



Sindh Water Sector Improvement Project

Resettlement Action Plan (RAP)
Contract WSIP/B1/GF/01

May 2016
Sindh Irrigation and Drainage Authority

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SIDA
Left Bank Barrage Colony
Hyderabad
Sindh
Pakistan

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Abbreviations

Acronym	Definition	Acronym	Definition
ACS	Additional Chief Secretary	ISEA	Integrated Social and Environmental Assessment
ADB	Asian Development Bank	IUCN	International Union for Conservation of Nature
AFs	Affected Families	LAA	Land Acquisition Act
APL	Adaptable Program Loan	LBOD	Left Bank Outfall Drain
APs	Affected Pearson	M&E	Monitoring and Evaluation
AWB (s)	Area Water Board (s)	MAF	Million Acre –Feet
BCM	Billion Cubic Meters	MD	Managing Director
BER	Bid Evaluation Report	MIS	Management Information System
BHU	Basic Health Unite	MRL	Maximum Residue Limit
BP	Bank Procedures	NAM	New Accounting Model
CAS	Country Assistance Strategy	NARC	National Agriculture Research Centre
CBC	Community Based Contract	NCB	National Competitive Bidding
CBOs	Community Based Organizations	NDP	National Drainage Program
CCA	Cultivable Command Area	NFDC	National Fertilizer Development Centre
CFAA	Country Financial Accountability Assessment	NGO	Non Governmental Organizations
Cfs	Cubic feet per second	NIP	Non Inspection Path
CM	Community Member	NRP	National Resettlement Policy
CoA	Chart of Accounts	O&M	Operation and Maintenance
CoI	Corridor of Impact	OECD	Overseas Economic Cooperation Fund
Cs	Cusecs	OFWM	On-Farm Water Management
DA	Designated Account	OP	Operational Procedure
DFID	Department for International Development	OPL	Official Poverty Line
DGAE	Director General Agricultural Extension	P&D	Planning & Development
DGAE&WM	Director General Agricultural Engineering and Water Management	PAP	Project Affected People
DO	Development Objective	PCMU	Project Coordination & Management Unit
Dos	Direct Outlets	PDO	Project Development Objective
DPR	Delivery Performance Ratio	PFAA	Provincial Financial Accountability Assessment
EA	Environmental Assessment	PIC	Project Implementation Consultants
EIA	Environmental Impact Assessment	PIFRA	Program to Improve Financial Reporting and Auditing
EMF	Environmental Management Framework	PIP	Project Implementation Plan
EMP	Environmental Management Plan	PMCA	Project Management Consultant/Procurement Agent
EMU	Environmental Management Unit	PMP	Pest Management Plan
EPA	Environmental Protection Agency	PP	Plant Protection
Eol	Expression of Interest	PSC	Project Steering Committee
ERR	Economic Rate of Return	PSR	Project Supervision Rating
		RAP	Resettlement Action Plan

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Acronym	Definition	Acronym	Definition
ESP	Environmental and Social Plan	PRC	Project Resettlement Committee
FAO	Food and Agriculture Organization	RD	Reduce Distance
FFS	Farmer Field School	RFP	Request for Proposal Packages
FGD	Focus Group Discussion	RP	Resettlement Plan
FM	Financial Management	SA	Special Accounts
FMR	Financial Management Report	SAP	Social Action Plan
FO	Farmers Organization	SCARP	Salinity Control and Reclamation Program
GB	General Body	SEPA	Sindh Environmental Protection Agency
GCA	Gross Command Area	SIDA	Sindh Irrigation and Drainage Authority
GDP	Gross Domestic Product	SIL	Specific Investment Loan
GIS	Geographic Information Systems	SIMF	Social Impact Management Framework
GPs	Good Practices	SMP	Social Management Plan
GPN	General Procurement Notice	SOFWMP	Sindh On-farm Water Management Project
GoP	Government of Pakistan	Sq.ft	Square Fit
GoS	Government of Sindh	SWMO 2002	Sindh Water Management Ordinance 2002
Ha	Hectare	SWSIP	Sindh Water Sector Improvement Project
I&D	Irrigation and Drainage	TCP	Technical Cooperation Programmes
IAS	International Accounting Standards	TI	Transparency International
IBIS	Indus Basin Irrigation System	ToF	Training of Facilitators
IBRD	International Bank for Reconstruction and Development	ToR	Terms of Reference
ICB	International Competitive Bidding	UNDB	United Nations Development Business
ICR	Implementation Completion Report	VR	Village Road
IDA	International Development Association	WAC	Water Allocation Committee
IDMTA	Irrigation and Drainage Management Transfer Agreement	WAPDA	Water and Power Development Authority
IEE	Initial Environmental Examination	WB	World Bank
IFC	International Finance Corporation	WCA	Water Course Association
IFRS	International Financial Reporting Standards	WSIP	Water Sector Improvement Project
INTOSAI	International Organization of Supreme Audit Institutions	WTO	World Trade Organization
IP/ NIP	Inspection Path/ Non-Inspection Path	WTS	Walk Through Survey
IPD	Irrigation and Power Department	WWF	World Wildlife Fund
IPM	Integrated Pest Management	IPSNM	Integrated Plant and Soil Nutrients Management

Glossary of National Terms

Term	Definition	Term	Definition
Abiana	Irrigation water charges	Mogha	Ungated outlet from distributary/ minor or canal
Chaks or Dehs	Tertiary irrigation command area	Mohanas	A fish hunting community by profession.
Cabin	Wooden Kiosk		
Hari	Tenant	Pancho	An irrigation practice where water is let to cascade from one field to another

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Term	Definition	Term	Definition
Kharif	Summer crop season (April-October)	Rabi	Winter crop season (November-March)
Warabandi	Rotational system for water distribution	Pacca	House or building constructed with concrete or burned bricks
Semi-Pacca	House or building constructed with burnt bricks and mud	Kacha	House constructed with un-burnt bricks and mud, or temporary wooden poles etc
Jhoopra	Hut	Otaq	Formal sitting/living arrangements for men guests
Washing Ghats	Areas designed along the canal/minor for laundry purpose	Tehsil / Taluka	A sub- division of a district headed by Assistant Commissioner, generally a district comprises of 3 to 5 tehsils

DEFINITIONS OF TERMS

The following terms and definitions have been used in this report (RP):

Affected Person/People	Any person affected by project-related changes in use of land, water, natural resources, or income losses.
Affected Family/Household	All members of a household residing under one roof and operating as a single economic unit, who are adversely affected by the Project, or any of its components. It may consist of a single nuclear family or an extended family group.
Col (Corridor of Impact)	It is an area falling within the Right of Way (RoW) used to determine the area of specific impact from the proposed works.
Compensation	Payment in cash or in kind of the replacement cost of the acquired assets or structures.
Cut-off-date	For non-land related entitlements: The date of the start of the census survey For land related entitlements: Date of notification under section 4 of the Land Acquisition Act
Encroacher	Person who extends his/her structure beyond area of ownership into adjacent areas
Entitlement	Range of measures comprising compensation, income restoration, transfer assistance, income substitution, and relocation, which are due to affected people, depending on the nature of their losses, to restore their economic and social base.
Income Restoration	Includes re-establishing income sources and livelihood of the affected persons according to their status
Involuntary Resettlement	Any resettlement, which does not involve willingness of the persons being adversely affected, but are forced through an instrument of law.
Shops	Commercial structures, like groceries, vulcanizing shops, tailoring shops, beauty parlour, market stalls, hotels, movie houses, and similar establishments.
Indigenous Peoples	The term 'Indigenous Peoples' is used in a generic sense to refer to a distinct, vulnerable, social and cultural group possessing characteristics as defined by the World Bank Operational Policy/Bank Policy 4.10 ¹ .
Land Acquisition	The process whereby a person is compelled by a government agency to acquire all or part of the land a person owns or possesses to the ownership and possession of the government agency for public purpose in return for compensation.
Market Value	The value of an asset determined by market transaction of similar assets and finally arrived at after negotiations with the owners. It includes transaction costs and without the depreciation and deductions for salvaged building material.

¹ World Bank Operational Manual available at <http://go.worldbank.org/DZDZ9038D0>

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Marginally Affected	Land or structure means less than 10 percent of the land or structure is affected and where the remaining unaffected portion is still viable for use.
Participation	A process that allows stakeholders to influence and share control over development initiatives, decisions and the use of resources that affect them.
Project Area	The area specified by the Project Document in the Official Notification and includes the areas within administrative limits of the Provincial Government.
Project Director (PD)	The officer selected by the SIDA, Government of the Sindh responsible for execution of the project.
Project Impacts	Loss of physical and non-physical assets, including houses, communities, productive land, income-earning assets and sources, use of resources, cultural sites, social structures, networks/ties, cultural identity and mutual help mechanisms.
Rehabilitation	Compensatory measures provided under the World Bank Policy Framework on involuntary resettlement other than payment of the replacement cost of acquired assets/ structures.
RoW (Right of Way)	It is an area allocated to any canal, distributary, minor road, sui gas pipeline or any high transmission line etc on its right and left sides for its safeguard, patrolling or any future development on its either side.
Relocation	The physical relocation of an AP from her/ his pre-Project place of residence or business.
Replacement Cost	The value determined to be fair compensation for land based on its productive potential, the replacement cost of houses and structures (current fair market price of building materials and labour without depreciation or deductions for salvaged building material), and the market value of residential land, crops, trees, and other commodities.
Severely Affected	Land or structure means more than 10 percent of total land or structure is affected or even less than 10 percent is affected but the remaining portion is no longer viable for use.
Squatter	People who occupy and use land without possessing it or having any legal title, or right to use/ possess the land / asset for residential or commercial purpose.
Stakeholders	Include the affected persons and communities, proponents, private and public businesses, the NGOs, host communities and other concerned departments/ agencies.
Vulnerable	The marginalized or those distinct people who might face the risk of marginalization and suffer disproportionately from resettlement effects, including the women, children, destitute persons, Encroacher/Informal Settlers; those with historical or cultural usufruct rights; and landless groups. Generally, people who are living below the poverty line are called vulnerable persons, people/family.

Executive Summary

Introduction

Development of agriculture and agro-based industries is the present need of the country. Agriculture is an important source of employment and exports (two thirds of employment and 80% of exports); irrigation represents more than 95% of the total consumptive use of water. However, this massive infrastructure is deteriorating and is in need of rehabilitation. In response to this the Government of Sindh has launched the Sindh Water Sector Improvement Project (WSIP-1) with the financial support of the World Bank to improve the efficiency of irrigation water distribution in Ghotki, Nara and Left Bank Area Water Boards (AWBs). The project is being executed through the Sindh Irrigation and Drainage Authority (SIDA) with the active involvement of AWBs and Farmers Organizations (FOs) with support from the Project Implementation Consultants (PICs). The WSIP interventions include rehabilitation of canals and existing structures, construction of new head and cross regulators, construction of buffalo wallows, provision of washing ghats and new foot and village road bridges on selected reaches of the Main, Branch, Distributary and Minor Canals.

The implementation plan for the assistance for affected persons described in this Resettlement Action Plan (RAP) is to be synchronized with the implementation schedule, including the procedure for assistance to the Project Affected Persons (PAPs) and complete disclosure of project documents to the public.

The B1 project component includes the rehabilitation of the Main and Branch Canals of the Ghotki, Nara and Left Bank Canal systems covering some 830 km of Main Canals and 1,130 km of Branch Canals. This RAP covers the direct social and economic impacts resulting from the sub-project for Rehabilitation of the Ghotki Feeder Canal (Ghotki AWB) to be implemented under contract WSIP/B1/GF/01. The proposed contract works have been prepared based on consultations with the AWB at each stage of identification, prioritization and planning. The RAP has been prepared to comply with national legislative requirements, the World Bank's loan requirements, and the Social Impact Management Framework prepared for WSIP and addresses the impacts associated with this sub-project.

Scope of Works

The scope of works for this sub-project is as follows:

- Establishment of temporary camps for the contractor's equipment and work force
- Rehabilitation of canal embankments

- Raising and strengthening of Non-Inspection Path (NIP) from RD 0-63 (L/S) and RD:63-124 (R/S)
- Raising and strengthening of Inspection Path (IP) from RD 40-64 (R/S) and RD:64-127 (L/S)
- Establishment of borrow areas
- Canal desilting and lowering of the bed level from RD 0 to 125
- Cutting of the berm in isolated reaches from RD 0 to 125 on the left bank and from RD 40 to 125 on the right bank
- Disposal of excavated material
- Formation of the canal berm through the construction of killa bushing in isolated reaches from RD 0 to 125
- Replacement of two cross regulators on the Ghotki Feeder Canal
- Replacement of four major and six minor head regulators offtaking from Ghotki Feeder Canal and realignment of the head reaches of offtaking canals
- Construction of temporary canal diversions
- Construction of two Village Road Bridges (VRBs)
- Rehabilitation of four VRBs
- Repair of existing sanctioned Direct Outlets RD: 0-127

The works detailed above constitute the proposed sub-project and are all considered within this RAP.

Purpose of the Resettlement Action Plan

The potential for direct economic and social impacts to arise from implementation of this sub-project have been identified. This RAP has been prepared as a plan for mitigations of these impacts and to, at least, maintain living standards of those affected by the sub-project activities. It includes the findings of socio-economic studies, census survey, consultations, parameters for entitlement packages for PAPs, the institutional framework, mechanisms for consultation, grievances resolution and the implementation timeframe.

The principal objective of the RAP is to ensure that all affected persons losing assets, infrastructure and livelihood as a result of the project are eligible to receive compensation and livelihood assistance. Such compensation and assistance shall be provided irrespective of ownership of title to the land.

Policy Legal and Administrative Framework

Land based entitlements due to registered land owners are in accordance with the Land Acquisition Act of Pakistan, which also meets the requirements of World Bank Policies.

Pakistan law does not provide for the payment of compensation or livelihood assistance to PAPs who do not hold a title to the land on which they depend for shelter or livelihood.

However, World Bank policy requires that all affected persons losing assets, infrastructure and livelihood as a result of a project are eligible to receive compensation and livelihood assistance, irrespective of ownership to a title to the land. To ensure compliance with World Bank policy, entitlements are provided by an Entitlement Matrix which is based on the Social Impact Management Framework, prepared by the Government of Sindh for WSIP in 2006. This Entitlement Matrix ensures the following:

- Compensation for lost assets regardless of rights to land on which they are sited
- Valuation of assets and land at the prevailing market rate
- Assistance in relocation for any PAP, regardless of legal entitlement to the land they occupy, in the form of a cash transport allowance
- Provision of additional allowance for those who may suffer impacts to their livelihood
- Permission for PAPs to rebuilt affected assets on alternative government owned sites (without transfer of title).

The matrix was updated in May 2016 to clarify some entitlement policies based on implementation of contracts WSIP/B1/NC/01 and WSIP/B1/NC/02 (in the Nara Area Water Board) and their associated Resettlement Action Plans.

Collection of Primary Data

The preparation of this Resettlement Action Plan required the collection of data and information from the field. To achieve this end, comprehensive questionnaires for data collection were prepared and filled during consultative meetings and field visits. Four types of questionnaires were developed for data collection:

- Village profile for the collection of macro level information relating to the existence of socio-economic infrastructure in the rural settlements falling within Col.
- Census survey to document the PAPs, their assets, family profiles and economic status.
- Socio-economic survey to develop an overall baseline profile of the people of the area in respect to their socio-economic behaviour, vulnerability and attitudes towards the developmental activity to be carried out in the area.
- Gender data collection survey targeting the female population of the Col exclusively in order to supplement the socio-economic data collection.

Consultations were made with the stakeholders and general public. Consultative meetings and focus group discussions were held to elicit and record the views and concerns of the local community on the proposed rehabilitation works. The concerns raised by the stakeholders were considered and engineering designs have been adjusted in order to enhance the sub-projects acceptability for the general public on socio-economic considerations. The main objectives of the consultations were to provide

a platform for the stakeholders to voice their suggestions to the project team and to develop a sense of collective ownership for the activities of the sub-project.

Socio-economic Baseline of Col

The Col for the embankment strengthening works is entirely owned by the Government of Sindh. 87 households² (645 PAPs) have illegally built residential and commercial structures within the Government owned land, of which 84 households (622 PAPs) permanently reside in the Col. None of these PAPs have a legal entitlement to the land they occupy. In addition, 307.6 acres of land is illegally cultivated by the farmers within the Col.

The surveys have identified that the primary source of income for the PAPs is agriculture, either as general labourers, tenants of farm owners. A small number are engaged in fishing, and the primary income of four households is from small businesses situated within the Col. 97% of the PAPs were found to be earning below the Pakistan poverty line.

The caste system is very prevalent within the Col. Each PAP belongs to a caste, and conflicts are most commonly resolved by the head of the caste. Where conflicts cannot be resolved in this way, they may be resolved by the village head, political leaders, or, as a last resort, in a court of law.

Sub-Project Impacts

Surveys of the Col completed by PIC identified 84 households (622 PAPs) residing in the Col, of which two also own commercial structures. A further three households (23 PAPs) were identified as owning commercial structures in the Col (but residing outside the Col). Note that a single household may own multiple structures within the Col. A further 34 households who are illegally farming 307.6 acres of government owned land in the Col have been identified.

In addition, the permanent acquisition of approximately 9.25 acres (owned by 6 households) and temporary acquisition of 10 acres (owned by 5 households) of privately owned land shall be required for the execution of the works.

The clearance of one hand pump which is owned by the community is also required. The proposed works and construction methodology have been designed to prevent the need to remove mosques and graves. Two Governments owned sites (a police chowki and an irrigation office) and one hand pump have also been established within the Col. The

² A household is defined as a family living with the head of the household and all the structures they own.

demolition of all such structures is required prior to the implementation of works under this sub-project. The replacement of community and Government owned sites shall be managed through the construction contract.

Tree cutting along the canal embankments and at the proposed structure sites is also required. All trees are owned by the Government, and their replacement shall be covered in the civil works contract. Tree cutting is discussed in detail in the Environmental Impact Assessment and Management Plan for Contract WSIP/B1/GF/01.

The works shall directly impact a total of 132 households. A summary of the direct social and economic impacts resulting from this sub-project is provided in the following table. Note that the table below sorts impacts by type of loss - as a single impacted household may experience multiple losses (and therefore a single household may be reported under two or more types of loss), the total number of impacted households cannot be summed from this table.

Table ES.1: Summary of Sub-Project Impacts

Type of Loss	Application	Definition of Impacted Person	Unit	Total
Loss of Land (Agricultural)	Permanent loss of entire land or where partial loss but the remaining land is less than 0.5 acre or is rendered economically unviable.	Legal owner with valid title or customary or usufruct rights.	Impacted Acres (Impacted Households)	9.925 (6)
		PAPs without title	Impacted Acres (Impacted Households)	307.6 (34)
	Temporary loss of land	Legal owner with valid title or customary or usufruct rights.	Impacted Acres (Impacted Households)	10 (5)
Loss of Land (Residential, commercial, industrial or institutional land)	Loss of residential, commercial, industrial or institutional land without sufficient remaining land. PAPs will be required to relocate.	PAPs without title	Impacted Households	87
		PAPs living below the poverty line (regardless of ownership)	Impacted Households	84

Type of Loss	Application	Definition of Impacted Person	Unit	Total
		of title to land on which structure is situated)		
Loss of Privately Owned Structures (Residential, commercial, industrial or agricultural)	Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use, and sufficient land for reorganization.	Owner of structure (regardless of ownership of title to land on which structure is situated)	Impacted Households	87
Loss of Structures (Community or institutional)	Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use.	Community or institution	Number of Impacted Structures	4
Loss of income (trade/ livelihood/ occupation or business incomes)	Temporary or permanent loss of agricultural/commercial/institutional income or wages	Impacted business owner	Impacted Households	5

Cut-off Date

The cut-off date for eligibility for all entitlements except land based entitlements due to registered owners has been set as the 08th August 2014. The 08th August 2014 was the first working day of PIC field team in the field during the 2014 field visit, during which the consultants updated the impact assessment and survey of the population of the Col. Any person constructed assets in the Col after this date shall not be eligible for entitlements under this Resettlement Action Plan.

The cut-off date for eligibility for land related entitlements due to registered owners shall be the date of the section 4 notification issued under the Land Acquisition Act of Pakistan.

Public Consultation and Information Disclosure

The PAPs were made fully aware of the Resettlement Action Plan through consultative meetings, individual and group discussions about the sub-project and the Resettlement Action Plan. During these consultations, entitlements and mitigations were discussed and agreed upon. PAPs were generally satisfied with the consultations regarding assistance for their lost assets. Where PAPs are to be displaced by the sub-project works, consultations were also carried out to identify suitable alternative sites for each household. The alternative sites shall provide equal or better living/trading conditions than the original site of each household.

Compensation, Relocation and Income Restoration

Privately owned land shall be permanently acquired as per the provisions of the Land Acquisition Act of Pakistan which is compliant with World Bank policy for the purposes of land acquisition. Land to be temporarily acquired shall be rented at prevailing market rates on agreement between the land owner and the contractor.

All structures situated within the Col are built on Government land. Therefore, owners of the houses, shops and other structures do not own a title to the land on which these structures are located. The affected households are permitted to rebuild their structures at an alternative government owned site (but without the transfer of title to ownership of this land). They are also entitled to a transport allowance (regardless of whether they have opted to move to a government owned site or not). Where the affected household is living below the poverty line, the household shall also be provided an additional Low Income Allowance.

Owners of structures which are to be removed from the Col are eligible for compensation to rebuild the affected structure, regardless of whether they own the land on which the structure is situated or not. Structure valuations are based on prevailing local market rates.

For those PAPs owning commercial structures within the Col, a Livelihood Allowance shall be paid. This allowance shall be equal to three times the monthly income of the household, or equal to the equivalent of three months minimum wage in Pakistan, whichever is greater. This allowance is intended to compensate for any lost income during transition, relocation and reconstruction of their businesses.

Where PAPs shall lose standing crops as a result of the sub-project, they shall be compensated at a per acre rate based on the average yield and average value of cultivated crops in the sub-project area. This compensation shall be paid to owners of the crops irrespective of ownership of title to the land on which the crops are grown,

All compensation rates have been calculated based on prevailing markets rates, with inflation to 2016 values where appropriate.

Impacted community and government structures shall be reconstructed under the civil works contract.

Institutional Framework

A strong institutional framework is already in place under WSIP for the implementation of this Resettlement Action Plan. SIDA will be responsible for implementing the RAP and coordination with relevant parties, including the Board of Revenue. SIDA may delegate some responsibilities to the AWB, however, SIDA shall remain responsible for ensure all actions are implemented. With the exception of temporary land acquisition, reconstruction of government structures and one community hand pump, compensation will not be part of the civil works contract but shall be paid by SIDA.

The disbursement of compensation and allowances, vacation of the Col and the permanent acquisition of land, shall be fully implemented prior to the mobilisation of the contractor for the works in order to prevent any delays to construction.

A Grievance Redress Committee shall be formed to provide a mechanism to mediate conflict and cut down on lengthy litigation. The Grievance Redress Mechanism will provide a forum to people to raise objections or concerns about project impacts and their mitigations.

Resettlement Budget

The total cost for the implementation of this Resettlement Action Plan is estimated to be PKR 65,944,398 (USD 659,444). This includes the compensation cost of affected structures within Col, allowances, permanent land acquisition, cost of monitoring and evaluation, training and administrative costs.

Monitoring and Evaluation

SIDA shall complete internal monitoring of implementation of the RAP in close coordination with the Environmental Management Unit (EMU) of SIDA. Internal monitoring shall be supplemented by external monitoring and evaluation by the Monitoring and Evaluation Consultants for WSIP. On monitoring framework is provided in this RAP.

1. Introduction

1.1 The Indus Basin Irrigation System

In order to fully utilize the river water resources of Pakistan, the Indus Basin Irrigation System (IBIS) has emerged as the largest contiguous irrigation system in the world. Irrigated agriculture within the IBIS provides not only food security to the country (supplying 90% of food production³), but also economic growth (accounting for over 25% of the country's Gross Domestic Product and 44% of employment in 2013⁴). The Indus River is therefore a critical resource for Pakistan.

The IBIS comprises of three large dams, eighty five small dams, nineteen barrages, twelve inter-river link canals, forty-five canal commands and 0.7 million tube wells. The IBIS irrigates 18.21 million hectares (45 million acres)⁵ of farm land producing wheat, rice, fruits, vegetables, sugarcane, maize and cotton for local use as well as for export.

Sindh province is the second biggest beneficiary of the IBIS (after Punjab) with three barrages and 14 canal commands. The irrigation system has a total length of 19,066 km (11,916 miles) of canals, which serve a gross command area (GCA) of 5.8 million ha (14,391 million acres). There are about 42,000 watercourses (tertiary channels), which have an aggregate length of approximately 120,000 km (75,000 miles) which supply irrigation water directly to agricultural land. Approximately 59 billion cubic meters (48 million acre-feet) of water is diverted annually to the canal commands. Yet the province suffers from low water availability and land productivity³.

1.2 Sindh Water Sector Improvement Project

1.2.1 Objectives

The Government of Sindh has launched the first phase of Water Sector Improvement Project (WSIP) with the financial support of the World Bank (WB). The overarching project objective is to improve the efficiency and effectiveness of irrigation water distribution in three areas of the Sindh Province, namely the Ghotki, Nara and Left Bank Area Water Boards (AWBs). Improvement is measured with respect to reliability, equity and user satisfaction.

1.2.2 Components of WSIP

WSIP is intended to begin addressing these complex issues with an optimal mix of institutional strengthening, capacity building and investments in irrigation infrastructure. As such, WSIP is being implemented in different phases, mainly, through the Sindh Irrigation and Drainage Authority (SIDA) and AWBs.

Phase-1 of WSIP consists of following separate components:

- Component A: Community Development and Capacity Building
- Component B: Rehabilitation and Improvement of Irrigation and Canal Systems

³Project Appraisal Document on a Proposed Credit to Pakistan for a Sindh Water Improvement Phase 1 Project, World Bank, 2007

⁴ World DataBank, World Bank, <http://databank.worldbank.org/data/home.aspx>, [accessed 13/01/15]

⁵<http://www.tbl.com.pk/indus-basin-irrigation-system-of-pakistan/>

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- Component C: Management Plan for Major I&D Infrastructure
- Component D: Monitoring and Evaluation of the Project Impact and Environmental Management Plan; and
- Component E: Project Coordination, Monitoring, Technical Assistance and Training

Poor operation and maintenance in the irrigation sector has necessitated investment into the rehabilitation of irrigation systems in the Nara, Ghotki and Left Bank AWBs. These rehabilitation activities are included within Component B of WSIP, which has been sub-divided into two further sub-components: B1 (rehabilitation of Main and Branch Canals) and B2 (rehabilitation of Minor and Distributary Canals). Under each sub-component, a number of rehabilitation packages (sub-projects) have been prioritised, designed, let, or are to be let as individual construction contracts.

An Integrated Social and Environmental Assessment (ISEA) was conducted for WSIP at the feasibility stage by the Government of Sindh in 2006, and includes a Social Impact Management Framework to be implemented for WSIP.

In accordance with the Social Impact Management Framework, this Resettlement Action Plan has been prepared for Contract WSIP/B1/GF/01, Rehabilitation of Ghotki Feeder Canal, which is a sub-project to be implemented within the Ghotki AWB under component B1 of WSIP.

1.2.3 Project Administration

WSIP is being implemented under a sector loan agreement between Government of Pakistan (GoP) and the WB. SIDA is the project proponent and is executing the project through the Nara, Ghotki and Left Bank AWBs under the supervision of Project Director (WSIP). The Project Coordination and Monitoring Unit (PCMU), sitting within the Planning and Development Department of the Government of Sindh, is responsible for overall monitoring and coordination of the project implementation activities.

The association of Mott MacDonald Ltd and MM Pakistan (Pvt) Ltd was appointed in 2009 by the Managing Director of SIDA as the Project Implementation Consultants (PIC) for WSIP phase 1. PIC were appointed to assist SIDA in the implementation of WSIP, including undertaking the detailed designs, environmental assessment, environmental management plans, resettlement actions plans, procurement of works and construction supervision for the rehabilitation works proposed under component B.

1.2.4 Works under WSIP Component B1

Improvement works under component B1 include remodelling of the Main and Branch canals on the basis of their sanctioned discharge, strengthening of embankments, rehabilitation and reconstruction of regulating structures, installation of gauges and flow measurement structures, rehabilitation and reconstruction of bridges where necessary, planting of trees and any other crucial rehabilitation works identified during the design period.

Two sub-projects have already been implemented within the Nara AWB: Contract WSIP/B1/NC/01 (Rehabilitation of the Upper and Lower Nara Canals) and Contract WSIP/B1/NC/02 (Rehabilitation of Makhi Complex and Khipro Canal).

A third major sub-project within the Nara AWB, Contract WSIP/B1/NC/03, is planned for the rehabilitation of the Mithrao Canal. A further two major sub-projects have been identified: Contract WSIP/B1/GF/01 (Rehabilitation of Ghotki Feeder Canal in the Ghotki AWB); and, Contract WSIP/B1/LB/01 (Rehabilitation of Fulleli Canal in the Left Bank AWB).

The detailed designs for Contract WSIP/B1/NC/03, Contract WSIP/B1/GF/01 and Contract WSIP/B1/LB/01 are complete. The preparation of the Environmental Impact Assessments (EIAs) and Environmental Management Plans (EMPs) are complete, and Resettlement Action Plans (RAPs) for each sub-project are under finalisation.

1.3 Contract WSIP/B1/GF/01: Rehabilitation of Ghotki Feeder Canal

1.3.1 General

Contract WSIP/B1/GF/01 ('the sub-project') of B1 component is to be carried out within the Ghotki AWB and includes embankment strengthening and raising and earthworks in the canal prism for 43km (127 RD) of the Ghotki Feeder Canal. The works also include the replacement of: two cross-regulators; four head regulators to branch canals; and, six head regulators to minor and distributary canals, the construction of two new village road bridges and the rehabilitation of four existing village road bridges. In accordance with design, the majority of the proposed civil works activities will remain within the Government owned Right of Way (RoW), thus minimum disturbance and relocation is envisaged, however there will be some impact on privately owned land due to the realignment of offtaking canals.

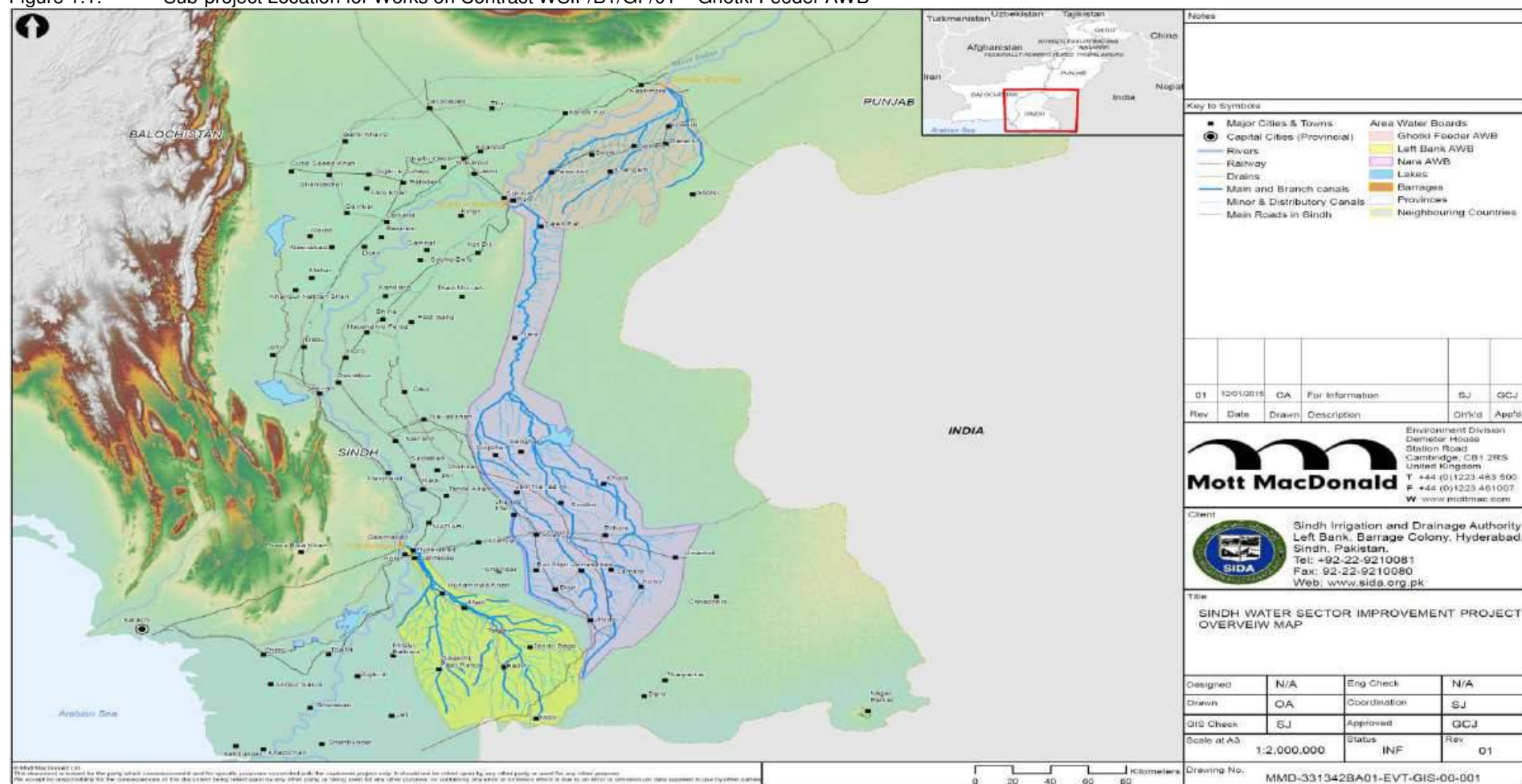
1.3.2 Sub-project Area

The sub-project area of the Contract WSIP/B1/GF/01 consists of Ghotki Feeder Canal from RD 0 to 127 within the Ghotki AWB. Ghotki Feeder Canal off-takes directly from the left bank of the River Indus, immediately upstream of Guddu Barrage. The design discharge of the canal is 9,436 ft³/s, and it supplies irrigation water to a command area of 855,231 acres in the districts of Ghotki and Sukkur. The system has deteriorated over time becoming inefficient in delivering water supplies for agriculture, suffering from sedimentation in the upper reaches and deterioration of the hydraulic regulating structures.

Figure 1.1 and Figure 1.2 indicate the location of the sub-project area for Contract WSIP/B1/GF/01.

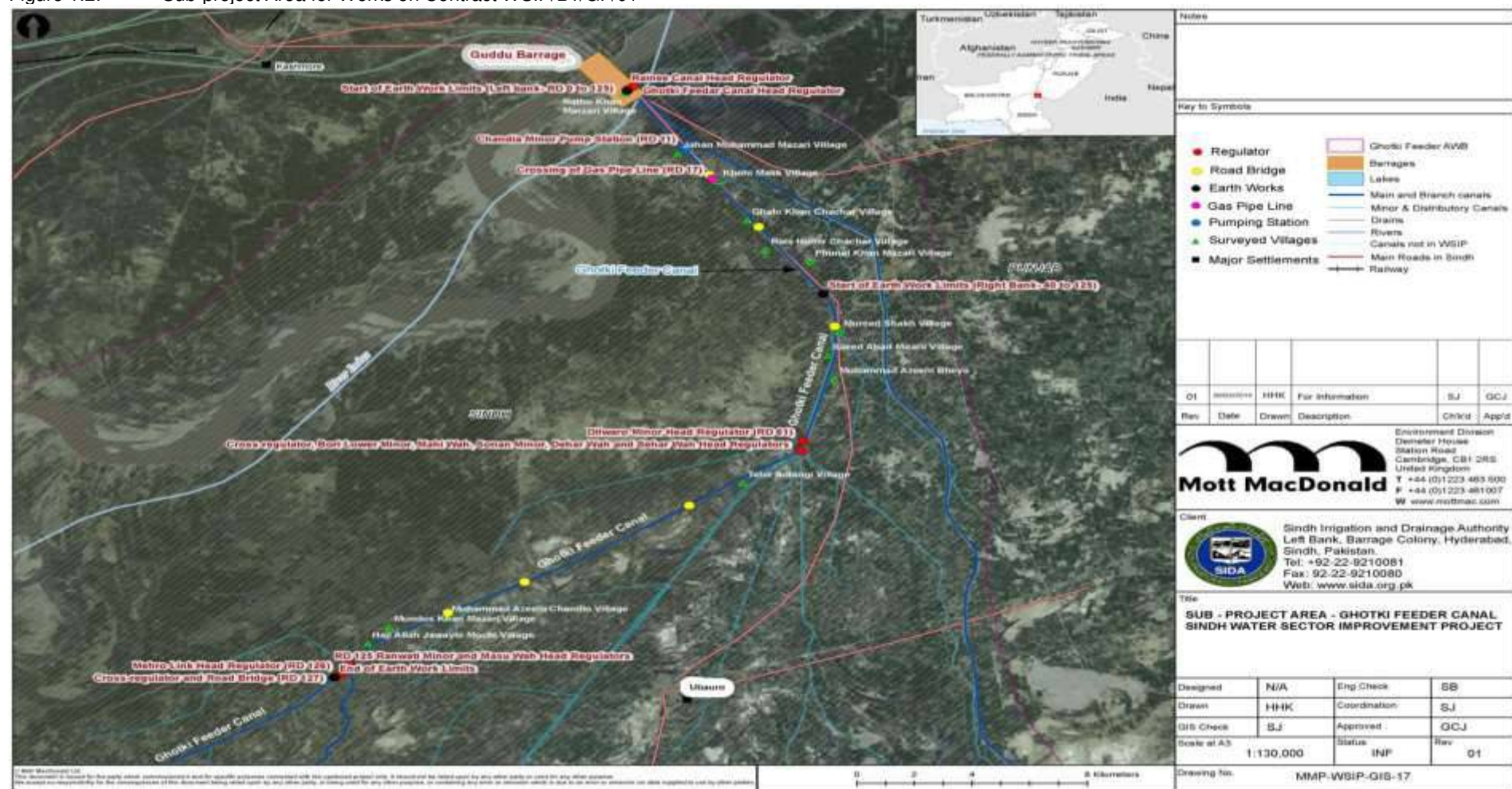
Sindh Water Sector Improvement Project

Figure 1.1: Sub-project Location for Works on Contract WSIP/B1/GF/01 – Ghotki Feeder AWB



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Figure 1.2: Sub-project Area for Works on Contract WSIP/B1/GF/01



1.3.3 Sub-project Objectives

The sub-project interventions will be executed by a Contractor, selected through the International Competitive Bidding (ICB) process. The proposed engineering interventions are aligned with the objectives of WSIP as follows:

- **To ensure authorized discharge flow requirements:** Due to deferred maintenance of structures and embankments, the Ghotki Canal irrigation system is in poor condition and is unable to sustain a safe running of the authorized discharge. The rehabilitation works have been designed to enhance the water carrying efficiency of the system through rehabilitation of the canal prism, and equitable distribution of water from head to tail through the rehabilitation of regulation structures.
- **To ensure equitable resource distribution:** The poor maintenance of hydraulic structures is leading to lack of fair distribution of irrigation water. Major regulating structures are to be rebuilt to ensure transparent and equitable distribution of water.
- **To protect interests of the community:** Replacement of regulating structures will benefit the community's agricultural interest and ensure canal crossings which are used by the public are maintained at the regulator sites (cross-regulator structures are also designed to carry public road crossings). In addition, two new bridges are to be built, and four are to be rehabilitated.
- **To meet irrigation system safety standards:** The civil work activities include reconstruction of channel banks and berms, inspection paths and non-inspection paths. This shall reduce the risk of canal breaches. Hydraulic structures shall also be provided with sufficient freeboard (distance from water level to deck level) to prevent flooding of public crossings and sufficient guards to prevent vehicles or members of the public entering the canals.

1.3.4 Type and Category of the Sub-project

It is anticipated that the sub-project may have some adverse social impacts associated with the displacement of a number of residential and commercial structures. The most significant impact is loss of shelter of PAPs.

The Ghotki Feeder Canal has a culturable command area of approximately 346,099 hectares (855,231 acres). Within this command area, agriculture is practiced to a large scale. Assuming an average farm size of 3.1 ha (7.6 acres) per family and an average family size of 6.8 persons⁶, it is determined that approximately 760,000 people are directly or indirectly dependent upon the irrigation water supplied through the Ghotki Feeder Canal.

Any major impact resulting from the sub-project, such as disruption of irrigation flows, has the potential to impact the large number of people who are dependent of the irrigation flows. This impact would be potentially unprecedented over an area far broader than the immediate sub-project area itself.

As a result of the potential impacts detailed above Contract WSIP/B1/GF/01 is categorised as a Category A project.

1.3.5 Need of Study

World Bank funded projects require a RAP for any project that results in involuntary land acquisition or related impacts. The scope and level of detail of resettlement planning will vary with circumstances,

⁶ Project Appraisal Document on a Proposed Credit to Pakistan for a Sindh Water Improvement Phase 1 Project, World Bank, 2007

depending on the project's complexity and the magnitude of its effects. As a minimum requirement the RAP must ensure that the livelihood of PAPs is restored to pre-project level. As the proposed Contract WSIP/B1/GF/01 has social and resettlement issues a RAP has been prepared to address these issues.

The WB seeks to promote the improvement of the living standards of PAPs. Thus, resettlement activities should result in visible improvements in the economic conditions and social well-being of affected people and communities. The WB Involuntary Resettlement Policy (OP- 4.12) applies under all conditions of potential physical or economic displacement resulting from the acquisition or use of land and other assets for a project regardless of the total number of people.

Physical displacement could bring about disruption and impoverishment to communities. Therefore it should be avoided or minimized by exploring all viable alternatives. If displacement is inevitable, compensation plans should be developed in the early stages of the planning process of the project.

This document forms the RAP for the sub-project to be implemented under Contract WSIP/B1/GF/01. The RAP is a substantial component of any development project that causes a change in the existing land use patterns or requires the resettlement of people or businesses. Projects related to canal rehabilitation may cause a series of resettlement effects. The need for resettlement mostly arises due to the clearance of an area of land to enable the execution of construction works, or as a result of land acquisition through expropriation or other regulatory measures. During this process houses, community structures and systems, social networks and social services may be partially or completely and temporarily or permanently damaged.

This RAP has been prepared to highlight the social consequences of rehabilitation activities in the Corridor of Influence (Col) of the sub-project and propose appropriate measures to reduce the adverse effects. This RAP has been prepared in according to the Social Impact Management Framework for WSIP, Pakistan Government Policy and World Bank Policy.

This document forms Volume I of the RAP. Volume I should be read alongside the Volume II of the RAP: Socio-Environmental Baseline and Impact Maps, which also acts as Volume II of the EIA/EMP for this contract.

1.3.6 Objectives of the Resettlement Action Plan

The potential for direct economic and social impacts to arise from implementation of this sub-project have been identified. As such this RAP has been prepared as a plan for mitigation of these effects and to, at least, maintain living standards of those affected by the sub-project activities. It includes the findings of socio-economic studies, census survey, consultations, parameters for entitlement packages for PAPs, the institutional framework, mechanisms for consultation, grievances resolution and the implementation timeframe.

Development projects that displace people involuntary can generally give rise to economic, social and environmental problems. Involuntary resettlement may cause severe long term hardship, impoverishment and environmental damage without the application of appropriate measures to mitigate these impacts. This RAP provides details regarding the likely impacts resulting from the sub-project intervention and the mitigation measures that will be adopted to address these adverse impacts.

The principal objective of the RAP is to ensure that all affected persons losing assets, infrastructure and livelihood as a result of the project are eligible to receive compensation and livelihood assistance. Such compensation and assistance shall be provided irrespective of ownership of title to the land.

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The following are the specific objectives of this RAP:

- Identify specific social and resettlement impacts of the sub-project by types and their mitigation
- Identification of those to be directly impacted as a result of project implementation
- Present a strategy for achieving the objectives of the World Bank policy and the Social Impact Management Framework for WSIP
- Provide a framework for implementation of strategies to ensure timely acquisition of land, payment of compensation and delivery of other benefits to PAPs.
- Provide details on the policies governing land acquisition and other direct impacts, the range of entitlements to improve the living standards, income earning capacity and production levels of PAPs or at least restore them to pre-project levels.
- Provide details on the public information consultation and participation and grievance redress mechanism in project planning, design and implementation.
- Identify and provide an estimate of required resources for implementation of recommended strategies, including monetary budget
- To provide a framework for supervision, monitoring and evaluation of implementation of this RAP.

2. Policy, Legal and Administrative Framework

2.1 Introduction

This chapter provides an overview of the relevant donor (World Bank) policies, Pakistan laws and the Social Impact Management Framework (SIMF) prepared for WSIP with which this RAP complies.

2.2 Pakistan Legal Framework

2.2.1 General

The Land Acquisition Act (LAA) of 1894 is the main law regulating land acquisition for public purposes in Pakistan. Each province has its own interpretation of the LAA, and some provinces have issued provincial legislations. The LAA and its implementation rules require that, following an impact assessment and valuation effort, land and crops are compensated in cash at market rate to titled landowners and registered land tenants/users, respectively. The LAA mandates that land valuation is to be based on the latest 3-5 years average registered land sale rates though, recently, the median rate over the past 1 year, or even current rates, were applied in some cases. Due to widespread practice of land under-valuation by the Revenue Department, current market rates are now frequently applied, plus 15% Compulsory Acquisition Surcharge as required under the LAA.

Based on the LAA only legal owners and tenants registered with the Land Revenue Department or possessing formal lease agreements, are eligible for compensation. Users of the Rights of Way (RoW) are not considered "affected" by project activities and thus not entitled to any mitigating measure, compensation, or livelihood support. Also, there is no legal obligation to provide compensation to title-less land users, unregistered tenants or encroachers either in form of house-for-house or land-for-land replacement, or in form of cash.

The LAA also does not automatically mandate for specific rehabilitation/assistance provisions benefiting the poor or vulnerable groups, nor does it automatically provide for income/livelihood losses, resettlement or rehabilitation expenses. Though, often this is done; it is the responsibility of affected persons to apply for benefits, rather than the responsibility of the project proponent to automatically provide them.

2.2.2 The Land Acquisition Act (LAA) 1894

The Land Acquisition Act (LAA) of 1894 is the key legislation that has direct relevance to resettlement and compensation in Pakistan. Each province has its own interpretation of the LAA, and some provinces have also passed provincial legislations. The LAA and its implementation rules require that before implementation of any development project the privately owned land and crops are compensated to titled landowners and/or registered tenants/users etc.

Based on the LAA, only legal owners and tenants registered with the Land Revenue Department or those possessing formal lease agreements are eligible for compensation. Under this Act, users of the Rights of Way (RoW) are not considered "affected persons" and thus not entitled to any mitigating measure, compensation, or livelihood support. Also, there is no legal obligation to provide compensation to title-less land users, unregistered tenants or encroachers for rehabilitation. However, after independence and with the passage of time various deviations to LAA have been practiced. Projects such as Ghazi Barotha and National Highways Authority road construction have awarded compensation to unregistered tenants and other forms of AP (Share-croppers, squatters).

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The exceptions to the rule can be explained by the fact that the law is not rigid and is broadly interpreted depending on operational requirements, local needs, and socio-economic circumstances.

Under this Act, only legal owners and tenants officially registered with the Land Revenue Department or possessing formal lease agreements are considered "eligible" for land compensation.

The key sections of the LAA, 1894 are briefly described below.

Section 3

According to Section 3 of the Act, *Land* is defined as including benefits to arise out of land, and things attached to the earth or permanently fastened to anything attached to the earth

Section 4

Section 4 of the Act requires that a preliminary notification is published in the official Gazette as well as at convenient places in the locality of the *Land* to be acquired. This notice allows an officer appointed by the Government of Sindh and his/her workmen to enter on to the land for the purposes of surveys, soil tests, setting out, with the exception of occupied houses unless with consent or following at least seven day's written notice of intention.

Requirements for publication of the notification under the Act are mandatory, and the acquisition proceedings would stand invalid if requirements of this section are not fully satisfied. The purpose of Section 4 is to enable preliminary investigations/land survey with a view to determine the suitability of the *Land*.

Section 5

If the Land notified under Section 4 is found to be suitable, or if no such survey is required at any time, a notice is issued under Section 5 of the Act. As for section 4 the notification is published in the official Gazette as well as at convenient places at or near the Land to be acquired. The notice must state the location of the Land, purpose of acquisition, area and, where a plan has been prepared, the location where such a plan is available for inspection.

Under section 5, the owners of Land, or those affected or likely to be affected, may raise objections in writing to the Collector within 30 days of notification under section 5. The Collector shall give the objector an opportunity to be heard, and after making further enquiry if any, shall submit the case to the Commissioner together with proceedings held by the Collector containing his/her recommendations. The decision of the Commissioner is considered final.

Section 6

Under section 6, a Secretary to the Commissioner (or other authorised official) may declare that the land is required for public purpose after considering any objections, if any, under section 5. The declaration shall be published in the official Gazette stating the location of the *Land*, purpose of acquisition, area (size) and, where a plan has been prepared, the location where such a plan is available for inspection. The area (size) declared under section 6 supersedes the area notified under section 4 or 5, where the area declared under section 6 is lesser.

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Section 7

Following declaration under section 6, the Collector shall be directed by the Commissioner to take order for the acquisition of the Land.

Section 8

Under section 8 of the Act the Collector shall mark out the Land to be acquired (if not completed under section 4) and prepare a plan showing the measurements of the area (if not previously prepared).

Section 9

Under section 9, the Collector places a notification on or near the Land to be acquired stating the intention to acquire the Land and that claims to compensation should be made to the Collector. The notice shall require those with interests in the Land to appear personally or by agent before the Collector at a stated time and place to state the amount and particulars of their claims to compensation and any objections to measurements made under section 8. The Collector may require such statements in writing.

Under section 9, the Collector shall also serve notice to the Irrigation Department of an enquiry under section 11 of the Act for the determination of claims and objections. The Irrigation Department shall be required to depute an authorised representative to attend the enquiry.

All notices under section 9 must be made not less than 15 days prior to the date of an enquiry under section 11.

Section 10

Under section 10, interested people are required to deliver the names of any other person possessing an interest in the Land (including co-proprietor, sub-proprietor, mortgagee or tenant), the nature of such interest and details of any rents and profits received or due in the preceding three years. The date by which the information may be submitted to the Collector must be no earlier than 15 days of notice under section 9.

Section 11

Under section 11, the Collector shall hold an enquiry into objections received between the date of notification under section 9 and the date of the enquiry. The date of the enquiry must be no earlier than 15 days following the notification under section 9. Objections may relate to measurements made under section 8, the value of the land, the date of notification under section 4 or the interests of those claiming compensation.

The Collector shall, through this enquiry, determine the true area of the land, the compensation due and to whom it is due and make the award.

Section 12

The determination of the Collector is considered final when filed in his office. The Collector shall immediately give notice of the award to interested people and he may take possession of the Land which shall thereupon vest absolutely in the government/ or acquiring department.

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Sections 13 and 14

Sections 13 and 14 give the Collector power to adjourn enquiries, call witnesses and summon evidence.

Section 15, 23 and 24

Sections 15, 23 and 24 define the methodology for determination of compensation to be awarded. Section 23 requires the following to be considered:

- Market value of the Land at date of publication of section 4 plus 15%. Market value shall be determined taking into account transfer of land similarly situated and in similar use. Consideration of potential value of the Land if put to a different use shall only be considered if it can be shown that land similarly situated and previously in similar use has, before the date of notification under section 4, been transferred to such a use.
- Damage to standing crops or trees
- Damage caused by severing Land to be acquired from the person's other land
- Damage to other property or earnings caused during acquisition
- Reasonable expenses due if the affected person is required to change residence as a result of the acquisition
- Any bona fide diminution of profits of the Land between date of declaration under section 6 and date of possession by Collector

Under section 24, the following shall not be taken into consideration when determining compensation:

- The degree of urgency of the acquisition
- Disinclination of affected person to part with Land acquired
- Any improvements to the Land made following notification under section 4
- Any increase to the value of the Land, or other land owned by an affected person likely to occur from the use to which the acquire land will be put following acquisition.

Section 17

In emergency cases the Collector, when directed by the Commissioner, may make notification under section 9 of any waste or arable land any time following notification under section 4. The Collector may take possession following 15 days of notice under section 9 of the Act, from which time the land shall rest with the Government. In such a case the value of compensation may be made by the Collector considering those issues usually exempt from valuation under section 24 of the Act.

Under section 17, sections 5, 6 and 11 (relevant to objections and enquiries) need not be applied in an emergency situation.

In the case where, following an emergency, immediate possession of Land is required for the purposes of maintaining traffic over a public road, the above process may be applied without the requirement to wait 15 days following notice under section 9 of the Act. In other words, the Collector (with approval from the Commissioner) may take possession of the required Land immediately following notification under section 9.

Land Acquisition under the Proposed Sub-project

The execution of the sub-project shall require the permanent acquisition of approximately 9.925 acres of privately owned land at RD 63 IP/NIP and RD 125 IP side of Ghotki Feeder canal. The cost of the

permanent land acquisition will be borne by the project proponent. Temporary land acquisition will be required for borrow material - the contractor will be responsible for temporary land acquisition. The contractor shall pay a monthly rent as per market value (or any other value as agreed with the land owner or registered tenant) to the land owner or registered tenant wherever borrow areas are established outside the RoW. The contractor shall repair or replace any damaged assets on private land at his own cost or else compensate the owner for the damage or loss.

2.3 Lender Policy

2.3.1 World Bank's Involuntary Resettlement Policy (OP 4.12)

2.3.1.1 General

The World Bank lays down policy guidance for the projects and programs that affect the human population to ensure that local residing people benefit from development projects and adverse effects on human environment caused by the project can be avoided or mitigated. Under the above policy displaced persons of development projects are entitled to compensation regarding loss of land, structural assets, access to assets, crops, livelihood activities etc. A social assessment has been carried out to evaluate the project's potential positive and negative/adverse effects on the people and to examine project alternatives where adverse effects can be minimized.

The World Bank's experience indicates that involuntary resettlement under development projects, if unmitigated, often gives rise to severe economic, social, and environmental risks: production systems are dismantled; people face impoverishment when their productive assets or income sources are lost; people are relocated to environments where their productive skills may be less applicable and the competition for resources greater; community institutions and social networks are weakened; kin groups are dispersed; and cultural identity, traditional authority, and the potential for mutual help are diminished or lost. This policy includes safeguards to address and mitigate these impoverishment risks.

The overall objectives of the Policy are given below:

- Involuntary resettlement should be avoided where feasible, or minimized, exploring all viable alternative project designs.
- Where it is not feasible to avoid resettlement, resettlement activities should be conceived and executed as sustainable development programs, providing sufficient investment resources to enable the persons displaced by the project to share in project benefits. Displaced persons should be meaningfully consulted and should have opportunities to participate in planning and implementing resettlement programs.
- Displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.
- The Policy defines the requirement of preparing a resettlement plan or a resettlement policy framework, in order to address the involuntary resettlement.

For the proposed sub-project, livelihood of some affected persons may be affected due to their dislocation from their existing location.

In view of the above, the OP 4.12 will be triggered; this RAP has been developed in accordance with this OP.

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This policy covers direct economic and social impacts from Bank-assisted investment projects that are caused by:

- The involuntary taking of land resulting in
 - Relocation or loss of shelter;
 - Loss of assets or access to assets; or
 - Loss of income sources or means of livelihood, whether or not the PAP must move to another location.
- The involuntary restrictions of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons.

According to the World Bank policy, the following measures would be adopted regarding PAPs;

- Inform about options and rights pertaining to resettlement matters
- Consulted on, offered choices among, and provided with technically and economically feasible resettlement alternatives
- Provide prompt and effective compensation at full replacement cost for losses of assets attributable directly to the sub-project
- Provide assistance such as moving allowances during relocation; and offer support after displacement, for a transition period, based on a reasonable estimate of the time likely to be needed to restore their livelihood and standards of living
- Provide with development assistance
- Counselling in respect of credit facilities, trainings, or job opportunities; and
- Measures to assist the displaced persons in their efforts to improve their livelihoods, or at least to restore, in real terms.

2.3.1.2 Criteria for Eligibility

Under the WB OP, the PAPs may be classified in one of the following three groups.

1. Those who have formal legal right of land (including customary and traditional rights) recognized under the laws of the country
2. Those who do not have formal legal rights of land at the time of census begins but have a claim to such land or assets provided that such claims are recognized under the laws of the country or become recognized through a process identified in a RAP⁷.
3. Those who have no recognized legal right or claim of the land they are occupying

Persons covered under criteria 1 and 2 above are provided compensation for the land they lose and offered alternative resettlement sites, while those under criteria 3 are offered resettlement assistance in lieu of compensation for the land they occupy. All PAPs meeting any of the above criteria are provided compensation for any lost assets as well as additional resettlement assistance as required by the WB OP 4.12.

All affected persons losing assets, infrastructure and livelihood as a result of the sub-project are eligible to receive compensation and livelihood assistance irrespective of ownership of title to the land.

⁷ No such process has been identified for this sub-project in this RAP.

2.3.1.3 Disclosure

In accordance with OP 4.12, the Government of Sindh shall provide the World Bank with a copy of this RAP. Following clearance by the World Bank, this RAP shall be made publically available by the World Bank and be published on the WSIP website (www.wsip.com.pk). The RAP shall also be translated by the project proponent (SIDA) into Sindhi and Urdu, and be made publically and freely available at the following locations:

- SIDA office at Hyderabad,
- AWB office at Ghotki City,
- Ghotki Feeder Canal, RD 43 – Regulator's operation room
- Ghotki Feeder Canal, RD 63 – Regulator's operation room
- Ghotki Feeder Canal, RD 125 – Regulator's operation room

The latter three locations are all situated within the sub-project area, and shall therefore be easily accessible to PAPs.

2.3.2 World Bank Policy on Access to Information

The World Bank allows access to any information in its possession (with exceptions, such as where such information could cause harm to specific parties or interests). The policy is based on the following five principles:

- Maximizing access to information;
- Setting out a clear list of exceptions;
- Safeguarding the deliberative process;
- Providing clear procedures for making information available; and
- Recognizing requesters' right to an appeals process.

Exceptions to access to information include:

- Personal information (of Bank staff)
- Communications within and between Governors and/or Executive Directors' Offices
- Proceedings of the World Bank Ethics Committee
- Information subject to Attorney-Client Privilege
- Information which may compromise the safety and security of individuals, the environment and assets and documents belonging to the World Bank or its staff
- Information restricted under separate disclosure regimes or investigative information
- Information provided to the World Bank in confidence
- World Bank corporate administrative matters
- World Bank deliberative information
- Some financial information

All other information held by the World Bank is to be made available in accordance with the World Bank Access to Information Policy⁸. Where access to information is denied, the requester may file an appeal where the World Bank has violated this policy, or there is a public interest case to override the exceptions to the policy.

⁸ Available at <https://policies.worldbank.org/sitepages%2FExtranetAppPage.aspx?url=ExtranetPreviewPage&docid=3797>

2.4 Review of Government and World Bank Resettlement Policies

2.4.1 Comparison of Policies

The World Bank Operational policy explicitly makes adequate provision for the affected persons who are either displaced or suffer losses, as a result of development project to be catered for. Livelihoods of persons to be affected must be prevented but in cases where it is inevitable, minimal displacements should occur. In such cases where displacement is unavoidable, compensation should be paid to the PAPs to help them to restore their social and economic livelihoods.

Land Acquisition Act, 1894 makes provision for compensation to be paid to only affected persons having suffered any loss and can produce any form of title that is legal in form of occupancy, ownership or legally binding tenancy agreement to the land in question. However, the World Bank policy accepts all forms of losses without exception to be catered for.

The World Bank policy requires that the persons affected by any development project be assisted during their transition period in the resettlement site and efforts made to restore their livelihoods whereas the Land Acquisition Act, 1894 is silent on that. The table given below highlights some comparison between the Land Acquisition Act, 1894 and the World Bank Policy on Involuntary resettlement.

Table 2.1: Comparison of Pakistan's LAA and WB Resettlement Policy

Pakistan's Land Acquisition Act, 1894	WB Involuntary Resettlement Policy
Land compensation only for titled landowners or holders of customary rights.	Lack of title should not be a bar to compensation and/or rehabilitation.
Crop losses compensation provided only to registered landowners and sharecrop/lease tenants.	Crop losses compensation provided to landowners and sharecrop/lease tenants whether registered or not
Land valuation based on the market value of the land at date of publication of section 4 notification (refer to section 23 of the LAA)	Land valuation based on current market rate/replacement value
Land Acquisition Collector (LAC) is the only pre-litigation final authority to decide disputes and address complaints regarding quantification and assessment of compensation for the affected assets	Disputes, complaints and grievances are resolved informally through community participation in the Grievance Redress Committees (GRC), Local governments, and NGO and/or local-level Community Based Organizations (CBOs)
The decisions regarding land acquisition and compensations to be paid are published in the official Gazette and notified in convenient places so that the people affected get aware of the same	Information related to quantification and costing of land, structures and other assets, entitlements, and amounts of compensation and financial assistance are to be disclosed to the affected persons prior to taking possession of their assets.
No provision for income/livelihood rehabilitation measure, allowances for severely affected persons, or resettlement expenses	The WB policy requires rehabilitation for income/livelihood, for severe losses, and for expenses incurred by the PAPs during the relocation process.

