# **Social Impact Assessment Report**

**October: 2021** 

**Project ID: P154990** 

Sub-Project: Improvement & Up-gradation of Malani to Chakrabatti Road (District Doda)

Jhelum Tawi Flood Recovery Project
(World Bank Funded)

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### **ABBREVIATIONS**

BPL Below Poverty Line

CBO Community Based organisations

COI Corridor of Impact

CPR Common Property Resources

DC District Collector

DSC Design & Supervision Consultant

DED Detailed Engineering Design

EIA Environmental Impact Assessment

EP Entitlement/Eligible Persons

ERA Economic reconstruction Agency

ESMF Environment and Social Management Framework

ESSR Environment & Social Screening Report

EM Entitlement Matrix

GBV Gender Based violence

GESI Gender Equality and Social Inclusion

Govt. Government

GRC Grievance Redressal Cell/Committee

HP Halqa Panchayat

IRC Indian Road Congress

IDA International Development Agency

IRAP International Road Assessment Programme

JTFRP Jhelum Tawi Flood Recovery Project

J&K Jammu & Kashmir

DSC Design & Supervision Consultant

DEA Department of Economic Affairs

DPR Detailed Project report

NGO Non-Governmental Organization

OP Operational Policy

PAP Project Affected Person

PAF Project Affected Family

PDF Project Displaced Family

PDP Project Displaced Person

PIU Project Implementation Unit

PMU Project Management Unit

PMC Project Management Consultant

R&R Resettlement & Rehabilitation

RAP Resettlement Action Plan

RFCTLAR&R Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and

Resettlement act, 2013

RDNA Rapid Damage and Needs Assessment

ROW Right of Way

RTI Right to information Act

SAR Social Assessment Report

SES Socio- Economic Survey

SEO Site Engineering Office

SH State Highway

SIA Social Impact Assessment

SC/ST Schedule Caste and Schedule Tribe

SMF Social Management Framework

SMP Social Management Plan

SOR Schedule of Rates

### **Definition of Words and Phrases**

# **Affected Persons (APs)**

Affected Persons (APs), for this Project, means all the people directly affected by a project-related land acquisition that leads to their physical relocation or loss of assets, or access to assets, with adverse impacts on livelihoods. This includes any person, household (sometimes referred to as project affected family), firms, or public or private institutions who on account of project-related land acquisition would have their;

- 1. standard of living adversely affected;
- 2. right, title or interest in all or any part of a house, land (including residential, commercial, artisanal mining, agricultural, plantations, forest and/or grazing land), water resources or any other moveable or fixed assets acquired, possessed, restricted or otherwise adversely affected, in full or in part, permanently or temporarily; and/or
- 3. business, occupation, place of work or residence, or habitat adversely affected, with or without displacement. APs therefore include;
  - persons affected directly by the acquisition or clearing of the right-of-way or construction work area;
  - persons whose agricultural land or other productive assets such as mining, trees or crops are affected;
  - persons whose businesses are affected and who might experience loss of income due to project-related land acquisition impacts;
  - persons who lose work/employment as a direct result of project-related land acquisition; and
  - people who lose access to community resources/property as a result of project-related land acquisition.

#### Census

Census means the pre-appraisal population record of potentially affected people, which is prepared through a count based on the village or other local population data or census.

#### **Compensation**

Compensation means payment in cash or kind for an asset to be acquired or affected by a project at replacement costs.

#### **Cut-off-date**

Cut-off-date means the date after which people will not be considered eligible for compensation if they are not included in the list of APs as defined by the census. Normally, the cut-off date for the titleholders is the date of the detailed measurement survey.

### **Displacement**

Displacement means either physical relocation or economic displacement directly caused by project-related land acquisition.

#### **Encroachers**

Encroachers mean those persons who extend their property beyond that for which they hold a Title are encroachers and would not be eligible for compensation for land for which they do not possess a title.

#### **Entitlement**

Entitlement means the range of measures comprising cash or kind compensation, relocation cost, income rehabilitation assistance, transfer assistance, income substitution, and relocation which are due to /business restoration which is due to APs, depending on the type and degree nature of their losses, to restore their social and economic base.

### **Livelihood Restoration**

Livelihood Restoration means the measures required to ensure that APs have the resources to at least restore, if not improve, their livelihoods. Restoration of livelihood of all APs is one of the key objectives of the World Bank's resettlement policy. It requires that people are given the means and assistance necessary for them to improve, or at least restore, their livelihood and living conditions to pre-project levels. Inventory of Losses means the pre-appraisal inventory of assets as a preliminary record of affected or lost assets.

# **Land Acquisition**

Land Acquisition means the process whereby a person is compelled by a public agency to alienate all or part of the land s/he owns, possesses, or uses, to the ownership and possession of that agency, for public purposes, in return for prompt and fair compensation. This includes direct acquisition and easement.

#### Non-Titled

Non-titled means those who have no recognizable rights or claims to the land that they are occupying and includes people using private or state land without permission, permit, or grant.

### Rehabilitation

Rehabilitation means the assistance provided to severely affected APs to supplement payment of compensation for acquired assets to improve, or at least achieve full restoration of, their preproject living standards and quality of life to pre-project level.

### Resettlement

Resettlement means all social and economic impacts that are permanent or temporary and are:

- (i) caused by the acquisition of land and other fixed assets,
- (ii) by the change in the use of land, or
- (iii) restrictions imposed on land as a result of the project.

#### **Resettlement Plan**

Resettlement Plan means the time-bound action plan with budget setting out resettlement strategy, objectives, entitlements, actions, responsibilities, monitoring, and evaluation.

#### **Structures**

Structures mean all structures affected, or to be acquired, by the project such as living quarters, wells, hand pumps, agricultural structures such as rice bins, animal pens, stores/warehouses, commercial enterprises including roadside shops and businesses.

#### **Squatters**

Squatters mean the same as a non-titled person i.e. those people without legal title to land and/or structures occupied or used by them. World Bank policy explicitly states that such people cannot be denied assistance to restore livelihoods and living conditions based on the lack of title.

#### **Vulnerable**

Vulnerable means any people who might suffer disproportionately or face the risk of being marginalized from the effects of resettlement i.e; (i) single household heads with dependents; (ii) disabled household heads; (iii) poor households; (iv) elderly households with no means of support; (v) the landless or households without the security of tenure; and (vi) ethnic minorities.

#### **Social Impact Assessment (SIA)**

Social impact assessment (SIA) is the process of identifying and managing the social impacts of industrial projects. It can also be applied to policies, plans, and programs. SIA is used to predict and mitigate negative impacts and identify opportunities to enhance benefits for local communities and broader society.

# **Project Influence Area**

The area likely to be affected by the project, including all its ancillary aspects, such as power transmission corridors, pipelines, canals, tunnels, relocation, and access roads, borrow and disposal areas, and construction camps, as well as unplanned developments induced by the project (e.g., spontaneous settlement, logging, or shifting agriculture along access roads). The area of influence may include, for example, the area where the project road is located.

# **Executive Summary**

The catastrophic deluge of September 2014 harmed the socio-economic aspects of the Union territory of Jammu and Kashmir (erstwhile state) and massive infrastructure damaged in which not only Srinagar was most affected but other districts as well. It left behind a trail of siltation in most of the water bodies as environmental degradation, which is always synonymous with major floods. In connection to the catastrophic flood, a mission of the World Bank visited the Union territory of Jammu and Kashmir (erstwhile state) during February 1-6, 2015 on request of the Government of India to review and assess the damages to produce a rapid multi-sectoral assessment report of the damages and needs. The RDNA estimates the total damages and loss caused by floods at about INR 211,975 million (US\$ 3,550.45), most of it to housing, livelihoods, and roads and bridges, which combined represented more than 70% of the damages in terms of value.

Based on the RDNA results, restoration works underway, and discussions with the GoJ&K, "Jhelum and Tawi Flood Recovery Project (JTFRP)" will focus on restoring critical infrastructure using international best practice on resilient infrastructure. One of the sub-project identified under Component 2 of JTFRP is "Improvement and Upgradation of Malani to Chakrabatti Road" sub-project. Under component 2 "Improvement and Upgradation of Malani to Chakrabatti Road" is proposed for a total length of 10.056 kms.

Sub-projects under "Jhelum and Tawi Flood Recovery Project" have a prior requirement of screening which has been conducted and is based on three categories; viz., nature of the project, the size of the project, and location of the project with sensitive area criteria. The objective of Environment and social screening was to identify the potentially significant environmental/ social issues of the sub-project at an early stage for detailed Environmental and Social impacts. The screening exercise does not envisage any adverse social impact.

One of the significant requirements under JTFRP is to disseminate project information by the method of "meaningful public consultation with stakeholders and the general public". The consultation for this sub-project was conducted successfully with local residents/ stakeholders in Berrare village on 03.07.2019 and 15.7.2019. During the consultation process, people have expressed keen interest in the proposed sub-project. The only thing they requested is to provide protection walls wherever executing agency does land cutting along the road.

Executive Engineer of the PWD (R&B) Bhaderwah division, vide communication number 4673-75 dated 17.12.2018 had issued a certificate and confirms that the existing road is single lane and the RoW is 10.00 meters. Certificate also confirms that the ownership of the land lies with PWD, Bhadrwah division. Project Manager (Transport, Jammu division) vide letter no

PIU/T/ERA/2021/865 dated 16.03.2021 provided a non-encumbrance certificate which confirms that RoW of 10 meters is available for road upgaradtion and its encumberance free which means that no private or public structure exists on the whole alignment.

The revenue record of the proposed sub-project could not be obtained from the concern department by JK ERA. Since the revenue record of the proposed sub-project was not available, therefore PMU, JTFRP published a notice in the two local newspapers namely "Amar Ujala" and "State Times" on 19.09.2021 and 20.9.2021 respectively, informing general people and those who are likely to be benefitted/affected in particular, about the upgradation of this road sub-project within the existing right of way under World Bank funding. It also called for any objection from the local people regarding use of RoW, along with supporting documentary evidence within 07 days of publication of the notice in the newspaper. The office of Director safeguards did not receive any objection or claim from anyone even after the lapse of one month of the publication of notice in two local newspapers. Thereafter, Director Safeguards issued an official letter vide no. ERA/DSG/PS/88-93 dated 25.10.2021 regarding encumbrance free RoW detailing therein the process followed to reconfirm the ROW ownership status.

