



WATER AND SANITATION AGENCY (WASA), LAHORE LAHORE DEVELOPMENT AUTHORITY

**SEWERAGE SYSTEM FROM LARECH COLONY TO GULSHAN-E-RABI, LAHORE
(THROUGH TRENCHLESS TECHNOLOGY)**

DRAFT FINAL LIVELIHOOD RESTORATION PLAN

September, 2025

Prepared by:
Water and Sanitation Agency, Lahore Development Authority, Government of Punjab
with the assistance of Project Management Consultant



A Joint Venture
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ABBREVIATIONS

AH	Affected Households
AIIB	Asian Infrastructure Investment Bank
AM	Accountability Mechanism
AP	Affected Persons
ARAP	Abbreviated Resettlement Plan
CoI	Corridor of Impact
CRO	Complaint Receiving Officer
DED	Detailed Engineering Design
DP	Displaced Person
DS	Downstream
EA	Executing Agency
EEW	Elevated Expressway
EMC	External Monitoring Consultant
EPA	Environmental Protection Agency
ESF	Environmental and Social Framework
ESHS	Environment and Social Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMP	Environment and Social Management Plan
ESP	Environmental and Social Policy
ESS	Environmental and Social Standards
ESU	Environmental and Social Unit
GOP	Government of Pakistan
GoPb	Government of Punjab
GPS	Global Positioning System
GRC	Grievances Redress Committee
GRM	Grievance Redress Mechanism
HH	Household
IAS	Impact Assessment Survey
IPs	Indigenous People
IR	Involuntary Resettlement
ISA	Impact Assessment Survey
Km	Kilometer
LDA	Lahore Development Authority
LRP	Livelihood Restoration Plan
LTC	Lahore Transport Company
LWASA	Water and Sanitation Agency Lahore
LWMMP	Lahore Water and Wastewater Management Project
M&E	Monitoring and Evaluation
mm	millimeter
MTBM	Micro Tunnel Boring Machine
NESPAK	National Engineering Service Pakistan
OGDCL	Oil & Gas Development Company
PD	Project Director
PED	Preliminary Engineering Design
PMC	Project Management Consultant

PMA	Punjab Mass Transit Authority
PMU	Project Management Unit
RoW	Right of way
RP	Resettlement Plan
SASMR	Semiannual Safeguard Monitoring Report
Sq. Km,	Square Kilometer
TBM	Tunnel Boring Machine
TBM	Tunnel Boring Machine
TBM	Tunnel Boring Machine
TOR	Terms of Reference
UC	Union Council

DEFINITION OF TERMS

Affected Household: All members of a household (or single-person household as the case may be), living under one roof and operating as a single economic unit, who will be economically and/or physically displaced by the project's involuntary resettlement impact, and/or in other way adversely affected by the Project or any of its components. It may consist of a single-person household (as the case may be), a nuclear family or an extended family group.

Affected Persons: Any person affected by the project-related changes in the use of land, water, natural resources, access to assets, or income losses.

Assistance: Support, rehabilitation, and restoration measures extended in monetary and/or kind over and above the compensation for lost assets.

Beneficiary Community: All persons and households situated within the government-owned or acquired property who voluntarily seek to avail and be part of the Project and represented by a community association that is duly recognized by the community residents, accredited by the local government, and legally registered with the appropriate institutions.

Bi-annual or Semiannual Safeguard Monitoring Report (SASMR): is the RP/LRP implementation and overall social safeguards compliance monitoring reports submitted by EA/IA to AIIB on a bi-annual or semiannual basis per the requirement of AIIB's Environment and Social Framework. The SASMR is prepared by EA/IA for validation by an independent monitoring agency/or a consultant.

Census of Affected People: The Census is a complete and accurate count of the people that will be affected by land acquisition and related impacts. When properly conducted, the census of the affected population provides the basic information necessary for determining eligibility for compensation. The survey focuses on income-earning activities and other socioeconomic indicators. Inventory of losses is the pre-appraisal inventory of assets as a preliminary record of affected or lost assets.

Compensation: Payment in cash for an asset or a resource that is acquired or affected by a project at the time the asset needs to be replaced.

Cut-off date: The completion date of the final updated census of project-displaced persons is usually considered the cut-off date. A cut-off date is normally established by the borrower government procedures that establish the eligibility for receiving compensation and resettlement assistance by the project displaced persons. In the absence of such procedures, the borrower/client will establish a cut-off date for eligibility.

Grievance Procedure: The process of complaints and grievance redressal established under the Project and prevail under law and regulations, or administrative authority, to enable land and other property owners and other displaced persons to redress issues related to the acquisition, compensation, or other aspects of resettlement.

Encroachers/squatters: People who have trespassed onto private/ community/state land to which they are not authorized. If such people arrive before the entitlements cut-off date, they are eligible for compensation for any structures, crops, or land improvements that they will lose.

Entitled Affected Persons: The titleholders / the persons in whose name the project-affected land, building, or business is registered/who run the business and who is authorized to receive the compensation and/or resettlement assistance granted for the acquisition of land, loss of structures or business.

Entitlement: Resettlement entitlements to a particular eligibility category are the total of compensation and other forms of assistance (e.g., monetary compensation, income restoration, transfer assistance, income substitution, and relocation) provided to displaced persons in the respective eligibility category.

Expropriation: Process whereby a public authority, usually in return for compensation, requires a person, household, or community to relinquish land rights that it occupies or otherwise uses.

Host population: Community residing near the area where the Project beneficiaries are resettled as part of the Project.

Household: One or more families residing in the same building or compound using the same stove to cook their meals and share day-to-day household expenses can be considered as one household.

Economic Displacement: Loss of land, assets, access to assets, income sources, or means of livelihood as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or access to legally designated parks and protected areas.

Eminent domain: The right of the state to use its sovereign power to acquire land for public purposes. National law establishes which public agencies have the prerogative to exercise eminent domain.

Executing Agency: An Agency, public or private, that is responsible for planning, designing, and implementing a development project.

Forced eviction: permanent or temporary removal, against the will of individuals, families, and/or communities, from homes or land (or both), which they occupy, without the provision of, or access to, appropriate forms of legal or other protection. The exercise of eminent domain, compulsory acquisition, or similar powers, is not considered to be forced eviction, providing it complies with the requirements of national law and is conducted in a manner consistent with basic principles of due process (including the provision of adequate advance notice, meaningful opportunities to lodge grievances and appeal, and avoidance of the use of unnecessary, disproportionate or excessive force).

Income Restoration: Re-establishing productive livelihood of the displaced persons to enable income generation equal to or, if possible, better than that earned by the displaced persons before the resettlement.

Involuntary Resettlement: Any resettlement, which does not involve the willingness of the persons being adversely affected but is forced through an instrument of law. Development projects result in unavoidable resettlement losses that displaced/affected persons have no option but to rebuild their lives, incomes and asset bases elsewhere. jhuggi; a house, usually made from mud and sheets of iron, that is dirty and in bad condition, and located in a very poor area of a city. or A small house, hivel, hut or cabin; a mean lodge or dwelling; a slightly built or temporary structure.

Katcha: A structure with both the walls and roof made of materials that include grass, leaves, mud, and unburnt brick or wood.

Land Acquisition: The process whereby a person is compelled by a public agency to alienate all or part of the land she/he owns or possesses, to the ownership and possession of that agency, for public purposes in return for fair compensation.

Market Value: The value of an asset determined by the market transaction of similar assets and finally arrived at after negotiations with the owners. It includes transaction costs without the depreciation and deductions for salvaged building material.

Meaningful Consultation: A process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to displaced persons; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of displaced persons and other stakeholders into decision makings, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues.

Non-Titleholder: Non-titled are those who have no recognizable rights or claims to the land and assets that they are occupying and includes people using private or public land without permission, permit or grant i.e., those people without legal title to land and/or structures occupied or used by them.

Physical Displacement: Relocation, loss of residential land, or loss of shelter as a result of (i) the involuntary acquisition of land (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas.

Pacca: A structure with both the walls and roof made of materials that include tiles, cement sheets, slates, corrugated iron, zinc or other metal sheets, bricks, lime, and stone or cement concrete.

Rehabilitation: Compensatory measures provided under the AIIB Policy Framework on Involuntary Resettlement other than payment of the replacement cost of acquired assets.

Relocation: Displacement or physical moving of the affected persons from the affected area to a new area/site and rebuilding homes, infrastructure, provision of assets, including productive land/employment, and re-establishing income, livelihoods, living, and social systems.

Relocation Assistance: Support provided to persons who are physically displaced by a project. Relocation assistance may include transportation, food, shelter, and social services that are provided to displaced persons during their relocation. It may also include monetary allowances that compensate displaced persons for the inconvenience associated with resettlement and defray the expenses of a transition to a new locale, such as moving expenses and lost work days.

Replacement Cost: Replacement cost involves replacing an asset at a cost prevailing at the time of its acquisition. This includes fair market value, transaction costs, interest accrued, transitional and restoration costs, and any other applicable payments, if any. Depreciation of assets and structures or deductions for salvaged building material should not be taken into account for replacement costs. Where there are no active market conditions, replacement cost is equivalent to the delivered cost of all building materials, labor cost for construction, and any transaction or relocation costs.

Resettlement Plan (RP): means the resettlement plan for the site or a section thereof, including any update thereto, prepared by the Employer and cleared by AIIB (in case permanent land acquisition for the projects/subproject is not required). The RP elaborates on displaced persons' entitlements, the income and livelihood restoration strategy, institutional arrangements, monitoring and reporting framework, budget, and time-bound implementation schedule.

Severely Affected: The affected persons who will experience major impacts, which are defined as (i) being physically displaced from housing, or (ii) losing 10 percent or more of their productive assets (income generating).

Semi Pacca: A structure with both the walls and roof that are made of materials that include wood, planks, grass, leaves, and wall are made of brick walls with mud masonry or un-burnt brick.

Structures: All buildings including primary and secondary structures, including houses and ancillary buildings, commercial enterprises, living quarters, community facilities and infrastructures, shops, businesses, fences, and walls.

Temporary loss of livelihood: The term temporary loss of livelihood generally refers to a situation where individuals or communities experience a short-term disruption in their ability to earn income or sustain their economic activities. This can occur due to various factors, such as natural disasters, economic downturns, or specific projects that may displace or affect local populations.

Vulnerable Household; Distinct group of people who may suffer disproportionately from resettlement effects. These include households below the poverty line, the elderly, disabled member(s), those without legal title to assets, landless, women, children, and indigenous people.

EXECUTIVE SUMMARY

E-1: Project Description and Scope

Lahore is the historic cultural center of the Punjab region and is one of Pakistan's most socially liberal, progressive, and metropolitan cities. Lahore is rapidly urbanizing and transforming into a regional urban hub of key economic (commercial, industrial, and financial) and socio-economic development activities. Lahore Water and Sanitation Agency (LWASA) was established in 1976 under Section 10 (2) of the Lahore Development Authority (LDA Act 1975) to perform all functions and exercise all authorities regarding water supply, sewerage, and drainage. The Government of Punjab, through the LWASA, planned to implement the project namely "Sewerage System from Larech Colony to Gulshan-e-Ravi, Lahore (Through Trenchless Technology. The project is being financed by the Asian Infrastructure Investment Bank (AIIB), under the overall project titled "Lahore Water & Wastewater Management Project (LWMMP)" The proposed project envisages laying off about 32.37 km of the sewer through Micro-Tunneling & Pipe Jacking Technology and construction/installation of a new pumping/disposal station with a capacity of 690 cusecs. Sewer pipes of 60" i/d (1500 mm), 96" i/d (2400 mm) and 140" i/d (3500 mm) would be provided depending upon the sewerage generation and accumulated flows. There will be 82 jacking pits and 83 recipient pits for tunnel boring. Two drainage channels will be rehabilitated/constructed as an outlet for wastewater from the disposal station to River Ravi. The project will serve 2.35 million populations/beneficiaries.

E-2: Livelihood Restoration Plan

Project Management Consultants (PMC) prepared a draft Preliminary Engineering Design Report (PEDR) based on which Livelihood Restoration Plan (LRP) is prepared. Subsequently, the PEDR is finalized and the LRP is updated due to changes in the design. Laying sewers underground through tunnels was proposed in PEDR to avoid or minimize resettlement impacts. A Tunnel Boring Machine (TBM) was proposed for drilling an underground tunnel for sewer laying. For the launching and exit of TBM jacking and recipient stations are designed. In total 165 such stations are proposed for alignments A, B and C of the sewerage system as per PEDR. The commercial entities located on the points of pits will be affected due to business interruption. Accordingly, LRP is prepared to assess the impacts on business, access to business & income loss and to prepare compensations for affected persons' losses. The Project Management Consultant (PMC) conducted an Impact Assessment Survey (IAS), public consultations, information dissemination and disclosure and stakeholder engagement activities for the preparation of LRP.

E-3: Project Impacts

The areas of the proposed trunk and lateral sewers were visited physically with the help of GPS and sites of potential impacts were identified for the impact assessment. Based on the assessment of proposed project components and intervention, the laying of underground trunk sewers does not involve any land acquisition as all the jacking and recipient stations are located on the roads owned by the Government. Similarly, no structures will be demolished, and no physical displacement will be involved. The project impacts are temporary in terms of loss of livelihood and access to businesses and houses. As per the findings of IAS, the livelihood of different families is associated with the commercial activities that are under the impact of the project. With the project interventions in impact areas, 17 different types of business operators/shopkeepers will face a temporary impact on their commercial activities that will result in the loss of their livelihood for the period of business interruption until restored. Business interruption in the project area will also cause a loss of temporary impacts for 30 workers employed by the 17 business operators. All workers will be compensated for the loss of their wages as livelihoods. The livelihood of these businesses will be disrupted for 04

months. The compensation hence will be provided to the affected business holders estimated on 04 months' loss of their net income. Out of 17 business operators, 09 are running businesses in a rented place. The amount of actual rent of the business premises/shops will also be provided for 04 months to these business operators. All the business operators running businesses on rent affirmed that they would continue their business after the construction of the project in the same place. The compensation for the employees of the business operators has also been envisaged based on their 04 months' salary/wage. The budget allocation for businesses and employment loss has been assessed based on the field surveys/interviews. The maximum provision taken in this LRP will only be disbursed upon verification of the net income records from the affected person. There are no APs who fall in the category of vulnerable.

E-4: Socio-Economic Profile

The trunk sewerage project in Lahore will address the needs of central Lahore, covering areas such as Aziz Bhatti Town, Gulburg Town, Gunj Bakhsh Town, and Allama Iqbal Town. Lahore, part of the Lahore District in Punjab, Pakistan, is governed by a District Commissioner and divided into five tehsils and 274 Union Councils. The district spans 1,772 square kilometers and has a population of 13.9 million, with a density of 7,339 people per square kilometer. The city's demographic profile shows a slight male majority and a youthful population, with 40% under 15 years old. The economic landscape includes a diverse occupational structure, with a significant focus on the service sector, and there is notable income inequality and poverty affecting around 29.5% of the population¹.

The socioeconomic conditions of project areas are characterized by diverse ethnic communities, with Punjabi being the predominant language. Housing varies between well-developed infrastructure and traditional old homes. The educational and health facilities are well-established, with a literacy rate of 78%. Transportation is supported by an extensive network of buses, metro services, and railways, alongside growing private ride-hailing options. Despite advancements, gender disparities persist, necessitating focused efforts to promote equality and empower women in various sectors.

Socioeconomic details of the 47 directly Affected Households (HHs) were collected through a survey of households of Affected Persons (APs). The total population of the 47 APs households is 354 persons of which 52 % are male and 48% are females. The average family size works out to 7.5.

Most of the surveyed APs were running a small business such as food and beverages, grocery selling, workshops, scrap shops, bag stores, mechanical works, car sales, printers and hairdressers. The employees working in these businesses are salesmen, mechanics, and general workers. 94 percent of the members of the HHs of APs were literate in which 26 percent attained primary education. The average monthly income comes out to PKR 176.171 per month per AP's family. Most of the APs' families live in Pacca houses and enjoy amenities like electricity and gas.

E-5: Legal Framework and Entitlements

The Environment and Social Policy (ESP) of AIIB will apply to the project setting. Environmental and Social Standards (ESS 1-3) are delineated in the AIIB Environmental and Social Framework (ESF). Based on the assessment of proposed project components and intervention, the laying of underground trunk sewers does not involve any land acquisition as all the jacking and recipient stations are located on the roads owned by the Government. Similarly, no structures will be demolished, and no physical displacement will be involved. The project impacts are temporary in terms of temporary loss of livelihood and access to shops and houses. In total 17 businesses will be affected wherein business owners, and 30

¹ Punjab Development Statistics 2023, Bureau of Statistics, Planning and Development Board.

employees/workers will lose their income during construction activities to be carried out for laying trunk sewers. Persons losing livelihood or employment (temporary) have also been categorized as APs eligible for compensation. All APs will be entitled to compensation for temporary loss of business and employment. They will receive livelihood assistance in the shape of monetary compensation for loss of business which will be paid @ 04 months of their net business income and wages.

E-6: LRP Disclosure and Consultation

The present LRP will be disclosed on LWASA and AIIB websites in accordance with the ESF of AIIB. The LRP will be made available at key publicly accessible and convenient locations such as the offices of LWASA and PMC. The summary of LRP will be translated into Urdu and disclosed on the LWASA website. The present LRP has been prepared based on the PEDR of PMC. The Contractor may bring changes in the design hence LRP will be revised and updated thereof. As per requirements of AIIB's Environment and Social Policy (ESP), consultations were carried out with business runners, residents, and Affected Persons (APs) to inform them about the project components and probable impacts the project would generate. APs generally appreciated the project as it will improve the environment. However, they suggested in time project completion and provision of adequate compensation to the APs.

E-7: LRP Budget

This cost for the implementation of the Livelihood Restoration Plan (LRP) is estimated based on livelihood impacts to be levied on the Affected Persons (APs). The estimation is based on the loss of net income of APs. These costs are estimated for the impacts determined based on the PEDR of trunk sewers provided by PMC. The total amount of the LRP budget is estimated at PKR 62.33 million. Being the project owner, the WASA will be responsible for the timely arranging of the allocation of funds needed to implement the LRP.

E-8: Grievance Redress Mechanism

The AIIB requires the establishment of a three-tier project-level grievance redress mechanism to address the concerns and grievances of the project-affected persons and stakeholders as per AIIB's Environment and Social Policy (ESP) and applicable standards. PMC's social survey team held a consultation with APs of the project area to devise a Grievance Redress Mechanism (GRM) to redress, in particular, the grievances related to livelihood restoration measures to be adopted for livelihood restoration as described in the LRP. A two-tier GRM for the preparatory phase is already in place and the three-tier GRM will be notified before the execution phase to provide a time-bound, early, transparent, and fair resolution for APs and other stakeholder grievances. As a first step, PMC and contractors will devise and launch awareness-raising campaigns for carrying out sessions to provide information on the GRM to the APs and other stakeholders. A Grievance Redressal (GR) Cell will be established as the first tier of GRM at the site. The second tier of the GRM will be at the PMU level. LWASA Management level will be the third tier of the Grievance Redressal Mechanism (GRM). Grievance Redress Committees are already constituted and notified for the second and third tiers of GRM. These GRCs will redress grievances prior to the execution phase of the project. If unsatisfied with the decision, the existence of the GRC will not impede the complaints' access to the government's administrative or judicial remedies.

E-9: Institutional Arrangements

The overall responsibility of LRP implementation lies with the Project Management Unit (PMU) established in LWASA. PMU will supervise the implementation of LRP through its Environment and Social Staff for carrying out activities related to LRP implementation. The Project Management Consultant (PMC)/Owner's Engineer will be responsible for monitoring and

implementation of LRP. PMC will depute Social Safeguards, Gender Specialist and field-based Social Mobilizer for the implementation of LRP. LWASA kept the provision of PKR 27.23 million to accommodate livelihood impacts, damages and variations that may occur due to design changes at the detailed design stage. LWASA Grievance Redress Mechanism (GRM) will be instituted to address grievances. Internal and external monitoring will be carried out during project implementation.

1 PROJECT DESCRIPTION AND SCOPE

1.1 Introduction

Lahore City is bounded on the North and West by Sheikhpura district, on the east by India, on the south Kasur district and River Ravi flows on the northern side of Lahore. The district comprises five sub-administrative units (Tehsils). According to the census 2023, the overall population of the district was 13,004,135 and among them, males were 52.9 percent and 47.1 percent were xs. The sex ratio is measured as 112.47. The area of the Lahore district is 1,772 square kilometers, which gives a population density of 7,339 persons per square kilometer as compared to 3,566 persons observed in 1998. The average annual growth rate of the population in the district during the inter-census period 2017-2023 is 2.65%.²

Lahore is the historic cultural center of the Punjab region and is one of Pakistan's most socially liberal, progressive, and metropolitan cities. Lahore is rapidly urbanizing and transforming into a regional urban hub of key economic (commercial, industrial, and financial) and socio-economic development activities. Water and Sanitation Agency Lahore (LWASA) was established in 1976 under Section 10 (2) of the LDA Act 1975 to perform all functions and exercise all authorities regarding water supply, sewerage, and drainage with a mandate to collect from users the charges for services. LWASA is the second largest water and sanitation agency in Pakistan as an operator for water supply and sewerage services in the city, operating in an area of more than 350-Sq. Km, through approximately 596 tube wells, about 5,826 km of water supply lines, and about 5187- Km of sewerage network.

Government of Punjab, through the LWASA, is planning to implement the project namely the "Lahore Water & Wastewater Management Project (LWMMP)" The project is being financed by the Asian Infrastructure Investment Bank (AIIB) through the Islamic Republic of Pakistan (GOP) and the Government of Punjab (GoPb) on a soft loan facility. The project comprises two phases; Phase I: Sewerage System from Laerch Colony Gulshan-e-Ravi (Through Trenchless Technology). The laying of trunk sewers and construction of ultimate disposal station and Phase II: Construction of Surface Water Treatment Plant at BRBD Canal Lahore.

As per the approved Procurement Plan (PP), there are seven (07) Packages under Three (03) components. The Component and Package wise detail is given in Table 1 below.

Table 1 Detail of the Project as per Procurement Plan

Sr. No.	Package No.	Executing Agency	Project Title
Component 01 Investment in safe water supply infrastructure			
1	0074-PAK-01	Project Management Unit (PMU) of PID	Construction of New Ravi Syphon, Head Regulator and Escape Channel Structure & Raw Water Intake at BRBD Canal (Irrigation Department)
2	0074-PAK-02	Project Management Unit (PMU) of LWASA	Construction of Surface Water Treatment Plant & Transmission mains and Distribution network
Component 02 Investment for wastewater management			
3	0074-PAK-03	Project Management Unit (PMU) of LWASA	Laying of Sewer line from Larech Colony & Gurumangat Road to Gulshan-e-Ravi (Through Trenchless Technology)

² Punjab Development Statistics 2023, Bureau of Statistics, Planning and Development Board.

Sr. No.	Package No.	Executing Agency	Project Title
4	0074-PAK-04	Project Management Unit (PMU) of LWASA	Construction of Ultimate Disposal Station at Gulshan-e-Ravi and Allied Works
Component 03 Project management			
5	0074-PAK-05	Project Management Unit (PMU) of LWASA	Project Management and Supervision Consultant (Water Supply Component), WASA
6	0074-PAK-06	Project Management Unit (PMU) of LWASA	Project Management and Supervision Consultant (Sewerage System), WASA
7	0074-PAK-07	Project Management Unit (PMU) of PID	Detailed Design & Resident Supervision Consultant for Punjab Irrigation Department

Source: Procurement plan of the project

The Sewerage System from Lareh Colony to Gulshan-e-Ravi Lahore (Through Trench-less Technology) is conceived because the existing sewerage system comprising secondary and tertiary sewers lacks the trunk infrastructure and the collected wastewater from the existing system is disposed of into open drains (storm water drains) through pumping/lift stations. The proposed project will only cover the laying of primary/trunk sewers which will be integrated with the already laid tertiary and secondary sewers. This will result in restraining the sewerage disposal into the stormwater drains and eliminate pumping/lifting operations, which incur huge recurring costs. The main objective of the project is to provide an improved sewage disposal system in Lahore for proper collection, conveyance, and disposal of sewage which will improve the overall environment in the project area.

1.2 Project Description

Lahore, being the hub of Punjab province's business activities, provides better opportunities and other facilities. It is therefore experiencing a rapid urbanizing trend, and a considerable population of Punjab and other provinces of the country is migrating/settling in Lahore, because of the lack of facilities related to jobs, education, medical, sports, housing infrastructure, water, sewerage and drainage infrastructure, etc., in other smaller towns of the province. This has resulted in a rapid population influx, which is putting huge stress on the existing water supply and sewage infrastructures of Lahore because such existing facilities cannot meet the growing needs and need to be upgraded.

Given the current situation i.e., deterioration of stormwater channels and wastage of limited financial resources because of the year-round pumping of sewage into stormwater drains, which has also become a permanent public nuisance and has caused overall degradation of the environment, the Water and Sanitation Agency (WASA) has decided to connect all the sewerage schemes which are discharging sewage into the stormwater channels with new trunk sewers leading to a new disposal/lift station in the existing Gulshan-e-Ravi disposal station. These trunk sewers will be installed at such depths that all the main sewers of the existing sewerage schemes can be connected to the proposed trunk sewers by gravity. It is also important to lay these trunk sewers at considerable depth using trenchless technology to avoid interference with or damage to the existing shallow-depth water supply lines and sewers as well as to other buried utility services. This pilot project is expected to be replicated in other sewerage zones in Lahore and other cities in Pakistan.

The project comprises two components, including the laying of sewer lines and the construction of a pumping and disposal station at Gulshan Ravi along with restoration of existing outfall drains. Component-I involves:

- i. Line A. laying of sewer 12.30 kilometers from Karachi Phattak to Qartaba Chowk using micro-tunneling and pipe jacking technology.
- ii. Line B. laying of sewer 12.82 kilometers from Guru Mangant Road to Qartaba Chowk using similar technology.
- iii. Line C. laying of sewer 7.25 kilometers from Qartaba Chowk to Gulshan-e-Ravi using similar technology.

The project aims to improve the wastewater management system in Lahore, which currently relies on open drains meant for rainwater to transport bulk wastewater, polluting the nearby River Ravi. The project will assist LWASA in constructing a modern conveyance system by constructing trunk sewers through underground tunneling and the construction of an ultimate pumping and disposal station at Gulshan-e-Ravi in the vicinity of the existing disposal station, which will safely transport domestic sewage, serving a population/beneficiary of 2.35 million over an area of about 56 square kilometers in central Lahore. The construction of a gravity-based transport of wastewater infrastructure will also eliminate the need for intermediate pumping of wastewater at 22 different locations, resulting in cost savings for LWASA in payment of electricity charges. The total length of the sewer to be constructed is about 32.37 kilometers (km), which is divided into three construction legs. The first trunk sewer measuring about 12.30 km will be constructed from Karachi Phattak to Qartaba Chowk, and the second trunk sewer with a length of 12.82 km will cover the sewage flow from Guru Mangant Road to Qartaba Chowk and the third length of 7.25 km will cover from Qartaba Chowk to Gulshan-e-Ravi.