2.4.2 Remedial Measures to Bridge the Gap

In principle, Pakistan's Law and World Bank Policy adhere not only to the objective of compensation for affected families, but also to the objective of rehabilitation. However, Pakistan's law is unclear on how rehabilitation is to be achieved and in practice the provision of rehabilitation is left to ad-hoc arrangements taken by the local governments and the specific project proponents. To clarify these issues and reconcile eventual gaps between Pakistan's Law and WB Policy, this RAP for the rehabilitation of the Ghotki Canal sub-project has been prepared which ensures the following:

- Compensation for any privately owned land lost as a result of the works
- Compensation for lost assets regardless of rights to land on which they are sited

- Valuation of assets and land at the prevailing market rate
- Assistance in relocation for any PAP, regardless of legal entitlement to the land they occupy, in the form of a cash transport allowance
- Provision of additional allowance for those who may suffer commercial losses'

This RAP is prepared in compliance with World Bank Operational Policy and Bank Policy 4.12 as well as national laws.

2.5 WSIP Social Impact Management Framework

The section of Social Impact Management Framework (SIMF) relevant to preparation of this RAP is summarised here. The SIMF was prepared for WSIP by the Government of Sindh and cleared by the World Bank in 2006. This RAP has been prepared in accordance with this SIMF.

The SIMF provides the overall guidance on process and procedure required for addressing social impacts caused by the sub-projects and for social screening and preparation and implementation of RAPs, and/or other mitigation plans as necessary. The SIMF requires that RAPs describe distinctly and clearly how the sub-project would improve, or at least restore economic livelihoods of Project Affected Persons through adequate asset compensation and economic rehabilitation measures.

The SIMF requires that RAPs shall be guided by the following policy objectives:

- Land acquisition is an integral part of the project design, and should be dealt with from the earliest stages of project preparation.
- Both involuntary resettlement and the negative impacts on people by acquisition of assets should be avoided or minimised whenever feasible, exploring all viable alternative project designs.
- Persons to be affected should have their former living standards and income earning capacity improved or at least restored. In the case of displacement, they should be provided with adequate support during transition period.
- Project stakeholders, including PAPs are consulted and given the opportunity to participate, as practicable, in the design, implementation, and operation of the project.
- Particular attention will be paid to the protection of marginalised, disadvantaged and vulnerable groups, including women and children and promoting and providing, wherever possible, opportunities for such groups to take advantage of the investment.

The SIMF also provides for a low income allowance to be provided to all PAPs without land title and living below the poverty line, in case of loss of residential, commercial, industrial and institutional land.

2.6 Entitlement Matrix

The criteria for assessing entitlements for compensation and rehabilitation assistance to different categories of PAPs is defined within the entitlement matrix (Table 2.2) and has been followed during the preparation of this RAP. This version of the entitlement matrix is based on the entitlement matrix given within the SIMF (November 2006), but with updates to reflect implementation of contracts WSIP/B1/NC/01 and WSIP/B2/NC/02, their associated RAPs, and findings of consultations with PAPs.

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Table 2.2: Entitlement Matrix

No;	Type of Loss	Application	Definition of Entitled Person	Entitlement Policy
1	Loss of Land (Agricultural)	Partial but permanent loss of land and the remaining land farmed is economically viable and at least equal to or more than 0.5 acres (marginal impact on household income and living standard)	Legal owner with valid title or customary or usufruct rights	PAPs will be entitled to: <ul style="list-style-type: none"> • Compensation as per Pakistan Land Acquisition Act
			Tenant, leaser holder and sharecropper	PAPs will be entitled to: <ul style="list-style-type: none"> • Cash compensation equivalent to market value of gross harvest for one year production or for the remaining period of tenancy/lease, whichever is greater. Compensation to be reduced to mirror any share cropping agreements in place between owner and tenant (typically 50%); AND • Cash compensation equivalent to market value of standing crops that could not be harvested. Compensation to be reduced to mirror any share cropping agreements in place between owner and tenant (typically 50%)
			PAPs without valid title	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Cash compensation equivalent to market value of standing crops that could not be harvested.
		Permanent loss of entire land or where partial loss but the remaining land is less than 0.5 acre or is rendered economically unviable. (Severe impact on household income and living standards).	Legal owner with valid title or customary or usufruct rights.	PAPs will be entitled to: <ul style="list-style-type: none"> • Equivalent area of land with equivalent productive potential at location acceptable to PAP, OR • Compensation as per Pakistan Land Acquisition Act
			Tenant, lease holder and share cropper	PAPs will be entitled to: <ul style="list-style-type: none"> • Cash compensation equivalent to market value of gross harvest for one year production or for the remaining period of tenancy/lease, whichever is greater. Compensation to be reduced to mirror any share cropping agreements in place between owner and tenant (typically 50%); AND • Cash compensation equivalent to market value of standing crops that could not be harvested. Compensation to be reduced to mirror any share cropping agreements in place between owner and tenant (typically 50%)
			PAPs without valid title	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Cash compensation equivalent to market value of standing crops that could not be harvested

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No;	Type of Loss	Application	Definition of Entitled Person	Entitlement Policy
2	Loss of Land (Residential, commercial, industrial or institutional land)	Temporary loss of land	Legal owner with valid title or customary or usufruct rights.	PAPs will be entitled to: <ul style="list-style-type: none"> Monthly rent at market value
			Tenant, lease holder and share cropper	PAPs will be entitled to: <ul style="list-style-type: none"> Market value of gross harvest for production over period of temporary loss (rounded up to the nearest year). Compensation to be reduced to mirror any share cropping agreements in place between owner and tenant (typically 50%)
			PAPs without valid title	PAPs will be entitled to the following: <ul style="list-style-type: none"> Cash compensation equivalent to market value of standing crops that could not be harvested
	Loss of Land (Residential, commercial, industrial or institutional land)	Partial loss of residential, commercial, industrial or institutional land with remaining land sufficient to reorganize	PAPs with valid title or customary and usufruct rights	PAPs will be entitled to the following; <ul style="list-style-type: none"> Cash compensation for affected portion of the land at replacement value
			PAPs such as tenants and leaseholders	PAPs will be entitled to the following; <ul style="list-style-type: none"> Reimbursement for loss of income for the un-expired lease period
			PAPs without valid title	See below
		Loss of residential, commercial, industrial or institutional land without sufficient remaining land. PAPs will be required to relocate.	PAPs with valid title or customary and usufruct rights	PAPs will be entitled to the following; <ul style="list-style-type: none"> An equivalent area of land of similar characteristics and access to facilities in an acceptable location, OR Compensation as per Pakistan Land Acquisition Act
			PAPs such as tenants and leaseholders	PAPs will be entitled to the following; <ul style="list-style-type: none"> An equivalent area of leased land for un-expired lease period, OR Reimbursement for un-expired lease period
			PAPs without valid title	PAPs will be entitled to the following; <ul style="list-style-type: none"> Permission to reside on alternative Government owned site without transfer of title
			PAPs living below the poverty line	PAPs will be entitled to the following: <ul style="list-style-type: none"> Low income allowance equal to two months household income, or two months minimum wage (whichever is greater)

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No;	Type of Loss	Application	Definition of Entitled Person	Entitlement Policy
3	Loss of Privately Owned Structures (Residential, commercial, industrial or agricultural)	Partial loss of structure and the remaining structure viable for continued use by current occupier	Legal owner of affected structure with valid or customary or usufruct rights	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Cash compensation for affected part of the structure at replacement value; AND • Allowance to cover repair of the remaining structure.
			Owner of affected structures without valid title to the land (squatter/encroacher)	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Cash compensation for affected part of the structure at replacement value; AND • Allowance to cover repair of the remaining structure
		Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use.	Owner of structure (regardless of ownership of title to land on which structure is situated)	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Transport allowance for shifting to new location; AND • Cash compensation for entire structure at replacement value; OR • Structure of equivalent standard in acceptable location
			Tenant / leaseholder in the affected structure	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Transport allowance for shifting to new location; AND • Transition allowance equivalent to three months' rent
4	Loss of Structures (Community or institutional)	Partial loss of structure and the remaining structure viable for continued use by current occupier	Community or institution	Repair under the civil works contract
		Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use.	Community or institution	Replacement under the civil works contract
5	Loss of income (trade/ livelihood/ occupation or business incomes)	Temporary or permanent loss of commercial income	Impacted business owner	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Livelihood allowance equivalent to three months household income, or three months minimum wage (whichever is greater)
		Temporary or permanent loss of agricultural/commercial/institutional wages	Impacted employee or labourer	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Livelihood allowance equivalent to three months household income, or three months minimum wage (whichever is greater)
6	Loss of access to common resource and facilities	Loss of access to rural common property resources and urban civic amenities	Communities/ households	PAPs will be entitled to the following: <ul style="list-style-type: none"> • Replacement of common property resources/

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No;	Type of Loss	Application	Definition of Entitled Person	Entitlement Policy
				amenities; OR • Access to equivalent amenities/ services
7	Loss of trees	Affected trees.	Owner of trees	PAPs will be entitled to cash compensation equivalent to market value on the basis of type, age and productive value.
8	Loss of public infrastructure	Infrastructure (electric water supply, sewerage & telephone lines; public health centre; public water tanks)	Relevant agencies.	Compensation in cash at replacement cost to respective agencies.
9	Losses to host Communities.	Affected amenities and services	Host community	Restore losses as a result of resettlement for amenities / services equivalent to the provided to PAPs
10	Temporary Losses	Affected structures or other fixed assets	Affected PAPs	In cash, on the basis of replacement cost of material and labour without deduction for depreciation or salvageable materials for the damages during the period of temporary possession.
		Severely affected structures	Affected PAPs made to shift temporarily from their present location	Entitlement will be in terms of rent allowance to cover the cost of alternate accommodation for the period of temporary displacement.
11	Loss of Land (unused)	Partial but permanent loss of land	Legal owner with valid title or customary or usufruct rights	PAPs will be entitled to: • Compensation as per Pakistan Land Acquisition Act
		Permanent loss of entire land or where partial loss but the remaining land is less than 0.5 acre	Legal owner with valid title or customary or usufruct rights	PAPs will be entitled to: • Compensation as per Pakistan Land Acquisition Act

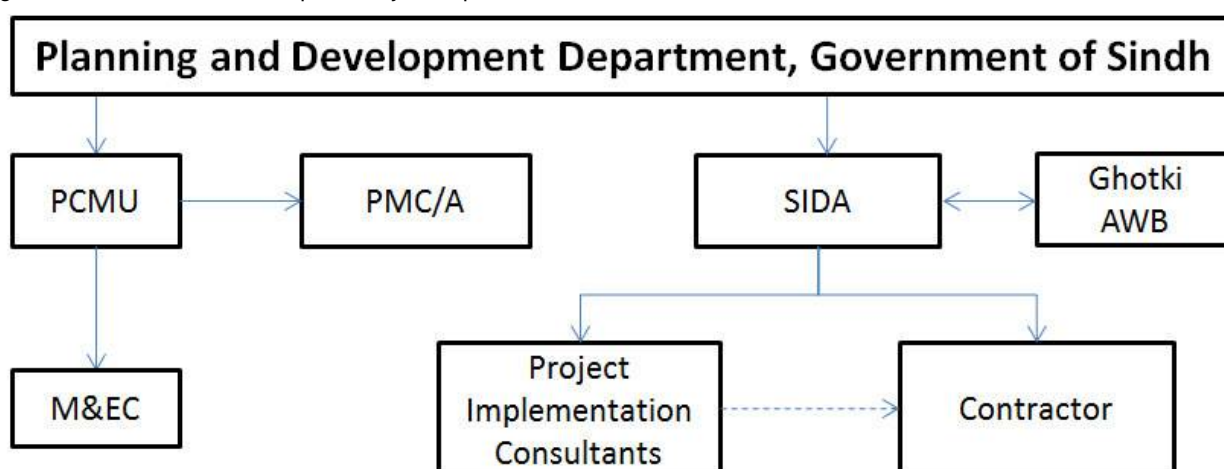
3. Description of the Sub-Project

Please refer to Chapter 1 for an overview of WSIP.

3.1 General Institutional Arrangements, Roles & Responsibilities

An organogram for institutional arrangements for sub-project implementation is shown in the following figure. The roles and responsibilities of each party are detailed in the following sections.

Figure 3.1: Institutional Setup for Project Implementation



3.1.1 The Sindh Irrigation and Drainage Authority (SIDA)

3.1.1.1 General

The Sindh Irrigation and Drainage Authority (SIDA) is the project proponent, and therefore the sub-project proponent. SIDA has a Board of Management chaired by the Minister of the Irrigation and Power Department (IPD) Government of Sindh.

SIDA is responsible for providing necessary support for the implementation of all WSIP components, including; maintaining consolidated project accounts, preparing disbursement applications and operation of the Designated Account and transfer of funds to other implementing agencies, and contributing to the project's overall management information system. SIDA is also responsible for procurement of major contracts under WSIP, including Contract WSIP/B1/GF/01. SIDA's Board meet quarterly to address project issues and make key decisions regarding investments as well as institutional strengthening. It will work closely with IPD in facilitating operation of the canal system during sub-project implementation.

SIDA shall act as the Employer, under the contract for WSIP/B1/GF/01.

3.1.1.2 Environmental Monitoring Unit (SIDA-EMU)

The responsibility for social and environmental management and monitoring will rest with the EMU established under SIDA. EMU are responsible for the environmental and social assessment, assisting in designing investments in a participatory way incorporating social and environmental issues, and monitoring

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the long term operational as well as construction phase impact of the project and major investments in the Province. These responsibilities extend to all investments made under WSIP, including this sub-project.

The EMU may seek necessary assistance from the social and environmental team of PIC in relation to works under component B1 and B2 of WSIP.

3.1.2 Project Coordination and Monitoring Unit (PCMU)

Project Coordination and Monitoring Unit (PCMU), established under the Planning and Development Department, Government of Sindh, monitor and coordinate all project implementation activities under WSIP, including this sub-project. It is responsible for carrying out project monitoring and evaluation studies and overall supervision of the environmental and social plans for WSIP (including this sub-project). PCMU shall engage a team of independent consultants (known as the Monitoring and Evaluation Consultants) to assist them in monitoring and evaluation.

3.1.3 Monitoring and Evaluation Consultants (M&EC)

M&EC assist PCMU in supervision and monitoring of the overall project as well as sub-projects (including Contract WSIP/B1/GF/01) in terms of environmental management and social plans. They provide continuous feedback to the Government of Sindh, Project Steering Committee (via PCMU) and implementing agencies on the project's performance and impact of its various components, so that corrective actions can be taken in a timely manner.

3.1.4 Project Management Consultants/Procurement Agent (PMC/A)

The Project Management Consultants/Agent (PMCA) oversee the procurement of consultancy services, works and goods to ensure these are in accordance with the World Bank's guidelines. PMC/A also oversees recruitment of project staff from the market place in a transparent manner with involvement of project implementing partners and Transparency International Pakistan (TIP). The team has a mandate to oversee the work performance of project staff and the consultants in carrying out their responsibilities, examining the functions of consulting services and the payments made to the consultants.

3.1.5 Ghotki Area Water Board

Ghotki AWB is responsible for the operation and maintenance of Ghotki Feeder Canal. The AWB shall hand-over operational responsibility of Ghotki Feeder within the sub-project area to the contractor who shall implement the works under this sub-project. These areas of the canal shall be handed over to the contractor for the entire duration of the works. The AWB is required to complete any permanent land acquisition prior to the commencement of works under this sub-project, and also assist the contractor in the completion of any temporary land acquisition that the contractor finds appropriate for the execution of the works.

Following completion of the works, the contractor shall hand over control of the canal within the sub-project area back to the Ghotki AWB who shall maintain responsibility for operation and maintenance for the operational phase.

3.1.6 The Project Implementation Consultants (PIC)

The association of Mott MacDonald Ltd and MM Pakistan (Pvt) Ltd was appointed in 2009 as the Project Implementation Consultants (PIC) for WSIP phase 1. PIC were appointed to assist SIDA in the implementation of WSIP, including undertaking the detailed designs, environmental assessment,

environmental management plans, resettlement actions plans, procurement of works and construction supervision for the rehabilitation works proposed under component B.

PIC have completed the detailed designs for this sub-project and are responsible for the preparation of this RAP as well as the EIA/EMP. PIC shall assist SIDA in the prequalification and procurement of a contractor to complete the works for this sub-project under Contract WSIP/B1/GF/01. Following contract award, PIC shall act as the 'Engineer' under the contract and maintain responsibility for supervision of the contract (on behalf of SIDA), including supervision of construction quality and the contractor's compliance with the EMP, for the duration of the works.

3.1.7 The Contractor

A contractor shall be appointed by SIDA under contract WSIP/B1/GF/01 to complete the works proposed in this sub-project.

3.2 Location of the Project

Ghotki Feeder Canal off-takes directly from the left bank of the River Indus, immediately upstream of Guddu Barrage. Due to a poor configuration of Guddu Barrage, large volumes of sediment are supplied into Ghotki Feeder. This sediment is deposited within the canal, especially within the first 65 RDs, and reduces the capacity of the canal to carry the design discharge.

Table 3.1: Salient Features of Ghotki Feeder Canal

Canal	Total Length (km)	Design Discharge (m ³ /s)	Number of Offtakes
Ghotki Feeder Canal	121	267	31

The Ghotki Feeder Canal is approximately 85m (280ft) wide at its head, reducing to 11m (35ft) at the tail. At the head of the canal (RD 0 to approximately RD 80), the canal berms have been entirely eroded and water flows against the embankments. Further downstream, berms are present with a width of between 6m and 9m (20ft and 30ft), but are becoming increasingly eroded as shown in the figure below. Trees and heaps of spoil originally excavated from the canal are present on the embankments.

Figure 3.2: Eroded berm on the Ghotki Canal



3.3 Right of Way

The Right of Way (RoW) is a strip of government owned land beyond the outer toe of both embankments of the canal that runs parallel to the embankments for the entire length of the canal. The width of the RoW as reported by the Ghotki AWB (but not confirmed officially) during field visits is given in the following table.

Table 3.2: Ghotki Feeder Canal Reported RoW

Reach (RD)	Left Bank Width of RoW (ft) – measured from canal centreline	Left Bank Width of RoW (ft) – measured from canal centreline
0 – 33	320	320
33 – 58	340	340
58 – 127	330	330

The RoW is illegally and heavily cultivated and inhabited by illegal settlements. The RoW is occasionally interrupted by areas of forested area, barren land which is prone to flooding, and open water.

Beyond the RoW agriculture continues to be practiced to a large scale, with cotton, wheat, rice and sugar cane being the dominant crops in the area. Cultivated areas are occasionally interrupted by small areas of barren land and open water, but these are not common. More common are extensive areas of woodland. Villages and smaller hamlets are present within the agricultural land, housing fishermen and farm labourers who work on the agricultural land (which is generally owned by larger landlords) as well as their families.

It is noted that the majority of the Corridor of Impact (Col) for this sub-project is *within* the RoW, but does not cover the *entire* RoW. The Col varies down the entire length of the canal, dependent upon the proposed embankment section and existing cross-section design as well as the spoil disposal requirements. See section 3.8 for measurements of the Col.

3.4 Scope of Works

The works detailed in this section constitute the proposed sub-project and are all considered within this RAP.

The main components of the sub-project are to remove sediment from the canal and lower the bed level, reinstate the berms, raise and strengthen the embankments as well as replace hydraulic regulating structures and construct new road bridges.

Full details of all proposed works can be found in Volumes I and II of the 'Design Report for Contract WSIP/B1/GF/01, Rehabilitation of Ghotki Feeder Canal.

Contract WSIP/B1/GF/01 will involve the following main engineering works:

- Establishment of construction and labour camps
- Establishment of borrow areas to win material for embankment works
- Raising and strengthening of embankments from RD 0-125 (left bank) and RD 40-125 (right bank)
- Canal remodelling (desilting and lowering of the design bed level) from RD 0 to 125
- Disposal of spoil resulting from canal remodelling
- Formation of the berm through the construction of killa bushing in isolated reaches from RD 0 to 125
- Cutting of the berm in isolated reaches from RD 0 to 125 on the left bank
- Cutting of the berm in isolated reaches from RD 40 to 125 on the right bank
- Replacement of two cross regulators
- Replacement of four major head regulators off-taking from Ghotki Feeder
- Replacement of six minor head regulators off-taking from Ghotki Feeder
- Construction of temporary canal diversions
- Construction of two Village Road Bridges (VRBs)
- Rehabilitation of four VRBs
- Repair of existing sanctioned Direct Outlets RD: 0-127

The hydraulic structures to be replaced are detailed in the following table.

Table 3.3: Hydraulic Structures to be Demolished and Replaced – Contract WSIP/B1/GF/01

RD	Structure	Name
11	Head Regulator	Chandia Minor
61	Head Regulator	Dilwaro Minor
65	Head Regulator	Mahi Wah
	Head Regulator	Dahar Wah
	Head Regulator	Sehar Wah
	Head Regulator	Bori Lower Minor
	Head Regulator	Sonan Minor
	Cross Regulator	
125	Head Regulator	Masu Wah
	Head Regulator	Ranwati Minor
	Head Regulator	Mehro Link Minor
	Cross Regulator	

Construction of two VRBs is planned at the following locations:

- RD 101 (to replace an existing crossing)
- RD 127 (to replace an existing crossing)

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Rehabilitation of the following four existing bridges is planned:

- RD 17
- RD 25
- RD 78
- RD 110

3.5 Labour Requirements

It is estimated that approximately 300 personnel shall be employed on the contract at its peak. Of these, 100 shall be skilled or semi-skilled, and shall include the following positions:

- Machine operators
- Engineers
- Surveyors
- Masons
- Electricians
- Mechanics

Approximately 200 unskilled labourers shall be engaged on the project, and this shall include drivers, construction labourers, watchmen and camp staff. The contractor shall be able to source these unskilled labourers from within the sub-project area, especially from Mureed Shakh village located on Ghotki Feeder Canal at approximately RD 45.

In addition, approximately 30 management staff shall be engaged by the contractor. These shall be engaged from the contractor's home office.

3.6 Assessment of Potential Impacts

3.6.1 Scoping

Prior to field studies, a scoping exercise was carried out to identify the construction activities which have the potential to result in direct economic or social impacts. The following table provides an assessment of the potential impacts under contract WSIP/B1/GF/01.

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Table 3.4: Scoping of *Potential* Impacts of Contract WSIP/B1/GF/01

Component of Works	Description	Loss of Shelter	Loss of Assets/Access to Assets	Loss of Income Source/ Means of Livelihood	Restriction of Access to Parks/ Protected Areas
Establishment of Construction/ Labour Camps (temporary works)	Construction camps are to be established. If established within the RoW, this has the potential to result in the loss of privately owned structures illegally constructed within the RoW. If camps are established beyond the RoW, temporary acquisition of privately owned land would be required. In either case, construction of camps has the potential to result in the loss of standing crops where these are grown within the footprint of the camp	√	√	√	-
Rehabilitation of embankments	Although the land is government owned, a number of households have built structures (shelter and commercial structures) on the embankments in which they live. Agriculture is not practiced within the footprint of the proposed embankment works	√	√	√	-
Establishment of borrow areas	The establishment of borrow areas is required to win material for the embankment works. The scoping assessment assumes some of the borrow areas shall be established in the RoW, and some in privately owned land outside the RoW. As a number of households have built structures (shelter and commercial structures) within areas of the RoW, borrow areas established within the RoW have the potential to result in loss of shelter and income. Establishment of borrow areas in agricultural land shall result in the loss of crops.	√	√	√	-
Disposal of excavated material (spoil)	As a number of households have built structures within areas of the RoW, any disposal of excavated material within the RoW has the potential to result in loss of shelter and commercial structures. As it is expected that the excavated material shall not be fertile, disposal of the material on fertile land shall result in loss of agricultural land and therefore loss of income.	√	√	√	-
Canal desilting and lowering of bed level	The footprint of this work component falls entirely within the flowing canal. Therefore, no structures or productive land shall be impacted	-	-	-	-
Berm cutting	Although the land is government owned, a number of households have built structures on the berms.	√	√	√	-

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Component of Works	Description	Loss of Shelter	Loss of Assets/Access to Assets	Loss of Income Source/ Means of Livelihood	Restriction of Access to Parks/ Protected Areas
	Agriculture is also practiced on some reaches of the berms.				
Berm formation	The footprint of this work component falls entirely within the flowing canal. Therefore, no structures or productive land shall be impacted	-	-	-	-
Establishment of haul routes to borrow areas	Temporary haulage routes may be required through private land resulting in loss of standing crops.	-	-	√	-
Replacement of cross-regulators	Works are to be carried out within the canal	-	-	-	-
Replacement of offtaking head regulators and realignment of head reaches	The land is a mix of government and privately owned land, and the works have the potential to result in the loss of structures and agricultural land.	√	√	√	-
Construction of temporary canal diversions	Diversions are to be constructed within the Government owned RoW, where a number of structures (shelter and commercial structures) have been constructed and agriculture may be practiced.	√	√	√	-
Construction of new VRBs	New VRBs shall be constructed within the RoW, but may impact any structures or crops illegally established within the RoW	√	√	√	-
Realignment of roads over the new VRBs	Realignment of roads linking to the new VRBs have the potential to impact any structures or crops illegally established within the RoW, and may extend into privately owned land, for which permanent acquisition would be required	√	√	√	-
Rehabilitation of existing VRBs	All works are confined to the government owned bridges on which there is no encroachment	-	-	-	-

3.6.2 Alternative Options for Minimizing the Impacts

Where the scoping exercise above identified areas of work which have potential direct economic or social impacts, the design of these elements were reviewed and amended to reduce the resettlement requirements as discussed in the sections below.

3.6.2.1 Construction and Labour Camps

The establishment of construction and labour camps was identified to have the potential to cause loss of shelter, assets and income. In order to remove these issues, sites for these camps have been identified which are situated on government owned land and within which no structures or farmed land are present. Thereby the potential for social and economic impacts is removed from this component.

3.6.2.2 Rehabilitation of the Embankments

There is no scope for amending the embankment design to reduce the impacts identified as strengthening of these embankments is one of the major priorities of this project to safeguard continued flows to the command area and prevent breaches of the canal. Due to habitation adjacent to the existing embankments, the construction of embankments along a new alignment is unlikely to reduce the impacts, and shall be prohibitively expensive. Such a proposal would also result in a much greater need for borrow material and an increase in the direct social and economic impacts surrounding borrow activities. Therefore the impacts associated with the rehabilitation of embankments are considered in this RAP.

3.6.2.3 Establishment of Borrow Areas

The establishment of borrow areas in any area which would require the removal of permanent structures shall be prohibited, thereby removing the potential for loss of shelter or assets. In order to prevent any impact upon privately owned land (temporary or permanent acquisition of agricultural land), deep borrow areas shall be established within the RoW, prior to spoil disposal activities. However, the potential for the loss of standing crops within the RoW remains and is considered in this RAP.

3.6.2.4 Spoil Disposal

Due to the need to dispose of large volumes of spoil beyond the canal embankments, the potential for both loss of shelter/assets and impact to livelihood (resulting from loss of commercial structures and agricultural land) has been identified. Loss of agricultural land has the potential to extend beyond government owned land to privately owned land. In order to prevent loss of shelter and assets, PIC has completed a detailed survey of the RoW and mapped the location of structures. Spoil disposal plans have been prepared which propose disposal of spoil in the RoW only in areas which are uninhabited (i.e. only in areas where structures are not present) and do not include fish farms. The plans do, however, propose disposal over any illegally cultivated land within the RoW, so the loss of standing crops is expected. Compensation for the loss of standing crops is included within this RAP – this is calculated based upon the RoW measurement detailed in section 3.3 which are yet to be confirmed by the AWB. Any changes to these measurements shall result in the need to revise the estimate of the loss of standing crops and associated budget.

The need to dispose of spoil outside the RoW has been removed by proposing haulage of dredged material from reaches of the canal where the volume of dredged material exceeds the available capacity within the RoW (for example in heavily encroached areas or in reaches which have experienced significant sedimentation) to areas where the disposal capacity of the RoW is greater than the volume of material to be removed from the canal (for example to less inhabited areas or to reaches where little excavation is required).

3.6.2.5 Berm Formation - Berm Cutting

The scoping exercise identified that excavation of the existing berms, which in some areas have been illegally inhabited, may result in loss of shelter or commercial structures of those living on the berms. In order to prevent this impact, the engineering design has been amended to remove excavation of any berm where assets are present. However, where the berms are illegally cultivated, these shall still be excavated. Therefore, the loss of standing crops is expected and is considered in this RAP.

3.6.2.6 Establishment of Haul Routes to Borrow Areas

The scoping exercise identified that the established of haul routes to borrow areas may result in the requirement for temporary acquisition or privately owned agricultural land, resulting in loss of income. As

the borrow areas are to be established adjacent to the canal in the RoW, the establishment of haul routes in privately owned land is no longer required, and therefore this impact is removed from the sub-project.

3.6.2.7 Realignment of Off-taking Canal Head Reaches

The layout of the replacement off-taking head regulators and canals has been adjusted following field visits in order to minimise the direct social and economic impacts. However, loss of shelter, assets and standing crops may still result from this component of the works.

3.6.2.8 Construction of Temporary Canal Diversions

The alignment of temporary canal diversions within the RoW has been chosen to minimise the direct social and economic impacts. However, loss of shelter, assets and standing crops may still result from this component of the works. It is noted that those structures (shelter and assets) to be lost as a result of the establishment of canal diversions shall also be impacted by the embankment rehabilitation works.

3.6.2.9 Construction of New VRBs

The location and alignment of VRBs have been chosen to avoid any structures or crops growing in the RoW, therefore all direct social and economic impacts associated with these works are removed.

3.6.2.10 Realignment of Roads

The alignment of the roads has been optimised following field visits to avoid any structures or crops growing in the RoW, therefore all direct social and economic impacts associated with these works are removed.

3.6.3 Sub-Project Activities Resulting in Direct Social and Economic Impacts

The following table provides an assessment of the final impacts resulting from works under contract WSIP/B1/GF/01 following implementation of the design and planning mitigation measures detailed in section 3.6.2.

Table 3.5: Assessment of Impacts following Design and Planning Mitigations

Work Component	Loss of Shelter	Loss of Assets/Access to Assets	Loss of Income Source/ Means of Livelihood	Comments on Impact
Embankment Rehabilitation	√	√	√	Loss of privately owned assets, including shelter and commercial structures in the RoW.
Borrow Areas	-	-	√	Loss of standing crops within the RoW
Spoil Disposal	-	-	√	Loss of standing crops within the RoW
Berm Formation – Berm Cutting	-	-	√	Loss of standing crops within the RoW
Realignment of Off-taking Canal Head Reaches	√	√	√	Loss of privately owned assets, including shelter and commercial structures in the RoW. Permanent loss of privately owned agricultural land

Work Component	Loss of Shelter	Loss of Assets/Access to Assets	Loss of Income Source/ Means of Livelihood	Comments on Impact
Temporary Canal Diversions	√	√	√	Loss of privately owned assets, including shelter and commercial structures in the RoW. Loss of standing crops within the RoW

3.7 Proposed Construction Activities

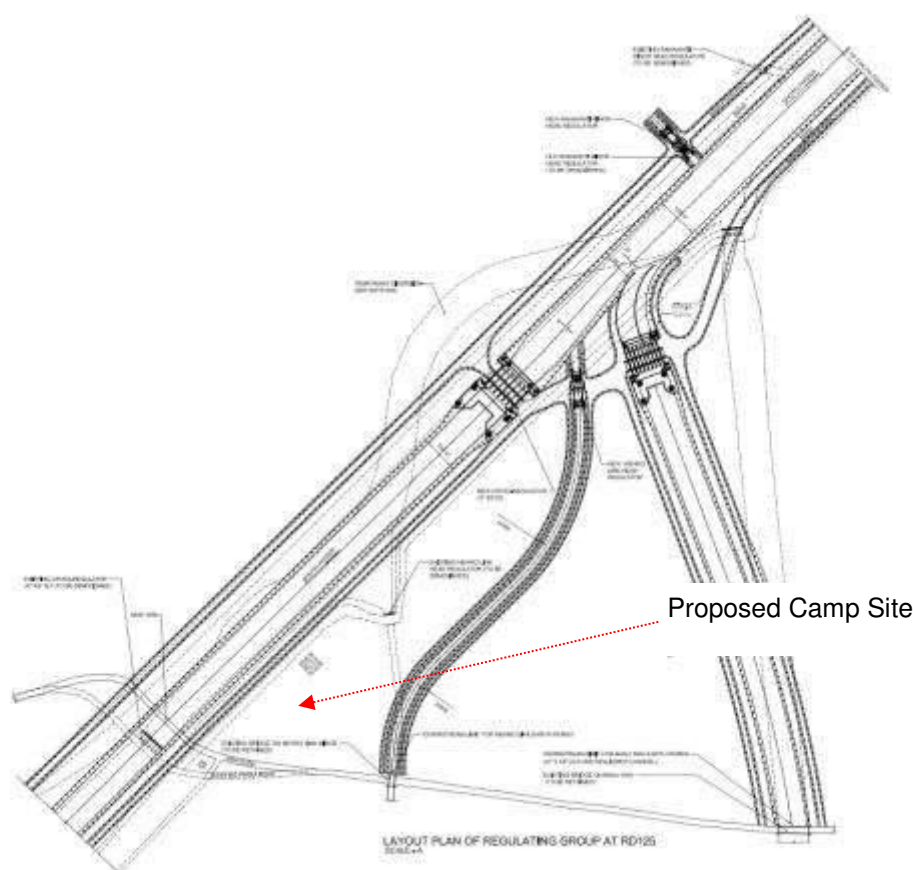
The works described in the following sections include the design and planning mitigation measures detailed in section 3.6.2.

3.7.1 Establish Construction Camps

3.7.1.1 Main Camp

The main construction camp shall be located at RD 127 of the Ghotki Feeder Canal within the RoW as shown in the following figure.

Figure 3.3: Location Plan of Main Camp at RD125



The camp shall cover an area of approximately 10,000m² (108,000ft²). The majority of this area shall be for the provision of a manufacturing and fabrication yard, and an office and dormitory shall also be provided here.

3.7.1.2 Sub Camp

Due to the large project area, the Contractor shall provide a single sub camp at RD 63. This camp shall be similar to the main camp, but on a smaller scale.

The camp shall be constructed within the Government owned RoW.

3.7.1.3 Temporary Camps

It is expected that the contractor shall establish temporary camps within the RoW at the following sites:

- Chandia Minor Head Regulator (RD 11)
- Dub II Minor Head Regulator (RD 107)

These camps shall consist of a single office building, generator and parking for plant and vehicles.

It is expected that movable tented camps with shelters shall be temporarily provided from RD 0 to 127 during the earthworks operations. These shelters shall not be used to accommodate labour overnight (with the exception of security guards).

3.7.2 Rehabilitation of Embankments

The following embankments shall be rehabilitated on the Ghotki Feeder Canal:

- From RD 0 to 125 on the left bank
- From RD 40 to 125 on the right bank

Works include:

- Raising of embankments where freeboard is insufficient (including compaction)
- Widening of embankments where width is less than required to prevent seepage (including compaction)
- Levelling and compaction only where freeboard is sufficient but the embankment is not currently motorable

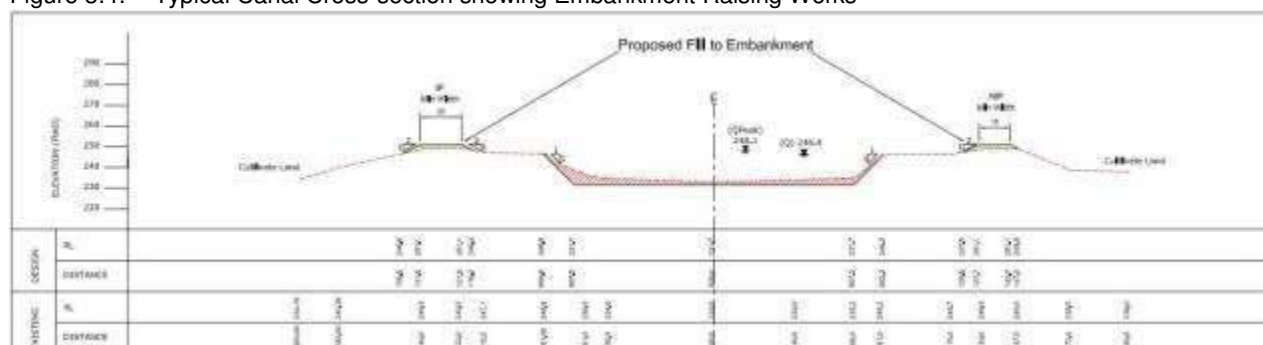
Detailed works are as follows:

Table 3.6: Proposed works for reconstruction of embankments

Left Bank		Right Bank	
RD	Proposed Works	RD	Proposed Works
0 to 8	Raising & widening	0 to 40	No works
8 to 12	Levelling & compaction	40 to 44	Raising & widening
12 to 18	Raising & widening	44 to 75	Levelling & compaction
18 to 72	Levelling & compaction	75 to 118	Raising & widening
72 to 125	Raising & widening	118 to 125	Levelling & compaction

A canal cross-section showing embankment raising works is provided in the following figure.

Figure 3.4: Typical Canal Cross-section showing Embankment Raising Works



Prior to filling works for these embankments, the top 0.15m (six inches) of material shall be removed from the footprint of the embankments and disposed of. Vegetation and all trees shall be cleared from this area.

3.7.3 Borrow Pits

379,275 m³ (13,394,000 ft³) of material will be required to from embankments. 361,680 m³ (12,779,000 ft³) of material will be taken from borrow areas and 17,414 m³ (615,000 ft³) from the reuse of existing spoils situated on adjacent to the existing embankments.

Deep borrow areas shall be established within the Government owned RoW land prior to spoil disposal activities in these areas. In order to reduce haulage costs, and the disturbance caused by haulage operation, it is preferable to establish borrow areas close to the point at which the material is required. However, as the sub-project area immediately adjacent to the canal from RD 63 to RD125 is flooded during the monsoon season and as embankment works shall continue during this time, haulage from borrow areas established within the RoW but beyond the flooded area may be required (dependent upon the contractor's programme).

The borrow areas shall be established within the cultivated lands which are commonly found within the RoW of the canal. Normally, it would be preferable to identify barren land suitable for the establishment of borrow areas in order to reduce the impact to cultivated land and farms. However in the case of Ghotki this is not possible as the area (both within and beyond the RoW) is very heavily farmed and insufficient barren land is available.

3.7.4 Canal Remodelling

Canal remodelling shall be completed from RD 0 to 125. The Works shall include excavation of silt from the canal bed and lowering of the bed level. On average, approximately 1.2m (4ft) depth of material shall be removed from the canal bed. The majority of the excavation shall be from RD 0 to 63 where 1,982,179m³ (70,000,000 ft³) silt will be removed, whereas from RD 63 to 125 only 934,455 m³ (33,000,000 ft³) will be removed.

In total 2,916,635 m³ (103,000,000 ft³) of material from canal bed will be removed.

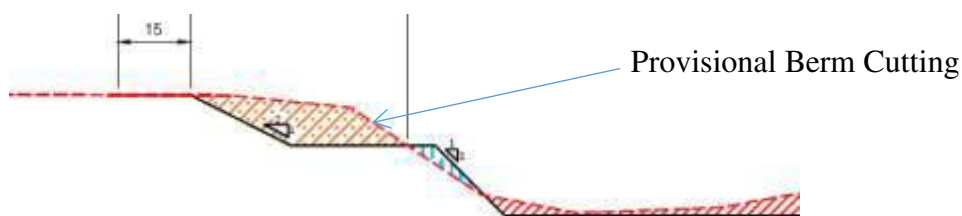
3.7.5 Berm Formation

The following two types of works will be implemented within the canal berm from RD 0 to 125 on the left bank and RD 40 to 125 on the right bank.

3.7.5.1 Berm Cutting

Where the existing level is higher than the design berm level, cutting to form the berm may be proposed, as shown in the following figure.

Figure 3.5: Berm Cutting

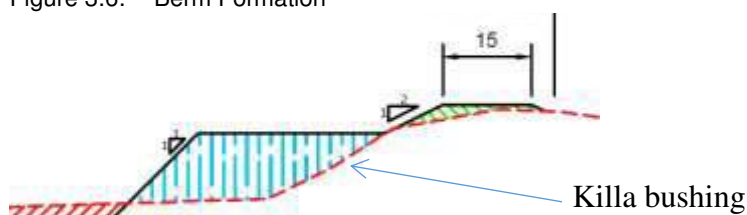


All berm cutting is provisional. The berm shall only be cut where there are no structures located on the berm. A maximum of 254,851 m³ (9,000,000 ft³) shall be cut from the berms (provisional). Where settlements are present on the berms, the berm shall not be cut.

3.7.5.2 Berm Formation

Where the existing level is lower than the design berm level, killa bushing is proposed on the canal edges, as shown below.

Figure 3.6: Berm Formation



3.7.6 Spoil Disposal

2,916,635m³ (103,000,000 ft³) of spoil (excavated from the canal bed) shall be disposed beyond the IP/NIP. Up to an additional 254,851 m³ (9,000,000 ft³) of spoil excavated from the berms shall also be disposed of beyond the IP/NIP – this value to dependent upon the quantity of provisional cut to be undertaken.

It is proposed that this spoil shall be disposed of only within the Government owned Right of Way (RoW). The removal of privately owned structures or clearance of orchards from the RoW shall be prohibited for the purpose of spoil disposal. Proposed spoil disposal areas are shown in Volume II of the RAP.

The assessment of spoil disposal areas within the RoW is based on the measurements of the RoW which were reported in the field.

3.7.7 Village Road Bridges (VRBs)

Two new bridges will be constructed at:

- RD 101 (to replace existing VRB)
- RD 125 (to replace VRB currently over existing cross-regulator)

Four bridges will be rehabilitated at:

- RD 17
- RD 25
- RD 78
- RD 110

3.7.8 Hydraulic Structures

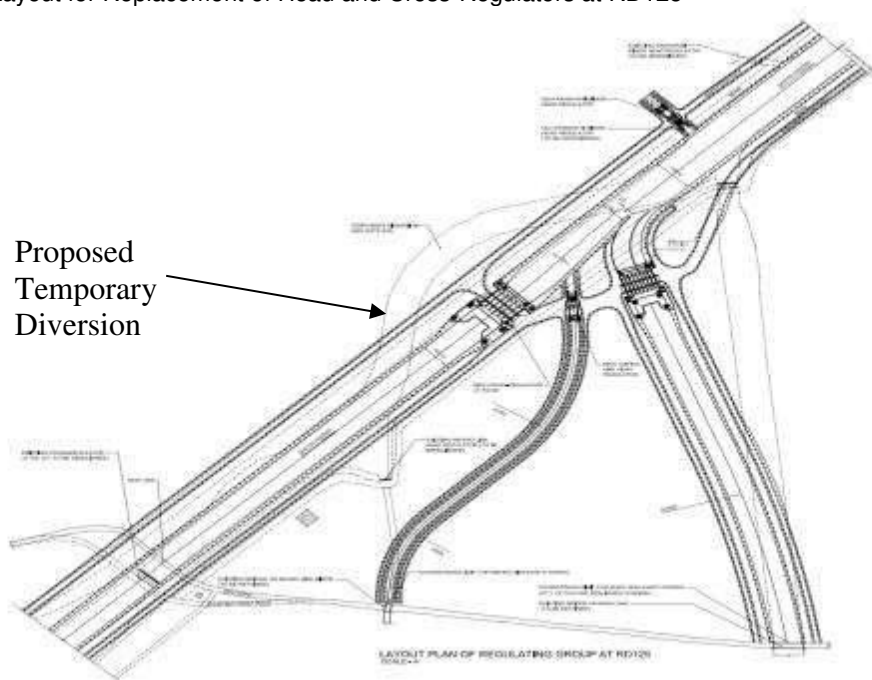
PIC completed a condition assessment of hydraulic structures on Ghotki Feeder Canal and found the majority of the structures to be in a poor condition, both structurally and hydro-mechanically, many being aged brick built structures.

A total of two cross regulators, 4 head regulators and 6 minor head regulators shall be constructed on the Ghotki Feeder Canal.

Permanent land acquisition will be required for the replacement of regulating complexes and realignment of offtaking canals at 63+000 and RD 125+000 of Ghotki Feeder Canal.

All cross-regulators shall be constructed within the current alignment of the canal, and temporary diversion channels shall be constructed to divert the canals around the structures during construction to provide a dry area for construction, as shown for the cross-regulator at RD 125 in the following figure.

Figure 3.7: Layout for Replacement of Head and Cross-Regulators at RD125



As all structures are to replace existing structures, there will be no major changes to water levels such that may be associated with the construction of a new weir where previously one did not exist.

All hydraulic structures from RD 0 to 127 are to be replaced except the following to which no works are proposed:

- Bori Upper Minor Head Regulator
- Gohram Minor Head Regulator

3.7.9 Works Schedule

A summary of the works schedule for Contract WSIP/B1/GF/01 is given in the following table. Works are scheduled to be completed over a period of 24 months.

Table 3.7: Works Schedule – Summary for Contract WSIP/B1/GF/01

Activity	Start (month/year)	End (month/year)
Mobilisation (personnel, materials and equipment)	01/2016	02/2016
Temporary Works	02/2016	05/2016
Canal remodelling and embankment works	05/2016	07/2016
Construction of hydraulic structures at RD63	07/2016	07/2017
Construction of hydraulic structures at RD 125	07/2017	12/2017

The length of Contract WSIP/B1/GF/01 is estimated to span 24 months, scheduled in order to make use of two closure periods during which the earthworks may be completed. The final programme shall be confirmed by the contractor.

3.8 Corridor of Impact (Col)

The Col is dealt with in this RAP as separate areas as follows:

3.8.1.1 Col for Embankment Works

All those living or working within the Col of the embankment works have been identified as PAPs who will be impacted by the sub-project works. The Col has been reduced to remove excavation of the existing berms where this would result in removal of shelter or other structural assets. As a result, the Col over a single cross-section of the canal shall not necessarily be continuous as demonstrated in the following two examples.

Figure 3.8: Example of Continuous Col on Ghotki Feeder Canal

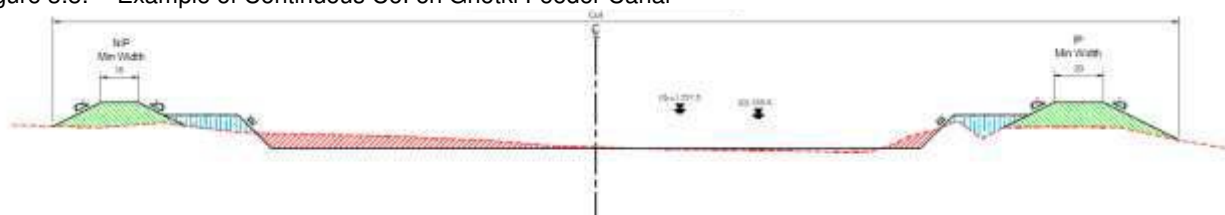
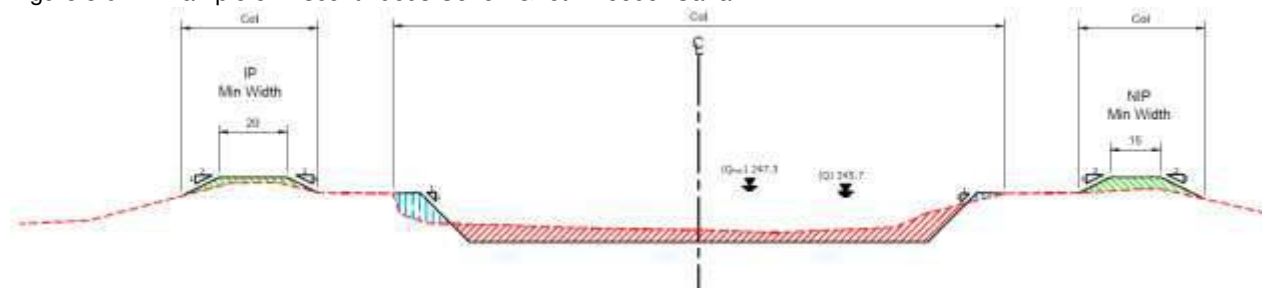


Figure 3.9: Example of Discontinuous Col on Ghotki Feeder Canal



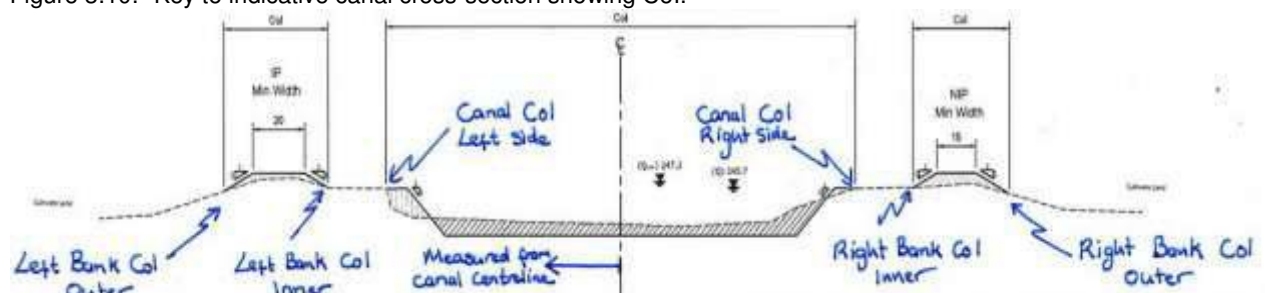
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The Col for embankment works for each reach of the canal from RD 0 to 125 is given in the following table, and a key to this table is provided in Figure 3.10. Cross-sections showing the Col for the embankment works at every 5RD are given in Appendix I.

Table 3.8: Ghotki Feeder Canal Col for Embankment Raising

Reach (RD)	Left Bank Col (measured from canal centreline)		Canal Col (measured from canal centreline)		Right Bank Col (measured from canal centreline)	
	Outer	Inner	Left Side	Right Side	Inner	Outer
0 – 3	217.57	164.61	164.61	163.18	163.18	233.65
3 - 7.5	222.43	162.58	162.58	148.85	182.61	208.59
7.5 – 12.5	199.93	183.74	147.14	140.68	185.68	207
12.5 – 17.5	197.88	157.44	126.13	125.11	199.87	219.87
17.5 – 22.5	184.6	169.6	169.6	143.32	185.87	205.87
22.5 – 27.5	184.6	169.6	169.6	154.82	184.87	204.87
27.5 – 32.5	193.28	1778.28	134.12	133.56	183.87	203.87
32.5 – 37.5	184.62	169.62	129.62	131.38	194.85	214.85
37.5 – 42.5	195.54	180.54	135.33	143.56	163.25	195.2
42.5 – 47.5	197.27	180.79	124.92	128.25	178	198.96
47.5 – 52.5	179.6	164.6	131.21	134.4	162.27	184.6
52.5 – 57.5	182.17	163.37	122.98	120.56	203.99	224.87
57.5 – 62.5	183.75	164.3	123.2	132.94	181.75	205.72
62.5 – 67.5	170.13	150.13	119.76	122.7	122.7	144.03
67.5 – 72.5	151.31	129	107.21	103.43	124.32	140
72.5 – 77.5	146.28	114.55	114.55	99.68	117	136.22
77.5 – 82.5	147.08	119.81	84.93	84.38	120.36	156.79
82.5 – 87.5	162.76	120.43	102.26	115.57	115.57	140.83
87.5 – 92.5	146.34	115.87	79.56	75.24	120.58	147.82
92.5 – 97.5	146.66	111.53	82.3	82.22	111.91	146.92
97.5 – 102.5	150.54	115.98	82.57	81.98	120.51	147
102.5 – 107.5	147.38	110.41	81.75	81.75	116.27	148.94
107.5 – 112.5	152.29	112.2	90	90.71	112.21	149.07
112.5 – 117.5	147.12	117.91	87.13	86.87	111.9	136.25
117.5 – 122.5	165	115.08	82.49	109.34	128.87	143.87
122.5 - 125	150.19	121.48	81.96	81.57	150.87	165.87

Figure 3.10: Key to indicative canal cross-section showing Col.



3.8.1.2 Col for Offtaking Canal Realignment and Temporary Diversions

The Col also includes the footprint of any realigned off-taking canal and temporary canal diversion. The layout of the realigned off-taking canals at both regulating complexes are provided in Appendix I.

3.8.1.3 Col for Spoil Disposal and Borrow Areas

As part of the proposed works, a large volume of spoil is to be disposed of within the RoW. As detailed in sections 3.6.2.3 and 3.6.2.4, the establishment of borrow areas or disposal of spoil shall be prohibited over structures and fish farms within the RoW. Therefore the impact shall be limited to the loss of any standing crops which are illegally grown within the RoW. Measurements of the RoW are provided in Table 3.2.

A plan of the spoil disposal locations is included in Volume II of this RAP (which also serves as Volume II to the EIA/EMP for this contract).

3.8.1.4 Col for Village Road Bridges

The Col for the village road bridges shall include the footprint of the proposed bridges. The Col for the bridges is contained within the government owned RoW.

3.8.1.5 Col for Hydraulic Structures

The Col for the hydraulic structures shall include the footprint of the proposed hydraulic structures and realigned canals.

4. Socio-Economic Studies

4.1 Approach and Methodology

4.1.1 Techniques and Sample Size

In order to have comprehensive and detailed information the following techniques and tools of data collection were used. It is also significant to note that representatives from SIDA were involved during the field survey. A list of SIDA staff accompanying the team is provided in Appendix B.

4.1.1.1 Sample Design

A census of all households and businesses falling within the Col was conducted.

4.1.1.2 Village Profile

A comprehensive village profile was prepared to document the socio-economic and demographic data of each sample settlement in the study area. During the field survey 13 villages were randomly selected from within the sub-project area.

4.1.1.3 Pretesting of Questionnaire

In order to test the validity and reliability of the developed questionnaire, interviewing guides were pretested in the study area and the questionnaires were reviewed to assess whether questions need to be clarified or changed.

4.1.1.4 Women Survey

A separate questionnaire was developed covering various aspects relating to women in the Col. Female interviewers of PIC conducted the field survey with male sociologists in the sub-project area and held meetings with the affected families.

4.1.2 Collection of Primary Data

The preparation of the RAP required the collection of data/information from the field settings. To achieve this end, comprehensive questionnaires for data collection were prepared as given in Appendix C. The questionnaires were filled during the consultative meetings and during field visits. Four types of questionnaires were developed for data collection, as described below:

- Village profile for the collection of macro level information relating to the existence of socio-economic infrastructure in the rural settlements falling within Col.
- Census survey to document the Project Affected Persons (PAPs), their assets, family profiles and economic status.
- Socio-economic survey to develop an overall baseline profile of the people of the area in respect of their socio-economic behaviour, vulnerability and attitudes towards the developmental activity to be carried out in the area.
- Gender data collection survey targeting the female population of the Col exclusively in order to supplement the socio-economic data collection.

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Consultations were carried out with the stakeholders and general public. Consultative meetings and focus group discussions were held to learn about the views and concerns of the local community on the proposed rehabilitation works. The concerns raised by the stakeholders were discussed with the project design team in order to enhance the projects acceptability for the general public on socio-economic considerations. The main objectives of the consultations were to provide a platform to the stakeholders, to voice their concerns or suggestions to the project team and to develop a sense of collective ownership for the activities of the project. For detailed consultations see Chapter 6.

PIC was initially active in the field from September to 2010 to January 2011. PIC remobilised to the field to update the baseline data from August 2014.

4.1.3 Collection of Secondary Data

Secondary data relating to the socio-economic characteristics of the sub-project was collected from the concerned local government offices, police, fisheries, building, and road and agriculture departments.

Official Websites of Ghotki and Sukkur districts were also searched. The population census reports for the concerned districts were also consulted.

4.2 Socio-Economic Profile of Sub-Project Area

4.2.1 Location of Canal

Ghotki Feeder Canal is located in the talukas of Ubauro, Daharki, Mirpur Mathelo, Ghotki, Pano Akil and Rohri of districts Sukkur and Ghotki.

4.2.2 Brief Description of Ghotki District

Ghotki district takes its name from the Ghotki Town which is the headquarters of the district. It is located between 27°18' to 28°27' north latitudes and 69°10' to 70°10' east longitude. The district is bounded on the north by Rahim Yar Khan and Jacobabad districts, on the south by Sukkur district, on the east by Jasalmir State of India and on the west again by Jacobabad district. Total area of the district is 6,083 square kilometres. Total population of districts is 970,549 comprising of 511,363 males and 459,186 females. The average annual growth rate of district is 3.26 percent per annum and population density of district is 159.6 persons per square kilometre. The Ghotki district is divided into five Talukas, namely Daharki, Ghotki, Mirpur Mathelo, Ubauro, Khanpur Mahar respectively. Ghotki district has two gas fields namely Mari gas field and Qadirpur gas field in Daharki and Ghotki talukas respectively. Mari gas field is larger than Qadirpur by production. At present 65 wells are functioning and producing 400 million cubic feet of gas per day. Engro Chemical Fertilizers, Fauji Fertilizer, Fatima Fertilizer Company are situated at Machi Goth, Taluka Sadiqabad, District Rahim Yar Khan (Punjab). Engro Energy Plant is situated in Ghotki, Liberty Power Plant and Fauji Foundation Power Plant are situated in Mirpur Mathelo. WAPDA (Guddu Thermal) and Sui Southern Gas Company are the main users/customers of natural gas produced by these gas fields. Important means of transport and communication in the district are roads and railways. The main Pakistan Railway Line (Karachi to Peshawar) passes through this district and district is also connected with the National Highway running from Karachi to Peshawar.

4.2.3 Brief Description of Sukkur District

Sukkur is an important district of Sindh Province, it is famous for export of dates. It is divided into four administrative talukas, namely; Sukkur City, Rohri, Saleh Pat and Pano Aqil. Among them Sukkur city and old Sukkur are urban centres while Pano Aqil is famous for having one of largest military cantonments in the country. Rohri is the smallest taluka of the Sukkur district, both in area and population but has an

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ancient and important railway junction. The area of the Sukkur District is 5,165km² and density of the population is 175.9 persons per square kilometre. The population of Sukkur District is 908,370; the average annual growth rate is 2.88 percent. Geographically it is spanned from 27°05' to 28°02' north latitudes and from 68°47' to 69°43' east longitudes. Sukkur district shares northern border with Shikarpur and (recently constituted) Kashmore districts. Ghotki is located on the north-eastern side while Khairpur on the south. Sukkur also shares its border with India (Jaisalmer, Rajasthan).

The city of Sukkur is located at an altitude of 220 feet (67 m) from sea level, having terrestrial coordinates 68°52' east and 27°42' north. Sukkur is the third largest city of Sindh province, situated on the west bank of Indus River in Sukkur District. It is also the narrowest point of the lower Indus. Sukkur is also connected by road and air with all major cities of Pakistan.

Sukkur is a hub of many small and large scale industries. Among important industries are cotton textiles, cement, leather, tobacco, paint and varnish, pharmaceuticals, agriculture implements, hand pumps, lock making, rice-husking, and sugar. Small-scale cottage industries comprise hosiery, boat making, fishing accessories, thread ball spooling, trunk making brass-ware, cutlery and ceramics

4.2.4 Cropping Pattern in the Sub-Project Area

The sub-project benefits from fertile land and is irrigated by canals, as a result is very rich in growing of cotton, wheat and sugarcane. The cropping pattern of the three districts is given in the following sections. It is noted that agriculture is practiced heavily within the Col of this sub-project. Many PAPs living within the Col are engaged as agricultural labourers.

4.2.4.1 The Cropping Pattern of District Ghotki

Ghotki district is very rich in the growing of cotton, wheat and sugarcane. Other crops in the area are rice, maize, barley, jawar, bajra, tobacco, gram and barley. The main occupation of the people is agriculture. The details of cropping pattern are given in Table 4.1.

Table 4.1: Cropping Pattern of Ghotki District

Cropping Seasons	
Rabi Crops	Kharif Crops
i) Wheat	i) Cotton
ii) Gram	ii) Sugarcane
iii) Oilseed (Rape Seed and Mustard)	iii) Rice
iv) Barley	iv) Bajra
v) Pluses	v) Maize
vi) Tobacco	vi) Pluses
vii) Rabi Fodder (Barseem/Losern)	vii) Kharif Fodder
viii) Vegetables (Onion, Tomato, Potato, Cabbage and Peas)	viii) Vegetables
ix) Orchard	ix) Orchard (Date, Banana, Falsa and Guava)

Source: Survey of the Project Area, Project Implementation Consultants, July. 2014 to August- 2014

4.2.4.2 The Cropping Pattern of District Sukkur

Sukkur district is very rich in growing of cotton, rice, wheat and sugarcane. Other crops in the area are watermelon, chillies and pluses. The main occupation of the people is agriculture. Details of cropping pattern in Sukkur district are given in Table 4.2.