Therefore, on the basis of certificate issued by Project Manager (Transport, Division Jammu), site visits, approved DPR and notice published in the newspaper it can be said that the subproject does not have any adverse impact on the assets such as structures, land or on livelihood of anyone.

However, if during execution, there is any unanticipated impact of the sub-project on any asset, the issue shall be addressed as per the provisions of Environment & Social Management Framework (ESMF) for the project, applicable policies of the WB and that of U.T of J&K.

# 1. Background Introduction

# 1.1 Project Background

In September 2014, Jammu & Kashmir experienced torrential monsoon rains in the region causing major flooding and landslides. The continuous spell of rains from September 2-6, 2014, caused Jhelum, Chenab, and Tawi Rivers as well as many other streams/tributaries to flow above the danger mark. The Jhelum River also breached its banks flooding many low-lying areas in the Kashmir region, including the capital. In many districts, the rainfall exceeded the normal by over 600%. In the Jammu division also, many districts received rainfall over the normal. Jammu district itself recorded over 467.3 mm of rainfall during Sept 2014, which is 339% excess of the normal (source-Indian Meteorological department website). The Indian Meteorological Department (IMD) records precipitation above 244.4 mm as extremely heavy rainfall, and J&K received 558mm of rain in the June- September period, as against the normal 477.4 mm.

Due to the unprecedented heavy rainfall, the catchment areas particularly the low-lying areas were flooded for more than two weeks. Some areas in urban Srinagar stayed flooded for 28 days. Water levels were as high as 27 feet in many parts of Srinagar. The areas from the main tributaries of river Jhelum vis-à-vis Brengi nallah, Vishav nallah, Lider nallah and Sandran nallah started overflowing due to the heavy rainfall causing water levels in the Jhelum River to rise. Subsequently, the discharge of the river Suran was 200 thousand cusecs as against an average of 50 thousand cusecs. With the excessive discharge of water, the river Suran affected the basin areas and also took a different course at various locations causing damages to the surrounding villages in the catchment area. Water levels also increased in the rivers of Chenab and Tawi, both of which were flowing above normal levels. Due to the rivers overflowing nearly 20 districts of the Union territory of Jammu and Kashmir (erstwhile state) were impacted.

A Joint team led by the **Department of Economic Affairs (DEA), GoI,** with representation from the World Bank visited J&K on October 21, 2014. Subsequently, GoI has sent a request to the World Bank on January 5, 2015, to field a Joint Rapid Damage and Needs Assessment (RDNA) Mission within the Union territory of Jammu and Kashmir (erstwhile state). In response, a mission of the World Bank visited the Jammu and Kashmir (erstwhile state) during February 1-6, 2015 to produce a rapid multi-sectorial assessment report of the damages and needs. The RDNA estimates the total damages and loss caused by floods at about INR 211,975 million (US\$ 3,550.45), most of it to housing, livelihoods, and roads and bridges, which combined represented more than 70% of the damages in terms of value.

Public service infrastructure and equipment of hospitals and education centres were also severely damaged and are still not fully operational.

Based on the Rapid Damage Needs Assessment (RDNA) results, restoration works underway, and discussions with the GoJ&K, the project will focus on restoring critical infrastructure using international best practices on resilient infrastructure.

Given the Jammu and Kashmir (erstwhile state)'s vulnerability to both floods and earthquakes, the infrastructure will be designed with upgraded resilient features and will include contingency planning for future disaster events. Therefore, the project aims at both restoring essential services disrupted by the floods and improving the design standard and practices in the Jammu and Kashmir (erstwhile state) to increase resilience.

# 1.2 Project Development Objective<sup>1</sup>

The Project Development Objective (PDO) is to support the recovery and increase disaster resilience in targeted areas of the Jammu and Kashmir (erstwhile state) and increase the capacity of the Jammu and Kashmir (erstwhile state) entities to respond promptly and effectively to an eligible crisis or emergency.

# 1.3 Project Components

The project is comprised of the following seven components:

- 1. Reconstruction and strengthening of critical infrastructure
- 2. Reconstruction of roads and bridges
- 3. Restoration of urban flood management infrastructure
- 4. Strengthening and restoration of livelihoods
- 5. Strengthening disaster risk management capacity
- 6. Contingent Emergency Response
- 7. Implementation Support.

# 1.4 Sub-Project Background

Component 2 of the "Jhelum and Tawi Flood Disaster Recovery Project" is 'to restore and improve the connectivity disrupted due to the disaster through the reconstruction of damaged roads and bridges'. The component will finance and support the reconstruction of about 300 km. of damaged roads and associated drainage works, retaining walls, breast walls, and other structures to increase resilience, designed to be seismic resilient (as per

<sup>&</sup>lt;sup>1</sup> Source: JTFRP- Environmental & Social Management Framework (ESMF), 2015.

the guidelines of the Bureau of Indian Standards) and concerning topography and hydrology (as per the guidelines of the Indian Roads Congress, the Ministry of Road Transport and Highways), and projected demographic changes.

One of the identified roads under package 4 is "Improvement & Upgradation of existing Malani- Chakarbarti road" sub-project. SIA has been completed for the project road. The proposed road sub-project falls in Doda district of Jammu division. The total length of the proposed road for reconstruction is 10.012 kms. It will be a single lane road with 3.75 m, carriageway.

# 1.5 Sub-Project Description

Project Road takes off from Km 7th of Pul-Doda – Bhaderwah and ends at village Sundra. From the connectivity point of view, this particular road has high importance as through this alignment people of several villages connect with district town. Gravel/ Earthen surface mostly exists. Due to the non-existence of throughout CC drain, the pavement was badly damaged and the slope eroded at several locations. Necessary protection work requires several stretches with the provision of a CC drain.

The geographical coordinates of the road - latitude: 33° 5'31.95"N (start of the project) and 33° 5'56.10"N (End of the Project) longitude: 75°35'16.95"E (Start of the project) and 75°36'4.38"E (End of the Project) (annexure 2).

### 1.6 Benefits of the Sub-Project

The reconstruction of the proposed road will be a great help to the farmers to transport agricultural products, children would be able to travel faster and safer to go to school, as well as the local people when accessing to basic facilities such as health center/hospital, markets, working place, place of worship, and other areas. Besides that, the road will have fewer bags of dust during the dry season which may aggravate the health condition of the children and elderly; unlike the condition of the road during the rainy season which is muddy and slippery, is risky for the lives of the road users especially those using bicycles and motorcycles.

The project will not cause any adverse impacts rather it will simplify the life of locals, teachers' fraternity and specifically of the women, elders and children. The sub-project has no adverse impact on any cultural aspect, indigenous people or constitutionally defined vulnerable groups. During the civil works, there will be minimal social impacts but these are temporary disturbances and will be mitigated under the SMP. Overall, the project will provide long-term benefits for the local people.

# 1.7 Need for Social Impact Assessment

Social Impact Assessment (SIA) is a tool for anticipating and mitigating the potentially temporary and permanent adverse impacts of projects. It also helps in enhancing the positive outcomes of the sub-project. SIA alerts project planners (public and private bodies) as to the likely social and economic costs and benefits of a proposed project. The knowledge of the potential costs, when weighed against the likely benefits of a project, helps decision-makers in deciding whether the project should be carried out, with or without modifications, or abandoned completely. The agency carrying out the SIA also develops a mitigation plan to overcome the potential negative impacts on individuals and communities.

The purpose of the SIA is to ascertain whether a project proposed by the developer is truly in the public purpose, and whether the project is located at a site which is least-displacing and requires the bare minimum amount of land.

#### 1.7.1 Need for SIA in Malani to Chakrabarti road Sub-Project

Social Impact Assessment study was conducted to identify and assess the land requirement for the proposed sub-project besides identifying the temporary and permanent impacts. Malani to Chakrabatti road sub-project road is going to be improved and upgraded only within the available RoW which PIU has certified is 10.0 meters and encumbrances free. Though the sub-project does not require private land acquisition, therefore, the Social Impact Assessment was conducted to identify and assess any other impact on the people and communities due to project implementation such as any impact on private assets (of both titleholders and non-titleholders), on the livelihood of people, common property resources or any other type of impacts. Further, it will guide Executing Agency (EA) to prepare a sound Social Management Plan that will provide guidance to the contractor & PIU to manage social issues during execution and post execution.

### 1.8 Objective and Scope of Social Impact Assessment

The Social Impact Assessment study involves the identification of potential social issues in the project and trying to address them through design interventions. The SIA further carries out impact prediction and evaluation of social issues of the project and proposed mitigation measures in the form of Social Management Plan. The major objectives of the SIA are given below:

- To gather baseline data for assessment of impacts (both direct and indirect);
- To do the socio-economic profiling of the project;

- To identify all potential adverse and positive social issues /impacts of the project;
- To suggest mitigation measures to effectively manage potential adverse impacts;
- To involve local people in the SIA study and project activities.

# 1.9 The methodology adopted for the SIA

### 1. Defining the Impact area

The first step undertaken was to define the Area of Impact. For defining the project area (both directly and indirectly), a map that will show the project area was prepared. Besides, a field visit to the area were undertaken on 15.07.2019 and 3.07.2019 to have a better understanding of the geographic limits of the area and the people living there.

### 2. Identifying the Information/Data Requirements and their Sources

The existing secondary data (census 2011) on impacts likely to follow from the project was reviewed and used for assessment purposes. This has provided disaggregated data according to caste, religion, sex, and other administrative categories, such as persons below the poverty line.

#### 3. Public Consultation

Project related information has been shared with all the concerned stakeholders. This was the first step to identify stakeholders who will be involved in the consultative processes. Since the sub-project does not envisage acquisition of assets such as land and structures. Therefore, only people residing along the sub-project road, and PIU, PMU and line departments were identified as major stakeholders. Public consultation took place on 15.7.2019 and 3.7.2019. The basic questions to consider in identifying stakeholders include:

- Who will be directly or indirectly and positively and negatively affected?
- Who are the most vulnerable groups?
- Who might have an interest or feel that they are affected?
- Who supports or opposes the changes that the project will produce?
- Whose opposition could be detrimental to the success of the project?
- Whose cooperation, expertise, or influence would be helpful to the success of the project?