Component II involves construction of an ultimate pumping and disposal station with a capacity of 688 Cusecs at Gulshan-e-Ravi, along with allied works, such as the installation of a SCADA system for gas concentration monitoring in trunk sewers, electromagnetic/ ultrasonic flow rate monitoring system, construction of an outfall channel, restoration and brick-lining of Cantonment Drain and Gulberg Drain, and installation of a rider sewer along Cantonment Drain. An ultimate pumping and disposal station having a capacity of 688 cusecs with 16 pumps at Gulshan-e-Ravi in the vicinity of the existing disposal station will be constructed for the ultimate disposal of sewage. The construction of this ultimate pumping and disposal station will serve the purpose of efficiently collecting and disposing of sewage flow collected from various disposal stations and sewers. Its primary objective is to ensure proper management of wastewater in the area. The wastewater will flow out from the disposal station through the existing drainage channels which will be rehabilitated to increase the capacity of flow.

The proposed project will employ the underground tunneling method of construction, a trenchless technique that minimizes excavation. A combination of Micro-Tunneling & Pipe Jacking Technology. Sewer pipes of less than 60" i/d (1500 mm), 60" i/d (1500 mm), 96" i/d (2400 mm), and 140" i/d (3500 mm) would be provided depending upon the sewerage generation and accumulated flows. There will be 82 jacking pits and recipients 83 pits for tunnel boring. Upon completion and diversion of sewage from the surface drains to the newly constructed trunk sewers, the drains in the locality will be rehabilitated and restored. This will enhance the capacity of the surface drainage and provide immense relief from the monsoon-related urban flooding and stagnation of wastewater witnessed in certain areas. Table 2 provides the proposed alignments of the trunk and lateral sewers and a brief description of them, and Figure 3 shows the pit locations.

Table 2: Detail of Trunk and Lateral Sewer Lines

Description	Inner Diameter (mm)	Length (meter)	Length kilometer)	Technology
Trunk Sewer Line-A				
Karachi Phatak to Infantry / Allama Iqbal Road crossing	2,400	1,199	1.20	MTBM
Infantry / Allama Iqbal Rd crossing to Bird Market D/S	2,400	610	0.61	MTBM
Bird Market D/S to Mughalpura / Allama Iqbal Road crossing	2,400	1,430	1.43	MTBM
Mughalpura / Allama Iqbal Road crossing to Durand Road Crossing	2,400	97	0.10	MTBM
Durand Road / Allama Iqbal Road crossing to Davis / Durand Road crossing	2,400	821	0.82	MTBM
Davis / Durand Road crossing To Edgerton Road Shimla Hill	2,400	254	0.25	MTBM
Edgerton Road /Shimla Hill to Ganga Ram Hospital Emergency Chowk	2,400	2,614	2.61	MTBM
Sub Total		7,025	7.03	
Lateral Sewer Line-A				
			0.00	
Mian Mir DS to Infantry Road	1,050	595	0.60	MTBM
Infantry Road DS to Infantry / Allama Iqbal Road crossing	1,500	593	0.59	MTBM
Larech Colony to Garhi Shahu Bazar	1,050	784	0.78	MTBM
Ghazi Mohallah DS to Garhi Shahu Bazar	1,050	109	0.11	MTBM
Garhi Shahu Bazar to Mughalpura / Allama Iqbal Road crossing	1,050	195	0.20	MTBM
Muhammad Nagar to Durand Road Crossing	1,050	570	0.57	MTBM
Governor House to Davis / Durand Road crossing	1,050	909	0.91	MTBM
Lakshmi Chowk DS to Abbott Road	1,500	890	0.89	MTBM
Janki Devi DS to Abbott Road	450	159	0.16	Open Cut
Abbott Road to Egerton Road / Shimla Hill	1,500	471	0.47	MTBM
Sub Total		5,275	5.28	
Total (Trunk + Lateral Sewer Line A)		12,300	12.30	
Trunk Sewer Line-B				
Gurumangat Rd DS to College Road / Q Block link Rd Crossing	1,500	735	0.74	MTBM
College Road / Q Block link Rd Crossing to Gulberg Main Boulevard	1,500	577	0.58	MTBM
Gulberg Main Boulevard Crossing to G Block Gulberg DS	1,500	775	0.78	MTBM
G Block Gulberg DS to Canal Crossing	2,400	862	0.86	MTBM
Canal Crossing to Ichra Morr/Ferozpur Road Crossing	2,400	1,779	1.78	MTBM
Ichra DS to Shama/Ferozpur Road intersection	2,400	815	0.82	MTBM
Shama/Ferozpur Road intersection to LOS Road Intersection	2,400	383	0.38	MTBM
LOS Road intersection to Qartaba Chowk	2,400	718	0.72	MTBM
Sub Total		6,644	6.64	

Description	Inner Diameter (mm)	Length (meter)	Length kilometer)	Technology
Lateral Sewer Line-B				
Q Block Gulberg DS to College Road / Q Block link Rd Crossing	1,050	551	0.55	MTBM
Center Point DS to Gulberg Drain along the Main Boulevard	1,050	2,501	2.50	MTBM
Zafar Ali Road DS to Shareef Colony	1,050	764	0.76	MTBM
Shareef Colony to Canal Crossing	1,050	695	0.70	MTBM
Shadman DS to Shama DS Shama/Ferozepur Road intersection	1,050	896	0.90	MTBM
Rasool Park DS to LOS junction with Ferozepur	1,500	767	0.77	MTBM
Sub Total		6,174	6.17	
Total (Trunk + Lateral Sewer Line B)		12,818	12.82	
Trunk Sewer Line-C				
Qartaba Chowk to Chauburji Chowk	3,500	1,058	1.06	MTBM
Chauburji Chowk/Multan Road to Samanabad Morr	3,500	1,459	1.46	MTBM
Samanabad Morr to Gulshan-e-Ravi DS	3,500	2,820	2.82	MTBM
Sub Total		5,337	5.34	
Lateral Sewer Line-C				
Lytton Road DS to Lake Road	1,050	827	0.83	MTBM
PIA Planetarium DS to Lake Road to Chauburji Chowk	1,050	441	0.44	MTBM
Poonch Road DS to Samanabad Morr	1,500	646	0.65	MTBM
Sub Total		1,914	1.91	
Total (Trunk + Lateral Sewer Line C)		7,251	7.25	
Grand Total		32,369	32.37	
Total Trunk Sewer		19,006	19.01	
Total Lateral Sewer		13,363	13.36	

1.3 Project Scope

Project Management Consultant (PMC)/Owner's Engineer is providing consultancy services for the design and construction of a project namely "Sewerage System from Larech Colony to Gulshan-e-Ravi in Lahore (through trench-less technology)". PMC, besides finalization of PEDR and updating of the Environmental and Social Impact Assessment (ESIA) also responsible for the preparation of the Livelihood Restoration Plan (LRP). PMC is also responsible for construction supervision including monitoring of compliance of the environmental and social safeguards.

1.4 Background and Scope of the Livelihood Restoration Plan

M/S NESPAK Pvt. Ltd. prepared an initial draft LRP based on the preliminary engineering design of both alignments A and B of the proposed trunk sewer. This initial draft was reviewed and found that as per the preliminary engineering design, trunk sewer passes through congested areas and narrow bazaars of the city which are a hub of commercial activities. Open-cut excavation for laying these sewer lines would have led to severe livelihood and resettlement impacts on the assets and businesses of the population located along the proposed alignments.

To avoid or minimize resettlement impacts, laying sewers underground through tunnels was proposed in the preliminary engineering design. A Micro-Tunnel Boring Machine (MTBM) was proposed for drilling an underground tunnel for sewer laying. For the launching and exit of MTBM jacking pits and recipients, stations were designed. In total 99 numbers of such stations were proposed for both alignments of the sewerage system. These stations were marked, however, subject to finalization during execution. Initial Draft LRP was prepared to take into account these stations.

PMC provided a draft Preliminary Engineering Design (PED) in September 2022 wherein the location of jacking and recipients pits were marked. The number of these pits was reduced to 76 in design revision from 99 originally designed by NESPAK. Additionally, there were changes in the alignment as well as the deletion of lateral sewers from the scope of the project. At one location, open cuts for laying sewers were proposed. As per this draft PED, the project envisaged laying of about 20.5 km long trunk sewer, 5.8 km of lateral sewer (WASA' scope), and construction/installation of a new pumping/disposal station with a capacity of 630 cusecs (856,300 m³/day) at Gulshan-e-Ravi with an arrangement of 10 No. pumps of 50 cusecs (122,325 m³/day) (including Stand-by pumps) each and the total pumping head of the proposed pumps is approximately 23 meters (~ 75 ft). There were 39 jacking pits and 37 recipient pits for tunnel boring.

The LRP was prepared in September 2022 based on the above-mentioned preliminary engineering design. AIIB provided comments on the LRP. AIIB. Later, in December 2022, PMC made changes in the engineering design and finalized the Preliminary Engineering Design (PED). As per this design, changes were made in the route of sewer alignments. Additionally, some of the lateral sewers had been excluded from the scope of work and shifted to LWASA's scope.

AIIB directed to update LRP based on the final PED. The LRP was revised by accommodating the changes marked in the final PED and submitted to LWASA after the incorporation of comments of AIIB. On March 29, 2023, WASA asked for the inclusion of drainage channel impacts as the channels will be rehabilitated/constructed. It was also advised to include impacts on the structures in the Tauheed Park settlement where the trunk sewer passes underground under these structures. LRP was updated and revised to accommodate these above-mentioned impacts.

Based on PMC's PEDR a PC-1 was prepared and submitted for approval by the competent forum. However, the forum advised revising the Trunk Sewerage System proposal owing to conflicts with other development projects in the pipeline including Elevated Expressway (EEW) and Blue and Purple Lines). Subsequently, the Project Steering Committee decided to carry out a Feasibility Study on the alternative trunk sewer routes for the project. Accordingly, PMC carried out the feasibility of the realigned trunk sewer lines. The realignment study aims to avoid conflict with the above-mentioned development projects and find a new route for the sewer tunnels to carry the sewage from project areas with minimum disturbance to the originally proposed alignment. PMC has identified four alternative routes for Line B and five for Line C. The routes are evaluated for constructability and economy along with environmental considerations. The following changes are finalized for the Trunk Sewer Lines:

Trunk Sewer **Line-A**, having 2400 mm internal diameter will start from Karachi Phatak (Sadar Lahore) and end at Qartaba Chowk. On its way, it collects sewage effluent from the disposal stations at Mian Mir Colony, Infantry Road, Bird Market, Larech Colony, Ghazi Muhallah, Muhammad Nagar, Governor House, Lakshmi Chowk and Janki Devi. Provisions have been made for the size of the Trunk Sewer Line-A to accommodate the sewage effluent from certain disposal stations, which will be connected to the Trunk Sewer in the future. These disposal stations include the ones located at Harbanspura and Jorray Pul which are in WASA

jurisdiction, and the ones located at Ghosia Colony, Askari IX, Abdur Rehman Road, Sofia Trust, Shalimar Colony which are under the jurisdiction of Lahore Cantonment Board. Trunk Sewer Line-A will be 7.25 km long, and its internal diameter will be 2400 mm throughout its length. It will be constructed by MTBM having a size of 2,800 mm and will have a total of sixteen (16) Receiving Shafts and seventeen (17) Jacking Shafts. These shafts will be circular and rectangular and will be constructed by installing steel sheet piles around the periphery.

Trunk Sewer **Line-B**, starts from Gurumangat Disposal Station with an internal diameter of 1500 mm. From Gulberg G-Block Disposal Station, the internal diameter of the Sewer increases to 2400 mm till its end at Qartaba Chowk along Ferozpur Road. On its way, it collects the sewage effluent from disposal stations located at Gulberg Q-Block, Center Point, Gulberg G-Block, Zafar Ali Road, Sharif Colony, Ichra, Shadman, Shama and Rasool Park, all of which fall under the jurisdiction of WASA Lahore. In the future sewage effluent from disposal stations, namely Fatehabad, Khan Colony, Askari Villa and Sultan Park under Lahore and Walton Cantonment Boards will also flow into the Trunk Sewer Line-B. Accordingly, the capacity of the Trunk Sewer Line-B has been selected to accommodate the discharges from these Disposal Stations as well. Main Line-B will be constructed by excavating fifteen (15) Receiving Shafts and sixteen (16) Jacking Shafts. The length of the Trunk Sewer Line-B will be 6.644 km out of which the Trunk Sewer with an internal diameter of 1500 mm will be 4.557 km long and the sewer with 2400 mm will be 2.087 km long.

Line-C starts from Qartaba Chowk, follows Bahawalpur Road, Multan Road, Gulshan-e-Ravi Main Boulevard, Nonarian Road, and Riaz Mansuri Road and ends at the proposed Ultimate Disposal Station to be located within the premises of the existing Disposal Station at Gulshan-e-Ravi. Trunk Sewer Line-C will pass the combined flow from Line-A and Line-B. On the way, it also carries flows from Disposal Station Lytton Road, PIA Planetarium and Poonch Road. There will be eleven (11) Receiving Shafts, and ten (10) Jacking Shafts will be constructed from Qartaba Chowk to the end at the proposed Ultimate Disposal Station at Gulshan-e-Ravi to lay the Trunk Sewer by MTBM. The layout of sewer lines is given in Figure 1.

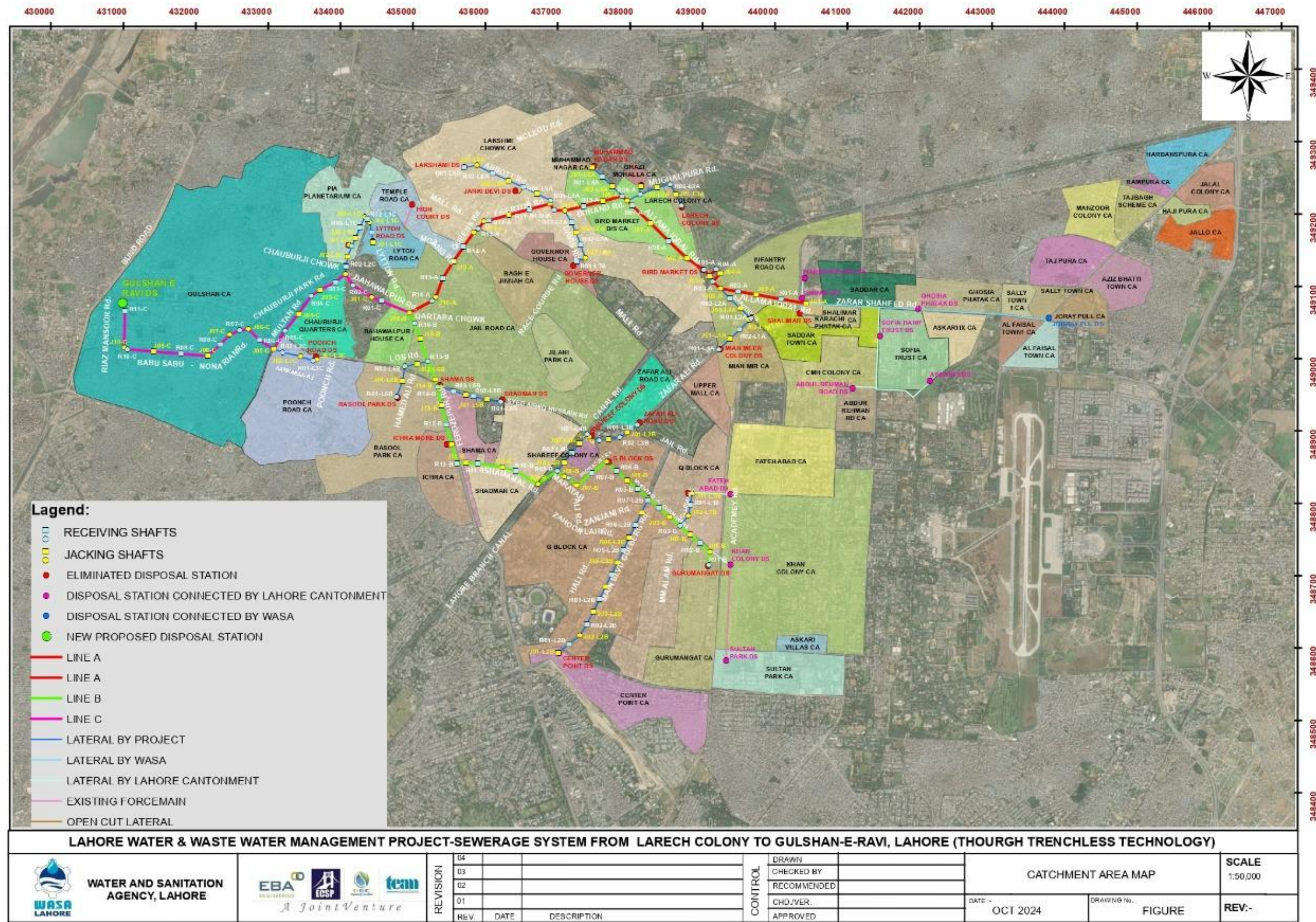


Figure 1 Layout Plan of Sewer lines

1.5 Methodology of Preparation of LRP and its Scope

PMC conducted a reconnaissance visit of project sites and found that impacts on the access to businesses and houses and business interruption are expected at certain locations where the Micro Tunnel Boring Machine (MTBM) will be used and where jacking and recipient pits will be excavated. PMC carried out a desk review of previous studies specifically previous ESIA, draft LRPs, and design studies to identify key resettlement and livelihood aspects. Additionally, similar studies bearing livelihood impacts as well as relevant socio-economic studies are reviewed, and relevant information is derived and made part of the LRP. PMC also reviewed prevailing laws and policies relevant to land acquisition, resettlement, environment, and climate change aspects. Environmental and Social Policy (ESP) and Environmental and Social Standards (ESSs) of the Asian Infrastructure Investment Bank (AIIB) are also reviewed and essential information is extracted and made part of the Draft LRP.

PMC carried out a socio-economic and livelihood survey (Questionnaire placed at **Annexure-I**) of business owners and employees of business entities to gauge impacts on livelihood, besides making a broader impact assessment at all 82 points of jacking and 83 recipient stations. The results of these surveys are used for the preparation of LRP. The perceptions, opinions, and suggestions of affected persons are recorded, and results are incorporated into the LRP. Public consultation sessions were also carried out with the business owners, staff of academic centers, hospitals and women and men residing near the trunk sewer lines route.

LRP covers the assessment of impacts on the livelihood of business operators and the socio-economic baseline of APs. An entitlement matrix is prepared to fix the eligibility of affected persons for compensation purposes. The budget for LRP and institutional and monitoring arrangements for the implementation are also devised along with implementation timelines. The present LRP will be updated based on a Detailed Engineering Design (DED) to be prepared by the EPC Contractor.

2 PROJECT IMPACTS ON LIVELIHOOD

2.1 Construction Activities and Working Areas

The proposed project envisages the laying of 32.37 km sewer line and the construction/installation of a new pumping/disposal station with a capacity of 688 cusecs (856,30 m³/day) at Gulshan-e-Ravi with an arrangement of 16 No. pumps of 53 cusecs (122,32 m³/day) (including Stand-by pumps) each and the total pumping head of the proposed pumps is approximately 23 meters (~ 75 ft). The wastewater flows from the disposal station through i) the existing underground outfall drainage channel falling in the central drain across the Bund Road leading to River Ravi. This drainage channel will be constructed to enhance the flow. An open drainage channel is also available to cater for the extra flow. This channel falls in the cantonment drain on Babu Sabu Nonariyan Road. This drainage channel requires rehabilitation within the channel.

As per the Feasibility Study trunk sewer design, there are 165 pits points of which 82 are jacking pits and 83 are recipient pits. The location map of jacking and recipient pits is placed as Figure-3. The working area of the jacking pits for sewer line dia of 1050 mm, 1500 mm, and 2400 mm is estimated as 50 meters in length and 8 meters in width. For sewer line dia of 3500, the working area is estimated as 60 meters in length and 12 meters in width. At Babo-Sabo Nonariyan Road, the width is reduced to 6 meters by adopting an engineering solution. The depth of excavation will vary in the range of 40-60 feet deep. The schematic drawing of pit sizes along with lengths and widths of the working area is given in Figure 2 below.

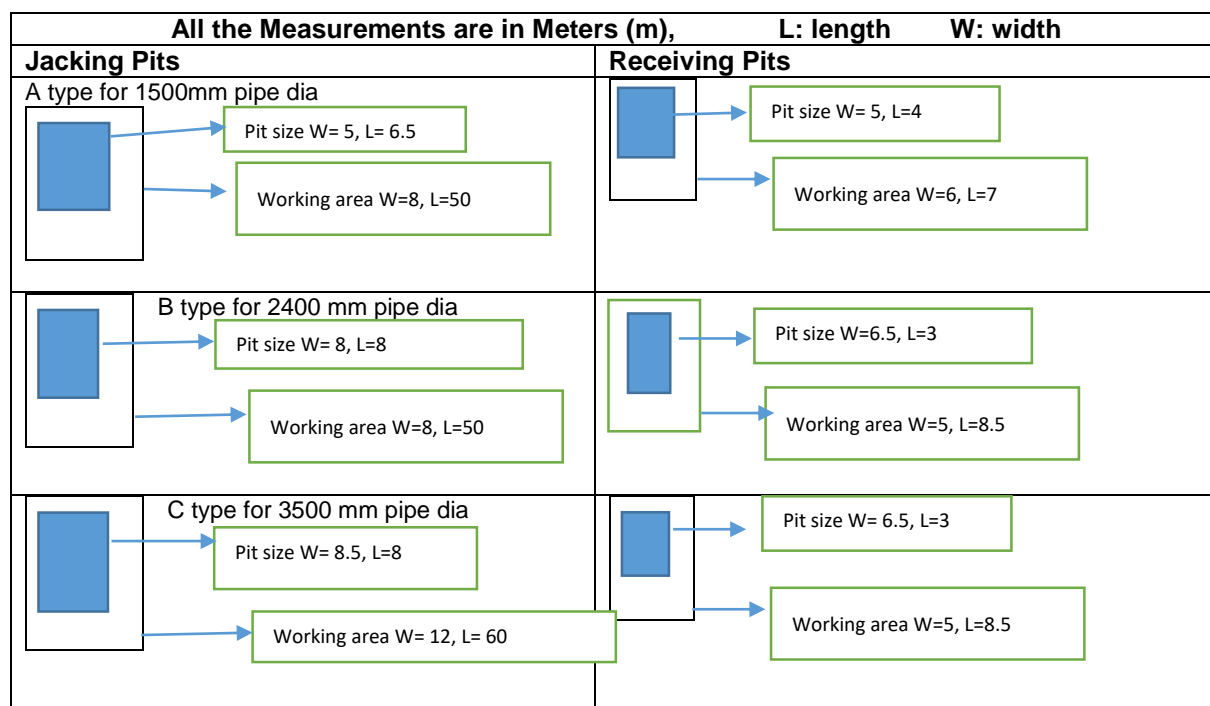







Figure 2 Schematic Drawing of Jacking and Recipient Pits

2.2. Impact Assessment

The current impact assessment on access to businesses and business interruption is based on the PEDR. As per this land acquisition is not involved as the construction will take place on roads that are owned by the Government. The drainage channels exist in the RoW of LWASA-LDA. Similarly, no resettlement impacts are observed since no structures will be demolished and no assets will be affected. The construction of the sewer line will cause access issues for businesses and residential units for which access will be ensured. Road closure at various construction points is observed for which a traffic management plan has been prepared and

made part of ESIA. Temporary disruption of business for four months around the working areas is also observed and recorded. The affected businesses will completely be closed down for four months. This will result in a loss of income for business owners and their employees.

The impacts related to potential damage to the buildings and structures due to vibration are assessed in ESIA. As per this assessment, Micro Tunneling Boring Machine (MTBM) will be deployed for the construction of the tunnel. MTBM will run 8 meters underground at the starting point of the tunnel and has a downward gradient till it reaches the end where it is about 20 meters. According to the MTBM expert of PMC, buildings that fall 6-7 meters above the shaft are safe from all kinds of vibration impacts, hence by using this technology the project does not have any impact on the buildings on the ground. This aspect needs to be further assessed at the detailed design stage by the EPC contractor. However, a lumpsum provision has been made as part of the budget to account for any impacts caused by the vibration.

<div><div><div><div>EBA ENGINEERING</div></div><div><div>EDSP</div></div><div><div>ECC</div></div><div><div>TEAM</div></div></div><div>A Joint Venture</div></div>	<div><div><div>WASA LAHORE</div></div><div>WATER AND SANITATION AGENCY, LAHORE</div></div>	04			DRAWN		<div>SEWERAGE SYSTEM FROM LARECH COLONY TO GULSHAN-E-RABI, LAHORE</div>	REVISED ALIGNMENT (PROPOSED)		SCALE 1:40,000
		03			CHECKED BY					
		02			RECOMMENDED					
		01			CHD./VER.					
		REV	DATE	DESCRIPTION	APPROVED					
							DATE :- AUG 2024	FIGURE 7.11	REV:-	

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2.3. Project Impacts

The areas of the proposed trunk and lateral sewers were visited physically with the help of GPS and sites of potential impacts were identified for the impact assessment. Based on the assessment of proposed project components and intervention, the laying of underground trunk sewers does not involve any land acquisition as all the jacking and recipient stations are located on the roads owned by the Government. Similarly, no structures will be demolished, and no physical displacement will be involved. The anticipated project impacts are temporary in terms of temporary loss of livelihood. The locations and numbers of jacking and recipient stations of trunk sewer are based on the feasibility study preliminary engineering design prepared by PMC. These locations and numbers may change in the detailed engineering design to be prepared by the EPC contractor and during the execution stage as per the excavation, strategy opted by the contractor. Impact assessment of commercial activities will be conducted again after the finalization of the detailed design by the contractor and LRP will be updated. The details of livelihood impacts are given in the ensuing paragraphs while the summary of these impacts along with mitigation measures can be seen in Table 2. The cut-off date for the livelihood impact assessment survey was December 15, 2024.

2.3.1. Impacts on Access

The trunk sewer lines A, B, and C and the lateral bear impacts related to probable disturbance to access to the shops and houses located along the routes. In total, access to 122 shops 64 houses and 16 sensitive receptors will have to be compromised because of jacking and recipient pits construction at the respective locations. Access to shops and houses must be ensured by providing safe passage for the movement of vehicles to their premises. Alternate traffic routes may also be developed to ensure access. Sewer line-wise impact on access is presented in **Table 3**.