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Table 4.2: Cropping Pattern of Sukkur District

Cropping Seasons	
Rabi Crops	Kharif Crops
i) Wheat	i) Cotton
ii) Gram	ii) Sugarcane
iii) Oilseed (Rape Seed and Mustered)	iii) Rice
iv) Barley	iv) Bajra
v) Pluses	v) Maize
vi) Tobacco	vi) Pluses
vii) Rabi Fodder (Barseem/Losern)	vii) Kharif Fodder
viii) Vegetables (Onion, Tomato, Potato, Cabbage and Peas)	viii) Vegetables
ix) Orchard	ix) Orchard (Date, Banana, Falsa and Guava)

Source: Survey of the Project Area, Project Implementation Consultants, July. 2014 to August- 2014

4.2.5 Education and Literacy Ratio in the Sub-project Area

During field survey 13 villages are selected randomly for socio-economic analysis. According to the results of the survey, the total population of the 13 surveyed villages and hamlets is 4,580 people, comprising of 2,150 males and 2,430 females. The number of literate persons comes to 932 (consisting of 776 boys and 156 girls students) which accounts for 20.35 percent of the total population. Out of total literate, persons having primary level education are 58.26 percent, middle level 26.39 percent and matric level 11.91 percent respectively. While the respondents with intermediate and graduation levels are 3.44 percent. The Information in respect of literacy levels of the surveyed villages is furnished in Table 4.7.

Table 4.3: Literacy Rate in the sub-project Corridor

Sr. No.	Education Level	Literacy Rate			Percentage
		Male (#)	Female (#)	Total (#)	
1	Primary	425	118	543	58.26
2	Middle	210	36	246	26.39
3	Matric	109	2	111	11.91
4	Above Matriculate	32	-	32	3.44
Sub-Total Educated		776	156	932	100 (20.35)
5	Illiterate	1223	2104	3327	72.65
6	Children	151	170	321	7
Grand Total		2150	2430	4580	100

Source: Survey of the Project Area, Project Implementation Consultants, July. 2014 to August- 2014

4.2.6 Social Amenities in Sub-project Area

The result of the survey revealed that the electricity, road, primary level education and mobile phone facilities are available in the of sub-project area. However, only approximately 75 percent of the population had access to this facility, whereas, 25 percent are not provided with electricity. Regarding the quality of services, about 49 percent of the respondents availing this facility showed their satisfaction. Education is the other important facility which is available to 39 percent of the respondents. The majority of people (approximately 56 percent) are not satisfied with the quality of services while 44 percent showed their satisfaction, road facility is only 30 percent available in the sub-project area. Mobile phone facility is 100 % available in the sub-project area. Availability of sewerage/drainage facility is not reported in the area. Other

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amenities like water supply tanks are not available in the sub-project area. Gas, Basic health Unit (BHUs) and land lined telephone services are not available in the surveyed villages, as reported by the respondents. The information in respect of access to social amenities and their quality of services are given in the following table.

Table 4.4: Access to Social Amenities in the sub-project area

Sr. No.	Facility	Available (%)	Not Available (%)	Satisfactory (%)	Unsatisfactory (%)
Ghotki feeder Canal					
A. RD 1+000 to RD 22+000					
1	Electricity	100	-	45	55
2	Gas	0	100	-	-
3	Water Supply/Tank	0	100	-	-
4	Telephone (Land Line)	0	100	-	-
5	Sewerage/ Drainage	0	100	-	-
6	Road	50	50	65	35
7	BHU	0	100	-	-
8	School (Primary only)	30	70	40	60
9	Mobile	100	-	100	-
B. RD 23+000 to RD 40+000					
1	Electricity	50	50	50	50
2	Gas	0	100	-	-
3	Water Supply/Tank	0	100	-	-
4	Telephone (Land Line)	0	100	-	-
5	Sewerage/ Drainage	0	100	-	-
6	Road	40	60	45	55
7	BHU	0	100	-	-
8	School (Primary only)	70	30	55	45
9	Mobile	100	-	100	-
C. RD 41+000 to RD 90+00					
1	Electricity	100	-	60	40
2	Gas	0	100	-	-
3	Water Supply/Tank	0	100	-	-
4	Telephone (Land Line)	0	100	-	-
5	Sewerage/ Drainage	0	100	-	-
6	Road	20	80	50	05
7	BHU	0	100	-	-
8	School (Primary only)	35	69	40	60
9	Mobile	100	-	100	-
D. RD 91+000 to RD 127+00					
1	Electricity	50	50	40	60
2	Gas	0	100	-	-
3	Water Supply/Tank	0	100	-	-
4	Telephone (Land Line)	0	100	-	-
5	Sewerage/ Drainage	0	100	-	-
6	Road	10	90	60	40

Sr. No.	Facility	Available (%)	Not Available (%)	Satisfactory (%)	Unsatisfactory (%)
7	BHU	0	100	-	-
8	School (Primary only)	20	80	40	60
9	Mobile	100	-	100	-
Over All					
1	Electricity	75	25	49	51
2	Gas	0	100	-	-
3	Water Supply/Tank	0	100	-	-
4	Telephone (Land Line)	0	100	-	-
5	Sewerage/ Drainage	0	100	-	-
6	Road	30	70	55	45
7	BHU	0	100	-	-
8	School (Primary only)	39	61	44	56
9	Mobile	100	-	100	-

Source: Survey of the Project Area, Project Implementation Consultants, July. 2014 to August- 2014

4.2.7 Pressing Needs of the Men

It has been pointed out by the men during the survey that 37.16 percent identified delivery of adequate irrigation water was their priority, they were concerned that they were not given irrigation water according to their design discharge of canal. The second and onward needs prioritized by the men are dispensary, electricity, a middle school and gas. The pressing needs of men are presented in the following table.

Table 4.5: Pressing Needs of Men (Multiple Responses)

Sr. No.	Items	Number	Percentage (%)
1	Irrigation Water	55	37.16
2	Dispensary	38	25.68
3	Electricity	30	20.27
4	Middle School	15	10.13
5	Gas	10	6.76
Total		148	100

Source: Survey of the Project Area, Project Implementation Consultants, July. 2014 to August- 2014

4.2.8 Status of Women

The survey has revealed that participation percentage of women in various socio-economic activities in the project corridor is generally high, 100 percent in case of household activities and child caring. Their participation percentage in case of agriculture stood at 48 percent, livestock rearing at 45 percent, and 95 percent in the case of social obligation (such as attending death and marriage ceremonies). Regarding decision making and participation of women remained zero percent. Information in respect of women participation is presented in the following table.

Table 4.6: Women Role in Socio-economic Activities (Multiple Response)

Sr. No.	Activity	Ghotki Feeder Canal(%)
1	Households Activities	100

Sr. No.	Activity	Ghotki Feeder Canal(%)
2	Child Care	100
3	Farm/Crop	48
4	Livestock Rearing	45
5	Social Obligations	95
6	Decision Making	-

Source: Survey of the Project Area, Project Implementation Consultants, July. 2014 to August- 2014

Figure 4.1: Women Engaged in Agriculture and livestock



4.2.8.1 Gender Issues

A gender study was carried out for the project to assess the difference in social roles between females and males. The constraints faced by the females in gaining access to various activities and participation were gathered. The female population in Pakistan according to the 1998, Census, is around 48%. In view of this situation, the gender issues assume special focus and need to be properly addressed and evaluated. The females were interviewed including working class ladies, house wives, students and elderly women. The results of the survey have shown that women are an integral part of the socio-economic life of the rural economy. Women of the area took active part in household activities (like cooking, washing of clothes, carrying of fodder for livestock and potable water for human consumption, etc.), child caring and fulfilling social obligations. The above data indicates that as far as participation in carrying out different activities is concerned, they share with the males in every household and field activity. However, their participation is zero in making decisions about various socio-economic matters, particularly related to activities which require interaction with others such as decisions about education of children, farm business, sale and purchase of livestock or property, etc. The male respondents were of the view that traditionally they have been undertaking such responsibilities and they do not think that the females have much exposure and courage to decide such matters. This is a kind of social stress for the women.

4.2.8.2 Pressing Needs of Women

Pressing needs of the women correspondents in the sub-project area within the corridor of impact are given in the following table:

Table 4.7: Pressing Needs of Women(Multiple Response)

Sr. No.	Items	Number	Percentage (%)
1	Irrigation water	55	33.33

Sr. No.	Items	Number	Percentage (%)
2	Electricity	45	27.27
3	Girls Primary School	30	18.18
4	Health (RHC)	25	15.16
5	Gas	10	6.06
Total		165	100.00

Source: Survey of the Project Area, Project Implementation Consultants, July. 2014 to August- 2014

It can be found from the above table that first priority of the women of the area is irrigation water. The second most pressing need is electricity. The remaining pressing needs are girl's primary school, health facility and availability of gas.

4.2.9 Non-Government Organization in the Sub-project Corridor

During the field survey it was observed that many NGOs were working in the sub-project and the following are currently active: Marvi Stop Service (MSS), Sindh Rural Support Organization (SRSO), Takhalik Foundation, Village Development Association (VDO), Gul Welfare Association, in the field of Health, Education, Livestock, Poultry, Health & Hygiene, Infrastructure, Micro-Credit and Environment. These NGOs are working in the whole districts, and not exclusively or specifically in sub-project area. NGO representatives assured the project team that they will work in the project affected villages on priority basis in future.

4.3 Socio-Economic Profile of Col

The socio-economic profile includes the description of the villages, households and populations within the Col. The socio-economic characteristics of the sub-project corridor are based on the village profile, socio-economic surveys, focus group meetings and information collected from the secondary sources. The results of the survey are described in the following sections.

The Col is defined in section 3.8.

4.3.1 Population of Col

The population of those residing in structures which have been illegally constructed in the Col can be sub-divided as shown in Table 4.8

Table 4.8: Population of the Col

Age Group	Male	% Age	Female	% Age	Total	Percentage
< 5	42	13.72	44	13.92	86	13.83
6-9	30	9.80	31	9.81	61	9.81
10-18	53	17.32	57	18.04	110	17.68
19-65	176	57.52	179	56.65	355	57.07
Above 65	5	1.63	5	1.58	10	1.61
Total	306	49.20	316	50.80	622	100

Source: Survey of the Project Area, Project Implementation Consultants, July. 2014 to August- 2014

The 622 PAPs identified in the table above are living within 84 households within the Col. In addition to these 84 households residing in the Col, 3 households of 23 PAPs own shops in the Col, but reside elsewhere. Full details of all those owning residential or commercial structures in the Col can be found in

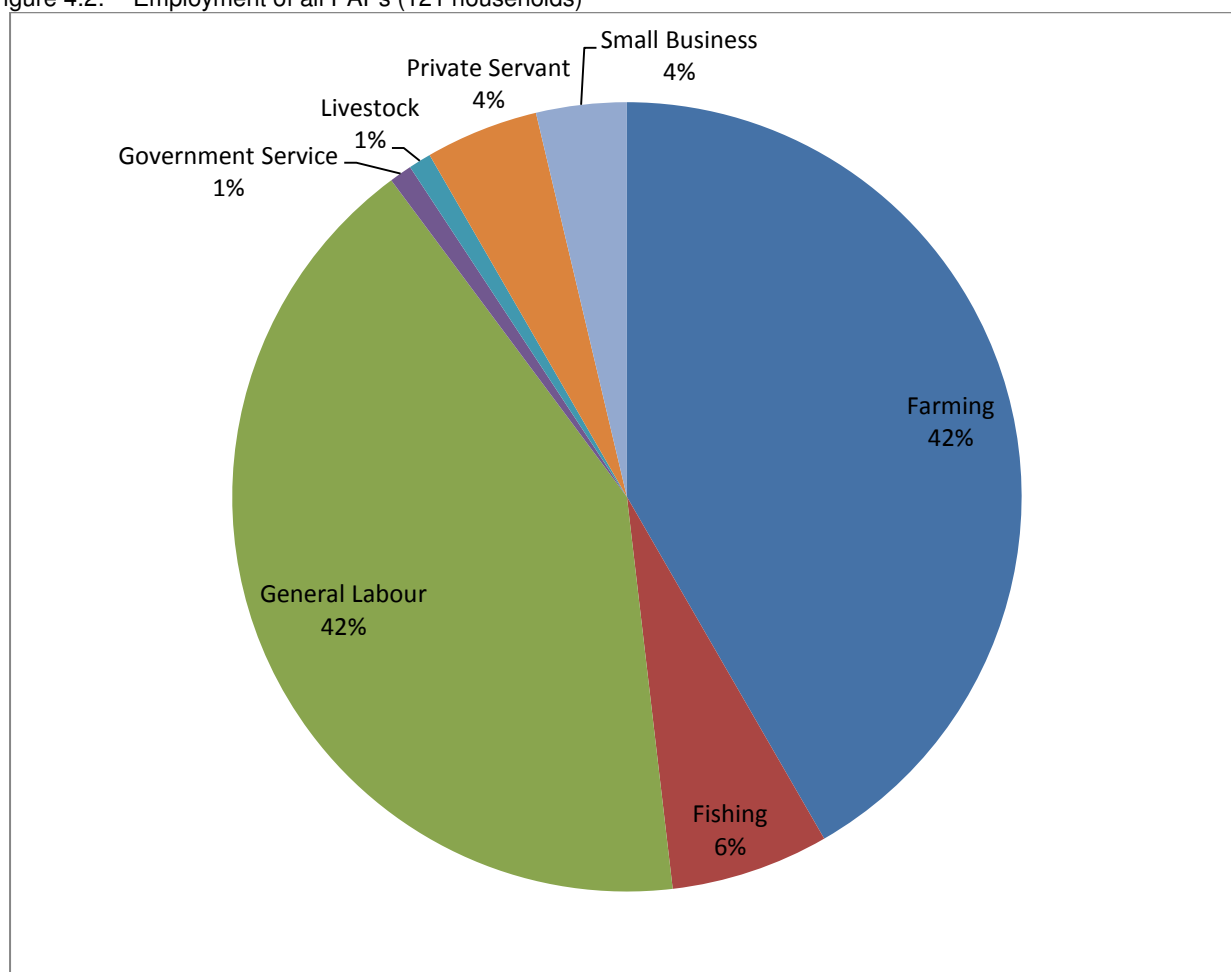
Appendix D. A further 34 households (as detailed in Appendix E) farm land situated within the Col, but are also residing outside the Col.

A total of 121 affected households have been identified.

4.3.2 Employment and Income Sources of PAPs

The employment of the PAPs by household is provided in the following figure, showing that the most common source of income to PAPs is from farming, followed by general labour. Note the figure below includes data from all 121 affected households.

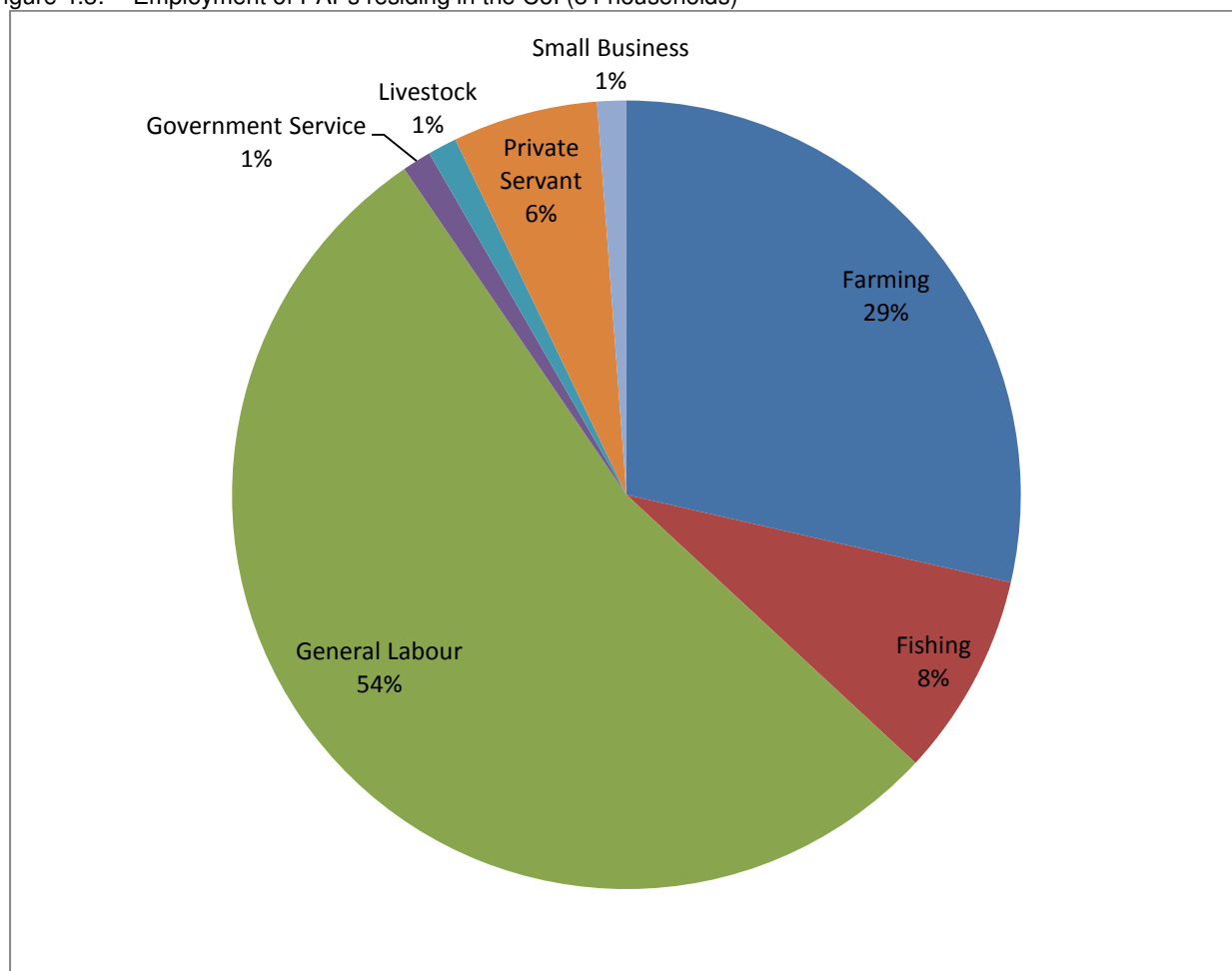
Figure 4.2: Employment of all PAPs (121 households)



All PAPs employed in small businesses are dependent upon the shops constructed within the Col, while the farming households are farming land inside and outside the Col.

The following figure provides the employment of the 84 households resident within the Col, and shows the majority depend on general labour as their source of income.

Figure 4.3: Employment of PAPs residing in the Col (84 households)



General labourers are engaged in number of roles. Most commonly, labourers are employed as agricultural labourers (harvesting, picking, threshing, animal rearing, drivers and guards).

Local laborers commonly gain employment during the sugarcane harvesting season, for crop harvest, loading and transportation. Sugar mills in the surrounding area also employ skilled and unskilled labor and a source of income generation. There are five sugar mills as well as a large rice industry in the command of Ghotki Feeder Canal. Both have created employment and made positive impact on the local economy in the area.

For the majority of labourers, employment is intermittent and usually on a temporary basis.

4.3.3 Income Levels and Poverty Status

The overall income and poverty status of PAPs owning assets in the Col is provided in the following table.

Table 4.9: Income and Poverty Status of the Affected Households

Sr. No.	Primary Profession of the AFs	No. of Affected Households	Total No. of PAPs.	Total Monthly Income (Rs)	Average Monthly Income Per Household (Rs)	Average Income Per Capita (Rs./Month)
1	Small Business (Shop, General Store, Cold Corner, Tea Stall, etc.)	4	34	34,000	8,500	1000

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Sr. No.	Primary Profession of the AFs	No. of Affected Households	Total No. of PAPs.	Total Monthly Income (Rs)	Average Monthly Income Per Household (Rs)	Average Income Per Capita (Rs./Month)
2	General Labour	45	297	244,500	5,433	832
3	Fishing	7	51	30,000	4,286	588
4	Farming Tenant	17	125	95,500	5,618	764
5	Farming Owner	7	86	90,000	12,857	1047
6	Private Service	5	41	32,000	6,400	780
7	Government Service	1	7	8,000	8,000	1143
8	Livestock	1	4	4,000	4,000	1000
Total					6,184	834

Source: Survey of the Project Area, Project Implementation Consultants, July. 2014 to August- 2014

Note: Six abandoned structures are not included in this table.

Table 4.10: Poverty Status of Ghotki Feeder Canal (Below Poverty Line)

Sr. No.	Profession of Affectees	No. of Households (Below Poverty Line)	Total No. APs (Below Poverty Line)	Poverty Status (%)
1	Small Business (Shop, General Store, Cold Corner, Tea Stall, etc.)	4	34	100%
2	General Labour	43	293	96%
3	Fishing	7	51	100%
4	Farming Tenant	17	125	100 %
5	Farming Owner	6	82	86 %
6	Private Service	5	41	100 %
7	Government Service	1	7	100%
8	Livestock	1	4	100 %
Total		84	637	97%

Source: Survey of the Project Area, Project Implementation Consultants, July. 2014 to August- 2014

The tables above indicate that among the affectees, all those households engaged in small businesses, fishing, farming (as tenants), private service, government service and livestock rearing are living below the poverty line, while the majority of general labourers and farm owners also live below the poverty line. Overall, 97% of the affected households are living below the poverty line.

The income levels have been considered in relation to the poverty line of Pakistan, which has been set in this RAP to be PKR 2,307 per capita per month. This is calculated from the 2010-2011 poverty line of PKR 1,745/capita/month as quoted in the Pakistan Economic Survey of 2013-2014². This value has been adjusted based on the annual consumer price inflation quoted by the World Bank³:

- 11.9% in 2011: PKR 1,952.66
- 9.7% in 2012: PKR 2,142.06
- 7.7% in 2013: PKR 2,307.00

¹<http://databank.worldbank.org/data/home.aspx>

4.3.4 Expenditure of Affected Household

During the field survey encroachers were asked their monthly/ yearly expenditure. They informed the consultants that their income and expenditure varies every month. They said they take loan from shopkeepers in the town and from landlords. Labourers depend on their daily wages until the harvest

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season when they are paid to harvest crops and make enough money to meet their expenses and repay loans to shopkeepers.

Table 4.11: Expenditure of Affected Households

Sr. No	Profession of the AFs	No. of Affected Households	Total No. of PAPs.	Total Monthly Expenditure (RS)	Average Monthly Expenditure Per Household (RS)	Average Expenditure Per Capita (Rs./Month)
1	Small Business (Shop, General Store, Cold Corner, Tea Stall, etc.)	4	34	37,000	9,250	1,088
2	General Labour	45	297	337,000	7,489	1,135
3	Fishing	7	51	56,500	8,071	1,108
4	Farming Tenant	17	125	132,100	7,771	1,057
5	Farming Owner	7	86	103,000	14,714	1,198
6	Private Service	5	41	42,500	8,500	1,037
7	Government Service	1	7	12,000	12,000	1,714
8	Livestock	1	4	5,000	5,000	1,250
Total		87	645	725,000	8,334	1,124

Source: Survey of the Project Area, Project Implementation Consultants, July. 2014 to August- 2014

4.3.5 Social Background of Affected Households

Of the 87 project affected households owning assets in the Col, 63% (55 households) moved to the Col following flooding of their property from the River Indus in 2010 and 2011. Note that immediately following the floods in the Indus, a large number of households were temporarily living on the embankments. The majority returned to their original land once the floods receded. Of those that remained on the embankment, some originally lived close to the embankments (and still own land nearby) but remained on the embankment for convenience, while others found new land to farm (as tenants) or local employment close to the embankments and preferred not to move away from this source of income.

37% (32 households) moved to the embankments for business. The majority (all but two households) moved to the NIP from RD 43 to 49 to be in the vicinity of Mureed Shakh village (immediately east of the Ghotki Feeder canal at this location). The village hosts a busy market, and employment (for example, in construction) and business (sale of produce) is readily available in this village. Those who moved to the embankment to be closer to employment and markets have been located on the embankments for a longer duration than those displaced by floods, and have resided here for between 10 and 20 years.

43% of those living on the embankments stated that they would be welcomed back to their original villages. However, most were not willing to do so, as this would involve them moving away from their source of employment or agricultural land. Note, that in many cases, families moved away from their original villages some years ago and prefer to move back to their own private land than to return to their home villages.

The remaining 57% stated that they would not be welcomed back to their original villages, mainly due to lack of available land available for housing and agriculture rather than due to conflicts.

The status of the affected households is summarised in the following table.

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Table 4.12: Settlement Background of PAPs

Sr No	Name of Affected Person (head of household)	Location on embankment (RD)	Occupation	Originating Village	Years Living on Embankment	Reason for Moving to Embankment	Welcomed Back to Original Village?	If Yes, Willing to Return?
Inspection Path (IP)								
1	Shah Gul Mazari	9+500(IP)	Govt. Servant	Orangzaib Mazari	5	Flood in Indus	yes	Yes
2	Wallan Mazari	14+000(IP)	Farming (Owner)	Orangzaib Mazari	5	Flood in Indus	yes	No
3	Pinyal Kosh	63+000(IP)	General Labour	Mir Kosh	5	Flood in Indus	yes	Yes
Non-Inspection Path (NIP)								
1	Faiz Mohammad	7+900 (NIP)	Farming (Owner)	Dur Mohammad Golato	5	Flood in Indus	yes	No
2	Ghulam Hyder	7+900(NIP)	Farming (Tenant)	Dur Mohammad Golato	5	Flood in Indus	yes	No
3	Pir Bux	14+700(NIP)	General Labour	Malik	6	Flood in Indus	yes	No
4	Karim Bux Mirani	14+500(NIP)	General Labour	Malik	6	Flood in Indus	yes	No
5	Bashir Ahmed	14+500(NIP)	General Labour	Khahi Malik	6	Flood in Indus	yes	No
6	Abdul Hakeem Malik	14+600(NIP)	General Labour	Khahi Malik	6	Flood in Indus	no	
7	Imam Din Malik	14+900(NIP)	Small Business	Khahi Malik	5	Flood in Indus	no	
8	Mohammad Bux	14+500(NIP)	General Labour	Khahi Malik	6	Flood in Indus	no	
9	Shahmir Malik	15+950(NIP)	Small Business	Khahi Malik	6	Flood in Indus	no	
10	Sohnno Mazari	18+000(NIP)	Farming (Tenant)	Khahi Malik	6	Flood in Indus	no	
11	Nihal Mazari	18+200(NIP)	General Labour	Mazari Village	6	Flood in Indus	no	
12	Shah Mohammad	19+200(NIP)	Farming (Tenant)	Mazari Village	5	Flood in Indus	no	
13	Ali Nawaz	19+800(NIP)	Farming (Tenant)	Mazari Village	6	Flood in Indus	yes	No
14	Ghulam Fareed	27+300(NIP)	Farming (Tenant)	Mazari Village	6	Flood in Indus	yes	No
15	Dil Murad	27+300(NIP)	Farming (Owner)	Mazari Village	6	Flood in Indus	yes	No
16	Hassan Ali Mazari	27+300(NIP)	Farming (Tenant)	Mazari Village	6	Flood in Indus	yes	No
17	Yaqoob Mazari	27+300(NIP)	Farming (Tenant)	Mazari Village	6	Flood in Indus	yes	No
18	Yaseen Mazari	27+300(NIP)	Farming	Mazari Village	6	Flood in Indus	yes	No

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Sr No	Name of Affected Person (head of household)	Location on embankment (RD)	Occupation	Originating Village	Years Living on Embankment	Reason for Moving to Embankment	Welcomed Back to Original Village?	If Yes, Willing to Return?
			(Tenant)					
19	Mir Muhammad	27+300(NIP)	Farming (Tenant)	Mazari Village	6	Flood in Indus	yes	No
20	Sohbat Khan Mazari	27+800(NIP)	Farming (Tenant)	Mazari Village	6	Flood in Indus	no	
21	Nazir Ahmed Mazari	28+900(NIP)	Private Servant	Ponhu Mazari	10	Business/work	Yes	No
22	Wazir Ahmed Mazari	28+900(NIP)	Private Servant	Ponhu Mazari	10	Flood in Indus	no	
23	Mohib Ali Mazari	28+800(NIP)	Private Servant	Ponhu Mazari	7	Flood in Indus	no	
24	Rehman mazari	29+000(NIP)	General Labour	Ponhu Mazari	6	Flood in Indus	no	
25	Ali Anwar mazari	30+000(NIP)	Farming (Owner)	Ponhu Mazari	6	Flood in Indus	yes	No
26	Mohammad Ramzan	40+000(NIP)	Private Servant	Dasti Village	5	Flood in Indus	yes	Yes
27	Balach Khan Dasti	40+000(NIP)	Private Servant	Dasti Village	5	Flood in Indus	yes	Yes
28	Allah Rakhiyo	40+100(NIP)	General Labour	Dasti Village	5	Flood in Indus	yes	Yes
29	Nazir Ahmed	40+200(NIP)	General Labour	Baksha pur Village	5	Flood in Indus	yes	Yes
30	Veer Malik	40+200(NIP)	General Labour	Baksha pur Village	5	Flood in Indus	yes	Yes
31	Malook malik	40+200(NIP)	General Labour	Baksha pur Village	5	Flood in Indus	yes	Yes
32	Kashmir Malik	40+200(NIP)	General Labour	Baksha pur Village	5	Flood in Indus	yes	Yes
33	Hamal Mazari	41+000(NIP)	Farming (Tenant)	Baksha pur Village	5	Flood in Indus	yes	Yes
34	Mir Hazar Mazari	41+000(NIP)	Farming (Tenant)	Baksha pur Village	5	Flood in Indus	yes	Yes
35	Yousif Dasti	41+500(NIP)	Farming (Tenant)	Baksha pur Village	5	Flood in Indus	yes	Yes
36	Ali Nawaz Dasti	41+500(NIP)	Farming (Tenant)	Baksha pur Village	5	Flood in Indus	yes	Yes
37	Dagha Khan	41+500(NIP)	General Labour	Baksha pur Village	5	Flood in Indus	yes	Yes
38	Karam Ali	43+300(NIP)	General Labour	Lashkran	20	Flood in Indus	no	
39	Abrar Ali	43+300(NIP)	General Labour	Lashkran	20	Flood in Indus	no	
40	Zahoor Ahmed	43+500(NIP)	General Labour	Miani Kondi wala	3	Flood in Indus	yes	No
41	Farooq	43+500(NIP)	General Labour	Miani Kondi wala	8	Flood in Indus	no	
42	Imam Ali	43+500(NIP)	General Labour	Lashkran	20	Flood in Indus	yes	No
43	Gulam Ali	43+300	Small Business	Mureed Shakh	10	Business/work	no	

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Sr No	Name of Affected Person (head of household)	Location on embankment (RD)	Occupation	Originating Village	Years Living on Embankment	Reason for Moving to Embankment	Welcomed Back to Original Village?	If Yes, Willing to Return?
44	Abandoned*	43+500(NIP)		-	-	-	-	
45	Mahboob Ali Memon	43+500(NIP)	Small Business	Mureed Shakh	15	Business/work	no	
46	Abandoned*	43+500(NIP)		-	-	-	-	
47	Barkatullah Dasti	43+500(NIP)	General Labour	Rajan pur	10	Business/work	no	
48	Ali Hasan Mirani	43+900(NIP)	Fishing	Gudani Village	15	Business/work	no	
49	Sher Mohammad	44+00(NIP)	Fishing	Gudani Village	15	Business/work	no	
50	Muhammad Amin Dasti	44+000(NIP)	General Labour	Mureed Shakh	16	Business/work	Currently located at Mureed Shakh	
51	Durr Muhammad Mirani	44+100(NIP)	General Labour	Mureed Shakh	17	Business/work	Currently located at Mureed Shakh	
52	Muneer Ahmed Shah	44+100(NIP)	General Labour	Khanbhra Village	15	Business/work	no	
53	Muhammad Mureed Mirani	44+150(NIP)	General Labour	Gudani Village	16	Business/work	no	
54	Abdul Ghani Mirani	44+150(NIP)	General Labour	Gudani Village	16	Business/work	no	
55	Abandoned*	44+200(NIP)		-	-	-	-	
56	Haji Iqbal Chaoudhry	44+250(NIP)	General Labour	Mureed Shakh	16	Business/work	Currently located at Mureed Shakh	
57	Papu Pathan	44+300(NIP)	General Labour	Mureed Shakh	15	Business/work	Currently located at Mureed Shakh	
58	Ashraf Ali Qureshi	44+350(NIP)	General Labour	Mureed Shakh	15	Business/work	Currently located at Mureed Shakh	
59	Muhammad Achar	44+400(NIP)	General Labour	Mureed Shakh	16	Business/work	Currently located at Mureed Shakh	
60	Muneer Ahmed Mirani	44+500(NIP)	General Labour	Mureed Shakh	15	Business/work	Currently located at Mureed Shakh	
61	Muhammad Mor	44+550(NIP)	General Labour	Kot Sabzal	15	Business/work	no	

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Sr No	Name of Affected Person (head of household)	Location on embankment (RD)	Occupation	Originating Village	Years Living on Embankment	Reason for Moving to Embankment	Welcomed Back to Original Village?	If Yes, Willing to Return?
62	Samundar Khan	44+600(NIP)	General Labour	Kot Sabzal	15	Business/work	no	
63	Bhora Khan	44+700(NIP)	General Labour	Lashkran village	16	Business/work	no	
64	Akbir Ali Dasti	44+750(NIP)	General Labour	Gudani Village	16	Business/work	no	
65	Noor Din Mirani	44+850(NIP)	Fishing	Gudani Village	15	Business/work	no	
66	Abandoned*	44+800(NIP)		-	-	-	-	
67	Shahnawaz Dasti	45+850(NIP)	General Labour	Mureed Shakh	16	Business/work	Currently located at Mureed Shakh	
68	Allah Jawayo	46+100(NIP)	General Labour	Lashkran village	15	Business/work	no	
69	Wahid Bux	47+200(NIP)	General Labour	Lashkran village	16	Business/work	yes	No
70	Kandho Khan	47+900(NIP)	Live Stock	Lashkran village	16	Business/work	yes	No
71	M.Azeem Bhyo	49+100(NIP)	Farming (Owner)	Lashkran village	14	Business/work	no	
72	Faiz Mohammad	49+100(NIP)	Farming (Owner)	Lashkran village	16	Business/work	no	
73	Mohammad Haleem	49+100(NIP)	Farming (Owner)	Lashkran village	16	Business/work	no	
74	Ali Gohar	49+100(NIP)	Farming (Tenant)	Lashkran village	16	Business/work	no	
75	Ghulam Hussaul	49+100(NIP)	Farming (Tenant)	Lashkran village	16	Business/work	no	
76	Muj Ali Mirani	51+00(NIP)	General Labour	Khubhra Village	14	Flood in Indus	Yes	Yes
77	Datto Mirani	51+00(NIP)	General Labour	Khubhra Village	4	Flood in Indus	Yes	Yes
78	Abondonned*	52+100(NIP)		-	-	-	-	
79	Abondonned*	52+400(NIP)		-	-	-	-	
80	Gul Mohammad Meerani	52+800(NIP)	General Labour	Khubhra Village	5	Flood in Indus	yes	No
81	Shahid	52+800(NIP)	General Labour	Khubhra Village	5	Flood in Indus	yes	No
82	Chanesar Mirani	53+00(NIP)	Fishing	Gudani Village	4	Flood in Indus	no	
83	Mir Khan Mirani	53+200(NIP)	General Labour	Gudani Village	4	Flood in Indus	no	
84	Dado Murani	53+200(NIP)	Fishing	Gudani Village	4	Flood in Indus	no	
85	Liaqat Ali Mirani	53+00(NIP)	Fishing	Gudani Village	4	Flood in Indus	no	
86	Akhtar Hussain	53+00(NIP)	Fishing	Gudani Village	4	Flood in Indus	no	
87	Umed Ali	61+200(NIP)	General Labour	Budho Kosh	4	Flood in Indus	no	
88	Abdul Rehman Kosh	61+200(NIP)	General Labour	Budho Kosh	4	Flood in Indus	no	

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Sr No	Name of Affected Person (head of household)	Location on embankment (RD)	Occupation	Originating Village	Years Living on Embankment	Reason for Moving to Embankment	Welcomed Back to Original Village?	If Yes, Willing to Return?
89	Mohammad Adhyo	61+300(NIP)	General Labour	Budho Kosh	20	Business/work	no	
90	Baksho Kosh	61+450(NIP)	Farming (Tenant)	Budho Kosh	20	Business/work	no	

4.3.6 Agriculture

The lands in sub-project area are fertile and canal water is the main source of crop cultivation. Farmers grow rice, sugarcane, cotton, sorghum, vegetables and cultivate orchards during the Kharif season (April to November) and wheat, oil seed, pulses and vegetables during Rabi season (May to October). Sugarcane is a cash crop and commonly grown in the sub-project area due to the availability of the surrounding sugar mills. The most commonly grown crops are wheat, rice, sugarcane and fodder for livestock.

Figure 4.4: Cropping in the Project Area



The canal irrigation system is the major source of crop cultivation in the sub-project area. It was also observed that some farmers have also installed tube wells to irrigate their land/crops.

Within the Col, at total of 315.4 acres of land is cultivated. Of this land, 307.6 acres of government owned land within the RoW (running alongside the outer toe of the canal embankments) is illegally farmed by farmers from 34 households. All of these households are resident outside the Col and have no legal entitlement to the land they are farming. These farmers are identified in Appendix E.

In addition, 7.8 acres of privately owned land within the Col (but outside the RoW) is farmed by private land owners at RD 63 and RD 125 of the Ghotki Feeder Canal.

Rice, wheat and sugar cane are commonly grown within the Col.

4.3.7 Landholding Status

During the field survey it was observed that no household which is residing, or owns commercial structures, within the Col, has any legal entitlement to any land within the Col.

9.925 acres of privately owned agricultural land is situated within the Col at RD 63+000 and RD 125+000 IP. The owners of this land are residing outside the Col.

4.3.8 Animal Husbandry in the Project Corridor

Overall in the sub-project area people own very good breeds of buffaloes, cows and bulls, goats and sheep. Livestock is the main source of milk, meat and ghee for the local population. Livestock is also a source of income as people of the area keep cow/bulls, goat and sheep to sell annually at Sukkur and Karachi market. Donkeys and camels are used for load carrying. Domestic poultry is also a source of income.

Figure 4.5: Livestock in the Project Area



4.3.9 Castes and Languages

Social organization in all villages is strongly based on Biradari (tribal) system, where each caste has a caste leader. The Main castes in the sub-project area are Mazari, Mirani, Mallah, Malik, Solongi, Kosh, Khoso, Lashari, Shaikh, Brohi, Syed, Bozdar, Maree and Jatoi. These castes are not related to religion and are not immutable.

Sindhi language is commonly spoken as mother tongue of majority of the communities in the project area. However, Balochi and Sareiki languages are also spoken and understood as local languages.

4.3.10 Cultural Heritage

No cultural assets, including graves or mosques, fall within the Col for the works. PIC identified graves situated near RD 40+000 on the IP side of Ghotki Feeder Canal, but these are situated beyond the Col.

4.3.11 Social Cohesion and Conflict in the Col

The social structure and conflict resolution mechanisms of the Col and sub-project area are similar.

The majority of families in the study area live in joint family systems (parents live with their elders and children). The sharing of resources is beneficial in term of joint incomes, manpower (agricultural practices) and basic amenities such as water, electricity, housing and food.

Social organization in all villages is strongly based on the tribal system, where each tribe has a tribal leader. The families belonging to the same tribe have strong interactions with one another and generally keep separate identities. For example, in the marriages of their young, they prefer to marry within their own tribe. Such interactions between different tribes are less common. During the survey it was found that most communities had built their own religious structures and maintenance of these religious structures was by the villagers themselves.

4.3.11.1 Conflict Resolution within Tribes and Castes

During the field survey of villages it was observed that most activities are carried out under the instruction of the head of tribe. The caste system in the rural area of the Sindh is very rich, and decisions about conflict, right of vote, marriage settlements and other matters are usually resolved by the head of tribe. Most of the conflicts in the Col are mutually resolved within the tribe at the village level. Those living within the Col feel obliged to accept the decision of their tribe leader.

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It has been observed in rural Sindh that where more than one tribe has settled within a single village, each tribe has their own tribe leader. Overall there is a village leader from the same village and who belongs to an influential political family or a land lord and is from a financially sound family of the village. The majority of conflicts are resolved by tribe leader, and if not solved at this level, the matter shall be elevated to the village leader.

Occasionally, where the conflict cannot be resolved at a village level, the matter may go to the political leaders of the area. Of the conflicts reaching this level, more than 90 percent of matters were resolved by the political leaders of the area.

In extreme cases where resolution at all other levels has failed, conflicts may go to police and ultimately a court of law. The police and the court of law are the last options and these are rarely exercised.

5. Assessment of Impacts

5.1 General

Prior to implementation of works as part of the rehabilitation of Ghotki Feeder Canal, clearance of certain measurements of land (defined as the Col) will be required. It has been found during the field surveys that the Col is occupied by families living in shelters and, in a limited number of cases, conducting business within the Col. Agriculture is also heavily practiced within the Col. 23.93 acres of privately owned land also falls within the Col. All structures within the Col shall require removal prior to the implementation of the works. Privately owned land shall also require acquisition prior to implementation of the works. The Col is defined in section 3.8.

5.2 Identification of PAPs

A Project Affected Person (PAP) is defined as any person, whose land, shelter, assets, infrastructure, source of livelihood or access to resources is to be affected by the sub-project activities. PAPs can be divided into the following two groups:

1. Directly and Partially Affected Persons: This group includes people whose land, houses, other built-up property or source of livelihood will be affected due to sub-project activities.
2. Indirectly Affected Persons: This group includes people who will not lose their land, houses or built-up property, but whose social relations and/or free mobility would be indirectly disrupted due to sub-project activities. All those living within the primary impact zone are considered to fall within this category.

Any person whose land, assets, infrastructure, source of livelihood or access to resources is likely to be affected by the sub-project activities within the Col of the embankment works or canal realignment is therefore considered to be a PAP. In the context of contract WSIP/B1/GF/01, this includes all those who will lose shelter, commercial structures or crops due to clearance of the Col, as well as those whose land shall be permanently or temporarily acquired.

The impact to the indirectly affected persons is covered within the Environmental Impact Assessment and Environmental Management Plan (EIA/EMP) for Contract WSIP/B1/GF/01. The EIA/EMP stipulates a number of actions taken during the planning and design as well as actions to be implemented by the contractor to prevent any significant impact to this group. This group is not considered within the RAP.

PIC was initially active in the field from September to 2010 to January 2011 to identify the PAPs. PIC remobilised to the field to update the list of PAPs from May to August 2014 in order to capture any changes to the population of the Col since January 2011.

Note that in this RAP, a structure is defined as a single continuous structure fixed to the ground, including all the rooms within that structure, any sheds built against or over that structure, and boundary walls associated with the structure. For example, a single house may contain multiple rooms (bedrooms, living room), a kitchen, a shed and a boundary wall. A full breakdown of the components of each structure is provided in Appendix D.

5.3 Overview of Impacts

103 privately owned structures and 48 hand pumps are constructed illegally on the canal embankments within the Col (i.e. the owners of these assets have no formal recognisable rights to the land occupied by their assets). These structures are owned by 87 households, comprising of 645 persons. Of the 103 structures, six are abandoned, and of the 48 hand pumps, 2 were abandoned. All 103 structures and 48 hand pumps shall be removed from the Col to allow the contractor to complete earthworks as part of the rehabilitation of the canal embankments.

Of the 87 households owning structures in the Col, three households (consisting of 23 PAPs) are owning only shops in the Col and their residences are situated outside the Col. The remaining 84 households (consisting of 622 PAPs) are residing within their houses constructed inside the Col.

An additional 34 households are illegally farming 307.6 acres of government owned land within the Col. This land shall be used during construction for the establishment of borrow areas, and subsequently for the disposal of material excavated from the canal. It is expected that the majority of the material to be excavated from the canal is not fertile, and therefore the 307.6 acres of illegally farmed land shall not be available for cultivation following implementation of the sub-project.

7.8 acres of privately owned land is to be permanently acquired adjacent to RD 63 and 125 of the Ghotki Canal. No structures are present in this land.

Full details of PAPs who shall be losing assets can be found in Appendix D and details of PAPs who shall lose standing crops can be found in Appendix E.

The clearance of one hand pump which is owned by the community is also required. No mosques or graves fall within the Col.

Three Governments owned sites and one hand pump have also been established within the Col, including Police chowki, Pump house, Irrigation Room.

5.4 Loss of Agricultural Land

5.4.1 Permanent Loss

7.8 acres of private land will be required for the realignment of off-taking canals at RD 63+000 and 125+000 of Ghotki Feeder Canal. Cost of the permanent land will be borne by the project proponent. The land is cultivated and owned by six separated owners.

An additional 307.6 acres of land illegally farmed within the RoW shall also be lost as a result of borrow pits and spoil disposal works. This shall result in the loss of any standing crops at the time of disposal within the Col for spoil disposal. The loss of a total of up to 307.6 acres of standing crops, cultivated by 34 households has been identified as a result of these works. This shall result in the loss of any money invested in crops which have been planted but not harvested at the time that works are implemented in the Col.

All land which is cultivated within the RoW is done so illegally. The estimated area of 307.6 acres is based upon the area which was found to be cultivated during the 2014 survey, the actual area may vary at the time of construction. See Appendix E for further details.

5.4.2 Temporary Loss

The contractor shall be required to temporarily acquire approximately 5 acres of privately owned cultivated land at RD 63 and at RD 125 (approximately 10 acres in total) in order to establish temporary canal diversions.

5.5 Loss of Residential, Commercial, Industrial or Institutional Land

5.5.1 Loss of Residential Land

84 households have constructed residential structures within the government owned RoW over land that shall be required for the implementation of works under this sub-project. These households shall be required to vacate this land for implementation of the sub-project. None of the 84 households own titles to the impacted land as it is all government owned.

If no other land is made available, this shall have a significant and direct impact upon the wellbeing of all of these PAPs as they shall not be able to reconstruct their residential structures. As the majority of these households are living below the poverty line, such impacts shall be exacerbated.

5.5.2 Loss of Commercial Land

Five households have constructed commercial structures within the RoW, also over land that shall be required for implementation of works under this sub-project. Of these five households, two have also constructed residential structures in the RoW, and are discussed in section 5.5.1. The remaining three households reside outside the impacted areas. All five households shall be required to vacate this land for implementation of the sub-project. None of the five households own titles to the impacted land as it is all government owned.

If no other land is made available, this shall have a significant and direct impact upon the income, of all of these PAPs as they shall not be able to reconstruct their commercial structures.

5.5.3 Loss of Industrial Land

None of the impacted land is used for industrial purposes.

5.5.4 Loss of Institutional Land

All institutional land that shall be impacted by the proposed works is currently owned by the Irrigation Department, and shall remain under ownership of the Irrigation Department,

5.6 Loss of Structures

5.6.1 Summary

The result of the survey revealed that different structures have been constructed at the toe of canal within the Col. These structures can be defined and sub-defined as follows:

- Houses (kacha and pacca), including:
 - Rooms
 - Kitchens

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- Washroom
- Boundary wall
- Sheds
- Animal shed
- Hand pumps (privately, community and government owned)
- Sheds
- Guest house (Otaq)
- Shops (Pacca, semi pacca or kacha)

The views of houses within the Col are shown in the following figures.

Figure 5.1: View of Houses in the Col



A summary of the impact to structures within the Col is given in the following table.

Table 5.1: Detail of Impacted Structures within the Col

Sr. No.	Type of Structure	Number of Structures		Total (IP + NIP)
		IP	NIP	
1	House	3	81	84
2	Abandoned House	-	3	3
3	Shops	-	4	4
4	Abandoned Shops	-	2	2
5	Otaqs	-	1	1
6	Abandoned Otaqs	-	1	1
7	Privately Owned Hand Pumps	2	44	46
8	Abandoned Hand Pumps	-	2	2
9	Animal Shed	-	9	9
10	Community Owned Hand Pumps	0	1	1
11	Government Owned Structures	-	3	3
Total				156

Source: Survey of the Project Area, Project Implementation Consultants, July. 2014 to August- 2014

Full details are provided in Appendix D.

The demolition/removal of all structures detailed in the table above is required.

5.6.2 Loss of Residential Structures

5.6.2.1 Loss of Shelter

A total of 84 houses, occupied by 84 different households, shall be removed from the Col. This shall result in the loss of shelter of the 84 households, consisting of 622 people (including 146 children aged less than 10 years old and ten aged over 65 years old). With the exception of three households, all are living below the poverty line. Without reconstruction of these structures, this shall have a significant and direct impact upon the wellbeing of all of these PAPs. As the majority of these households are living below the poverty line, such impacts shall be exacerbated.

The cost of reconstruction would be a significant expenditure for these households, who have a very low income. This would require a reduction in expenditure on basic commodities (such as food, clothes and medical expenses), which would also have a significant impact on the wellbeing of these PAPs.

Sufficient compensation to allow the affected households to reconstruct their houses without impacting upon their wellbeing through increased expenditure is detailed in Chapter 7.

5.6.2.2 Impact on Drinking Water

Of the 84 households who shall be impacted by loss of shelter, 46 households shall be impacted by the removal of 46 privately owned hand pumps. The removal of these hand pumps shall result in a reduction in the availability of drinking water within the Col. The income of the affected households is low, and without sufficient compensation, these households shall not be able to install new hand pumps outside the Col, resulting in a long term negative impact to their wellbeing.

5.6.3 Loss of Commercial Structures

Five households own commercial structures situated within the RoW. Of these, four households own shops and one owns a otaq (guesthouse). All five households are living below the poverty line. Of the five households, two shall also lose shelter, and are therefore also detailed in section 5.6.2.1.

All structures shall be permanently removed from the Col. Without reconstruction of these structures, this shall have a significant and direct impact upon the income of the affected households. The cost of reconstruction of these structures would be a significant expenditure for these households, who have a very low income. This would require a reduction in expenditure on basic commodities (such as food, clothes and medical expenses), which would also have a significant impact on the wellbeing of these PAPs. The impact to the income of these PAPs is discussed further in section 5.7.

5.6.4 Loss of Industrial Structures

There are no industrial structures located within the Col.

5.6.5 Loss of Community Structures

A single community owned hand pump was identified to fall within the Col of the works at RD 16.2 of the Ghotki Feeder Canal (NIP side) and shall be removed for implementation of works under this sub-project. The hand pump is used by passers-by travelling through the area, and is not relied upon by any specific household. This hand pump is shown in the figure below.

Figure 5.2: View of Hand pump in the Col



No graves or mosques fall within the Col for the sub-project works.

5.6.6 Loss of Institutional Structures

The field surveys revealed that the following government structures exist in the Col: one Police Chowki (consisting of two rooms); one irrigation room; and, one hand pump. Demolition of all these structures shall be required for the completion of these works and their reconstruction has been included within the civil works contract. Details of the government sites to be removed from the Col are given in the following table.

Table 5.2: Detail of Government Structure at Col

Sr. No.	Type of Structure	No.of structure	Location
1	Police Chowki	1	NIP
2	One room (Irrigation Department)	1	NIP
3	Hand pump	1	NIP
Total		3	

Source: Survey of the Project Area, Project Implementation Consultants, July. 2014 to August- 2014

Figure 5.3: View of Irrigation room



Figure 5.4: View of police chowki



5.7 Impact to Income

5.7.1 General

The poverty status assessment (section 4.3.3) identifies that 97% of the PAPs are living below the poverty line. Fishing families are earning the lowest incomes, and as such shall be most vulnerable to changes in their circumstances which impact upon their income or expenditure, which may result from the sub-project impacts.

5.7.2 Loss of Income and Wages

5.7.2.1 Small Businesses

It is noted that the four households own shops, and one household owns an otaq (guesthouse) within the Col. Further details on the ownership of commercial structures may be found in Appendix D.3.

The affected households who own shops and otaqs within the Col shall experience a direct impact on their income due to loss of these business structures and therefore the loss of trade. This is true for all business structures. Compensation for the impact to the livelihood of owners of shops and otaqs is therefore required, and is discussed further in Chapter 7.

Figure 5.5: Shops Located within Col of Contract WSIP/B1/GF/01



5.7.2.2 General Labourers

The field survey identified 45 households who depend on general labour as their source of income. General labourers are finding employment in a range of industries, including agriculture, sugar mills, cotton, fertilizer factories, rice mills and construction. As their location of employment is outside the Col, there shall be no direct impact to their income.

5.7.2.3 Fishing

Seven households are dependent upon fishing for their income. They fish from Guddu Barrage and sell these fish as a source of income. As Guddu Barrage is outside the Col for this sub-project, there shall be no direct impact upon their income.

5.7.2.4 Farming

There shall be a direct impact to the livelihood of the 34 households who are farming the 315.4 acres of land within the Col (307.6 acres within the RoW, and 7.8 acres of privately owned land). These farmers shall experience a loss of income from the land that they currently farm within the Col. Compensation in line with the Entitlement Matrix (see section 2.5) is detailed in Chapter 7.

There shall be no direct impact to the income of farmers living in the Col, but who farm land outside the Col.

5.7.2.5 Private Service

The result of the survey indicated that five households living within the Col depend upon private service. All households are employed outside the Col, and as such there shall be no impact to their income.

5.7.2.6 Government Service

One household living within the Col is employed in government service. As their employment is outside the Col, there shall be no direct impact to their income.

5.7.2.7 Livestock

One household living within the Col rears livestock for sale at local markets for their income. They keep their livestock within a shed constructed illegally within the Col. As this shed shall be removed from the Col, this shall have a direct impact on their income. As these PAPs are living below the poverty line, such an impact would be exacerbated. Compensation for this shed is required to allow the household to reconstruct this in a new location to reduce the impact to their income.

5.7.3 Impacts on Women Headed Households

During the surveys of the sub-project area, it was found that no women headed households exist in the Col of sub-project.

5.8 Impacts on Trees

All trees to be cut during implementation of the sub-project are government owned. To mitigate the adverse impacts, provision for re-plantation through the contractor has been proposed: the contractor shall plant five trees for every one tree which is cut. Full details of trees to be cut are included in the EIA/EMP for Contract WSIP/B1/GF/01.

5.9 Indirect Impacts

Please refer to the EIA/EMP for Contract WSIP/B1/GF/01 for an assessment of indirect impacts to residents of the sub-project area, including: dust; community disturbance (including traffic and water resources); and, noise. Proposed mitigations are also included in the EIA/EMP.

5.10 Summary

The impacts associated with each component of works are summarised in the following table.

Table 5.3: Summary of Project Impacts

Type of Loss	Application	Definition of Entitled Person	Unit	Establishment of Construction Camp	Rehabilitation of embankments	Borrow pits and spoil disposal	Canal desilting and lowering of bed level	Berm cutting/formation	Establishment of haul routes	Construction of hydraulic structures ^{9,10}	Construction of bridges ¹¹	Rehabilitation of bridges	Total
Loss of Land (Agricultural)	Permanent loss of entire land or where partial loss but the remaining land is less than 0.5 acre or is rendered economically unviable.	Legal owner with valid title or customary or usufruct rights.	Impacted Acres (Impacted Households)							9.925 (6)			9.925 (6)
		PAPs without title	Impacted Acres (Impacted Households)			299.8 (33)		8.2 (1)					307.6 (34)
	Temporary loss of land	Legal owner with valid title or customary or usufruct rights.	Impacted Acres (Impacted Households)							10 (5)			10 (5)
Loss of Land (Residential, commercial, industrial or institutional land)	Loss of residential, commercial, industrial or institutional land without sufficient remaining land. PAPs will be required to relocate.	PAPs without title	Impacted Households		87								87
		PAPs without title living, below the poverty line	Impacted Households		84								84
Loss of Privately Owned Structures (Residential, commercial, industrial or agricultural)	Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use, and sufficient land for reorganization.	Owner of structure (regardless of ownership of title to land on which structure is situated)	Impacted Households		87								87
Loss of Structures (Community or institutional)	Entire loss of structures or where only partial impact, but the remaining structure is rendered unviable for continued use.	Community or institution	Number of Impacted Structures		4								4
Loss of income (trade/ livelihood/ occupation or business incomes)	Temporary or permanent loss of commercial income	Impacted business owner	Impacted Households		5								5

⁹ This component of works includes the following activities: replacement of cross-regulators; replacement of offtaking head regulators and realignment of head reaches; and, construction of temporary canal diversions.

¹⁰ Structures to be impacted by the construction of temporary canal diversions shall also be impacted by the rehabilitation of the embankments. To avoid double counting these structures, they are only considered under the rehabilitation of embankments component.

¹¹ Including realignment of roads at the location of proposed and replacement bridges.

6. Public Consultation and Information Disclosure

6.1 Introduction

To comply with World Bank's requirements and policies on environmental assessment of projects, the sponsors of the projects resulting in involuntary resettlement are required to prepare and publicly disclose a RAP. The RAP must be prepared through a process of public consultation with all interested and affected parties. Proper consultation with affected parties can increase the effectiveness and reduce the cost of RAP implementation for the sponsor or other responsible parties. The proposed sub-project of Contract WSIP/B1/GF/01 will impact the local environment of the area as well as communities living in and around the sub-project area to some extent. This chapter provides details of consultations carried out with stakeholders during the preparation of this Resettlement Action Plan.

6.2 Objectives of Consultation

Public consultation plays a vital role in studying the effects of the sub-project on the stakeholders and in the successful implementation and execution of the proposed sub-project. Public involvement is a compulsory feature of the RAP, which leads to better and more acceptable decision-making. The important general objectives of the Consultation process are:

- Provide key project information to the stakeholders, and to solicit their views on the Resettlement Action Plan, and ensure their views are incorporated into the RAP,
- Discuss and agree on mitigation measures,
- Information dissemination, education, and liaison,
- Identification of problems and needs,
- Collaborative problem solving,
- Develop and maintain communication links between the project proponents and stakeholders,
- Reaction, comment and feedback on proposed sub-project and RAP;
- Ensure that views and concerns of the stakeholders are incorporated into the sub-project design and implementation with the objectives of reducing or offsetting negative impacts and enhancing benefits of the proposed sub-project;
- Create a sense of ownership among the stakeholders regarding the sub-project;
- Increase public confidence about the proponent, reviewers and decision makers; and
- To ensure the transparency in all the sub-project activities.

6.3 Methodology

The consultants carried out public consultations at various locations in the proposed sub-project area of Contract WSIP/B1/GF/01. The stakeholder's consultation during the work targeted the sub-project area, administration, government officials, shops keepers and local community in and around the sub-project area:

- Selection of the stakeholders for consultation, reconnaissance of the proposed sub-project sites and initial discussions with the SIDA officials, Irrigation department, AWB public and private employees stakeholders, local public representative, local shopkeepers, and Project Affected Persons (PAPs).
- Appraising the targeted stakeholders initially for the purpose of consultation and working out a schedule for holding regular consultation meetings;
- Meetings with the stakeholders through the participation of consultants' environmental and social specialists and documenting the opinions of the stakeholders expressed during the meetings etc

6.4 Consultations with Project Affected Persons

As per WB Policy, at the second stage of consultation community members and their representatives were consulted to introduce the sub-project formally to the local community, to obtain their views on the project and discuss impacts to the PAPs as well as mitigation measures. Group discussions were also carried out on consultation process. Various focus group meetings /discussions carried out with all expected project affected persons during August 2014. The meetings were held at various locations. In the meetings affected people were informed about the plans for rehabilitation of the Ghotki Feeder Canal. A question answer session was initiated such as:

- Demographic characteristics of the village, such as population, number of households, housing characteristics, availability of social amenities, ethnic groupings etc.
- Livelihood activities of the project affected persons.
- Women's role in socio- economic life.
- Existing health and education facilities in the village.
- Feeling about the development work of the Ghotki Canal.

Following issues were also discussed:

- Sub-project introduction will ensure the water supply without any hindrances
- Un-authorized structures within the Col may be affected due to the project works.
- Compensation for lost structures will be paid as per WB policy
- Mutual consensus on acceptable compensation was reached
- Location of where PAPs shall be shifted to
- Consultation with host community about community and religious structures.

6.4.1 Outcome of Focus Group Discussion/Meetings

All the affected households at Ghotki Feeder Canal AWB sub-project desire to get compensation in shape of cash for compensation for their structures and wanted to manage themselves.

6.4.2 Cut Off Date

The cut-off date for eligibility for all entitlements, except land based entitlements due to registered owners, has been set as the 08th August 2014. The 08th August 2014 was the first working day of PIC field team in the field during the 2014 field visit, during which the consultants updated the impact assessment and survey of the population of the Col. Any person constructed assets in the Col after this date shall not be eligible for entitlements under this Resettlement Action Plan.

The cut-off date for eligibility for land related entitlements due to registered owners shall be the date of the section 4 notification issued under the Land Acquisition Act of Pakistan.

6.4.3 Relocation Locations

Subsequent to initial social assessments, PIC undertook consultations in the field from the 10th to the 17th November 2014, accompanied by members of the Ghotki Feeder AWB¹². The aim of these consultations was to identify preferred relocation sites for all affected households. In many cases, the affected

¹² The following AWB staff accompanied the field consultations: Mr. Imdad Ali Mirani Daroga, Mr. Gul hassan Daroga, Shah Nawaz Beldar, Budho Kosh Beldar

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households do not own land to which they can relocate – in these cases, the field team identified suitable sites within the government owned land which were to the satisfaction of the AWB.