# 4. Conducting Screening

Social Impact Assessment (SIA) process began with screening. Screening was undertaken in the very beginning stages of project development. The purpose of screening was to screen out "no significant impacts" from those with significant impacts and get a broad picture of the nature, scale, and magnitude of the issues. This helped in determining the scope of detailed SIA that would be subsequently carried out. The screening results revealed that the project will not have any significant impact. It has been decided that the proposed road will be upgraded in the available RoW and there are no structures either commercial, residential or any CPR in the alignment of the road.

### 5. Carry Out Scoping in the Field

The next step was scoping. Essentially, this involves a visit to the project site, and consultation with all stakeholders. It is important to confirm their understanding of key issues. On-site appreciation of impacts is indispensable for projects that cause displacement on a large scale. The local knowledge can be invaluable in finding alternatives that help avoid or at least reduce the magnitude and severity of adverse impacts.

#### 6. Developing a Mitigation Plan

SIA study helps and guides in the preparation of social mitigation and management plan for the envisaged and unanticipated impacts. In this study SMP has been prepared in consultation with the locals, PIU and other stakeholders which will serve as blueprint for managing and mitigating social issues/impacts during execution of the sub-project.

# 1.10 Structure of SIA Report

To Present the findings of the SIA study, the information's have been suggested in the following chapters:

#### **Executive Summary**

- 1. Introduction & Background
- 2. Project Description
- 3. Legal and Regulatory Framework
- 4. Socio-Economic Profile of the Project Impact Area
- 5. Analysis of Alternatives
- 6. Stakeholder's Consultation
- 7. Analysis of Social Impacts
- 8. Mitigation Measures
- 9. Grievance Redressal Mechanism
- 10. Institutional Arrangements
- 11. Monitoring and Evaluation

# 2. Project Description

# 2.1 Description of the Project

The Jammu & Kashmir region owing to its geographical and geo-climatic setting is a multi-hazard prone region that has experienced natural disasters like earthquakes, floods, landslides, avalanches, high-velocity winds, and snowstorms. Most of the project roads in Kashmir Valley fall in plain terrain whereas roads under Jammu Province are passing through hilly terrain. In Kashmir, Floods and flash floods are also frequent. Floods generally occur in the summer when heavy rains are followed by snowmelt. Flooding of the river Jhelum is the main cause of floods in the region. In Jammu province, hill roads are mainly damaged frequently during the beginning of summer due to snowmelt and due to heavy rain. Hill slopes are badly damaged and sliding comes on the roads as there is no such protection work exists towards hill slide slope. Even Jammu Srinagar National Highway is not unturned from it.

In September 2014, the northern region of India experienced torrential monsoon rains in the region causing major flooding and landslides. The continuous spell of rains from September 2nd to 6th, 2014, caused Jhelum and Chenab Rivers as well as many other streams/tributaries to flow above the danger mark. Due to the unprecedented heavy rainfall, the catchment areas particularly the low laying areas were flooded for more than two weeks. As a result, the main tributaries of river Jhelum vis-a-vis Brengi Nallah, Vishav Nallah, Lider Nallah, and Sundran Nallah started overflowing. The water level also increased in the rivers of Chenab and Tawi, both of which the water flowing above normal levels. Due to the rivers overflowing nearly 20 districts were impacted. The total damage and loss caused by the flood is about INR 211,975 million, most of it to housing, livelihoods, and roads and bridges, which combined represented more than70% of the damages in terms of value. Public service infrastructure and equipment of hospitals and education centers were also severely damaged and are still not fully operational.

The project "Jhelum & Tawi Flood Recovery Project" will focus on restoring critical infrastructure using the international best practice of resilient infrastructure. Given the region's vulnerability to both floods and earthquakes, the infrastructure will be designed with upgraded resilient features and will include contingency planning for future disaster events. Therefore, a study followed by detailed reports on flood management aims at both restoring essential services disrupted by the floods and improving the design standards and practices to increase resilience.

Based on the RDNA results, restoration works underway, and discussions with the Govt. of J&K, "Jhelum and Tawi Flood Disaster Recovery Project (JTFRP)" will focus on restoring critical infrastructure using international best practice on resilient infrastructure. Component 2 of JTFRP is 'to restore and improve the connectivity disrupted due to the disaster through the reconstruction of damaged roads and bridges. The project will finance the restoration and improvement of about 27 damaged roads, as per the guidelines of the Indian Roads Congress, the Ministry of Road Transport and Highways.

# 2.2 Sub-Project Description

Project Road takes off from Km 7th of Pul-doda – Bhaderwah road and end at village Sundra. From connectivity point of view, this particular road has high importance as through this alignment people of several villages namely Malaini, Jahnana, Dranga, Pendku, Ghambeer Muglian, Mehrada and connect it with district town. Gravel/Earthen surface mostly exists. Due to non-existence of throughout CC drain, pavement badly damaged and slope eroded at several locations. Necessary protection work requires at several stretches with provision of CC drain. Due to non-existence of CC drain throughout, pavement badly damaged and slope eroded at several locations. Project Stretch is mostly Gravel/Earthen. In winter and monsoon road condition became non-motorable. Human life of the hill side villages becomes difficult during this period. It will be a single lane road with 3.75 m, carriageway.

### 2.3 Project Location

The sub-project starts from Malani village and ends at Chakrabatti village. The topography of the project area is hilly. The existing length of the road is 10.012 km. This sub-project falls in the Doda District of the Jammu division. The geographical coordinates of the road latitude: 33° 5'31.95"N (start of the project) and 33° 5'56.10"N (End of the Project) longitude: 75°35'16.95"E (Start of the project) and 75°36'4.38"E (End of the Project) (annexure 2).

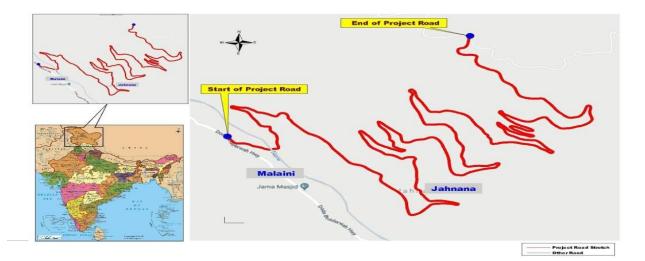


Figure 1: Overview of Proposed Road in Malani-Chakrabatti Road Sub Project

# 2.4 Details of Existing Project Road

# 2.4.1 The embankment, Carriageway, and Shoulder

The average width of the existing carriageway varies from 2.50 m to 3.00 m with an



average shoulder width of 0.50 m resulting in the average formation width varies from 3.50 m to  $4.00\ m.$ 

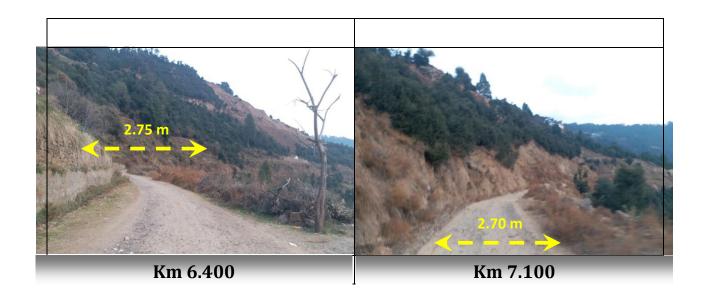
### 2.4.2 Horizontal and vertical alignment

Project road runs in Hilly terrain having several hairpin bends with non-standard curves. Existing vertical gradients also very steep at certain stretches.

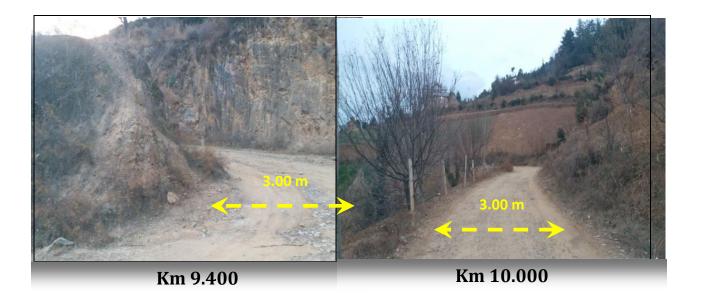
# 2.4.3 Pavement Condition

The existing pavement is flexible up to 0.400 Km is in poor condition. The rest portion of the project stretch is either Gravel or Earthen, condition of pavement severely damaged..









# 2.4.4 Cross Drainage Structures



There are 19 nos. of CD structure in the project road, out of which 10 nos are HP culverts,8 Slab culverts, and 1nos Majore Bridge 60m Span. Out of these 10 nos HP culverts, 9 nos are chocked by siltation; need to replace by 1.2 m dia HP Culverts. The details are given in Table 2.