Table 3: Summary of Livelihood and Access Impacts

S. No	Sewer Line	Sewer Line Dia (mm)	Roads	Jacking Pits (No.)	Recipient Pit (No.)	Livelihood Impacts	Access Disturbance Shops	Access Disturbance Houses)	Business Disruption (Shops) Annexure-II, Annexure III and Annexure IV	Sensitive Receptors	Mitigation Measures
							Numbers	Numbers	Numbers	Numbers	
1	Line A	2400	Allama Iqbal Road, Canal Road, Mughalpura Road, Durand Road, Queen Marry Road, Egerton Road, Kashmir Road, Copper Road, Queens Road	16	16	Shops, hospitals, workshops, and other buildings are on jacking and recipient pit's locations on Allam Iqbal Road. Most of them have no livelihood impacts. Access must be ensured to avert business interruption. The pits are located on all roads' hand side (LHS). LHS of roads at the pit location will be closed. n reduce the impacts further. On Durand Road, RoW is limited which may cause blockage of the road. An alternate traffic route is needed on this road.	56	11	1	5	Access to shops and buildings must be ensured. Traffic on the RHS of the roads must be diverted for mobility. Compensation must be paid to affected business holders.

S. No	Sewer Line	Sewer Line Dia (mm)	Roads	Jacking Pits (No.)	Recipient Pit (No.)	Livelihood Impacts	Access Disturbance Shops	Access Disturbance Houses)	Business Disruption (Shops) Annexure-II, Annexure III and Annexure IV	Sensitive Receptors	Mitigation Measures
							Numbers	Numbers	Numbers	Numbers	
2	Line B	2400	Guru Mangat Road, College Road, Q Block Link Road, Main Boulevard Gulburg, Gurmani Road, Shaukat Ali Road, Maratab Ali Road, Canal Road, Shah Jamal Road, Ferozepur Road	16	16	Access to the houses/buildings may be compromised at Guru Mangat Road, Q Block Link Road, Mushtaq Gurmani Road, Rana Shaukat Ali Road, Syed Maratab Ali Road, Shah Jamal Road and Ferozepur Road.	2	14	0	6	Access to shops and buildings must be ensured. The traffic must be diverted on the RHS of the roads for traffic mobility.
3	Line C	3500	Bahawalpur Road, Multan Road, Samanabad Road, Gulshan-e-Ravi Road, Babu Sabo-Nonariyan	10	11	Businesses on the RHS of Babu Sabu Nonariyan Road will be impacted. Roads will also be closed to hamper access to houses.	31	20	5	1	Compensation for business disruption has to be provided. Access to houses and shops has to be ensured.

S. No	Sewer Line	Sewer Line Dia (mm)	Roads	Jacking Pits (No.)	Recipient Pit (No.)	Livelihood Impacts	Access Disturbance Shops	Access Disturbance Houses)	Business Disruption (Shops) Annexure-II, Annexure III and Annexure IV	Sensitive Receptors	Mitigation Measures
							Numbers	Numbers	Numbers	Numbers	
			Road, Riaz Ali Road								
4	Lateral Garhi Shahu Road L6A	1050	Garhi Shahu Road	2	1	No Impact	0	0	0	0	No Impact
5	Lateral Garhi Shahu Bazar-L3A	1050	Mughalpura Road	2	2	Access to shops may disturb which has to be ensured. Access to houses also has to be ensured	9	2	0	0	Access to shops and buildings must be ensured through traffic management.

S. No	Sewer Line	Sewer Line Dia (mm)	Roads	Jacking Pits (No.)	Recipient Pit (No.)	Livelihood Impacts	Access Disturbance Shops	Access Disturbance Houses)	Business Disruption (Shops) Annexure-II, Annexure III and Annexure IV	Sensitive Receptors	Mitigation Measures
							Numbers	Numbers	Numbers	Numbers	
6	Lateral Gazi Mohalla-L4A	1050	Mughalpura Road	1	1	The road width is 15 feet, and along this road, there is an additional 15 feet of shoulder space. The road will be completely closed here. There is a school, High Hope, on this road with two gates, so there will be no issue with access to the school. There is a commercial plaza at this point as well, but there will be no issue with its access. Ghazi Shahu Bazar Chowk, which connects to Ghazi Muhallah will be blocked, only pedestrians can pass. The access to shops will not be impacted.	2	0	0	1	Access to shops and buildings must be ensured through traffic management.
7	Lateral Ashiq Hussain Road-L5B	1500	Ashiq Hussain Road	3	3	No Impact	0		0	0	No Impact

S. No	Sewer Line	Sewer Line Dia (mm)	Roads	Jacking Pits (No.)	Recipient Pit (No.)	Livelihood Impacts	Access Disturbance Shops	Access Disturbance Houses)	Business Disruption (Shops) Annexure-II, Annexure III and Annexure IV	Sensitive Receptors	Mitigation Measures
							Numbers	Numbers	Numbers	Numbers	
8	Lateral Samanabad-L3C	1050	Samanabad Road	2	2	The green belts can be used to ensure access to 3 shops	3	0	0	0	Access to shops and buildings must be ensured through traffic management.
9	Lateral Zafar Ali Road-L3B	1500	Zafar Ali Road	2	3	No Impact	0	0	0	0	No Impact
10	Lateral Rana Shoukat Mehmood Road-LB5	1050	Rana Shoukat Mehmood Road	1	1	No Impact	0	0	0	0	No Impact
11	Lateral Infantry Road-L2A	1050	Infantry Road	1	2	No Impact	0	0	0	0	No Impact
12	Lateral Infantry Road-L1A	1500	Infantry Road	2	2	LPG shop and house are located, so its access will be impacted. The road width is 20–22 feet. The road will be closed, affecting 4 houses and 4 shops. The KBE side office will face access issues.	2	0	5	1	Compensation for business disruption has to be provided. Access to houses and shops has to be ensured.

S. N o	Sewer Line	Sewer Line Dia (mm)	Roads	Jacking Pits (No.)	Recipient Pit (No.)	Livelihood Impacts	Access Disturbance Shops	Access Disturbance Houses)	Business Disruption (Shops) Annexure- II, Annexure III and Annexure IV	Sensitive Receptors	Mitigation Measures
							Numbers	Numbers		Numbers	
13	Lateral Davis Road- L3A	1050	Davis Road	1	1	No Impact	0	0	0	0	No Impact
14	Lateral Lytton Road L1C & L2C	1050	Lytton Road	6	5	The access to shops and houses has to be ensured	6	2	0	1	Access to shops and buildings must be ensured through traffic management.

S. No	Sewer Line	Sewer Line Dia (mm)	Roads	Jacking Pits (No.)	Recipient Pit (No.)	Livelihood Impacts	Access Disturbance Shops	Access Disturbance Houses)	Business Disruption (Shops) Annexure-II, Annexure III and Annexure IV	Sensitive Receptors	Mitigation Measures
							Numbers	Numbers	Numbers	Numbers	
15	Lateral Lakshmi Chowk-L8 and L0		Abbot Road	3	4	This point starts from the front of the A.S. car showroom and extends up to just before the DIG Investigation office. One side of the road will be completely closed, which will cause access issues. There are 10 to 15 shops in this area. The road width is 30 feet, and one side of the road will be closed. This point is near the gate of Shaheen Complex. There will be an entrance issue for the complex, but since the complex also has a gate on the Egerton Roadside, there will be no major issue. However, there will still be space for pedestrians to access the shops	10	1	6	1	Compensation for business disruption has to be provided. Access to houses and shops has to be ensured.

S. No	Sewer Line	Sewer Line Dia (mm)	Roads	Jacking Pits (No.)	Recipient Pit (No.)	Livelihood Impacts	Access Disturbance Shops	Access Disturbance Houses)	Business Disruption (Shops) Annexure-II, Annexure III and Annexure IV	Sensitive Receptors	Mitigation Measures
							Numbers	Numbers	Numbers	Numbers	
16	Lateral Ayesha Sadique Road-L4B	1050	Ayesha Sadique Road	3	3	This is a circular pit with a diameter of 15 feet, located on the left side of the road. There is space available near the disposal area. Access has to be ensured for a street and a house. The road will be closed.	1	1	0	0	Access to shops and buildings must be ensured through traffic management.
17	Lateral Rasool Park-L6B	1050	Shama Road	2	2	Access to 2 streets and 11 houses has to be ensured. The road will be closed	0	13	0	0	Access to shops and buildings must be ensured through traffic management.
18	Lateral Center Point-L2B	1500	Main Boulevard Gulburg	7	7	No Impact	0	0	0	0	No Impact
19	Lateral Guru Mangat-L1&L18		Guru Mangat Road	2	1	No Impact	0	0	0	0	No Impact
Total				82	83		122	64	17	16	

2.3.2. Impacts on Businesses

The livelihood of different families is associated with the commercial activities that are under the impact of the project. With the project interventions in impact areas, 17 different types of business operators/shopkeepers will face business disruption impact on their commercial activities that will result in the loss of their livelihood for the period of business interruption until restored. Business interruption in the project area would have caused a loss of temporary impacts for 30 workers employed by the business operators. All workers will be compensated for the loss of their wages as livelihoods. The livelihood of different families is associated with the commercial activities which are under the impact of the project. The temporary impacts include the loss of business for Households of 17 business operators and 30 employees. The business operators will be compensated for 04 months of their net income while employees will be provided with 04 months of salary/wages. Out of 17 business operators, 09 are running businesses in a rented place. The amount of actual rent of the business premises/shops will also be provided for 04 months to these business operators. All the business operators running businesses on rent affirmed that they would continue their business after the construction of the project in the same place. There are no business operators or employees who fall in the category of vulnerable. A summary of livelihood impacts on businesses and employees is presented in Table 4 and Table 5 below, while the detail of livelihood impacts and compensations are provided in **Annexure-II** and **Annexure-III** and **Annexure IV**.

Potential reduction in the income of these business owners will be affected due to the construction of jacking and recipient stations. The livelihood impacts will also occur to the business employees. The impact on one station due to civil works will be for a four (04) months duration. Considering this compensation is estimated on the loss of net income for four (04) months. The budget allocation for businesses and employment loss has been assessed based on the field surveys/interviews. The maximum provision in this LRP will only be disbursed upon verifying the affected person's net income records.

Table 4 Summary of Livelihood Impacts on Businesses

Sr. No.	Type of Businesses Affected	No. of Business as Per Scale *of the Business				No. of Business as per Estimated Monthly Income in PKR				
		Small	Medium	Large	Total	<50,000	50,000-100,000	100,000 – 150,000	150,000 >	Total
1	Food and beverages	1	-	-	1	-	1	-	-	1
2	Liquid Gas Shop	1	-	-	1	1	-	-	-	1
3	Groceries	1	-	-	1	-	-	1	-	1
5	Barber Shop	-	1	-	1	1	-	-	1	1
6	Garments	1	-	-	1	-	1	-	-	1
7	Printing Press	-	-	1	1	-	-	-	1	1
8	Vehicle Workshops	2	1	-	3	-	2	-	1	3
9	Car Sale Purchase	-	2	-	2	-	-	-	2	2
10	School Bag Shop	1	-	-	1	1	-	-	-	1
11	Kitchen Equipment	1	-	-	1	-	-	1	-	1
12	Mechanical Works	1	-	-	1	-	1	-	-	1
13	Building Material	1	-	-	1	-	1	-	-	1
14	Scrap Shop	1	-	-	1	-	-	1	-	1
15	Parking Stand	1	-	-	1	-	-	1	-	1
Total		12	4	1	17	3	6	3	5	17

* The small business with up to PKR 150,000 net monthly income. Medium business = more than PKR 150,000 and upto PKR=10,00,000 net monthly income: Large business = more than PKR 10,00,000 net monthly income

Table 5 Summary of Livelihood Impacts on Employees

Employee Category	No. Employees	No. of Employees as Per Average Monthly Income in PKR.			
		< 15,000	15,000 – 25,000	>25,000	Total
Salesmen	2	0	2	0	2
Auto Mechanic	4	0		4	4
Helpers	10	0	2	8	10
Painter	3	0	0	3	3
Machine Operators	2	0		2	2
Lath Workers	3	1		2	3
Hairdresser	4			4	4
Parking Worker	1		1		1
Electrician	1			1	1
Total	30	1	5	25	30

2.3.3. Impacts on Outfall Drainage Channel

The area of drainage channels was visited and found that both channels pass into the land owned by the Lahore Development Authority (LDA). The civil works on the channels will be limited to RoW of LDA. Therefore, no land acquisition is involved in the construction/ rehabilitation of both channels. No involuntary resettlement is involved in the project as no structure will be demolished. The impacts on the businesses, if any, will be mitigated through engineering solutions to be adopted by the contractor.

2.3.4. Impacts on Disposal Stations

There are 22 pumping/lift/disposal stations of LWASA which will cede the mechanical sewer wastewater pumping operations and will serve as bypass stations in case of choking of the system. There will be some modifications in the structures of the existing 22 disposal stations. Intake structures will also be constructed in these disposal stations. This may involve the demolishing of existing structures located on the premises of disposal stations.

22 offices belonging to LWASA exist on the premises. In case these offices are demolished, similar buildings will be constructed to accommodate these offices. Disposal stations are constructed on government land. All construction works will be confined to the existing disposal station. Therefore, no land acquisition is involved in the construction of the disposal stations.

2.3.5. Impacts on Gender

Business disruption impacts are assessed on the route of trunk sewer lines. None of the impacted businesses are run by women. No women employee was found in these businesses. However, the gender consultation process for the project, in line with AIIB's Gender Guidelines and Environmental and Social Policy (ESP) was carried out. This aimed to ensure equitable participation and benefit-sharing for women and vulnerable groups throughout the project's lifecycle. The consultation focuses on assessing gender-specific impacts, incorporating women's perspectives, promoting gender equality, and enhancing community participation. Key findings reveal concerns about health risks, economic opportunities, access to information, and existing sewerage infrastructure. Women emphasized the need for improved safety measures, job creation, skills training, and a gender-sensitive grievance mechanism. Recommendations include capacity building, enhanced communication strategies, and ongoing engagement to ensure sustainable gender-sensitive

outcomes. Women were generally optimistic about the project believing that the project would improve employment, mobility, income generation, and overall living standards.

The Gender Action Plan (GAP) as a standalone document prepared for the project aligns with the AIIB's Environment and Social Framework (ESF). GAP aims to promote gender equality, inclusivity, and women's socioeconomic empowerment. It serves as a roadmap to achieve the United Nations Sustainable Development Goal No. 5 on Gender Equality. The GAP emphasizes the importance of integrating gender issues into all project components, enhancing women's participation, raising awareness about health and sanitation, and addressing gender-based violence. Key objectives include conducting gender sensitivity training, fostering community engagement, and ensuring that women and marginalized groups are included in designing, implementing, monitoring and evaluation activities.

To implement the GAP, the project will focus on various initiatives such as awareness training on sewerage management and hygiene, capacity building for women, and economic opportunities. Activities include educating participants on safe waste disposal and the economic impact of inadequate sewerage systems while providing training to enhance skills in sanitation management. GAP also consists of the skill development training plan. Additionally, measures will be taken to prevent child labor and address gender-based violence through awareness campaigns and establishing support structures.

2.4. Skill Development and Training

The project will impact on the livelihood of small shopkeepers (APs). These small business holders do have the capacity to run their businesses. They lack capital investment and training in the enterprises. Resource persons from vocational training institutes can be arranged under the project to provide training to the AP and his workers so that their skills are improved, and they can undertake business activities better. The business owners whose businesses will be disrupted due to the project's construction and their employees are questioned whether they require any training. In response, 10 candidates of 07 business holders showed interest in the skill development training. Out of 10 candidates, 02 are business holders themselves, 04 are sons of business holders and 04 are employees of business holders. 02 candidates are interested in seeking training in computers, 01 in professional cooking, 04 in automobiles, 01 in electrical work, 01 in hairdressing and 01 in free-lancing (marketing). In total training will be provided for 10 persons. The names and basic data of these candidates are placed in **Annexure-V**. The tentative training plan along with the budget is presented in Table 6.

Table 6 Training Plan for Affected Persons

Type of Training / Course	Duration	Eligibility	No. of Participants	Description	Budget* (PKR)
Basic Computer Information Course	6 months	Matriculation	2	Introduction to Computers operating systems Microsoft Word Applications Microsoft Excel Applications Microsoft PowerPoint (Presentation Development) Computer networking and internet Web page surfing	200,000

Type of Training / Course	Duration	Eligibility	No. of Participants	Description	Budget* (PKR)
Certification in Professional Cooking	9 months	Matriculation	1	Kitchen Fundamentals Knife skills and kitchen safety Food Preparation: Cooking techniques Baking, grilling, saucing Stocking Menu planning and nutrition Food Safety and Sanitation Food presentation.	600,000
Technical Training in Vehicle Repairing	3 months	Matriculation	4	Engine Repair, Body Works Maintenance	600,000
Technical Training Electrical Works	3 months	Matriculation	1	AC repair, Electrical Works	150,000
Hair Dressing	3 months	Matriculation	1	Hair styling, Beauty Care	150,000
Free-Lancing (Marketing)	3 months	Matriculation	1	Content Marketing Marketing Research E-commerce Digital Marketing Video and YouTube Marketing Mobile Marketing Social Media Marketing	100,000
Total			10		1,600,000

* The costs are based on rates of Tcvta and Cothm

3. SOCIO-ECONOMIC PROFILE

3.1. Socio-economic Profile of Project Areas

The project will be implemented in Lahore primarily catering to the sewerage requirements of central Lahore consisting of Aziz Bhatti Town, Gulberg Town, Gunj Bakhsh Town, and Allama Iqbal Town. This section describes the socio-economic conditions of Lahore City. The micro-tunneling activity spans 32.37 Km and passes along the main roads of Central Lahore. The total length is divided into three segments; (A) from Karachi Phattak to Qartaba Chowk, (B) Guru Mangat Road to Qartaba Chowk and (C) which is also the confluence point of lines A and B, starts from Qartaba Chowk and ends at Gulshan-e-Ravi disposal station. The wastewater is then transported into River Ravi through an outfall drain. Some congested areas are highly commercialized through which sewer lines pass. The whole project is in a developed and highly urbanized setting. There are 82 jacking and 83 recipient pits where construction will take place around which small, medium, and large businesses are located. An assessment of these businesses and the impact on them due to the project is presented in Table 2. However, the broader profile of the routes of trunk sewer lines is presented below.

Karachi Phattak, where line A starts from, passes under the canal to join with Allama Iqbal Road is semi old developed area where there are shops along the main road. There are few mosques, hospitals, schools, and a shrine of Mian Mir Sahib; however, there will be no impacts on the traffic, local businesses, or communities. Most of the residents belong to the low and middle class. The locals mostly speak Punjabi and a few Sikhs shops have also been seen. The local population is mostly divided into Bralvi and Shia sects. Then line A continues from Allama Iqbal Rd. to Shimla Pahari which is also semi old developed area. The population speaks Punjabi and Urdu and belongs to the middle class. The Allama Iqbal Rd. is a two-way road around 25m wide. There will be no impacts on traffic or business loss. Two laterals starting from Ghazi Mohalla and Larech Colony disposal station, pass through Garhi Shahu Bazar to join line A at Allama Iqbal Rd. It passes through a narrow commercial area which would have temporary losses for businesses. These businesses have been contacted by the Social Safeguard team to calculate their compensation. From Shimla Pahari, the line moves along Agerton Road passes in front of Flattie's Hotel and curves towards Qartaba Chowk, Queen's Road. This segment is mostly commercial and has wide roads that can easily accommodate construction activities.

There could be a conflict point close to the Flattie's Hotel which may cause access problems. This will be resolved through engineering design. The area population speaks both Urdu and Panjabi and has many shops run by Pathans. This segment has some green spots and has Jinnah Garden close by. The main sensitive receptors include WAPDA house, Flattie's Hotel and Punjab Assembly Hall. Qartaba Chowk where line A ends a commercial area that is famous for home appliances shops.

Line B starts from a highly commercial and old industrial area of Guru Mangat Rd. and connects to Syed Gurmani Rd. The area is known to be posh, highly developed with a lot of greenery. There are shopping malls, brand shops, and international food chains like McDonald's, KFC and Hardy's. The locals belong to the middle to high class. The majority of the population speaks Urdu. There are a few sensitive receptors that include Mother Teresa Orphanage and Home Economics College for Women. The Gurmani Rd. runs along a stormwater/wastewater drain. The construction will be done on the left side of the road, away from the drain. This site has houses and the green belts in front of the houses will be sacrificed and rehabilitated after the completion of the works. The line from there connects to Shah Jamal Rd. via less than a half Km junction of Syed Maratab Ali Rd. and passes under the canal. The Shah Jamal Rd is a single road which is about 13m wide. It is a residential and commercial area where we find schools, hospitals, the shrine of Baba Shah Jamal and the Iran Consulate. There could be a point that could cause access issues, but it can be easily avoided through

engineering solutions and by moving the pit point a few meters. Line B then continues to Ferozpur Road to Qurtaba Chowk which is two-way 4 lanes on each side and 33 meters wide. This is the main artery of the city and has commercial plazas on it. There is no impact as plenty of space will be available for construction activities. Laterals from Shama, Maulana Shaukat Ali Rd and Shadman also join line B.

Line C, which starts from Qurtaba Chowk to Gulshan-e-Ravi disposal station is in an old developed area that has narrow roads, small houses, shops, hospitals and hotels. The population belongs to the low-income class and mostly speaks Panjabi. The line passes through a single road, Bahawalpur Rd., which is 8 meters wide, and it will be closed for construction and require a diversion. Lahore's largest graveyard, Miani Sahib, is situated on this road. From Bahawalpur Road line continues to Multan Rd., about 20 meters away from the historical monument of Chauburji. It runs along the Multan Road till it reaches the Gulshan-e-Ravi Road from where it turns left onto Babu Sabu Nonarian Rd. and then it terminates at the Gulshan-e-Ravi disposal station. The Babu Sabu Nonarian road is a congested single road having a width of just 8 meters. Also, the Cantonment drain runs along the Nonarian road, and the construction will be done on its left bank. There are a few shops and a house that might face access issues. The road will be closed and require diversions. The access issue has been discussed with the design team and they are considering providing temporary bridges to cater for access issues. Since the road is narrow and has a drain by its side, it is prone to more accidents and conflicts with the local community. Other sensitive receptors along line C include the Department of Minerals and Mines, Fisheries and Wildlife Department, Government Girls High School and a mosque.

3.1.1. Political and Administrative Setup

The project site is situated within Lahore City, part of the Lahore District in Punjab Province, Pakistan. The highest-ranking administrative authority in the district is the District Commissioner. For revenue collection and administrative purposes, the Lahore District is divided into five tehsils namely Lahore Cantt, Lahore City, Model Town, Raiwind and Shalimar. Local governance is further managed through 274 Union Councils. The total land area of Lahore District covers 1,772 square kilometers. As per the catchment area, the project Area falls in partly four Tehsils namely Lahore Cantt, Lahore City, Model Town and Shalimar Tehsil. It falls in Union Council Numbers 61, 68, 62, 58, 64, 65, 73, 67, 72, 74, 32, 34, 36, 152, 145, and 143.

3.1.2. Demographic Characteristics

Lahore City, located in Punjab Province, Pakistan, is bordered by Sheikhupura District to the north and west, the Wahgah border to the east, and Kasur District to the south. The northern boundary of the city is marked by the River Ravi. Lahore City spans a total land area of 404 square kilometers. According to the 2023 Census, Lahore has a population of 13.9 million, having experienced an average annual growth rate of 2.65% from 2017 to 2023. The city has an average household size of 6.3 people and a population density of 7,339 persons per square kilometer. The population is slightly male dominated, with males comprising 52.9% and females 47.1%. Additionally, Lahore has a youthful demographic, with over 40% of its residents under the age of 15.³

Lahore City is bounded on the North and West by Sheikhupura district, on the east by India, on the south Kasur district and River Ravi flows on the northern side of Lahore. The district comprises five sub-administrative units (Tehsils). According to the census 2023, the overall population of the district was 13,004,135 and among them, males were 52.9 percent and 47.1 percent were females. The sex ratio is measured as 112.47. The area of the Lahore district is

³ Punjab Development Statistics 2023, Bureau of Statistics, Planning and Development Board.

1,772 square kilometers, which gives a population density of 7,339 persons per square kilometer as compared to 3,566 persons observed in 1998. The average annual growth rate of the population in the district during the inter-census period 2017-2023 is 2.65%.

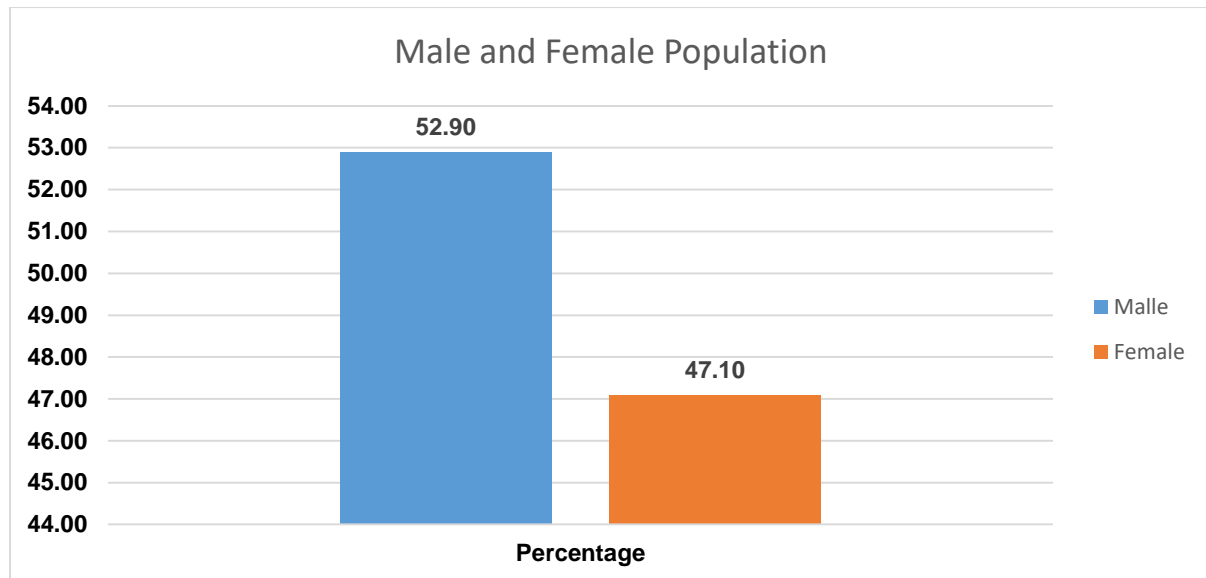


Figure 4 Male and Female Population

3.1.3. Religion

The majority of the population practices Islam, accounting for 95% of residents. Among them, 50% follow the Barelvi sect, 25% are Deobandi, and 10% belong to the Ahl-e-Hadith and Ahl-e-Tashi sects. The remaining 5% of the population consists of religious minorities, including Christians, Ahmadis, Hindus, Sikhs, and others. The graph below provides a breakdown of the religious and sectarian composition.