During consultations, affected persons were found to be willing to vacate the IP and NIP. As discussed in section 4.3.5, only 43% of those households living on the embankments reported that they would be welcomed back to their original villages. Of these 43%, only 16 households were willing to return, with the remainder preferring to stay within the vicinity of the embankments to remain close to their agricultural land or place of employment.

The PAPs fell into the following broad categories:

- 16 households who were displaced by floods would be welcomed back at their home villages and are willing to return
- 16 households who were displaced by floods and prefer to vacate the embankments to land they own adjacent to the embankments. These households moved from their land during the floods in 2010 and 2011. Once the floods receded, these households did not leave the embankments as their original locations were so close.
- 23 households who were displaced by floods prefer to remain close to their current location (in order to remain close to the land they farm or their place of employment). However, these households do not own land in the area and shall therefore be allowed by the AWB to reconstruct their houses within the government owned RoW, beyond the Col for these works.
- 32 households who moved to the embankments for business or employment between 10 and 20 years ago prefer to remain close to their current location in order to remain close to their place of business or employment. The majority (30) of these households are located on the outskirts of Mureed Shakh village. However, these households do not own land in the area and shall therefore be allowed by the AWB to reconstruct their houses within the government owned RoW, beyond the Col for these works.

Of the above households, five shall lose commercial structures. All five households expressed their preference to be relocated within the proximity of their current location. With the exception of one, none own any land nearby and shall therefore be allowed by the AWB to reconstruct their shops and otaqs within the government owned RoW, beyond the Col for these works. It is expected that households owning commercial structures within the sub-project area shall experience higher trade during construction as a result of an influx of labourers to the area.

Of the 87 affected households, 55 households are to be given permission by the AWB to rebuild their structures within government owned land. In each case, an area of land has been identified which is within 1 km of the existing location of the affected household (please refer to section 0 for further details). In most cases the distance from their existing to proposed location is around just 300 ft (100m). Given the small distances, there shall be minimal impact on the income or social networks of each household. In the case of employed PAPs, households will not be moving further away from their place of employment. In the case of commercial structures, locations adjacent to the main road running through the project area or adjacent to road bridges crossing the canal have been identified to ensure the PAPs shall not experience a reduction in passing trade in their new location. The ground conditions at the proposed sites are broadly similar to the existing sites. In some cases, minor levelling works shall be required prior to reconstruction of the affected structures, and this shall be completed by the affected households without assistance under this RAP. In no cases shall there be a transfer of land title from the government to the affected household.

6.5 Consultation with Local Women Community

6.5.1 General

Consultation sessions with the local women were also held. The consultant's female interviewer conducted these consultations. The women of the area were keenly interested in the consultations and provided good information. The participants included housewives, students, and farm workers.

As far as education is concerned, the majority of them were illiterate. Most of them belonged to poor families living in small houses. They pointed out the following issues and concerns, associated with this sub-project.

- Most of the women demanded proper compensation, rehabilitation and assistance.
- The relocation of affected business structure of their spouse's will create negative effect on their income.
- Risk of safety, security and privacy will be increased due to the working of outsiders during construction.

Some women were interested to work with their family male members during construction work, which will reduce the burden on their budget.

6.5.2 Hand Pumps

PIC carried out additional consultations with female members of the project affected households in November 2015 with regards to impacts resulting from loss of hand pumps. The women consulted informed the female sociologist that they rely upon their hand pumps within their homes for daily use for both domestic and livestock needs. With regards to compensation, materials and labour for the installation of new hand pumps are available within Mureed Shakh village (located at approximately RD 45 of the Ghotki Feeder Canal). PAPs will be able to arrange for local installation of hand pumps if provided with sufficient compensation. As the hand pumps are used on a daily basis, it is important that compensation is provided in advance of clearance of the Col to ensure new hand pumps can be constructed before the existing hand pumps are removed from the Col.

The community hand pump is used by passers-by travelling through the area, and is not relied upon by any specific household.

Figure 6.1: Consultations with Project Affected Women Regarding Hand Pumps



6.6 Meetings with Secondary Stakeholders

As per participatory approach, staff of SIDA, Ghotki AWB and Irrigation Department were contacted during the preparation of this RAP. A list of officials contacted is given in Appendix B.

6.7 Grass Root Stakeholders Consultation

The grass root consultations were carried out at the following project locations:

- Natho Khan Mazari
- Hullar Chacaar
- Mureed Shakh
- Meer Kosh
- Jam Khan Samejo
- RD-127

Details of discussions during stakeholder consultations can be found in Appendix F. Detailed list of persons contacted during grass root consultation is given in Appendix B, and pictorial views are provided in I.2.

6.8 Summary of Consultation Findings

The following table reviews the mains impacts that were discussed and mitigations that were agreed during the consultations.

Table 6.1: Impacts and Mitigations Discussed during Consultations

Impact	Discussion	Agreed Mitigation
Improved delivery of water within the command area	Rehabilitation of the canal is required to ensure equitable distribution of supplies throughout the command area. Desilting and bank raising were seen as priority works by those consulted.	Implementation of works under Contract WSIP/B1/GF/01
Loss of privately owned structures	PAPs cannot afford to rebuild their structures. Compensation is required	Compensation for lost structures as per the Entitlement Matrix
Loss of residential land	Some PAPs indicated that they were willing to relocate back to their own land beyond the Col. However, others expressed that they had no alternative land available to move to. Without alternative land, PAPs refused to move.	The AWB shall make land available for PAPs to rebuild their structures. Land preparation and transfer of title to the land shall not be provided.
Loss of commercial land	PAPs were concerned that they may experience a drop in trade at their new location	Alternative sites for commercial structures were identified that were close to roads to ensure continued, and in some cases improved, passing trade.
Disposal of excavated material within the RoW resulting in impacts to privately owned structures	There is sufficient space between structures in the RoW to allow for disposal of material excavated from the canal. This area should be fully used to prevent further loss of assets.	Disposal of material over structures in the RoW shall be prohibited under the contract. A spoil disposal plan has been prepared which utilises areas on which no structures are present. Local communities were involved in the preparation of this plan.
Cutting of berms on the resulting in impacts to privately owned structures	Unlike embankment raising, PAPs did not consider that berm cutting works were critical for the safe running of the system and that the impact to the PAPs would be greater than the benefit to the canal system. The PAPs requested the project to consider lining – however it was explained that the cost to line the canal was prohibitive.	Contract drawings have been amended to ensure that there shall be no berm cutting along reaches of the canal where structures are present.
Disposal of excavated material resulting in loss of agricultural land	Spoil should be disposed of within the RoW and not on peoples private land. PAPs farming land in the RoW requested compensation.	Spoil disposal plan provides for disposal of spoil only in the RoW. PAPs with standing crops within the RoW shall be provided with crop compensation.

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Impact	Discussion	Agreed Mitigation
Employment	A large number of labourers shall be required for implementation of the sub-project. The contractor should employ local people.	Contractor shall require a large number of skilled and unskilled labourers. Many of these shall be employed from the local community
Loss of homes	Some PAPs are very poor and will not be able to afford the replacement of their homes	Compensation for replacement of all affected assets to be provided. Those living below the poverty line shall be offered an additional allowance.
Community disturbance from migrant labourers	Free mobility of women and children should be ensured.	Contractor shall provide a camp for migrant staff to reside in. All migrant workers shall receive training on local sensitivities as part of their induction.
Replacement of road bridge	The bridge at RD 101 is too narrow and sugarcane trollies cannot pass over this bridge	Road bridge at RD 101 to be replaced under Contract WSIP/B1/GF/01.
Reduction in waterlogging and salinity of farmland	The berms of the canal are being eroded and the embankments are becoming weak, resulting in seepage from the canal leading to waterlogging and salinity on farm land. Impact to agricultural productivity. The berms require protection in some areas.	Embankment rehabilitation and killa bushing (berm reinstatement) included within Contract WSIP/B1/GF/01.

7. Relocation and Compensation Plan

7.1 General

This RAP has been prepared on the basis of the findings of the census survey and by adopting the legal and policy framework of Government of Pakistan and the World Bank policies as reflected in the Entitlement Matrix (see section 2.5). This Entitlement Matrix was discussed during consultations as part of the proposed mitigation measures. The Resettlement Action Plan focuses on providing assistance in the form of compensation for the lost assets and additional assistance aim at restoring the livelihoods of PAPs to their pre-project condition. This section details the applicable entitlements, grouped by the type of loss in order to remain consistent with the Entitlement Matrix and the impacts for this project as detailed in Chapter 5.

Note that, where required, compensation rates have been inflated to 2016 prices by applying annual consumer price inflation as quoted by the World Bank¹³ which provides inflation rates up to year 2014. For inflation beyond 2014, reference is made to Trading Economics¹⁴.

7.2 Loss: Land (Agricultural)

7.2.1 Application: Permanent Loss of Entire Holding

7.2.1.1 Entitled Person: Title Holder

Entitlement: Compensation as Per Land Acquisition Act

Permanent acquisition of 9.925 acres of private land will be required for the cross-regulator at RD 63+000 and 125+000 of Ghotki Feeder Canal. The cost of the permanent land will be borne by the project proponent. SIDA/AWB is responsible for the land acquisition. SIDA will write an official letter to the Deputy Commissioner (DC) of the related district with the Deh map (provided in Appendix H) and the list of land owners whose land will be acquired. DC will appoint an Assistant Commissioner as a land acquisition officer and he will deal with the land acquisition matters.

The Assistant Commissioner will follow the procedure for acquisition under the LAA, as detailed in section 2.2.2 of this RAP.

The land compensation cost per acre has been collected from the Revenue Department in Ghotki. The Assistant commissioner Ghotki is the land acquisition officer for the sub-project area and responsible for paying the land compensation to the land owners. The Revenue Department indicated that the cost of land is PKR 1,000,000 per acre, including compensation for loss of standing crops (as applicable under the Land Acquisition Act). An additional 15% has been allowed in accordance with the Land Acquisition Act, therefore the total estimated compensation rate is PKR 1,150,000 per acre.

The details of land to be acquired are given in the following tables. The Deh map is provided in Appendix H.

¹³ <http://databank.worldbank.org/data/home.aspx>

¹⁴ <http://www.tradingeconomics.com/pakistan/inflation-cpi/forecast>

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Table 7.1: Inventory of Land Acquisition at RD 63

S.No	Location	Survey Number	Area Acres	Area Ghunta
1	RD 63 NIP Side	65/4	0	7
2	RD 63 NIP Side	224 Irrigation Bungalow	0	31
3	RD 63 NIP Side	76/2	0	18
4	RD 63 NIP Side	76/3	0	33
5	RD 63 NIP Side	76/4	0	25
6	RD 63 IP Side	225	0	21
Total Permanent Land Required in RD 63			3	15

Source: Survey of the Project Area, Project Implementation Consultants, July. 2014 to August- 2014

Table 7.2: Inventory of Land Acquisition at RD 125

S.NO	Location	Survey Number	Area Acres	Area Ghunta
1	IP Side (Masu Wah)	239	0	7
3	"	234	1	28
4	"	233	1	32
5	"	225	0	3
6	"	226	1	24
7	"	227	0	16
8	"	224	0	9
9	"	225	0	23
Total Permanent Land Required in RD 125			6	22

7.2.2 Application: Permanent Loss of Entire Holding

7.2.2.1 Entitled Person: PAP without Valid Title

Entitlement: Crop Compensation

The compensation rate has been calculated based on the average yield and value of cultivated crops. This information was collected from within the sub-project area by PIC, and is presented in the table below.

Table 7.3: Yield price and total value of affected crop/acre

Crop	Average yield (kg/acre)	Price (PKR/40Kg) in 2014	Price (PKR/40Kg) with inflation to 2016 rates	Value (PKR/acre) - 2016
Wheat	1,600	1,200	1320	53,000
Rice	2,400	850	940	56,400
Cotton	1,200	2,300	2,600	78,000
Sugarcane	36,000	112	125	112,500
Oil seed	600	2,500	2,800	42,000
Fodder	7,200	55	60	11,000

It is not possible to anticipate the crops which shall be grown at the time of implementation of the sub-project. However, an allowance has been included in the budget based on the average value of the crops grown in the Col (rice, wheat and sugarcane) of PKR 74,000 per acre.

7.2.3 Application: Temporary Loss

The following entitlements shall be provided by the contractor for WSIP/B1/GF/01.

7.2.3.1 Entitled Person: Title Holder

Entitlement: Rent of Land at Market Rate

Temporary land acquisition will be required for diversions of canals (as part of the works for replacement of hydraulic structures). The contractor will be responsible for temporary land acquisition. Monthly rent as per the market value will be paid to the owner by the contractor. The owner will be compensated for any damage to his land or assets there on, or else damaged assets shall be restored to their former condition at the contractor's cost.

7.2.3.2 Entitled Person: Tennant Farmer, Sharecropper or Farmer without Valid Title

Entitlement: Crop Compensation

Cash compensation or compensation in kind (such as employment during construction) shall be provided to the entitled person. Cash compensation shall be as per Table 7.3.

7.3 Loss: Land (Residential and Commercial)

7.3.1 Application: Entire Loss

7.3.1.1 Entitled Person: PAP without Valid Title

PAPs who shall lose the land on which their structures are located, but who do not own the title to the land on which these structures are situated are permitted to rebuild their structures at an alternative government owned site (but without the transfer of title to ownership of this land). They are also entitled to a transport allowance (regardless of whether they have opted to move to a government owned site or not). Where the affected household is living below the poverty line, the household shall also be provided an additional Low Income Allowance.

Entitlement: Alternative Sites

The affected households have been consulted to identify whether they prefer to rebuild affected structures at an alternative government owned site or on their own land outside the Col. The following table summarises the preference of each household and is consistent with the findings of the consultations summarised in section 6.4.3. Plans, signed by the AWB representatives, which identify the alternative sites which shall be made available to these households can also be found in Appendix K. These plans detail the exact resettlement locations.

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Table 7.4: Resettlement Locations

Sr. No	Name of Affected Person (head of household)	Location on embankment (RD)	Occupation	Originating Village	Years Living on Embankment	Reason for Moving to Embankment	Welcomed Back to Original Village?	If Yes, Willing to Return?	Preferred Site to Rebuilt Assets	Distance to Preferred Site
Inspection Path (IP)										
1	Shah Gul Mazari	9+500(IP)	Govt. Servant	Orangzaib Mazari	5	Flood in Indus	yes	Yes	Orangzaib Mazari	1km
2	Wallan Mazari	14+000(IP)	Farming (Owner)	Orangzaib Mazari	5	Flood in Indus	yes	No	Beyond Col – Gov land	<1km
3	Pinyal Kosh	63+000(IP)	General Labour	Mir Kosh	5	Flood in Indus	yes	Yes	Mir Kosh village	1km
Non-Inspection Path (NIP)										
1	Faiz Mohammad	7+900 (NIP)	Farming (Owner)	Dur Mohammad Golato	5	Flood in Indus	yes	No	Own land	<1km
2	Ghulam Hyder	7+900(NIP)	Farming (Tenant)	Dur Mohammad Golato	5	Flood in Indus	yes	No	Own land	<1km
3	Pir Bux	14+700(NIP)	General Labour	Malik	6	Flood in Indus	yes	No	Own land	<1km
4	Karim Bux Mirani	14+500(NIP)	General Labour	Malik	6	Flood in Indus	yes	No	Own land	<1km
5	Bashir Ahmed	14+500(NIP)	General Labour	Khahi Malik	6	Flood in Indus	yes	No	Own land	<1km
6	Abdul Hakeem Malik	14+600(NIP)	General Labour	Khahi Malik	6	Flood in Indus	no		Own land	<1km
7	Imam Din Malik	14+900(NIP)	Small Business	Khahi Malik	5	Flood in Indus	no		Own land	<1km
8	Mohammad Bux	14+500(NIP)	General Labour	Khahi Malik	6	Flood in Indus	no		Beyond Col – Gov land	<1km
9	Shahmir Malik	15+950(NIP)	Small Business	Khahi Malik	6	Flood in Indus	no		Beyond Col – Gov land	<1km
10	Sohnno Mazari	18+000(NIP)	Farming (Tenant)	Khahi Malik	6	Flood in Indus	no		Beyond Col – Gov land	<1km
11	Nihal Mazari	18+200(NIP)	General Labour	Mazari Village	6	Flood in Indus	no		Beyond Col – Gov land	<1km
12	Shah Mohammad	19+200(NIP)	Farming (Tenant)	Mazari Village	5	Flood in Indus	no		Beyond Col – Gov land	<1km
13	Ali Nawaz	19+800(NIP)	Farming	Mazari Village	6	Flood in Indus	yes	No	Beyond Col –	<1km

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Sr. No	Name of Affected Person (head of household)	Location on embankment (RD)	Occupation	Originating Village	Years Living on Embankment	Reason for Moving to Embankment	Welcomed Back to Original Village?	If Yes, Willing to Return?	Preferred Site to Rebuilt Assets	Distance to Preferred Site
			(Tenant)						Gov land	
14	Ghulam Fareed	27+300(NIP)	Farming (Tenant)	Mazari Village	6	Flood in Indus	yes	No	Own land	<1km
15	Dil Murad	27+300(NIP)	Farming (Owner)	Mazari Village	6	Flood in Indus	yes	No	Own land	<1km
16	Hassan Ali Mazari	27+300(NIP)	Farming (Tenant)	Mazari Village	6	Flood in Indus	yes	No	Own land	<1km
17	Yaqoob Mazari	27+300(NIP)	Farming (Tenant)	Mazari Village	6	Flood in Indus	yes	No	Own land	<1km
18	Yaseen Mazari	27+300(NIP)	Farming (Tenant)	Mazari Village	6	Flood in Indus	yes	No	Own land	<1km
19	Mir Muhammad	27+300(NIP)	Farming (Tenant)	Mazari Village	6	Flood in Indus	yes	No	Own land	<1km
20	Sohbat Khan Mazari	27+800(NIP)	Farming (Tenant)	Mazari Village	6	Flood in Indus	no		Beyond Col – Gov land	<1km
21	Nazir Ahmed Mazari	28+900(NIP)	Private Servant	Ponhu Mazari	10	Business/ work	Yes	No	Own land	<1km
22	Wazir Ahmed Mazari	28+900(NIP)	Private Servant	Ponhu Mazari	10	Flood in Indus	no		Own land	<1km
23	Mohib Ali Mazari	28+800(NIP)	Private Servant	Ponhu Mazari	7	Flood in Indus	no		Own land	<1km
24	Rehman mazari	29+000(NIP)	General Labour	Ponhu Mazari	6	Flood in Indus	no		Beyond Col – Gov land	<1km
25	Ali Anwar mazari	30+000(NIP)	Farming (Owner)	Ponhu Mazari	6	Flood in Indus	yes	No	Own land	<1km
26	Mohammad Ramzan	40+000(NIP)	Private Servant	Dasti Village	5	Flood in Indus	yes	Yes	Dasti Village	5 km
27	Balach Khan Dasti	40+000(NIP)	Private Servant	Dasti Village	5	Flood in Indus	yes	Yes	Dasti Village	5 km
28	Allah Rakhiyo	40+100(NIP)	General Labour	Dasti Village	5	Flood in Indus	yes	Yes	Dasti Village	5 km
29	Nazir Ahmed	40+200(NIP)	General Labour	Baksha pur Village	5	Flood in Indus	yes	Yes	Baksha pur Village	65 km
30	Veer Malik	40+200(NIP)	General Labour	Baksha pur Village	5	Flood in Indus	yes	Yes	Baksha pur Village	65 km

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Sr. No	Name of Affected Person (head of household)	Location on embankment (RD)	Occupation	Originating Village	Years Living on Embankment	Reason for Moving to Embankment	Welcomed Back to Original Village?	If Yes, Willing to Return?	Preferred Site to Rebuilt Assets	Distance to Preferred Site
31	Malook malik	40+200(NIP)	General Labour	Baksha pur Village	5	Flood in Indus	yes	Yes	Baksha pur Village	65 km
32	Kashmir Malik	40+200(NIP)	General Labour	Baksha pur Village	5	Flood in Indus	yes	Yes	Baksha pur Village	65 km
33	Hamal Mazari	41+000(NIP)	Farming (Tenant)	Baksha pur Village	5	Flood in Indus	yes	Yes	Baksha pur Village	65 km
34	Mir Hazar Mazari	41+000(NIP)	Farming (Tenant)	Baksha pur Village	5	Flood in Indus	yes	Yes	Baksha pur Village	65 km
35	Yousif Dasti	41+500(NIP)	Farming (Tenant)	Baksha pur Village	5	Flood in Indus	yes	Yes	Baksha pur Village	65 km
36	Ali Nawaz Dasti	41+500(NIP)	Farming (Tenant)	Baksha pur Village	5	Flood in Indus	yes	Yes	Baksha pur Village	65 km
37	Dagha Khan	41+500(NIP)	General Labour	Baksha pur Village	5	Flood in Indus	yes	Yes	Baksha pur Village	65 km
38	Karam Ali	43+300(NIP)	General Labour	Lashkran	20	Flood in Indus	no		Beyond Col – Gov land	<1km
39	Abrar Ali	43+300(NIP)	General Labour	Lashkran	20	Flood in Indus	no		Beyond Col – Gov land	<1km
40	Zahoor Ahmed	43+500(NIP)	General Labour	Miani Kondi wala	3	Flood in Indus	yes	No	Beyond Col – Gov land	<1km
41	Farooq	43+500(NIP)	General Labour	Miani Kondi wala	8	Flood in Indus	no		Beyond Col – Gov land	<1km
42	Imam Ali	43+500(NIP)	General Labour	Lashkran	20	Flood in Indus	yes	No	Beyond Col – Gov land	<1km
43	Gulam Ali	43+300	Small Business	Mureed Shakh	10	Business/ work	no		Beyond Col – Gov land	<1km
44	Abandonned*	43+500(NIP)		-	-	-	-			
45	Mahboob Ali Memon	43+500(NIP)	Small Business	Mureed Shakh	15	Business/ work	no		Beyond Col – Gov land	<1km
46	Abandonned*	43+500(NIP)		-	-	-	-			
47	Barkatullah Dasti	43+500(NIP)	General Labour	Rajan pur	10	Business/ work	no		Beyond Col – Gov land	<1km

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Sr. No	Name of Affected Person (head of household)	Location on embankment (RD)	Occupation	Originating Village	Years Living on Embankment	Reason for Moving to Embankment	Welcomed Back to Original Village?	If Yes, Willing to Return?	Preferred Site to Rebuilt Assets	Distance to Preferred Site
48	Ali Hasan Mirani	43+900(NIP)	Fishing	Gudani Village	15	Business/ work	no		Beyond Col – Gov land	<1km
49	Sher Mohammad	44+00(NIP)	Fishing	Gudani Village	15	Business/ work	no		Beyond Col – Gov land	<1km
50	Muhammad Amin Dasti	44+000(NIP)	General Labour	Mureed Shakh	16	Business/ work	Currently located at Mureed Shakh		Beyond Col – Gov land	<1km
51	Durr Muhammad Mirani	44+100(NIP)	General Labour	Mureed Shakh	17	Business/ work	Currently located at Mureed Shakh		Beyond Col – Gov land	<1km
52	Muneer Ahmed Shah	44+100(NIP)	General Labour	Khanbhra Village	15	Business/ work	no		Beyond Col – Gov land	<1km
53	Muhammad Mureed Mirani	44+150(NIP)	General Labour	Gudani Village	16	Business/ work	no		Beyond Col – Gov land	<1km
54	Abdul Ghani Mirani	44+150(NIP)	General Labour	Gudani Village	16	Business/ work	no		Beyond Col – Gov land	<1km
55	Abandoned*	44+200(NIP)	-	-	-	-	-			
56	Haji Iqbal Chaoudhry	44+250(NIP)	General Labour	Mureed Shakh	16	Business/ work	Currently located at Mureed Shakh		Beyond Col – Gov land	<1km
57	Papu Pathan	44+300(NIP)	General Labour	Mureed Shakh	15	Business/ work	Currently located at Mureed Shakh		Beyond Col – Gov land	<1km
58	Ashraf Ali Qureshi	44+350(NIP)	General Labour	Mureed Shakh	15	Business/ work	Currently located at Mureed Shakh		Beyond Col – Gov land	<1km
59	Muhammad Achar	44+400(NIP)	General Labour	Mureed Shakh	16	Business/ work	Currently located at Mureed Shakh		Beyond Col – Gov land	<1km
60	Muneer Ahmed Mirani	44+500(NIP)	General Labour	Mureed Shakh	15	Business/ work	Currently located at Mureed Shakh		Beyond Col – Gov land	<1km
61	Muhammad Mor	44+550(NIP)	General Labour	Kot Sabzal	15	Business/work	no		Beyond Col – Gov land	<1km
62	Samundar Khan	44+600(NIP)	General Labour	Kot Sabzal	15	Business/work	no		Beyond Col – Gov land	<1km
63	Bhora Khan	44+700(NIP)	General Labour	Lashkran village	16	Business/work	no		Beyond Col – Gov land	<1km
64	Akbir Ali Dasti	44+750(NIP)	General Labour	Gudani Village	16	Business/work	no		Beyond Col – Gov land	<1km

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Sr. No	Name of Affected Person (head of household)	Location on embankment (RD)	Occupation	Originating Village	Years Living on Embankment	Reason for Moving to Embankment	Welcomed Back to Original Village?	If Yes, Willing to Return?	Preferred Site to Rebuilt Assets	Distance to Preferred Site
									Gov land	
65	Noor Din Mirani	44+850(NIP)	Fishing	Gudani Village	15	Business/work	no		Beyond Col – Gov land	<1km
66	Abandoned*	44+800(NIP)		-	-	-	-			
67	Shahnawaz Dasti	45+850(NIP)	General Labour	Mureed Shakh	16	Business/work	Currently located at Mureed Shakh		Beyond Col – Gov land	<1km
68	Allah Jawayo	46+100(NIP)	General Labour	Lashkran village	15	Business/work	no		Beyond Col – Gov land	<1km
69	Wahid Bux	47+200(NIP)	General Labour	Lashkran village	16	Business/work	yes	No	Beyond Col – Gov land	<1km
70	Kandho Khan	47+900(NIP)	Live Stock	Lashkran village	16	Business/work	yes	No	Beyond Col – Gov land	<1km
71	M.Azeem Bhyo	49+100(NIP)	Farming (Owner)	Lashkran village	14	Business/work	no		Beyond Col – Gov land	<1km
72	Faiz Mohammad	49+100(NIP)	Farming (Owner)	Lashkran village	16	Business/work	no		Beyond Col – Gov land	<1km
73	Mohammad Haleem	49+100(NIP)	Farming (Owner)	Lashkran village	16	Business/work	no		Beyond Col – Gov land	<1km
74	Ali Gohar	49+100(NIP)	Farming (Tenant)	Lashkran village	16	Business/work	no		Beyond Col – Gov land	<1km
75	Ghulam Hussaul	49+100(NIP)	Farming (Tenant)	Lashkran village	16	Business/work	no		Beyond Col – Gov land	<1km
76	Muj Ali Mirani	51+00(NIP)	General Labour	Khubhra Village	14	Flood in Indus	Yes	Yes	Khubhra Village	3 km
77	Datto Mirani	51+00(NIP)	General Labour	Khubhra Village	4	Flood in Indus	Yes	Yes	Khubhra Village	3 km
78	Abondonned*	52+100(NIP)		-	-	-	-			
79	Abondonned*	52+400(NIP)		-	-	-	-			
80	Gul Mohammad Meerani	52+800(NIP)	General Labour	Khubhra Village	5	Flood in Indus	yes	No	Beyond Col – Gov land	<1km
81	Shahid	52+800(NIP)	General Labour	Khubhra Village	5	Flood in Indus	yes	No	Beyond Col – Gov land	<1km
82	Chanesar Mirani	53+00(NIP)	Fishing	Gudani Village	4	Flood in Indus	no		Beyond Col – Gov land	<1km

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Sr. No	Name of Affected Person (head of household)	Location on embankment (RD)	Occupation	Originating Village	Years Living on Embankment	Reason for Moving to Embankment	Welcomed Back to Original Village?	If Yes, Willing to Return?	Preferred Site to Rebuilt Assets	Distance to Preferred Site
83	Mir Khan Mirani	53+200(NIP)	General Labour	Gudani Village	4	Flood in Indus	no		Beyond Col – Gov land	<1km
84	Dado Murani	53+200(NIP)	Fishing	Gudani Village	4	Flood in Indus	no		Beyond Col – Gov land	<1km
85	Liaqat Ali Mirani	53+00(NIP)	Fishing	Gudani Village	4	Flood in Indus	no		Beyond Col – Gov land	<1km
86	Akhtar Hussain	53+00(NIP)	Fishing	Gudani Village	4	Flood in Indus	no		Beyond Col – Gov land	<1km
87	Umed Ali	61+200(NIP)	General Labour	Budho Kosh	4	Flood in Indus	no		Beyond Col – Gov land	<1km
88	Abdul Rehman Kosh	61+200(NIP)	General Labour	Budho Kosh	4	Flood in Indus	no		Beyond Col – Gov land	<1km
89	Mohammad Adhyo	61+300(NIP)	General Labour	Budho Kosh	20	Business/work	no		Beyond Col – Gov land	<1km
90	Baksho Kosh	61+450(NIP)	Farming (Tenant)	Budho Kosh	20	Business/work	no		Beyond Col – Gov land	<1km

7.3.1.2 Entitled Person: PAPs Living below the Poverty Line

Entitlement: Low Income Allowance

The number of households having monthly earnings below the poverty line is estimated to be 84. Their incomes are fragile and they are less able to absorb any change in their socio-economic equilibrium. For such households, in addition to the entitlements above, an additional Low Income Allowance equal to two times the monthly household income of the household (inflated to 2016 value), or equal to the equivalent of two months minimum wage in Pakistan (PKR 22,000 in 2016, assuming 10% inflation from 2014 rates), whichever is greater. This allowance is intended to increase their resilience to impacts resulting from loss of their residential land.

7.4 Loss: Privately Owned Structures

7.4.1 Application: Entire Loss

7.4.1.1 Entitled Person: Owner of Structure

Owners of structures which are to be removed from the Col are eligible for compensation to rebuild the affected structure, regardless of whether they own the land on which the structure is situated or not.

Entitlement: Compensation for Replacement of Structures

All the structures in the Col are illegally built on government land. Data on assets within the Col has been collected through physical inspection and measurement of the structures. Full details of structures are given Appendix D.

A valuation survey was undertaken by PIC for estimating the unit rate for compensation for loss of residential and commercial structures and other such assets. The rates were arrived at by PIC engineers and sociologists, in consultation with the local community/ affected people and market places as detailed in Appendix G (quoted at 2014 rates). Using this data, the unit rates used for valuation of affected structures was determined. These are based on the prevailing market rates as of August 2014, with inflation to 2016 rates (7.2% inflation in 2014, 2.53% inflation in 2015), and the following procedures/ methods were used for the assessment of unit compensation values of different items/ assets located within the Col:

- Houses are valued at replacement value/cost based on cost of materials, type of construction, labour, transport and other construction costs.
- Hand pumps and other utilities are valued at current installation cost.
- The relocation cost is the amount needed to displace and relocate assets at prevailing market prices without adding costs for transaction.

Table 7.5: Compensation Rates for Replacement Assets

Description	Unit	Unit/Rate (Rs.)
(i) Residential, Commercial, Community or government	Sq. ft.	Pacca = 898
		Semi-pacca = 625
		Kacha = 155
(ii) Straw Shed, Cattle Shed	Sq. ft.	Kacha = 286
		Straw Shed = 263
(iii) Boundary Wall	5 ft height & 1 ft. length in running ft.	Pacca = 1078
		Semi-pacca = 514
		Kacha = 376

Description	Unit	Unit/Rate (Rs.)
Hand pump	Number	7700

The compensation cost for privately owned structures is based on the valuation of structural assets provided in the table above. Owners of privately owned structures shall be paid compensation for replacement of their structures in full, regardless of the entitlement of the PAPs to the land in which the affected structure is located and regardless of where they will rebuild these structures.

The details of structures and compensation due are given in Appendix D.

Entitlement: Transport Allowance

Standard Transport Allowance

A standard transport allowance shall be paid to each household owing assets in the Col to cover the cost of that household to shift their belongings to their new location where their new location is within 10km of their existing location. This allowance shall be paid regardless of any other assistance (i.e. this allowance shall be paid to households who will rebuild affected structures on private land or government owned land). The standard transport allowance has been valued at PKR 11,000 per household and shall cover two trucks to transport goods within a 10km radius. This allowance has been calculated based on quotes of PKR 10,000 obtained from local transporters in 2014 to use two trucks to transport goods up to 10 km.

Long Distance Transport Allowance

A long distance transport allowance is to be provided to any household who shall rebuild their affected structures at a location which is greater than 10km from their current location. The long distance transport allowance shall be calculated as PKR 1,100 per 1km of relocation distance. In calculating the additional allowance, the relocation distance shall be rounded up to the nearest 10 km. Long distance transport allowances are detailed in Appendix D.5.

7.5 Loss: Community or Institutional Structures

7.5.1 Application: Entire Loss

7.5.1.1 Entitled Person: Affected Community or Institution

Entitlement: Reconstruction of Community or Institutional Structures

The community structures to be removed from within the Col are comprised of one hand pump. Reconstruction of this hand pump on the raised embankment shall be included within the civil works contract so that it continues to be available for use.

The government structures are one police chowki, one irrigation room, and one hand pump. The rehabilitation works shall require the demolition of these structures. Reconstruction of the structures shall be included within the civil works contract.

7.6 Loss: Income

It is anticipated that the sub-project will make a positive impact on the economy of the area. A number of employment opportunities will be created during the rehabilitation work, particularly for the unskilled labour.

7.6.1 Application: Loss of Income from Commercial Structures

7.6.1.1 Entitled Person: Owner of Impacted Business

Entitlement: Livelihood Allowance

For those PAPs owning commercial structures within the Col, a Livelihood Allowance shall be paid. This allowance shall be equal to three times the monthly income of the household, or equal to the equivalent of three months minimum wage in Pakistan (PKR 33,000 in 2016 - assuming 10% inflation from 2014 rates), whichever is greater. This will be provided to support the affected families losing their sources of livelihood in order to allow them to restore their business at a new location without any economic pressure.

This allowance is intended to compensate for any lost income during transition, relocation and reconstruction of their businesses. There are five affected households involved in business activities in the Col (four shops and one otaq). See more details in Appendix D.

8. Institutional Arrangements

This chapter describes the institutional roles and responsibilities associated with the implementation of this RAP for the sub-project. An overview of the general institutional arrangements for WSIP is provided in section 3.1.

The responsibilities of each party in the implementation of the RAP are summarised within the context of the implementation schedule in Chapter 10.

8.1 Sindh Irrigation and Drainage Authority

SIDA are overall responsible for the implementation of this RAP through the Environmental Management Unit and Social Cell. This includes disbursement of funds for compensation, permanent acquisition of land identified in this RAP and vacation of the Col prior to mobilisation of the contractor for Contract WSIP/B1/GF/01. The AWB will assist SIDA for implementation of this RAP. Note that SIDA shall maintain overall responsibility for any RAP implementation activities which may be delegated to other parties.

8.1.1 Environmental Management Unit and Social Cell

The Environment Management Unit (EMU) and Social Cell established within SIDA will be responsible for all implementation activities within the RAP. While EMU and the Social Cell shall delegate a number of these tasks to other parties (as detailed in the following sections), they shall maintain direct responsibility for the following specific tasks:

- Review this RAP
- Translation and disclosure of this RAP
- Establishment of the Grievance Redress Committee (GRC)
- Settlement of any issues arising in the field
- Referring issues which cannot be solved by the project team to the GRC
- Preparation of final budget arrangement of funds through the AWB
- Notification of PAPs on embankments
- Verification of PAPs
- Completion of file of each PAP
- Preparation of relevant reports and preparation of final report on disbursement
- Under taking on stamp paper by PAP and verification
- Internal monitoring
- Supervision of permanent land acquisition

SIDA shall oversee and monitor implementation of this RAP. A Social Organiser and two engineers from the Ghotki AWB will ensure the implementation of the RAP and work closely with PIC field staff and the contractor.

8.2 Ghotki Area Water Board

SIDA shall delegate responsibility for the following tasks to be implemented by the Ghotki AWB:

- Direct liaison with the Board of Revenue for permanent land acquisition required for this sub-project
- Resolution of any land acquisition issues and cases

- Ensuring there is no further encroachment into the Col following the cut-off date defined in this RAP. This shall be achieved through the Assistant Manager for Social Mobilisation within the AWB.
- The Social Mobilisation Team of the AWB shall assist SIDA in the following:
 - Disclosure of the translated RAP among the PAPs
 - Notification of PAPs on embankments
 - Information dissemination, awareness raising and liaison with affected communities.
- Transfer of resettlement funds to Board of Revenue
- Provide support to the contractor during the construction period in order to resolve any issues arising from temporary land acquisition and minimise any delays to the construction progress.
- Vacation of the Col (following compensation payment by SIDA)

Ghotki AWB shall designate a Social Organiser and two engineers to be responsible for RAP implementation tasks. These staff shall work closely with PIC field staff and the contractor, and shall be supervised by SIDA.

Following the practice adopted by the Nara AWB for contract WSIP/B1/NC/02 where the establishment of borrow areas was required, the Ghotki AWB shall depute the Social Organiser to assist the contractor with day to day temporary land acquisition requirements. The two engineers shall work under oversight of SIDA's Sociologist/Participation Specialist and coordinate the Board of Revenue and land owners for the completion of permanent land acquisition.

8.3 Board of Revenue

The Assistant Commissioner of the Ghotki District Board of Revenue shall be responsible for permanent acquisition of land on behalf of the AWB. He shall acquire the land on behalf of the AWB following procedures of the Land Acquisition Act (see section 2.2.2). The Assistant Commissioner also acts as the Land Acquisition Officer.

The Assistant Commissioner shall also be responsible for the disbursement of funds to PAPs through cross cheques during a public event. PAPs shall present the stamp paper to the Assistant Commissioner, who shall verify the identity of the PAP, disburse the compensation through cross cheque and add his stamp to the stamp paper, confirming disbursement of the compensation.

The funds shall be provided by the AWB.

8.4 Project Coordination and Monitoring Unit (PCMU)

The Project Coordination and Monitoring Unit (PCMU) shall be responsible for coordination of the implementation of this RAP and for monitoring of implementation progress, assisted by the Monitoring and Evaluation Consultants (M&EC). PCMU shall also oversee any acquisition of public or private land or assets associated with the implementation of this sub-project.

PCMU shall undertake regular monitoring of progress in implementing this RAP to ensure timely actions are taken in response to any issues experienced.

8.5 Monitoring and Evaluation Consultants

The M&EC are responsible for reviewing and clearing this RAP. Following this, they also have a role in the implementation of the RAP as monitoring and evaluation is important tool for managers to determine the status and success of any project. The M&EC will provide continuous feedback to SIDA and PCMU on the implementation progress of this RAP, identify problems in implementation and suggest corrective actions.

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The purpose of RAP monitoring is to verify that:

- Actions and commitments described in the RAP are implemented fully and on time,
- Eligible affected people receive their full compensation entitlements within the agreed timeframe,
- RAP actions and compensation measures are effective in sustainably enhancing (or at least restoring) affected people's living standards and income levels,
- Complaints and grievances lodged by PAPs are followed up and that where necessary, appropriate corrective actions are taken up and implemented,
- Progress of any community development activities or reconstruction/relocation of community structures defined in the RAP
- Performance of contractor in providing employment opportunities for PAPs, and
- Payments for loss of income.

Monitoring

The M&EC shall monitor progress of implementation of this RAP against the following indicators:

- Value of compensation disbursed against anticipated budget for each impact (refer to Chapter 9)
- Status of compensation disbursement
- Progress in acquisition of private land
- Progress in vacation of the Col
- Status of restoration of livelihood for PAPs where income has been impacted
- Grievances redress activities
- Agreements reached and arrangements made between the contractor and PAPs for temporary acquisition of assets (such as temporary land acquisition)
- Entitlement Matrix in the context of the anticipated impacts.

The M&EC shall be responsible for monitoring performance of the implementing parties against these indicators.

Evaluation

As part of their evaluation activities under this RAP, the M&EC shall evaluate the following within the sub-project area:

- Impact of construction activities in sub-project area in particular on PAPs and livestock
- Success of livelihood restoration
- Socio-economic impact and impact on the level of un-employment and household incomes amongst PAPs and within the sub-project area

The evaluation of the success of the implementation of this RAP against objectives of the plan should be completed by the M&EC within one year of completion of the civil works contract.

8.6 Project Implementation Consultants

The Project Implementation Consultants are responsible for the preparation of this RAP.

During construction, PIC shall be responsible for supervision of the contractor, including the arrangements the contractor makes for the temporary acquisition of land required to complete his works.

8.7 Contractor

The contractor appointed to implement this sub-project under Contract WSIP/B1/GF/01 shall be responsible for all temporary land acquisition required for the completion of his works. This shall include the mutual agreement with land owners for the provision of rent or actions in kind in exchange for the temporary use of their land for the establishment of camps or borrow areas, as well as compensation for loss of crops to land owners and sharecroppers.

The contractor shall prepare and keep signed agreements between the contractor and land owners for the temporary use of private land, detailing monetary rent and/or acts in kind, agreed with the land owner in exchange for the temporary use of his land. The agreements shall also state the condition of the land that is to be handed over to the land owner following use by the contractor.

The contractor shall also be responsible for staff training, including training of migrant staff on cultural sensitivities within the local population.

8.8 Grievance Redress

8.8.1 Review of Social Task Force and Grievance Redress Committee Performance on Previous Contracts

The Resettlement Action Plans prepared for Contracts WSIP/B1/NC/01 and WSIP/B1/NC/02 (both implemented within the Nara AWB) included the establishment of a Social Task Force (STF) at AWB level. The objective of the STF was to ensure that measures are taken in a timely fashion to prevent potential grievances. STF was comprised of AWB, SIDA, PIC, and Board of Revenue. Initially, during the execution of Contract WSIP/B1/NC/01 and WSIP/B1/NC/02 the STF did not formally meet at regular periods. However, the issues on which the STF were intended to advise upon were dealt with by AWB, including land acquisition. Therefore, it has been decided that a STF shall not be established for implementation of contract WSIP/B1/GF/01.

Formal establishment and meetings of the GRC were rarely undertaken. Examples of grievances during the execution of these contracts were as follows:

- Delay in payment for permanent land acquisition
- Delay in payment of compensation to PAPs
- Arrangements for borrow material by contractor

These grievances were resolved by individual members of the GRC to the satisfaction of the complainant, but rarely as a united committee. Timely establishment of the GRC may have made resolution of these grievances more efficient.

8.8.2 Grievance Redress Mechanism

The main objective of the grievance redress mechanism will be to arrive at mutually acceptable solutions to grievances through free and open discussions. It will also provide a forum to people who might have objections or concerns about their compensation to raise their objections and through conflict resolution address their issues adequately. The project will establish a grievance redress committee (GRC) at a sub-project level for the affected persons in line with the Social Impact Management Framework for WSIP. The GRC shall meet at least quarterly to consider outstanding grievances.

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Grievance redress arrangements should be disseminated to the PAPs with clear information on where and how grievances can be submitted, as well as the process for grievance redress, both at the subproject level and through the court system.

The committee is responsible for the facilitation of resolution of disputes and grievances which may arise during the implementation of this plan. The committee shall be formed of the following members:

Table 8.1: Grievance Redress Committee

Representative	Members
Assistant Commissioner	Chairman
Project Director, WSIP	Member
Land Acquisition Collector	Member
Sociologist/Participation Specialist, SIDA	Member (Secretary)
Local dignitary	Member
2 nr. Affected Person Representatives	Members

Any grievance which cannot be resolved at a project level (i.e. by the contractor, PIC, SIDA or AWB) shall be referred to the GRC. If the affected person is not satisfied with the decision of GRC, he/she, as a last resort may submit the complaint to the court of Law. The committee will establish community complaints register at sub-project sites. Committee will register and file any, grievance redress cases and would bring these into the notice of Project Director. Revenue department will be involved for land acquisition and crop compensation.

Grievances may be submitted to the GRC through any of the following means:

- By individual(s) through the complaints registrations system on the WSIP website (<http://www.wsip.com.pk/Complaint/>)
 - These complaints are submitted directly to the Managing Director of SIDA and the PMC/A Team Leader and will be forwarded to the GRC chairman
- By individual(s) in writing directly to the GRC chairman at the following address:
- By individual(s) in person at the Ghotki AWB office
 - Director AWB shall forward grievances to the GRC chairman
- Referred to GRC chairman by the Contractor or PIC (for grievances submitted to the Contractor or PIC in the first instance but that cannot be not resolved by them)

The following standards shall underpin the proposed systems for handling any submitted grievances:

- All grievances received will be formally recorded by the GRC chairman in a Grievance Register to be maintained by the GRC.
- A written acknowledgement shall be issued by the GRC chairman to the affected person within three working days of receipt.
- The GRC shall meet to discuss the Grievance within 5 working days of receipt. Attendees, minutes of the meeting and actions arising from the meeting shall be entered into the Grievance Register.
- If required, a second meeting of the GRC shall be held within 20 working days of receipt of the grievance, thus allowing 15 working days for deliberation by the GRC, receipt of legal advice and undertaking of investigations as may be necessary. Attendees, minutes of the meeting and actions arising from the meeting shall be entered into the Grievance Register.
- The final decision of the GRC (arising from the first or second meeting) shall be recorded in the Grievance Register, including any further actions to be taken and both shall be communicated to the affected person in writing within 30 days of receipt of the grievance.
- If a final decision cannot be reached by the GRC within 30 days, the findings of the GRC to date shall be communicated to the affected person in writing. The GRC shall agree upon a timeframe for

resolution of the grievance which shall be recorded in the Grievance Register and shall also be communicated to the affected person in writing within 30 days of receipt of the grievance.

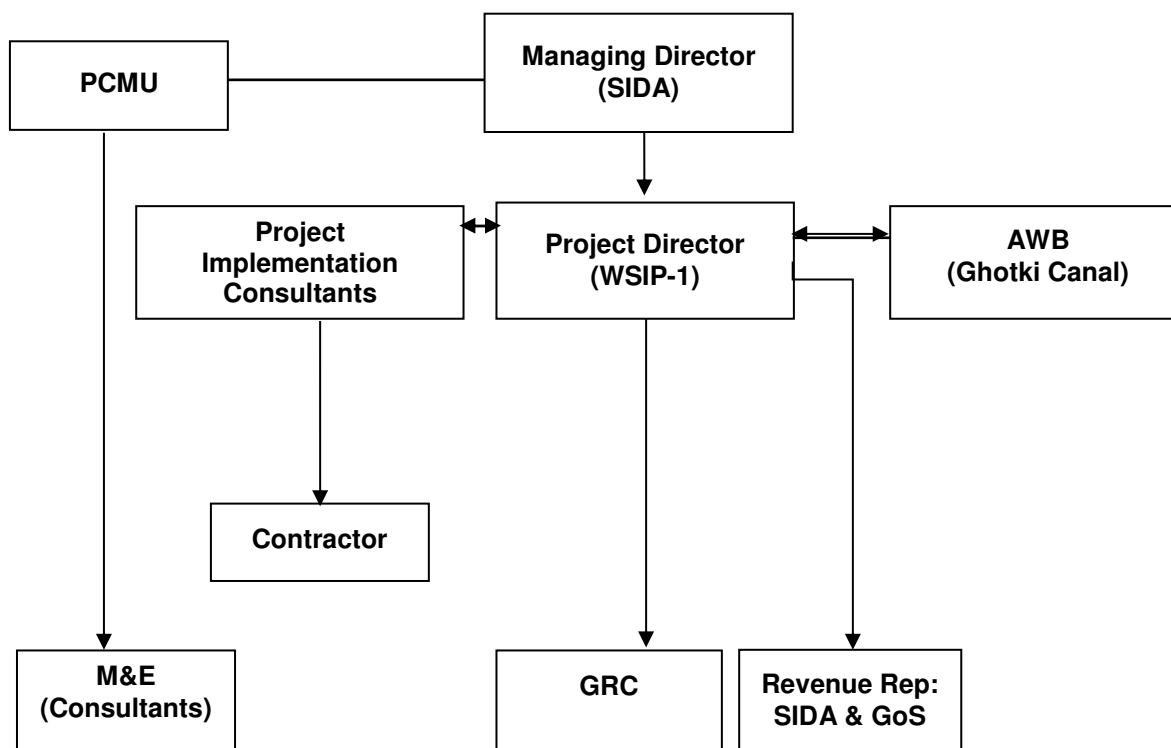
- Attendees, minutes and actions arising from any subsequent meetings shall continue to be entered into the Grievance Register, and the affected person shall be updated, in writing, on findings at 30 day intervals.
- If, at any time, the affected person is not satisfied with the decisions or findings of the GRC, they may register their complaint in a court of law.

All costs incurred by the GRC shall be borne by SIDA.

8.9 Organisation Structure

The organizational chart for the implementation of the Resettlement Action Plan is shown below:

Figure 8.1: Organisational Structure for RAP Implementation



8.10 Training and Capacity Building

Training and capacity building of all primary and secondary stakeholders is an important part of the sub-project implementation and will be an integral part of the sub-project. It helps to create and develop a similar approach among the project stakeholders. For this purpose, a training programme of two days is planned to impart training to all relevant officials of AWB and representatives of affected people. The amount of Rs. 100,000 has been provided in the budget for two days training. The training cost will be borne by the project proponent. The training will be provided by training specialists. During the training session following topics will be covered (sections 8.10.1 to 8.10.4):

8.10.1 Principles and Procedures of Involuntary Resettlement

- World Bank policy on involuntary resettlement.
- Identification of PAPs.
- Consultations with affected persons.

8.10.2 Consultation and Participation

Training regarding sub-project objectives and its impacts will be given to the expected stakeholders. All expected impacts will be discussed with the community. How they will be satisfied and their trust gained will be ensured.

8.10.3 Grievance Redress

Training shall be provided to the GRC in order to brief them on the requirements of this Resettlement Action Plan, World Bank policy and the Pakistan legal framework under which the committee must act.

8.10.4 Skill Development

In addition to the training of the implementation stakeholders, SIDA shall complete skills development training to PAPs. Technical skill development programme for PAPs is considered essential as their regular sources of livelihood and income generation will be directly affected as a result of rehabilitation works.

Furthermore, in the contemporary world, the Sustainable Livelihoods Approach (SLA) is strongly perceived as a way to improve understanding of the livelihoods of poor people. It draws on the main factors that affect poor people's livelihoods.

9. Budget

This section provides the compensation and assistance cost estimates as well as costs for administration of the RAP.

The details of estimated budget are given in the following table.

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Table 9.1: Budget for Implementation of the RAP

Type of Loss	Application	Entitled Person	Entitlement	Unit	Quantity	Unit Cost (PKR)	Cost (PKR)
A: Compensation							
Land (Agricultural)	Permanent Loss	Legal owner with valid title	Compensation as per Land Acquisition Act	Acres of impacted land	9.925	1,150,000	11,413,750
		PAPs without title	Crop compensation	Acres of impacted land	307.6	74,000	22,762,400
	Temporary Loss	Legal owner with valid title	Rent at market rate	Acres of impacted land			
		Tenant or PAP without title	Crop compensation	Acres of impacted land	10	To be paid by Contractor	
Land (Residential or commercial)	Entire Loss	PAPs without title	Alternative site	Affected Households	55	0	0
		PAPs living below poverty line	Low Income Allowance	Affected Households	84	Varies - refer to Appendix D	1,903,000
			Compensation for Replacement of Structures	Affected Households	87	Varies - refer to Appendix D	21,914,460
			Standard Transport Allowance	Affected Households	78	11,000	858,000
Privately owned Structures	Entire Loss	Owner of structure	Long Distance Transport Allowance	Affected Households	9	Varies - refer to Appendix D	693,000
Community Structures	Entire Loss	Affected community	Reconstruction of structure	Number of structures	1	Covered under civil works contract	
Government Structures	Entire Loss	Affected institution	Reconstruction of structure	Number of structures	3	Covered under civil works contract	
Income	Loss of Income from Commercial Structures	Owner of impacted business	Livelihood allowance	Affected Households	5	Varies - refer to Appendix D	178,200
Sub-total (A)							59,722,810
B: Training Cost							
	Training Cost	-	-	Lump Sum	-	100,000	100,000
Sub-total (B)							100,000

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C: Monitoring and Evaluation						
Monitoring and Evaluation	-	-	Lump Sum	-	2% of (A)	1,194,456
Administrative Costs	-	-	Lump Sum	-	3% of (A)	1,791,684
Sub-total (C)						2,986,141
D: Contingencies						
Contingency	-	-	-	-	5% of (A) + (C)	3,135,448
GRAND TOTAL						65,944,398
US\$ (US\$ = PKR 100)						659,444

10. Implementation of RAP

10.1 Introduction

The following implementation schedule is proposed to ensure implementation of this RAP shall be complete prior to mobilization of contractor for works under Contract WSIP/B1/GF/01.

The implementation schedule reflects the sequencing and duration of activities planned, the schedule recognizes that activities will be taking place simultaneously and allows, within reason, for staggered starts. The schedule proposed shall ensure clearance of Col and necessary land acquisition can be complete prior to mobilization of the contractor.

10.2 Implementation Schedule

The basic steps for preparation and implementation of this RAP are summarized in Table 10.1. The responsibility for each step is also detailed within. Within the schedule, the time at which Contract WSIP/B1/GF/01 is awarded is referred to as month 0.

Sindh Water Sector Improvement Project

Table 10.1: RAP Implementation Schedule

#	Activity	Responsibility	Month												
			-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1-24	24+	
1	Preparation and Revision of RAP	PIC													
2	Review and Approve of RAP	SIDA/M&EC		X											
3	Coordinate/Monitor RAP Implementation	PCMU													
4	Prevent Encroachment into Col	AWB													
5	Establish Grievance Redress Committee	SIDA		X											
6	*Supervision of Land Acquisition	SIDA													
7	*Resolution of Land Acquisition Issues	AWB													
8	*Notification of LA to Board of Revenue (BoR)	AWB		X											
9	*Section 4 Notification under LAA	BoR		X											
10	*Surveys and Setting Out	BoR		X											
11	Translation and Disclosure of RAP	SIDA		X											
12	*Section 5 Notification under LAA	BoR			X										
13	*Period for Objections to LA	PAPs													
14	*Period for Investigation into Objections to LA	BoR													
15	Finalisation of Resettlement Budget	SIDA					X								
16	Notification of PAPs	SIDA													
17	*Review of Objections to LA by Commissioner	BoR						X							
18	Transfer of Funds to BoR	AWB						X							
19	*Section 6 Declaration under LAA	BoR						X							
20	*Preparation of Land Acquisition Plan (map)	BoR													
21	Disbursement of Compensation to PAPs	BoR													
22	*Section 9 Notification under LAA	BoR								X					
23	Vacation of PAPS from Col	AWB													
24	*Period to Register Interest in Land	PAPs													
25	*Section 11 Enquiry under LAA (if required)	BoR								X					
26	Period for Grievance Redress	GRC													
27	*Acquisition under Section 12 of LAA	BoR									X				

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#	Activity	Responsibility	Month											
			-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1-24	24+
28	*Handover of Land to AWB	BoR										X		
29	Mobilisation of Contractor	-										X		
30	Temporary Land Acquisition	Contractor												
31	Assist in Temporary Land Acquisition	AWB												
32	Supervision of Contractor	PIC												
33	Internal Monitoring	SIDA												
34	External Monitoring	M&EC												
35	Evaluate RAP	M&EC												

* = Action required for permanent land acquisition at Bakhoro Cross-Regulator; LA = Land Acquisition; LAA = Land Acquisition Act; ? = If required

10.3 RAP Implementation Detail

The methodology for the implementation of the RAP as outlined in Table 10.1 is discussed in the following sections. SIDA shall maintain overall responsibility for implementation of the RAP.

10.3.1 General

10.3.1.1 Preparation of RAP

The RAP has now been completed by PIC and is to be reviewed and approved as per the following section. Any necessary revisions are to be agreed and incorporated by PIC.

10.3.1.2 Review Approval of RAP

This RAP shall be submitted in the first instance to Project Director SIDA for review. SIDA shall then forward this to M&EC for their review, and approval (following any agreed revisions).

10.3.1.3 Internal and External Monitoring

SIDA shall carryout internal monitoring, and M&EC shall complete external monitoring, from the point at which the RAP is approved until completion of the civil works. Further details are provided in Chapter 11. Both parties shall monitor the land acquisition and compensation and vacation of PAPs.

10.3.1.4 Translation and Disclosure of the RAP

SIDA shall translate this RAP and ensure the translated version of this RAP remains available to the public at locations within the sub-project area (refer to section 2.3.1.3).

10.3.1.5 Establish Grievance Redress Committee

SIDA shall establish the Grievance Redress Committee as detailed in Chapter 8.

10.3.1.6 Evaluate the RAP

Following completion of Contract WSIP/B1/GF/01, the M&EC shall evaluate the success of this RAP. Further details are provided in Chapter 11.

10.3.2 Land Acquisition

10.3.2.1 Supervision of Land Acquisition

SIDA shall remain active in the supervision of land acquisition. Initially they shall ensure that the Board of Revenue has been notified and the acquisition process has commenced according to the LAA.

10.3.2.2 Notification of Land Acquisition to Board or Revenue

The AWB shall notify the Board of Revenue (Ghotki District) of the permanent land acquisition requirements and request the Board of Revenue to begin acquisition proceedings under the Land

Acquisition Act on their behalf. SIDA and the AWB shall provide all required information to the Board of Revenue.

10.3.2.3 Section 4 Notification

The Board of Revenue shall issue a notification under section 4 of the LAA of intention to acquire land. The notification shall be published in the official Gazette and displayed at a convenient and prominent location close to the land to be acquired. It is also recommended that the AWB begin consultations with the land owner(s) at this stage.

10.3.2.4 Surveys and Setting Out

Following the section 4 notification, officers of the Board of Revenue shall be permitted to enter the land to be acquired to take any necessary measurements if required by the Board of Revenue.

10.3.2.5 Section 5 Notification

After any investigations required (section 10.3.2.4), the Board of Revenue shall issue a notification under section 5 of the LAA stating the location and area of land to be acquired. The notification shall be published in the official Gazette and displayed at a convenient and prominent location close to the land to be acquired. The notification shall include the address to which any objections should be submitted.

10.3.2.6 Period for Objections to Land Acquisition

During this period, any person with an interest in the land, or who may be affected by its acquisition is required to raise objections within 30 days of notification under Section 5 of the LAA. Objections shall be submitted in writing to the address provided on the Section 5 notification.

10.3.2.7 Period for Investigations into Land Acquisition

The Board of Revenue shall provide any person who has submitted a written objection (within 30 days of notification under Section 5 of the LAA) an opportunity for their objection to be heard, following which the Board of Revenue shall make further enquires (if required) and shall submit the case to the Commissioner along with their recommendation and details of enquires made.

10.3.2.8 Review of Objections by Commissioner

The Commissioner shall review any objections which are submitted by the Board of Revenue and make a final decision as to any further actions required. The decision of the Commissioner shall be considered final.

10.3.2.9 Section 6 Declaration

Following review of objections (if any) by the Commissioner, the Board of Revenue shall issue a declaration under Section 6 of the LAA stating the following:

- Location of land to be acquired
- Purpose of acquisition
- Area (size) of land to be acquired

- Location that the plan (map of acquisition) is available for inspection

This declaration shall be published in the official Gazette.

10.3.2.10 Preparation of Land Acquisition Plan

Following the Section 6 declaration, the Board of Revenue shall mark out the land to be acquired and prepare a plan (map) of the area to be acquired (if the plan has not already been prepared).

10.3.2.11 Section 9 Notification

The Board of Revenue shall place a notification on the land to be acquired stating the intention to acquire the land and notifying those with an interest in the land, or an objection to the measurements given in the section 6 declaration, that they must appear before the Board of Revenue at a time and place stated on the notification.

10.3.2.12 Period to Register Interest in Land

Following notification under Section 9, all those with an interest in the land to be acquired (including co-proprietor, sub-proprietor, mortgagee or tenant) are required to submit details of their interest (such as details of any rent and income from the land in the last three years) to the Board of Revenue. A period of no less than 15 days shall be allowed for people to register their interest.

10.3.2.13 Section 11 Enquiry

Should any objections be received during the 15 days following notification under Section 9 the Board of Revenue shall hold an enquiry to determine the true area of land, compensation due and to whom it is due. If no objections are received, there shall be no need to hold an enquiry.

10.3.2.14 Acquisition under Section 12

If no objections are received within 15 days on the Section 9 notification, the Board of Revenue shall take possession of the land. If objections are received, and an enquiry is held, the Board of Revenue shall file their findings and notify interested people of the final award and then take possession of the land.

10.3.2.15 Handover of Land to AWB

Following acquisition under Section 12, the Board of Revenue shall handover the land to the AWB.