**Table 1: List of Existing Cross Drainage Structures** 

|        | Existing Structures |       |             |       |                                       |           |  |  |  |  |
|--------|---------------------|-------|-------------|-------|---------------------------------------|-----------|--|--|--|--|
| Sl No. | Chainage            | Types | Dia/Span(m) | Width | Width of<br>Head/Parape<br>t Wall (m) | Condition |  |  |  |  |
| 1      | 0+084               | НРС   | 1 x 0.9     | 8.865 | 1.250                                 | C & P     |  |  |  |  |
| 2      | 0+172               | НРС   | 1 x 1.2     | 8.537 | 1.450                                 | Good      |  |  |  |  |

|        |          |        | Existing Structures |        |                                       |           |  |  |
|--------|----------|--------|---------------------|--------|---------------------------------------|-----------|--|--|
| Sl No. | Chainage | Types  | Dia/Span(m)         | Width  | Width of<br>Head/Parape<br>t Wall (m) | Condition |  |  |
| 3      | 0+320    | Bridge | 60.0                | 4.71   | -                                     | Good      |  |  |
| 4      | 0+525    | SC     | 1 x 2.8             | 5.591  | 3.200                                 | Poor      |  |  |
| 5      | 0+710    | SC     | 1 x 2.4             | 6.357  | 2.600                                 | Good      |  |  |
| 6      | 0+915    | SC     | 1 x 1.5             | 6.402  | 1.800                                 | Good      |  |  |
| 7      | 1+125    | SC     | 1 x 3.2             | 5.627  | 3.500                                 | Poor      |  |  |
| 8      | 1+380    | SC     | 1 x 3.2             | 6.846  | 3.250                                 | Good      |  |  |
| 9      | 1+870    | SC     | 1 x 2.7             | 5.484  | 3.100                                 | Good      |  |  |
| 10     | 3+050    | SC     | 1 x 2.8             | 5.291  | 3.200                                 | Good      |  |  |
| 11     | 4+450    | SC     | 1 x 2.7             | 5.350  | 3.000                                 | Good      |  |  |
| 12     | 5+570    | HPC    | 1 x 0.9             | 7.482  | 1.110                                 | C & P     |  |  |
| 13     | 6+360    | HPC    | -                   | 5.868  | -                                     | C & P     |  |  |
| 14     | 6+915    | НРС    | 1 x 0.9             | 9.437  | 1.150                                 | C & P     |  |  |
| 15     | 7+180    | НРС    | 1 x 0.9             | 8.742  | 1.100                                 | C & P     |  |  |
| 16     | 8+460    | НРС    | 1 x 0.9             | 11.327 | 1.050                                 | C & P     |  |  |
| 17     | 9+225    | НРС    | 1 x 0.9             | 11.868 | 1.150                                 | C & P     |  |  |
| 18     | 9+600    | НРС    | 1 x 0.9             | 9.883  | 1.100                                 | C & P     |  |  |
| 19     | 9+780    | НРС    | 1 x 0.9             | 9.687  | 1.200                                 | C & P     |  |  |

<sup>\*</sup> C&P – Chocked & Poor, R&NC-Replaced & New Construction

# 2.4.5 Existing drain

In this project road, there are only 3237.75 m earthen (unlined) drain exists at different stretches. Details are shown in Table 3.

**Table 2: List of Drain** 

|  | Sl No | Chainage | Left | Right | Type of Drain |
|--|-------|----------|------|-------|---------------|
|--|-------|----------|------|-------|---------------|

|    | From   | То     | Lengt   | h (m)   |         |
|----|--------|--------|---------|---------|---------|
| 1  | 0+108  | 0+150  | -       | 41.766  | Unlined |
| 2  | 0+350  | 0+480  | -       | 130.155 | Unlined |
| 3  | 0+564  | 0+744  | -       | 180.322 | Unlined |
| 4  | 0+766  | 0+798  | -       | 32.056  | Unlined |
| 5  | 0+815  | 1+089  | 293.409 | -       | Unlined |
| 6  | 1+100  | 1+117  | -       | 17.245  | Unlined |
| 7  | 1+139  | 1+425  | 286.06  | -       | Unlined |
| 8  | 1+471  | 1+534  | 62.857  | -       | Unlined |
| 9  | 1+780  | 1+817  | 37.883  | -       | Unlined |
| 10 | 1+862  | 2+258  | 395.528 | -       | Unlined |
| 11 | 4+481  | 4+762  | 280.572 | -       | Unlined |
| 12 | 5+343  | 5+428  | -       | 84.555  | Unlined |
| 13 | 5+568  | 5+882  | -       | 314.56  | Unlined |
| 14 | 6+368  | 6+717  | 349.131 | -       | Unlined |
| 15 | 6+966  | 7+010  | 44.829  | -       | Unlined |
| 16 | 7+682  | 7+799  | -       | 117.245 | Unlined |
| 17 | 7+835  | 7+933  | 97.951  | -       | Unlined |
| 18 | 7+974  | 8+064  | -       | 90.620  | Unlined |
| 19 | 8+479  | 8+678  | 198.926 | -       | Unlined |
| 20 | 9+771  | 9+934  | -       | 163.293 | Unlined |
| 21 | 10+037 | 10+056 | -       | 18.783  | Unlined |
|    | Total  | •      | 2047.15 | 1190.60 |         |

# 2.4.6 Existing Protection wall

In this project road, there are only 901.100 m Breast Wall exists in the form of stone masonry at different stretches. From Km 2.674 to Km 2.718, Km 2.779 to Km 2.821, Km 6.900 to Km 6.911, and Km 8.450 to Km 8.469 damaged but the rest are in Good Condition.

The length of the Retaining Wall is 1142.36 m is not in good condition. Details are shown in Table 4.

**Table 3: List of Existing Protection Wall** 

|           | Chai  | nago  | Breas  | t Wall | Chai     | nago  | Retaini | ing Wall |
|-----------|-------|-------|--------|--------|----------|-------|---------|----------|
| Sl<br>No. | Cilai | nage  | Left   | Right  | Chainage |       | Left    | Right    |
|           | From  | То    | Lengt  | h (m)  | From     | То    | Leng    | th (m)   |
| 1         | 0+000 | 0+077 | 76.983 | -      | 0+100    | 0+142 | -       | 42.122   |
| 2         | 0+100 | 0+121 | 20.886 | -      | 0+635    | 0+711 | -       | 76.354   |
| 3         | 0+130 | 0+167 | 37.394 | -      | 0+725    | 0+795 | -       | 69.718   |
| 4         | 0+190 | 0+225 | 34.614 |        | 0+820    | 0+962 | 141.719 | -        |
| 5         | 0+255 | 0+279 | 24.387 |        | 1+021    | 1+060 | 39.018  | -        |
| 6         | 0+261 | 0+279 | -      | 18.174 | 1+382    | 1+410 | 28.444  | -        |
| 7         | 0+345 | 0+352 | 6.9195 | 12.305 | 1+450    | 1+529 | 78.964  | -        |
| 8         | 0+360 | 0+390 | 30.106 | -      | 1+671    | 1+700 | 28.813  | -        |
| 9         | 0+418 | 0+443 | 25.418 | -      | 2+074    | 2+216 | 142.451 | -        |
| 10        | 0+451 | 0+477 | 25.382 | -      | 2+289    | 2+304 | 15.181  |          |
| 11        | 0+484 | 0+511 | 27.108 | -      | 2+795    | 2+853 | -       | 57.791   |
| 12        | 0+518 | 0+525 | 7.119  | 8.480  | 3+573    | 3+640 | 67.162  | -        |
| 13        | 0+534 | 0+552 | 18.039 | 3.035  | 3+790    | 3+825 | -       | 35.499   |
| 14        | 0+630 | 0+656 | 25.988 | -      | 3+854    | 3+906 | -       | 52.192   |
| 15        | 0+700 | 0+707 | 6.906  | 2.618  | 5+565    | 5+666 | -       | 101.105  |
| 16        | 0+768 | 0+804 | 36.271 | -      | 6+210    | 6+309 | 99.312  | -        |
| 17        | 0+905 | 0+912 | -      | 6.644  | 9+350    | 9+384 | -       | 34.35    |
| 18        | 1+029 | 1+048 | -      | 18.799 | 9+630    | 9+662 | -       | 32.163   |
| 19        | 1+140 | 1+154 | 8.715  | 14.240 | -        | -     | -       | -        |
| 20        | 1+490 | 1+545 | -      | 55.382 | -        | -     | -       | -        |
| 21        | 2+073 | 2+090 | -      | 16.653 | -        | -     | -       | -        |

| G.        | Chainage |       | Breast Wall |         | Chainage |       | <b>Retaining Wall</b> |        |
|-----------|----------|-------|-------------|---------|----------|-------|-----------------------|--------|
| Sl<br>No. |          |       | Left        | Right   | chamage  |       | Left                  | Right  |
|           | From     | То    | Lengt       | h (m)   | From     | То    | Leng                  | th (m) |
| 22        | 2+164    | 2+185 | -           | 20.814  | -        | -     | -                     | -      |
| 23        | 2+225    | 2+230 | -           | 5.351   | -        | -     | -                     | -      |
| 24        | 2+266    | 2+371 | -           | 105.000 | -        | -     | -                     | -      |
| 25        | 2+674    | 2+718 | 43.970      | -       | -        | -     | -                     | -      |
| 26        | 2+779    | 2+821 | 42.305      | -       | -        | -     | -                     | -      |
| 27        | 3+900    | 3+911 | 11.103      | -       | -        | -     | -                     | -      |
| 28        | 5+191    | 5+200 | 9.431       | -       | -        | -     | -                     | -      |
| 29        | 5+914    | 5+929 | 15.397      | -       | -        | -     | -                     | -      |
| 30        | 5+986    | 6+000 | 14.363      | -       | -        | -     | -                     | -      |
| 31        | 6+900    | 6+911 | -           | 11.425  | -        | -     | -                     | -      |
| 32        | 7+160    | 7+171 | 11.248      | -       | -        | -     | -                     | -      |
| 33        | 8+450    | 8+469 | -           | 19.215  | -        | -     | -                     | -      |
| 34        | 9+218    | 9+224 | 6.052       | -       | -        | -     | -                     | -      |
| 35        | 9+588    | 9+592 | 4.077       | -       | -        | -     | -                     | -      |
| 36        | 9+785    | 9+798 | 12.789      | -       | -        | -     | -                     | -      |
|           |          | Total | 583.97      | 318.13  |          | Total | 641.06                | 501.29 |
|           |          | Total | 901.10      |         |          | Total | 1142.36               |        |

# 2.4.7 Existing Pavement Composition

The said road is a very old road that was initially constructed not based on traffic on the section but to give connectivity to hillside villages. Afterward, several maintenance works of the different specifications have been undertaken over the road. Specification adopted for such maintenance widely varies from year to year as well as from stretches to stretches. But during heavy rain in the year 2014, the alignment is severely damaged and connectivity with villages was cut off for a few weeks. Trial Pit Investigation has been conducted for

detailing pavement composition at different locations and on average following composition is found as existing hard crust as mentioned in table 5.