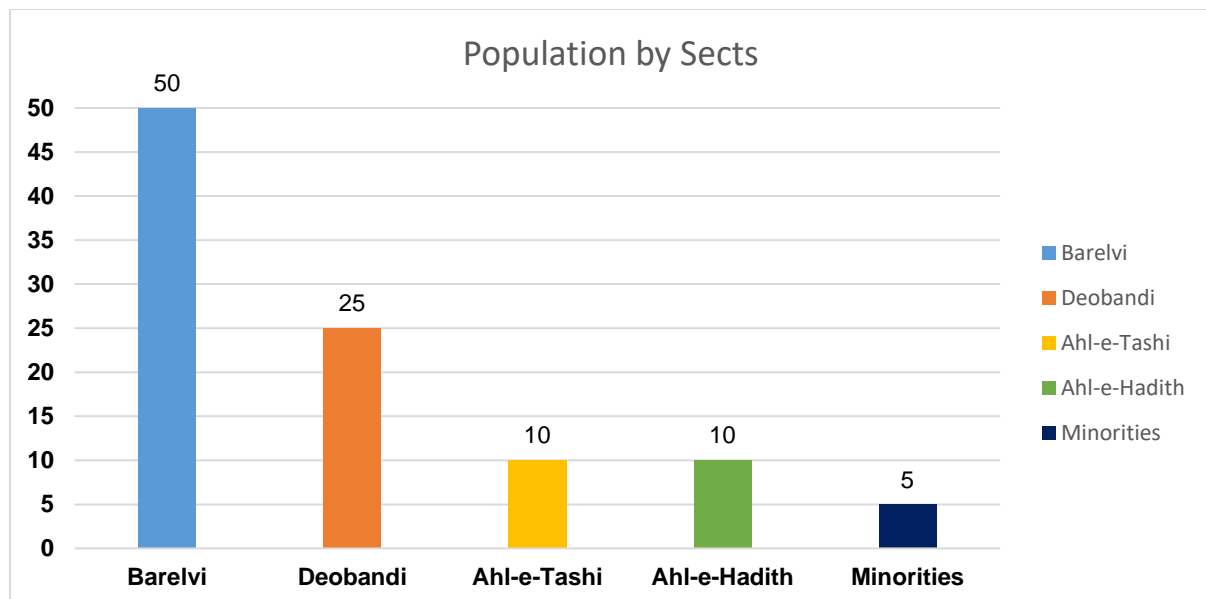


Figure 5 Population by Sects

3.1.4. Ethnic Structure

There is a variety of major castes and communities, including Arain, Jutt, Rajput, Malik, Pathan, Mughal, Sheikh, Kombh, and Gujjar. In addition to these groups, there are traditional village artisans such as Lohars (blacksmiths), Tarkhans (carpenters), Kumhars (potters), Mochis (cobblers), Machhis (water carriers), barbers, and weavers. Together, these communities play a vital role in shaping the diverse socio-economic fabric.

3.1.5. Language

Punjabi is the predominant language, spoken by approximately 74% of the population. Other languages spoken by smaller segments of the population include Urdu, Pashto, Saraiki, and Sindhi. In educational and governmental contexts, Urdu and English serve as the official languages.

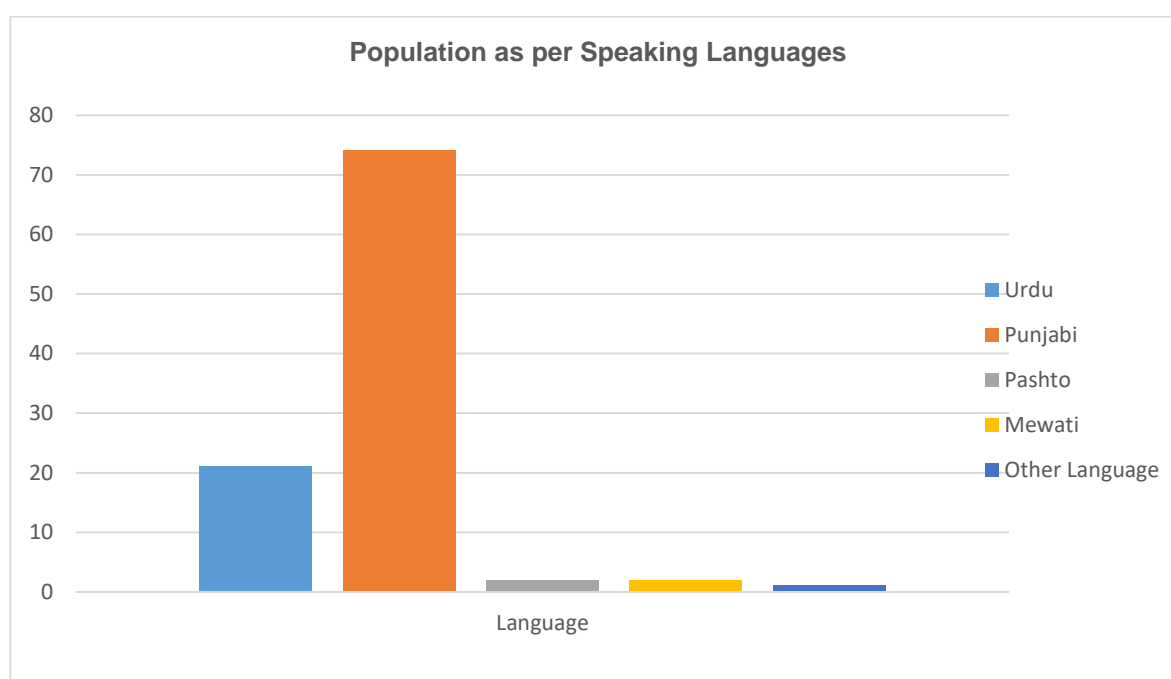


Figure 6 Population as Per Speaking Languages

3.1.6. Gender Ratio

There are 111 males for every 100 females, indicating a slightly higher gender ratio.

3.1.7. Marital Status

Among the population aged 15 and older, 37.1% have never been married, 57.7% are married, 4.9% are widowed, and 0.3% are divorced. The proportion of never-married individuals is higher among males than females.

Table 7 Marital Status

Marital Status	Detail	Percentage
Never Married	Both Sexes	37.1
	Male	42.2
	Female	31.2

Married	Both Sexes	57.7
	Male	54.8
	Female	61.1
Widowed	Both Sexes	4.9
	Male	2.8
	Female	7.3
Divorced	Both Sexes	0.3
	Male	0.2
	Female	0.4

3.1.8. Migration

16.4% of the population were recorded as lifetime in-migrants in Lahore District. Among the lifetime immigrants, 70.5% originated from other districts within Punjab, while 10.7% came from Sindh, Khyber Pakhtunkhwa, and Balochistan. Additionally, 1.4% were from Pakistan Administered Kashmir (PAK) and the Northern Areas (NA), and the remaining 117.4% were repatriated Pakistanis from other countries. Notably, there were only 11 migrants whose birthplace was not reported. Table 8 provides a detailed breakdown of lifetime in-migrants by their place of origin and settlement.

Table 8 Migration Status

Description	Percentage
Total in-migrants	100
Migrants from the same province	70.5
Migrants from other provinces	10.7
Migrants from PAK/ NA	1.4
Migrants from other countries	17.4
Migrants from places not reported	*

3.1.9. Economically Active Population

21.8% of the population is economically active, including those employed in both the formal and informal sectors. The labor force participation rate is considerably higher among males, at 54.2%, compared to just 12.1% for females.

3.1.10. Occupational Structure

In the project area, key occupations cover a wide range of sectors, including industry, trade, services, and government positions. The population is engaged in various professions, with the service sector being particularly significant, employing a large share of the workforce and playing a crucial role in the district's economy. The percentage of the population associated with different types of occupations is shown in table 9 below.

Table 9 Occupational Structure

Occupation	Population
Agriculture with its Allied Livestock Breeding, Fishing, Forestry	5.70%
Manufacture	9.60%
Construction	30%
Wholesale/ Retail, Hotel/ Restaurant	15.60%
Transport, Storage & Communication	6.70%
Community, Social & Personal Services	17.10%
Financing, Insurance, Real Estate etc.	5.40%
Activities not Adequately Defined	9.40%
Electricity, Gas & Water	0.50%

3.1.11. Income Distribution

Income distribution is markedly uneven, with a considerable disparity between high and low-income groups. The Gini coefficient, which quantifies income inequality, stands at 0.35, indicating moderate inequality. The majority of the population falls into lower-income brackets, while a smaller portion enjoys higher incomes.

3.1.12. Poverty

The poverty rate is around 29.5% of the population. To address this issue and improve living conditions for vulnerable residents, various government initiatives and social welfare programs have been implemented.

3.1.13. Literacy and Education

With a literacy rate of 78%, surpassing the national average, the literacy rate for males is 81%, while females have a literacy rate of 74%. There is a wide range of educational institutions, including schools, colleges, and universities in the project areas.

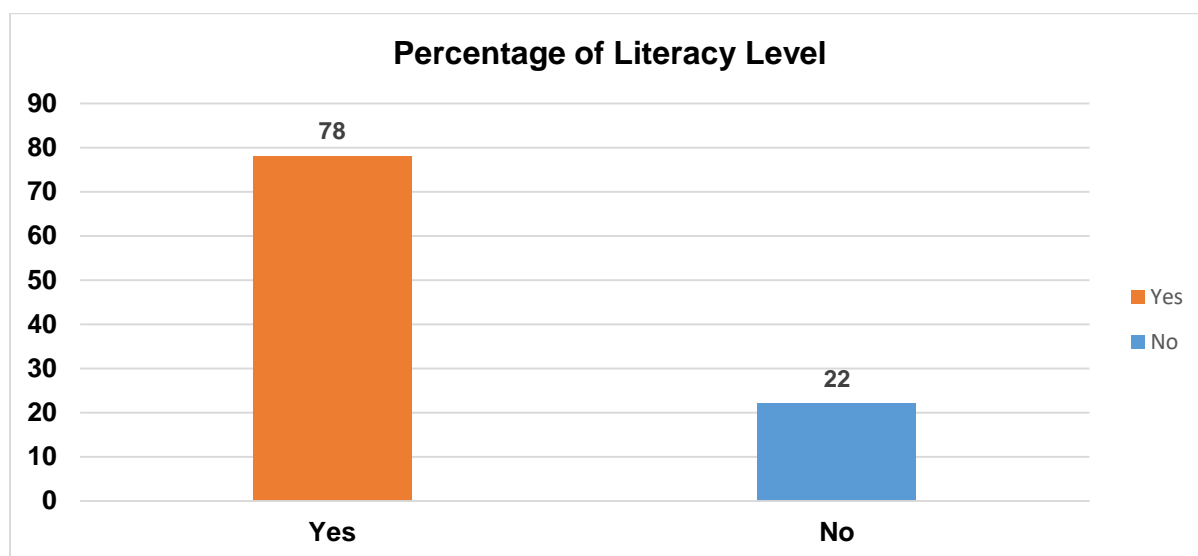


Figure 7 Literacy Level

3.1.14. Educational Facilities

Educational facilities are primarily managed by the Government of Punjab, the city government, the private sector, and various voluntary organizations. The educational attainment levels of the population are as follows: 12.6% have less than primary education, 23.2% have completed primary education, 22.5% have middle school education, 18.2% have matriculation (secondary) education, 9.3% have intermediate education, 7.2% are graduates, 2.6% are post-graduates, and 0.6% hold certificates.

3.1.15. Health Facilities

There is an extensive array of medical and health facilities to meet the needs of the local population. Key hospitals in the city include Shaukat Khanum Memorial Cancer Hospital, Pakistan Kidney and Liver Institute, King Saud Bin Abdulaziz Hospital, General Hospital, Lady Willingdon Hospital, Mayo Hospital, Fatima Jinnah Hospital, The Children's Hospital, Services

Hospital, and Ganga Ram Hospital. Additionally, several voluntary organizations operate hospitals that contribute to the healthcare services available to the public. Graph below shows the detail of medical facilities operated by Health Departments.

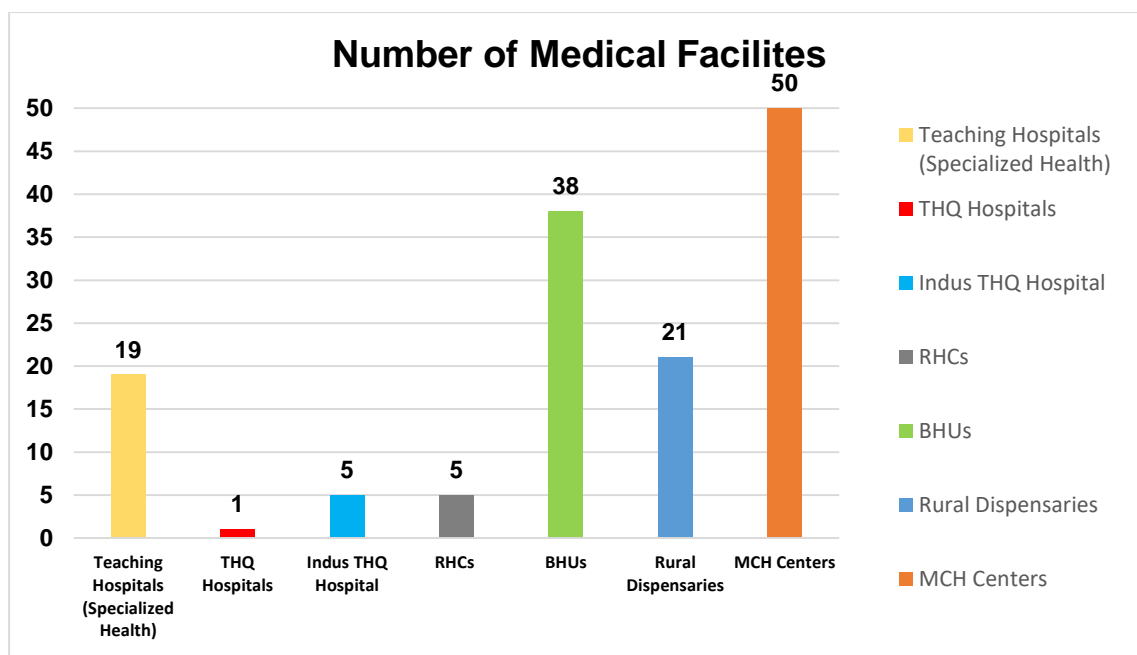


Figure 8 Number of Medical Facilities

3.1.16. Housing and Infrastructure

Housing conditions exhibit significant variation, marked by well-planned housing societies, apartment complexes, and residential colonies in contrast to low-income settlements. The majority of households own their homes, with only a small percentage residing in rented accommodations.

3.1.17. Industry

The project area hosts a diverse range of large industrial units that produce a wide array of products, including cotton, woolen, and silk fabrics; carpets and rugs; textile goods; leather and rubber footwear; clothing; pharmaceuticals; soap; iron and steel products; heating, plumbing, and lighting equipment; hardware; various fabricated items; agricultural machinery; engines and turbines; textile and printing machinery; metalworking machinery; pumps and compressors; household appliances; water generators; motor generators; transformers; electric fans; communication equipment; bicycles; and rickshaws.

Table 10 Industry in the Project Area

Name of Industry	Nos.
ICI Soda Ash	1
Pakistan Tobacco Company	1
Cement	2
Mari Petroleum	1
OGDCL	1
Brick Kilns	80
Flour Mills	16
Total	102

3.1.18. Land Utilization

Lahore District covers an area of 858,000 acres, with 316,000 acres designated as cultivated land. Of this, 33,882 acres are irrigated, representing 10% of the cultivated area⁴. The primary agricultural crops include wheat, vegetables, fodder, and fruit from orchards. Grazing also constitutes a significant land use. For detailed land utilization statistics for Lahore District in the year 2017, refer to the table below.

Table 11 Land Utilization

Particulars	Area (acres)
Cultivated Area	316,815
Irrigated Area	33,832
Rain Fed	282,983
Uncultivated Area	541,952
Forest	110,491
Culturable Waste	149,971
Not Available for Cultivation	281,490
Total Area	858,767

3.1.19. Archeological and Cultural Property

Lahore is a city renowned for its rich archaeological and historical heritage, featuring a diverse array of iconic sites. Among its treasures are the majestic Lahore Fort, the landmark Minar-e-Pakistan, the grand Badshahi Mosque, Shahi Fort, Chuburgi and the distinguished Lahore Museum. Visitors can also explore the revered Shrine of Data Ganj Bakhsh, the sacred Shrine of Madhu Lal Hussain, the impressive Shah Jahan Monument, and the enchanting Shalimar Gardens. Additionally, the historic seven gates of Lahore stand as enduring symbols of the city's past. These sites collectively offer a profound insight into Lahore's cultural legacy and storied history.

3.1.20. Transportation

Lahore's public transportation is primarily managed by the Lahore Transport Company (LTC) and the Punjab Mass Transit Authority (PMA). The PMA operates the Lahore Metro Bus and the forthcoming Orange Line Metro, which form the core of the city's transit network. To support these services, LTC and PMA run an extensive bus network that connects different parts of the city and serves as a feeder system for the Metro Bus. Additionally, the Punjab government has built numerous underpasses to reduce traffic congestion and prevent jams, making Lahore the city with the highest number of underpasses in Pakistan, according to official data.

Lahore Junction Station is the city's main railway hub and a key center for Pakistan Railway services in northern Pakistan. It provides essential connections to major destinations including Peshawar, Islamabad-Rawalpindi (the national capital), as well as long-distance routes to Karachi and Quetta. Additionally, Lahore Cantonment Station handles a selection of trains, further enhancing the city's extensive railway network.

Auto rickshaws and cabs are essential modes of public transportation in Lahore. The city is home to approximately 246,458 auto rickshaws, often called "autos," which are a prevalent choice for local travel. Additionally, motorcycle rickshaws, known as "chand gari" or "chingchi," are widely used for short-distance commuting. In recent years, private ride-hailing services such as IN drive and Yango have become increasingly popular in Lahore. These services offer

⁴ Punjab Development Statistics 2023, Bureau of Statistics, Planning and Development Board.

radio cabs that can be booked in advance via mobile apps or phone calls and have become a favored transportation option for many city residents.

3.1.21. Handicrafts

Lahore is renowned for its diverse arts and crafts, including intricate embroidery, exquisite silver and gold jewelry, and detailed brass and ivory inlay work. The city is also famous for its block and screen printing on textiles. Additionally, Lahore is a major center for hand-knotted carpet production. These carpets are among Pakistan's top export items and represent the second largest sector in the cottage and small industry. Local artisans in Lahore create a wide range of handmade carpets, featuring a variety of traditional motifs.

3.1.22. Gender Situation

Gender disparities continue to affect access to education, employment, decision-making, and resource control in the city. To address these challenges, it is crucial to implement targeted interventions and awareness programs that promote gender equality and empower women across the project.

3.2. Socio-economic Profile of Affected Persons

3.2.1. Demographic Profile

The study aimed to assess the present socio-economic condition of the APs and to appraise the project impacts on their livelihoods. Socioeconomic details of the 47 directly Affected Households (HHs) including 17 business owners and 30 employees collected through a survey of households of Affected Persons (APs). The total population of the 47 AP households is 354 persons of which 52 % are male and 48% are females. The average family size works out to 7.5. The breakdown by gender is given in Table 12.

Table 12: Household Composition of Affected Persons

Gender Disruption	Total Population	Percent
Male	184	52
Female	170	48
Total	354	100

As far as the existence of Indigenous People (IPs) is concerned, no such tribe/ community was reported in the area under the project.

3.2.2. Age Composition

The total population of the 47 AP households is 354 persons, the majority (46%) fall in the 15-40 years age group. The breakdown by age group is given in Table 13.

Table 13: Household Composition of Affected Persons

Age Range (Year)	Population	Percentage
0-15	93	26
15-40	162	46
40-60	75	21
60 & above	24	7
Total	354	100

3.2.3. Occupational Status

Most of the surveyed APs were running a small business and the data indicated that AHs were engaged in different business activities. All the owners are solely running their businesses. The APs are running a variety of businesses including food and beverages, liquid gas seller, groceries seller, barbers, garments sellers, printing businesses holders, vehicle workshops holders, car selling business holders, school bag sellers, kitchen equipment sellers, mechanical workers, building material sellers, scrap sellers, and parking stand holders. The finding of the survey indicates that the earnings of all directly affected APs are not less than the minimum wage (PKR 37,000/month) announced by the government for the fiscal year 2024 -25 and no women-headed household is under the impact of the project activities. The business disruption of 17 businesses will also lead to an income loss of 30 employees working in these businesses. They are salesmen, auto mechanics, helpers, painters, machine operators, lath workers, hairdressers, parking workers, and electricians. The average monthly income of these employees is PKR 31,133.

3.2.4. Education and Literacy

Data indicates that 94 percent of the members of the HHs of APs were literate. Out of the total literate, the persons having the primary level of education were 17 percent. Household members with middle-level education were 25 percent and those having matriculation-level education are 18 percent. Household members with intermediate are 11 percent and graduation level education are 14 percent. The illiterate HH members are 6 percent. The information with respect to the education and literacy level of the members of the APs' households is provided in Table 14.

Table 14: Literacy Rate and Educational Level of AP Household Members

S. No	Education	Number	Percentage
1	Primary	60	17
2	Middle	90	25
3	Matric	63	18
4	Intermediate	39	11
5	Graduation	51	14
6	Masters	21	6
7	Illiterate	21	6
8	Out of School	9	3
Total		354	100

3.2.5. Income and Expenditure

Income and source of income are important factors to run a family system smoothly. An adequate and permanent source of income leads to the rational planning of a family. The monthly income allows a family to plan and manage their kitchen, education of the children, social obligations and living status in society.

The average monthly income comes out to PKR 176,171 per AP's family. Among the surveyed APs family income ranges between PKR 50,000 to 500,000 per month. The expenditures of the household depend on income. The household income permits the head of the household to spend money on different items such as food, education, transport, utility bills, and other expenses. Based on information relating to the household expenditure is PKR 103,971 per month per Household. This expenditure includes utility bills, school/college fees of the

children, groceries, food, clothing, transport, and miscellaneous expenditures. The breakup of average household expenditures is given in Table 15.

Table 15: Average Household Expenditures

S.No	Household Items	Average Monthly Expense (PKR)	Percentage (%)
1	Grocery and Food	35,176	33.83
2	Utility Bills	20,706	19.92
3	Education	22,735	21.87
4	Transport	8,118	7.81
5	Health	9,412	9.05
6	Rituals/Ceremonies	7,824	7.52
	Total	103,971	100

3.2.6. Household Assets

The responses received from APs reflect that 76% of AHs have refrigerators, televisions, motorcycles, electric fans and sewing machines. Washing machines and geysers are possessed by 65 % of AHs followed by 41% of AHs having electric water pumps, 6% having pick up/vans and air conditioners. All the AHs have mobile phones.

3.2.7. Housing Conditions

The housing conditions of the respondents have been analyzed according to the type of houses in which they were residing. These are categorized as pucca houses, semi-pucca houses, and kacha houses. A house or building constructed with concrete or burnt bricks falls in the Pucca category whereas a house or building constructed with burnt bricks with mud comes under the semi-Pucca category while a house constructed with mud bricks or temporary wooden logs is categorized as a kacha house. 100 % of AHs have pucca houses.

3.2.8. Social Amenities

In the project area, all APs have facilities of electricity, cell phone service health, and educational institutions. The Source of drinking water was the municipal water supply for 95% of APs. Out of them, 30% were satisfied with the quality of the drinking water. Regarding service for solid waste collection, 40% of APs mentioned as collected by the government, while the remaining 60% reported solid waste collected by the informal sector. The facility of gas was available to 99% of APs.

3.2.9. Perception on Project

The APs showed mixed views on the possible impacts and effects of the project. They are optimistic that employment opportunities, marketing facilities access to sewerage and environmental upgradation will occur due to the project. They have not shown reservations that the project will negatively impact the local population. The perceptions of respondents are given in Table 16.

Table 16: Average Household Expenditures

S.No.	Possible impacts/effects of the Project	Increase (%)
1	Employment opportunities	53
2	Marketing facilities	59
3	Living standard	24
4	Income generating activities	41
5	Access to sewerage facilities	35
6	Environmental Upgradation	12
7	Mobility	12

3.2.10. Pressing Needs

Most of the APs opined that daily expenses for basic needs are hard to meet. Businesses are declining and unemployment is increasing. The basic household items such as groceries and food and utilities like electricity have become so expensive that the common man cannot afford them. A fair percentage of APs declared health education, transport, water supply and sewerage as the pressing needs for their respective areas.

4. LEGAL AND POLICY FRAMEWORK AND ENTITLEMENT

4.1. Legal Provision for Livelihood Restoration

The Land Acquisition Act 1894 is main law regulating land acquisition to be acquired for public purposes. The Act primarily mandates land acquisition from titleholders and registered sharecroppers. The Act neither inherently mandates specifically for resettlement assistance and rehabilitation provisions benefiting the non-title holders and other vulnerable groups, or severely affected APs, nor directly provides for the rehabilitation of income/livelihood losses or resettlement costs. The LAA 1894 does not trigger the project as only livelihood impacts are observed. However, the LAA 1894 may trigger in case some unanticipated impact occurs at the stage of detailed engineering design or during construction.

As per the preliminary design of the project, livelihood losses due to interruption in commercial activities at excavated jacking and recipient pits are envisaged. For addressing these losses provisions of Environment and Social Policy (ESP) and Environmental and Social Standards (ESSs) of the Asian Infrastructure Investment Bank (AIIB) will be followed.

The AIIB has its ESP which is required to be fulfilled by the borrower. The national legislation and ESP diverge on some key points that need to be identified and filled. The National laws and regulations entail compensation against land acquisition and land-based assets for title holders, whereas ESP covers compensation at market rates and even to non-titled holders. ESP also focuses on public consultation, information disclosure, and grievance redressal mechanisms. The gaps between the AIIB ESP and National legislation and measures to bridge the gaps between the two are tabulated below.