10.3.2.16 Temporary Land Acquisition

The temporary acquisition of privately owned land (if required) shall be arranged between the contractor and the land owner. The contractor shall prepare and keep signed agreements for the temporary use of private land, detailing monetary rent and/or acts in kind, agreed with the land owner in exchange for the temporary use of his land. The agreements shall also state the condition of the land that is to be handed over to the land owner following use by the contractor. The contractor shall make copies of these agreements copies available at the request of SIDA or PIC.

10.3.2.17 Assist in Temporary Land Acquisition

In recognition of the risk of delays resulting from inefficient temporary acquisition, an officer of the AWB, with appropriate authority (delegated or otherwise), should be made available to the contractor, throughout the entire construction period to assist in the resolution of temporary land acquisition issues.

10.3.2.18 Supervision of Contractor

PIC shall be responsible for supervision of the contractor, and shall require the contractor to submit signed copies of agreements for temporary land acquisition wherever the contractor has used private land for the completion of the works.

10.3.3 Payment of Compensation

10.3.3.1 Prevent Encroachment into the Col

The AWB shall monitor the Col and provide eviction notices to any person(s) who have arrived, or do arrive, following the cut-off date provided in this RAP. The notice should inform the person(s) of the cut-off data and inform them that they shall not be eligible for compensation or assistance under this RAP. A copy of the grievance redress mechanism should also be provided to them.

10.3.3.2 Finalisation of Resettlement Budget

SIDA shall finalise the Resettlement budget, based on the findings of this RAP.

10.3.3.3 Notifications of PAPs

SIDA shall prepare a unique package for each project affected household which includes the following information:

- Inventory of losses of each PAP in the household
- Compensation to be paid to each PAP in the household
- The date, time and venue for the disbursement of compensation
- Detailing the requirement to present their National Identity Card (NIC) and submit a copy of their NIC on the date of disbursement.
- Detailing the requirement to obtain a stamp paper from the local court confirming the PAPs identity.
- For any PAP under the age of 18 or without a NIC, the PAP must provide an affidavit with photograph signed by the head of local government.
- The requirement to hold an open a bank account in order to receive compensation
- Details of the Grievance Redress Mechanism

These packages shall be distributed to the PAPs no later than one month prior to the date of disbursement of funds.

10.3.3.4 Transfer of Funds to Board of Revenue

Following finalisation of the budget, AWB shall transfer the resettlement funds to the Board of Revenue.

10.3.3.5 Disbursement of Compensation to PAPs

Disbursement of compensation shall be carried out in public by the Board of Revenue. The identity of PAPs shall be verified through his/her NIC (or signed affidavit in the case of eligible PAPs under 18 years of age) and stamp paper. Following verification, payment of compensation shall be paid through a crossed cheque to the name of the PAPs. Payments of less than PKR 5,000 may be made in cash.

10.3.3.6 Vacation of PAPs from Col

PAPs shall be given two months from the date of disbursement of compensation to vacate the Col (except in the case of permanent land acquisition). AWB shall be responsible for vacating the Col.

10.3.3.7 Period for Grievance Redress

The GRC shall be active to review any grievances received from the time at which PAPs are formally notified. The GRC shall aim to resolve all grievances prior to mobilisation of the contractor.

11. Monitoring and Evaluation

11.1 Introduction

The World Bank requires proper monitoring of implementation of the RAP and reporting on its effectiveness, including the disbursement of compensation, effectiveness of public consultation and participation activities. The objective of monitoring is to provide feedback on implementation of the RAP and to identify problems and successes as early as possible to allow timely adjustment to implementation arrangements. For these reasons, RAP monitoring and evaluation activities should be adequately funded, implemented by qualified specialists and integrated into the overall project management process.

Monitoring involves periodic checking to ascertain whether activities are progressing as per schedule, while evaluation is essential in reviewing the performance of the RAP against its original objectives. RAP implementation will be monitored both internally and externally.

SIDA being the proponent of the sub-project will be responsible for internal monitoring through the EMU and the Social Cell will prepare monthly progress report on the implementation of this RAP. In addition, SIDA shall engage a Resettlement Specialist to provide necessary technical assistance and monitor the implementation the RAP activities. The monitoring framework is given in Table 11.1.

11.2 Monitoring and Evaluation

Monitoring and evaluation is an important tool for managers to determine the status of any project. Only through a well-planned and organized system of monitoring and evaluation, the progress against the given targets for various components of a development project can be achieved. Such evaluation is possible through the review of quarterly and annual reports.

The purpose of RAP monitoring is to verify that:

- Actions and commitments described in the RAP are implemented fully and on time,
- Eligible affected people receive their full compensation entitlements within the agreed timeframe,
- RAP actions and compensation measures are effective in sustainably enhancing (or at least restoring) affected people's living standards and income levels,
- Complaints and grievances lodged by PAPs are followed up and that where necessary, appropriate corrective actions are taken up and implemented,
- If necessary, changes in RAP procedure are made to improve delivery of entitlements to PAPs,
- Progress of community structures reconstruction,
- Income restoration of PAPs;
- Progress of liaison with construction contractor for employment opportunities for PAPs, and
- Payments for loss of income.

11.3 Internal Monitoring

The RAP includes indicators and benchmarks for achievement of the objectives under the program, which can be categorized as under:

- Process indicators, which include project inputs, expenditures, staff deployments etc;
- Output indicators are results in terms of numbers of affected persons compensated and mitigated, additional assistance provided etc; and,

- Impact indicators related to the long-term effects/benefits of the sub-project on people's lives in the sub-project affected area.

The first two types of indicators, related to process and immediate outputs and results, will be monitored internally by SIDA. This information will be collected from the sub-project site and assimilated in the form of a monthly progress report to assess the progress and results of RAP implementation, and adjust the work progress, where necessary, in case of any delays or problems. Specific activities under RAP implementation that will be monitored are the following:

- Information campaign and consultation with PAPs
- Land acquisition
- Compensation for affected structures
- Status of compensation disbursement
- Status of restoration of livelihood employment opportunities for PAPs
- Grievances redress activities
- Sub-project employment

Field offices of SIDA will be responsible for monitoring the day-to-day RAP activities of the sub-project. A performance data sheet will be developed to monitor the sub-project at the field level. Monthly reports will be received from the concerned quarters.

Field level monitoring will be carried out through;

- Review of census information for all PAPs.
- Consultation and informal interviews with PAPs.
- Key informant interviews
- Community public meetings and
- In depth case studies

Monthly and quarterly reports will be submitted by the field offices and SIDA will be responsible for overall monitoring at sub-project level.

11.4 External Monitoring and Evaluation

M&EC shall be responsible for external monitoring of the RAP for this sub-project and monitoring of their implementation. They shall review and clear the RAP. The M&EC shall provide continuous feedback to SIDA, via PCMU, on the sub-project's performance and impact of its various components so that corrective actions could be taken in a timely manner. The M&EC activities are likely to cover:

- Any acquisition of public and private land and assets.
- Agreements reached and arrangements made for temporary acquisition of assets (such as temporary land acquisition).
- Impact of construction activities in sub-project area in particular on population and livestock as part of the evaluation of the RAP implementation
- Socio-economic impact and impact on the level of un-employment and household incomes in the sub-project areas as part of the evaluation of the RAP implementation
- Restoration of livelihoods as part of the evaluation of the RAP implementation

11.5 Monitoring Framework

SIDA will be responsible for implementation of RAP and will prepare monthly progress reports on RAP activities and consequently submit these to the WB for review.

Table 11.1: Monitoring Framework

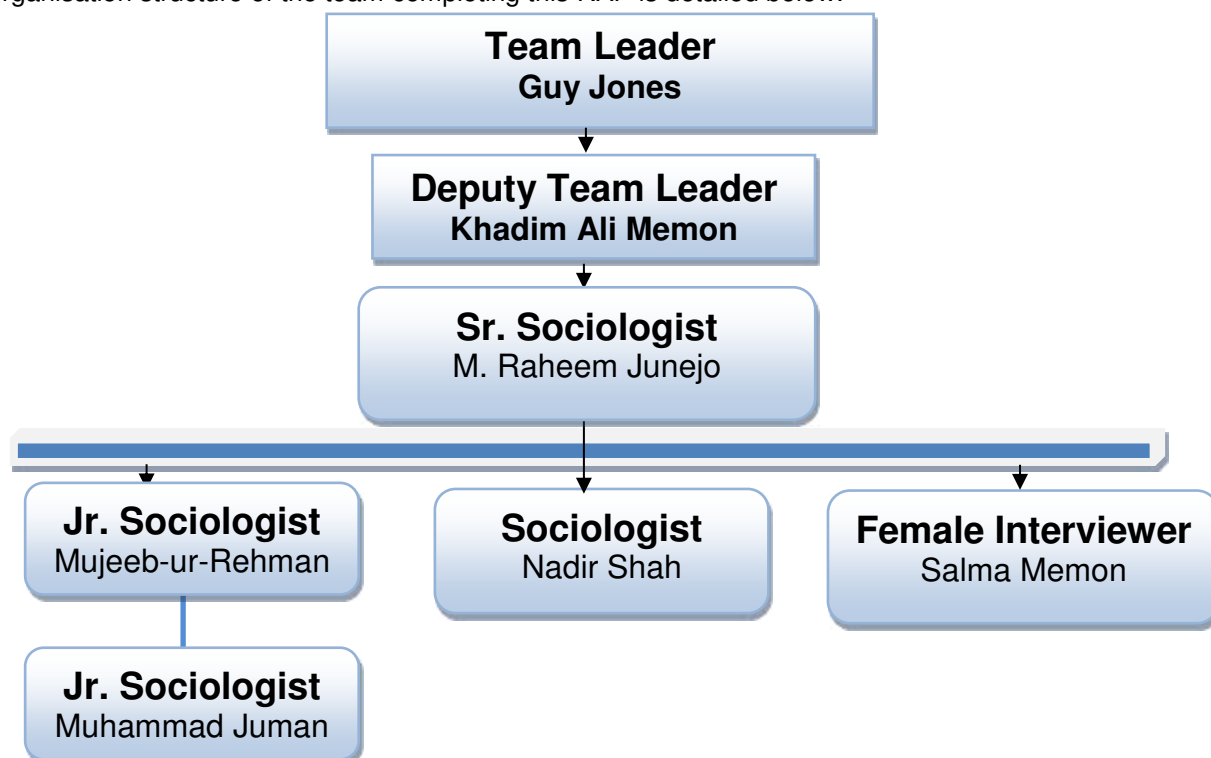
Aspect	Indicator	Verification
Affected Persons are compensated in a fair and mutually accepted manner for their damages by the project authorities.	The PAPs are correctly identified.	List of PAPs in resettlement plan List of PAPS updated by the SIDA staff and concerned AWB.
	Affected structures correctly recorded for compensation	List of PAPs in resettlement plan List of PAPS with affected structures updated by SIDA staff and concerned AWB
	Compensation / assistance for damaged structures is paid based upon on replacement cost	Receipts of payments made to project affected persons
Gender/Vulnerable	Gender /Vulnerable are correctly identified.	List of gender/vulnerable and their compensation is calculated according to World Bank Policy.
Loss of community structures	Affected structures correctly recorded for reconstruction / relocation	Community hand pumps replaced on embankments
Grievance Mechanism is in place	Social Complaint Register for checking Grievance Committee is in place	Social Complaint Register: Consultation with affected persons during internal and external monitoring
Resettlement Action Plan is effectively implemented	Staff training according to the monitoring plan	Training reports including list of trainees and types of training
	The skill and knowledge acquired during the training are effectively employed	Internal monitoring record. External monitoring visit reports
	Level of interaction and participation of stakeholders. Type of expertise and level of input and output of such expertise.	Stakeholders' suggestion incorporated. Social and Resettlement Expertise.
Local employment on the construction contract	Number of PAPs employed as unskilled labourers	Contractor's employment records
	Number of PAPs employed as skilled labourers	
	Local unskilled labourers by FO area (Ghotki AWB)	
	Local skilled labourers by FO area (Ghotki AWB)	
	Local unskilled labour employed form outside Ghotki AWB	
	Local skilled labour employed form outside GhotkiAWB	

Appendices

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Appendix A. Organization Chart of PIC Social Team

The organisation structure of the team completing this RAP is detailed below:



Appendix B. Additional Details of Survey Participants & Consultations

B.1. Detail of Officials Participated in Field Surveys

List of Officials Participating in Field Surveys				
Sr. No.	Name	Designation	Organization	Contact No.

B.1.1. List of SIDA Officials

1	Sajan Khan	Acting Manager CR	AWB	0333-7213384
2	Mohammad Younis	AMSM	AWB	0302-3086596
3	Ali Bux Mahar	AEN	Irrigation Department	0300-3117113
4	Abdul Majeed Naich	Sub Engineer	Irrigation Department	0302-3158152
5	Imtiaz Ali	Assistant Manager (SM)	AWB	0302-9722025
6	Saeed Ahmed Dahri	Assistant Engineer	SIDA	0302-3294485
7	Sadaruddin Mahar	Quantity Surveyor	SIDA	0301-3822156
8	M. Anwer Soomro	Assistant Engineer	AWB	0300-3136323
9	Ali Murad Mangi	SDO	AWB	0300-3126795
10	Ali Hassan Kolachi	Daroga	AWB	0302-3682488
11	Mohammad Bukhsh Butto	Canal Assistant	AWB	0333-7242393
12	Imdad Ali Mirani	Daroga	AWB	0300-3264773
13	Shah Nawaz Mazari	Baildar	AWB	0302-7949665
14	Sikiandar Ali Malik	Baildar	AWB	0301-3678602
15	Sain Shah	Baildar	AWB	0307-6347030

B.2. List of Officials Contacted during survey

Sr. No.	Name	Designation	Organization	Contact No.
List of Other Government Department Officials Contacted				
1	Habib Rehman Narejo	Directorate of Fisheries	DD Fisheries	0300-3076840
2	Abdul Majeed Chachar	Directorate of Fisheries	DD Fisheries	0333-2672147
3	Subhan Ali	Revenue	Assistant Commissioner	0301-8254425
4	Muhammad Saleem	Revenue	Supervisor	0300-3245638
5	Hidayatullah Chajro	DG Agri-Extension	DG Agri-Extension	022-9200060
6	Wali Muhammad Soomro	Agriculture Extension	Deputy Coordinator IPNM	0323-3944390
7	Tauqeer Ahmad Shaikh	Agriculture Extension	Agriculture Officer	0300-3057458
8	Ghulam Mustafa Nangraj	Agriculture Extension	PRO	0300-3036689
9	Mushtaq Ahmed Memon	Sui Southern Zone Hyderabad	Senior Executive	-
10	Amanullah Laghari	Sui Southern Zone Hyderabad	Field Engineer	-
11	Riaz Ahmed Dayo	Agriculture Ghotki	Executive District Officer	0300-9316898
12	Aftab Ahmed Soomro	Public Works Department	Director	022-9200087 0300-3210121

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13	Anwar Ali Siyal	AWB Ghotki	Director	0333-7155598
14	Mr. Tunveer Hussain Shah	Education Works Department	Sr. Engineer	-
15	Amir Azam Wasan	Education Works Department	Executive Engineer	0301-3362456
16	ShahNawaz	Irrigation Department	Baildar Ghotki	-
17	Zulfqr Ali Shah	Police Department	DIG Sukkur	-
18	Zulifqar Kilyar	Police Department	ASP Hyderabad	-

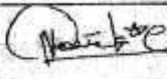

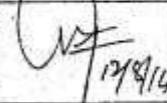
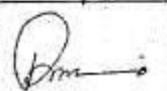

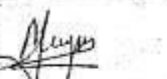
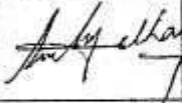
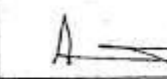
B.3. Contact Detail of Board of Revenue

Sr. No.	Name	Designation	Organization	Contact No.
1	Tahir Rauf Choudary	Assistant Commissioner	Revenue	0321-8800015
2	Abdul Rashed Golo	PA (Deputy Commissioner)	Revenue	0307-3260044,0300-3125307
3	Zamir Ahmed Kalhoro	Office Assistant	Revenue	0300-3196926
4	Rafaqat Hussain	-	Revenue	0300-6755007
5	Nasir Ahmed Khalidi	-	Revenue	03003178872

B.4. Meeting with Consultants Regarding Program Tendering Documents for Ghotki Feeder Canal

MEETING WITH CONSULTANTS REGARDING PROGRAM
TENDERING DOCUMENTS FOR GHOTKI FEEDER CANAL HELD ON
12.08.2014 AT DIRECTORATE, GHOTKI FEEDER CANAL, AREA
WATER BOARD, GHOTKI.

S.#	Name	Designation	Department / Agency	Signature
1	Syed Zahid Shah	Member AWP GFC AWP	GFC AWP	[Signature]
2	Anwar Ali Shah	Executive AWB Ghotki	GFC - AWP	[Signature]
3	Nazir Ahmed Khan	GMT SIDA Plants Area	SIDA	[Signature]
4	Mohammed Munir Malik	ASST Muzammar Div Muzammar	Irrigation	[Signature]
5	Faisal MORBAN	DPD WSIP	WSIP	[Signature]
6	M. Rahim Jais	Gr. Sociologist	MM P Consultants	[Signature]
7	Riaz Hussain Bhatti	Program Officer, WSIP	SIDA	[Signature]
8	REZWAN TUNIO	Asst. For For	SIDA	[Signature]
9	Mohd Ali Rana	Asst. Manager CSM GFC	GFC AWP	[Signature]

10	Sajjan Khan Ghanghoo	Acting Manager CR	GFCAWB	
11	Naveed Brander	PIC Design Support Eng.	PIC	
12	Nazir Ahmad Lashari	KE/PIC	PIC	
13	Rafiq Sultan Memon	Acting GM (FACR)	GFCAWB	
14	Muhammad Younis Saraj	AM & M	GFC ANSB	
15	Mushtaq Ali	AM S-M	GFC AWB	
16	Imtiaz Ali	AM (S-M)	GFC AWB	
17	Mahe Mahendrajah	CRE WSIP B1	PIC	
18				
19				
20				
21				

B.5. Grass root stakeholders Consultations

Sr. No.	Name	Designation	Contact No.
A. Ghotki Feeder Canal			
1	Mohammad Adrees Mazari	Owner	0333-8225081
2	Allahi Bux	Owner	0307-3136640
3	Ghulam Hassan	Owner	0334-7317777
4	Ghulam Rasool Mazari	Owner	0301-2942273
5	Miran Bux	Owner	0333-7247250
6	Sadam Hussain	Owner	0344-3194028
7	Mohammad Iqbal Mazari	Owner	0334-4176082
8	Shahbaz Ali Shah	Owner	-
9	Mohammad Hassan Chacher	Owner	0333-7580705
10	Imtiaz Ali	Owner	0334-2708214
11	Luqman Ali Khan	Tenant	-
12	Asif Ali Khan	Tenant	-
13	Rais Gulan	Owner	-
14	Tahir Solongi	Owner	0333-7241048
15	Abdul Ghafoor	Tenant	0333-3257982
16	Bashir Ahmed	Tenant	0334-5728939
17	Allah Wadyio Solongi	Tenant	0346-5772831
18	Ghafar Malik	Owner	-
19	Piyaro Khan Mahar	Owner	-
20	Dado Khan Chandio	Tenant	0303-2710381
21	Sahib Khan	Tenant	0300-3546512
22	Abdul Aziz Chandio	Owner	0301-5233668
23	Dil Ber Hussain Khokhar	Tenant	0303-3699017
24	Rasool Bux Mirani	Owner	0343-3988564
25	Imdad Ali Mirani	Tenant	0300-3264773
26	Ali Hassan	Tenant	0346-6958490
27	Imam Bux	Owner	0333-7253155
28	Abdul Majeed	Owner	0332-2701335
29	Shahzado Chujan	Tenant	0333-7242115
30	Fakhar Din Soomro	Tenant	0333-7329585
31	Pathan Malik	Tenant	-
32	Arabi Malik	Owner	0303-5237881
33	Mathan Khan	Tenant	0345-5933381
34	Sikandar Ali Abro	Tenant	-

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Sr. No.	Name	Designation	Contact No.
35	Riaz Ahmed Pitafi	Tenant	-
36	Amanullah Gill	Tenant	-
37	Mohammad Yousif Mazari	Tenant	-
38	Mohammad Ishfaq Kosh	Owner	0333-7242106
39	Abdul Majeed Kosh	Tenant	-
40	Abdul Rehman Kosh	Tenant	-
41	Kamal Din Supio	Tenant	-
42	Jam Munir Ahmed Dhar	Owner	-
43	Abdul Saleem Malik	Tenant	-
44	Dakan Khan Kosh	Tenant	-
45	Hazar Khan Malik	Tenant	-
46	Abdul Jabar Soomro	Tenant	-
47	Rustam Ali Lakhan	Tenant	-
48	Molla Bux	Tenant	-
49	Noor Mohammad Chandio	Tenant	-
50	Sultan Ahmed Sheikh	Tenant	-

B.6. Names of Sample Surveyed Villages

Names of Sample Villages			
Sr.#	Name of Village	Name of Canals	Location (RD)
1	Natho Khan Mazari	Ghotki Feeder Canal	Head (IP)
2	Jahan Mohammad Mazari	Ghotki Feeder Canal	RD11+000 (IP)
3	Ghalo Khan Chachar	Ghotki Feeder Canal	RD 22+000 (IP)
4	Khohi Malik	Ghotki Feeder Canal	RD 17+000 (NIP)
5	Rais Hultar Chachar	Ghotki Feeder Canal	RD 27+100 (IP)
6	Punhal Khan Mazari	Ghotki Feeder Canal	RD 29+000 (NIP)
7	Mureed Shakh	Ghotki Feeder Canal	RD 44+250 (NIP)
8	Saeed Abad Minrani	Ghotki Feeder Canal	RD 47+800 (IP)
9	Mohammad Azeem Bheyo	Ghotki Feeder Canal	RD 50+000 (NIP)
10	Tahir Solongi	Ghotki Feeder Canal	RD 72+000 (IP)
11	Mohammad Azeem Chandio	Ghotki Feeder Canal	RD 110+000 (IP& NIP)
12	Mandus Khan Mazari	Ghotki Feeder Canal	RD 120+500 (IP)
13	Haji Allah Jawayio Mochi	Ghotki Feeder Canal	RD 122+000 (NIP)

Appendix C. Survey Questionnaires and Data Collection Tools

ASSETS INVENTORY CENSUS QUESTIONNAIRE Water Sector Improvement Project (WSIP) SOCIAL AND ENVIRONMENT ASSESMENT STUDY

ID.No. _____

1. Location Name of Distry /Minor: _____

1.2 RD: _____

2. IDENTIFICATION

2.1 Name of Affected Person: _____

2.2 Father's Name: _____

2.3 Respondent NIC No: _____

2.4 Permanent Address of the Respondent:

Village: _____ Sub-Village _____ Town _____

Tehsil _____ District: _____

2.5 Category of Respondent: (Tick relevant)

<input type="checkbox"/> 1	Resident Land Owner	<input type="checkbox"/> 2	Absentee Land Owner	<input type="checkbox"/> 3	Tenant
<input type="checkbox"/> 4	Business Owner Operator	<input type="checkbox"/> 5	Business Tenant Operator	<input type="checkbox"/> 6	Encroacher
<input type="checkbox"/> 7	Squatter/ Informal Settlers	<input type="checkbox"/> 8	Other (Specify) _____		

2.6 Demographic Profile of Respondent (Children up to 10 yrs (#): M____, FM ____=T____)

Sr. No.	Relationship with Respondent (See codes)	Sex Male=1 Female=2	Age (Yrs.)	Education (See Codes)	Name of Business/ Occupation (See Codes)		Income from Business/ Occupation (Rs. / Annum)		Health Condition
					Main	Secondary	Main	Secondary	
1	SELF								
2									
3									
4									
5									
6									
7									
8									
9									
10									

Demographic Codes: a) **Relationship:** 1=Self, 2=Wife, 3=Son, 4=Daughter, 5=Father, 6=Mother, 7=Brother, 8=Sister, 9=Grand Father, 10=Grand Mother, 11=Sister in Law, 12=Nephew, 13=Father-in-Law, 14=Mother- in- Law, 15=Niece, 17=Uncle, 18=Aunty, 19=other

b) **Sex:** 1=Male, 2=Female(c).

c) **Education:** 1= Primary 2= Middle 3= Metric, 4= Intermediate, 5= BA/BSc, 6= MA/MSc, 7=LLB, 8=Engineer, 9=MBBS, 10=Technical Diploma, 11=Dars-e-Nizami, 12=Can Read Quran, 13= Can Insert Signatures, 14= Illiterate

d) **Occupations:** 1=Agriculturist, 2=Shopkeeper, 3= Trader, 4= Govt. Servant, 5=Private Servant, 6=Timber Labor, 7=General Labor, 8=Livestock, 9=Fishing, 10=Driver, 11=Health Related, 12=Educator/Teacher, 13=House-Maid, 14= House Wife, 15=Gone Abroad, 16=Gone out City within Pakistan

e) Health: **1= Good, 2= Average, 3= Poor**

3. DETAIL OF AFFECTED PROPERTY

3.1 Type of Affected Property (a) Land (b) Structure (c) Land & Structure

3.2 Offset from the Outer Edge of Existing RoW _____ Ft.

3.3 Located At (RS / LS) _____

3.4 In case of affected land provide following details:

Type of Land	Total Land Owned	Affected Land
--------------	------------------	---------------

Sindh Water Sector Improvement Project

	Acre (within and outside this village)	Width (ft.)	Length (ft.)
a) Agriculture			
b) Commercial			
c) Residential			
d) Grazing Land			
e) Forest Land			
f) Wasteland			
g) Others (specify)			

3.5 If Structure, specify category of Structure: (tick relevant)

(a).Commercial_____ (b).Residential_____ (c).Otaq (Guest House)_____

3.6 Information about Commercial Structures:

Structure	Size (ft)		Type of structure (codes)			Estimated cost (Rs.)	Year of construction	Affected structures (ft.)	Ownership documents Yes-----No---
	W	L	Roof	Wall	Floor				
Shop									
Cabin									
Adda									
Other									

3.7 Information About Residential Structure:

Structure	Sr. No	Size (ft)		Type of Structure			Estimated cost (Rs.)	Year of construction	Similar const. cost at present (Rs.)	Affected structures (ft) (WxL)	Owners hip status
		W	L	Roof	Wall	Floor					
Living Rooms	1										
	2										
	3										
	4										
Kitchen	1										
	2										
Bathroom/ Latrine	1										
	2										
Shed (Animal)	1										
	2										
Other	1										
	2										

Types of Structures (codes)

Walls: 1= Bricks + Cement + Cement Plaster 2= Bricks+Cement+Mud Plaster 3= Bricks+Mud+Mud Plaster 4= Mud Masonry

Roofs: 1= RCC 2= RBC 3= Tiles+T.Irons+Girders 4= Tiles+Wooden Planks 5= Asbestos/ Iron Sheets 6= Mud+Wood 7= Mud+Thatched

Floors: 1= Mosaic 2= Concrete with Plaster 3= Bricks+Cement 4= Mud

3.6 Details about Shareholders, if any:

Sr.No.	Name	Relationship with Respondent	Share in % age	Document Available (Yes/No)
1.				
2.				
3.				
4.				
5.				

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3.7 Details about Affected Crops:

Sr. No.	Crops	Area		Production (Kgs)	Total Costs (Rs.)	Qty Sold (Kgs)	Price (Rs./40Kgs)
		Marla	Kanal				
1.							
2.							
3.							
4.							
5.							

3.10 Details about other Affected Assets

Type of Asset	No.	Value (Rs.)	When Purchased / Installed (No. of Yrs.)
Peter Engine			
Hand Pump/Donkey Pump			
Electric Motor			
Tube Well			
Lined Watercourse			
Other (specify)			

4. COMPENSATION PREFERENCES

4.1 Do you have some other place to move? Yes _____ No _____

4.2 In case of Yes:

a) How far away from this place? _____ (km)

b) Do you own this place? Yes _____ No _____

5. IN CASE OF TENANT

5.1 Name of Owner: _____ Name of Occupation / Business _____

Av. Monthly Income (Rs.) _____ Av. Monthly Rent (Rs.) _____

5.2 Type of Tenancy a) Residential b) Commercial c) Agriculture Land

5.3 For how long you are at tenancy: _____ Month _____ Year

5.4 Have you made any investment: Yes _____ No _____

5.5 If yes, Provide following details:

Structure	Size (ft)		Estimated Cost (Rs.)	Year of Construction	Cost for Similar Replacement (Rs.)
	W	L			
House (Rooms)					
Shop					
Cabin					
Other(specify)					

7. COMMENTS / OBSERVATIONS

7.1 General Remarks of the Respondents

General Observations of Interviewers

Name of Interviewer _____ Dated _____

Sindh Water Sector Improvement Project

Socio-economic and Poverty Assessment Baseline Survey Water Sector Improvement Project (WSIP) SOCIO-ECONOMIC AND POVERTY ASSESSMENT BASE LINE SURVEY

IDENTIFICATION

Case No. _____

1.1 Name of Respondent _____ 1.2 Father's Name _____

1.3 Respondent NIC No: _____

1.4 Permanent Address of the Respondent:

Village: _____ Town _____ Tehsil _____ District: _____

1.5 Located At: Head / Middle / Tail (of the Distributary / Minor)

1.6 Category of Respondent: (Tick relevant)

1	Resident Land Owner	2	Absentee Land Owner	3	Tenant
4	Business Owner Operator	5	Business Tenant Operator	6	Encroacher
7	Squatter/ Informal Settlers	8	Other (Specify) _____	9	

1.7 Demographic Profile of Respondent (Children up to 10 yrs (#): M __, FM __=T __)

Sr. No.	Relationship with Respondent (See codes)	Sex Male=1 Female=2	Age (Yrs.)	Education (See Codes)	Name of Business/ Occupation (See Codes)		Income from Business/ Occupation (Rs. / Annum)		Health Condition
					Main	Secondary	Main	Secondary	
1	SELF								
2									
3									
4									
5									
6									
7									
8									
9									
10									

Demographic Codes:

- a) Relationship: 1=Self, 2=Wife, 3=Son, 4=Daughter, 5=Father, 6=Mother, 7=Brother, 8=Sister, 9=Grand Father, 10=Grand Mother, 11=Sister in Law, 12=Nephew, 13=Father –in-Law, 14=Mother- in- Law, 15=Niece, 16=Uncle, 17=Aunt, 18=Others
- b) Sex: 1=Male, 2=Female
- c) Education: 1= Primary 2= Middle 3= Matric, 4= Intermediate, 5= BA/BSc, 6= MA/MSc, 7=LLB, 8=Engineer, 9=MBBS, 10=Technical Diploma, 11=Dars-e-Nizami, 12=CanRead Quran, 13= Can Insert Signatures, 14= Illiterate
- d) Occupations: 1=Agriculturist, 2=Shopkeeper, 3= Trader, 4= Govt. Servant, 5=Private Servant, 6=Timber Labour, 7=General Labour, 8=Livestock, 9=Fishing, 10=Driver, 11=Health Related, 12=Educator/Teacher, 13=House-Maid, 14= House Wife, 15=Gone Abroad, 16=Gone out City within Pakistan
- e) Health Condition 1=Good, 2=Average, 3=Poor

2. LANGUAGE SPOKEN _____

3. Agriculture

3.1 Agricultural Implements

Sr. No.	Items	Nos.	Year of Purchase	Present Value
1	Tractor			
2	Fodder Cutter			

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3	Seed Drill			
4	Reaper Machine			
5	Thresher			
6	Spray Pump			
7	Scraper			
8	Others			

3.2 LAND UTILIZATION

Land	Acres	Kanal	Marla
Total Area owned			
Total Cultivated Area			
a. Area Under Rabi (winter) Crops			
b. Area Under Kharif (summer) Crops			
Uncultivated Area			

3.3 Cropping Pattern, Yield and Cost

Code	Crops	Area Sown		Production (Kgs)	Total costs incurred (Rs.)	Price (Rs/40kg)
		Acres	Kanal			
1	Rice					
2	Sugarcane					
3	Cotton					
4	Maize					
5	Millets					
6	Potato					
7	Fodder (kharif)					
8	Vegetables(kharif)					
9	Barley					
10	Wheat					
11	Oilseed					
12	Fodder (Rabi)					
13	Vegetables(Rabi)					
14	Orchards					
15	Other					

3.4 Source of Irrigation

1. Canal 2. Tube well 3. Canal + Tube well 4. Lift Irrigation 5. Barani 6. Other. _____

3.5 Prevalent Land Rate

Residential _____ Agriculture Land _____
Cultivable Waste _____ Other _____

3.6 Land Rent (Rs./ Year) _____

3.7 Tube well Water (Rs./Hr.) _____

4. POSSESSION OF HOUSEHOLD ITEMS

Item	No	Value (Rs.)	Item	No	Value (Rs.)
Refrigerator			Van/Pickup		
Deep Freezer			Gas Cylinder		
Television			VCR		
Electric Fan			Telephone/PTCL		
Electric Iron			Mobile		
Radio/Tape Recorder			Electric Water Pump		
Bicycle			Computer		
Motor Cycle/Scooter			Air Cooler		
Car			Other		

5. AVERAGE MONTHLY EXPENDITURE ON FOOD AND NON- FOOD ITEMS (RS.)

a. Food Items	Expenses	b. Non-Food Items	Expenses
Meat		Bath Soap	
Ghee		Washing Soap	
Sugar		Gas Cylinder	
Flour		Fuel Wood	
Legumes		Kerosene Oil	
Vegetables		Other	

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Species			
Tea Leaves			
Others			

c. Estimated Monthly Expenditure

1. Kitchen _____ 2. Others _____

5.. HOUSING CONDITIONS

5.1 Total Area of the House: _____ Kanal _____ Marla
 5.2 Year of Construction _____
 5.3 Present Value of the House (Rs.) _____
 5.4 Type of Structure a) Katcha _____ b) Pacca _____ c) Semi-Pacca _____

6. ACCESS TO SOCIAL AMENITIES (TICK)

Social Amenities	Available	Satisfactory	Non-Satisfactory	No Access
Electricity				
Gas				
Water Supply				
Telephone				
Sewerage/Drainage				
BHU				
School				

7. LIVESTOCK INVENTORY

Livestock	No.	Present Value (Rs.)
Buffaloes		
Cows		
Horse		
Donkey		
Camel		
Sheep/Goat		
Poultry		
Other		

9. WOMEN'S PARTICIPATION AND ROLE IN DIFFERENT HOUSEHOLD ACTIVITIES

9.1 Participation and Decision Making (Tick):

Activities

Household activities
 Child caring
 Farm/Crop activities
 Livestock rearing
 Sale & Purchase of properties
 Social obligations (marriage, birthday & other functions)
 Local representation (councilor/political gathering)

Participation Extent (%)	Decision Making Extent (%)

10. PERCEPTION OF RESPONDENT FOR ACTION ASSOCIATED WITH THE PROJECT

Possible impacts/effects of the Project	1	Increase	2	Decrease
Employment opportunities				
Industrial Development Opportunities				
Living standard				
Unemployment				
Income generating activities				
Electricity Supply Quality				
Mobility (Access to Resources)				
Other specify				

11. Does any NGO / FO Exist in your Area?

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Yes _____ No _____

If yes,

Name of NGO / FO _____

Are you member of this NGO / FO _____

Are you member of this NGO / FO _____

Role of NGO / FO _____

12. General Observations of Interviewers

Name of Interviewer _____ Date. _____

Village Profile
Water Sector Improvement Project

Serial No. _____

ENVIRONMENTAL AND SOCIAL ASSESSMENT STUDY

IDENTIFICATION:

- a. Name of Union Council: _____
- b. Name of Main Village: _____
- c. Total Number of Settlements in the Village: _____
- d. Name of Settlement / Chak of Scoping Session: _____
- e. Persons Attending the Scoping Session: Total _____ Males _____ Females _____

1. ETHNICITY AND POPULATION

Name of the Main Caste	Name of the Clan	Name of HEAD or Prominent Member of Caste / Clan	Total Household of Respective Caste	Population		
				Male	Female	Total
1						
2						
3						
4						
5						
6						
7						
8						

2. LANGUAGES SPOKEN IN THE VILLAGE:

- 2.1 Urdu _____ 2.2 Sindhi _____
- 2.3 Punjabi _____ 2.4 Others _____

NUMBER OF EDUCATED PERSONS IN THE SETTLEMENT / VILLAGE

Level	Male (No.)	Female (No.)	Total (M+F)
Primary Level			
Middle			
Metric			
Intermediate			
Graduation			
Post Graduation			
Others			

3. EDUCATION FACILITIES AVAILABLE IN THE SETTLEMENT / VILLAGE

Description	No. of institutions		Enrolment		No. of Teachers	
	Boys	Girls	Boys	Girls	Male	Female
Primary School.						
Middle School						
High School						
Inter College						
Degree College						
Madrasa						
Vocational						

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4. HEATH FACILITIES (Within Village)

Facility Within Village	Exists Yes=1 No=2	Whether Functioning Yes=1 No=2	Medical Staff Available (Nos.)	Nearby Similar facility (near of place)
Hospital				
Basic Health Unit				
Mother Child Care Centre				
Child Immunization Centre				

4. IS THERE ANY PRIVATE MEDICAL PRACTITIONER IN THE VILLAGE?

1 M.B.B.S (No.) _____

2 Homeopathic (No.) _____

3 Hakeem (No.) _____

4 Paramedical (No.) _____

5. DOES ANY CHILD BIRTH ATTENDANT AVAILABLE IN THE VILLAGE? YES ☐ No ☐

If yes, what type?

- 1) Doctor ☐
- 2) Others Specify ☐

6. OCCURRENCE OF DISEASES DURING LAST FIVE YEARS

1 Malaria 2 Typhoid 3 Cholera 4 HIV 5 Measles

6 Polio 7 T.B. 8 Diaphorea 9 Hepatitis 10 Others Specify

7. NUMBER OF HOUSES IN THE VILLAGE

1. Katcha _____ 2) Pacca _____ 3) Semi-Pacca _____ 4) Hut _____

8. AVAILABLE UTILITIES(No. of houses having facility)

8.1 Water supply system

Municipal Supply	1 <input type="text"/>	Spring	2 <input type="text"/>	Hand Pump,	3 <input type="text"/>
Electric Motor Pump,	4 <input type="text"/>	Water Channel	5 <input type="text"/>	Other,	6 <input type="text"/>
Water Carrying System					
Self Carried	1 <input type="text"/>	Tanker	2 <input type="text"/>	Donkey Back	3 <input type="text"/>
Tapped	4 <input type="text"/>	Other	5 <input type="text"/>		

Wastewater Disposal System:

Sewerage System, 1 Open Drains, 2 Soakage Pits 3

Latrine:

Fields 1 Within House, Flush System 2

Electricity:

Yes 1 No 2

Sindh Water Sector Improvement Project

9. ACCESS TO SOCIAL AMENITIES

Type of Amenity	Available in the Village 1= Yes 2= No	Available in Nearby Village / Locality 1= Yes 2= No	Distance from the Village (km)
Electricity			
Gas			
Fuel cylinder			
Telephone (Land Line)			
Post Office			
Bank			
Mosque			
Graveyard			
Other			

10. ACCESSIBILITY OF THE VILLAGE THROUGH:

1. Metalled Road _____ 2. Soling _____ 3. Katcha _____.

11. DISTANCE OF VILLAGE FROM ROAD / TRACK: ----- km

12. AVAILABILITY OF TRANSPORT IN THE VILLAGE?

Public Transport Yes _____ No _____

Private Transport Yes _____ No _____

13. OCCUPATIONAL STATISTICS (No of Households with Major Source of Income of the head of family)

1. Agriculturist _____
2. Shopkeepers _____
3. Transporters _____
4. Livestock Farmers _____
5. Employment (Public) _____
6. Employment (Private) _____
7. Daily wage Earners /Laborer _____
8. Poultry Farmers _____

14. LAND STATISTICS OF VILLAGE

Acres

Kanal

- | | | |
|-----------------------------------|-------|-------|
| 1) Cultivated Land | _____ | _____ |
| 2) Fallow Land | _____ | _____ |
| 3) Cultivable Waste Land (Banjar) | _____ | _____ |
| 4) GhairMumkin | _____ | _____ |
| 5) Total Land | _____ | _____ |

15. IRRIGATION WATER SOURCE AND AREA IRRIGATED

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	Acres	Kanal
1. Canal Only	_____	_____
2. Tube well Only	_____	_____
3. Canal+ Tube well	_____	_____
4. Barani	_____	_____

16 Do the farmers sell water to other farmers?

Yes ☐ No ☐

If yes why? _____

17. CONFLICT RESOLUTION MECHANISM

17.1 Who are the influential in your village?

1. Politician / Landlord ☐
2. Nazim /Councilor ☐
3. Religious Scholars ☐
4. Heads of Families ☐
5. Others(Specify) ☐

18.2 How the matters related to property, dispute about the control and consumption of the natural resources of the area are and matters of common interest settled?

- a) Punchyat ☐
- b) Head of the Caste ☐
- c) Nazim of the Area ☐
- d) Head of Families ☐

19. N UMBER OF ANIMAL IN THE VILLAGE

Animal type	Masculine		Feminine		Total
	Young Stock (upto 3 yrs)	Adult	Young Stock (upto 3 yrs)	Adult	
Buffalo					
Cow					
Sheep					
Goat					
Horses					
Donkeys					
Mules					
Others					

20. Pressing Needs of the ProjectArea:

21 COMMENTS/OBSERVATIONS OF THE INTERVIEWER:

Sindh Water Sector Improvement Project

Interviewed by: _____ Date: _____

LIST OF PARTICIPANTS/ RESPONDENTS

Sr. No.	Name	Father's Name	Village / Settlement
1)			
2)			
3)			
4)			
5)			
6)			
7)			
8)			
9)			
10)			

SINDH WATER SECTOR IMPROVEMENT PROJECT, PHASE – 1

Gender Data Collection

Year: _____

Questionnaire No. _____

1. Location /Identification

- a. Name of village _____
- b. Name of canal _____
- c. WC/minor/ distributary no. _____
- d. Taluka / Distt. _____

2. Biographical Data

- a. Name of respondent _____
- b. Father's/ Husband's name _____
- c. Marital status:
 - i. Married _____
 - ii. Single _____
 - iii. Widow _____
 - iv. Divorced _____
- d. Literacy status
 - i. Literate _____
 - ii. Illiterate _____
- e. If literate years of schooling/ level of education
 - i. Primary _____
 - ii. Middle _____
 - iii. High _____
 - iv. Graduate _____
 - v. Others _____
- f. Do you own any property in your name?
 - i. Yes _____
 - ii. No _____
- g. If yes, then
 - i. Land _____
 - ii. House _____
 - iii. Livestock _____
 - iv. Any other _____
- h. What is total house hold composition?
 - i. Boys _____
 - ii. Girls _____
 - iii. Total _____
- i. What are your specific household activities?
 - i. Food preparation _____
 - ii. Cleaning / housekeeping _____
 - iii. Manage house budget _____
 - iv. Caring of children _____
 - v. Any other, (specify) _____

Sindh Water Sector Improvement Project

j. What are your specific farm activities?

- i. Livestock rearing _____
- ii. Poultry farming _____
- iii. Milking of animals _____
- iv. Harvesting of crops _____
- v. Weeding _____
- vi. Vegetable sowing / harvesting _____
- vii. Any other (specify) _____

k. Role Of Women In Decision Making

- i. Are you involved in : _____
- ii. Marriage of children yes _____, No _____
- iii. Sale & purchase of property yes _____, No _____
- iv. Decision regarding schooling of children yes _____, No _____
- v. Decision to attend social factions yes _____, No _____

l. How many adult female including you are living in this house?

- i. 1 _____, 2 _____, 3 _____, 4 _____, 5 _____

m. Mention three basic facilities that women need most:

- i. _____
- ii. _____
- iii. _____

3. Health

a. Which of health facilities are available at your village?

- i. BHU _____
- ii. Dispensary _____
- iii. Private doctor _____
- iv. Hakeem _____

b. Which were the strongly hit diseases in last year?

- i. Diarrhea _____
- ii. Measles _____
- iii. Hepatitis _____
- iv. Typhoid _____
- v. Tuberculosis _____
- vi. Heart diseases _____

c. In case of emergency who takes you to hospital?

- i. Husband _____
- ii. Mother-in-law _____
- iii. Father in law _____
- iv. Alone _____

d. Do you face any problem / difficulty for transport while rushing towards hospital?

- i. Yes _____
- ii. No _____

e. If yes, then what would you prefer

- i. Have proper transport arrangement _____
- ii. To be reside at some proper place _____

f. What are the basic health needs or facilities which you want in your area?

- i. _____

Sindh Water Sector Improvement Project

- ii. _____
- iii. _____

4. Education

- a. Is there any school for girls in the village?
 - i. Yes _____ No _____
- b. If yes, then how many girls of village are studying in that school?
 - i. _____ %

5. Participation in FO/ WCA

- a. Did women aware about their land ownership?
 - i. Yes _____
 - ii. No _____
- b. How many members are there in FO/WCA? _____
- c. Status of membership
 - i. Ordinary membership yes _____, No _____
 - ii. Office bearers yes _____, No _____
- d. What was women contribution in FO/ WCA affairs?
 - i. _____
 - ii. _____
 - iii. _____
- e. Do you receive any training for this? Yes _____, No _____
- f. If yes, state the following

Month / year	Place	Type of Training	Organization / Project

- g. Do you think that participation of women in FO/ WCA affairs will make it successful?
 - i. Yes _____, No _____

- h. If yes ; state the reasons

- i. What are the suggestions for efficient and effective functioning of FO/WCA?

- j. What factors prohibit an average woman of this village to come forward and participate effectively in FA/WCA affairs at village level?

6. Income Generation

- a. Do you contribute to family income
 - i. Yes _____, No _____
- b. If yes, what is source of your income?

Sindh Water Sector Improvement Project

Sources	Annual Income (Rs)
i. Farm labour	_____
ii. Fire wood collection	_____
iii. Embroidery	_____
iv. Domestic Services	_____
v. Any other	_____

7. Skill Development

a. Do you think that different kind of trainings can enhance your income generating resources?

i. Yes _____, No _____

b. If yes, which training you would like to obtain?

i. Sewing/ stitching	_____
ii. Embroidery	_____
iii. Teaching	_____
iv. Handicrafts	_____
v. Any other (specify)	_____

8. Pressing needs of women in project area

Sr. no	Needs / facilities	To what extent in %age

Name of interviewer: _____

Appendix D. Details of Project Affected Persons and Assets

D.1. Details of Affected Structures of Ghotki Feeder Canal and Estimated Compensation Cost

Sr.	Name of Affected		Address					Poverty Status					Affected structure						
No.	Person	Father's Name	Name of FO	Deh/Village	Taluka	District	RD	Profession	Monthly Income (2014)	Monthly Income (2016)	Family Size	Per Capita Income	Status Above/ Below	Name of Structure	Type of Structure	Type of construction	Size of Structure (sft/rft)	Unit Rate (RS.)	Total Cost of Structure
Ghotki Feeder Canal (IP)																			
1	Shah Gul Mazari	Dost Mohammad	GFC		Ubaro	Ghotki	9+500(IP)	Govt. Servant	8,000	8,800	7	1,143	B	House	Room	Kacha	480	155	74,389
															Shed	Straw	810	263	212,779
															B/wall	Kacha	280	376	105,252
														Hand Pump	Hand Pump	Unit	1	7700	7,700
2	Wallan Mazari	Duno Mazari	GFC		Ubaro	Ghotki	14+000(IP)	Farming (Owner)	8,000	8,800	8	1,000	B	House	Room	Kacha	464	155	71,909
															B/wall	Kacha	120	376	45,108
														Hand Pump		Unit	1	7700	7,700
3	Pinyal Kosh	Kambhir Kosh	GFC		Ubaro	Ghotki	63+000(IP L/S)	General Labour	7,000	7,700	8	875	B	House	Room	Kacha	480	155	74,389
Ghotki Feeder Canal (NIP)																			
1	Faiz Mohammad	Habiburahman	GFC		Ubaro	Ghotki	7+900 (NIP)	Farming (Owner)	11,000	12,100	4	2,750	A	House	Room	Pacca	196	898	176,005
															Shed	Straw	216	263	56,741
														Hand Pump		Unit	1	7700	7,700
2	Ghulam Hyder	Abdul Karim	GFC		Ubaro	Ghotki	7+900(NIP)	Farming (Tenant)	7,000	7,700	4	1,750	B	House	Room	Kacha	168	155	26,036
3	Pir Bux	Mir Hazar	GFC		Ubaro	Ghotki	14+700(NIP)	General Labour	8,000	8,800	7	1,143	B	House	Room	Kacha	168	155	26,036
															B/wall	Kacha	60	376	22,554
4	Karim Bux Mirani	Sacho	GFC		Ubaro	Ghotki	14+500(NIP)	General Labour	5,000	5,500	4	1,250	B	House	Room	Kacha	391	155	60,596
															B/Wall	Kacha	570	376	214,263
														Hand Pump		Unit	1	7700	7,700
5	Bashir Ahmed	Raheem Bux	GFC		Ubaro	Ghotki	14+500(NIP)	General Labour	5,000	5,500	2	2,500	A	House	Room	Kacha	256	155	39,674
															B/Wall	Kacha	52	376	19,547
														Hand Pump		Unit	1	7700	7,700
6	Abdul Hakeem Malik	Mitha Malik	GFC		Ubaro	Ghotki	14+600(NIP)	General Labour	7,000	7,700	12	583	B	House	Room	Kacha	345	155	53,467
															B/Wall	Kacha	78	376	29,320
7	Imam Din Malik	Faiz Mohammad	GFC		Ubaro	Ghotki	14+900(NIP)	Small Business	8,000	8,800	12	667	B	Shop	Room	Pacca	170	898	152,657
															Room	Pacca	170	898	152,657
8	Mohammad Bux	Mohammad Waris Mazari	GFC	Khohi Malik	Ubaro	Ghotki	14+500(NIP)	General Labour	5,000	5,500	8	625	B	House	Room	Pacca	221	898	198,454
															B/Wall	Kacha	890	376	334,551
9	Shahmir Malik	Chalaka Malik	GFC	Khohi Malik	Ubaro	Ghotki	14+950(NIP)	Small Business	5,000	5,500	5	1,000	B	Shop	Wall	Pacca	220	1078	237,212
10	Sohnno Mazari	Khuda Bux	GFC		Ubaro	Ghotki	18+000(NIP)	Farming (Tenant)	5,000	5,500	6	833	B	House	Room	Kacha	286	155	44,323
															Animal Shed	Straw	294	263	77,231
														Hand Pump		Unit	1	7700	7,700
11	Nihal Mazari	Jalal Mazari	GFC		Ubaro	Ghotki	18+200(NIP)	General Labour	5,500	6,050	9	611	B	House	Room	Kacha	459	155	71,134
														Hand Pump		Unit	1	7700	7,700
12	Shah Mohammad	Qadir Bux Malik	GFC		Ubaro	Ghotki	19+200(NIP)	Farming (Tenant)	4,500	5,000	4	1,125	B	House	Room	Kacha	544	155	84,307
															Room	Straw	280	263	73,553
														Hand Pump		Unit	1	7700	7,700

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Sr.	Name of Affected		Address					Poverty Status					Affected structure						
No.	Person	Father's Name	Name of FO	Deh/Village	Taluka	District	RD	Profession	Monthly Income (2014)	Monthly Income (2016)	Family Size	Per Capita Income	Status Above/ Below	Name of Structure	Type of Structure	Type of construction	Size of Structure (sft/rft)	Unit Rate (RS.)	Total Cost of Structure
13	Ali Nawaz	Qadir Bux Malik	GFC		Ubaro	Ghotki	19+800(NIP)	Farming (Tenant)	5,000	5,500	9	556	B	House	Room	Straw	476	263	125,040
														Hand Pump		Unit	1	7700	7,700
14	Ghulam Fareed	Dil Murad Mazari	GFC		Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	8,000	8,800	14	571	B	House	Room	Semi Pacca	320	624	199,776
															Animal Shed	Straw	104	263	27,320
15	Dil Murad	Ghulam Fareed	GFC		Ubaro	Ghotki	27+300(NIP)	Farming (Owner)	15,000	16,500	23	652	B	House	Room	Kacha	270	155	41,844
															Animal Shed	Kacha	465	155	72,064
16	Hassan Ali Mazari	Dil Murad Mazari	GFC	Punhal Khan Mazari	Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	5,000	5,500	3	1,667	B	House	Room	Kacha	390	155	60,441
17	Yaqoob Mazari	Dil Murad Mazari	GFC		Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	5,000	5,500	11	454	B	House	Room	Kacha	480	155	74,389
															Animal Shed	Kacha	315	155	48,817
														Hand Pump		Unit	1	7700	7,700
18	Yaseen Mazari	Dil Murad Mazari	GFC		Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	3,000	3,300	4	750	B	House	Room	Kacha	210	155	32,545
19	Mir Muhammad	Dil Murad Mazari	GFC		Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	3,000	3,300	4	750	B	House	Room	Kacha	300	155	46,493
															B/Wall	Kacha	135	155	20,922
20	Sohbat Khan Mazari	Ghazi Khan	GFC		Ubaro	Ghotki	27+800(NIP)	Farming (Tenant)	9,000	9,900	10	900	B	House	Room	Kacha	378	155	58,581
														Otaq	Room	Kacha	300	155	46,493
														Hand Pump		Unit	2	7700	15,400
21	Nazir Ahmed Mazari	Ghulam Hyder	GFC	Punhal Khan Mazari	Ubaro	Ghotki	28+900(NIP)	Private Servant	6,000	6,600	5	1,200	B	House	Room	Pacca	255	898	228,985
															Room	Pacca	255	898	228,985
22	Wazir Ahmed Mazari	Ghulam Hyder	GFC	Punhal Khan Mazari	Ubaro	Ghotki	28+900(NIP)	Private Servant	6,000	6,600	9	667	B	House	Room	Semi Pacca	210	624	131,103
23	Mohib Ali Mazari	Gulam Mazari	GFC	Punhal Khan Mazari	Ubaro	Ghotki	28+800(NIP)	Private Servant	6,000	6,600	12	500	B	House	Room	Kacha	285	155	44,168
														Hand Pump		Unit	1	7700	7,700
24	Rehman mazari	Behram Mazari	GFC		Ubaro	Ghotki	29+000(NIP)	General Labour	5,000	5,500	4	1,250	B	House	Room	Kacha	320	155	49,592
															Animal Shed	Kacha	720	155	111,583
25	Ali Anwar mazari	Arz Mohammad	GFC		Ubaro	Ghotki	30+000(NIP)	Farming (Owner)	16,000	17,600	13	1,231	B	house	Room	Kacha	300	155	46,493
														Hand Pump		Unit	1	7700	7,700
26	Mohammad Ramzan	Bakhsh Khan Dasti	GFC		Ubaro	Ghotki	40+000(NIP)	Private Servant	8,000	8,800	8	1,000	B	House	Room	Semi Pacca	380	624	237,234
															Room	Kacha	180	155	27,896
															B/Wall	Kacha	52	155	8,059
														Hand Pump		Unit	1	7700	7,700
27	Balach Khan Dasti	Mohammad Ramzan	GFC		Ubaro	Ghotki	40+000(NIP)	Private Servant	6,000	6,600	7	857	B	House	Room	Kacha	320	155	49,592
															kitchen	Kacha	176	155	27,276
															B/Wall	Kacha	183	155	28,361
														Hand Pump		Unit	1	7700	7,700
28	Allah Rakhiyo	Mohammad Ramzan	GFC		Ubaro	Ghotki	40+100(NIP)	General Labour	5,000	5,500	7	714	B	House	Room	Kacha	224	155	34,715
															B/Wall	Kacha	165	376	62,023
														Hand Pump		Unit	1	7700	7,700
29	Nazir Ahmed	Mehan Khan Malik	GFC		Ubaro	Ghotki	40+200(NIP)	General Labour	5,000	5,500	7	714	B	House	Room	Kacha	272	155	42,154
															Animal shed	Kacha	100	155	15,498

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															B/Wall	Kacha	220	155	34,095
30	Veer Malik	Mian Khan	GFC		Ubaro	Ghotki	40+200(NIP)	General Labour	4,500	5,000	4	1,125	B	House	Room	Kacha	256	155	39,674
31	Malook malik	Mian Khan	GFC		Ubaro	Ghotki	40+200(NIP)	General Labour	6,000	6,600	7	667	B	House	Room	Kacha	336	155	52,072
															B/Wall	Kacha	220	155	34,095
														Hand Pump		Unit	1	7700	7,700
32	Kashmir Malik	Mian Khan	GFC		Ubaro	Ghotki	40+200(NIP)	General Labour	3,000	3,300	2	1,500	B	House	Room	Kacha	464	155	71,909
															B/Wall	Kacha	152	155	23,556
33	Hamal Mazari	Mohkum Din	GFC		Ubaro	Ghotki	41+000(NIP)	Farming (Tenant)	5,000	5,500	6	833	B	House	Room	Kacha	336	155	52,072
															Animal Shed	Kacha	45	155	6,974
34	Mir Hazar Mazari	Kheno Khan	GFC		Ubaro	Ghotki	41+000(NIP)	Farming (Tenant)	5,000	5,500	6	833	B	House	Room	Kacha	300	155	46,493
															B/Wall	Kacha	740	155	114,682
														Hand Pump		Unit	1	7700	7,700
35	Yousif Dasti	Ali Nawaz Dasti	GFC		Ubaro	Ghotki	41+500(NIP)	Farming (Tenant)	6,000	6,600	7	857	B	House	Room	Kacha	266	155	41,224
															B/Wall	Kacha	390	376	146,601
														Hand Pump		Unit	1	7700	7,700
36	Ali Nawaz Dasti	Machro khan	GFC		Ubaro	Ghotki	41+500(NIP)	Farming (Tenant)	8,000	8,800	11	727	B	House	Room	Kacha	285	155	44,168
															B/Wall	Kacha	425	376	159,757
37	Dagha Khan	Machro khan	GFC		Ubaro	Ghotki	41+500(NIP)	General Labour	5,000	5,500	8	625	B	House	Room	Pacca	285	898	255,925
															B/Wall	Kacha	480	376	180,432
														Hand Pump		Unit	1	7700	7,700
38	Karam Ali	Ghulam Ali Dasti	GFC		Ubaro	Ghotki	43+300(NIP)	General Labour	3,000	3,300	2	1,500	B	House	Room	Pacca	288	898	258,619
															Kitchen	Kacha	104	155	16,118
															B/Wall	Kacha	80	376	30,072
39	Abrar Ali	Gulam Ali Dasti	GFC		Ubaro	Ghotki	43+300(NIP)	General Labour	3,000	3,300	3	1,000	B	House	B/Wall	Kacha	370	376	139,083
40	Zahoor Ahmed	Nabi Bux	GFC		ubaro	Ghotki	43+500(NIP)	General Labour	7,500	8,250	7	1,071	B	House	Room	Pacca	240	898	215,516
41	Farooq	Nawab Khan	GFC		ubaro	Ghotki	43+500(NIP)	General Labour	6,000	6,600	3	2,000	B	House	Room	Pacca	196	898	176,005
42	Imam Ali	Bilawal Dasti	GFC		Ubaro	Ghotki	43+500(NIP)	General Labour	2,000	2,200	2	1,000	B	House	Room	Pacca	304	898	272,987
															Room	Pacca	168	898	150,861
43	Gulam Ali	Mohmmad Ramzan	GFC		Ubaro	Ghotki	43+300 to 43+500	Small Business	14,000	15,400	11	1,273	B	House	Room	Kacha	375	155	58,116
															Room	Pacca	304	898	272,987
															B/Wall	Kacha	1,116	376	419,504
														Shop	B/Wall	Kacha	540	376	202,986
															Room	Semi Pacca	308	624	192,285
Hand Pump		Unit	1	7700	7,700														
44	Abandoned*		GFC		Ubaro	Ghotki	43+500(NIP)							Shop	Room	Pacca	260	898	233,475
45	Mahboob Ali Memon	Kaoro Khan	GFC		Ubaro	Ghotki	43+500(NIP)	Small Business	7,000	7,700	6	1,167	B	Shop	Room	Pacca	231	898	207,434
46	Abandoned*		GFC		Ubaro	Ghotki	43+500(NIP)							Shop	Room	Pacca	240	898	215,516
47	Barkatullah Dasti	Faiz Mohammad	GFC		Ubaro	Ghotki	43+500(NIP)	General Labour	6,000	6,600	12	500	B	House	Room	Pacca	275	898	246,945
															Shed	Kacha	360	155	55,791
														Hand Pump		Unit	2	7700	15,400