The average pavement thickness is 208 mm. The total thickness of the hard crust varies in between 110 mm – 350 mm where existing crust comprises of GSB consists of compacted granular materials having thickness 100 mm to 240 mm thick (average 150 mm), partly disintegrated base course with WBM materials of 70 mm to 140 mm thick (average 99 mm) and Bituminous/ Binder course varying from 50 mm to 90 mm thick (average 70 mm). From Km 0.000 to Km 0.500, BT surface exists only and the rest are either Gravel or Earthen. A detail of pit wise existing pavement compositions is provided in table 5 below:

**Table 4: Details of Existing Pavement Composition** 

|                    |       |                          |                    | Thickne                          | ss (mm)                 |                                 |       |
|--------------------|-------|--------------------------|--------------------|----------------------------------|-------------------------|---------------------------------|-------|
| Location           | Side  | Description of<br>Layers | Individual<br>(mm) | Surface<br>(Bituminous)<br>in mm | Base<br>Course<br>in mm | Sub-<br>Base<br>Course<br>in mm | Total |
|                    |       | Bituminous               | 90                 |                                  |                         |                                 |       |
| RD 0.000<br>/ TP 1 | RHS   | WBM                      | 70                 | 90                               | 70                      | 100                             | 260   |
|                    |       | Sand & Dust              | 100                |                                  |                         |                                 |       |
|                    |       | Bituminous               | 50                 | 50                               |                         | 110                             |       |
| RD 0.500<br>/ TP 2 | 0 RHS | WBM                      | 70                 |                                  | 70                      |                                 | 230   |
| ,                  |       | Sand & Dust              | 110                |                                  |                         |                                 |       |
| R                  |       | Bituminous               |                    |                                  |                         |                                 |       |
| D 1.000 /          | RHS   | WBM                      | 70                 |                                  | 140                     | 140                             | 280   |
| TP 3               |       | Sand & Dust              | 140                |                                  |                         |                                 |       |
|                    | LHS   | Bituminous               |                    |                                  |                         |                                 |       |
| RD 1.500<br>/ TP 4 |       | WBM                      | 70                 |                                  | 70                      | 120                             | 190   |
| ,                  |       | WBM                      | 120                |                                  |                         |                                 |       |
|                    |       | Bituminous               |                    |                                  |                         |                                 |       |
| RD 2.000<br>/ TP 5 | LHS   | WBM                      | 140                |                                  | 140                     | 150                             | 290   |
| ,                  |       | Sand & Dust              | 150                |                                  |                         |                                 |       |

|                     | Thickness (mm) |                          |                    |                                  |                         |                                 |       |
|---------------------|----------------|--------------------------|--------------------|----------------------------------|-------------------------|---------------------------------|-------|
| Location            | Side           | Description of<br>Layers | Individual<br>(mm) | Surface<br>(Bituminous)<br>in mm | Base<br>Course<br>in mm | Sub-<br>Base<br>Course<br>in mm | Total |
| RD 2.500<br>/ TP 6  |                | Bituminous               |                    |                                  |                         |                                 |       |
|                     | LHS            | WBM                      | 120                | -                                | 120                     | 190                             | 310   |
|                     |                | Sand & Dust              | 190                |                                  |                         |                                 |       |
|                     |                | Bituminous               |                    |                                  | 70                      | 140                             | 210   |
| RD 3.000<br>/ TP 7  | RHS            | WBM                      | 70                 | -                                |                         |                                 |       |
| •                   |                | Sand & Dust              | 140                |                                  |                         |                                 |       |
|                     |                | Bituminous               |                    |                                  | 70                      | 110                             | 180   |
| RD 3.500<br>/ TP 8  | RHS            | WBM                      | 70                 |                                  |                         |                                 |       |
| •                   |                | Sand & Dust              | 110                |                                  |                         |                                 |       |
|                     | RHS            | Bituminous               |                    |                                  | 110                     | 150                             | 260   |
| RD 4.000<br>/ TP 9  |                | WBM                      | 110                |                                  |                         |                                 |       |
|                     |                | Sand & Dust              | 150                |                                  |                         |                                 |       |
|                     | RHS            | Bituminous               |                    |                                  | 110                     | 150                             | 260   |
| RD 4.500<br>/ TP 10 |                | WBM                      | 110                | •                                |                         |                                 |       |
| •                   |                | Sand & Dust              | 150                |                                  |                         |                                 |       |
|                     | RHS            | Bituminous               |                    |                                  | 110                     | 240                             | 350   |
| RD 5.000<br>/ TP 11 |                | WBM                      | 110                |                                  |                         |                                 |       |
|                     |                | Sand & Dust              | 240                |                                  |                         |                                 |       |
| RD 5.500<br>/ TP 12 | RHS            | Bituminous               |                    |                                  |                         |                                 |       |
|                     |                | WBM                      |                    |                                  |                         | 150                             | 150   |
|                     |                | Sand & Dust              | 150                |                                  |                         |                                 |       |
| RD 6.000<br>/ TP 13 | LHS            | Bituminous               |                    |                                  |                         | 230                             | 230   |
|                     |                | Sand Layer               |                    |                                  |                         | 230                             | 430   |

|                     |      |                          | Thickness (mm)     |                                  |                         |                                 |       |
|---------------------|------|--------------------------|--------------------|----------------------------------|-------------------------|---------------------------------|-------|
| Location            | Side | Description of<br>Layers | Individual<br>(mm) | Surface<br>(Bituminous)<br>in mm | Base<br>Course<br>in mm | Sub-<br>Base<br>Course<br>in mm | Total |
|                     |      | Sand & Dust              | 230                |                                  |                         |                                 |       |
|                     |      | Bituminous               |                    |                                  |                         | 120                             | 120   |
| RD 6.500<br>/ TP 14 | RHS  | WBM                      |                    | -                                |                         |                                 |       |
|                     |      | Sand & Dust              | 120                |                                  |                         |                                 |       |
|                     |      | Bituminous               |                    |                                  |                         |                                 |       |
| RD 7.000<br>/ TP 15 | RHS  | WBM                      |                    |                                  |                         | 160                             | 160   |
|                     |      | Sand & Dust              | 160                |                                  |                         |                                 |       |
|                     | RHS  | Bituminous               |                    |                                  |                         |                                 |       |
| RD 7.500<br>/ TP 16 |      | WBM                      |                    |                                  |                         | 130                             | 130   |
|                     |      | Sand & Dust              | 130                |                                  |                         |                                 |       |
|                     | LHS  | Bituminous               |                    |                                  |                         | 140                             | 140   |
| RD 8.000<br>/ TP 17 |      | WBM                      |                    |                                  |                         |                                 |       |
|                     |      | Sand & Dust              | 140                |                                  |                         |                                 |       |
|                     | LHS  | Bituminous               |                    |                                  |                         |                                 | 170   |
| RD 8.500<br>/ TP 18 |      | WBM                      |                    |                                  | 170                     | 170                             |       |
|                     |      | Sand & Dust              | 170                |                                  |                         |                                 |       |
| RD 9.000<br>/ TP 19 | RHS  | Bituminous               |                    |                                  |                         |                                 |       |
|                     |      | WBM                      |                    |                                  | 150                     | 150                             |       |
|                     |      | Sand & Dust              | 150                |                                  |                         |                                 |       |
| RD 9.500<br>/ TP 20 | RHS  | Bituminous               |                    |                                  |                         |                                 |       |
|                     |      | WBM                      |                    |                                  |                         | 180                             | 180   |
|                     |      | Sand & Dust              | 180                |                                  |                         |                                 |       |
| RD                  | LHS  | Bituminous               |                    |                                  |                         | 110                             | 110   |

|                                              | Side | Description of<br>Layers | Thickness (mm)     |                                  |                         |                                 |       |
|----------------------------------------------|------|--------------------------|--------------------|----------------------------------|-------------------------|---------------------------------|-------|
| Location                                     |      |                          | Individual<br>(mm) | Surface<br>(Bituminous)<br>in mm | Base<br>Course<br>in mm | Sub-<br>Base<br>Course<br>in mm | Total |
| 10.000 /<br>TP 21                            |      | WBM                      |                    |                                  |                         |                                 |       |
|                                              |      | Sand & Dust              | 110                |                                  |                         |                                 |       |
| Average Thickness from Km 0.000 to Km 10.000 |      |                          |                    | 70                               | 99                      | 150                             | 208   |
| Minimum Thickness from Km 0.000 to Km 10.000 |      |                          |                    | 50                               | 70                      | 100                             | 110   |
| Maximum Thickness from Km 0.000 to Km 10.000 |      |                          | 90                 | 140                              | 240                     | 350                             |       |

#### 2.4.8 RoW Details of Sub-Project Road

The sub-project road exists on government land and it has 10 meters of RoW. It has been confirmed by the letter of RoW certificate details issued by the PWD Bhaderwah Division. The proposed improvement and up-gradation work will be carried out within the available government land. Project Manager (Transport, Jammu Division) vide letter no PIU/T/ERA/2021/865 dated 16.03.3021 issued a non-encumbrance certificate and confirms that the available existing RoW is 10.00 meters and sub-project does not require land for the proposed up gradation (annexure 4).

### 2.4.9 Major Utilities Along The Existing Road

A detailed road inventory survey was carried out at 100 m intervals. Detail information was collected and utilized for planning, design and cost estimate. An inventory of the project road has been carried out through dimensional measurement and visual inspection. Features like chainage, terrain and land-use, height of fill or depth of cut, width of pavement and shoulders, important road junctions and geometric deficiencies, utilities etc., were recorded. These surveys were carried out by visual observation supplemented with sample measurements using tape etc. The road inventory has been referenced to the existing km posts established along the roadside.