Table 17 Gap Analysis between National and AIIB ES POLICIES

Relevant ESS	National & Provincial Laws	Identification of Gaps	Gaps addressed
ESS-2 Land Acquisition and Involuntary Resettlement Resettlement Plan (RP) Livelihood Restoration Plan (LRP)	Land Acquisition Act (LAA), 1894 addresses the land acquisition and compensation by the Government.	Pakistan does not have any legal provision for the preparation and approval of resettlement-related documents e.g. Resettlement Plan (RP) / Abbreviated Resettlement Plan (ARAP). Scope of the LAA, 1894 in comparison to the requirements of ESP only partially takes into account the resettlement of displaced populations. Coverage of LAA, 1894 also does not provide any assistance for the poor and vulnerable PAPs, livelihood losses, or resettlement costs for rehabilitation. Generally, it covers monetary compensation policy for the acquisition of land and built-up property, and damage to other assets such as crops, trees, and infrastructure. LAA, 1894, does not require adequate consultation with affected parties; it simply requires that declaration and notice be	Construction of the project is in the state-owned land therefore; no land acquisition will be involved. Furthermore, relevance of this ESS will be reassessed during the detailed design stage at specific site levels when more information is available and upon the finalization of Project design. Although, the proposed project does not involve any private land acquisition, however, there will be resettlement and economic/ livelihood impacts. RP and LRP are developed to provide compensation to the displaced persons at market rates along with applicable allowances including severity and shifting allowances. GRM is developed for the project to deal with the

Relevant ESS	National & Provincial Laws	Identification of Gaps	Gaps addressed
		<p>given about the temporary use of land or acquisition and the purposes for which it is required and provide an opportunity for filing objections. Nor does it require the preparation of an RP/ARP. In Pakistan, no Government body/organization own the resettlement-related documents. Compensation for land and other assets is based on average values and schedule unit rates that do not ensure the replacement market value of the property acquired. However, LAA, 1894 requires a 15 percent compulsory acquisition surcharge to supplement the assessed compensation.</p> <p>According to LAA, 1894, only title holders can get compensation for their lands, while tenants and squatters who are considered illegal occupants are forcefully removed overnight and the project is started without considering the loss of livelihoods and means of livelihoods of the affected peoples neither any compensation of their losses in terms of properties is paid. There is no convenient GRM except recourse of appeal to formal administrative jurisdiction or the court of law.</p>	<p>grievances to resettlement and livelihood restoration. Public consultation was carried out with directly and indirectly affected persons for information disclosure.</p>
<p>ESS- 3</p> <p>Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities</p>	There is no law on indigenous people.	Since there is no law on indigenous people, AIIB's ESS-3 will prevail.	It is not applicable to the project as there are no indigenous people in the project area.

4.2. Environment and Social Policy and Standards of AIIB

The Environment and Social Policy (ESP) of AIIB recognizes that environmental and social sustainability is a fundamental aspect of achieving outcomes consistent with its mandate to support infrastructure development. AIIB aims at the fulfillment of mandatory environmental and social requirements for the projects. ESP facilitates the achievement of development

outcomes, through a system that integrates sound environmental and social management into its projects. Environmental and Social Standards (ESSs) delineated in the AIIB Environmental and Social Framework (ESF) apply to AIIB's funded projects. Three Environmental and Social Standards (ESS) are provided in ESF; i) Environmental and Social Standard (ESS) 1-Environmental and Social Assessment and Management ii) ESS 2-Involuntary Resettlement, iii) ESS-3: Indigenous People. ESS-2 will apply to the project setting as the project will impact the livelihood of commercial entities due to the construction of trunk sewers. No Indigenous People are found in the project area; hence ESS-3 does not trigger for the project.

The objectives of the ESS-2-Involuntary Resettlement are to avoid involuntary resettlement wherever possible or to minimize involuntary resettlement by exploring project alternatives. The adoption of tunneling boring technology in the project execution helped reduce the involuntary resettlement impacts if compared with the open-cut excavation. ESS-2 also entails that where avoidance of Involuntary Resettlement is not feasible to enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre-project levels or the improved overall socioeconomic status of the displaced poor and other vulnerable groups. For this sustainable development programs and benefit sharing by allocation of sufficient resources need to be ensured. Skill development and training capacity-building programs will be implemented in the project for this purpose.

4.3. Scope and Applicability of ESS-2 for the Project

The involuntary resettlement standard 2 envisages a screening process to determine its scope and applicability. Involuntary Resettlement (IR) covers physical displacement (relocation, loss of residential land, or loss of shelter) and economic displacement (loss of land or access to land and natural resources; loss of assets or access to assets, income sources, or means of livelihood) as a result of (a) involuntary acquisition of land; or (b) involuntary restrictions on land use or access to legally designated parks and protected areas. It covers such displacement whether such losses and involuntary restrictions are full or partial, permanent or temporary. As per the preliminary design of the trunk sewer project, physical displacement will not occur. Similarly, land acquisition or resettlement impacts are not observed as the construction will take place on roads that are owned by the Government. Livelihood impacts relating to the disruption of commercial activities of business holders are envisaged in certain points of the trunk sewer alignments.

If adverse environmental, social, or economic impacts from Project activities involving loss of access to assets or resources or restrictions on land use that do not fall within the definition of involuntary resettlement are identified, such impacts are avoided, or when avoidance is not feasible, they are at least minimized, mitigated, or compensated for, through the environmental and social assessment under ESS 1. If these impacts are found to be adverse at any stage of the project, the Client is required to develop and implement a management plan to restore the livelihoods of affected persons to at least pre-project level or better.

As per ESS-2, the client (in this case Lahore-WASA) is required to undertake certain IR-related actions. These actions include IR-related planning, preparation of requisite planning documents, holding stakeholder consultation, taking livelihood restoration measures, information disclosure, compensation payment as per entitlements, grievance redressal, supervision, and monitoring.

4.4. Restoration Plan

ESS-2 contains measures to Improve, or at least restore, the livelihoods of all persons displaced by the Project. The Entitlement Matrix depicting the restoration Plan of the affected persons is provided in Section 4.5 of this document. Where possible, land-based resettlement strategies when affected livelihoods are land-based or where land is collectively owned; or

monetary compensation at replacement value for the land, including transitional costs, when the loss of land does not undermine livelihoods;

- (i) Prompt replacement of assets with assets of equal or higher value;
Prompt compensation at full replacement cost for assets that cannot be restored;
and
- (ii) Capacity-building programs to support improved use of livelihood resources and enhance access to alternative sources of livelihood. Include transaction costs in determining compensation. Examine the opportunities for providing additional revenues and services through benefit-sharing, as the nature and objectives of the Project may allow.

The IR Planning envisages determining the required scope of Involuntary Resettlement planning, through surveys and studies of affected persons and an evaluation of socioeconomic conditions specifically related to Involuntary Resettlement risks and impacts for establishing baseline information on assets, productive resources, and status of livelihoods. Based on these activities, the client will prepare a Resettlement Plan (in this case Livelihood Restoration plan) encompassing affected persons' entitlements, income and livelihood restoration strategy, institutional arrangements, monitoring and reporting of implementation, budget, and time-bound implementation schedule.

Meaningful consultations with affected persons and project stakeholders and their informed participation in the consultations during the preparation of LRP are essential. Additionally, information disclosure of LRP and its implementation as part of the project with the provision of full costs will be ensured by the client. The client will also be responsible for compensation payment as per entitlements before any physical or economic displacement. Grievance redressal is part of the process. The client will closely supervise the implementation of the LRP throughout project implementation and monitor and assess outcomes specifically the impacts on the standards of living of affected persons, and achievement of objectives. The client will also disclose monitoring reports and use suitably qualified and experienced third parties to support monitoring programs.

4.5. Eligibility and Entitlements

Based on the assessment of proposed project components and intervention, the laying of underground trunk sewers does not involve any land acquisition as all the jacking and recipient stations are located on the roads owned by the Government. Similarly, no structures will be demolished, and no physical displacement will be involved. The anticipated project impacts are a temporary disruption in access and traffic mobility to the business enterprises, offices, private buildings, and residential structures. These impacts will be temporary in terms of temporary less accessibility to their premises. EPC contractor will ensure the safe passage for the access to shops/businesses and houses. The traffic management plan will be prepared to provide access. In case of loss of livelihood, only the affected businesses will be affected wherein business owners and employees/workers will lose their income during construction activities to be carried out for laying trunk sewers.

For compensation, eligible persons who will be impacted as a result of the project interventions as the construction of jacking and recipient stations are considered Affected Persons (APs). Persons losing livelihood or employment (temporary) have also been categorized as APs eligible for compensation. All APs will be entitled to compensation for temporary loss of business and employment. They will receive livelihood assistance in the shape of monetary compensation for loss of business which will be paid @ 04 months of their business income in place of their business and income interruption. Though the businesses will be temporarily suspended for 03 months period, however, a one-month business loss has been considered to restore their businesses at the same level. Accordingly, 04 months' compensation on net

income is entitled. Advance notices will be served to APs at least 01 month before the commencement of civil works to safeguard their stocks and equipment. The compensation for business disruption for APs is given as per entitlements. The entitlements for such APs are given in the entitlement matrix below.

The LRP focuses on assisting the lost livelihood due to temporary business disruption and suggests measures to restore their livelihoods to the former living standards of the APs. Keeping in view the project impacts, the compensation and other assistance/allowances would be permissible to the APs as per the Entitlement Matrix given in Table 18.

Table 18: Entitlement Matrix

Sr. No.	Category	Type of Loss	Entitled AP	Compensation Entitlements
1	Temporary loss of business income	Loss of business disruption due to construction activities	All affected business owners	<ul style="list-style-type: none"> • Compensation for net income loss (evidence-based) for the duration of the business stoppage. • An advance notice will be served to APs before the commencement of construction.
2	Rental payment for businesses operating in a rented place	Rent to be paid during the closure of the business	All affected business operators running business on rent	<ul style="list-style-type: none"> • Compensation for rent to be paid for the duration of the business stoppage. •
3	Temporary loss of wages/salaries	Loss of employment due to disruption in business	All affected employees, wage laborers, etc.	<ul style="list-style-type: none"> • Compensation for income loss due to disruption in employment • The loss of Income for the period of business interruption will be equal to 4 months of minimum wage rates i.e., PKR 37,000 per month as promulgated by the Government of Punjab Notification for the year 2024-25 (See Annexure-VI). • An advance notice will be served to APs before the commencement of construction.
4	Temporary Loss of Access to Business/Shop	Loss of Access to Business/Shop	All affected persons	<ul style="list-style-type: none"> • Barricade the pit area with a sheet • Rest assured for access to the shop/business • Raise Awareness campaign during construction activities area • An advance notice will be served before taking up construction activities.
5	Skills enhancement	Deficiency in skills	APs, APs's family members and Employees	<ul style="list-style-type: none"> • Training will be arranged for APs, their employees and family members • An amount of PKR 1.6 million is kept for this training.

Sr. No.	Category	Type of Loss	Entitled AP	Compensation Entitlements
6	Unanticipated impacts	All unanticipated losses	All affected persons	During the entire course of project implementation, the PMU will be responsible for dealing with any unanticipated adverse impacts in the light of the spirit of the principles of this Entitlement Matrix. Any additional impacts will be documented and if required, the Entitlement Matrix will be updated by the PMU to mitigate adverse impacts after verification of their occurrence and social impact assessment and mitigation plan in the form of addendum(s) to this LRP by ESU staff of PMC for endorsement by LWASA and approval of AIIB. All unanticipated impacts will be taken into account and addressed/compensated in line with AIIB's ESS and national Laws.

5. INFORMATION DISCLOSURE AND CONSULTATIONS

5.1. LRP Disclosure

The present LRP will be disclosed on LWASA and AIIB websites in accordance with the ESF of AIIB. The LRP will be made available at key publicly accessible and convenient locations such as the offices of LWASA and PMC. The summary of LRP will be translated into Urdu and disclosed on the LWASA website. The present LRP has been prepared based on the preliminary design of PMC. The Contractor may bring changes in the design hence LRP will be revised and updated thereof.

5.2. Consultation

As per requirements of AIIB's Environment and Social Policy (ESP), consultations were carried out with business runners, residents, and Affected Persons (APs) to inform them about the project components and probable impacts the project would generate. The opinions, views, and suggestions for the minimization and mitigation of project impacts were recorded. The concerns and issues raised by residents and APs have been adequately considered in the provision of livelihood restoration assistance in safeguards documents. The concerns relating to compensation for the loss of income will be catered to by PMU-LWASA. The compensation equaling 04 months of income of APs from their businesses is considered enough by the APs.

The concerns related to disturbance of access, and environmental issues were recorded, and it was informed that mitigation measures such as traffic management and control of air and noise pollution will be mitigated. Necessary safety measures with cautionary signs including health, safety, road safety, and pedestrian crossing will be displayed during the construction and operational phase of the project. The APs and residents were informed that nighttime work will take place during the construction of the project. Mitigation measures will be adopted to reduce disturbance to the residents during nighttime work. APs will be provided with opportunities by the Contractor for employment during the construction phase and opportunities will also be explored for the employment of APs in the operational phase of the Project. However, they suggested in time project completion and provision of adequate compensation to the APs.

APs were apprised of the LRP document by providing them with the details such as compensation to be paid, advance notices on construction schedules, timeline for completion of construction activities and measures to be adopted to ensure their health and safety. They were also apprised of the Grievance Redress Mechanism (GRM) available to them in case they have any grievance related to compensation payment and grievances related to health and safety and contractors' work. The summary of consultations is given in Table 19 while the attendance sheet is presented in **Annexure-VIII**.

5.3. Addressing Concerns and Future Consultations

The concerns and issues raised by residents and APs have been adequately considered in the provision of livelihood restoration assistance in LRP. The concerns relating to compensation for the loss of income will be catered to by PMU-LWASA. The monetary compensation equaling 04 months of income of APs from their businesses is considered enough by the APs. Consultations will be carried out again during the LRP updating by the EPC contractor based on a detailed design. PMU will also ensure public consultation and information dissemination during the execution stage of the project under the Stakeholder Engagement Plan (SEP) prepared as a standalone document. All relevant stakeholders, particularly those associated with religious places, cultural heritage sites, and graveyards have been apprised about the project. Formal consent is in process which is targeted to be obtained before the start of works upon receipt of Updated design.

Table 19: Summary of Consultation

Date of Consultation	Venue of Consultation	Number of Participants	AP's General Perceptions of the Project	Issues and Concerns Raised During Consultation	Response from the Project
17-09-2022	Q Chowk, College Road Gulbarga-III, Lahore	8	<p>The project is good for the benefit of residents of Lahore and local people as it will clean the drains which are spreading foul smell and are a cause of accidents.</p> <p>The tunneling technology is also good as it will lead to less impact on businesses and road users.</p>	<ul style="list-style-type: none"> - Project abandoned due to frequent changes in governments. - Businesses that will be impacted and need adequate compensation - Businesses interruption can be avoided by changing the location of pits to the other side of the road 	<ul style="list-style-type: none"> - The project is fully funded by the Asian Infrastructure Investment Bank (AIIB) hence will be implemented and will not stop on want of funds or change of government. - Request will be forwarded to the contractor who will look into it at the time of detailed engineering design.
17-09-2022	Q Chowk, College Road Gulberg-III, Lahore	5	<p>The project is in favor of local people. The cleaning of drains will clean the area, and the lives of children and adults will be saved which is threatened as incidents of falling in the drain occur.</p>	<ul style="list-style-type: none"> - Project may not be implemented as many projects are suspended after the change of government. - The project should not disturb the businesses and access of local people. 	<ul style="list-style-type: none"> - The project is fully funded by the Asian Infrastructure Investment Bank (AIIB) hence will be implemented and will not be suspended. - The business interruption will be compensated, and access will be ensured by providing alternative routes.
18-09-2022	Hamza Hospital, Shama Road	2	<p>The project is beneficial for the local population and the coming generations.</p> <p>The project will help with cleaning the environment.</p> <p>The lives of children will be saved. Our business should be protected during construction. Additionally, construction activity should not harm the environment. Compensation should be provided for the disruption of our business. The compensation</p>	<ul style="list-style-type: none"> - Businesses should be protected during construction. - Construction activity should not harm the environment. - Compensation should be provided for the disruption of our business. -The compensation should be enough to meet the expenses of APs for a couple of months. 	<ul style="list-style-type: none"> - Efforts are being made to reduce business losses in the design. The same will be followed by the contractor. - Mitigation measures will be adopted for environmental protection during construction - The project will affect businesses for one month, however, compensation will be for about 03 months.

Date of Consultation	Venue of Consultation	Number of Participants	AP's General Perceptions of the Project	Issues and Concerns Raised During Consultation	Response from the Project
			should be enough to meet expenses for a couple of months.		
21-09-2022	Sikandar Road, Cantt Drain Mian Mir Colony	1	<p>The project is designed by the government, and hopefully, it will benefit.</p> <p>The project should be for the benefit of local people.</p> <p>The drain is open, and people dump solid waste in it. Once a child also drowned in this drain.</p> <p>If the sewer line is laid, we support the project.</p> <p>The open drain causes disease.</p> <p>It also justifies the machines like Air Conditioners and other machinery getting rotten.</p>	None	Not Applicable
08-02-2023	Shama Metro Bus Station	2	Tunneling is a good technique.	<ul style="list-style-type: none"> - Business should not be affected. - The construction should take place away from the business. - The road should not be destroyed as this leads to business interruption 	<ul style="list-style-type: none"> - Affected businesses will be compensated. - The destroyed part of the road will be repaired.
08-02-2023	Shama Chowk	8	At this time of high inflation, we cannot see any advantage of such a project as it will affect already deteriorated businesses badly.	<ul style="list-style-type: none"> - Project will cause loss of businesses that are already in the doldrums. - The government should protect businesses first and give second priority to such projects. 	<ul style="list-style-type: none"> - Businesses will be interrupted temporarily against which compensation will be paid.
08-02-2023	Abbot Road Shops	7	<p>The benefit is that the issues arising from the mismanagement of liquid waste will be reduced.</p> <p>Water will not accumulate in the streets.</p>	<ul style="list-style-type: none"> - Businesses will be badly affected. - Government should take care of inflation at present rather than initiating such projects. 	<ul style="list-style-type: none"> - Business interruption will be well-compensated - Development projects contribute to the local economy.

Date of Consultation	Venue of Consultation	Number of Participants	AP's General Perceptions of the Project	Issues and Concerns Raised During Consultation	Response from the Project
08-02-2023	Main Chauburji Park	7	There is no need for such projects in the present high inflation period.	<ul style="list-style-type: none"> - The life and business of common men will be destroyed by this project. - People don't have money to feed their children, and the government is putting a burden on common men by building such projects 	<ul style="list-style-type: none"> - Business interruption will be well compensated - Development projects play a vital role in economic development.
8-02-2023	Bahawal Pur Road	9	There is no need for such a project in the present high inflation period.	<ul style="list-style-type: none"> - Roads will be closed which will destroy the businesses. - People are already under stress due to inflation. They need flour, not a sewer. 	<ul style="list-style-type: none"> - Access will be ensured by providing alternative routes - Development projects should also take place along with the welfare of local people.
05-04,2023	WASA Disposal Station- Gulshan Ravi	9	The government should focus on such projects	The dwellers fear their livelihood will be impacted	Livelihood losses will be compensated.
10-04-2023	Mehr Nazir Park	10	The project is beneficial for local people as the sewerage is blocked off and on	None	Not Applicable
10-04-2023	Ganda Nala Bund Road, Gulshan Ravi	8	The project is beneficial for local people as the sewerage is blocked off and on	None	Not Applicable
23-08-2024	Babu Nonarian Road	6	The project will be greatly beneficial to the public.	<ul style="list-style-type: none"> - The construction works will disrupt all the business activities temporarily. - Access to Transportation goods will be restricted. They showed satisfaction with the construction of the project and stated that the project would be beneficial for the public. - Previously construction of road projects also affected their business activities. 	The suggestion of participants to shift the construction area to the right bank of the Cantonment Drain to avert livelihood impact is forwarded to the concerned authorities. This shifting has been made in the design accordingly

Date of Consultation	Venue of Consultation	Number of Participants	AP's General Perceptions of the Project	Issues and Concerns Raised During Consultation	Response from the Project
				<ul style="list-style-type: none"> - They showed concern that construction activities should be completed within the stipulated time of 02-03 months as communicated by the survey team. They also expressed that if there is a delay in construction activities in the specified time, their business will be disrupted, which will cause income loss. - Minimal time will be utilized for the completion of construction activities in the area. - They also highlighted that construction material would not be placed/kept in front of the door/gates of shops/houses. - They also said that their stock/goods arise at the shop/store once a week on an average basis on vehicles, and there should be no hindrance to the transportation of goods/stock. - They pointed out that the construction of a sewer line towards the right side of the nullah will reduce resettlement/income displacement impacts as well as reduce the impact on traffic mobility in the area. 	
23-08-2024	Mustafabad	6	The benefit is that the issues arising from the mismanagement of liquid waste will be reduced.	<ul style="list-style-type: none"> - Businesses in this reach will be affected due to construction activities. - Access to customers will be restricted during the construction period. 	Access to shops will be ensured.

Date of Consultation	Venue of Consultation	Number of Participants	AP's General Perceptions of the Project	Issues and Concerns Raised During Consultation	Response from the Project
				<ul style="list-style-type: none"> - Mobility of the Public will be affected, and alternate access roads should be provided for mobility. - They suggested that an alternate site towards the right side of the nullah may be considered for the installation/placement of a sewer pipeline. 	
23-08-2024	Allama Iqbal Road, Bird Market	4	The project is good for the people living in the area	<ul style="list-style-type: none"> - Road closures will negatively impact local businesses, potentially causing significant disruptions. - With inflation already putting people under financial strain, their immediate concern is access to necessities like flour, rather than new sewer infrastructure. 	Access to shops will be ensured
23-08-2024	Railway Stadium, Mughalpura Road	5	The project is good for future developments.	<ul style="list-style-type: none"> - Business operations in this area will be impacted by the construction of this project. - They expressed their concern that construction activities will impact in reduction of Customers. - They suggested that shifting the jacking pit point at a distance of around 200ft to 250ft will avoid business disruption/income displacement/loss as there are shops at that place. However, the construction of the project is good for future developments. 	The suggestion of participants to shift the construction area backward in front of the wall of the railway stadium to avert livelihood impact will be forwarded to the concerned authorities. The design is changed to avert impacts accordingly
23-08-2024	Mozang Road	5	The project is beneficial for the area as the sewerage is blocked off and on.	<ul style="list-style-type: none"> - They raised the issue of rainwater and highlighted that the rainwater penetrates their shops during the rainy season. 	<ul style="list-style-type: none"> - The contractor will be bound by LWASA to complete the civil works in the stipulated time.

Date of Consultation	Venue of Consultation	Number of Participants	AP's General Perceptions of the Project	Issues and Concerns Raised During Consultation	Response from the Project
				<ul style="list-style-type: none"> - They expressed concern that construction activities should be completed within the stipulated timeframe of 2-3 months, as communicated by the survey team. They also indicated that any delays in the construction process beyond this period could disrupt their business operations and result in a loss of income. - Customer access will be limited during the construction period. - Previously construction of road projects also affected their business activities. - It will take more than 3 months; we do not support it. - They recommended considering an alternative site on the right side of the nullah for the installation or placement of the sewer pipeline. - Minimal time will be utilized for the completion of construction activities in the area. - They expressed concern that the construction activities will take more than 3 months, causing income loss due to disturbance of business, and therefore do not support it. They also added that the department should consider an alternate site /route to save the loss of their businesses. - They also emphasized if there is no alternate site or route available the department should try to minimize the 	<ul style="list-style-type: none"> - The compensation will be paid to the business holders whose business will disrupt due to construction of sewer line

Date of Consultation	Venue of Consultation	Number of Participants	AP's General Perceptions of the Project	Issues and Concerns Raised During Consultation	Response from the Project
				<p>construction period by doing day and night work.</p> <ul style="list-style-type: none"> - They also pointed out that the local contractor should not deploy/engaged in this project as they have no less resources and capability of machinery and equipment. - They also express their concern that shop operators will not allow the construction activities of the project in this area. They also insisted that the survey team may contact the market union president in this regard. 	
10-12-2024	Nusrat Colony, Mian Meer, Cantt	19	The project is good for the benefit of residents of Lahore and local people as it will clean the drains which are spreading foul smell and are a cause of accidents.	<ul style="list-style-type: none"> - The project should be completed swiftly. Project delays may cause disturbance for the public. - Construction areas should be restored. - Cleanliness should be maintained. - Night-time work will disturb the residents 	<p>The project is being financed by AIIB. Such projects are time-bound and hence will be completed in time. The contractor will restore the site to its original after completion of construction.</p> <p>The contractor will adopt essential measures to reduce disturbance to the residents during night shifts.</p>
10-12-2024	Infantry Road	11	The project is good for local people	<ul style="list-style-type: none"> - It is requested to complete the project as soon as possible. - Site restoration to its original form after construction and cleanliness should be maintained. 	<p>The project is being financed by AIIB. Such projects are time-bound and hence will be completed in time. The contractor will restore the site to its original after completion of construction.</p>

Date of Consultation	Venue of Consultation	Number of Participants	AP's General Perceptions of the Project	Issues and Concerns Raised During Consultation	Response from the Project
11-12-2024	Samanabad	10	The project will be greatly beneficial to the public.	<ul style="list-style-type: none"> - The project should be completed as early as possible. - Night-time work will disturb the residents 	<p>The project is being financed by AIIB. Such projects are time-bound and hence will be completed in time.</p> <p>The contractor will adopt essential measures to reduce disturbance to the residents during night shifts</p>
11-12-2024	LOS Road	10	The project will be greatly beneficial to the public.	<ul style="list-style-type: none"> - During such projects, most of the time incompetent contractors are hired who don't work properly. - Usually, the workforce deployed during the construction of such projects is incompetent. - 	<p>The contractor will be bound to hire skilled labor and complete the work in time.</p>
11-12-2024	Saadi Park, Mozang Chungi	10	The project will be beneficial to the public.	<ul style="list-style-type: none"> - The construction activities may generate air and noise pollution. - The construction activities may cause traffic disturbances and inconvenience to locals. - A competent workforce should be hired. - Night-time work will disturb the residents 	<p>Transportation of construction materials will be avoided during the night and a strict schedule of construction material transport will be observed.</p> <p>Water sprinkling at sites will be ensured where dust will be emitted.</p> <p>A proper traffic management plan will be implemented to avoid traffic jams</p> <p>The contractor will adopt essential measures to reduce disturbance to the residents during night shifts</p>

Date of Consultation	Venue of Consultation	Number of Participants	AP's General Perceptions of the Project	Issues and Concerns Raised During Consultation	Response from the Project
12-12-2024	Qila Gujjar Singh	10	The project will be greatly beneficial to the public.	<ul style="list-style-type: none"> - The project should not end up like conventional government schemes (i.e., incomplete, delayed, troublesome for the public, etc.) - Night-time work will disturb the residents 	<p>The project is being financed by AIIB. Such projects are time-bound and hence will be completed in time with the least disturbance to local people.</p> <p>The contractor will adopt essential measures to reduce disturbance to the residents during night shifts</p>
12-12-2024	Shah Jamal, Ichra	10		<ul style="list-style-type: none"> - Concerns regarding the timely completion of the project. - Site restoration should be duly observed. - Competent contractors and laborers should be hired. - Public disturbance should be avoided as much as possible. - Night-time work will disturb the residents 	<p>The project is being financed by AIIB. Such projects are time-bound and hence will be completed in time with the least disturbance to local people.</p> <p>The contractor will adopt essential measures to reduce disturbance to the residents during night shifts</p>
12-12-2024	Shera Kot, Nonarian Road	10	The project is highly appreciable since this area is poor in terms of sanitation, sewerage disposal, and hygiene.	<ul style="list-style-type: none"> - Access to shops and houses should be ensured - Night-time work will disturb the residents 	<p>The access will be ensured by the provision of paths and bridges</p> <p>The contractor will adopt essential measures to reduce disturbance to the residents during night shifts.</p>

6. LIVELIHOOD RESTORATION BUDGET

6.1. General

This cost for the implementation of the Livelihood Restoration Plan (LRP) is estimated based on livelihood impacts to be levied on the Affected Persons (APs). The estimation is based on the loss of net income of APs. These costs are estimated for the impacts determined based on the preliminary design of trunk sewers provided by PMC. The cost would be revised and updated according to the exact impact on business operators based on the Detailed Engineering Design (DED) to be carried out by the Contractor. The number of APs assessed by conducting a census and socio-economic survey based on the preliminary design of PMC. Compensation cost estimated for temporary loss of livelihood due to temporary impact on commercial activities falling in the Corridor of Impact.