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48	Ali Hasan Mirani	Rais Gudo	GFC		Ubaro	Ghotki	43+900(NIP)	Fishing	4,000	4,400	9	444	B	House	Room	Pacca	289	898	259,517
															Washroom(Wall)	Pacca	36	1078	38,817
															B/Wall	Kacha	1,270	376	477,392
														Hand Pump		Unit	1	7700	7,700
49	Sher Mohammad	Nabi Bux	GFC		Ubaro	Ghotki	44+00(NIP)	Fishing	5,000	5,500	10	500	B	House	Room	Kacha	195	155	30,220
															B/Wall	Kacha	420	376	157,878
														Hand Pump		Unit	1	7700	7,700
50	Muhammad Amin Dasti	Salar Khan	GFC		Ubaro	Ghotki	44+000(NIP)	General Labour	6,000	6,600	5	1,200	B	House	Room	Semi Pacca	154	624	96,142
															Kitchen	Kacha	150	155	23,246
															B/Wall	Kacha	100	376	37,590
														Hand Pump		Unit	1	7700	7,700
50	Durr Muhammad Mirani	Muhammad Hayat	GFC		Ubaro	Ghotki	44+100(NIP)	General Labour	3,000	3,300	9	333	B	House	Room	Kacha	374	155	57,961
															B/Wall	Kacha	1,000	376	375,900
														Hand Pump		Unit	1	7700	7,700
52	Muneer Ahmed Shah	Khair Shah	GFC		Ubaro	Ghotki	44+100(NIP)	General Labour	5,000	5,500	6	833	B	House	Room	Kacha	238	155	36,884
															B/Wall	Kacha	350	376	131,565
														Hand Pump		Unit	1	7700	7,700
53	Muhammad Mureed Mirani	Muhammad Eidan	GFC		Ubaro	Ghotki	44+150(NIP)	General Labour	5,000	5,500	7	714	B	House	Room	Straw	306	263	80,383
54	Abdul Ghani Mirani	Kalu Khan	GFC		Ubaro	Ghotki	44+150(NIP)	General Labour	5,000	5,500	8	625	B	House	Room	Pacca	240	898	215,516
															Washroom(Wall)	Pacca	36	1078	38,817
															B/Wall	Kacha	96	376	36,086
														Hand Pump		Unit	1	7700	7,700
55	Abandoned*		GFC		Ubaro	Ghotki	44+200(NIP)							House	Room	Semi Pacca	168	624	104,883
															Room	Pacca	224	898	201,148
															Washroom(Wall)	Semi Pacca	36	624	22,475
															B/Wall	Kacha	540	376	202,986
														Hand Pump		Unit	1	7700	7,700
56	Haji Iqbal Chaoudhry	Muhammad Rafiq	GFC		Ubaro	Ghotki	44+250(NIP)	General Labour	10,000	11,000	9	1,111	B	House	Room	Pacca	224	898	201,148
															Room	Pacca	224	898	201,148
															Room	Kacha	840	376	315,756
														Hand Pump		Unit	1	7700	7,700
57	Papu Pathan	Nawab Pathan	GFC		Ubaro	Ghotki	44+300(NIP)	General Labour	10,000	11,000	5	2,000	B	House	Room	Pacca	289	898	259,517
															Room	Pacca	289	898	259,517
															Room	Pacca	289	898	259,517
															Washroom(Wall)	Pacca	100	1078	107,824
															Washroom(Wall)	Pacca	100	1078	107,824
															B/Wall	Kacha	770	376	289,443
58	Ashraf Ali Qureshi	Bindu	GFC		Ubaro	Ghotki	44+350(NIP)	General Labour	5,000	5,500	9	555	B	House	Room	Kacha	196	155	30,375
															Washroom(Wall)	Semi Pacca	180	514	92,590

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															B/Wall	Kacha	350	155	54,242
59	Muhammad Achar	Piyaro	GFC		Ubaro	Ghotki	44+400(NIP)	General Labour	6,000	6,600	8	750	B	House	Room	Semi Pacca	208	624	129,855
															Room	Semi Pacca	128	624	79,911
															Washroom(Wall)	Pacca	64	1078	69,007
															B/Wall	Kacha	742	376	278,917
														Hand Pump	Unit	1	7700	7,700	
60	Muneer Ahmed Mirani	Muhammad Mithal	GFC		Ubaro	Ghotki	44+500(NIP)	General Labour	3,000	3,300	3	1,000	B	House	Room	Kacha	208	155	32,235
															Kitchen	Kacha	195	155	30,220
														Hand Pump	Unit	1	7694	7,694	
61	Muhammad Mor	Pir Bux Mirani	GFC		Ubaro	Ghotki	44+550(NIP)	General Labour	5,000	5,500	5	1,000	B	House	Room	Kacha	272	155	42,154
															Room	Semi Pacca	306	624	191,036
															Wall(House)	Kacha	432	376	162,389
															B/Wall	Kacha	350	376	131,565
														Hand Pump	Unit	1	7700	7,700	
62	Samundar Khan	Dawood Khan	GFC		Ubaro	Ghotki	44+600(NIP)	General Labour	8,000	8,800	15	533	B	House	Room	Kacha	272	155	42,154
															Washroom(Wall)	Kacha	72	376	27,065
															B/Wall	Kacha	720	376	270,648
														Hand Pump	Unit	1	7700	7,700	
63	Bhora Khan	Badal Khan Dasti	GFC		Ubaro	Ghotki	44+700(NIP)	General Labour	5,000	5,500	9	556	B	House	Room	Sami Pacca	238	624	148,584
															Room	Sami Pacca	238	624	148,584
															Room	Sami Pacca	168	624	104,883
															B/Wall	Kacha	480	376	180,432
														Hand Pump	Unit	1	7700	7,700	
64	Akbir Ali Dasti	Ghamno Dasti	GFC		Ubaro	Ghotki	44+750(NIP)	General Labour	5,000	5,500	9	556	B	House	Room	Sami Pacca	270	624	168,561
															Room	Kacha	360	155	55,791
															Washroom(Wall)	Kacha	64	376	24,058
														Hand Pump	Unit	1	7700	7,700	
65	Noor Din Mirani	M.Bachal Mirani	GFC		Ubaro	Ghotki	44+850(NIP)	Fishing	3,000	3,300	2	1,500	B	House	Room	Sami Pacca	270	624	168,561
															Room	Sami Pacca	270	624	168,561
														Hand Pump	Unit	1	7700	7,700	
66	Abondonned*		GFC		Ubaro	Ghotki	44+800(NIP)							House	Room	Sami Pacca	176	624	109,877
															Room	Sami Pacca	224	624	139,843
															B/Wall	Kacha	770	376	289,443
67	Shahnawaz Dasti	Lal Bux	GFC	Lal Bux Dasti	Ubaro	Ghotki	45+850(NIP)	General Labour	5,000	5,500	9	556	B	House	Room	Kacha	150	155	23,246
															B/Wall	Kacha	1,610	376	605,198
														Hand Pump	Unit	1	7700	7,700	
68	Allah Jawayo	Jamal din	GFC		Ubaro	Ghotki	46+100(NIP)	General Labour	4,000	4,400	4	1,000	B	House	Room	Kacha	238	155	36,884
														Hand Pump	Unit	1	7700	7,700	
69	Wahid Bux	Mehrab Dasti	GFC		Ubaro	Ghotki	74+200(NIP)	General Labour	4,000	4,400	7	571	B	House	Room	Kacha	240	155	37,194

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															B/Wall	Kacha	400	376	150,360
														Hand Pump		Unit	1	7700	7,700
70	Kandho Khan	M.Ismail Dasti	GFC		Ubaro	Ghotki	47+900(NIP)	Live Stock	4,000	4,400	4	1,000	B		Room	Kacha	216	155	33,475
71	M.Azeem Bhyo	Karam Khan	GFC	M.Azeem Bhyo	Ubaro	Ghotki	49+100(NIP)	Farming (Owner)	15,000	16,500	11	1,364	B	House	Room	Sami Pacca	306	624	191,036
														B/Wall	Sami Pacca	240	624	149,832	
														Hand Pump		Unit	1	7700	7,700
72	Faiz Mohammad	Karam Khan	GFC	M.Azeem Bhyo	Ubaro	Ghotki	49+100(NIP)	Farming (Owner)	10,000	11,000	9	1,111	B	House	Shed	Kacha	480	155	74,389
														B/Wall	Sami Pacca	220	514	113,166	
73	Mohammad Haleem	Karam Khan	GFC	M.Azeem Bhyo	Ubaro	Ghotki	49+100(NIP)	Farming (Owner)	15,000	16,500	18	833	B	House	Room	Sami Pacca	304	624	189,788
														Room	Sami Pacca	304	624	189,788	
														B/Wall	Sami Pacca	400	514	205,756	
														Hand Pump		Unit	1	7700	7,700
74	Ali Gohar	Kathoro	GFC		Ubaro	Ghotki	49+100(NIP)	Farming (Tenant)	8,000	8,800	11	727	B	House	Room	Straw	168	263	44,132
75	Ghulam Hussaul	M.Haleem	GFC		Ubaro	Ghotki	49+100(NIP)	Farming (Tenant)	3,000	3,300	5	600	B	House	Room	Straw	450	263	118,211
76	Muj Ali Mirani	Rahim Bux	GFC		Ubaro	Ghotki	51+00(NIP)	General Labour	4,000	4,400	6	667	B	House	Room	Kacha	442	155	68,499
														Wall(House)	Sami Pacca	400	514	205,756	
														Hand Pump		Unit	1	7700	7,700
77	Datto Mirani	Lal Bux	GFC		Ubaro	Ghotki	51+00(NIP)	General Labour	8,000	8,800	11	727	B	House	Room	Kacha	374	155	57,961
														Room	Kacha	432	155	66,950	
														Hand Pump		Unit	1	7700	7,700
78	Abondonned*		GFC		Ubaro	Ghotki	52+100(NIP)							Otaq	Room	Kacha	196	155	30,375
														Hand Pump		Unit	1	7700	7,700
79	Abondonned*		GFC		Ubaro	Ghotki	52+400(NIP)							House	Shed	Straw	140	263	36,777
														Shed	Straw	182	263	47,810	
80	Gul Mohammad Meerani	Koral	GFC		Ubaro	Ghotki	52+800(NIP)	General Labour	8,000	8,800	7	1,143	B	House	Room	Straw	216	263	56,741
81	Shahid	Noor Hasan	GFC		Ubaro	Ghotki	52+800(NIP)	General Labour	5,000	5,500	2	2,500	A	House	Room	Kacha	252	155	39,054
82	Chanesar Mirani	Nangar Khan	GFC		Ubaro	Ghotki	53+00(NIP)	Fishing	4,000	4,400	7	571	B	House	Room	Straw	408	263	107,178
83	Mir Khan Mirani	Tagyo	GFC		Ubaro	Ghotki	53+200(NIP)	General Labour	3,000	3,300	4	750	B	House	Room	Straw	225	263	59,105
														Hand Pump		Unit	1	7700	7,700
84	Dado Murani	Mir Khan	GFC		Ubaro	Ghotki	53+200(NIP)	Fishing	5,000	5,500	9	555	B	House	Room	Straw	225	263	59,105
85	Liaqat Ali Mirani	Mir Khan	GFC		Ubaro	Ghotki	53+00(NIP)	Fishing	5,000	5,500	9	555	B	House	Room	Straw	475	263	124,778
86	Akhtar Hussain	M.Hashim Mirani	GFC		Ubaro	Ghotki	53+00(NIP)	Fishing	4,000	4,400	5	800	B	House	Room	Straw	192	263	50,436
87	Umed Ali	Ahmed Khan	GFC	Mir Kosh	Ubaro	Ghotki	61+200(NIP)	General Labour	4,000	4,400	7	571	B	House	Room	Kacha	266	155	41,224
														Animal shed	Straw	150	263	39,404	
														B/Wall	Kacha	475	376	178,552	
88	Abdul Rehman Kosh	Ahmed Khan	GFC	Mir Kosh	Ubaro	Ghotki	61+200(NIP)	General Labour	5,000	5,500	7	714	B	House	Room	Kacha	288	155	44,633
														Animal Shed	Straw	192	263	50,436	
														Hand Pump		Unit	1	7700	7,700
89	Mohammad Adhyo	Budhyo Kosh	GFC	Mir Kosh	Ubaro	Ghotki	61+300(NIP)	General Labour	10,000	11,000	8	556	B	House	Room	Pacca	288	898	258,619

Sr.	Name of Affected		Address					Poverty Status					Affected structure						
No.	Person	Father's Name	Name of FO	Deh/Village	Taluka	District	RD	Profession	Monthly Income (2014)	Monthly Income (2016)	Family Size	Per Capita Income	Status Above/ Below	Name of Structure	Type of Structure	Type of construction	Size of Structure (sft/rft)	Unit Rate (RS.)	Total Cost of Structure
															Room	Kacha	168	155	26,036
														Hand Pump		Unit	1	7700	7,700
90	Baksho Kosh	Budho	GFC	Mir Kosh	Ubaro	Ghotki	61+450(NIP)	Farming (Tenant)	6,000	6,600	10	600	B	House	Room	Kacha	570	155	88,336
Grand Total												645							21,914,460

D.2. Details of Low Income Allowance Entitlements

Sr.	Name of Affected		Address					Poverty Status						Low Income allowance (PKR)
No.	Person	Father's Name	Name of FO	Deh/Village	Taluka	District	RD	Profession	Monthly Income (2014)	Monthly Income (2016)	Family Size	Per Capita Income	Status Above/ Below	
Ghotki Feeder Canal (IP)														
1	Shah Gul Mazari	Dost Mohammad	GFC		Ubaro	Ghotki	9+500(IP)	Govt.Servant	8,000	8,800	7	1,143	B	22,000.00
2	Wallan Mazari	Duno Mazari	GFC		Ubaro	Ghotki	14+000(IP)	Farming(Owner)	8,000	8,800	8	1,000	B	22,000.00
3	Pinyal Kosh	Kambhir Kosh	GFC		Ubaro	Ghotki	63+000(IP L/S)	General Labour	7,000	7,700	8	875	B	22,000.00
Ghotki Feeder Canal (NIP)														
4	Ghulam Hyder	Abdul Karim	GFC		Ubaro	Ghotki	7+900(NIP)	Farming(Tenant)	7,000	7,700	4	1,750	B	22,000.00
5	Pir Bux	Mir Hazar	GFC		Ubaro	Ghotki	14+700(NIP)	General Labour	8,000	8,800	7	1,143	B	22,000.00
6	Karim Bux Mirani	Sacho	GFC		Ubaro	Ghotki	14+500(NIP)	General Labour	5,000	5,500	4	1,250	B	22,000.00
7	Abdul Hakeem Malik	Mitha Malik	GFC		Ubaro	Ghotki	14+600(NIP)	General Labour	7,000	7,700	12	583	B	22,000.00
8	Imam Din Malik	Faiz Mohammad	GFC		Ubaro	Ghotki	14+900(NIP)	Small Business	8,000	8,800	12	667	B	22,000.00
9	Mohammad Bux	Mohammad Waris Mazari	GFC	Khohi Malik	Ubaro	Ghotki	14+500(NIP)	General Labour	5,000	5,500	8	625	B	22,000.00
10	Shahmir Malik	Chalaka Malik	GFC	Khohi Malik	Ubaro	Ghotki	14+950(NIP)	Small Business	5,000	5,500	5	1,000	B	22,000.00
11	Sohnno Mazari	Khuda Bux	GFC		Ubaro	Ghotki	18+000(NIP)	Farming(Tenant)	5,000	5,500	6	833	B	22,000.00
12	Nihal Mazari	Jalal Mazari	GFC		Ubaro	Ghotki	18+200(NIP)	General Labour	5,500	6,050	9	611	B	22,000.00
13	Shah Mohammad	Qadir Bux Malik	GFC		Ubaro	Ghotki	19+200(NIP)	Farming(Tenant)	4,500	4,950	4	1,125	B	22,000.00
14	Ali Nawaz	Qadir Bux Malik	GFC		Ubaro	Ghotki	19+800(NIP)	Farming(Tenant)	5,000	5,500	9	556	B	22,000.00
15	Ghulam Fareed	Dil Murad Mazari	GFC		Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	8,000	8,800	14	571	B	22,000.00
16	Dil Murad	Ghulam Fareed	GFC		Ubaro	Ghotki	27+300(NIP)	Farming(Owner)	15,000	16,500	23	652	B	33,000.00
17	Hassan Ali Mazari	Dil Murad Mazari	GFC	Punhal Khan Mazari	Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	5,000	5,500	3	1,667	B	22,000.00
18	Yaqoob Mazari	Dil Murad Mazari	GFC		Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	5,000	5,500	11	454	B	22,000.00
19	Yaseen Mazari	Dil Murad Mazari	GFC		Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	3,000	3,300	4	750	B	22,000.00
20	Mir Muhammad	Dil Murad Mazari	GFC		Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	3,000	3,300	4	750	B	22,000.00
21	Sohbat Khan Mazari	Ghazi Khan	GFC		Ubaro	Ghotki	27+800(NIP)	Farming (Tenant)	9,000	9,900	10	900	B	22,000.00
22	Nazir Ahmed Mazari	Ghulam Hyder	GFC	Punhal Khan Mazari	Ubaro	Ghotki	28+900(NIP)	Private Servant	6,000	6,600	5	1,200	B	22,000.00
23	Wazir Ahmed Mazari	Ghulam Hyder	GFC	Punhal Khan Mazari	Ubaro	Ghotki	28+900(NIP)	Private Servant	6,000	6,600	9	667	B	22,000.00
24	Mohib Ali Mazari	Gulam Mazari	GFC	Punhal Khan Mazari	Ubaro	Ghotki	28+800(NIP)	Private Servant	6,000	6,600	12	500	B	22,000.00

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Sr. No.	Name of Affected Person		Address					Poverty Status						
	Person	Father's Name	Name of FO	Deh/Village	Taluka	District	RD	Profession	Monthly Income (2014)	Monthly Income (2016)	Family Size	Per Capita Income	Status Above/ Below	Low Income allowance (PKR)
25	Rehman mazari	Behram Mazari	GFC		Ubaro	Ghotki	29+000(NIP)	General Labour	5,000	5,500	4	1,250	B	22,000.00
26	Ali Anwar mazari	Arz Mohammad	GFC		Ubaro	Ghotki	30+000(NIP)	Farming(Owner)	16,000	17,600	13	1,231	B	35,200.00
27	Mohammad Ramzan	Bakhsh Khan Dasti	GFC		Ubaro	Ghotki	40+000(NIP)	Private Servant	8,000	8,800	8	1,000	B	22,000.00
28	Balach Khan Dasti	Mohammad Ramzan	GFC		Ubaro	Ghotki	40+000(NIP)	Private Servant	6,000	6,600	7	857	B	22,000.00
29	Allah Rakhiyo	Mohammad Ramzan	GFC		Ubaro	Ghotki	40+100(NIP)	General Labour	5,000	5,500	7	714	B	22,000.00
30	Nazir Ahmed	Mehan Khan Malik	GFC		Ubaro	Ghotki	40+200(NIP)	General Labour	5,000	5,500	7	714	B	22,000.00
31	Veer Malik	Mian Khan	GFC		Ubaro	Ghotki	40+200(NIP)	General Labour	4,500	4,950	4	1,125	B	22,000.00
32	Malook malik	Mian Khan	GFC		Ubaro	Ghotki	40+200(NIP)	General Labour	6,000	6,600	7	667	B	22,000.00
33	Kashmir Malik	Mian Khan	GFC		Ubaro	Ghotki	40+200(NIP)	General Labour	3,000	3,300	2	1,500	B	22,000.00
34	Hamal Mazari	Mohkum Din	GFC		Ubaro	Ghotki	41+000(NIP)	Farming(Tenant)	5,000	5,500	6	833	B	22,000.00
35	Mir Hazar Mazari	Kheno Khan	GFC		Ubaro	Ghotki	41+000(NIP)	Farming(Tenant)	5,000	5,500	1	833	B	22,000.00
36	Yousif Dasti	Ali Nawaz Dasti	GFC		Ubaro	Ghotki	41+500(NIP)	Farming(Tenant)	6,000	6,600	7	857	B	22,000.00
37	Ali Nawaz Dasti	Machro khan	GFC		Ubaro	Ghotki	41+500(NIP)	Farming(Tenant)	8,000	8,800	11	727	B	22,000.00
38	Dagha Khan	Machro khan	GFC		Ubaro	Ghotki	41+500(NIP)	General Labour	5,000	5,500	8	625	B	22,000.00
39	Karam Ali	Ghulam Ali Dasti	GFC		Ubaro	Ghotki	43+300(NIP)	General Labour	3,000	3,300	2	1,500	B	22,000.00
40	Abrar Ali	Gulam Ali Dasti	GFC		Ubaro	Ghotki	43+300(NIP)	General Labour	3,000	3,300	3	1,000	B	22,000.00
41	Zahoor Ahmed	Nabi Bux	GFC		ubaro	Ghotki	43+500(NIP)	General Labour	7,500	8,250	7	1,071	B	22,000.00
42	Farooq	Nawab Khan	GFC		ubaro	Ghotki	43+500(NIP)	General Labour	6,000	6,600	3	2,000	B	22,000.00
43	Imam Ali	Bilawal Dasti	GFC		Ubaro	Ghotki	43+500(NIP)	General Labour	2,000	2,200	2	1,000	B	22,000.00
44	Gulam Ali	Mohmmad Ramzan	GFC		Ubaro	Ghotki	43+300 to 43+500	Small Business	14,000	15,400	11	1,273	B	30,800.00
45	Mahboob Ali Memon	Kaoro Khan	GFC		Ubaro	Ghotki	43+500(NIP)	Small Business	7,000	7,700	6	1,167	B	22,000.00
46	Barkatullah Dasti	Faiz Mohammad	GFC		Ubaro	Ghotki	43+500(NIP)	General Labour	6,000	6,600	12	500	B	22,000.00
47	Ali Hasan Mirani	Rais Gudo	GFC		Ubaro	Ghotki	43+900(NIP)	Fishing	4,000	4,400	9	444	B	22,000.00

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Sr. No.	Name of Affected Person		Address					Poverty Status						Low Income allowance (PKR)
	Person	Father's Name	Name of FO	Deh/Village	Taluka	District	RD	Profession	Monthly Income (2014)	Monthly Income (2016)	Family Size	Per Capita Income	Status Above/ Below	
48	Sher Mohammad	Nabi Bux	GFC		Ubaro	Ghotki	44+00(NIP)	Fishing	5,000	5,500	10	500	B	22,000.00
49	Muhammad Amin Dasti	Salar Khan	GFC		Ubaro	Ghotki	44+000(NIP)	General Labour	6,000	6,600	5	1,200	B	22,000.00
50	Durr Muhammad Mirani	Muhammad Hayat	GFC		Ubaro	Ghotki	44+100(NIP)	General Labour	3,000	3,300	9	333	B	22,000.00
51	Muneer Ahmed Shah	Khair Shah	GFC		Ubaro	Ghotki	44+100(NIP)	General Labour	5,000	5,500	6	833	B	22,000.00
52	Muhammad Mureed Mirani	Muhammad Eidan	GFC		Ubaro	Ghotki	44+150(NIP)	General Labour	5,000	5,500	7	714	B	22,000.00
53	Abdul Ghani Mirani	Kalu Khan	GFC		Ubaro	Ghotki	44+150(NIP)	General Labour	5,000	5,500	8	625	B	22,000.00
54	Haji Iqbal Chaoudhry	Muhammad Rafiq	GFC		Ubaro	Ghotki	44+250(NIP)	General Labour	10,000	11,000	9	1,111	B	22,000.00
55	Papu Pathan	Nawab Pathan	GFC		Ubaro	Ghotki	44+300(NIP)	General Labour	10,000	11,000	5	2,000	B	22,000.00
56	Ashraf Ali Qureshi	Bindu	GFC		Ubaro	Ghotki	44+350(NIP)	General Labour	5,000	5,500	9	555	B	22,000.00
57	Muhammad Achar	Piyaro	GFC		Ubaro	Ghotki	44+400(NIP)	General Labour	6,000	6,600	8	750	B	22,000.00
58	Muneer Ahmed Mirani	Muhammad Mithal	GFC		Ubaro	Ghotki	44+500(NIP)	General Labour	3,000	3,300	3	1,000	B	22,000.00
59	Muhammad Mor	Pir Bux Mirani	GFC		Ubaro	Ghotki	44+550(NIP)	General Labour	5,000	5,500	5	1,000	B	22,000.00
60	Samundar Khan	Dawood Khan	GFC		Ubaro	Ghotki	44+600(NIP)	General Labour	8,000	8,800	15	533	B	22,000.00
61	Bhora Khan	Badal Khan Dasti	GFC		Ubaro	Ghotki	44+700(NIP)	General Labour	5,000	5,500	9	556	B	22,000.00
62	Akbir Ali Dasti	Ghamno Dasti	GFC		Ubaro	Ghotki	44+750(NIP)	General Labour	5,000	5,500	9	556	B	22,000.00

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Sr. No.	Name of Affected Person		Address					Poverty Status						
	Person	Father's Name	Name of FO	Deh/Village	Taluka	District	RD	Profession	Monthly Income (2014)	Monthly Income (2016)	Family Size	Per Capita Income	Status Above/ Below	Low Income allowance (PKR)
63	Noor Din Mirani	M.Bachal Mirani	GFC		Ubaro	Ghotki	44+850(NIP)	Fishing	3,000	3,300	2	1,500	B	22,000.00
64	Shahnawaz Dasti	Lal Bux	GFC	Lal Bux Dasti	Ubaro	Ghotki	45+850(NIP)	General Labour	5,000	5,500	9	556	B	22,000.00
65	Allah Jawayo	Jamal din	GFC		Ubaro	Ghotki	46+100(NIP)	General Labour	4,000	4,400	4	1,000	B	22,000.00
66	Wahid Bux	Mehrab Dasti	GFC		Ubaro	Ghotki	74+200(NIP)	General Labour	4,000	4,400	7	571	B	22,000.00
67	Kandho Khan	M.Ismail Dasti	GFC		Ubaro	Ghotki	47+900(NIP)	Live Stock	4,000	4,400	4	1,000	B	22,000.00
68	M.Azeem Bhyo	Karam Khan	GFC	M.Azeem Bhyo	Ubaro	Ghotki	49+100(NIP)	Farming (Owner)	15,000	16,500	11	1,364	B	33,000.00
69	Faiz Mohammad	Karam Khan	GFC	M.Azeem Bhyo	Ubaro	Ghotki	49+100(NIP)	Farming(Owner)	10,000	11,000	9	1,111	B	22,000.00
70	Mohammad Haleem	Karam Khan	GFC	M.Azeem Bhyo	Ubaro	Ghotki	49+100(NIP)	Farming(Owner)	15,000	16,500	18	833	B	33,000.00
71	Ali Gohar	Kathoro	GFC		Ubaro	Ghotki	49+100(NIP)	Farming(Tenant)	8,000	8,800	11	727	B	22,000.00
72	Ghulam Hussaul	M.Haleem	GFC		Ubaro	Ghotki	49+100(NIP)	Farming(Tenant)	3,000	3,300	5	600	B	22,000.00
73	Muj Ali Mirani	Rahim Bux	GFC		Ubaro	Ghotki	51+00(NIP)	General Labour	4,000	4,400	6	667	B	22,000.00
74	Datto Mirani	Lal Bux	GFC		Ubaro	Ghotki	51+00(NIP)	General Labour	8,000	8,800	11	727	B	22,000.00
75	Gul Mohammad Meerani	Koral	GFC		Ubaro	Ghotki	52+800(NIP)	General Labour	8,000	8,800	7	1,143	B	22,000.00
76	Chanesar Mirani	Nangar Khan	GFC		Ubaro	Ghotki	53+00(NIP)	Fishing	4,000	4,400	7	571	B	22,000.00
77	Mir Khan Mirani	Tagyo	GFC		Ubaro	Ghotki	53+200(NIP)	General Labour	3,000	3,300	4	750	B	22,000.00
78	Dado Murani	Mir Khan	GFC		Ubaro	Ghotki	53+200(NIP)	Fishing	5,000	5,500	9	555	B	22,000.00
79	Liaqat Ali Mirani	Mir Khan	GFC		Ubaro	Ghotki	53+00(NIP)	Fishing	5,000	5,500	9	555	B	22,000.00
80	Akhtar Hussain	M.Hashim Mirani	GFC		Ubaro	Ghotki	53+00(NIP)	Fishing	4,000	4,400	5	800	B	22,000.00
81	Umed Ali	Ahmed Khan	GFC	Mir Kosh	Ubaro	Ghotki	61+200(NIP)	General Labour	4,000	4,400	7	571	B	22,000.00
82	Abdul Rehman Kosh	Ahmed Khan	GFC	Mir Kosh	Ubaro	Ghotki	61+200(NIP)	General Labour	5,000	5,500	7	714	B	22,000.00
83	Mohammad Adhyo	Budhyo Kosh	GFC	Mir Kosh	Ubaro	Ghotki	61+300(NIP)	General Labour	10,000	11,000	8	556	B	22,000.00
84	Baksho Kosh	Budho	GFC	Mir Kosh	Ubaro	Ghotki	61+450(NIP)	Farming(Tenant)	6,000	6,600	10	600	B	22,000.00
Grand Total														1,903,000

D.3. Details of Livelihood Allowance

Sr. No.	Name of Affected Person	Father's Name	Address		Taluka	District	RD	Profession	Poverty Status			Status Above/ Below	Affected structure					Livelihood Allowance	Three Months	Total Amount
			Name of FO	Deh/Village					Monthly Income	Family Size	Per Capita Income		Name of Structure	Type of construction	Size of Structure (sft/rft)					
Ghotki Feeder Canal (NIP)																				
1	Imam Din Malik	Faiz Mohammad	GFC		Ubaro	Ghotki	14+900(NI P)	Small Business	8,800	12	667	B	Shop	Pacca	170	11,000	3	33,000		
													Shop	Pacca	170					
2	Shahmir Malik	Chalaka Malik	GFC	Khohi Malik	Ubaro	Ghotki	14+950(NI P)	Small Business	5,500	5	1,000	B	Shop(Wall)	Pacca	220	11,000	3	33,000		
3	Gulam Ali	Mohmmad Ramzan	GFC		Ubaro	Ghotki	43+300 to 43+500	Small Business	15,400	11	1,273	B	Room	Kacha	375	15,400	3	46,200		
													Room	Pacca	304					
													B/Wall	Kacha	1,116					
													Shop(Wall)	Kacha	540					
													Shop	Semi Pacca	308					
													Hand Pump	Unit	1					
4	Mahboob Ali Memon	Kaoro Khan	GFC		Ubaro	Ghotki	43+500(NI P)	Small Business	7,700	6	1,167	B	Shop	Pacca	231	11,000	3	33,000		
5	Sohbat Khan Mazari	Ghazi Khan	GFC		Ubaro	Ghotki	27+800(NI P)	Farming (Tenant)	9,900	10	900	B	Otaq	Katcha	300	11,000	3	33,000		
Total																		178,200		

D.4. Household monthly expenditure

Sr. No.	Name of Affected Person	Father's Name	Address				Profession	Poverty Status					
			Name of FO	Deh/Village	Taluka	District		RD	Monthly Income (2014)	Family Size	Per Capita Income	Status Above/ Below	Monthly Expendi ture
Ghotki	Feeder Canal (IP)												
											12,000		
1	Shah Gul Mazari	Dost Mohammad	GFC		Ubaro	Ghotki	9+500(IP)	Govt.Servant	8,000	7	1,143	B	
											9,000		
2	Wallan Mazari	Duno Mazari	GFC		Ubaro	Ghotki	14+000(IP)	Farming(Owner)	8,000	8	1,000	B	
3	Pinyal Kosh	Kambhir Kosh	GFC		Ubaro	Ghotki	63+000(IP L/S)	General Labour	7,000	8	875	B	
Sub-Total									23,000	23			29,000
Ghotki	Feeder Canal (NIP)												

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Sr. No.	Name of Affected Person	Father's Name	Address		Taluka	District	RD	Profession	Poverty Status				Monthly Expenditure
			Name of FO	Deh/Village					Monthly Income (2014)	Family Size	Per Capita Income	Status Above/Below	
1	Faiz Mohammad	Habiburahman	GFC		Ubaro	Ghotki	7+900 (NIP)	Farming(Owner)	11,000	4	2,750	A	14,000
2	Ghulam Hyder	Abdul Karim	GFC		Ubaro	Ghotki	7+900(NIP)	Farming(Tenant)	7,000	4	1,750	B	7,000
3	Pir Bux	Mir Hazar	GFC		Ubaro	Ghotki	14+700(NIP)	General Labour	8,000	7	1,143	B	8,500
													8,000
4	Karim Bux Mirani	Sacho	GFC		Ubaro	Ghotki	14+500(NIP)	General Labour	5,000	4	1,250	A	7,000
5	Bashir Ahmed	Raheem Bux	GFC		Ubaro	Ghotki	14+500(NIP)	General Labour	5,000	2	2,500	A	9,000
6	Abdul Hakeem Malik	Mitha Malik	GFC		Ubaro	Ghotki	14+600(NIP)	General Labour	7,000	12	583	B	8,000
7	Imam Din Malik	Faiz Mohammad	GFC		Ubaro	Ghotki	14+900(NIP)	Small Business	8,000	12	667	B	6,500
8	Mohammad Bux	Mohammad Waris Mazari	GFC	Khohi Malik	Ubaro	Ghotki	14+500(NIP)	General Labour	5,000	8	625	B	7,000
9	Shahmir Malik	Chalaka Malik	GFC	Khohi Malik	Ubaro	Ghotki	14+950(NIP)	Small Business	5,000	5	1,000	B	6,500
10	Sohnno Mazari	Khuda Bux	GFC		Ubaro	Ghotki	18+000(NIP)	Farming(Tenant)	5,000	6	833	B	9,500
11	Nihal Mazari	Jalal Mazari	GFC		Ubaro	Ghotki	18+200(NIP)	General Labour	5,500	9	611	B	6,000
12	Shah Mohammad	Qadir Bux Malik	GFC		Ubaro	Ghotki	19+200(NIP)	Farming(Tenant)	4,500	4	1,125	B	9,500
13	Ali Nawaz	Qadir Bux Malik	GFC		Ubaro	Ghotki	19+800(NIP)	Farming(Tenant)	5,000	9	556	B	11,000
14	Ghulam Fareed	Dil Murad Mazari	GFC		Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	8,000	14	571	B	18,000
15	Dil Murad	Ghulam Fareed	GFC		Ubaro	Ghotki	27+300(NIP)	Farming(Owner)	15,000	23	652	B	6,000
16	Hassan Ali Mazari	Dil Murad Mazari	GFC	Punhal Khan Mazari	Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	5,000	3	1,667	A	9,600
17	Yaqoob Mazari	Dil Murad Mazari	GFC		Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	5,000	11	454	B	
18	Yaseen Mazari	Dil Murad Mazari	GFC		Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	3,000	4	750	B	4,000

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Sr. No.	Name of Affected Person	Father's Name	Address					Profession	Poverty Status				
			Name of FO	Deh/Village	Taluka	District	RD		Monthly Income (2014)	Family Size	Per Capita Income	Status Above/ Below	Monthly Expendi ture
19	Mir Muhammad	Dil Murad Mazari	GFC		Ubaro	Ghotki	27+300(NIP)	Farming (Tenant)	3,000	4	750	B	4,000
20	Sohbat Khan Mazari	Ghazi Khan	GFC		Ubaro	Ghotki	27+800(NIP)	Farming (Tenant)	9,000	10	900	B	10,500
21	Nazir Ahmed Mazari	Ghulam Hyder	GFC	Punhal Khan Mazari	Ubaro	Ghotki	28+900(NIP)	Private Servant	6,000	5	1,200	A	7,500
22	Wazir Ahmed Mazari	Ghulam Hyder	GFC	Punhal Khan Mazari	Ubaro	Ghotki	28+900(NIP)	Private Servant	6,000	9	667	B	10,000
23	Mohib Ali Mazari	Gulam Mazari	GFC	Punhal Khan Mazari	Ubaro	Ghotki	28+800(NIP)	Private Servant	6,000	12	500	B	9,000
24	Rehman mazari	Behram Mazari	GFC		Ubaro	Ghotki	29+000(NIP)	General Labour	5,000	4	1,250	A	6,000
25	Ali Anwar mazari	Arz Mohammad	GFC		Ubaro	Ghotki	30+000(NIP)	Farming(Owner)	16,000	13	1,231	A	16,000
26	Mohammad Ramzan	Bakhsh Khan Dasti	GFC		Ubaro	Ghotki	40+000(NIP)	Private Servant	8,000	8	1,000	B	8,500
27	Balach Khan Dasti	Mohammad Ramzan	GFC		Ubaro	Ghotki	40+000(NIP)	Private Servant	6,000	7	857	B	7,500
28	Allah Rakhiyo	Mohammad Ramzan	GFC		Ubaro	Ghotki	40+100(NIP)	General Labour	5,000	7	714	B	8,000
29	Nazir Ahmed	Mehan Khan Malik	GFC		Ubaro	Ghotki	40+200(NIP)	General Labour	5,000	7	714	B	8,000
30	Veer Malik	Mian Khan	GFC		Ubaro	Ghotki	40+200(NIP)	General Labour	4,500	4	1,125	B	5,000
31	Malook malik	Mian Khan	GFC		Ubaro	Ghotki	40+200(NIP)	General Labour	6,000	7	667	B	8,000
32	Kashmir Malik	Mian Khan	GFC		Ubaro	Ghotki	40+200(NIP)	General Labour	3,000	2	1,500	A	4,000
33	Hamal Mazari	Mohkum Din	GFC		Ubaro	Ghotki	41+000(NIP)	Farming(Tenant)	5,000	6	833	B	6,500

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Sr. No.	Name of Affected Person	Father's Name	Address					Poverty Status					
			Name of FO	Deh/Village	Taluka	District	RD	Profession	Monthly Income (2014)	Family Size	Per Capita Income	Status Above/ Below	Monthly Expenditure
													6,000
34	Mir Hazar Mazari	Khen0 Khan	GFC		Ubaro	Ghotki	41+000(NIP)	Farming(Tenant)	5,000	6	833	B	
													7,500
35	Yousif Dasti	Ali Nawaz Dasti	GFC		Ubaro	Ghotki	41+500(NIP)	Farming(Tenant)	6,000	7	857	B	
													10,000
36	Ali Nawaz Dasti	Machro khan	GFC		Ubaro	Ghotki	41+500(NIP)	Farming(Tenant)	8,000	11	727	B	
													8,500
37	Dagha Khan	Machro khan	GFC		Ubaro	Ghotki	41+500(NIP)	General Labour	5,000	8	625	B	
													4,000
38	Karam Ali	Ghulam Ali Dasti	GFC		Ubaro	Ghotki	43+300(NIP)	General Labour	3,000	2	1,500	A	
39	Abrar Ali	Gulam Ali Dasti	GFC		Ubaro	Ghotki	43+300(NIP)	General Labour	3,000	3	1,000	B	4,500
40	Zahoor Ahmed	Nabi Bux	GFC		ubaro	Ghotki	43+500(NIP)	General Labour	7,500	7	1,071	B	9,000
41	Farooq	Nawab Khan	GFC		ubaro	Ghotki	43+500(NIP)	General Labour	6,000	3	2,000	B	6,000
													3,500
42	Imam Ali	Bilawal Dasti	GFC		Ubaro	Ghotki	43+500(NIP)	General Labour	2,000	2	1,000	B	
													15,000
43	Gulam Ali	Mohmmad Ramzan	GFC		Ubaro	Ghotki	43+300 to 43+500	Small Business	14,000	11	1,273	A	
44	Abandoned*		GFC		Ubaro	Ghotki	43+500(NIP)						
45	Mahboob Ali Memon	Kaoro Khan	GFC		Ubaro	Ghotki	43+500(NIP)	Small Business	7,000	6	1,167	B	7,000
46	Abandoned*		GFC		Ubaro	Ghotki	43+500(NIP)						
													11,000
47	Barkatullah Dasti	Faiz Mohammad	GFC		Ubaro	Ghotki	43+500(NIP)	General Labour	6,000	12	500	B	
													10,000
48	Ali Hasan Mirani	Rais Gudo	GFC		Ubaro	Ghotki	43+900(NIP)	Fishing	4,000	9	444	B	
													9,500
49	Sher Mohammad	Nabi Bux	GFC		Ubaro	Ghotki	44+00(NIP)	Fishing	5,000	10	500	B	

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Sr. No.	Name of Affected Person	Father's Name	Address					Poverty Status					
			Name of FO	Deh/Village	Taluka	District	RD	Profession	Monthly Income (2014)	Family Size	Per Capita Income	Status Above/ Below	Monthly Expendi ture
												7,000	
50	Muhammad Amin Dasti	Salar Khan	GFC		Ubaro	Ghotki	44+000(NIP)	General Labour	6,000	5	1,200	A	8,000
50	Durr Muhammad Mirani	Muhammad Hayat	GFC		Ubaro	Ghotki	44+100(NIP)	General Labour	3,000	9	333	B	7,000
52	Muneer Ahmed Shah	Khair Shah	GFC		Ubaro	Ghotki	44+100(NIP)	General Labour	5,000	6	833	B	7,000
53	Muhammad Mureed Mirani	Muhammad Eidan	GFC		Ubaro	Ghotki	44+150(NIP)	General Labour	5,000	7	714	B	8,500
54	Abdul Ghani Mirani	Kalu Khan	GFC		Ubaro	Ghotki	44+150(NIP)	General Labour	5,000	8	625	B	
55	Abandoned*		GFC		Ubaro	Ghotki	44+200(NIP)						10,000
56	Haji Iqbal Chaoudhry	Muhammad Rafiq	GFC		Ubaro	Ghotki	44+250(NIP)	General Labour	10,000	9	1,111	B	9,000
57	Papu Pathan	Nawab Pathan	GFC		Ubaro	Ghotki	44+300(NIP)	General Labour	10,000	5	2,000	A	9,000
58	Ashraf Ali Qureshi	Bindu	GFC		Ubaro	Ghotki	44+350(NIP)	General Labour	5,000	9	555	B	8,000
59	Muhammad Achar	Piyaro	GFC		Ubaro	Ghotki	44+400(NIP)	General Labour	6,000	8	750	B	

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Sr. No.	Name of Affected Person	Father's Name	Address		Taluka	District	RD	Profession	Poverty Status				
			Name of FO	Deh/Village					Monthly Income (2014)	Family Size	Per Capita Income	Status Above/Below	Monthly Expenditure
													4,500
60	Muneer Ahmed Mirani	Muhammad Mithal	GFC		Ubaro	Ghotki	44+500(NIP)	General Labour	3,000	3	1,000	B	
													7,000
61	Muhammad Mor	Pir Bux Mirani	GFC		Ubaro	Ghotki	44+550(NIP)	General Labour	5,000	5	1,000	B	
62													14,000
	Samundar Khan	Dawood Khan	GFC		Ubaro	Ghotki	44+600(NIP)	General Labour	8,000	15	533	B	
													8,500
63	Bhora Khan	Badal Khan Dasti	GFC		Ubaro	Ghotki	44+700(NIP)	General Labour	5,000	9	556	B	
													10,000
64	Akbir Ali Dasti	Ghamno Dasti	GFC		Ubaro	Ghotki	44+750(NIP)	General Labour	5,000	9	556	B	
													4,000
65	Noor Din Mirani	M.Bachal Mirani	GFC		Ubaro	Ghotki	44+850(NIP)	Fishing	3,000	2	1,500	A	
66	Abondonned*		GFC		Ubaro	Ghotki	44+800(NIP)						8,000
67	Shahnawaz Dasti	Lal Bux	GFC	Lal Bux Dasti	Ubaro	Ghotki	45+850(NIP)	General Labour	5,000	9	556	B	
													6,000
68	Allah Jawayo	Jamal din	GFC		Ubaro	Ghotki	46+100(NIP)	General Labour	4,000	4	1,000	B	
													6,000
69	Wahid Bux	Mehrab Dasti	GFC		Ubaro	Ghotki	74+200(NIP)	General Labour	4,000	7	571	B	
70	Kandho Khan	M.Ismail Dasti	GFC		Ubaro	Ghotki	47+900(NIP)	Live Stock	4,000	4	1,000	B	5,000
													16,000
71	M.Azeem Bhyo	Karam Khan	GFC	M.Azeem Bhyo	Ubaro	Ghotki	49+100(NIP)	Farming (Owner)	15,000	11	1,364	A	

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Sr. No.	Name of Affected Person	Father's Name	Address					Profession	Poverty Status				Monthly Expenditure
			Name of FO	Deh/Village	Taluka	District	RD		Monthly Income (2014)	Family Size	Per Capita Income	Status Above/ Below	
72	Faiz Mohammad	Karam Khan	GFC	M.Azeem Bhyo	Ubaro	Ghotki	49+100(NIP)	Farming(Owner)	10,000	9	1,111	B	10,000
													20,000
73	Mohammad Haleem	Karam Khan	GFC	M.Azeem Bhyo	Ubaro	Ghotki	49+100(NIP)	Farming(Owner)	15,000	18	833	B	
74	Ali Gohar	Kathoro	GFC		Ubaro	Ghotki	49+100(NIP)	Farming(Tenant)	8,000	11	727	B	12,000
75	Ghulam Hussaul	M.Haleem	GFC		Ubaro	Ghotki	49+100(NIP)	Farming(Tenant)	3,000	5	600	B	6,000
													5,500
76	Muj Ali Mirani	Rahim Bux	GFC		Ubaro	Ghotki	51+00(NIP)	General Labour	4,000	6	667	B	
													10,000
77	Datto Mirani	Lal Bux	GFC		Ubaro	Ghotki	51+00(NIP)	General Labour	8,000	11	727	B	
78	Abondonned*		GFC		Ubaro	Ghotki	52+100(NIP)						
79	Abondonned*		GFC		Ubaro	Ghotki	52+400(NIP)						
80	Gul Mohammad Meerani	Koral	GFC		Ubaro	Ghotki	52+800(NIP)	General Labour	8,000	7	1,143	B	9,000
81	Shahid	Noor Hasan	GFC		Ubaro	Ghotki	52+800(NIP)	General Labour	5,000	2	2,500	A	5,000
82	Chanesar Mirani	Nangar Khan	GFC		Ubaro	Ghotki	53+00(NIP)	Fishing	4,000	7	571	B	7,500
													6,000
83	Mir Khan Mirani	Tagyo	GFC		Ubaro	Ghotki	53+200(NIP)	General Labour	3,000	4	750	B	
84	Dado Murani	Mir Khan	GFC		Ubaro	Ghotki	53+200(NIP)	Fishing	5,000	9	555	B	8,500
85	Liaqat Ali Mirani	Mir Khan	GFC		Ubaro	Ghotki	53+00(NIP)	Fishing	5,000	9	555	B	9,000
86	Akhtar Hussain	M.Hashim Mirani	GFC		Ubaro	Ghotki	53+00(NIP)	Fishing	4,000	5	800	B	8,000
													6,000
87	Umed Ali	Ahmed Khan	GFC	Mir Kosh	Ubaro	Ghotki	61+200(NIP)	General Labour	4,000	7	571	B	
													6,500
88	Abdul Rehman Kosh	Ahmed Khan	GFC	Mir Kosh	Ubaro	Ghotki	61+200(NIP)	General Labour	5,000	7	714	B	
													10,000
89	Mohammad Adhyo	Budhyo Kosh	GFC	Mir Kosh	Ubaro	Ghotki	61+300(NIP)	General Labour	10,000	8	556	B	
90	Baksho Kosh	Budho	GFC	Mir Kosh	Ubaro	Ghotki	61+450(NIP)	Farming(Tenant)	6,000	10	600	B	10,000
Sub-Total									515,000	622			696,100
Grand Total													725,100

D.5. Long Distance Transport Allowance

Sr. No	Name of Affected Person (head of household)	Location on embankment (RD)	Occupation	Resettlement Location	Relocation Distance	Long Distance Transport Allowance (PKR)
1	Nazir Ahmed	40+200(NIP)	General Labour	Baksha pur Village	65 km	77,000
2	Veer Malik	40+200(NIP)	General Labour	Baksha pur Village	65 km	77,000
3	Malook malik	40+200(NIP)	General Labour	Baksha pur Village	65 km	77,000
4	Kashmir Malik	40+200(NIP)	General Labour	Baksha pur Village	65 km	77,000
5	Hamal Mazari	41+000(NIP)	Farming (Tenant)	Baksha pur Village	65 km	77,000
6	Mir Hazar Mazari	41+000(NIP)	Farming (Tenant)	Baksha pur Village	65 km	77,000
7	Yousif Dasti	41+500(NIP)	Farming (Tenant)	Baksha pur Village	65 km	77,000
8	Ali Nawaz Dasti	41+500(NIP)	Farming (Tenant)	Baksha pur Village	65 km	77,000
9	Dagha Khan	41+500(NIP)	General Labour	Baksha pur Village	65 km	77,000
					Total	693,000

Appendix E. Details of Affected Farmers

Government Land (within ROW) Under Crop IP

RD	Location	Cultivate Land (Acres)	No. of Farmers
0 to 5	IP	10.75	Pahlwan Chacher and Chalo Chacher
9 to 11+500	IP	4.60	Allah Rakhio Malik
11+500 to 13+000	IP	1.40	Amanullah Khan Mazari
13+00 to 14+500	IP	1.00	Kati Khan Mazari
14+500 to 16+00	IP	2.75	Chalo Khan Mazari and Kati Khan Mazari
16+00 to 20+00	IP	7.00	Ghulam Nabi
20+00 to 22+00	IP	3.60	Daim Chacher
22+00 to 24+00	IP	3.90	Rais Gulan
24+500 to 25+00	IP	1.00	Hayat Mohd Chacher
25+800 to 27+300	IP	2.58	Chalo Khan Chacher
27+500 to 29+00	IP	1.89	Chalo Khan Chacher
29+00 to 37+00	IP	14.50	Sharif Chohan, Ghulam Farid
37+00 to 38+400	IP	2.73	Mohd Amin , Khameso Chacher
38+400 to 39+600	IP	2.75	Sachal Merani, Imam Bux Merani
39+600 to 42+150	IP	4.40	Haji Ahmed, Bux Malik, Allah Bachio Malik Dani Bux Malik, Hasan Malik, Gulab Malik
42+150 to 43+500	IP	3.00	Allah Divao Mirbahar, Wahid Bux , Munir Dahar, Haji Gullam Hyder Dashti cell: 0300-9813091
43+625 to 46+500	IP	3.96	Gulbahar , Haji Mohd Mosa, Gullam Farid, Bux Ali, Mohd Ali Merani
46+500 to 47+700	IP	2.47	Asgar ali & Kalo Merani
48+00 to 51+100	IP	3.90	Shaban Merani, Nasir Merani, Allah Bux Merani
51+00 to 61+300	IP	4.00	Shafi Mohd Kosh, Javed , Nihal, Ramzan, Hayat, Karim Bux , Nazir, Julian, Lal khan Kosh
61+400 to 62+800	IP	3.21	Abdul Jabar Kossh, Wahed ALI Solangi, Ayjaz ali Kosh , Nawab Ali Kosh
63+00 to 73+00	IP	28.70	Abdul Jabar Kossh, Nawab Khan Kosh, Bachal Kosh and Yaseen Solangi
97+00 to 110+00	IP	35.00	Asgar Jatoti, Jalal Jatoti, Wazir Jatoti, Gulan Gurgez
110+00 to 125+00	IP	39.60	Abid Ali Jatoti, Shahnawaz Baloch, Azam Balouch and Akhond Jatoti
Total Land (Acres)		188.69	

Government Land (within ROW) Under Crop NIP

RD	Location	Cultivate Land (Acres)	No. of Farmers
1+00 to 7+00	NIP	13.77	Parvez Mazari ,Shah Gul Mazari
7+00 TO 8+00	NIP	3.28	Faiz Mohd Mazari
8+00 TO 9+00	NIP	1.14	Gulam Hyder ,Pir bux Mazari
9+00 TO 10+500	NIP	2.58	Ibrahim Mazari
10+500 TO 15+00	NIP	12.91	Wallan Mazari, Karim Bux Mazari
19+00 to 25+500	NIP	2.38	Nihal Mazari ,Ali Mohd Mazari ,Karim Bux Mazari
25+500 43+500	NIP	8.00	Ali Gohar Mazari,Ibrahim Mazari,Muhib Mazari,Nazir Mazari,Abdul Sattar Mazari, Yar Ali Mazari,Yaseen Merani,Abbas Chachar,Allah Diwao,Haq Nawaz,Malook Merani,M.Qasim Merani,Fakir merani,Khambro Merani,Hazoor Bux Merani,Lalo Gulam Rasool Pathan,Akbar Dashti,Ghullam Ali Dashti
46+800 to 49+600	NIP	2.57	Sarwar Merani,Sozal Khan Dashti
63+500 to 70+00	NIP	12.00	Gulam Farid Solangi ,Ariz Mohd Chacher
97+00 to 100+00	NIP	2.41	Abdul Karim Dhondho ,Gullam Qadir Dhondho
100+00 to 110+00	NIP	28.70	Mohd Youns Gurgez,Nawab Khan Dhondho,
110+00 to 115+800	NIP	16.64	Piyar Ali Dhondho,Raham ali and Nawaz ali Dhondho,Khair Mohd Solangi
117+200 to 117+300	NIP	0.5	Mustaq Solangi
117+500 125+000	NIP	12.00	Karam ali Dhondho,Ashiq ali Gurgez,Abdul Gafioor Gurgez ,Shahnawaz Gurgez,allah wario Solangi
Total Land (Acres)		118.88	

Appendix F. Grass Root Consultations

The grass root consultations were carried out at the following sub-project locations:

Details of Grass Root Consultation with respect to Sub-project Components are given below:

Location	Names and No. of Participants	Key Issues Discussed
RD 1+500 Place: Village Natho Khan Mazari at RD 1+000 (IP) Ghotki Feeder Consultation Date: 16-08-2014 Total No. of Participants: (23)	PIC 1 Mohammad Raheem 2 Ishfaq Ali Makhdoom 3 Mujeeb-ur-Rahman 4 MohammadJuman 5 Shadab Bughio 6 Sajjad Veesar 7 Anwar Solangi Community 1.Sadiq Ali Mazari 2.Ameer Bux Mazari 3.Abdul Quyum Mazari 4.Sikander Ali Mazari 5. Mahboob Ali Kosh 6. Anwar Ali Malik 7.Munwar Solagi 8.Sikandar Ali 9.Ali Bux 10.Kandero 11.Abul Majeed 12.Lalan Khan 13.Manzoor Ahmed 14.Mohammad Hajan 15.Hasan Ali 16.Fida Hussain	The Aims & objectives of Consultative Meeting. Mr.Mohammad Raheem, Sr: Sociologist (PIC), briefed about the proceeding under WSIP project for rehabilitation will be carried out under Contract WSIP/B1/GF/01 The participants were informed in the consultative meeting about the civil works, those will be carried out under Contract WSIP/B1/GF/01 Govt: of Sindh with the help of Govt: of Pakistan and world Bank to improve the water supply efficiency of the Ghotki Feeder. Q1 What are your opinion/suggestion about the canal works? Ans: Canal works shall be carried put to increase water in the off taking canal. Canal created W/L and salinity in head reaches of the canal Q: How to control the water logging and salinity. Ans: Canal banks shall be lined; silt shall be removed for the bed of canal. Q: Canal Head Regulators will be reconstructed to pass more water Ans: Head Regulators shall be constructed to increase flow of water Q: For the construction of new Head Regulators private land may be required shall you people cooperate to get some private land? Ans: We are small land owner and will not provide land .Govt: shall pay cost of land according to the market rates. Q; Construction some house of Head Regulators, strengthen the canal banks the unauthorised structures will be damage? Ans: We are poor and have no land to establish our housed our housed shall be protected. Q: During Construction works, some houses / shops and religious structures on the canal banks will be affected? Ans: We shall cooperate with contractor to carryout the canal works. Q: During the desilting of canal a huge quantity of silt will be removed from canal where we put the silt? Ans: We all jointly find the way to dispose the silt there are some depression on the outer side of canal and spoil may be dispose of there. Q: Canal berms will be cut, how will the contractor do the works where the houses /shops are constructed on the berm of the canal? Ans: When there is no space you shall line the canal bank. Stone pitching shall be carried out on the banks of canal. Killa bushing shall be carried out to avoid the houses, shops and religious structures. Assure the employment of local community in project works Construction and rehabilitation works may be carried out by International Contractor, so that to maintain the quality

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Location	Names and No. of Participants	Key Issues Discussed
		<p>of work</p> <p>Construction work shall be carried out due to closure of canal</p> <p>Project shall provide education and health facilities in the command of Ghotki canal.</p>
<p>Place:Villag Hullar Chachar RD-25+000</p> <p>Consultation Date: 17-08-2014</p> <p>Total No. of Participants: 27</p>	<p>PIC</p> <ol style="list-style-type: none"> 1.Mohammad Raheem 2 Ishfaq Ali Makhdoom 3. Mujeeb-ur-Rahman 4. MohammadJuman 5. Shadab Bughio 6. Sajjad Veesar 7. Anwar Solangi <p>Community</p> <ol style="list-style-type: none"> 1.Fayaz Ahmed Chachar 2.Raza Mohammad Chachar 3.Asif Ali Chachar 4.Shah Gul 5.Sadaqat Ali 6.Nazeer Ahmed Chachar 7.Shahnawaz Meerani 8.Haqnawaz Soomro 9.Allah Bux Chachar 10.Mukhtiar Chachar 11.Asiam Chachar 12.Wali Mohammad 13.Shah Gul 14.Nabi Bux 15.Khanan 16.Fazal Ali 17Aftab Ahmed 18.Faheem Chachar 19.Abdul Khaliq 20.Raise Ahmed 	<p>The Aims & objectives of Consultative Meeting. Mr.Mohammad Raheem, Sr: Sociologist (PIC), briefed about the proceeding under WSIP project for rehabilitation will be carried out under Contract WSIP/B1/GF/01</p> <p>The participants were informed in the consultative meeting about the civil works, those will be carried out under Contract WSIP/B1/GF/01</p> <p>Objectives of the consultative meeting were to brief the participants about the civil works, those will be carried out under Contract WSIP/B1/GF/01</p> <ol style="list-style-type: none"> 1.Canal created w/l desilting 2. Stone pitching shall be carried out the canal banks. 3. Canal bank is raised about 6 to 10 feet, it is urgently required desilting. 4. Canal bed and banks shall be lined from RD-0 to RD-63. 5. Regarding the disposal of silt from canal, we will jointly find the place to dispose the excavated material. 6. Avoid to damage the housed/shops. 7. Religious structure shall be avoided to damage. 8. There are gaps between to dispose the silt. 9. We will not vacate the houses where we shall go, who will pay the construction cost.
<p>Place:Mureed Shakh RD-43</p> <p>Consultation Date: 12-08-2014</p> <p>Total No. of Participants: 47</p>	<p>PIC</p> <ol style="list-style-type: none"> 1.Mr Mahe (MML) 2.Mr Neil (MML) 3.Mr Nazeer Ahmed Lashari (PIC) 4.Mohammad Raheem(PIC) 5. Mujeeb-ur-Rahman(PIC) 6. MohammadJuman (PIC) 7.Ishfaq Ali Makhdoom (PIC) 8.Sajjad ALI Veesar (PIC) 9.Shadab Bughio (PIC) 10.Anwar Ali Solangi (PIC) 11.Tariq Bin Asad (PIC) 12.Tariq Abbasi (PIC) 	<p>The Aims & objectives of Consultative Meeting. Mr.Mohammad Raheem, Sr: Sociologist (PIC), briefed about the proceeding under WSIP project for rehabilitation will be carried out under Contract WSIP/B1/GF/01</p> <p>The participants were informed in the consultative meeting about the civil works, those will be carried out under Contract WSIP/B1/GF/01</p> <p>Objectives of the consultative meeting were to brief the participants about the civil works, those will be carried out under Contract WSIP/B1/GF/01</p> <ol style="list-style-type: none"> 1. Construction works shall be carried out in a way to avoid houses. 2. It is very difficult to shift from here we have no other place to live. 3. For desilting there are some gaps in between houses,

Sindh Water Sector Improvement Project

Location	Names and No. of Participants	Key Issues Discussed
	13.Aurangzeb Almani (PIC) 14.Imtiaz Ali Odho (AWB) 15.Sajan Ghanghro (AWB) 16.Imdad Meerani (Irri) 17.Sikandar Mazari (Irri) 18.Sajan Khan (AWB) 19.Mohammad Younis (AWB) 20. Ali Bux Mahar (AEN Irri:) 21.Abdul Majeed Sub:eng (Irri:) Community 1.Mohammad Ismail Meerani 2.Kora Dasti 3.Mohammad Ali 4.Akhtrar Hussain 5.Nazeer Ahmed Beldar 6.Shahnawaz (Chowkidar) 7.Ghulam Haider (Landlord) 8.Ashiq Hussain Meerani 9.Haleemullah 10.Dasti(Shopkeeper) 11.Karam Ali Dasti 12.Abdul Latif Dasti 13.Shahzado Dasti 14.Khuda Bux Dasti 15.Hakim ALI Dasti 16.Shaman Ali Meerani 17.Ghulam Ali 18.Mohammad Amin Dasti 19.Zahoor Ahmed Meerani 20.Ghulam Farid (Revenue) 21.Mohammad Tariq 22.Mohammad Sharif Malik 23.Sher Mohammad Meerbhar 24.Mataro Khan Gopang 25.Syed Suleman Shah 26.Iqbal Ahmed Malik	where you put the silt material. 4. Berms of the canal shall be strengthening by making juck work. 5. We shall provide a way for machinery during construction work. 6. Excavated material shall be placed in right of way. 7. Crop compensation shall be given to damage the crop in right of way. 8. If some structure will be affected during construction we shall coordinate to with Irrigation Department. 9. Local contractor will not do the proper work. 10. It will be better to give contract to foreign construction company. 11. Local people shall be employed in construction work.
Place:Village Meer Kosh RD-63	PIC 1.Mr Mahe (MML) 2.Mr Neil (MML) 3.Mr Nazeer Ahmed Lashari (PIC)	1. Project works are necessary to improve canal efficiency. 2. Desilting must be carried out. 3. Bed level of the canal rise 4 to 8 feet at different locations.
Consultation Date: 12-08-2014	4.Mohammad Raheem (PIC) 5. Mujeeb-ur-Rahman (PIC) 6. MohammadJuman (PIC) 7.Ishfaq Ali Makhdoom (PIC) 8.Sajjad ALI Veesar (PIC) 9.Shadab Bughio (PIC) 10.Anwar Ali Solangi (PIC) 11.Tariq Bin Asad (PIC)	4. Canal shall be lined, if not possible stone pitching shall be carried out. 5. Very poor people are residing near the canal banks their houses shall avoided to demolish. 6. We will cooperate with contractor and find the way for machinery. 7. We are poor and small land owner's cannot provide land w/o project. 8. Local people shall be employed in project works.
Total No. of Participants: 39		

Sindh Water Sector Improvement Project

Location	Names and No. of Participants	Key Issues Discussed
	12.Tariq Abbasi (PIC) 13.Aurangzeb Almani (PIC) 14.Imtiaz Ali Odho (AWB) 15.Sajan Ghanghro (AWB) 16.Imdad Meerani (Irri) 17.Sikandar Mazari (Irri)	9. RD-63 Kosh and Solangi are fighting since last eight years kosh suggested the only kosh people be given employed the other one not allowed in the area. 10. Contractor shall keep the staff at work place and camp. 11. Ensure the free mobility of women was working in field for crop harvesting/threshing, fodder cutting etc. 12. Irrigation Department shall provide the security to local community during construction work.
	Community 1.Haji Abdul Ghani Kosh 2.Meer Hasan Kosh 3.Bhooral Kosh 4.Abdul Fatah Kosh 5.Mohammad Paryal Kosh 6.Hanif Kosh 7.Allahwarayo Kosh 8.Mohammad Anwar Kosh 9.Aurangzeb Arbani 10.Ghulam Rasool 11.Gahno Khan 12.Mohammad Hassan 13.Haji Ghulam Nabi 14.Rano Kosh 15.Ranjhan 16.Nizamuddin 17.Waryo Kosh 18.Asghar Ali 19.Punhal Kosh 20.Koro Kosh 21.Haq Nawaz 22.Ghulam Rasool	
Place:Wasti pull Jam Khan Mohammad RD-101 Consultation Date: 18-08-2014 Total No. of Participants: 25	PIC 1.Mohammad Raheem 2. Mujeeb-ur-Rahman 3. MohammadJuman 4.Ishfaq Ali Makhdoom 5.Shadab Bughio 6.Sajjad Veesar 7.Anwar Solangi 8. Imdad Ali Meerani (Irri :) Community 1.Aijaz Ahmed Samejo 2.Imam Din Samejo 3.Akhtiar Samejo 4.Soomar Ali Samejo 5.Sajid Ali Samejo 6.Imtiaz Ali Samejo	The Aims & objectives of Consultative Meeting. Mr.Mohammad Raheem, Sr: Sociologist (PIC), briefed about the proceeding under WSIP project for rehabilitation will be carried out under Contract WSIP/B1/GF/01 The participants were informed in the consultative meeting about the civil works, those will be carried out under Contract WSIP/B1/GF/01 1. Canal banks strengthen work shall be carried out on emergency basis. 2. Canal bridge at RD-101 shall be reconstructed. 3. Bridge is narrow sugarcane trolley cannot cross the bridge. 4. Canal banks are in poor condition anytime breach in the canal banks may occur. 5. Canal berms are disappearing and shall be re-constructed. 6. Canal created w/l and salinity and crop are destroyed. 7. Water logging and salinity damage the village. 8. Cultivated area has been converted in to the ponds. 9. Canal may be lined /stone pitching with desilting.