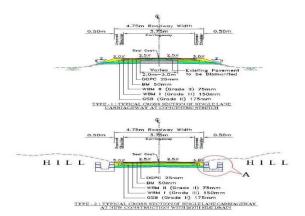
### 2.5 Proposed Activities (Improvement & Upgradation)

Table 5: Proposed Technical Description in the Sub-Project Road

| Sl.No. | Description of item             | Details                                                                        |                                                                                      |  |  |
|--------|---------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--|--|
| 1      | Road length                     | Existing – 10.056 km.                                                          | Design – 10.012 km                                                                   |  |  |
| 2      | Road Configuration              | Existing:- 2.50 m to 3.0 m wide carriageway                                    | Propose:- 3.75 m wide carriageway                                                    |  |  |
| 3      | Terrain                         | Hilly                                                                          |                                                                                      |  |  |
| 4      | RoW                             | 10.00 mtr                                                                      |                                                                                      |  |  |
| 5      | Land use pattern                | Open                                                                           |                                                                                      |  |  |
| 6      | Existing Surface of carriageway | Flexible pavement with mostly Earthen. Some stretches are Flexible BT surface. |                                                                                      |  |  |
| 7      | Pavement Condition              | Poor                                                                           |                                                                                      |  |  |
| 8      | New Flexible Pavement thickness | OGPC-25 mm; BM -50 mm, WBM - 225 mm; GSB-<br>150 mm                            |                                                                                      |  |  |
| 9      | Design CBR                      | 8.20 % (Av CBR)                                                                |                                                                                      |  |  |
| 10     | Junctions                       | Major- 01                                                                      |                                                                                      |  |  |
| 11     | Traffic                         | T9 (15 ESAL to 20 EASL) – IRC SP 72 -2015                                      |                                                                                      |  |  |
| 12     | Cross drainage structures       | Existing Culvert- 19 HP Culvert - 10 Nos. Slab Culvert - 8 Nos Bridge – 1 no   | Proposed Culvert- 14 HP Culvert - 9 Nos (Reconstruction) SC - 5 Nos (Reconstruction) |  |  |
| 13     | Settlement                      | Malaini, Jahnana, Dranga, Pendku, Ghambeer<br>Muglian, Mehrada                 |                                                                                      |  |  |

# 2.5.1 Carriageway Width

In general, the proposed cross-section comprises of 3.75 m wide carriageway with 1.000 m wide granular hard shoulder on either side of the c/w. The camber on either side of the carriageway and hard shoulder is 2.5 % & on the shoulder, it is 3.0 %. The proposed cross-sections are presented in TCS-1 & TCS - 2 having 3.75 m CW.



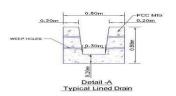
Note:

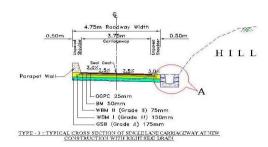
1. PCC upto 75mm thick shall be done by BM.

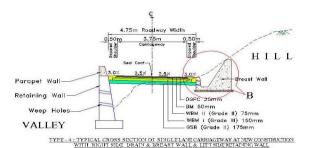
2. PCC from 75mm to 225mm thick shall be done by WBM after diamontling Existing Bluminous Surface.

3. PCC of thickness more than 225mm shall be done GSB after dismantling Existing Bluminous Surface.

4. PCC shall decided based on difference in level of FRL and existing level and/or level after dismantling and recompaction of Existing Bluminous Surface.



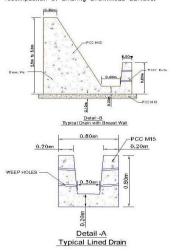




Note: 1. PCC upto 75mm thick shall be done by BM. 2. PCC from 75mm to 225mm thick shall be done by WBM after dismontling Existing Bituminous Surface.

3.PCC of thickness more than 225mm shall be done GSB after dismantling Existing Bituminous Surface.

4.PCC shall decided based on difference in level of FRL and existing level and/or level after dismantling and recompaction of Existing Bituminous Surface.



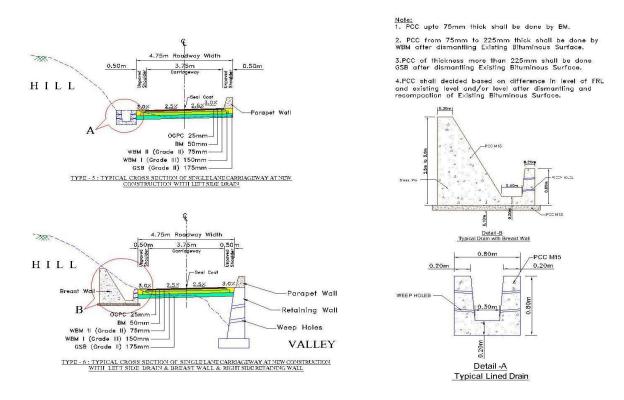


Figure 2 proposed cross-sections

# 2.5.2 Horizontal and vertical alignment

Existing alignment is followed for the purpose of widening and strengthening of the existing road and it is found that mostly the required ruling design speed of 40 km/hour is maintained. The existing carriageway will be provided with the required grade after making the provision of a profile corrective course with proper cambers over the existing carriageway surface. Due to land constraints, most of the curve radius is less than 60, henceforth 0.6 m to 0.9 m extra widening provide at those locations as per IRC norms.

#### 2.5.3 Improvement of Sight Distance

Improvement of sight distance on the proposed alignment has been taken care of while designing the alignment. However, a necessary road sign has to be provided where speed is restricted wherever required.

#### 2.5.4 Improvement of Cross Drainage Structures

There are 19 nos. of CD structure in the project road, out of which 10 nos. HP culverts, 8 nos Slab culverts, and 1 Major Bridge exist on the project stretch. Out of these 10 nos HP culverts, 9 nos. are replaced by 1200 mm dia HP as existing all are choked due to siltation and in very poor condition. In addition to that, 5 nos of Slab Culverts also proposed to replace and reconstruct by Box culvert. The details are mentioned in Table 6.

**Table 6: Details of Proposed Culverts** 

| Sl  | Existing Structures |              |             |                    | Proposed Structure |      |          |          |
|-----|---------------------|--------------|-------------|--------------------|--------------------|------|----------|----------|
| No. | Chainage            | Types        | Dia/Span(m) | Invert<br>Level(m) | Width              | Туре | Span/Dia | Remarks  |
| 1   | 0+084               | Pipe Culvert | 1 x 1.0     | 1089.812           | 8.865              | HPC  | 1 x 1.2  | Replaced |
| 2   | 0+172               | Pipe Culvert | 1 x 1.2     | 1086.107           | 8.537              |      |          | Retained |
| 3   | 0+320               | Bridge       | 60.0        | 1076.264           | 4.71               |      |          | -        |
| 4   | 0+525               | Slab Culvert | 1 x 2.8     | 1087.055           | 5.591              | Box  | 3 x 3    | Replaced |
| 5   | 0+710               | Slab Culvert | 1 x 2.4     | 1099.664           | 6.357              |      |          | Retained |
| 6   | 0+915               | Slab Culvert | 1 x 1.5     | 1111.863           | 6.402              |      |          | Retained |
| 7   | 1+125               | Slab Culvert | 1 x 3.2     | 1121.564           | 5.627              | Box  | 3 x 3    | Replaced |
| 8   | 1+380               | Slab Culvert | 1 x 3.2     | 1130.124           | 6.846              |      |          | Retained |
| 9   | 1+870               | Slab Culvert | 1 x 2.7     | 1146.858           | 5.484              | Box  | 3 x 3    | Replaced |
| 10  | 3+050               | Slab Culvert | 1 x 32.8    | 1221.22            | 5.291              | Box  | 3 x 3    | Replaced |
| 11  | 4+450               | Slab Culvert | 1 x 2.7     | 1309.804           | 5.35               | Box  | 3 x 3    | Replaced |
| 12  | 5+570               | Pipe Culvert | 1 x 1.0     | 1375.752           | 7.482              | HPC  | 1 x 1.2  | Replaced |
| 13  | 6+360               | Pipe Culvert | -           | -                  | 5.868              | HPC  | 1 x 1.2  | Replaced |
| 14  | 6+915               | Pipe Culvert | 1 x 0.9     | 1482.617           | 9.437              | HPC  | 1 x 1.2  | Replaced |
| 15  | 7+180               | Pipe Culvert | 1 x 0.9     | 1499.887           | 8.742              | HPC  | 1 x 1.2  | Replaced |
| 16  | 8+460               | Pipe Culvert | 1 x 0.9     | 1568.273           | 11.327             | HPC  | 1 x 1.2  | Replaced |
| 17  | 9+225               | Pipe Culvert | 1 x 0.9     | 1614.732           | 11.868             | HPC  | 1 x 1.2  | Replaced |
| 18  | 9+600               | Pipe Culvert | 1 x 1.0     | 1634.03            | 9.883              | HPC  | 1 x 1.2  | Replaced |
| 19  | 9+780               | Pipe Culvert | 1 x 1.0     | 1647.708           | 9.687              | НРС  | 1 x 1.2  | Replaced |

# 2.5.5 Protective works

PCC Breast Wall required about length 1650m, (Avg. height 1.50 m). Retaining walls are proposed about 1460m in length along the project road.

# 2.5.6 Drainage Works and drainage Capacity

In this project road, there is a line drain provided **6350m** in length, and a breast wall drain of **1650m** needs to be constructed.

## 2.5.7 Pavement Design

After doing the pavement investigation and pavement condition survey, it has been studied thoroughly. After that pavement design has been done as per the following considerations:

- Rehabilitation on existing pavement
- Reconstruction of existing pavement

The consultants have worked out the designs for all the above cases based on results of survey/investigations about traffic, axle load spectrum, pavement condition, and strength, subgrade/material properties, etc.

The design life adopted in the analysis is 10 years for flexible pavement from the date of opening the road to traffic.

## 2.5.8 Rehabilitation of existing pavement

The pavement with mostly Earthen. Some stretches are Flexible BT surfaces. Design of flexible pavement for new construction has been done following "Tentative Guidelines for the Design of Flexible Pavement" (IRC SP: 72-2015).

The following Survey has been conducted and procedure followed for design and construction:

- 1. Conducted the Traffic Study and based on PCU, lane configuration finalized. In the case of land constraint, lane configuration has been restricted up to the availability of space between properties of both sides.
- 2. In case land availability allows providing required lane configuration to upgrade (widening), rehabilitation and reconstruction considered for these stretches. For the widening portion, mostly concentric widening is considered. After both edge trimming, prepare the original ground for construction of embankment, followed by sub-grade, GSB, WMM, DBM, and BC.
- 3. Raising of Existing Carriageway is not done where roadside establishment exists. On those stretches, reconstruction has been proposed. Where lane configuration is not feasible for the upgrade, the carriageway has been restricted up to the availability of space between properties of both sides.
- 4. The existing condition of the road is poor. Hence, the BBD test was not carried out. Existing bituminous layer to be dismantled and re-compaction to be done after

dismantling bituminous layer. Re-compacted level shall be compared concerning design level and WBM/GSB (depending upon the level difference of FRL and level after recompaction). Existing Base and Subbase layers are generally more than the required thickness than that of new pavement. Widening portion to be constructed from the subgrade as per the design.