6.2. Compensation for Livelihood Loss

The project will result in a temporary loss of income for business owners and employees and the rent to be paid by the business operators running the business in the rented places. The compensation for losses has been calculated based on the loss of net income of APs. Additionally, rent for the business holder running the business in a rented place is also provided. For the business loss disturbance allowance for business owners/operators is estimated as PKR 15.39 million. The rent for the business operators running businesses is PKR 1.59 million and income disturbance allowance for Employees is estimated to the tune of PKR 3.92 million. The total compensation is PKR 20.93 million. The same is reflected in Table 20.

6.3. Compensation Rental Allowance Provision for Rental Business Operators

The Project will also give a hundred percent 100% rental loss to the business operators in case of complete closure of the businesses. The allowance will be paid for the period of 04 months. The amount of PKR. 1,976,000 /-

6.4. Training

Training for skill development for small business holders and employees has been envisaged under the project. This cost is calculated as per the actual requirement. An amount of PKR 1.6 million is kept in the budget and depicted in Table 20.

6.5. Monitoring & Evaluation

Monitoring and evaluation of LRP implementation is envisaged under the project. This will also comprise third-party monitoring from a firm/expert to conduct the evaluation of LRP implementation. The cost of monitoring and evaluation is estimated on a lump sum basis. This amount is PKR 1.5 million. The same is shown in Table 20.

6.6. Contingency

The project may encounter unanticipated impacts due to changes in design or any other reasons during execution. Contingencies tuned to 10% of the budget kept for this purpose. This amounts to PKR 2.40 million. The same is depicted in Table 20.

6.7. Management Cost

Inputs of WASA for the implementation of LRP are covered under the management costs. This includes activities related to the finalization of the LRP, grievance redress, and regular

monitoring and evaluation. To cover the management cost required for the implementation of LRP, a provision of 3% of the total cost, i.e., PKR 0.79 million has been made in the budget. See Table 20.

6.8. Provision for Design Change

LWASA kept the provision of PKR 27.23 million to accommodate Livelihood impacts that may occur due to design change at detail design stage.

6.9. Provision for Vibration Impact (If any)

LWASA kept the provision of PKR 7.87 million to account for unforeseen impacts owing to vibration due to construction activities.

6.10. Livelihood Restoration Budget

Based on the compensation for losses and other costs as provided above, the total amount of the LRP budget is estimated to be PKR 62.33 million as presented in Table 20.

6.11. Sources of Financing

Being the project owner, the WASA will be responsible for the timely arranging of the allocation of funds needed to implement the LRP. The compensation for temporary income losses will be transferred from WASA to PMU which will disburse the funds to the APs with assistance from the local administration.

Table 20: Budget for Livelihood Restoration Plan

Sr. No.	Description	Unit	Quantity	Duration (Month)	Amount (PKR)	Amount (PKR in Million)	Remarks
A	Income Disturbance Allowance						
1	Income disturbance allowance for business owners/operator	No.	17	4	15,388,400	15.39	The business owners for temporary business interruption will get compensation equal to 4 months of net income loss.
2	Rent for the business operators running businesses in rented places	No.	10	4	1,620,800	1.62	The business operators running business in rented places get compensation equal to 4 months of the rent
3	Income Disturbance Allowance for Employees	No.	30	4	3,924,000	3.92	The loss of Income of employees for the period of business interruption will be equal to 4 months of minimum wage rates i.e., Rs. 37,000 per month as per the Minimum Wage Rate Notification of Government of Punjab. (Annexure-VI)
	Sub-Total (A)				20,933,200	20.93	
B	Training & Capacity Building and Monitoring						
4	Training of APs and Employees of APs		Lump Sum		1,600,000	1.60	The training amount is estimated based on the training requirements of APs.
5	Monitoring & Evaluation		Lump Sum		1,500,000	1.50	
	Sub-Total (B)				3,100,000	3.10	

Sr. No.	Description	Unit	Quantity	Duration (Month)	Amount (PKR)	Amount (PKR in Million)	Remarks
C	Total (A+B)				24,033,200	24.03	
D	Contingency 10% of C				2,403,320	2.40	
E	Total (C+D)				26,436,520	26.44	
F	Management Cost @ 3% of total Cost				793,096	0.79	
G	Total (E+F)				27,229,616	27.23	
H	Provision for Design Change (if any)				27,229,616	27.23	L-WASA kept this provision to accommodate livelihood impacts that may occur due to design change at the detailed design stage
I	Total (G+H)				54,459,231	54.46	
J	Provision of Vibration Impact (if any)				7,870,000	7.87	Provisional sum to account for unforeseen impacts owing to vibration due to construction activities
K	Grand Total (I + J)				62,329,231	62.33	

7. GRIEVANCE REDRESS MECHANISM

An integrated grievance redress mechanism (GRM) at the project level for environmental and social concerns is established to facilitate amicable and timely resolution of complaints and grievances of the AHDs, including local communities regarding the social, environmental, and resettlement aspects of the project. The GRM is already in place for the preparatory phase of the project, it is a two-tiered structure. However, during the execution of the project, the three-tier GRM will be notified at the following levels:

- i. Grievance Redress Committee at field/construction site (GR Cell),
- ii. Grievance Redress Committee at LWASA PMU
- iii. Grievance Redress Committee at LWASA Management

The GRM will be gender-responsive, culturally appropriate, and readily accessible to the stakeholders at no cost and without retribution. The step-wise process of the proposed GRM is summarized below.

7.1 AIIB Requirements

As per the requirements of the Asian Infrastructure Investment Bank (AIIB), a suitable project-level grievance redress mechanism must be established in accordance with AIIB's Environment and Social Policy, as well as applicable standards, to address concerns and grievances of project-affected persons and stakeholders. This mechanism will receive and facilitate resolution of concerns or grievances from individuals or groups who believe they have been adversely affected by the Project's environmental or social impacts, or those who feel that their interests are at risk due to the Project's construction and operations activities. The mechanism will also ensure the protection of complainants from retaliation and respect their request for anonymity, if desired, while addressing concerns related to the project's social, resettlement, and environmental performance.

Although measures have been identified to mitigate the environmental, social, and resettlement impacts of the Project, it is acknowledged that despite best efforts, some individuals/households and stakeholders may still be dissatisfied with the measures adopted. To address such situations, an effective Grievance Redress Mechanism (GRM) has been established to ensure timely and successful implementation of the project. The GRM will provide a public forum for aggrieved parties to raise their concerns and seek adequate resolution. It will receive, evaluate, and facilitate the resolution of concerns, complaints, and grievances related to the environmental and social performance of the Project at the project level.

7.2 Aims and Objectives of Grievance Redress Mechanism

The primary objective of the Grievance Redress Mechanism (GRM) will be to investigate charges of irregularities and complaints and grievances received from affected persons (APs) and other stakeholders, and provide a time-bound, early, transparent, and fair resolution process to address and resolve environmental and social concerns and grievances linked to the project. The key objectives of the GRM are as follows:

- i. Provide a clear process for APs and other stakeholders to provide comments and raise grievances, ensuring that their voices are heard and addressed in a systematic manner.
- ii. Allow APs and other stakeholders to raise concerns, complaints, and grievances anonymously, using multiple intake locations and modes, to protect their identity and ensure confidentiality.

- iii. Structure and manage the handling of concerns and grievances in an organized manner, while also monitoring the effectiveness of the mechanism to continuously improve its performance.
- iv. Ensure that concerns and grievances are handled in a fair and transparent manner, in accordance with provincial laws and regulations, AIIB's environment and social policy framework and standards, and international best practices, to ensure a just resolution for all parties involved.

The GRM will be designed to uphold these objectives and provide a robust and responsive mechanism for addressing and resolving concerns and grievances related to the environmental and social impacts of the project.

7.3 Nature of Complaints to be Redressed

It is anticipated that during the implementation and operational phases of the project, grievances and complaints may arise from affected persons (APs) and other stakeholders related to various issues, including but not limited to:

- i. Compensation and resettlement and rehabilitation assistance, such as the name of AP(s) missing from the eligible APs' list, incorrect identification of losses (such as damage to assets or loss of income) during the design stage, improper distribution of compensation and/or resettlement assistance, delays in the payment of compensation and resettlement assistance, etc.
- ii. Disruptions caused by civil works contractors, such as disruptions to general public services/utilities during civil works, non-observance of project principles as laid down in the Resettlement Plan (RP) and environmental issues, etc.
- iii. Any other issues arising during the project implementation that may affect APs and other stakeholders.

To ensure that APs and other stakeholders are aware of the Grievance Redress Mechanism (GRM), the Environmental and Social (ES) staff of the PMU, Project Management Consultant (PMC) and LWASA will conduct public awareness campaigns, disseminate information materials, and hold face-to-face meetings with both literate and illiterate APs. Information about the GRM will be posted on noticeboards at site offices of contractors and sub-contractors, construction camps, and concerned Government Departments.

7.4 Two-Tier Grievance Redress Mechanism (GRM) for Preparatory Phase

The Grievance Redress Mechanism of the project for the Preparatory Phase (before Execution) is already in place to resolve the concerns and grievances of the affected persons.

A first tier of the Grievance Redress Committee (GRC) has been notified for the Project to resolve the concerns and grievances of Affected Persons with the approval of the Managing Director, WASA vide office order no. PD/LWWMP/WASA/207-215 dated 13.04.2023. The committee is responsible for the resolution of the complaints (received if any) within three (03) to seven (07) days. If necessary, this committee will consult with all relevant parties (e.g., Affected Persons, the general public, women, and relevant government departments) to resolve the issues. The office order of the notified designated committee for the first tier of GRM is given in Annexure-VII.

The designated 2nd tier Committee will resolve those complaints/ grievances that are not resolved directly by the first-tier WASA designated Committee. In such cases, the first tier Committee will provide all the relevant data to the second tier Grievance Redress Committee

and GRC will suggest the corrective measures and assign clear responsibilities for implementing its decision within 10 working days, depending on the nature of the grievance. An office order for the constitution of the second tier Committee has been issued with the approval of the Managing Director, WASA vide no PD/LWWMP/ WASA/198-206 dated 13.4.2023. The notification/office order is provided in **Annexure-VII**.

7.5 Three Tier Grievance Redressal Mechanism (GRM) for Execution Phase

The Three-Tier GRM (Grievance Redressal Mechanism) for the Project is established in LWASA to provide a time-bound, early, transparent, and fair resolution for grievances. The Environment and Social (ES) staff of PMU will conduct public awareness campaigns on the GRM, with the support of ES staff of PMC (Project Management Consultant) and LWASA. All complaints received, whether verbal or in writing, will be properly documented and recorded in the Complaint Management Register(s) placed at GR Cell. The focal point responsible for receiving grievances will be Project Director, Project Management Unit, Lahore Waste Water Project, LWASA, contact number, +92-333-3330287, +92-42-9926843, Email Address: ProjectDirector.LWWMP@gmail.com. This will enhance the overall communication between the Project affected persons and the Project Management Unit.

PMU will install a complaint box in the office and the Contractor will install a box in the field office, and PMU assign a dedicated telephone number for the registration of complaints. PMU will also designate a staff who will be the focal point to record the complaints and report to PMU and concerned offices. At the construction site, a Grievance Redress (GR) Cell will be established to address the grievance at the site prior to execution phase of the project. A comprehensive grievance redress process regarding compensation is described in Table 20 and the grievance resolution flow mechanism is given in Figure 9.

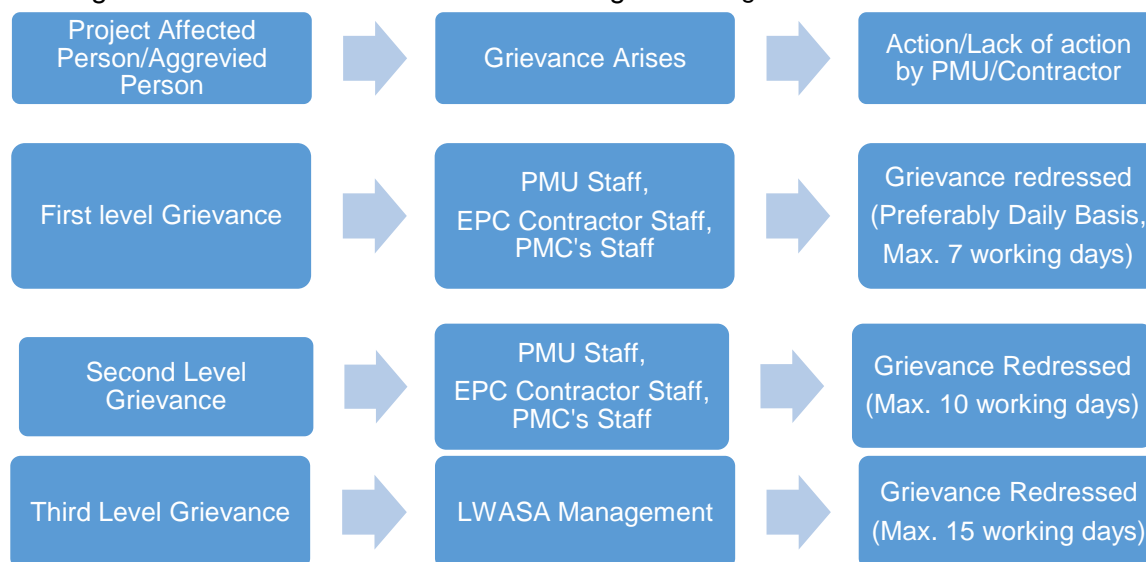


Figure 9 Grievance Redress Mechanism during Execution Phase of the Project

7.5.1 First Tier of GRM

A Grievance Redress (GR) Cell will be established at the construction site to address the grievances at the site prior to execution phase of the project. This will serve the purpose of first-tier GRM. The GR Cell will be comprised of the Manager E&S PMU, environment manager, and social manager of the EPC contractor and resident engineer, and HSE officer of PMC and one community representative. This cell will be the fastest and most accessible grievance redress forum for redressing the complaints on-site. Complaints will be resolved within seven (7) working days, depending on the nature of the grievance, however, most of

the complaints will be addressed promptly at the site, preferably on daily basis. In case the complaints are not resolved by GR Cell, complaints will be forwarded to the second-tier Grievance Redress Committee (GRC). The composition of the GR Cell is given in Table 21 and will be notified prior to the execution phase of the project.

Table 21 Composition of Grievance Redress Cell (First-Tier)

S. No.	Designation/Department	Office
1	Manager E&S, PMU Larech	Chair of the Committee
2	Resident Engineer, Project Management Consultant (PMC)-L	Member (Secretary)
3	Health Environment Safety (HSE) officer of PMC	Member
4	Environment Manager EPC Contractor	Member
5	Social Manager EPC Contractor	Member
6	Community Representative	Member

Efforts will be made to address concerns and grievances at the local level by the ES staff of PMU, PMC (Project Management Consultant), or through the involvement of representatives of the APs Committee and informal mediators. The ES staff of PMU and PMC may seek additional support and guidance from LWASA (Water and Sanitation Agency Lahore) in grievance redressal matters. Investigation of grievances will involve site visits and consultations with relevant parties to identify and reach on a realistic picture of the grievances.

The functions of the GRC include resolving problems, recommending possible solutions and providing support to affected persons arising from various social, resettlement, and environmental issues such as land acquisition (temporary or permanent) if any, asset acquisition, eligibility for entitlements, compensation, damages, resettlement assistance, as well as environment-related issues such as dust, noise, utilities (electric power, gas, telephone optical fiber, water supply), waste disposal, traffic interference, access, and public safety. The GRC will reconfirm grievances of APs, categorize and prioritize them, and aim to provide solutions within 7 working days. The ES staff of PMU will be responsible for processing and presenting all relevant documents, field inquiries, and evidences/proofs to the GRC, maintaining a database of complaints, recording decisions, issuing minutes of meetings, and monitoring to ensure that formal orders are issued and required actions against decisions are being carried out. The PMC and EPC Contractor ES staff will assist PMU in these tasks as and when required.

Grievances will be documented, and personal details of the complainant (such as name, address, date of complaint, nature of complaint, etc.) will be included unless anonymity is requested. A tracking number will be assigned for each grievance, and it will include the following elements:

- i. Initial grievance sheet: This will include a description of the grievance, and an acknowledgement of receipt will be handed back to the complainant when the complaint is registered, either verbally or in writing.
- ii. Grievance monitoring sheet: This will mention the actions taken, such as investigation and corrective measures.
- iii. Closure sheet: One copy of this sheet will be handed over to the complainant after they agree to the resolution and sign-off on it

7.5.2. Second Tier of GRM

The second tier of GRC will be established at the PMU level. The Committee will comprise of the PD, E&S staff of PMU, PMC & EPC Contractor. Complaints will be resolved within ten (10) working days, depending on the nature of the grievance. A second tier of the Grievance Redressal Committee (GRC) will be notified before the execution phase of the Project to resolve the concerns and grievances of Affected Persons. If necessary, this committee will consult with all relevant parties (e.g., Affected Persons, the general public, women, and relevant government departments) to resolve the issues. The composition of the second-tier Committee is given in Table 22.

Table 22 Composition-PMU Level GRC (Second-tier of GRM)

S. No.	Designation/Department	Office
1	Project Director, PMU Lareh	Chair of the Committee
2	Manager E&S, PMU Lareh	Member (Secretary)
3	Representative of E&S staff of PMC	Member
4	Representative of E&S staff of EPC Contractor	Member
5	Community Representative	Member

The ES staff of PMU will organize training on GRM and grievance registration and handling procedures, in coordination with the ES staff of PMC, for LWASA to familiarize them with the process. The contractor will develop a code of conduct for GBV, SEA and will be bound to implement it in letter and spirit. The second tier GRC will meet as necessary when there are grievances to be addressed and will aim to resolve problems and provide support to affected persons within 10 working days, depending on the nature of the grievance.

7.5.3 Third Tier of GRM

The third tier of the Grievance Redress Mechanism (GRM) is the Grievance Redress Committee (GRC), which will be established by LWASA (Water and Sanitation Agency) prior to the execution phase of the Project to resolve the concerns and grievances of affected persons. The GRC will be chaired by the Managing Director, WASA. The GRC consists of the Managing Director (MD), LWASA Deputy Managing Director (Engg.), LWASA, Project Director, Project Management Unit (PMU), LWWMP, and any other co-opted member. The Committee will resolve those complaints/ grievances that are not resolved directly by the second-tier designated Committee at the PMU Level. In such cases, the second tier Committee will provide all the relevant data to the third tier Grievance Redressal Committee and GRC will suggest the corrective measures at the field level and assign clear responsibilities for implementing its decision within 15 working days, depending on the nature of the grievance (in case the solution is possible within the prescribed time). An office order for the constitution of the third tier Committee will be issued prior to the execution phase with the approval of the Managing Director, WASA. The proposed structure of the third tier GRC is provided in Table 23.

Table 23 Structure-Grievance Redressal Committee (Third tier GRC)

S. No.	Designation/Department	Office
1	Managing Director WASA, Lahore	Chair of the Committee
2	DMD Engineering, WASA, Lahore	Deputy Chair
3	Project Director (LWWMP)	Member

4	Manager E&S PMU	Member (Secretary)
5	Any other co-opted member	Member

If the complainants are dissatisfied with the decision of the GRC, they still have access to approach the Government's Administrative or Court of Law for judicial remedies. GRC-PMU will maintain a database of complaints and their resolution status at each level and report grievance resolution status updates, and GRM-related data in semi-annual safeguard monitoring reports, and monthly monitoring reports to AIIB.

7.6. Functions of GRC

The following are the functions of GRC:

- The first tier GR cell will provide and maintain records of all grievances received at the tier-one level (site).
- Tier one GRC will promptly register any received complaint and will be responsible for redressing the issue within 7 working days of receipt of the complaint.
- In case the complaints are not resolved by GR Cell, complaints will be forwarded to the second-tier Grievance Redress Committee (GRC).
- Second-Tier GRC will review the complaint and will be responsible for redressing the issue within 10 working days of receipt of the complaint.
- In case the complaints are not resolved by the Second-Tier GRC, complaints will be forwarded to the third-tier Grievance Redress Committee (GRC).
- The third tier Committee will resolve or communicate its decision within 15 working days for the complaints/ grievances that are not resolved directly by the first and second tiers.

The aim of the Grievance Redressal Committee (GRC) will be as follows:

- i. Ensure effective implementation of the Grievance Redressal Mechanism for concerns and issues falling under their jurisdiction.
- ii. Provide easy access to the Grievance Redressal Mechanism, allowing grievances to be filed verbally, by phone, in writing, or via web-based provisions, including the option to submit grievances anonymously.
- iii. Address and resolve all referred grievances in a timely and impartial manner within 10 working days of receipt.
- iv. Deal promptly with issues related to:
 - resolving day-to-day site issues related to E&S aspects,
 - recommending possible solutions,
 - providing support to affected persons arising from various social, resettlement, and environmental issues such as land acquisition (temporary or permanent) if any,
 - asset acquisition,
 - eligibility for entitlements,
 - compensation,
 - damages (if any),
 - resettlement assistance, as well as environment-related issues such as dust, noise, utilities (electric power, gas, telephone optical fiber, water supply),
 - waste disposal,
 - traffic interference,
 - access, and public safety
 - any other related matter
- v. Seek assistance from other persons or institutions when needed.

- vi. Inform about GRC and AIIB accountability mechanisms to APs.
- vii. Record and reply to aggrieved parties/persons with speaking orders/minutes of meetings/decisions of the committee, keeping a copy as a record.
- viii. The decision/judgment made by GRC will be communicated to Aggrieved Persons and the E&S team of the Bank by monitoring reports.
- ix. Provide the option to the aggrieved parties to file an appeal for review of the decision / Judgment of the GRC within 10 working days of receiving the review matter, and the GRC may reconsider the matter/ case or refer the case to the appropriate forum after examining the appeal.
- x. In such cases where grievances cannot be resolved by the GRC, the affected person can seek alternative redressal and approach higher Administrative Authorities or the court of law, as appropriate.

Court: If the project-level GRM will not be able to resolve the grievance or the complaining party is not satisfied with the decision, it will be resolved as per law and court order of Pakistan which will be outside of the project GRM scope. The GRC cannot impede an AP's access to the legal system, according to ESF. Thus, an AP can approach the courts at any time in accordance with the applicable legal provisions as per Section 18 of the Land Acquisition Act 1894. Implementing the GRC's decision will be contractually binding on the contractor. Also, if not satisfied with the resolution of the issue by project-level GRM, the complaining party can send the complaint to AIIB's Accountability Mechanism discussed below, after making good faith efforts to resolve the grievance with AIIB's operation department.

7.7. AIIB's Accountability Mechanism / Project-affected People's Mechanism (PPM)

Affected persons and people in the project areas will also be informed about the AIIB's Accountability Mechanism, and that they should at first put good faith efforts into resolving the complaints on the project level and the project implementing agencies in the country. Two or more APs (can be from the same family) can submit their complaint to the AIIB's Accountability Mechanism (AM). The AM is a last resort mechanism. The project-affected persons will first address the issue with the project-level GRM, and then they will make good faith efforts to address the issue with the relevant AIIB operations department. Complaints will not be eligible in certain cases such as:

- About actions not related to something AIIB did or did not do in formulating, processing, or implementing an AIIB-assisted project;
- About an AIIB-assisted project for which 2 or more years have passed since the loan or grant closing date;
- About matters those complainants have not made good faith efforts to address with the operations department concerned;
- About decisions made by AIIB, the borrower or executing agency, or the private sector client on the procurement of goods and services, including consulting services; and allegations of fraud or corruption in AIIB-assisted projects (these will be managed by other facilities).
- The complaint may be submitted by mail, fax, email, or in-person to:

Complaint Receiving Officer (CRO), Accountability Mechanism Asian Infrastructure Investment Bank (AIIB), Tower A, Asia Financial Center, No.1 Tianchen East Road, Chaoyang District, Beijing 100101
 Phone, +86-10-8358-0000,
 Fax Number: +86-10-8358-0003 and
 Email: ppm@aiib.org

8. INSTITUTIONAL ARRANGMENTS

8.1. LRP Implementation

The overall responsibility of LRP implementation lies with the Project Management Unit (PMU) established in LWASA. PMU will supervise the implementation of LRP through its Environment and Social Staff for carrying out activities related to LRP implementation. The Project Management Consultant (PMC)/Owner's Engineer will be responsible for the monitoring and implementation of LRP. PMC will depute Social Safeguards, Gender Specialist and field-based Social Mobilizer for the implementation of LRP. The Contractor will be responsible for the implementation of LRP. Grievances will be redressed under the GRM provided in section-7. PMC will keep the APs informed about the project's activities, compensation and assistance package duly approved by LWASA and AIIB. The APs will participate in all the decisions relating to the implementation of LRP. The APs will also be involved in the grievance redress to review and resolve any dispute concerning compensation and other resettlement issues. The whole process will be monitored and evaluated by a third party throughout the implementation cycle. The institutional arrangements for LRP implementation are elaborated in the ensuing paragraphs.

8.1.1. Project Steering Committee

The Project Steering Committee (PSC) has been established to ensure effective coordination and smooth implementation of the Project, provide policy guidance and resolve inter-agency problems. PSC's role is to steer, facilitate, coordinate and expedite project implementation, provide overall guidance and policy direction to mitigate emerging issues, hold periodic review meetings and issue directions for efficacious implementation of same. The PSC convenes meetings every quarter or when required, to assess the project's progress and make necessary adjustments. The committee reviews the semi-annual and annual project performance reports, and based on periodic discussions, issues directions for effective implementation of the Project. The PSC plays a vital role in providing oversight and guidance to ensure that the project is implemented smoothly and according to plan.

8.1.2. Housing Urban Development and Public Health Engineering Department

The Housing Urban Development and Public Health Engineering Department (HUD & PHED) is the implementing agency for the Project, with the implementation being carried out under the overall control of the Secretary of HUD & PHED, Government of Punjab. This department will play a key role in overseeing and managing the project to ensure its successful execution.

8.1.3. Lahore Water and Sanitation Agency (LWASA), Lahore Development Authority (LDA)

The executing agency (EA) responsible for the Project is LWASA, which operates under LDA and is part of the Government of Punjab. LWASA, established under Section 10 (2) of the LDA Act-1975, is entrusted with the functions and authorities related to water supply, sewerage, and drainage, including the collection of fees and user charges from users for services rendered. As the EA for the project, LWASA will be responsible for the management and supervision of the project, ensuring its smooth implementation. LWASA will also play a crucial role in coordinating with other relevant agencies for the successful execution of the Project, as part of its mandate for interagency coordination.