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Location	Names and No. of Participants	Key Issues Discussed
	7.Niaz Ahmed Samejo 8.Abdul Rasheed Samejo 9.Karim Khan 10.Jam Mohammad 11.Mohammad Hussain 12.Yar Mohammad 13.Ishaque 14.Ali Nawaz 15.Rajib Ali 16.Safdar Ali 17.Abdul Hameed	10. Desilting shall be carried out there is sufficient space for excavated material. 11. Our land is under water you put the material in our land. 12. There are WAPDA tubewells in poor condition the tubewells shall be restored to control water logging and salinity.
Place:RD-127	PIC	The Aims & objectives of Consultative Meeting. Mr.Mohammad Raheem, Sr: Sociologist (PIC), briefed about the proceeding under WSIP project for rehabilitation will be carried out under Contract WSIP/B1/GF/01 The participants were informed in the consultative meeting about the civil works, those will be carried out under Contract WSIP/B1/GF/01 Objectives of the consultative meeting were to brief the participants about the civil works, those will be carried out under Contract WSIP/B1/GF/01 1. Bed level of the canal has risen about 6 to 7 feet. 2. Canal banks shall be lined /stone pitching with juck works. 3. Canal created water logging and salinity. 4. Villagers near the canal become abandoned, people migrated to other place/near town. 5. Agricultural land has been changed in fish pond. 6. Animals and human population is severely affected due to water borne diseases and snake biting. 7. Ground water is mixed with sewerage water and it is difficult to village people to get sage drinking water. 8. Local people are complaining of stomach diseases. 9. Some people requested for employment during project works
Place: Allah Dad Chandio	1.Mohammad Raheed	
Consultation Date: 20-08-2014	2. Mujeeb-ur-Rahman	
	3. MohammadJuman	
Total No. of Participants: 29	4.Ishfaq Ali Makhdoom	
	5.Shadab Bughio	
	6.Sajjad Veesar	
	7.Anwar Solangi	
	8. Imdad Ali Meerani (Irri :)	
	9. Mukhtiar Ahmed Kolachi (Irri :)	
	10. Hasan Ali Kolachi (Irri :)	
	11. Imdad Ghup (Irri :)	
	12. Safeer Ahmed Kolachi (Irri :)	
	13. Mohammad Ishaq Kolachi (Irri :)	
	14. Naveed Ahmed (Irri :)	
	Community	
	1.Allah Bachayo Rind	
	2.Sakhi Bux Rind	
	3.Allah Bux	
	4.Mushtaq Ali	
	5.Mohammad Akram	
	6.Saleem Ahmed	
	7.Iqbal	
	8.Zulifqar Ali	
	9.Imran Ahmed	
	10.Waseem Ahmed	
	11.Aziz Ahmed	
	12.Chakar Khan Rind	
	13.Abdul Latif Rind	
	14.Waheed Ali	
	15.Manzoor Khan	

Response of Religious Structure: The outcome of the meetings with the affectees regarding religious structures is that, first priority should be given to avoid these structures because shifting of the structures is not acceptable to the affectees.

Appendix G. Details of Asset Valuation

G.1. Detail of market Rates for Pacca House

PACCA HOME					
Material					
S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	Bricks	11,305	No	5.00	56,523.60
2	Ceiling Bricks	607	No	10.00	6,072.00
3	Cement bags	98.77	Bags	530.00	52,345.67
4	Fine Sand	468.71	Cft	25.00	11,717.64
5	Course Sand	380.75	Cft	42.00	15,991.55
6	Plastic Sheet	36.375	Sq.Yard	13.50	491.06
7	Distemper	1,670.50	SFT	3.50	5,846.75
8	Iron Gridder	35.75	Rft	180.00	6,435.00
9	Iron Tee	299.00	Rft	53.00	15,847.00
10	Steel Door (3.5' x 6')	21.00	SFT	190.00	3,990.00
11	Steel Window (4' x 4')	16.00	SFT	162.00	2,592.00
12	Steel ventilator (1' x 2')	4.00	SFT	150.00	600.00
13	Water Spout	2	No	300.00	600.00
Total Material Rate					179,052.28

Labour / Equipment					
S.no	Description	Qty	Unit	Hire Charges	Amount (rs)
1	Mason	1	12.00 day	1,000.00	12,000.00
2	Skilled Labour	1	12.00 day	700.00	8,400.00
2	Un-Skilled Labour	2	15.00 day	500.00	15,000.00
3	Cooli	1	15.00 day	380.00	5,700.00
4	Wheel barrow	1	15.00 day	100.00	1,500.00
5	Scaffolding		L.S		3,000.00
6	Carriage		L.S		17,000.00
Total Labour/ Material Charges					62,600.00

Total Cost of One Pacca Home		241,652.28
Total Covered Area Sft		295.75
Rate Per Sft		817.08
Say		817.00

G.2. Detail of market Rates for Semi Pacca HouseSEMI PACCA HOME
Material

S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	Bricks	11,305	No	5.00	56,523.60
3	Cement bags	59.46	Bags	530.00	31,516.01
4	Fine Sand	272.20	Cft	25.00	6,804.98
5	Coarse Sand	175.95	Cft	42.00	7,389.83
6	Supply of Mud (Trolley)	2	No	700.00	1,400.00
7	Wheat Straw (Bou)	3.00		250.00	750.00
8	Iron Grider	35.75	Rft	180.00	6,435.00
9	Bamboo	280.00	Rft	13.00	3,640.00
9	Kiri	288.00	Sft	13.00	3,744.00
10	Bushes	312.00	Sft	7.00	2,184.00
11	Plastic Sheet	34.7	Sq. Yard	13.50	468.00
12	Steel Door (3.5' x 6')	21.00	SFT	190.00	3,990.00
13	Steel Window (4' x 4')	16.00	SFT	162.00	2,592.00
14	Steel ventilator (1' x 2')	2.00	SFT	150.00	300.00
Total Material Rate					127,737.42

Labour / Equipment

S.no	Description	Qty	Unit	Hire Charges	Amount (rs)
1	Masson	1	10.00 day	1,000.00	10,000.00
2	Skilled Labour	1	14.00 day	700.00	9,800.00
3	Unskilled	1	16.00 day	500.00	8,000.00
4	Cooli	1	3.00 day	380.00	1,140.00
5	Wheel barrow	1	14.00 day	100.00	1,400.00
6	Scaffolding		L.S		4,000.00
7	Carriage		L.S		15,000.00
Total Labour/ Material Charges					49,340.00

Total Cost of One Semi Pacca House		177,077.42
Total Covered Area Sft		312.00
Rate Per Sft		567.56
Say		568.00

G.3. Detail of market Rates for Kacha House

KACHA HOME					
Material					
S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	kacha Walls	966	Sft	12.00	11,592.00
2	Supply of Mud (Trolly)	2	No	700.00	1,400.00
3	Wheat Straw (Bou)	5.00		250.00	1,250.00
4	Stem	26.00	Rft	95.00	2,470.00
5	Bamboo	280.00	Rft	13.00	3,640.00
6	Kiri	288.00	Sft	13.00	3,744.00
7	Bushes	312.00	Sft	7.00	2,184.00
8	Plastic Sheet	34.7	Sq.Yard	13.50	468.00
9	Wooden Door (3.5' x 6')	21.00	SFT	190.00	3,990.00
10	Wooden Window (4' x 4')	16.00	SFT	162.00	2,592.00
11	Wooden ventilator (1' x 2')	2.00	SFT	150.00	300.00
Total Material Rate					33,630.00

Labour / Equipment					
S.no	Description	Qty	Unit	Hiring Charges	Amount (rs)
1	Masson	1	2.00 day	1,000.00	2,000.00
2	Skilled Labour	1	3.00 day	700.00	2,100.00
3	Unskilled	1	3.00 day	500.00	1,500.00
4	Cooli	1	1.00 day	380.00	380.00
5	Wheel barrow	1	3.00 day	100.00	300.00
6	Hiring Charges of equipments		L.S		2,000.00
7	Carriage		L.S		2,000.00
Total Labour/ Material Charges					10,280.00

Total Cost of One Kacha House		43,910.00
Total Covered Area Sft		312.00
Rate Per Sft		140.74
Say		141.00

G.4. Detail of market Rates for Semi Pacca Boundary Wall

Semi Pacca Boundary Wall (unit = one Rft) (Existing Structure)

Material

S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	Dismantling of Existing Structure	4.88	Cft	18.0	87.75
2	Bricks (Wastage)	13.16	No	5.0	65.81
3	Cement bags	0.07	Bags	530	37.67
4	Fine Sand	0.36	Cft	25	8.88
5	Course Sand	0.71	Cft	42	29.85
6	Mud		L.S	20	20.00
Total Material Rate					249.97

Labour / Equipment

S.no	Description	Qty	Unit	Hire Charges	Amount (rs)
1	Mason	1	0.10per day	1,000.00	100.00
2	Skilled Labour	1	0.10per day	700.00	70.00
3	Cooli	1	0.10per day	380.00	38.00
4	Wheel barrow	1	0.10per day	100.00	10.00
Total Labour/ Material Charges					218.00

Total Cost of Boundary Wall per RFT	467.97
Say	468.00

G.5. Detail of market Rates for Kacha Boundary Wall

Kacha Boundary Wall (unit = one Rft)

Material

S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	Kacha Wall	6.13	Sft	12.00	73.50
2	Wheat Straw		L.S	30.00	30.00
3	Mud		L.S	20.00	20.00
Total Material Rate					123.50

Labour / Equipment

S.no	Description	Qty	Unit	Hire Charges	Amount (rs)
1	Mason	1	0.10per day	1,000.00	100.00
2	Skilled Labour	1	0.10per day	700.00	70.00
3	Cooli	1	0.10per day	380.00	38.00
4	Wheel barrow	1	0.10per day	100.00	10.00
Total Labour/ Material Charges					218.00

Total Cost of Boundary Wall per RFT					341.50
Say					342.00

G.6. Detail of market Rates for Pacca Boundary Wall

Pacca Boundary Wall (unit = one Rft)

Material

S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	Bricks	65.81	No	5.00	329.06
2	Cement bags	0.46	Bags	530.00	242.62
3	Fine Sand	2.14261378	Cft	25.00	53.57
4	Course Sand	0.71076923	Cft	42.00	29.85
Total Material Rate					655.10

Labour / Equipment

S.no	Description	Qty	Unit	Hire Charges	Amount (Rs)
1	Mason	1	0.10per day	1,000.00	100.00
2	Skilled Labour	2	0.10per day	700.00	140.00
3	Un skilled Cooli	1	0.20per day	380.00	76.00
4	Wheel barrow	1	0.10per day	100.00	10.00
Total Labour/ Material Charges					326.00

Total Cost of Boundary Wall per RFT	981.10
Say	981.00

G.7. Detail of market Rates for Kacha Hut

KACHA HUT (10' x 12')

Material

S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	Kacha Walls	484	Sft	12.00	5,808.00
2	Supply of Mud (Trolley)	1	No	700.00	700.00
3	Wheat Straw (Bou)	2.00		250.00	500.00
4	Stem	120.00	Rft	95.00	11,400.00
5	Bamboo	156.00	Rft	13.00	2,028.00
6	Kiri	156.00	Sft	13.00	2,028.00
7	Bushes	143.00	Sft	7.00	1,001.00
8	Plastic Sheet	13.3	Sq.Yard	13.50	180.00
9	Rope	30.0	Kg	130.00	3,900.00
Total Material Rate					27,545.00

Labour / Equipment

S.no	Description	Qty	Unit	Hiring Charges	Amount (rs)
1	Skilled Labour	1	2.00 day	700.00	1,400.00
2	Unskilled	1	2.00 day	500.00	1,000.00
3	Carriage		L.S		1,200.00
Total Labour/ Material Charges					3,600.00

Total Cost of One Kacha House		31,145.00
Total Covered Area Sft		120.00
Rate Per Sft		259.54
Say		260.00

G.8. Detail of market Rates for Straw Hut

STRAW HUT (10' x 8')					
Material					
S.no	Description	Qty	Unit	Av: market Rates	Amount (Rs)
1	Stem	80.00	Rft	95.00	7,600.00
2	Bamboo	14.00	Rft	13.00	182.00
3	Kiri	264.00	Sft	13.00	3,432.00
4	Bushes	140.00	Sft	7.00	980.00
5	Rope	30.00	Kg	100.00	3,000.00
Total Material Rate					15,194.00
Labour / Equipment					
S.no	Description	Qty	Unit	Hiring Charges	Amount (rs)
1	Skilled Labour	1	2.00 day	700.00	1,400.00
2	Unskilled	1	2.00 day	500.00	1,000.00
3	Carriage		L.S		1,500.00
Total Labour/ Material Charges					3,900.00
Total Cost of One Kacha House					19,094.00
Total Covered Area Sft					80.00
Rate Per Sft					238.68
Say					239.00

G.9. Market Quotations

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 0333-7262809
 16/8/14

مقدار	قیمت	ملاحظات
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13	180	...

نوٹ شاہی قادری
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 0333-7262809
 16/8/14

مقدار	قیمت	ملاحظات
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13	180	...
13	180	...

فیوچر آف سٹور
 16/8/14
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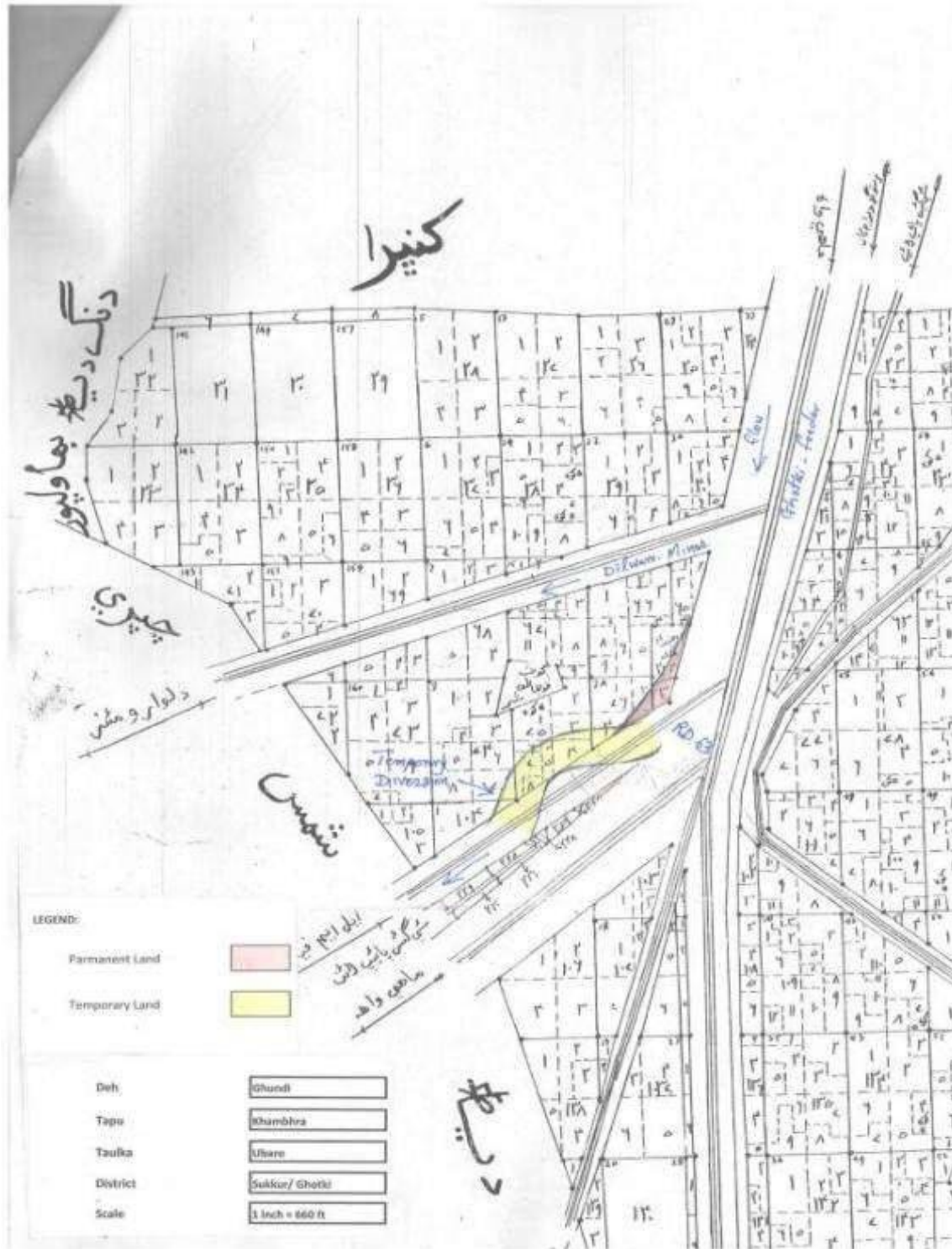
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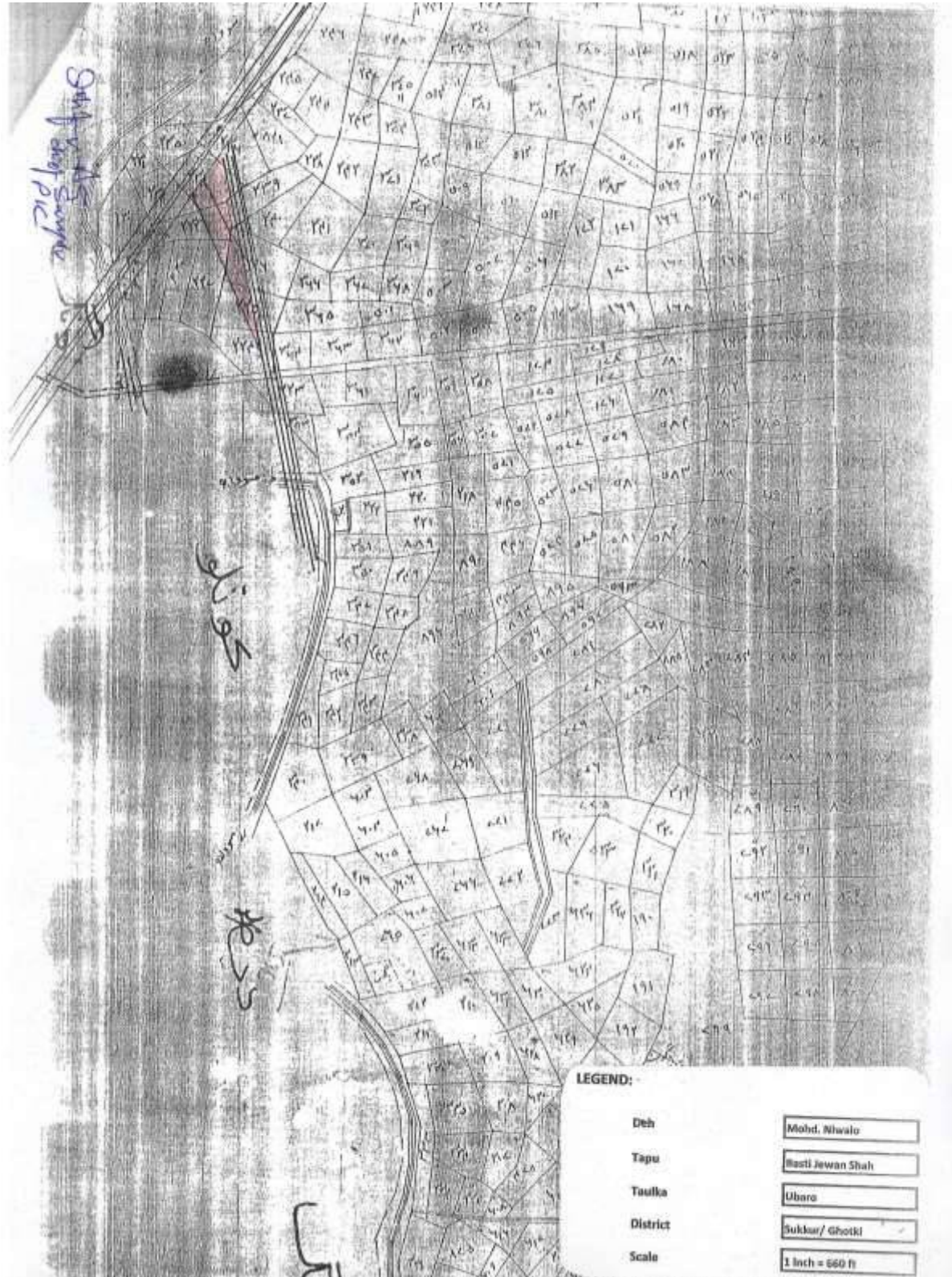
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Appendix H. Deh Maps

H.1. RD 63+000









H.2. RD 127+000



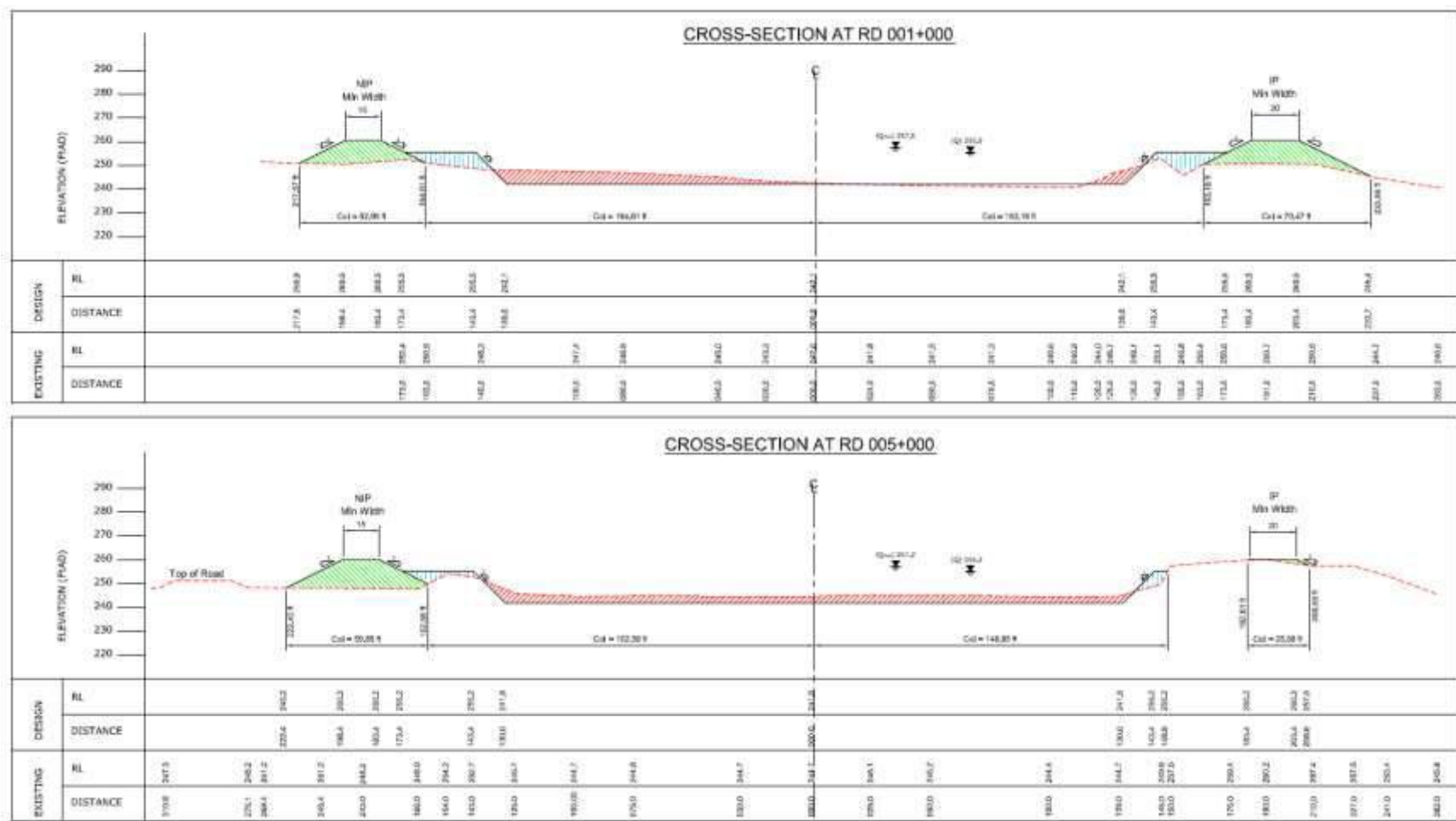
Appendix I. Corridor of Impact

I.1. Embankment Works Corridor of Impact – Cross Sections

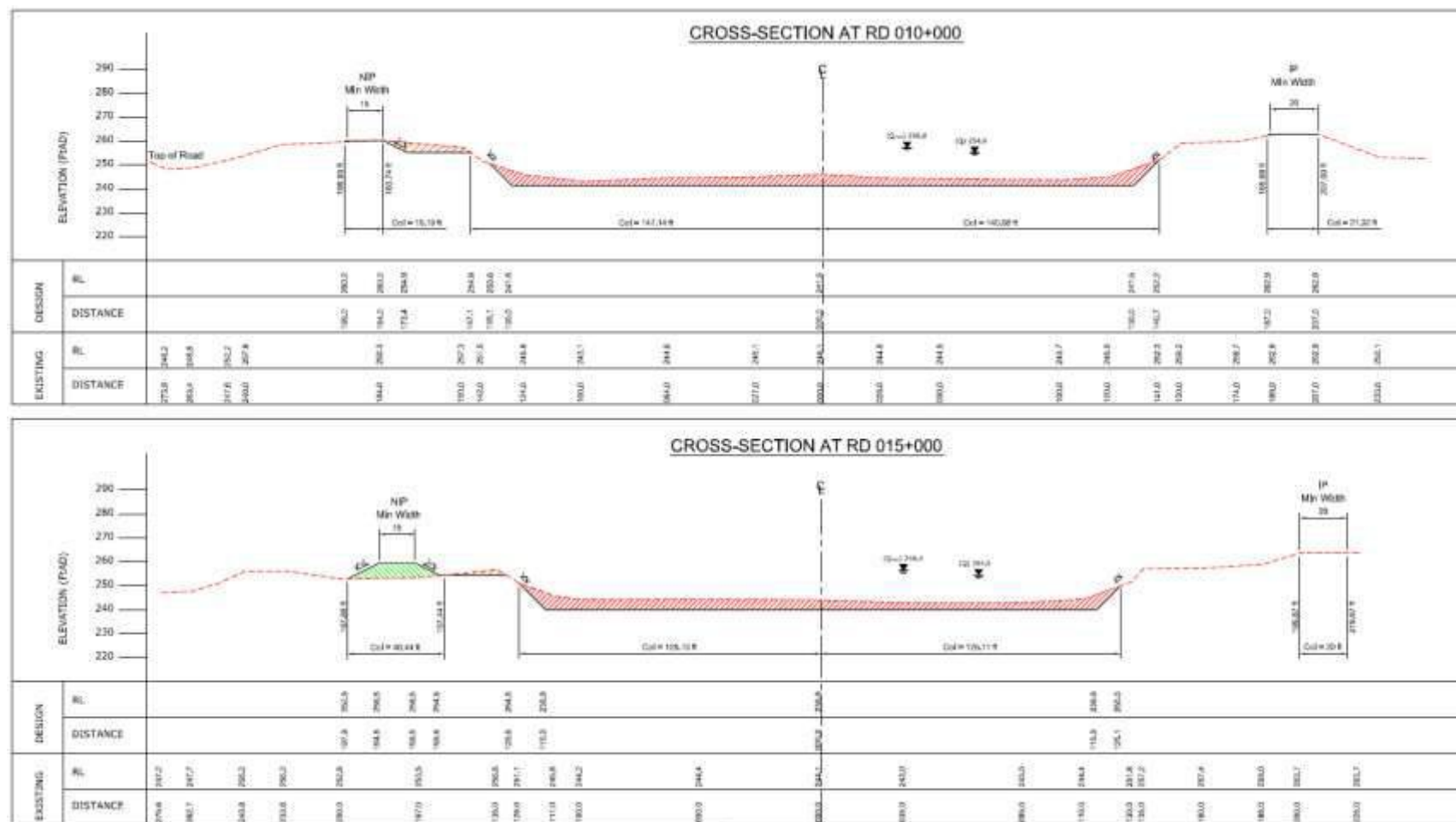
Legend

Existing	
Design	
Cut Area	
Fill Area	
Killabushing	
Potential Cut Area	

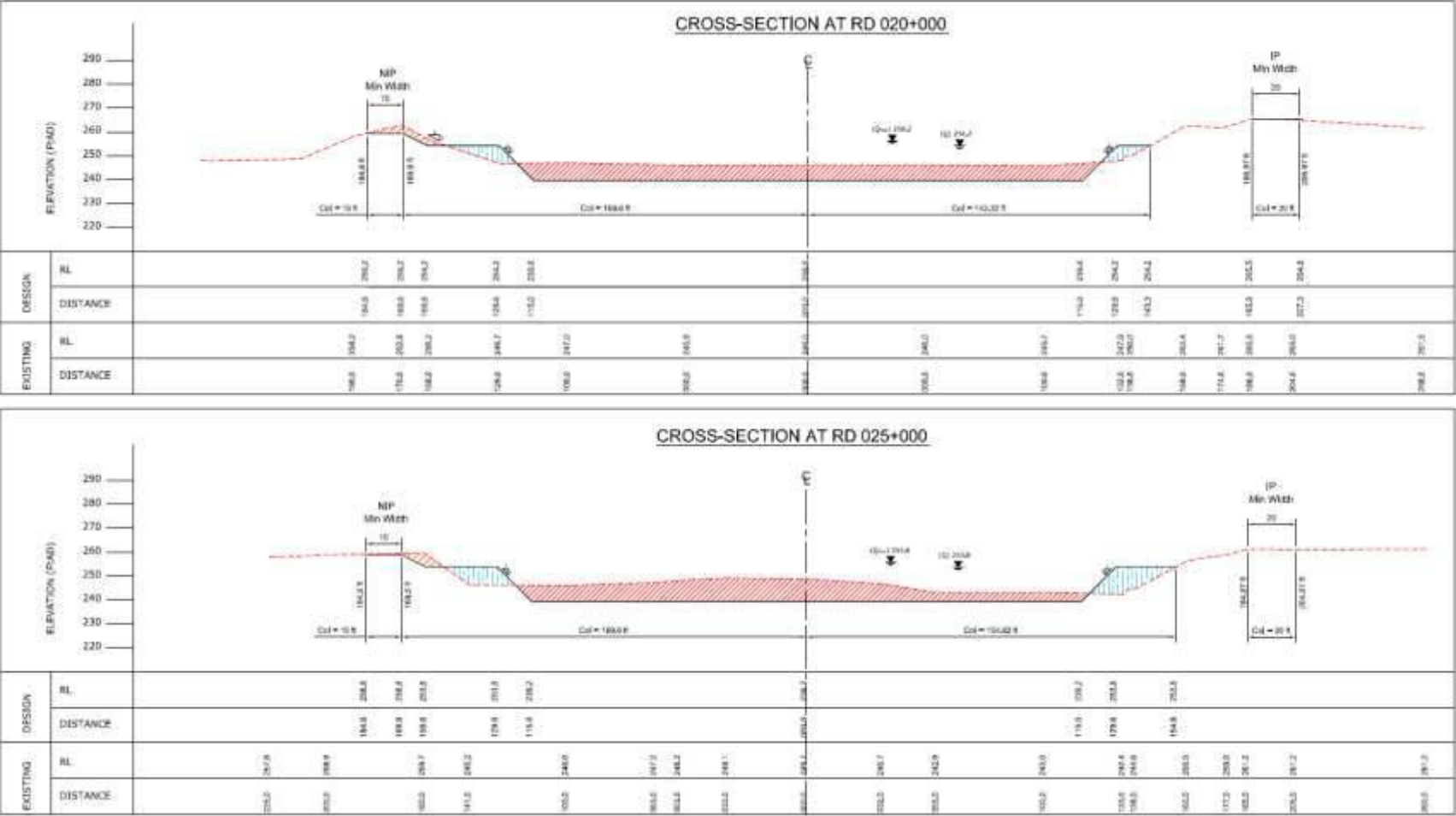
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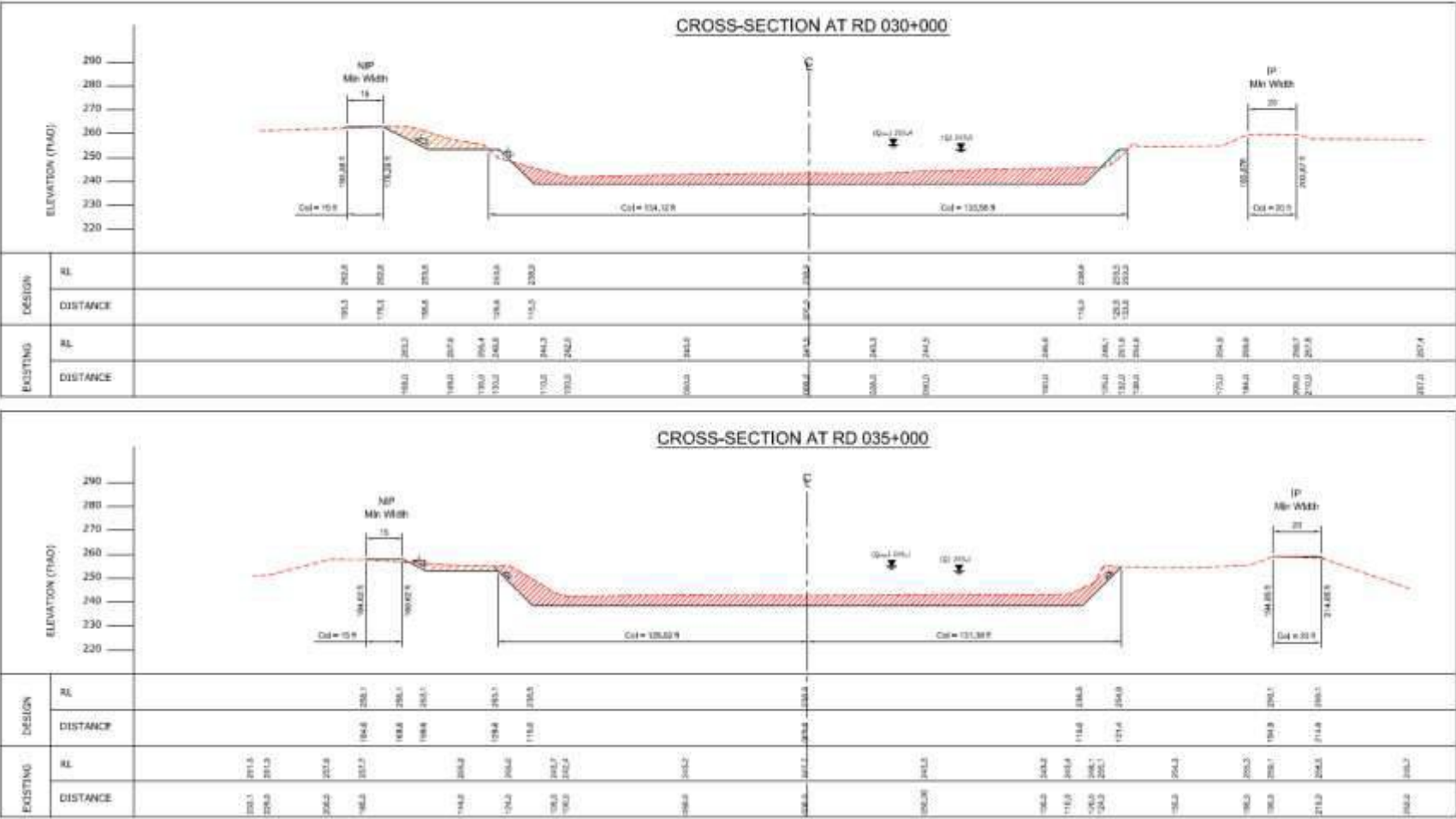
Sindh Water Sector Improvement Project