5. Axle Load survey was conducted to find out VDF. Wherever Axle load survey not done standard VDF value considered based on terrain and traffic as per IRC SP 72-2015.

#### 2.5.9 Traffic Safety and Other Appurtenances

Following road furniture and miscellaneous items have been designed keeping safety aspects in mind.

## I. Road Markings

Road Markings on the carriageway and the objects within and adjacent to the roadway are used as a means of guiding and cont Hilly the traffic. They promote road safety and ensure the smooth flow of traffic in the required paths of travel.

The location and type of marking lines, material, and the colour is followed using IRC: 35-2015 – "Code of Practice for Road Markings".

The road markings were carefully planned on carriageways, intersections, and bridge locations.

## II. Road Signs

Road signs were planned to supply information, to regulate traffic by imparting messages to the drivers. The type, locations, sizes were planned using IRC: 67-2012 "Code of Practice for Road Sign". Details of Road Signages are given in table 7.

**Table 7: Details of Road Signages** 

| Sl no  |                    | Sign<br>Size          |                 | Nos  |  |
|--------|--------------------|-----------------------|-----------------|------|--|
| 51 110 | Fig No Description |                       | J               | 1103 |  |
| 1      | 14.02              | Give Way              | 900 Equilateral | 4    |  |
| 2      | 14.23              | Overtaking Prohibited | 600 Equilateral | 0    |  |
| 3      | 15.01              | Left Hand Curve       | 600 Equilateral | 12   |  |
| 4      | 15.02              | Right Hand Curve      | 600 Equilateral | 12   |  |
| 5      | 15.03              | Right Hairpin Curve   | 600 Equilateral | 14   |  |

| 6     | 15.04                         | Left Hairpin Curve                 | 600 Equilateral           | 14  |
|-------|-------------------------------|------------------------------------|---------------------------|-----|
| 7     | 15.05                         | Right Reverse Bend                 | 600 Equilateral           | 6   |
| 8     | 15.06                         | Left Reverse Bend                  | 600 Equilateral           | 18  |
| 9     | 15.07                         | Series of Bends                    | 600 Equilateral           | 10  |
| 10    | 15.09                         | Side Road Right                    | 600 Equilateral           | 3   |
| 11    | 15.10                         | Side Road Left                     | 600 Equilateral           | 3   |
| 12    | 15.18, 15.19,<br>15.20, 15.21 | Intersection                       | 600 Equilateral           | 4   |
| 13    | 15.23                         | Narrow Road Ahead                  | 600 Equilateral           | 0   |
| 14    | 15.24                         | Road Widens                        | 600 Equilateral           | 0   |
| 15    | 15.34                         | School Ahead                       | 600 Equilateral           | 0   |
| 16    | 15.35                         | Build Up Area                      | 600 Equilateral           | 0   |
| 17    | 15.72                         | Chevron(Normal)                    |                           | 0   |
| 18    | 15.76                         | Object Hazard(Left)                | 90 cm x 30 cm rectangular | 38  |
| 19    | 15.77                         | Object Hazard(right)               | 90 cm x 30 cm rectangular | 38  |
| 20    | 16.02                         | Directional Sign                   |                           | 0   |
| 21    | 16.04                         | Directional Sign                   | 60 cm x 90 cm rectangular | 4   |
| 22    | 16.06                         | Place Identification Sign          | 60 cm x 45 cm rectangular | 8   |
| 23    | 14.37                         | Maximum Speed Limit                | 600 mm dia                | 98  |
| 24    | 15.30,15.31                   | Start & End of Dual<br>Carriageway | 600 Equilateral           | 0   |
| 25    | 17.07                         | Hospital Ahead                     | 600 Equilateral           | 0   |
| Total |                               |                                    |                           | 286 |

## III. Delineators

The role of delineators is to provide visual assistance to the driver about the alignment of the road ahead, especially at night. Reflectors are used on the delineators for better night visibility. IRC: 79-1981 "Recommended Practice for Road Delineators" was followed to plan location details. Two types of road delineators were planned i.e. hazard markers and object markers. Hazard markers are to define obstructions like guardrails, and abutments adjacent to the

carriageway, for instance at culverts and bridges. Object markers are used to indicate hazards and obstructions within the vehicle flow path, at channelising islands close to intersections.

#### IV. Parapet Wall

Parapet walls are provided along the edge of the shoulders at the valley side throughout the project stretch excluding the settlement areas. These are provided to prevent the vehicles from toppling over. Parapet walls are proposed about around 4029.5m in length along the project stretches.

#### V. Convex Mirror

Roadside Convex Safety Mirrors are widely used by both commercial and private properties to help eliminate blind spots on approach roads, junctions and entrances. Convex mirrors are ideal for use in road safety applications because the domed effect of the mirror will give a wider angle view and allows the driver to see down the road from a wider range of parked positions.

Typically a 600mm diameter convex mirror is useful when viewed no more than 6 Metres or 20 feet away. Above this distance, you need to use a bigger mirror. Chainages were 23 in nos. convex mirrors are required.

Table 8: Chainge where convex mirrors required

| 0+250 | 0+350 | 0+525 | 0+750 | 1+125 | 1+870 |
|-------|-------|-------|-------|-------|-------|
| 2+200 | 2+500 | 3+050 | 3+350 | 3+700 | 4+150 |
| 4+450 | 5+000 | 6+000 | 7+000 | 7+400 | 7+600 |
| 7+800 | 7+900 | 8+200 | 8+900 | 9+800 |       |

# 3. Legal and Regulatory Framework

This section deals with the laws, regulations, and policies, of the Government of India, the State Government, and the World Bank, related to environmental and social issues. Only the laws, regulations, and policies relevant to the project are discussed here. This section needs to be updated as to when new laws, regulations, and policies are made and enforced or the existing ones are revised.

# 3.1 Operational Policies of World Bank

The safeguard policies, the triggers for each policy, as well as the status of their relevancy for the proposed project are presented in the table below:

**Table 9: World Bank's Operational Policies** 

| Operational Policy                          | Key Features                                                                                                                                                                                                                                       | Applicability                                                                                  |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Involuntary<br>Resettlement (OP<br>4.12)    | Physical relocation and land loss resulting in: (i) relocation or loss of shelter; (ii) loss of assets or access to assets; (iii) loss of income sources or means of livelihood, whether or not the affected people must move to another location. | Not Applicable  The sub-project has no impact on any private asset.                            |
| Indigenous Peoples<br>(OP 4.10)             | If there are indigenous peoples in the project area, and potential adverse impacts on indigenous peoples are anticipated, and indigenous peoples are among the intended beneficiaries.                                                             | Not Applicable  The sub-project does not adversely impact any Schedule caste/tribe population. |
| Physical Cultural<br>Resources<br>(OP 4.11) | The policy is triggered by projects which, prima facie, entail the risk of damaging cultural property (e.g., any project that includes large-scale excavations, movement of earth, surface environmental changes or demolition).                   | Not applicable  No impact on any cultural resources.                                           |

## 3.2 World Bank's Environment Health and Safety Guidelines

The Environmental, Health, and Safety (EHS) Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs.

Application of the EHS Guidelines to existing facilities may involve the establishment of site-specific targets, with an appropriate timetable for achieving them. The applicability of the EHS Guidelines should be tailored to the hazards and risks that may occur in the subproject on the basis during pre-construction, construction, and operation phases.

# 3.3 National & State Policies

**Table 10: National and U.T.'s Policies** 

| S.No. | Acts/Policies/Rules                                                                                                                                                                                      | Relevance to this project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Applicability in the sub-project                                                 |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| 1     | The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 The old act is Land Acquisition Act, 1894 and it is replaced by the new Act RFCTLARR,2013 | The Act has provisions to provide fair compensation to those whose land is taken away, brings transparency to the process of acquisition of land to set up factories or buildings, infrastructural projects, and assures rehabilitation of those affected.                                                                                                                                                                                                                                                                                                                                           | Not Applicable.  The sub-project does not involve acquisition of private assets. |
| 2     | State Land Acquisition Act<br>1990 (1934 AD)                                                                                                                                                             | The State Land Acquisition Act  1990 (1934 AD) is in force in the state of Jammu and Kashmir. This Act provides the legal framework for land acquisition for public purposes in J&K. It enables the State Government to acquire private lands for a public purpose, and seeks to ensure that no person is deprived of land except under the Act.                                                                                                                                                                                                                                                     | Not Applicable. The sub-project does not require land acquisition.               |
| 5     | Jammu and Kashmir Common<br>Lands (Regulation) Act, 1956                                                                                                                                                 | An Act to regulate the rights in common lands. Provide relief to the user of the lands, used for common purposes like roads, streets, lanes, pathways, water channels, drains, wells, tanks, or any other source of water supply to the villagers in general. Provision for the prohibition of encroachments over such common lands and public places and eviction thereof and in case of encroachments, to restore the rights of the users. Provision for assigning land for extension of "Village Abadi", if existing land is inadequate for the habitation of the villagers at any point of time. | Not Applicable.  No common land is involved.                                     |

# 3.4 Other Central and State acts which may be applicable in the Subproject:

- Minimum Wages Act, 1948
- Contract Labor Act, 1970
- The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013
- The Bonded Labor System (Abolition) Act, 1976
- Child Labor (Prohibition and Regulation) Act 1996 along with Rules, 1988
- Children (Pledging of Labor) Act, 1933 (as amended in 2002)
- The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995
- The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Rules, 1996
- Untouchability Offences Act, 1955
- The Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act,
   1989
- The Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Rules,
   1995
- Disaster Management Act 2005: specifies that while providing compensation and relief to victims of disasters there shall be no discrimination on the grounds of sex, caste, community, descent, or religion.
- The Jammu and Kashmir Protection of Human Rights Act 1997
- The Jammu and Kashmir Natural Calamities Destroyed Areas Improvement Act, 1955:
- The Jammu and Kashmir Right to Information Act 2004
- Backward Classes Commission Act, 1997
- Persons with Disabilities Act, 1998
- J&K Reservation Act, 2004

# 4. Socio-Economic Profile of the Sub-project Impact Area

Doda had come into existence in the year 1948 and its headquarters is located at a distance of 181 km From Jammu, the winter capital, and 222 km from Srinagar, the summer capital of the state. Doda district Lies in the outer Himalayan range in J&K State and falls between 32° 53′ and 34°21′N latitude and 75°1′ and 76° 47′E longitude. It has an average elevation of 1107 meters (3361 feet). The district is surrounded in the north by the Anantnag and in the west by Udhampur district and in the South-west by Kathua District and is South-East by Chamba district of Himachal Pradesh.