As the Executing Agency (EA) of the Project, the LWASA has established robust systems for procurement, project management, and internal control for consultants, contractors, operators, and other relevant parties. Additionally, LWASA, sanctioned by the Government of Punjab, is responsible for taking appropriate measures for detailed engineering designing and

implementation, operation, and maintenance of the project, as well as environmental and social safeguards compliance. For dispensation of these functions, LWASA requires dedicated support.

8.1.4. Project Management Unit

LWASA has established a PMU for the project headed by a Project Director (PD) and consisted of professional staff supported by a team of consultants known as Project Management Consultants (PMC) to assist LWASA in the implementation of the Project, as well as in supervision and monitoring, including social safeguards management.

PMU will incorporate environmental and social safeguards management requirements into the Contracts of PMC and EPC/DBL (Engineering, Procurement, and Construction/Design-Build) Contractors at the appropriate stages of the Project implementation process. This will ensure that the Project is executed in compliance with the relevant environmental and social safeguards, in line with the Project's goals and objectives. PMU will ensure the implementation of LRP. PMU will be responsible for carrying out the following tasks.

- i. The Overall responsibility for the implementation of the Project lies with PMU
- ii. Oversee and supervise the environmental and social management of the project
- iii. Ensure that compensation is paid to APs against the displacement and livelihood losses
- iv. Ensure that PMC deploys environmental and social staff for the implementation of LRP.
- v. Ensure that PMC monitors the implementation of LRP in true letter and spirits
- vi. Review and finalize periodical environmental and social safeguards monitoring reports received from PMC & Contractor and submit them to AIIB.
- vii. PMU will coordinate, update and seek necessary approvals regarding all necessary E&S activities from the Bank (AIIB) and local approving forums.
- viii. Ensure that the contractor updates all environmental and social safeguards documents as per the detailed engineering design.
- ix. PMU will also redress all the reported grievances through the proposed GRM Mechanism
- x. PMU to ensure that PMC and EPC Contractor will perform their assigned roles and responsibilities as specified in their respective contracts.

8.1.5. Project Management Consultant

PMC, as the consultancy firm will be responsible for managing the entire process of procurement of the EPC/DBO contractor for LWASA (EA/Client/Employer). PMC will also be responsible for the effective supervision and assistance to PMU for project implementation, detail designing by EPC contractor, constructional works, and social safeguards management. PMC will perform the following roles and responsibilities related to social and environmental management:

- i. The PMC will assist LWASA's PMU in overall project management and implementation, including the implementation of LRP. This will include reviewing and finalizing this document.
- ii. The PMC will supervise and monitor all project activities, including the implementation of social safeguard documents, by assuming the role of "LWASA representative". This will involve ensuring that the contractor and other parties are fully coordinating with LWASA, AIIB, and other stakeholders for the implementation of these documents.
- iii. The PMC will carry out capacity building of LWASA, PMU, and other relevant agencies in social safeguards management. This will involve providing training and support to build the capacity of LWASA, and staff of other relevant departments as necessary.

- iv. The PMC will conduct an independent investigation of grievances and prepare factual documentation describing the circumstances of the grievances with necessary documentation, records, and photographs. This may result in resolution or arbitration between the APs and LWASA and/or EPC/DBO contractors, sub-contractors, or service providers. The PMC will also attend hearings and provide all legal and other support to LWASA.
- v. The PMC will ensure that proper health and safety measures are put in place as per AIIB's policy and standards. This will involve overseeing the implementation by the contractor of the required social mitigation measures as per LRP.
- vi. The PMC will organize monthly progress review meetings involving all stakeholders, including the consultant, contractor, client, line departments, and others as required. The PMC will also maintain records of meetings and follow up on agreed actions.
- vii. The PMC will maintain records, files, and reports of LRP implementation, including necessary documentation, records, and photographs, in a manner suitable to meet GoPb, AIIB, and legal standards.
- viii. The PMC will prepare and issue all necessary reports on the implementation of LRP, and the overall environment and social management, as required by LWASA and AIIB. The format and contents of the reports will be agreed upon with LWASA and AIIB and will include monthly progress reports submitted not later than the 7th day after the end of the month, detailed quarterly reports, and a detailed completion report of LRP, GAP and SEP implementation. The reports shall include monthly photographs 4(referenced and dated) comprising an overview and focal photograph of all key issues, as well as records of supervision and monitoring of LRP implementation and other aspects of the environment.
- ix. PMC environment and social safeguards staff will conduct capacity-building activities for LWASA, LDA, and other relevant departments. The staff will also supervise the work of the contractors in the field to ensure compliance with the safeguard measures outlined in safeguards documents.
- x. The environment and social staff of PMC will review, validate, and ensure the quality of the monthly progress reports prepared by the contractors, and compile them into quarterly progress reports to be submitted to LWASA and AIIB for review and clearance. The staff will also provide support to LWASA in the preparation of a compensation and resettlement assistance completion report(s) prior to the award of the civil works contract, indicating the clearance of those sections where civil works could not commence until full payment of compensation and resettlement assistance to APs has been made.

8.1.6. Engineering Procurement and Construction/Design Build Operate Contractor

The EPC/DBO Contractor will be responsible for carrying out the detailed engineering design of the project under the leadership of a full-time Team Leader/Resident Engineer. The Contractor will hire and engage social, gender, and environmental staff along with necessary support staff. The key tasks of the EPC/DBO contractors will include:

- i. Review the existing LRP report prepared during the preliminary design stage and update them based on changes made in the detailed engineering design and site-specific requirements.
- ii. Hire and deploy Environment and Social Expert, Resettlement and Gender Expert. These experts will be responsible for implementing all the actions proposed in environmental and social safeguard documents including LRP, GAP, and SEP, as well as the GRM by all parties involved in the project after seeking due approvals from the PMU. They will conduct internal supervision and monitoring of these instruments throughout the project operations to ensure compliance and quality of services provided by the contractor. These specialists will prepare monthly and quarterly

- progress reports on the environment and safeguards, which will be submitted to the PMC for review and validation.
- iii. The Environment and Social Experts of the contractor work in collaboration with the social safeguard specialists of the PMC throughout the project implementation in social safeguards compliance. They will ensure that the contractor's activities are in line with the agreed-upon LRP implementation measures and that any grievances raised by aggrieved persons are addressed through the GRM in a timely and satisfactory manner.
 - iv. Disseminate Information (through Brochures or any other media/form) to APs and other stakeholders and implement all these safeguards documents as disclosed by PMU/ AIIB.
 - v. Prepare and implement addendums to the LRP, to mitigate unforeseen impacts, when required, based on changes in the project design during the execution stage.
 - vi. Prepare all requisite reports on LRP and social safeguards implementation and submit them to PMC.
 - vii. EPC will also address the comments received from PMU/AIIB on E&S Documents

8.1.7. Asian Infrastructure Investment Bank (AIIB)

AIIB provides technical guidance to PMU/LWASA and the consultants; supervises the preparation, updating, and implementation of LRP reviews and approval of LRP, internal and external monitoring reports, and corrective action plan if needed for any identified gaps and provides guidance and required remedial/corrective actions targeting full compliance of the project with safeguard requirements as per ESF.

8.2. Resources Required for LRP Implementation

LRP implementation requires financial resources for payment of compensation as estimated in section 6 of this LRP. Being the project proponent LWASA will be responsible for the timely arranging of the allocation of funds needed to implement the LRP. The compensation for temporary income losses will be transferred from LWASA to PMU which will disburse the funds to the APs.

8.3. Human Resource Requirement

For effective implementation of LRP and social safeguards tasks, Manager environment and Social is required at PMU. Additionally, a Resettlement expert and a Gender expert need to be deployed in PMC. The contractor will deploy an Environmental and Social Expert and a Resettlement and Gender Expert. This staff will be responsible for carrying out tasks for the implementation of LRP and social safeguards. The details of staff along with costs are given in Table 24.

Table 24 Detail of Environment and Social Staff

Sr. No.	Position	No.	Scheduling (months)	Unit Cost (PKR.)			Cost (PKR)	Remarks
				Year 1	Year 2	Year 3		
A1	PMU Safeguards Unit							
1	Manager Environmental & Social	1	30	-			-	Position approved by PDWP and provision already taken in PC-I. No further change can be made at this stage in PMU.

Sr. No.	Position	No.	Scheduling (months)	Unit Cost (PKR.)			Cost (PKR)	Remarks
				Year 1	Year 2	Year 3		
A2	Supervision Consultant							
1	Resettlement Expert	1	30	328,363	361,199	397,319	10,658,663	
2	Gender Expert	1	30	328,363	361,199	397,319	10,658,663	
3	Support Staff	2	30	80,000	88,000	96,800	10,387,200	
	Total						31,704,526	
4	Indirect Cost (Communication Cost, Administrative Cost, Logistics support, Printing of Reports) - 10% Approx.						3,170,453	
5	Variation / Contingency- 5%						1,585,226	
A3	Contractors for Packages 1 & 2							
1	Resettlement & Gender Expert	2	30	-	-	-	-	
2	Support Staff	2	30	-	-	-	-	
	Indirect Costs (Communication Cost, Administrative cost, Logistics support, Printing of Reports)			-	-	-	-	
	Grand Total						36,460,205	

8.4. Monitoring and Evaluation

The LRP has been prepared with the aim of ensuring that APs are compensated properly against the disturbance of their livelihoods. Thus, it is essential to have a comprehensive monitoring program in place to ensure that the implementation of the LRP takes place as planned. The monitoring of the planning and implementation of resettlement has been designed as an essential part of LRP implementation and incorporates a systematic Monitoring and Evaluation (M&E) process to be continued even after the completion of the Project.

The M&E system presented herein is a continuous process of collecting, collating and analyzing information about the progress of LRP implementation and a tool for identifying the strengths and weaknesses of the process. Periodic evaluation of the process and the outcomes will enable PMU to identify deficiencies, procedural weaknesses, policy inadequacies and institutional drawbacks to devise and implement corrective measures to achieve the desired goals and objectives of the LRP.

Livelihood Restoration tasks under the project are subjected to both internal and external monitoring. Internal monitoring will be conducted by the ESU of PMU, with support from its

PIC. The external monitoring and evaluation will be assigned to an External Monitoring Consultant (EMC).

8.5. Internal Monitoring and Evaluation

Internal monitoring will be carried out routinely by ESU of PMU for the implementation of LRP upon completion of payment of compensation and provision of allowances to APs in sections that are proposed for clearing and handing over for civil works. Indicators set for internal monitoring will be those relating to process and immediate outputs and results. This information will be collected directly from the field and reported monthly to the PMU to assess the progress and results of this LRP implementation, and to adjust the work program, if necessary. PMC will undertake monitoring and evaluation of LRP implementation. The monthly reports will be consolidated quarterly in the standard supervision reports to AIIB. Specific monitoring will be:

- Information campaign and consultation with APs;
- Disbursement of compensation payments to APs;
- Implementation of livelihood restoration measures; and
- Functioning of grievance redress mechanism.

8.6. External Monitoring and Evaluation

The project includes a provision for external monitoring and evaluation of the implementation of the subproject resettlement plans by an External Monitoring Consultant (EMC). AIIB-approved Terms of Reference (TOR) would be followed for the procurement. The EMC will independently verify the completion of compensation payments and provision of allowances in sections proposed for clearing and handing over the site for civil works. And review the implementation of LRP biannually and evaluate whether the basic objective of the LRP and AIIB Safeguard Policy Statement concerning involuntary resettlement are being met. The brief scope of services of EMC will be as under but not limited to the following.

- Review Entitlement policies and compensation
- Confirm the completion of compensation payments, adequacy of budgets, and timeline of payments and recommend if no objection for commencing civil works can be issued.
- Review and verify internal monitoring reports prepared by PMU and its field offices;
- Monitor the adequacy and efficiency of organizational mechanisms for LRP implementation
- Prepare a time-bound Corrective Action Plan (in case of non-compliance) with the help of support Consultants and monitor its implementation;
- Assess the adequacy of efforts in resolving cases with legal and administrative impediments and recommend measures needed, in case of gaps;
- Evaluate and assess the adequacy of compensation given to the APs and the livelihood opportunities and incomes as well as the quality of life of APs of project-induced changes; and
- Evaluate and assess the adequacy and effectiveness of the consultative process with affected APs, particularly those vulnerable, including the adequacy and effectiveness of grievance procedures and legal redress available to APs, and dissemination of information about these.

The EMC will prepare a compensation completion review report upon the completion of compensation payments and recommend whether no objection can be issued to hand over the site for commencing civil works and submit reports biannually external monitoring reports on the agreed impact indicators i.e., implementation of livelihood restoration activities, remaining LRP activities, grievance redress mechanism and consultation with APs. Copies of the EMC report will be submitted to the PMU for its review and endorsement to AIIB. The language of the reports will be English. Illustrations, if necessary, will be provided as part of the reports. If significant issues are identified in the external resettlement monitoring report, a time-bound Corrective Action Plan will be prepared, reviewed and approved by AIIB and disclosed to APs. The CAP implementation progress will also be reviewed and monitored by the EMC and will be made part of the subsequent monitoring reports. Internal and external monitoring and reporting will continue on a quarterly and semiannual basis respectively until all LRP activities have been completed, including restoration of temporarily used land and emerging livelihood restoration issues during project implementation.

8.7. Implementation Schedule

LRP will be updated according to detailed design and later on at the time of commencement of civil work as per the requirement of space for the digging of holes (Jacking and Recipient Stations). After approval of the updated LRP from AIIB, the compensation will be paid to all APs in accordance with the provisions of the Entitlement Matrix. The contractor will not commence the civil works before implementation of the LRP in concurrence with AIIB. The time period for the implementation is 2.5 years and compensation to APs will be disbursed as per space required for the commencement of civil work with serving the advance notices accordingly. The basic resettlement-related steps for the implementation of this LRP are summarized in Figure 10.

Sr. No.	Activities	Responsibility	Tentative Implementation Schedule																													
			1-Year												2-Year												3-Year					
			Months												Months												Months					
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	Staffing of LRP implementation team in place and oriented with the APs and the LRP	PMU	■																													
2	Updating of LRP after detailed engineering design	PMU	■	■																												
3	Approval of LRP	AIIB		■	■																											
4	Urdu translation disclosure of final LRP both in English and Urdu at the websites of LWASA and AIIB	ESU of PMU			■	■																										
5	Disclosure of updated LRP to PAPS and other Stakeholders and consultations throughout the project implementation	ESU of PMU			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
6	One month advance notice to APs for stopping their business activities and payment of compensation against loss of livelihood and account opening	ESU of PMU			■	■	■																									
7	Disbursement of Payment of Compensation against business disruption (Disbursement will be done according to civil work execution and requirement at different stages of Project implementation)	ESU of PMU			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
8	Internal Monitoring of LRP implementation activities bill be conducted on a daily and monthly basis and monitoring reports will be prepared Quarterly	ESU of PMU					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
9	Commencement of Civil Works in the area	Contractor				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
10	External LAR monitoring ,biannual and disclosure	EMC					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	

Figure 10: LRP Implementation Schedule

Annexure-I: Socioeconomic and Livelihood Questionnaire

SEWERAGE SYSTEM FROM LARECH COLONY TO GULSHAN-E-RABI, LAHORE (THROUGH TRENCHLESS TECHNOLOGY) FEASIBILITY STUDY FOR ALTERNATE OPTIONS

LIVELIHOOD ASSESSMENT AND SOCIO-ECONOMIC SURVEY

1. Identification Data

Questionnaire ID #						
Name of Enumerator						
Date of Interview						
Location (Tick Relevant)	Alignment "A"		Alignment "B"		Alignment "C"	
Pit #						
Name of Road						
Location of Pit (Coordinates)						
Right of Way (RoW) of Road (Feet)	LHS	RHS	LHS	RHS	LHS	RHS
Working Area (Feet)	LHS	RHS	LHS	RHS	LHS	RHS
Distance of Affected Business/Structure from the Edge of the Working Area (Feet)	LHS	RHS	LHS	RHS	LHS	RHS

2. Basic Data of Displaced Person

a.	Name of Displaced Person (DP)	
b.	Name and Father Name of Respondent (If DP is not available)	
c.	Relationship/Association of Respondent with DP	

d.	Father's Name of DP				
e.	Caste of DP				
f.	Religion of DP				
f.	Address of DP (House #/Settlement/UC/Tehsil/District)				
g.	Cell # of DP				
h.	CNIC # of DP				
i.	Geographic Location (Coordinates) of Affected Business/Structure				
m.	Category of DP (Tick Relevant)	i. Business Owner/Operator	ii. Business Operator on Rent	iii. Shareholder	iv. Squatter/Petty Shop
		v. Employee of Business Owner/Business Renter	vi. House Owner	vii. House Renter	viii. Other
n.	Title of Ownership	i. Registered	ii. Informal Documents	iii. Rent Agreement	iv. Other

Part I: Livelihood Assessment

3. Affected Business

3.1. Details of Affected Business (Please collect evidence of expenditures and income including copies of utility bills, vouchers of supplies, salaries, and tax payments)

a.	Name of Business				
b.	Type of Business				
c.	Year of Establishment				
d.	Ownership Status of Business	i. Self-Owned	ii. On Rent	iii. On Partnership/Shareholding	iv. Other
e.	Type of building business housed in with Size in feet	i. Shop	ii. Shed	iii. Kiosk	iv. Other
g.	Monthly Rent (Rs.)	For rented in			For rented out

h.	Monthly Expenses on Utilities (Rs.)	i. Electricity	ii. Gas	iii. Water & Sewerage	iv. Security	v. Other
i.	Monthly Running Expenses (Rs.)	i. Employees		ii. Supplies		iii. Other
	Annual/Monthly Tax Payments (Rs.)	i. Excise		ii. Sales Tax		iii. Income Tax
	Monthly Income from Sale (Rs.)					
	Monthly Net Income (Rs.)					

3.2 Detail of Employees if any (Fill Part-II: Socio-economic of the questionnaire for each employee)

Sr. No.	Name of Employee	Job Title of Employee	Education Level	Experience	Monthly Salary/Wage (Rs.)	Other Benefits (Bounces+ Health Cover +Other)
a.						
b.						
c.						
d.						
e.						
f.						

4. Details of Affected Business/Structure

4.1. Details of Affected Business Structures (In case structure is affected)

Sr. No.	Type of Structure	No.	Total Area		Covered Area		Affected Area		Affected Structure (See Codes)			Year of Construction	Cost Incurred (Rs.)	Present Value (Rs.)
			W (ft.)	L (ft.)	W (ft.)	L (ft.)	W (ft.)	L (ft.)	Roof	Wall	Floor			
a.	Shop													
b.	Shed													
c.	Kiosk													
d.	House													
e.	Building													
f.	Plaza													
g.	Other													
Walls: 1=Bricks + Cement, 2= Bricks + Cement+ Decorative Tiles, 3= Brick + Mud, 4=Stoned + Mud+ Wood, 5= Mud Roofs: 1= Concrete, 2= Steel Girder = T. iron +Brick Tile, 3= Wooden Girder + Wooden Ribs with Wooden Planks, 4=Mud + Thatched Floors: 1= Concrete Mosaic / Marble), 2= Brick + Cement, 3= Brick + Mud, 4= Kacha (Mud)														

5. Livelihood Impacts and Mitigation

5.1. Detail of Livelihood Impacts and their mitigation

Sr. No.	Livelihood Impacts	Level (Full/Partial)	Preferred Option for Livelihood Restoration		
a.	Loss of income due to disruption of business during construction activities		i. Monterey Compensation (Net Income Loss)	ii. Allowances and benefits	iii. Other
b.	Loss of employment due to disruption of business during construction activities		i. Monterey Compensation (Net Income Loss)	ii. Allowances and benefits	iii. Other
c.	Shifting business due to disruption of business during construction		i. Monterey Compensation (Shifting of Business)	ii. Allowances and benefits	iii. Other
d.	Engineering or other solutions for avoiding impacts				
e.	Other				

5.2. Training and Skill Development Requirements

Sr. No.	Name of Potential Trainee	Relationship with DP	Age	Education Level	Experience	Attained Skills	Required Training	Preferred Training Institute
a.								
b.								
c.								
d.								
e.								
f.								
g.								
h.								
i.								
j.								
k.								
l.								
m.								
n.								

Part II: Socio-economic Survey

6. Demographic Profile of Affected Household

S. No.	a.	b.	c.	d.	e.		f.		g.
	Relationship with Respondent (See Codes)	Sex Male=M Female=F Transgender=T	Age (Yrs.)	Education (See Codes)	Business/ Occupation (See Codes)		Monthly Income (Rs. Per Month)		Major Disease in Last 01 Year /Disability With Type
					Main	Secondary	Main	Secondary	
i.	SELF								
ii.									
iii.									
iv.									
v.									
vi.									
vii.									
Viii									
ix.									

Relationship: 1=Self, 2=Wife, 3=Son, 4=Daughter, 5=Father, 6=Mother, 7=Brother, 8=Sister, 9=Grand Father, 10=Grand Mother, 11=Brother's Wife, 12=Nephew, 13=Niece 14=Father –in-Law, 15=Mother- in- Law, 16= Daughter-in Law. 17=Son-in-Law 18=Grand Son 19=Grand Daughter 20= Others

Education: 1= Primary 2= Middle 3= Matric, 4= Intermediate, 5= Graduation, 6= Masters, 7=LLB, 8=Engineer, 9=MBBS, 10=Technical Diploma, 11=Dars-e-Nizami/ Hafiz Quran, 12=Can Read Quran, 13= Can Insert Signatures, 14= Illiterate, 15= Others (Out of School, Not of School Age, etc.)

Occupations: 1=Agriculturist, 2=Shopkeeper General, 3= Mine Owner, 4= Govt. Service, 5=Private Service, 6= G. Laborer, 7=Livestock Related, 8=House-Maid, 9= House Wife, 10=Gone Abroad, 11= Student, 12= Driver 13=Jobless, 14=Old, 15=Retired, 16=Mine Laborer, 17=Contractor, 18=Business/ Trading, 19= Other

7. Monthly Household Expenditure

S. No.	Item	Monthly Expenditure (Rs.)
a.	Grocery and Food	
b.	Utility Bills	
c.	Education	
d.	Transport	
e.	Ritual/Ceremonies	
f.	Others	

8. Household Assets

S.No.	Item	No	Value (Rs.)	S.No.	Item	No	Value (Rs.)
a.	Refrigerator			j.	Van/Pickup		
b.	Television			k.	Car		
c.	Washing machine			l.	Gas Cylinder		
d.	Geyser			m.	Dish Antenna		
e.	Electric fan			n.	Telephone Landline		
f.	Electric iron			o.	Mobile Phone		
g.	Sewing machine			p.	Air Conditioner		
h.	Motorcycle			q.	Electric Water Pump		
i.	Bicycle			r.	Computer		

9. Access to Social Amenities

S. No.	Social Amenities	Available (Yes-No)	Satisfied (Yes-No)	Reasons for Not Satisfied
a.	Electricity			
b.	Gas			

c.	Water Supply			
d.	Water Filtration Plant			
e.	Sewerage/Drainage			
f.	Health Care Services			
g.	School			
h.	College (Boys-Girls)			
i.	University (Boys-Girls)			
j.	Telephone			
k.	Road			
l.	Religious Institution			

10. Perceptions of Respondents for Action Associated with the Project

S.No.	Possible impacts/effects of the Project	Increase	Decrease
i.	Employment opportunities		
ii.	Marketing facilities		
iii.	Living standard		
iv.	Unemployment		
v.	Income generating activities		
vi.	Access to sewerage facilities		
vii.	Environmental Upgradation		
viii.	Mobility		
ix.	Other		

11. Pressing Needs Perceived

S.No.	Order of Preference	Pressing Need
i.	First	
ii.	Second	
iii.	Third	
iv.	Fourth	
v.	Fifth	
vi.	Sixth	
vii.	Seventh	

viii.	Eighth	
ix.	Ninth	

12. General Observations of Respondent

	<p>Any comments you would like to make? (Not specifically related to a question).</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
--	---

13. Observations/Comment/ Additional Information of Interviewer

	<p>Any observation/comment/ additional information obtained by the interviewer</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
--	--

14. Authentication of Data Provided

I, Solemnly, declare that the information provided by me in this questionnaire is correct. I have provided the correct information for my land, housing, commercial entity, trees, and other assets. This information can be verified by any government agency.