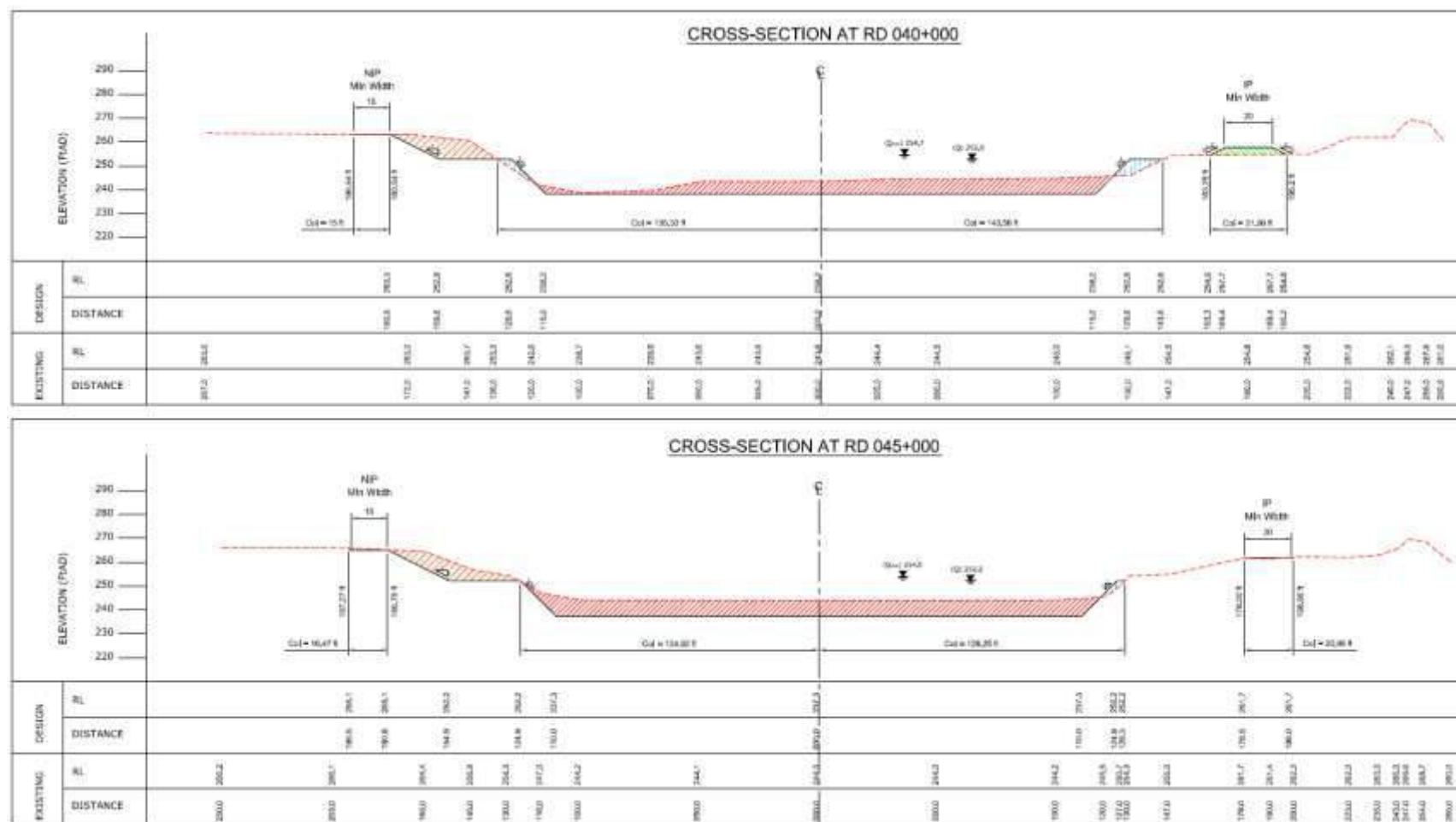
Sindh Water Sector Improvement Project



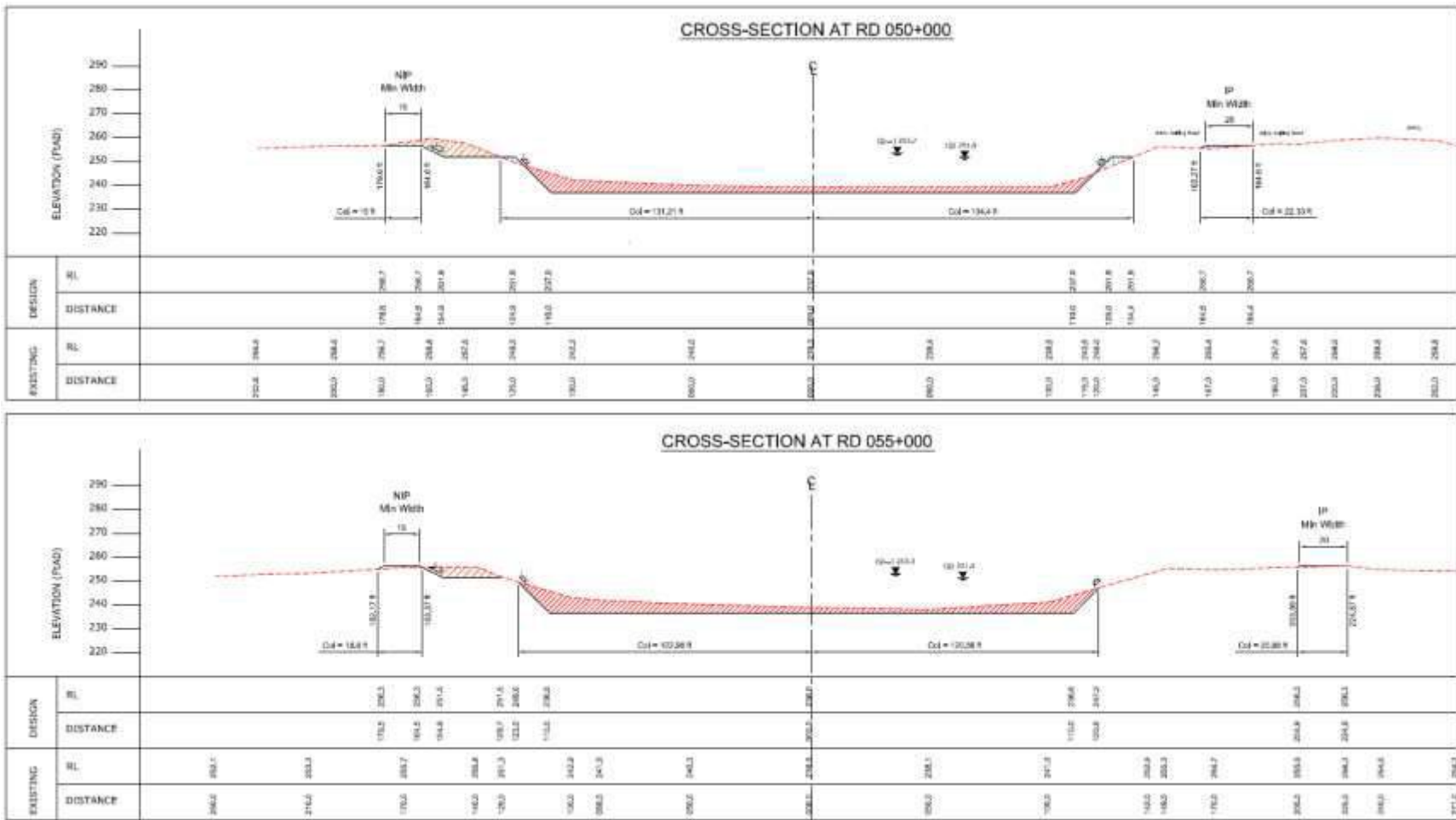
Sindh Water Sector Improvement Project



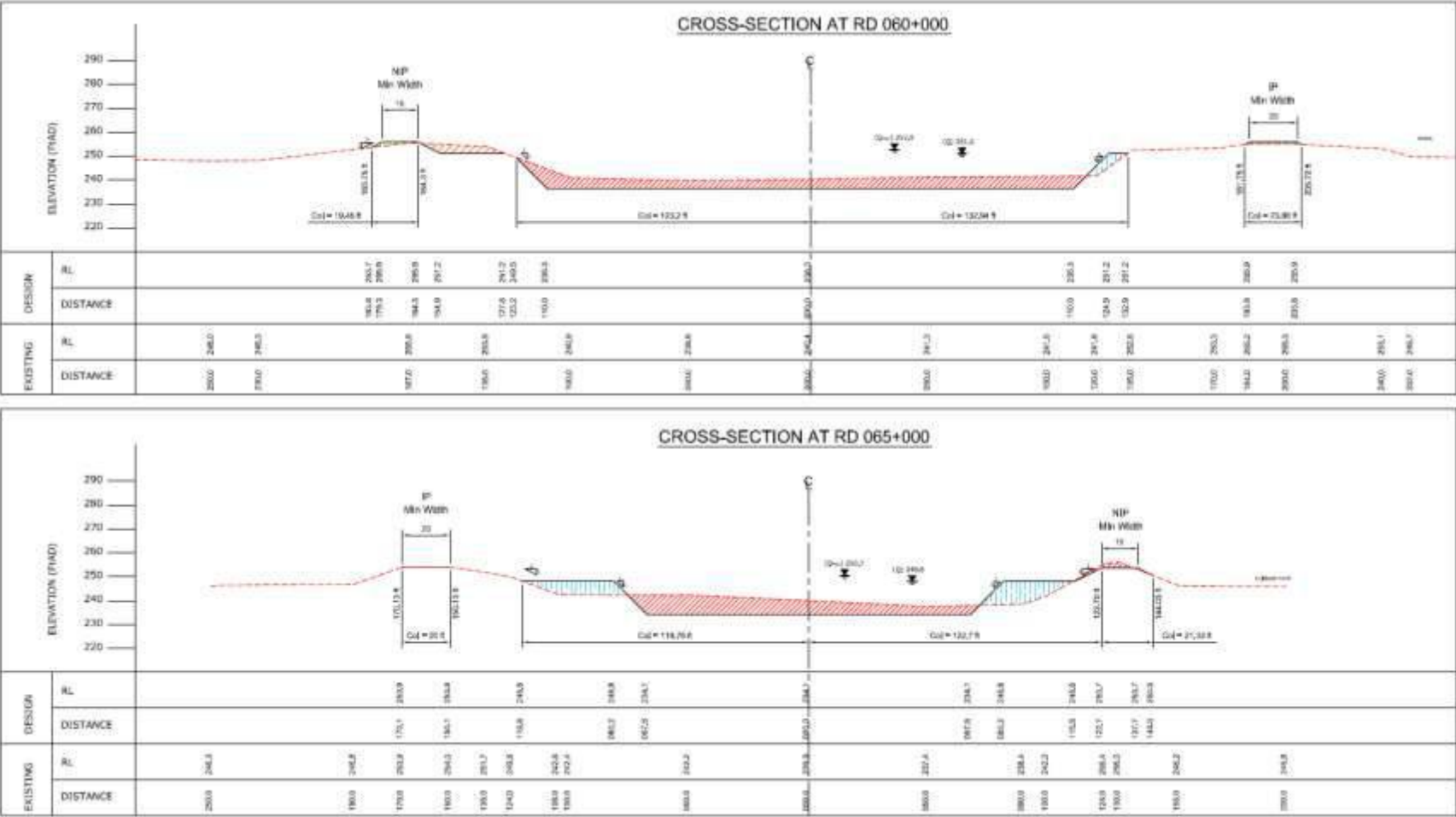
Sindh Water Sector Improvement Project



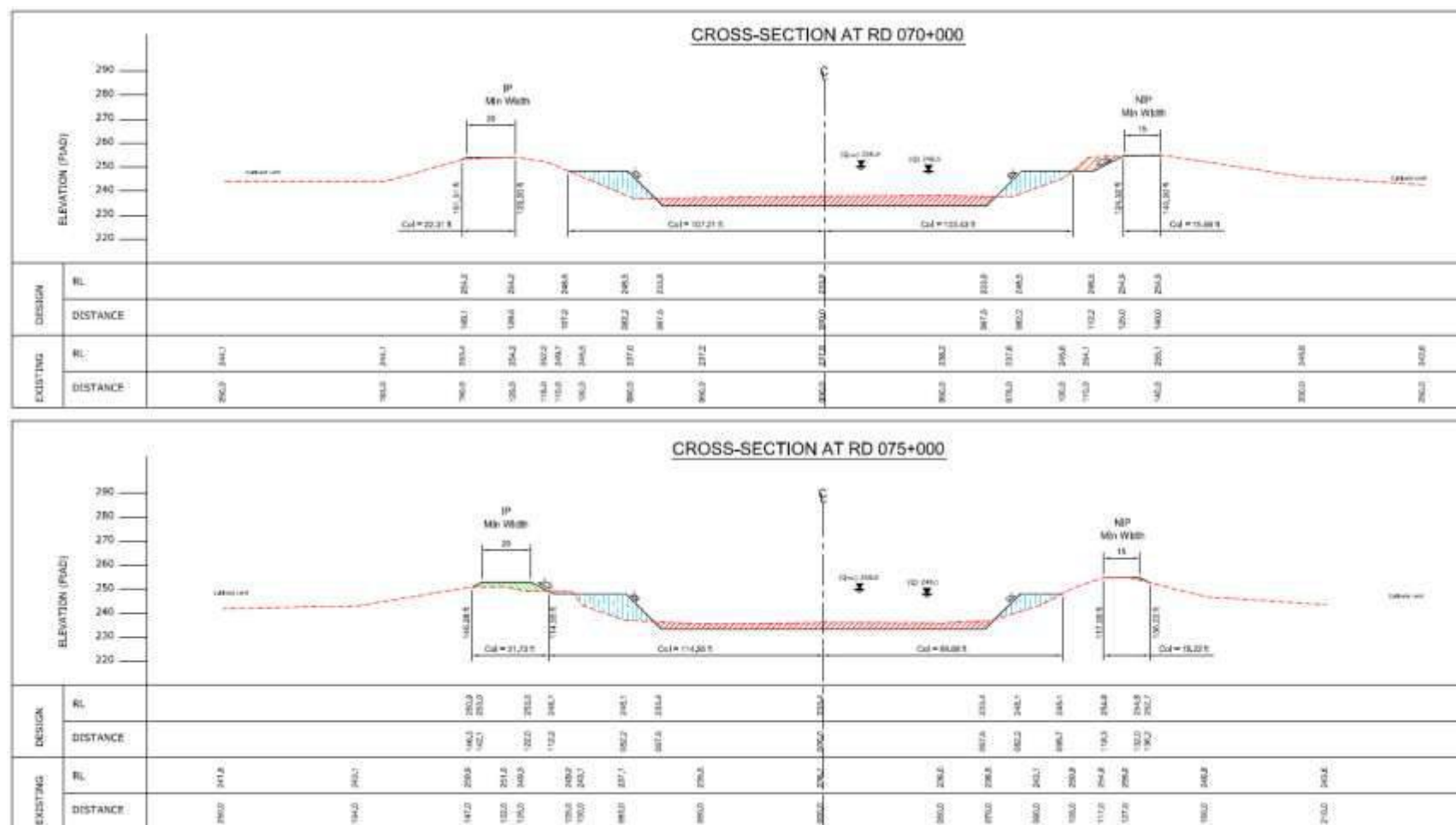
Sindh Water Sector Improvement Project



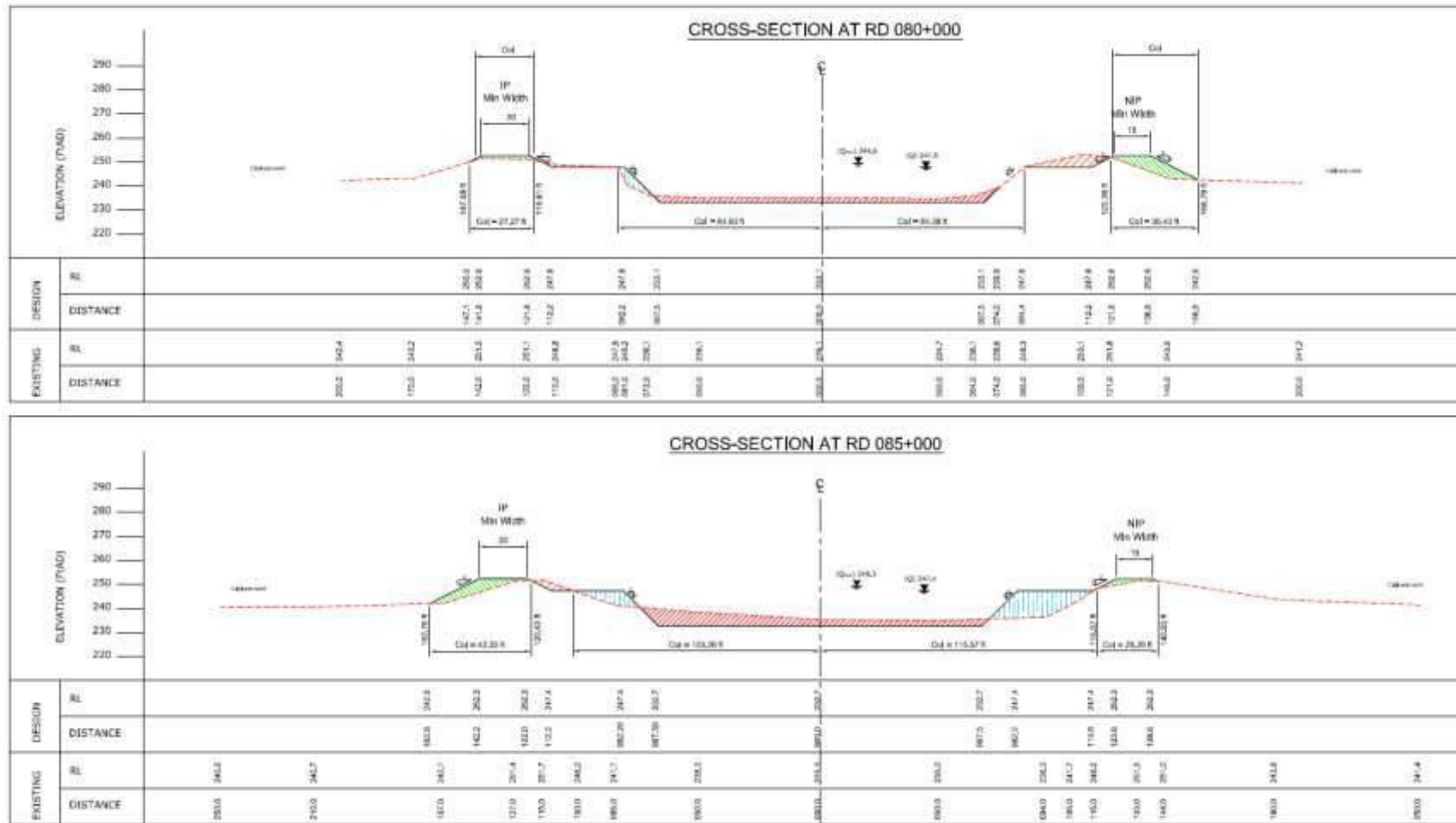
Sindh Water Sector Improvement Project



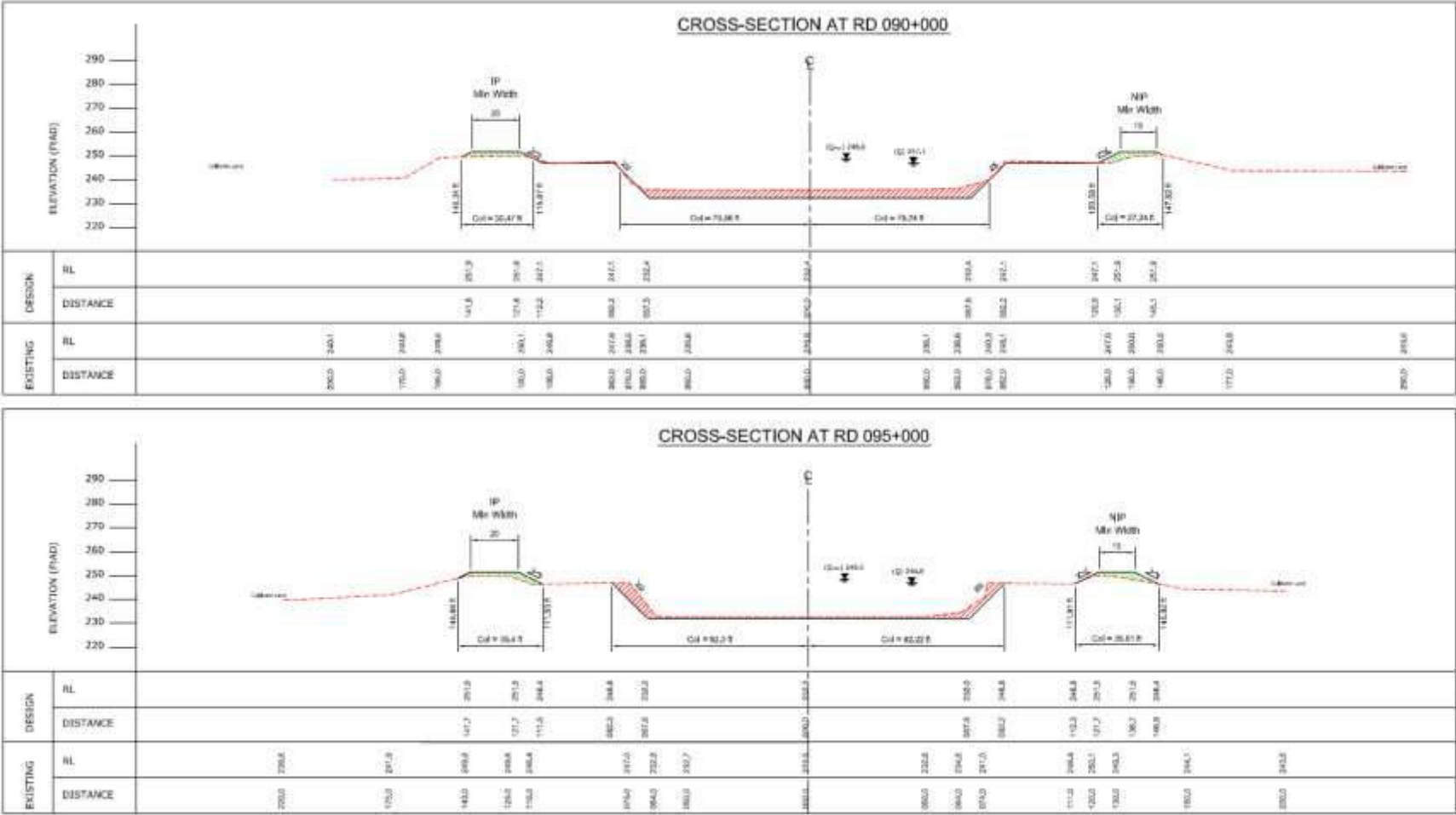
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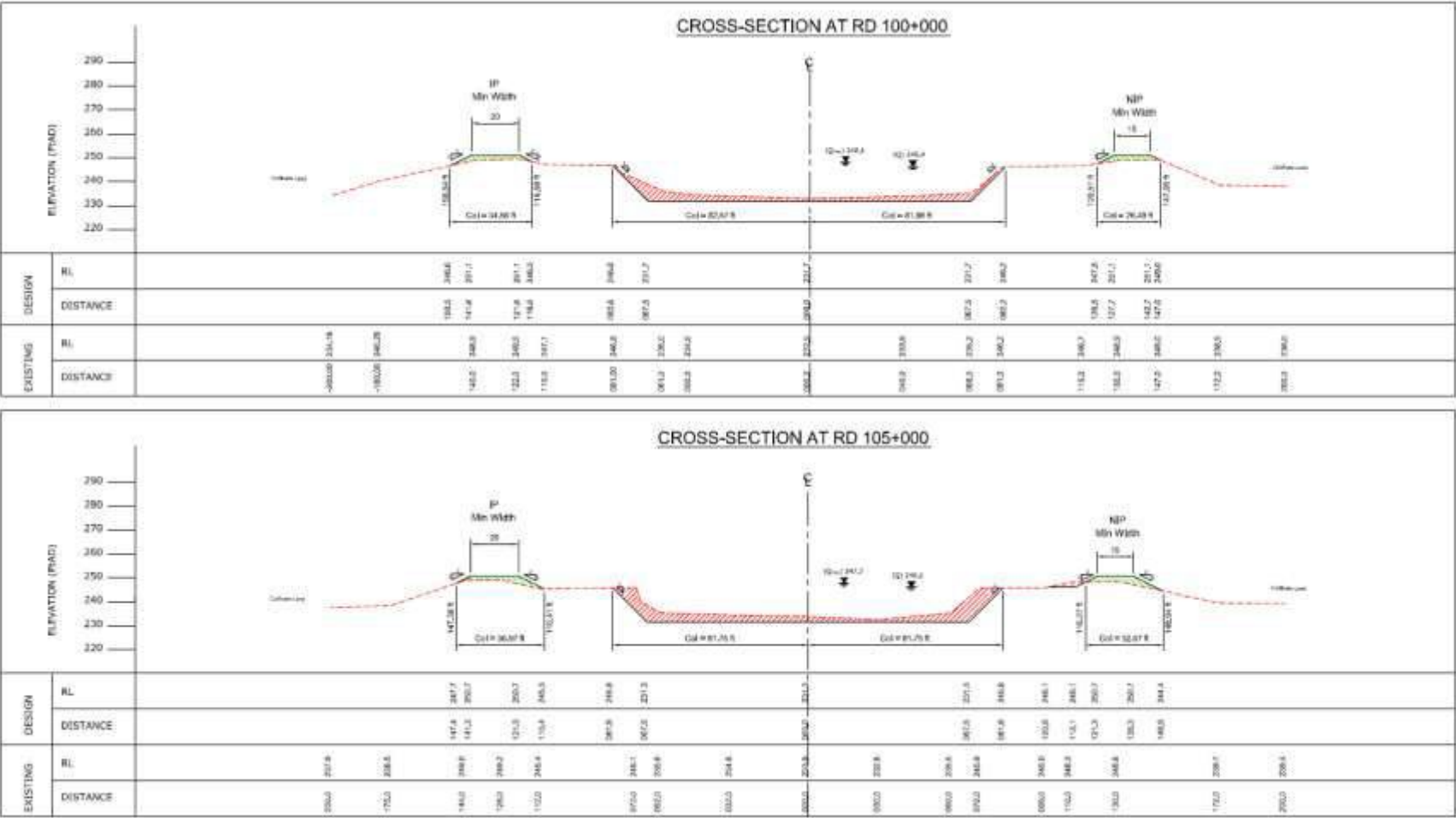
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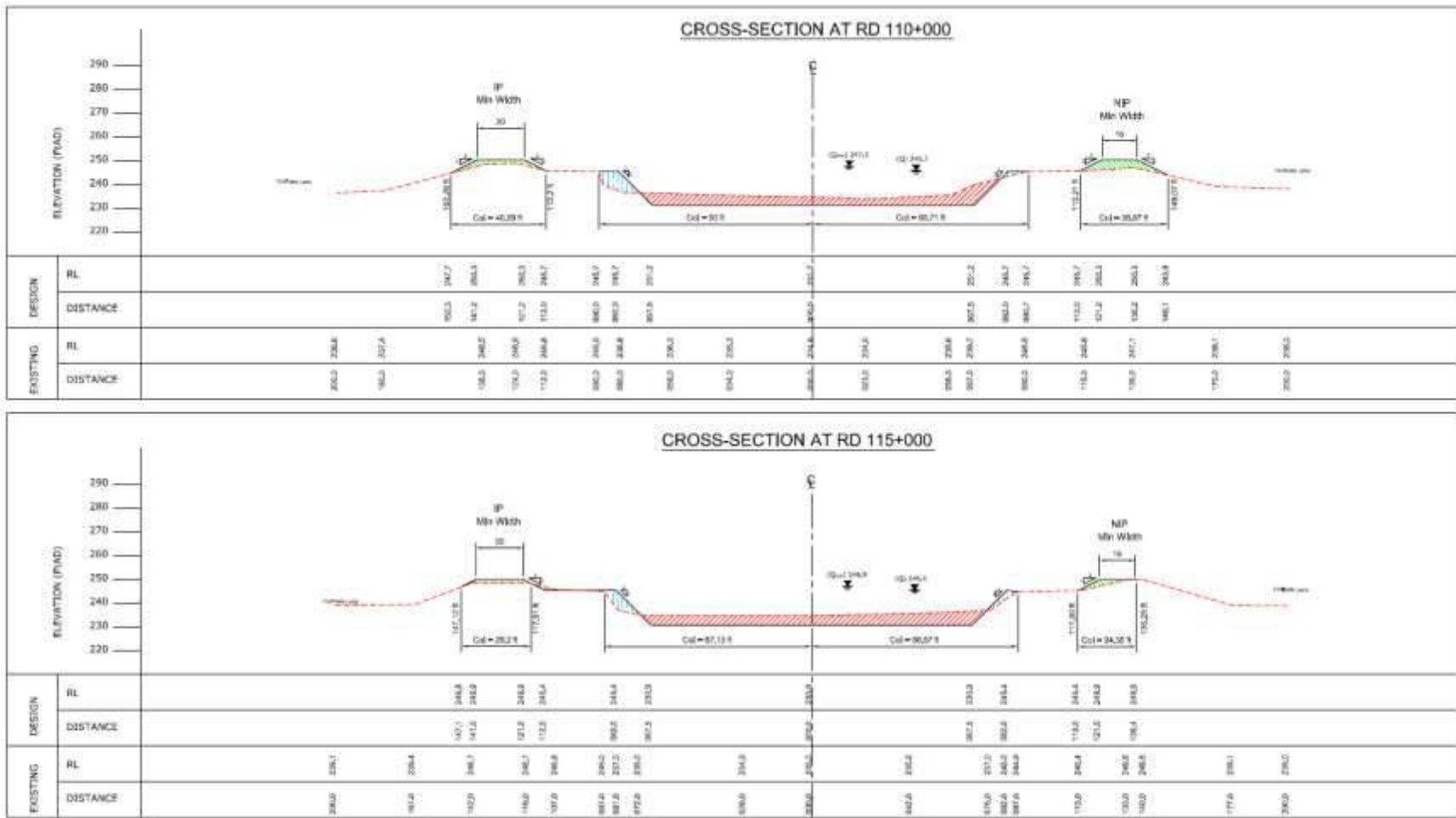
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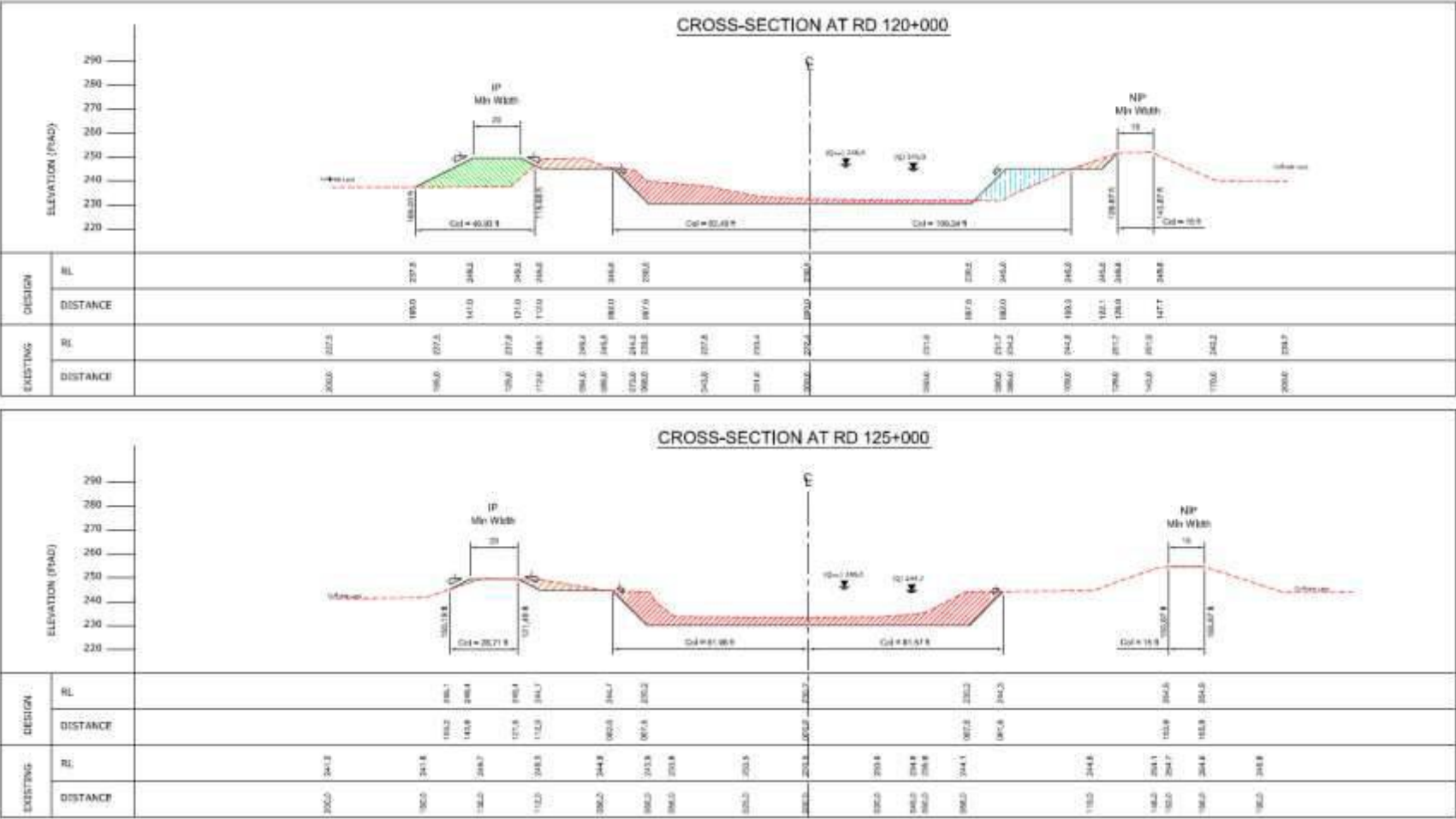
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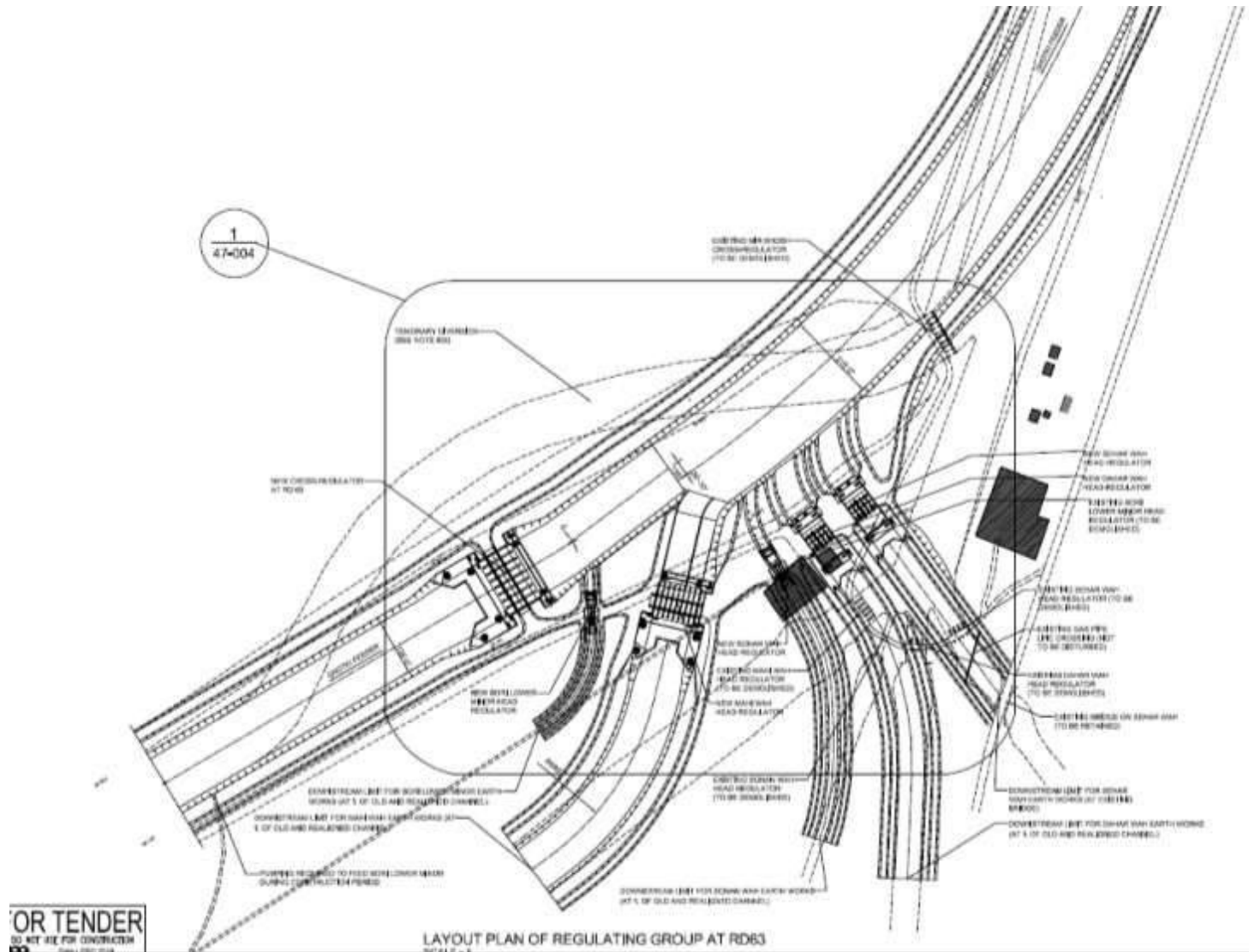
Sindh Water Sector Improvement Project



Sindh Water Sector Improvement Project



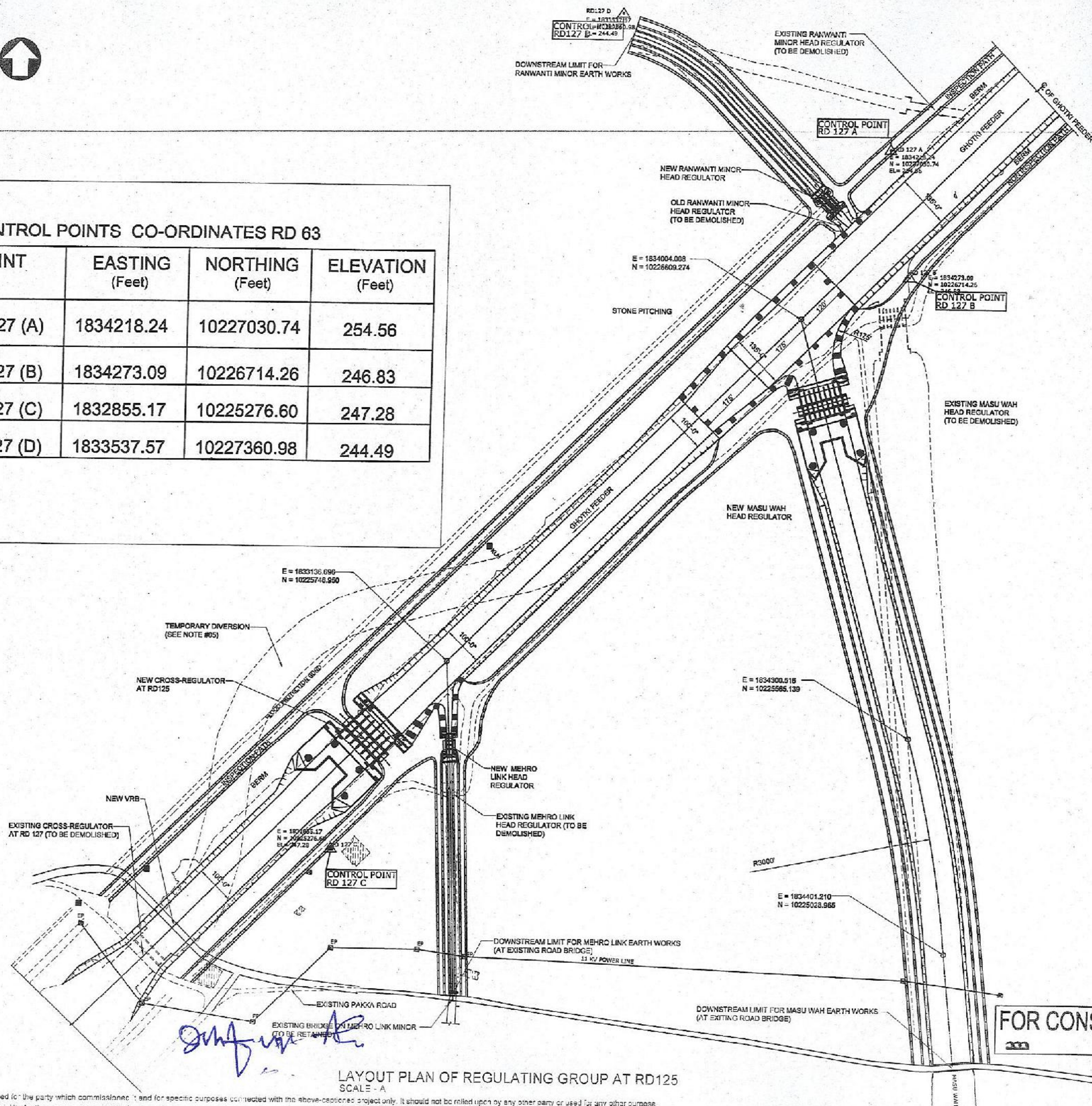
I.2. Corridor of Impact for Realignment of Offtaking Canal – Layout Plans





CONTROL POINTS CO-ORDINATES RD 63

POINT	EASTING (Feet)	NORTHING (Feet)	ELEVATION (Feet)
RD 127 (A)	1834218.24	10227030.74	254.56
RD 127 (B)	1834273.09	10226714.26	246.83
RD 127 (C)	1832855.17	10225276.60	247.28
RD 127 (D)	1833537.57	10227360.98	244.49



LAYOUT PLAN OF REGULATING GROUP AT RD125
SCALE - A

FOR CONSTRUCTION

Date: MAR 2016

- Notes
- DO NOT SCALE FROM THIS DRAWING.
 - ALL DIMENSIONS ARE IN FEET & INCHES UNLESS OTHERWISE SPECIFIED.
 - ALL LEVELS ARE IN FEET ABOVE IRRIGATION DEPARTMENT DATUM.
 - DIVERSION SHOWN IS INDICATIVE ONLY. CONTRACTOR IS RESPONSIBLE FOR ALL 'TEMPORARY WORKS', THEREFORE FINAL DIVERSION ARRANGEMENTS ARE LEFT TO THE CONTRACTOR'S DISCRETION.
 - EXISTING STONE PITCHING TO REMAIN ALONG GHOTKI FEEDER CANAL UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER.

Key to symbols

EXISTING BUILDINGS

Reference drawings

- FOR GENERAL NOTES REFER TO DWG. NO. WSIP/B06/01-010
- FOR MASU WAH HEAD REGULATOR DETAILS REFER TO DWG. NO. WSIP/B1/GF/48-031 TO 034
- FOR CROSS REGULATOR DETAILS AT RD 125 REFER TO DWG. NO. WSIP/B1/GF/49-020 TO 021
- FOR STANDARD HEAD REGULATORS OF DISTRIBUTARY AND MINOR CANALS REFER TO DWG. NO. WSIP/B1/GF/11-001 TO 11-003 AND WSIP/B1/GF/53-001
- FOR LAYOUT PLAN OF BRIDGE AT RD 127 REFER TO DWG. NO. WSIP/B1/GF/47-012
- FOR APPROACH CHANNEL DETAILS REFER TO DWG. NO. WSIP/B1/GF/51-014
- FOR COORDINATES OF KEY POINTS OF HEAD & CROSS-REGULATORS REFER TO DWG. NO. WSIP/B1/GF/47-011

Scales

0 25' 50' 100' 200' 300' 400' 500' 600'
SCALE - A

Rev	Date	Drawn	Description	Crtd	App'd
B	Mar 2016	ZL	LAYOUT PLAN REVISED	NMB	JDP
A	Feb 2016	ZL	FOR CONSTRUCTION	NMB	JDP

Consultant
Matt MacDonald
in association with
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MM Pakistan (Pvt.) Ltd.
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Fax: +92-22-9210080
Web: www.sida.org.pk

Title
SINDH WATER SECTOR IMPROVEMENT PROJECT
GHOTKI FEEDER CANAL
LAYOUT PLAN OF REGULATING GROUP AT RD125
SHEET 1 OF 2

Designed	ZAN	Eng. Chk.	AC	
Drawn	ZL	Coordination	-	
Dwg. Chk.	AC	Approved	JDP	
Scale	AS SHOWN	Project	WSIP	Status
Paper Size	A1	CAD File	2:253177_WSIP125_GRC_Wareg_Plan01_A1	CON
Drawing No.			WSIP/B1/GF/47-006	Rev.

Appendix J. Pictorial View

Photo J.1: Straw House at Ghotki Feeder



Photo J.2: Straw House at Ghotki Feeder



Photo J.3: Picture of PIC and AWB representative and local community



Sindh Water Sector Improvement Project

Photo J.5: Community Mosque



Photo J.6: A view of pacca shop



Photo J.7: A Kacha House at Ghotki Feeder



Photo J.8: A Kacha House at Ghotki Feeder



Sindh Water Sector Improvement Project

Photo J.9: A view of kacha house



Photo J.10: Picture of PIC and Irrigation Department and local community



Photo J.11: Picture of PIC and Irrigation Department and local community
Photo J.12: A view of pacca house



J.1. Women Consultation in the Project Area

Photo J.13: Women consultation meeting with local community at Ghotki Feeder Canal



Photo J.15: Women Consultation with women washing cloths at Ghotki Feeder Canal



Photo J.16: Female Interviewer busy in data collection at Ghotki Feeder Canal



Sindh Water Sector Improvement Project

Photo J.17 Women Consultation with local women at Ghotki Feeder Canal



Photo J.18 Female Interviewer women consultation at Ghotki Feeder Canal



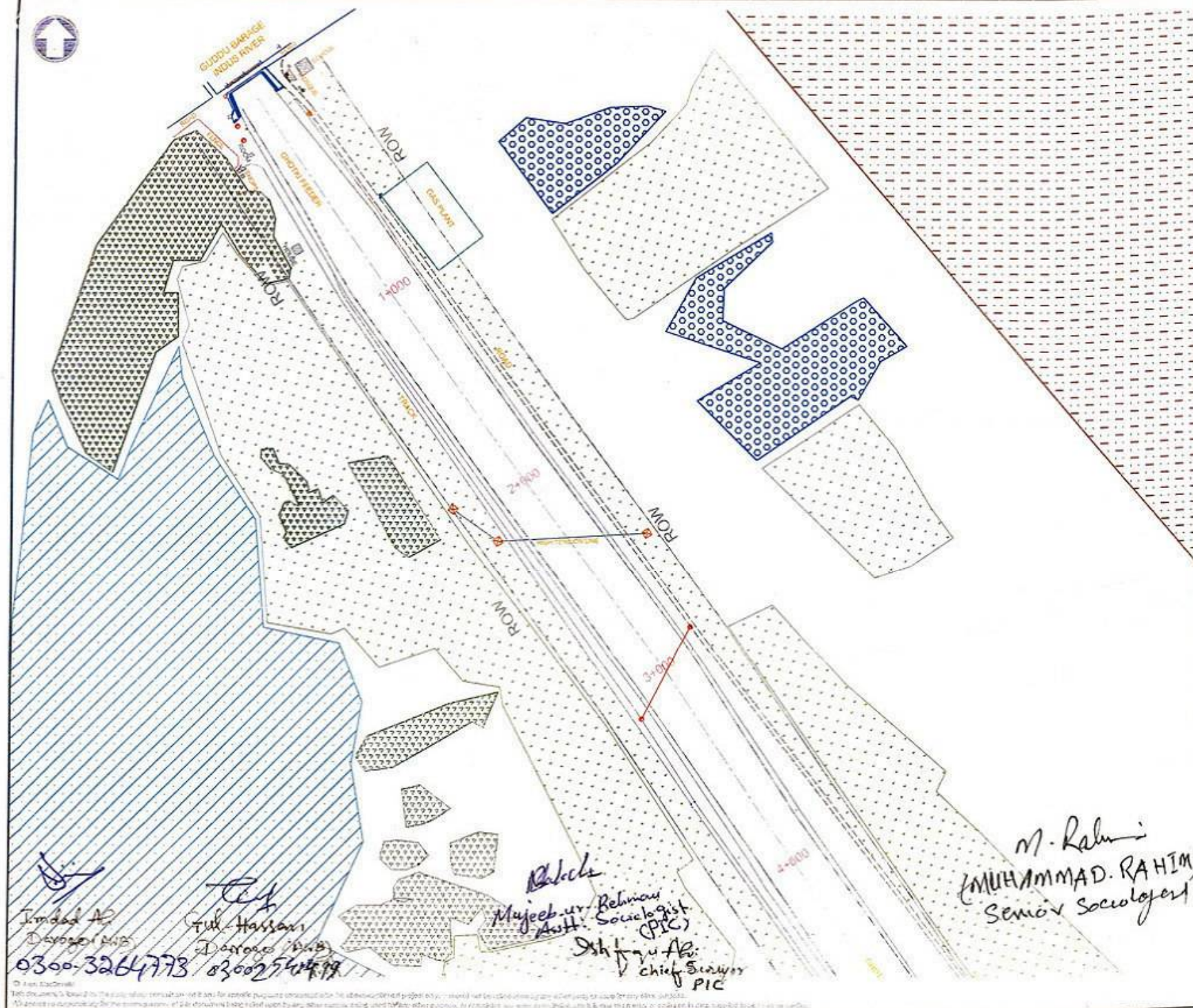
Photo J.19 W Women Consultation with local women at Ghotki Feeder Canal



Photo J.20 Female Interviewer busy in data collection at Ghotki Feeder Canal

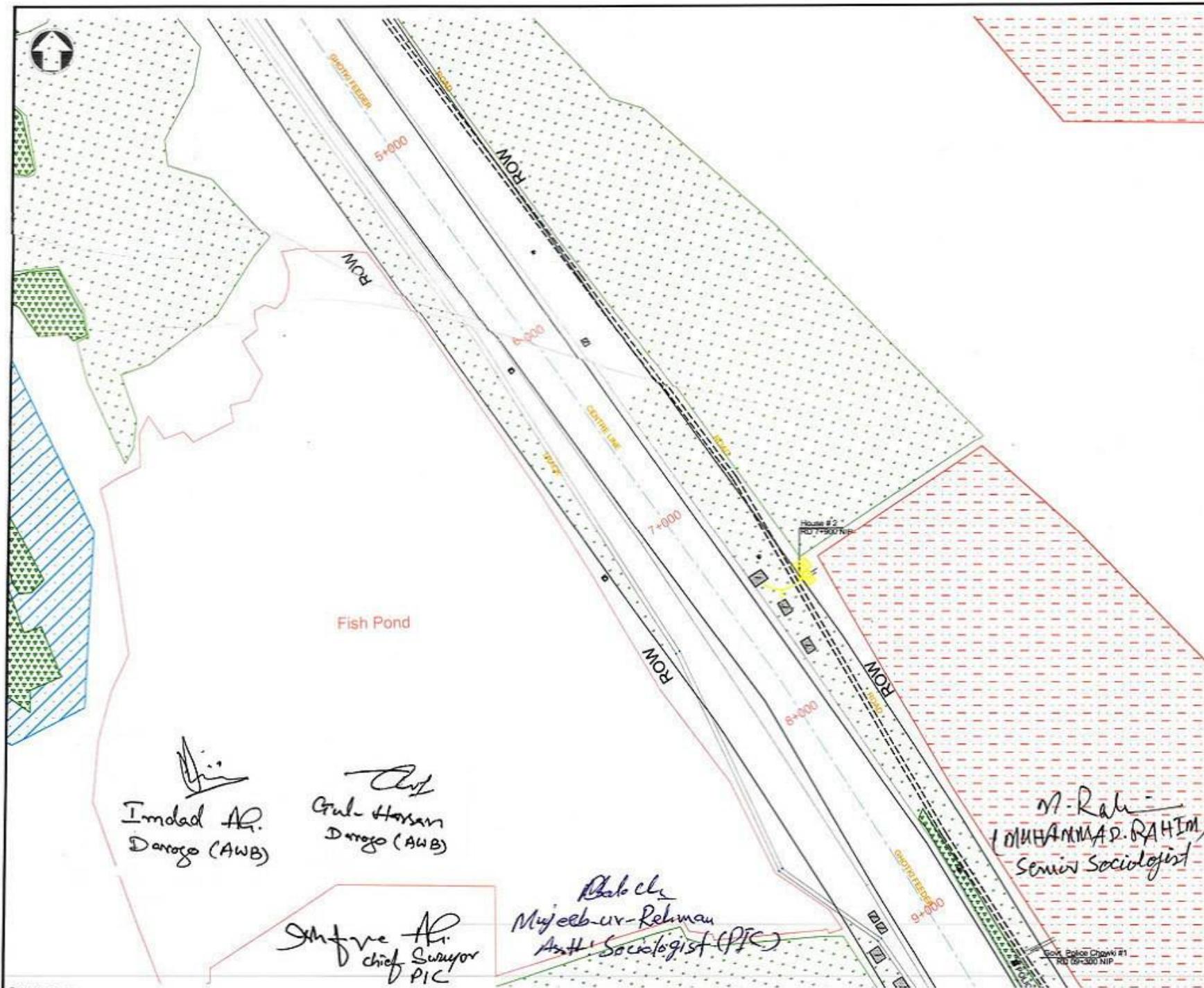


Appendix K. Relocation Plans

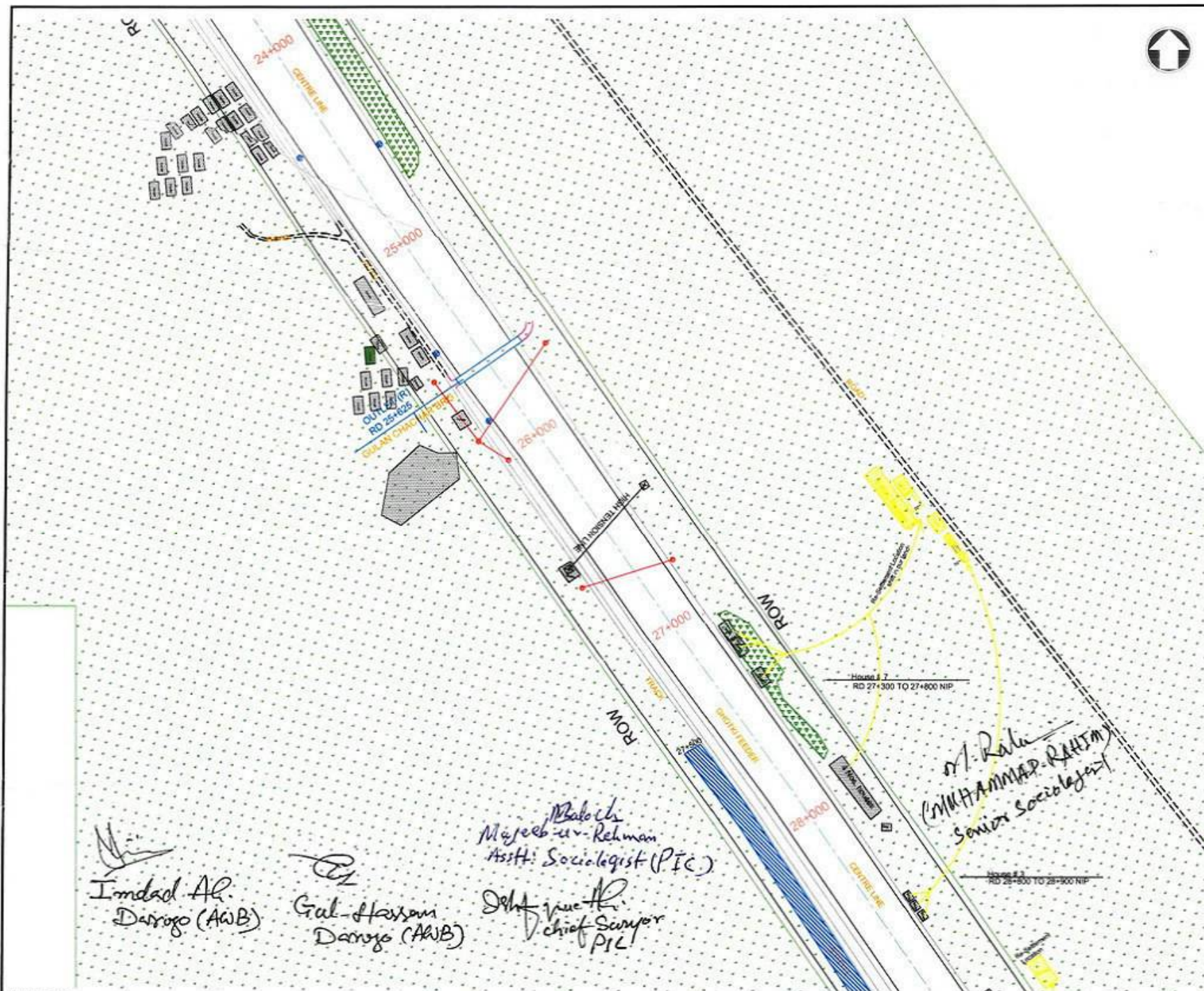


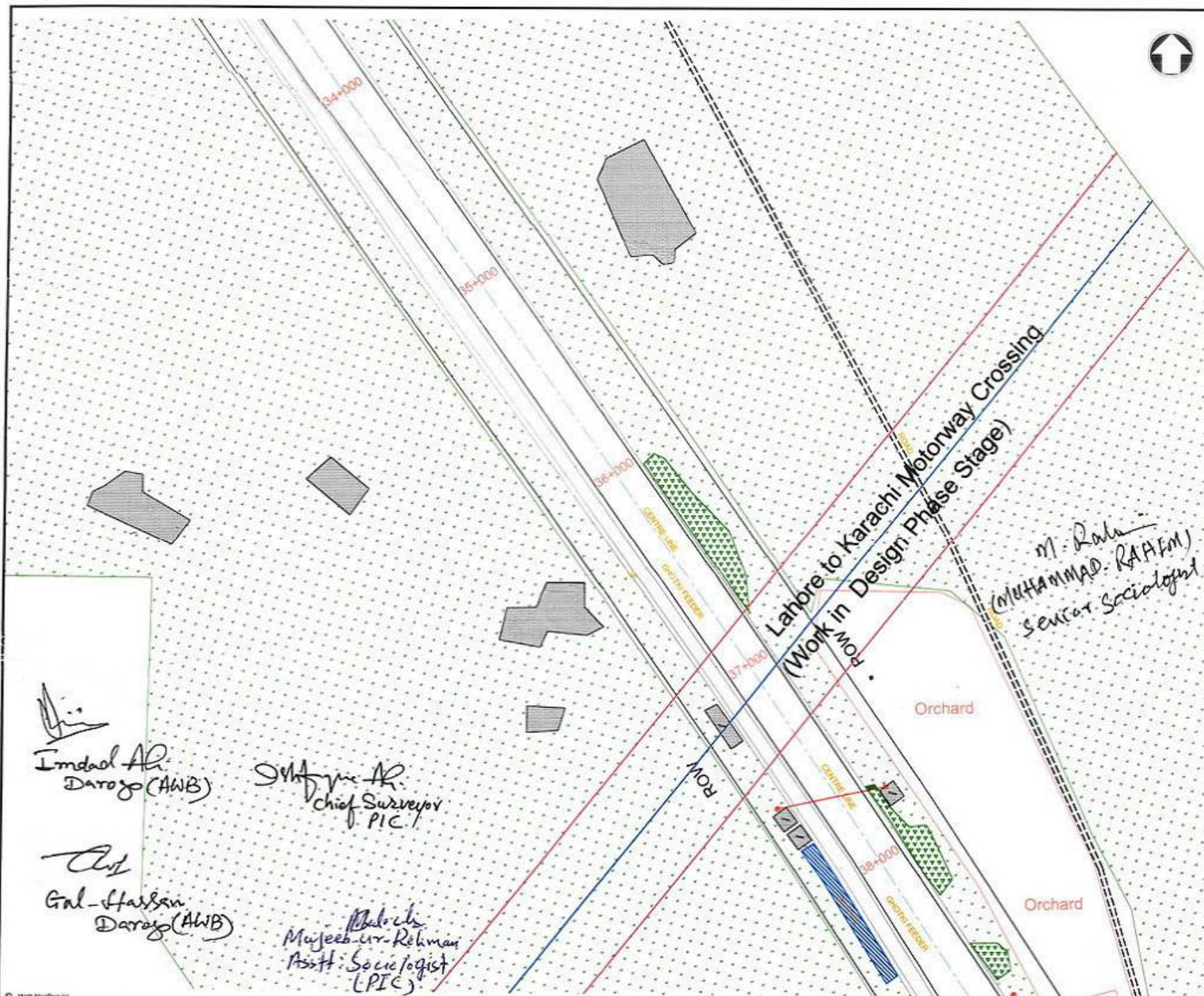
M. Rahim:
(MUHAMMAD. RAHIM)
Senior Sociologist

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Jones	100K	Panthers	AAA
Shane	600	Arrows	ODD
Solo - 100000	Nepal	VPP	Come
Chaudhry	8L	PA700	9.0



<p>Notes:</p> <ol style="list-style-type: none"> Do not scale from this drawing. For details of existing trees within the project area see the Environmental Assessment & Management Plan for Contract WSPB1/GF/01. For further details of the existing habitats see the Environmental & Social Impact Assessment for Contract WSPB1/GF/01. Mapping of Socio-Environmental Baseline has been completed only to the area within the Corridor of Influence for Contract WSPB1/GF/01. For mapping of impacts of works on Ghotki Feeder Canal for Contract WSPB1/GF/01. 																									
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<p>Consultant:</p> <p>Mott MacDonald</p> <p>in association with MCM Pakistan (Pvt.) Ltd.</p> <p>MCM Pakistan (Pvt.) Ltd. Domen Estate, 1st Floor, 18-C, Shaheed-e-Millat Road, Karachi-75350 Pakistan. Tel: +92-21-4543944, 4380518, 4309327 Fax: +92-21-4524819 E-mail: KM@mmpakistan.com</p>																									
<p>Client:</p> <p>SIDA</p> <p>Sindh Irrigation and Drainage Authority Left Bank, Damage Colony, Hyderabad, Sindh, Pakistan. Tel: +92-22-6210061 Fax: +92-22-6210060 Web: www.sida.org.pk</p>																									
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Drawing No.	WSPB1/NCB-102																								





Notes	
1.	Do not scale from this drawing
2.	For details of existing trees within the project area see the Environmental Assessment & Management Plan for Contract WSP/IGF/01
3.	For further details of the existing habitats see the Environmental & Social Impact Assessment for Contract WSP/IGF/01
4.	Mapping of Socio-Environmental Baseline has been completed only for the area within the Corridor of Influence for Contract WSP/IGF/01
5.	For mapping of impacts of works on Ghotki Feeder Canal for Contract WSP/IGF/01

Key to symbols	
	Scattered Small Ponds
	Soil
	Irrigated Fields (Shurba/Ghara)
	Trees (Shadri)
	Bare Land
	Agriculture Land
	Buildings
	Right of Way
	Sun Hole
	Minor
	Offspring watercourse
	Inspection Point
	Inspection Point
	Canal Centre Line
	Modelled Road
	Earthen Road
	Bridge
	Reduced Distance (RD) from canal head

Reference drawings	
For index Plan of G/F-01 Socio-Environmental Baseline Mapping refer to drawing WSP/IGF/01-100	

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Rev	Date	Drawn	Description	SHU	GCJ
1	SEP 2014	ZL	First Issue		

Consultant	
Mott MacDonald An association with MM Pakistan (Pvt.) Ltd.	

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Title	
SINDH WATER SECTOR IMPROVEMENT PROJECT Socio-Environmental Baseline Map Ghotki Feeder Canal Sheet 8 of 25	

Drawn	Coordination	Approved	Eng. Chk.	A.K.A.	Status
MAK	SAU	SAU	SAU	SAU	SAU

Scale	AS 5000	Project	WSP	Status
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Drawing No.	Rev.
WSP/IGF/01-100	1



Chief
Gul-Hassan
Darroo (AWB)

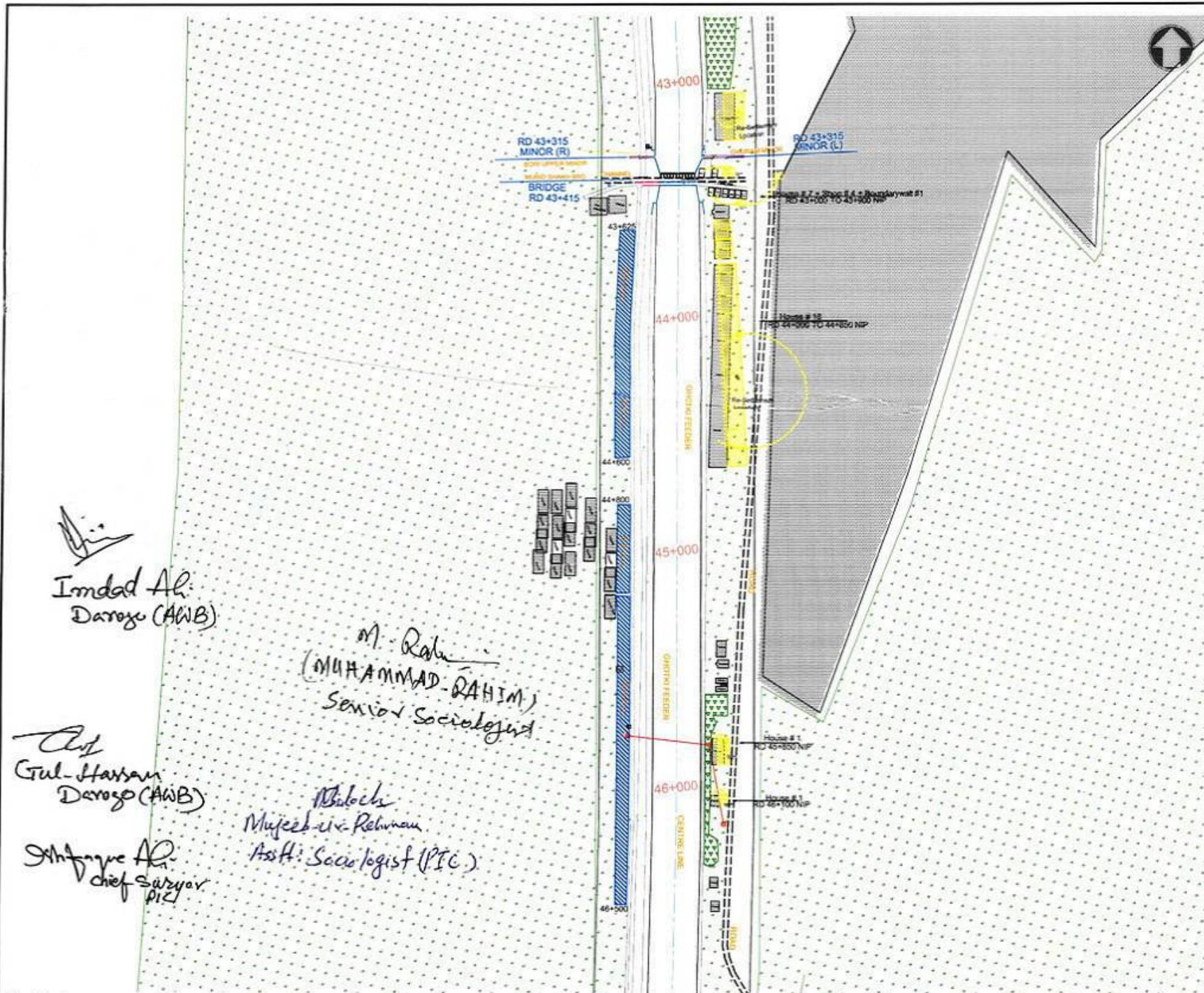
Imdad Ali
Darroo (AWB)

Shafiq Ali
Chief Surveyor
PIC

Mujeeb-ur-Rehman
Asstt. Sociologist
(PIC)

M. Rahim
MuHAMMAD RAHIM
Senior Sociologist

Notes													
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5. For mapping of impacts of works on Ghotki Feeder Canal for Contract WSP/01/01													
Key to symbols													
Scattered Small Woods	Buildings												
Soil	Right Of Way												
Wetland/Reeds (Struts, Grasses)	5m Wall												
New Irrigation	Minor												
Barren Land	Offalling watercourse												
Agriculture Land	Inspection/Repair Inspection Path												
	Canal Control Irr												
	Metalled Road												
	Earthen Road												
	Bridge												
	Reduced Distance (RD) from canal head												
Reference Drawings													
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Notes	
1. Do not scale from this drawing.	
2. For details of existing trees within the project area see the Environmental Assessment & Management Plan for Contract WSP/BS-10.	
3. For further details of the existing habitats see the Environmental & Social Impact Assessment for Contract WSP/BS-10/01.	
4. Mapping of Socio-Environmental Baseline has been completed only for the area within the Corridor of Influence for Contract WSP/BS-10/01.	
5. For mapping of impacts of works on Ghotki Feeder Canal for Contract WSP/BS-10/01.	

Key to symbols	
Scattered Small Ponds	Right of Way
Soil	Minor
Indirect, Revert (Shrub, Grass, etc.)	Oblique watercourse
Tree Pockets	Inspection/Repair Inspection Path
Barren land	Canal Centre line
Agriculture land	Modified Road
	Eastern Road
	Bridge
	Reduced Distance (RD) from Canal head

Reference drawings	
For Index Plan of GP-01 Socio-Environmental Baseline Mapping refer to drawing WSP/BS-10/01-100	

Scale	
0 500 600 700 1000	

C	SEP 2014	EL	First Issue	SRU	GCJ
Rev	Date	Drawn	Description	Drawn	Approved

Consultant	
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SINDH WATER SECTOR IMPROVEMENT PROJECT Socio-Environmental Baseline Map Ghotki Feeder Canal Sheet 10 of 25			

Designed	Drawn	Checked	Approved
Eng. Chk.	MAK	Coordination	Approved
Eng. Chk.	SRU	Approved	GCJ

Scale	AS 1:5000	Project	WSP	Status
Paper Size	A1	CAD File		Rev.
Drawing No.	WSP/BS-10/01-100			Rev.

Chief
Gul-Hassan
Darroo (AWB)

Imdad Ali
Darroo (AWB)

SM Fayaz Ali
Chief Surveyor
PIC

Muhammad
Muftab-ur-Rehman
Asstt. Sociologist
(PIC)

M. Raza
(MUHAMMAD RAHEM)
Senior Sociologist

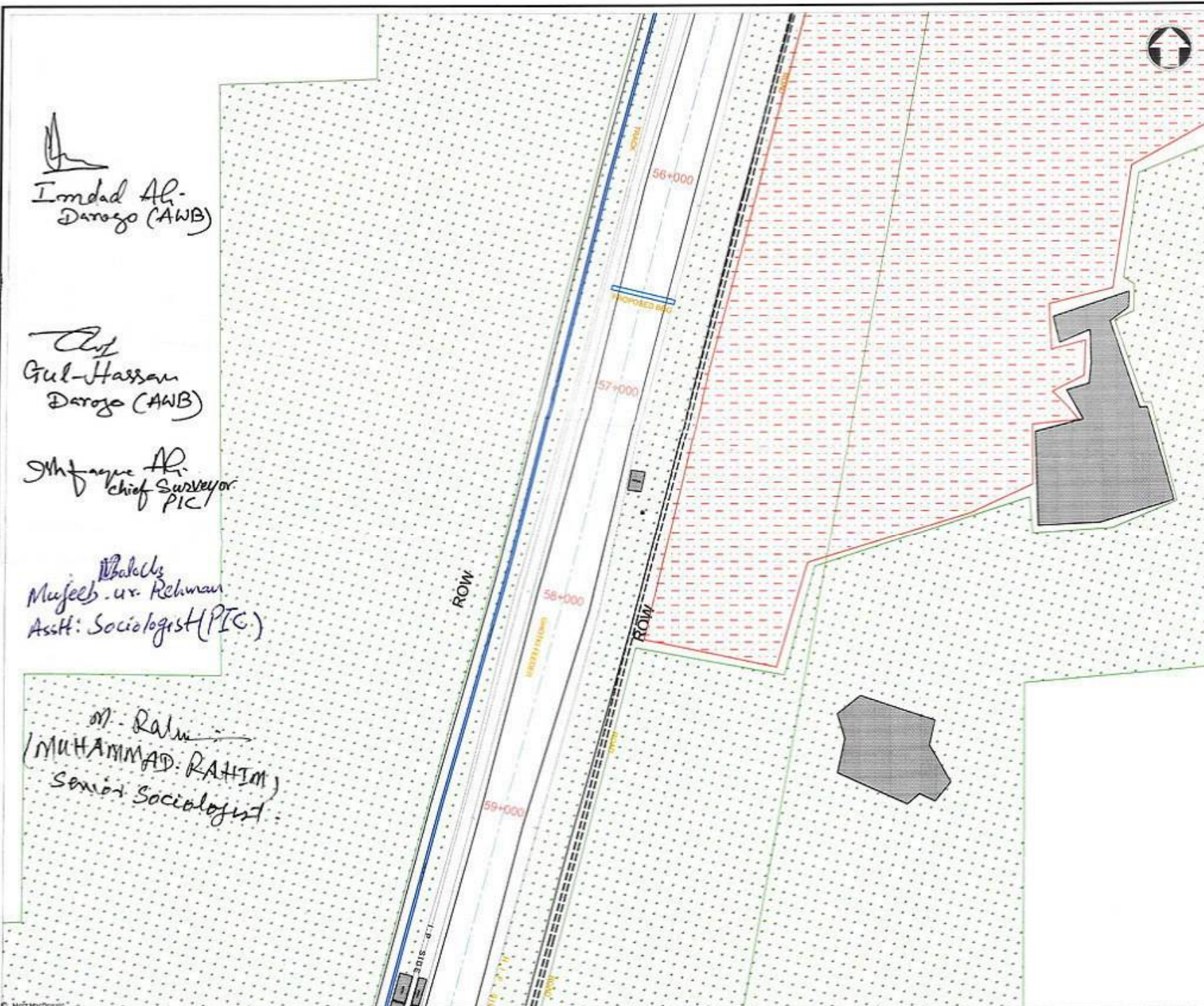
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<p>Notes</p> <ol style="list-style-type: none"> Do not scale from this drawing. For details of existing trees within the project area see the Environmental Assessment & Management Plan for Contract WSP/IDF/01. For further details of the existing habitats see the Environmental & Social Impact Assessment for Contract WSP/IDF/01. Mapping of Socio-Environmental Baseline has been completed only for the area within the Corridor of Influence for Contract WSP/IDF/01. For mapping of impacts of works on Ghotki Feeder Canal for Contract WSP/IDF/01. 																											
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<p>The</p> <p>SINDH WATER SECTOR IMPROVEMENT PROJECT Socio-Environmental Baseline Map Ghotki Feeder Canal Sheet 12 of 25</p>																											
<table border="1"> <tr> <td>Designed</td> <td>-</td> <td>Eng. Csk</td> <td>-</td> </tr> <tr> <td>Drawn</td> <td>MAK</td> <td>Coordination</td> <td>A.K.A</td> </tr> <tr> <td>Dep. Csk</td> <td>SWG</td> <td>Approved</td> <td>GCJ</td> </tr> <tr> <td>Scale</td> <td>A5 Sh/Om</td> <td>Project</td> <td>WSP</td> </tr> <tr> <td>Paper Size</td> <td>A1</td> <td>CAD file</td> <td>SWP</td> </tr> <tr> <td>Drawing No.</td> <td colspan="2">WSP/IDF/01-112</td> <td>Rev.</td> </tr> </table>				Designed	-	Eng. Csk	-	Drawn	MAK	Coordination	A.K.A	Dep. Csk	SWG	Approved	GCJ	Scale	A5 Sh/Om	Project	WSP	Paper Size	A1	CAD file	SWP	Drawing No.	WSP/IDF/01-112		Rev.
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(MUHAMMAD RAHIM)
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- Do not scale from this drawing
- For details of existing trees within the project area see the Environmental Assessment & Management Plan for Contract WSP/01/GF-01
- For further details of the existing habitats see the Environmental & Social Impact Assessment for Contract WSP/01/GF-01
- Mapping of Social/Environmental Baseline has been completed only for the areas within the Corridor of Influence for Contract WSP/01/GF-01
- For mapping of impacts of works on Ghosh Feeder Canal for Contract WSP/01/GF-01

<p> ^a </p>	<p> </p>
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Scattered Small Ponds

Canal

Irrigated Fields (Rice, Grapes, Citrus)

Tree Stands

Pasture Land

Agriculture Land

Buildings

Right of Way

Gravel

Minor

Off-highway watercourse

Inspection Point

Section Point

Canal Control Line

Measured Road Intersection Point

Bridge

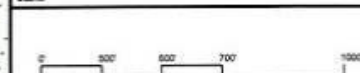
Reduced Elevation (ND) from canal New

0 1000

Reference drawings

For Index Plan of QF-01 Socio-Environmental Baseline Mapping refer to drawing WSPB-01-QF-00-100

System	
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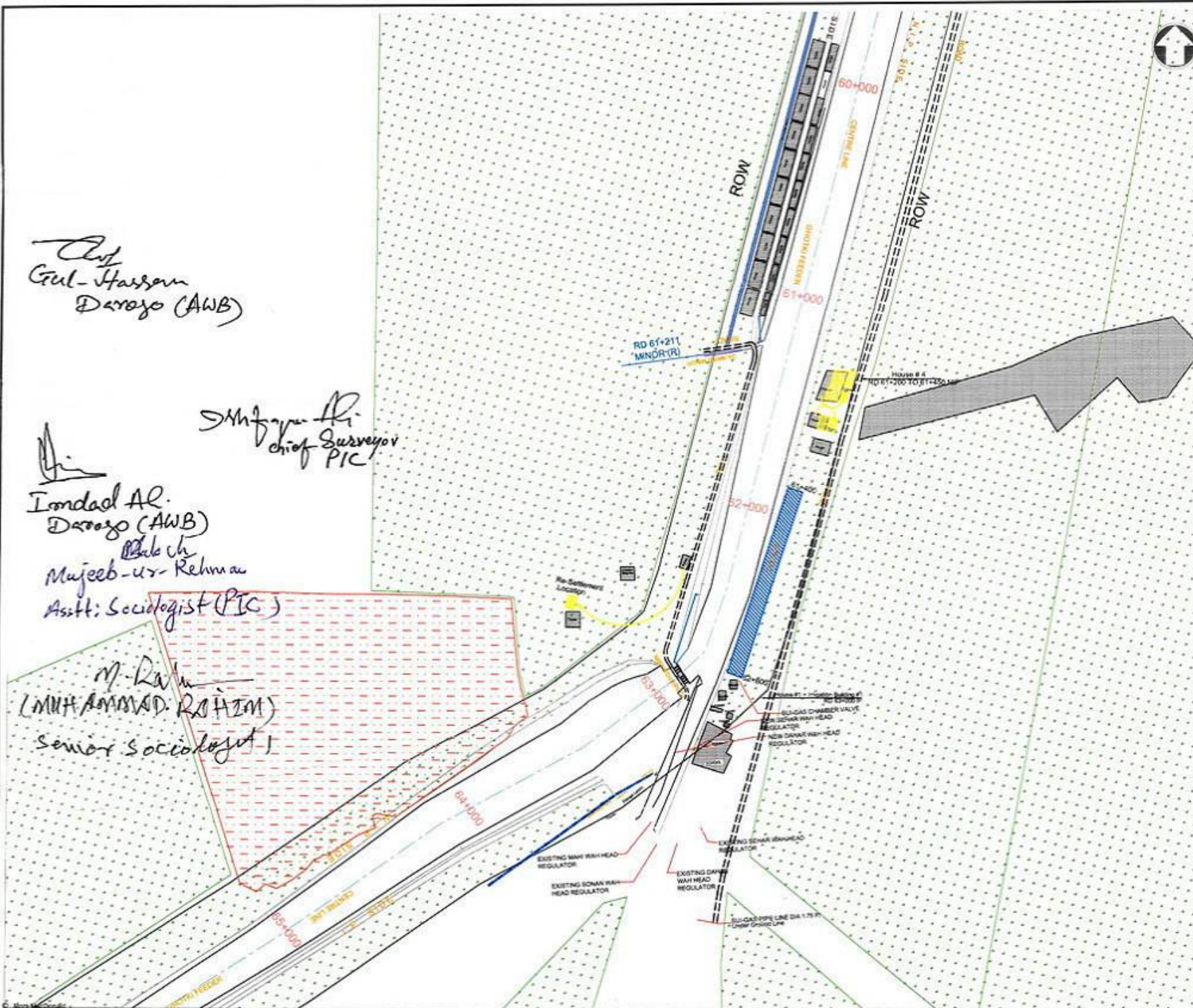
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SINDH WATER SECTOR IMPROVEMENT PROJECT
Socio-Environmental Baseline Map
Ghotki Feeder Canal
Sheet 13 of 25

Designed	-	Eng. Chk.	-	
Drawn	MAK	Coordination	A.K.A	
Dep. Chk.	SBU	Approved	GCU	
Scale	A5-D=Chk	Project	WSP	Status
Paper Size	A1	CAD file		inf
Drawing No.	WSP/BI/NCB-113			Rev.

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1. Do not scale from this drawing
2. For details of existing trees within the project area see the Environmental Assessment & Management Plan for Contract WSPB1/GF/01
3. For further details of the existing habitats see the Environmental & Social Impact Assessment for Contract WSPB1/GF/01
4. Mapping of Socio-Environmental Baseline has been completed only for the areas within the Corridor of Influence for Contract WSPB1/GF/01
5. For mapping of impacts of works on Ghoda Feeder Canal for Contract WSPB1/GF/01

Key to symbols



Reference drawings

* For Index Plan of GP-01 Socio-Environmental Baseline Mapping refer to drawing WSP-B1/GP-01/00

Scales



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Socio-Environmental Baseline Map
Ghotki Feeder Canal
Sheet 14 of 25

Designed	-	Eng. Chk.	-	
Drawn	MAK	Coordination	A.K.A	
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