Name of Affected Person

Signature:

Date: _____

Annexure-II: Inventory of Business Losses and Compensation

S. No.	Pit #	Impact Location (Coordinates)	Name of Road	Name of DP	Father's Name of DP	Name of Business	Type of Business	Scale of Business	Ownership Status	Monthly Net Income (PKR)	Loss of Business Disruption for 04 months (PKR)
1	R01-L1-A	31.544584, 74.3596084	Sikandar Road Infantry Road	Muhammad Nadeem	Barkat Ali	LPG Shop	LPG Gas	Small	Owner	25,000	100,000
2	JO2-L1-A	31.548238, 74.364334	Infantry Road	Muhammad Ijaz	Faqeeq Muhammad	Moiz Nzaymal Creation	Garments Shop	Small	Renter	60,000	240,000
3	JO2-L1-A	31.548221, 74.36420	Infantry Road	Abdul Wahab	Abdul Arif Javeed	KBE Kitchen	Commercial Kitchen Equipment	Small	Owner	150,000	600,000
4	JO-9	31.562835, 74.342677	Queen Marry Road	Muhammad Shakeel	Muhammad Shafique	But Auto Workshop	Car Repairing Workshop	Medium	Renter	300,000	1,200,000
5	JO-2-L8-A	31.5652270, 74.329319	Abbot Road	Muhammad Aslam	Ghulam Hussain	Aslam Motors	Car Sales & Purchase	Medium	Owner	200,000	800,000
6	JO-2-L8-A	31.5652930, 74.3293719	Abbot Road	Zahid Sultan	Sultan Ahmad	Al Raza Auto Lab Vision Engineering	Car Engine Repair	Small	Renter	150,000	600,000
7	JO-2-L8-A	31.565535, 74.328976	Abbot Road	Rana Saleem/Rana Aleem	Rana atta Muhmmad Khan	AS Motors	Car Sale Purchase & Sales	Medium	Owner	524,200	2,096,800
8	JO-2-L8-A	31.565312, 74.329473	Abbot Road	Afzal	Iqbal	Decent Barber	Barber Shop	Medium	Owner	228,000	912,000
9	JO-2-L8-A	31.564692, 74.733037	Abbot Road	Hamza Iqbal	Zafar Iqbal	Zee Printer	Printing Press	Large	Renter	1,635,000	6,540,000
10	JO-2-L8-A	31.5652249, 74.329217	Abbot Road	Malik Ghafoor	Siraj Din	Scrap House	Scrap Store	Small	Owner	122,000	488,000
11	JO8-C	31.543370, 74.284909	Nonarian Road	Muhammad Khalil	Muhammad Munir	Khalil Kitchen	Kitchen	Small	Renter	49,700	198,800

S. No.	Pit #	Impact Location (Coordinates)	Name of Road	Name of DP	Father's Name of DP	Name of Business	Type of Business	Scale of Business	Ownership Status	Monthly Net Income (PKR)	Loss of Business Disruption for 04 months (PKR)
12	JO8-C	31.543345, 74.284835	Nonarian Road	Muhammad Sohail	Muhammad Hussain	Sohail Auto Bike Repair	Motorcycle Mechanic	Small	Renter	80,000	320,000
13	JO8-C	31.543432, 74.284908	Nonarian Road	Muhammad Arshad	Muhammad Shafi	Mechanical Work	Mechanical Work	Small	Renter	80,800	323,200
14	JO8-C	31.543363, 74.285048	Nonarian Road	Muhammad Anwar	Karim Buksh	Cement & Brick Dealer	Budling Material	Small	Owner	65,400	261,600
15	JO8-C	31.543482, 74.2847701	Nonarian Road	Muhammad Rizwan	Rana Muhammad Akthar	Parking Stand	Parking Stand	Small	Renter	97,000	388,000
16	JO2-L1-A	31.547953, 74.363880	Infantry Road	Amjad Abbas	Muhammad Abbas	School Bag Shop	School Bag Shop	Small	Owner	40,000	160,000
17	JO2-L1-A	31.547953, 74.363880	Infantry Road	Harry Sam	Samual	Barber Shop	Barber Shop	Small	Renter	40,000	160,000
Total										3,847,100	15,388,400

Annexure-III: Inventory of Business Operators for Livelihood Compensation

S. No.	Pit #	Impact Location (Coordinates)	Name of Road	Name of DP/ disturbed	Father's Name of DP	Name of Business	Type of Business	Scale of Business	Ownership Status	Rent Per Month (PKR)	Rent to Paid for Business Disruption for 04 months (PKR)
1	JO2-L1-A	31.548238, 74.364334	Infantry Road	Muhammad Ijaz	Faqeeq Muhammad	Moiz Nzaymal Creation	Garments Shop	Small	Renter	12,000	48,000
2	JO-9	31.562835, 74.342677	Queen Marry Road	Muhammad Shakeel	Muhammad Shafique	But Auto Workshop	Car Repairing Workshop	Medium	Renter	80,000	320,000
3	JO-2-L8-A	31.5652930, 74.3293719	Abbot Road	Zahid Sultan	Sultan Ahmad	Al Raza Auto Lab Vision Engineering	Car Engine Repair	Small	Renter	25,000	100,000
4	JO-2-L8-A	31.565312, 74.329473	Abbot Road	Afzal	Iqbal	Decent Barber	Barber Shop	Medium	Renter	30,000	120,000
5	JO-2-L8-A	31.564692, 74.733037	Abbot Road	Hamza Iqbal	Zafar Iqbal	Zee Printer	Printing Press	Large	Renter	160,000	640,000
6	JO8-C	31.543370, 74.284909	Nonarian Road	Muhammad Khalil	Muhammad Munir	Khalil Kitchen	Kitchen	Small	Renter	32,000	128,000
7	JO8-C	31.543345, 74.284835	Nonarian Road	Muhammad Sohail	Muhammad Hussain	Sohail Auto Bike Repair	Motorcycle Mechanic	Small	Renter	12,000	48,000
8	JO8-C	31.543432, 74.284908	Nonarian Road	Muhammad Arshad	Muhammad Shafi	Mechanical Work	Mechanical Work	Small	Renter	12,200	48,800
9	JO8-C	31.543482, 74.2847701	Nonarian Road	Muhammad Rizwan	Rana Muhammad Akthar	Parking Stand	Parking Stand	Small	Renter	32,000	128,000

10	JO2-L1-A	31.547953, 74.363880	Infantry Road	Harry Sam	Samual	Barber Shop	Barber Shop	Small	Renter	10,000	40,000
Total										405,200	1,620,800

Annexure-IV: Inventory of Income Losses to Employees of Businesses and Compensation

S. No.	Jacking/ Recipient Pit #	Location (Coordinates)	Location Road	Name of Business Owner	Name of Business	Type of Business	Scale of Business	Name of Employee	Job Title of Employee	Monthly Salary/Wage (PKR)	Compensation for 4 Months (PKR)
1	JO2-L1-A	31.548238, 74.364334	Infantry Road	Muhammad Ijaz	Moiz Nzaymal Creation	Garments Shop	Small	Usman	Saleman	16,000	64,000
2	JO2-L1-A	31.548221, 74.36420	Infantry Road	Abdul Wahab	KBE Kitchen	Commercial Kitchen Equipment	Small	Sufwan	Saleman	18,000	72,000
3	JO-9	31.562835, 74.342677	Queen Marry Road	Muhammad Shakeel	But Auto Workshop	Car Repairing Workshop	Medium	M.Shakeel	Danter	32,000	128,000
4								Shahid	Painter	32,000	128,000
5								Yousif	Machinic	32,000	128,000
6								Saim	Machinic	30,000	120,000
7								Arbaz	Machinic	25,000	100,000
8								Tahir	Electrician	30,000	120,000
9								Shafique	Danter	40,000	160,000
10								Ikram Khan	Helper	18,000	72,000
11								Nasir Khan	Helper	18,000	72,000

S. No.	Jacking/ Recipient Pit #	Location (Coordinates)	Location Road	Name of Business Owner	Name of Business	Type of Business	Scale of Business	Name of Employee	Job Title of Employee	Monthly Salary/Wage (PKR)	Compensation for 4 Months (PKR)
12	JO-2-L8-A	31.5652270, 74.329319	Abbot Road	Muhammad Aslam	Aslam Motors	Car Sales & Purchase	Medium	Khair Muhammad	Helper	25,000	100,000
13	JO-2-L8-A	31.5652930, 74.3293719	Abbot Road	Zahid Sultan	Al Raza Auto Lab Vision Engineering	Car Engine Repair	Small	Ikhlaz Ahmad	Lath Work	50,000	200,000
14								Adeel	Lath Work	40,000	160,000
15								Sulman	Lath Work	10,000	40,000
16	JO-2-L8-A	31.565312, 74.329473	Abbot Road	Afzal	Decent Barber	Barber Shop	Medium	Shehzad	Hairdresser	65,000	260,000
17								Daniyal	Hairdresser	65,000	260,000
18								Makki	Hairdresser	65,000	260,000
19								Tauseef	Hairdresser	65,000	260,000
20	JO-2-L8-A	31.564692, 74.733037	Abbot Road	Hamza Iqbal	Zee Printer	Printing Press	Large	Haroon	Machine Man	40,000	160,000
21								Waseem	Machine Man	40,000	160,000
22								Tayyab	Helper	25,000	100,000
23								Afaq	Helper	25,000	100,000
24								Adeel	Helper	25,000	100,000
25								Ali	Helper	25,000	100,000
26	JO8-C	31.543370, 74.284909	Nonarian Road	Muhammad Khalil	Khalil Kitchen	Kitchen	Small	Javeed	Helper	15,000	60,000

S. No.	Jacking/ Recipient Pit #	Location (Coordinates)	Location Road	Name of Business Owner	Name of Business	Type of Business	Scale of Business	Name of Employee	Job Title of Employee	Monthly Salary/Wage (PKR)	Compensation for 4 Months (PKR)
27								M.Waseem	Helper	15,000	60,000
28	JO8-C	31.543345, 74.284835	Nonarian Road	Muhammad Sohail	Sohail Auto Bike Repair	Motorcycle Mechanic	Small	Shehroz	Mechanic	35,000	140,000
29	JO8-C	31.543432, 74.284908	Nonarian Road	Muhammad Arshad	Mechanical Work	Mechanical Work	Small	Ahmed	Helper	40,000	160,000
30	JO8-C	31.543482, 74.2847701	Nonarian Road	Muhammad Rizwan	Parking Stand	Parking Stand	Small	M.Waseem	Parking Incharge	20,000	80,000
Total										981,000	3,924,000

Annexure-V: Basic Data of Training Candidates

Sr. No.	Name of Potential Trainee	Name of Business Holder	Relationship with Business Holder	Age (Year)	Education Level	Experience (Year)	Attained Skills	Required Training	Preferred Training Institute
1	Asim	Muhammad Nadeem	Son	15	Middle	0	Computer	Computer	TEVTA

2	Muhammad Ijaz	Muhammad Ijaz	Self	42	Middle	25	AC Repairing	AC Repairing	TEVTA
3	Sufwan	Abdul Wahab	Employ	23	Intermediate	2	Computer	Computer	TEVTA
4	Muhammad Shakeel	Muhammad Shakeel	Self	28	Intermediate	16	Car Repairing	Car Repairing	T.T.I.C Mughalpura
5	Arbaz	Muhammad Shakeel	Employ	25	Middle	7	Car Repairing	Car Repairing	T.T.I.C Mughalpura
6	Nasir	Muhammad Shakeel	Employ	25	Middle	1	Car Repairing	Car Repairing	T.T.I.C Mughalpura
7	Salhe Aleem	Rana Saleem/Rana Aleem	Son	22	Bachelor of Business Administration (BBA)	0	Computer	Free Lancing	Gulberg TEVTA
8	Talha Aleem	Rana Saleem/Rana Aleem	Son	20	Matric	0	Auto Electric	Auto Electric	TTIC Mughalpura
9	Makki	Afzal	Employ	19	Matric	1	Hairdresser	Hairdresser	TEVTA
10	Usman Ali	Muhammad Khalil	Son	22	Middle	0	Chef	Chef	Cotham College

Annexure-VI: Notification of Government of Punjab for Minimum Wages

EXTRA ORDINARY ISSUE

REGISTERED No. L-7531



The Punjab Gazette

PUBLISHED BY AUTHORITY

LAHORE MONDAY JULY 08, 2024

GOVERNMENT OF THE PUNJAB
MINIMUM WAGES BOARD
62-D NEW MUSLIM TOWN LAHORE

NOTIFICATION

Dated 5th July, 2024

No. MWB/58(VI)/2024: The following draft recommendations which the Minimum Wages Board proposes to review under section 16 of the Punjab Domestic Workers Act, 2019 in respect of domestic workers employed in all households in the Punjab Province are hereby published as required under rule 14 (1) of the Minimum Wages Rules, 1962 for information of persons likely to be affected by it. Notice is hereby given that the proposed rates together with objections and suggestions with respect thereto, may be received to the Secretary, Minimum Wages Board Punjab, Lahore, within a period of thirty days from the date of publication of this notification in the official Gazette, which shall be taken into consideration by the said Board under Rule 14 (2) of Rules ibid. Any objection or suggestion received after the expiry of the prescribed period will not be considered /entertained:-

DRAFT RECOMMENDATIONS REGARDING FIXATION OF MINIMUM RATES OF WAGES OF DOMESTIC WORKERS EMPLOYED IN ALL HOUSEHOLDS IN THE PUNJAB PROVINCE.

- I. These recommendations shall apply to all households located in the Punjab Province under Section 16 of Punjab Domestic Workers Act 2019. The minimum rates of wages being proposed for domestic workers shall be applicable uniformly throughout the Province.
- II. These recommendations shall be applicable as per provisions of the Punjab Domestic Workers Act, 2019 and shall come into force w.e.f. 01.07.2024 after their approval and notification by Government of the Punjab under section 17 of the said Act.
- III. As per provisions of Rule 15 of the Rules ibid, for work of equal value, a female worker of the category shall get the same minimum wages as allowed to a male worker of the category for such work.
- IV. The daily / weekly working hours and conditions of overtime work and work on weekly days of rest and on paid holidays, etc. in respect of the domestic workers of the given category shall be regulated by the Punjab Domestic Workers Act, 2019 and other relevant Labour Laws.
- V. The following deductions shall be allowed to the employers for providing housing accommodation and transport to the workers employed by them:-
 - a) For providing housing accommodation @Rs. 459.03/- per month
 - b) For providing transport @Rs. 98.28/- per month
- VI. The schedule of proposed minimum rate of wages is appended below:-

SCHEDULE

Sr. No.	Category of Workers	Proposed minimum rates of wages		
		Per Hour	Per day (for 8 working hours)	Per month (for 26 working days)
I.	Domestic Workers employed in all household of Punjab Province.	Rs.177.88	Rs. 1423.07/-	Rs. 37,000/-

BY ORDER OF THE MINIMUM WAGES BOARD, PUNJAB

M. Shahid
05/07/2024
(MUHAMMAD SHAHID)
Secretary
Minimum Wages Board, Punjab.

Annexure-VII: Notification of Grievance Redress Committee



WATER & SANITATION AGENCY (LDA)
OFFICE OF THE PROJECT DIRECTOR
LAHORE WATER & WASTEWATER MANAGEMENT PROJECT (LWWMP)
 ZAHOOR ELAHI ROAD, GULBERG-II, LAHORE.
 Ph#: +92-42-99263142-43; Fax#: +92-42-99263147

NO.PD/LWWMP/WASA/ 207-215

Dated: 13 - 04 - 2023

OFFICE ORDER :

The Grievance Redressal Mechanism (GRM) for the preparatory phase (before execution) of the project " Sewerage System from Larechs Colony to Gulshan -e-Ravi, Lahore (Through trenchless technology) - Lahore Water & Wastewater Management Project " has been devised to resolve the concerns and grievances of affected persons.

2 In this regard, WASA Lahore Designated Committee comprising the following members is hereby constituted for the 1st (first) tier of GRM:

1. Director Administration	Chair of the Committee
2. Dy. Project Director (LWWMP)	Member (Secretary)
3. Dy. Director (Social Mobilization)	Member
4. Dy. Director (P&E)	Member
5. Assistant Director (Social Mobilization)	Member
6. Assistant Director (P&E)	Member
7. Land Acquisition Collector	Member

3 The designated team of WASA Lahore for the first tier of GRM will be responsible to record grievances and to resolve them within three (03) days to seven (07) days. This team will consult with all the relevant parties (e.g. Affected People, Deputy Commissioner, Assistant Commissioner, Land Acquisition Collector, and their staff, general public, and other govt departments), if necessary, to resolve the concerns and grievances of the affected persons.

This is being issued by the approval of the Managing Director at NP-81 Of the concerned file vide Diary No.MD / 4207 dated 05-04-2023.

Project Director (LWWMP)
WASA, LDA, LAHORE

Cc:

1. Deputy Managing Director (Engg.), WASA, Lahore.
2. P.S. to Managing Director, WASA, Lahore.
3. All members of GRM 1st (first) tier

Annexure-VIII: Attendance Sheet of Participants of Consultation Session

Sr. No.	Location	Name of Participant	Father's Name
1	Shama Chowk, Samanabad Town	M. Younas	Makhan Dean
2	Shama Chowk, Samanabad Town	M. Farooq	Haji M. Sadiq
3	Shama Chowk, Samanabad Town	M. Talha	M. Fayyaz
4	Shama Chowk, Samanabad Town	M. Imran	M. Aslam
5	Shama Chowk, Samanabad Town	Shah Nawaz	Bakir
6	Shama Chowk, Samanabad Town	Mansab Ali	Sharafat Ali
7	Shama Chowk, Samanabad Town	M. Hussain	M. Nawaz
8	Shama Chowk, Samanabad Town	M. Asif	M. Hashim
9	Shama Chowk, Samanabad Town	Muhammad Shabir	Siraj Din
10	Shama Chowk, Samanabad Town	Muhammad Talha Hafeez	Muhammad Hafeez
11	Abbot Road	Saleem	Ata Muhammad
12	Abbot Road	Naveed Butt	Farrukh
13	Abbot Road	Zaman Khan	Rustam
14	Abbot Road	M. Aleem	Nazim
15	Abbot Road	Kashif	Aslam
16	Abbot Road	Abid	Javed
17	Abbot Road	Syed Riaz-ul-Hassan	Zaidi Sahb
18	Multan Road	Kashif	Munawar
19	Multan Road	Nouman	Bashir
20	Multan Road	Inam	Mahayyudin
21	Multan Road	Abdur Rehman	Majeed
22	Multan Road	Rashid	Ikram
23	Multan Road	Zia-ur-Rehman	Habib
24	Multan Road	Nadeem	Boota
25	Bahawalpur Road	Aqeel	M. Aleem
26	Bahawalpur Road	M. Waseem	Fazal Din
27	Bahawalpur Road	M. Nadeem	Allah Din
28	Bahawalpur Road	Ashiq Nazar	Nazar
29	Bahawalpur Road	M. Nadeem	M. Saleem
30	Bahawalpur Road	Abdul Aziz	Abdul Rasheed
31	Bahawalpur Road	M. Shakeel	Liaqat
32	Bahawalpur Road	Ijaz	M. Hanif
33	Bahawalpur Road	Ghulam Muhiyuddin	M. Yaqoob
34	Q Chowk, College Road, Gulberg	Muhammad Saleem Majeed	Abdul Majeed
35	Q Chowk, College Road, Gulberg	Muhammad Ashraf	Muhammad Yousef
36	Q Chowk, College Road, Gulberg	Muhammad Riaz	Nabi Bukhsh
37	Q Chowk, College Road, Gulberg	Arslan Ali	Naveed Ali
38	Q Chowk, College Road, Gulberg	Nabeel Ahmed	Ghous
39	Q Chowk, College Road, Gulberg	Adeel Khan	Abdul Rauf
40	Q Chowk, College Road, Gulberg	Mustafa	Ahmed Ali
41	Q Chowk, College Road, Gulberg	Muhammad Naseer	Khuda Bukhsh
42	Q Chowk, College Road, Gulberg	Abdul Rauf	Rasheed

Sr. No.	Location	Name of Participant	Father's Name
43	Q Chowk, College Road, Gulberg	Kamran Ali	Muhammad Ali
44	Q Chowk, College Road, Gulberg	Muhammad Khan	Wajid Ali
45	Q Chowk, College Road, Gulberg	Arshad Ali	Shukat Ali
46	Q Chowk, College Road, Gulberg	Muhammad Ilyas	Bashir Ahmed
47	Mian Mir Colony	Waleed Ansari	Ghulam Nabi Ansari
48	Mehar Nazir Park Ganda Nala Ghulshan Ravi	Kashif	Abdul Haq
49	Mehar Nazir Park Ganda Nala Ghulshan Ravi	Muhammad Aleem	Muhammad Ali
50	Mehar Nazir Park Ganda Nala Ghulshan Ravi	Bilal Shah	Anwar Shah
51	Mehar Nazir Park Ganda Nala Ghulshan Ravi	Ali Razaq	Muhammad Alam
52	Mehar Nazir Park Ganda Nala Ghulshan Ravi	Muhammad Mazahar	Muhammad Faqeer
53	Mehar Nazir Park Ganda Nala Ghulshan Ravi	Ghulam Rasool	Ibraheem
54	Mehar Nazir Park Ganda Nala Ghulshan Ravi	Muhammad Saleem	Muhammad Ramzan
55	Mehar Nazir Park Ganda Nala Ghulshan Ravi	Muhammad Abbas	Suleman
56	Mehar Nazir Park Ganda Nala Ghulshan Ravi	Asif Myneer Bajwa	Muhammad Nazir
57	Mehar Nazir Park Ganda Nala Ghulshan Ravi	Mian Muhammad Qasim	Muhammad Rafique
58	Ganda Nala Band Road Ghulshane Ravi	Muhammad Munir	Nazir Ahmad
59	Ganda Nala Band Road Ghulshane Ravi	Muhammad Baber	Talib Ali
60	Ganda Nala Band Road Ghulshane Ravi	Farooq Ahmad	Muhammad Hussain
61	Ganda Nala Band Road Ghulshane Ravi	Ghulam Mustafa	Muhammad Ali
62	Ganda Nala Band Road Ghulshane Ravi	Muhammad Faisal	Abdul Mjeed
63	Ganda Nala Band Road Ghulshane Ravi	Muhammad Jangeer	Muhammad Waqar
64	Ganda Nala Band Road Ghulshane Ravi	Muhammad Younas	Talib Ali
65	Ganda Nala Band Road Ghulshane Ravi	Nazir Ahmad	Khuda Buksh
66	Wasa Disposal Jhuggiyan Ghulshan Ravi	Billo	Poori
67	Wasa Disposal Jhuggiyan Ghulshan Ravi	Ghulam Nabi	Ghulam Rasol
68	Wasa Disposal Jhuggiyan Ghulshan Ravi	Toqeer Hussain	Mazhar Hussain
69	Wasa Disposal Jhuggiyan Ghulshan Ravi	Farooq	M Siddique
70	Wasa Disposal Jhuggiyan Ghulshan Ravi	M Nadeem	Mushtaq
71	Wasa Disposal Jhuggiyan Ghulshan Ravi	Shahbaz	wilayat
72	Wasa Disposal Jhuggiyan Ghulshan Ravi	Liaquat	Kaleem

Sr. No.	Location	Name of Participant	Father's Name
73	Wasa Disposal Jhuggiyan Ghulshan Ravi	Pasha	Ishaq
74	Wasa Disposal Jhuggiyan Ghulshan Ravi	Nadeem	Siddique
75	Babu Sabu-Nonariyan Road	Irfan But	Shahid Butt
76	Babu Sabu-Nonariyan Road	Zaman Khan	Ismail
77	Babu Sabu-Nonariyan Road	Iftihar Ahmed	Haji Muhammad Boota
78	Babu Sabu-Nonariyan Road	Akber Mistery	Barket Ali
79	Babu Sabu-Nonariyan Road	Irfan	Rustem
80	Babu Sabu-Nonariyan Road	Muhammad Usaman	M. Hanif
81	Allama Iqbal Road	Muhammad Ali Butt	-
82	Allama Iqbal Road	Javeed Iqbal	Iqbal Mustafa
83	Allama Iqbal Road	Mazoor	Maqbool Ahmed
84	Allama Iqbal Road	Waqas	
85	Allama Iqbal Road	Baber	Hussain
86	Allama Iqbal Road	M. Ali	M. Shahid
87	Garhi Shau Bazar	Zahid	Haji Ghulam Masood
88	Garhi Shau Bazar	Wazir	Haji Ghulam Masood
89	Garhi Shau Bazar	Shahid	Haji Ghulam Masood
90	Garhi Shau Bazar	Arshad	Haji Ghulam Masood
91	Mughalpura Road	Haji Bilal	Haji Imdad
92	Mughalpura Road	Qaiser Ashraf	M. ashraf
93	Mughalpura Road	Saleem	M. ashraf
94	Mughalpura Road	Amjed	M. ashraf
95	Mughalpura Road	Yaseen	M. ashraf
96	Mozan Road	Madini Optical	-
97	Mozan Road	Usama	M. Rehman
98	Mozan Road	Muhammad Ishaq	M. Iqbal
99	Mozan Road	M. Rehman	M. Ramzan
100	Mozan Road	Ishaq Optical	-
101	Samanabad	Tasleem Ahmed	Qutab-ud-Din
102	Samanabad	Saqib Khalid	Khalid Mehmood
103	Samanabad	Rafiq Maseeh	Sadiq Maseeh
104	Samanabad	Naveed Ahmad	Taaj Din
105	Samanabad	Abid Mehmood	Taj Din
106	Samanabad	Imran Aslam	Muhammad Aslam
107	Samanabad	Javaid Mehmood	Ghulam Sabir
108	Samanabad	Rizwan Sabir	Sabir
109	Samanabad	Faizan Nazeer	Nazeer
110	Link Ferozpur Road	Hamid Ali	Muhammad Yaqoob
111	Link Ferozpur Road	Jaffar	Muhammad Manzoor
112	Link Ferozpur Road	Muhammad Hussain	Ahmad Nadeem
113	Link Ferozpur Road	Tariq Jaan	Bashir Jaan
114	Link Ferozpur Road	Muhammad Irshad	Ch. Taj-ud-din
115	Link Ferozpur Road	Muhammad Zulqarnain	Zulfiqar Ahmad
116	Link Ferozpur Road	Iftikhar Ahmad	Hakeem Abdur Raheem

Sr. No.	Location	Name of Participant	Father's Name
117	Link Ferozpur Road	Khawar Javaid	Munawar Ali
118	Link Ferozpur Road	Gulzar Ali	Barkat Ali
119	Link Ferozpur Road	Nayamat Ali	Abdul Ghani
120	Shimla Pahari	Afzal	Iqbal
121	Shimla Pahari	Shahzad	Butt
122	Shimla Pahari	Daniyal	Haider
123	Shimla Pahari	Makki	Rasool
124	Shimla Pahari	Touseef	Muhammad Imran
125	Shimla Pahari	Hamza Iqbal	Zafar Iqbal
126	Shimla Pahari	Haroon	Ghulam Ali
127	Shimla Pahari	Waseem	Muhammad Ashraf
128	Shimla Pahari	Tayyab	Muhammad Ishaq
129	Shimla Pahari	Afaq	Javaidj
130	Shah Jamal	Muhammad Ali	Muhammad Hasan
131	Shah Jamal	Muhammad Adeel	Sheikh Asif
132	Shah Jamal	Abdul Ghafoor	Muhammad Majid
133	Shah Jamal	Muhammad Aslam	Ghulam Hussain
134	Shah Jamal	Rana Muhammad Saleem	Rana Aleem
135	Shah Jamal	Talha Aleem	Rana Aleem
136	Shah Jamal	Shafaqat	Inayat Ullah
137	Shah Jamal	Muhammad Shakeel	Muhammad Shafiq
138	Shah Jamal	Shahid	Bashir
139	Shah Jamal	Yousaf	Muhammad Ahmad
140	Shera Kot	Saim	Abdullah
141	Shera Kot	Zahid Sultan	Sultan Ahmad
142	Shera Kot	Ikhlaq Ahmed	Muhammad Ahmed
143	Shera Kot	Arbaz	Iftikhar Ali
144	Shera Kot	Adeel	Ashraf
145	Shera Kot	Nasir Ahmad	Muhammad Ahmad
146	Shera Kot	Sulyman	Wasim
147	Shera Kot	Tahir	Sohaib
148	Shera Kot	Shafiq	Alam
149	Shera Kot	Ikram Khan	Saif Khan
150	Saadi Park	Mubeen Ahmad	Kamran Nasir
151	Saadi Park	Rayaz	Sher Muhammad
152	Saadi Park	Muhammad Arshad	Muhammad Rasheed
153	Saadi Park	Muhammad Mumtaz	Ghulam Hussain Chaudhry
154	Saadi Park	Naqeeb Ullah	Bismillah
155	Saadi Park	Sultan Ali Shah	Hadayat Ali Shah
156	Saadi Park	Khurram Shafiq	Muhammad Shafiq
157	Saadi Park	Muhammad Bilal	Muhammad Akram
158	Saadi Park	Babar	Muhammad Bilal
159	Saadi Park	Saqib	Muhammad Shafiq

Annexure-IX: Picture Gallery

Livelihood Impacts



Public Consulation