## 4.1 Physical features

The form of land is rugged and mountainous surrounded by the sprawling mountains of the Himalayas from north to west. These are named by Dilidhar, Peer Panchal, and Great Himalayas. The tributaries of river Chenab have formed many small plateaus which are suitable for cultivation. Even slopes up to 60 degrees are being brought under cultivation in the various parts of the district.

The District is endowed with natural beauty and has a vast wealth of natural resources. Full with natural endowments, scenic splendor, places of tourist interest, worship, round-the-year snowcapped mountain peaks, and challenging tracks allure the adventures and trekkers not only from India but also from abroad. The District Doda has good potential for tourism – including pilgrim and adventure tourism – owing to its captivating scenic splendor, pilgrim centers, and lofty mountain peaks.

#### 4.2 Location and size

Doda district lies in the outer Himalayan range in Jammu & Kashmir state. The district falls between 32°-53′ and 34°-21′ north latitude and 75°-1′ and 76°-47′ east longitude. Doda district lies in the eastern part of Jammu & Kashmir state. The district is bounded by Anantnag district in the north, Kistwar in the north-east, Kathua, and Udhampur in south and south-west, Ramban in the West Chamba area of Himachal Pradesh falls in the south. The total geographical area of the district is 8912 Sq.Km. Having recorded a population of 409936 persons, the district ranks 13th among all districts of the State. Its density i.e population per Sq.Km works out to 46.

# 4.3 Physiography

Doda district has a very rigged and mountainous terrain. Doda area can also be called as a land of lofty mountains, deep gorges, valleys and meadows, showing great variation in

elevation. The district includes Greater Himalaya, Lesser Himalaya, and Pir Panjal ranges which are interwoven by numerous small forested hills leaving limited space for cultivation. Except for Chenab and small river valleys, the topography of the district is mountainous and forested and many areas are covered with snow during the winter season. Hilltops of Greater Himalaya have glaciated caps. The district includes a few plain and low-level areas with a minimum height of 740 meters. But there is hardly any mountain peak dotted in the district which is less than 5,637 meters in height.

# 4.4 Drainage

The district has a dendritic type of drainage pattern. Chenab or Chandrabhaga is the most important river which enters the district in the south-east from Himachal Pradesh and flows in the north-western direction up to Dool village of district Kishtwar and then turns southward and Marau Sudar river joins in it. Kuli Gad joins the Chenab river from the east near Thathri village and then Chenab starts flowing westward along the northern boundary of Bhaderwah tehsil. After traversing some distance, Ladder or Deesa Nadi joins it from north, and Niru River joins it from the south near Pull Doda and it continues to flow westward up to National Highway and from this crossing into Ramban district.

# 4.5 Underground Water Resources

Except Sub-Recent terraces formed along the Chenab and near Bhaderwah, the entire district is covered by hard rock formations, Highly mountainous terrain, steep and extremely dissected topography, impervious nature of the rocks, all collectively result into more surface runoff than the downward percolation.

#### 4.6 Climate

Due to its varying physical features, the district does not have a uniform climate. Average rainfall in district Doda is very low among the other districts of the Jammu division. Due to low average annual precipitation, the whole of district Doda has been declared as drought-prone. The climate of Bhaderwah is different from that of Doda. In Bhaderwah there is a lot of snowfall during the winters for enjoying the snowfall especially. Due to this feature of Bhaderwah, it is generally called "MINI KASHMIR"

#### 4.7 Soils

The soil in the district is generally loose and sandy with very low moisture. The incidence of soil erosion is very high and roads blockage is frequent during the rainy season. There are some portions/ areas of the district which are located on the National Highway namely

Batote to Bhallessa. These places are notorious for the fall of slides during every rainy season and cause inconvenience to all.

## 4.8 Geology

Geologically the district is not very rich, though the minerals like Gypsum, Limestone's, Marble's, and other precious stones (Saphire) are also found in the district in abundance. So far as the extraction of these minerals is concerned only gypsum is being extracted at Jathi of Assar Block.

#### 4.9 Rivers

The main river in the district is Chenab which enters the District at Ihstihari (Padder) and leaves it near the main Disi Kund (Lunder) besides this there are some other small rivers such as Marsoo Dhar, Kalnai, and Neeru. These rivers flow through gorges and are mainly exploited for the generation of Hydel Power. There is immense potential for the opening of water-based industrial units as the river Chenab and its tributes flowing through the District has the capacity of generating 1500 MW of electricity

## 4.10 Flora and Fauna

Trees; namely; deodar, kail, fir, and pine are existing at higher altitudes, whereas in lower slopes and plain areas the trees of bamboo, tali, kher, tunu and thorny bushes are in abundance. Among fruit trees mango, apricot, guava, apple, walnut and citrus trees are found over a large area of the district.

The vegetation consists of barberis, spirala, primsepia, qurrcus and flex including subalpine herbs. So far as the fauna of the district is concerned, wild animals include leopard, panther, fox, wild goat, and wild cow. The pet animals, viz., cow, buffalo, goat, sheep, horse, camel, and birds like parrot, dove, cock, sparrow, peacock, hen and duck are also found in the district. Animals like chetah, nilgai, sambar, etc. are found.

## **4.11 Forest**

District Doda is rich in forest wealth. The forest provides timber of important varieties viz, Deodar, Fir, Kail, Chir, etc. These also yield products like dhoop, resin, gucchian and other products. For rejuvenation of degraded forests and increase the forest area by plantation in the district taken up in a big way by the forest Department. During 2016-17, total timber production was 48066.55 Cft, firewood production was 500 Qtls, Guchhies-12.33 Qtls, Nagchatri-3.67 Qtls, and Cedar Wood oil- 6200 litres earning huge revenue for the district.

# 4.12 Population

The population of the district Doda as per census 2011 was 4.10 lacs out of which 2.14 lacs are Males & 1.96 lacs are females.

#### 4.13 Sex Ratio

As per census 2011, the sex ratio was worked out to be 919 which is higher than the state ratio of 889.

#### 4.14 Workers

According to the 2011 census the working population in the district was 151912 out of which 101144 are male and 50768 are female.

# 4.15 Literacy

According to the census 2011, 219083 (64.68%) of the population was enumerated as literate. This is less than 67.2% for the state. It is higher 78.4% for males and lower (49.7%) for females. It is higher 85.6% for the urban areas and lower (62.7%) in rural areas.

# 4.16 Cropping Patterns

Agriculture is the main occupation of the people. Maize, Wheat, Barley, and Pulses are the important crops grown in the district: rice is the staple diet of the people. The main food crops of the district are maize and rice in Kharif and wheat in the Rabi season. The most important crop is maize which is grown in the entire district, wheat ranks next. The area under rice cultivation is small. The cropping pattern during 2009-10 was as under:

**Table 11: Cropping Patterns** 

| Sl.No. | Name of the Food Crops | Area Sown (000 Ha) |
|--------|------------------------|--------------------|
| 1.     | Maize                  | 26.232             |
| 2.     | Wheat                  | 4.195              |
| 3.     | Rice                   | 1.905              |
| 4.     | Condiments & Spices    | 0.039              |
| 5.     | Pulses                 | 2.014              |
| 6.     | Barley                 | 3.044              |
| 7.     | Millets/Bajra          | 0.016              |
| 8.     | Fruit & Vegetable      | 0.67               |
|        | Total Food & Crops     | 38.11              |

(Source: Digest of Statistics J&K 2008-09)

High yielding varieties programme has been taken up with full vigor. High-yielding variety

seeds are used in areas with increased irrigation facilities. The farmers in the district are increasingly using pesticides and plant protection material.

Apart from the above food grains the various fruit grown in the district is apple, apricot, mango, grapes, pear, plum, and citrus fruit, etc.

#### 4.17 Horticulture

Horticulture is the second big occupation of the people of this district. In horticulture fruitswise plant occupied areas are as under:

Kind-wise Area under Major Horticulture Crops in Doda District for the year 2009-10. (Figures in Hectares)

**Table 12: Horticulture** 

| Fruits Plants      |                                      |
|--------------------|--------------------------------------|
| A. Fresh Fruits    | Area under these crops (in hectares) |
| Apple              | 4408.08                              |
| Pear               | 1296                                 |
| Apricot            | 309.22                               |
| Peach              | 194                                  |
| Plum               | 118.76                               |
| Cherry             | 7.5                                  |
| Citrus             | 62                                   |
| Olive              | 214.99                               |
| Kiwi               | 0.43                                 |
| Other Fresh Fruits | 275                                  |
| Total fresh Fruits | 6885.989                             |
| B. Dry Fruits      |                                      |
| Walnut             | 5700.6                               |
| Almond             | 215                                  |
| Total Dry Fruits   | 5915.6                               |

# 4.18 Irrigation

The net area irrigated from different sources in Doda district during 2009-10( 000Hect) are:

**Table 13: Irrigation** 

| Canals           | 2.64  |
|------------------|-------|
| Springs/Tanks    | 0.089 |
| Wells/Tube wells | 0.013 |
| Others           | 0.035 |
| Total            | 2.777 |

Cropped Area irrigated in Doda district during 2009-10 (Lac.Hect.) are:

**Table 12: Cropped Area irrigated** 

| Rice/Paddy            | 0.019 |
|-----------------------|-------|
| Maize                 | 0.008 |
| Wheat                 | 0.007 |
| Other cereals/Millets | 0.002 |
| Fruits/ veg           | 0.001 |
| Oil Seeds             | 0.001 |
| Total                 | 0.038 |

#### 4.19 Natural wealth

A brief account of various mineral found in the Doda district is given below:

Gypsum is an important mineral used in the manufacture of chemical fertilizers, cement, plaster of Paris, etc. Extensive deposits of gypsum occur in Assar- areas. All these deposits are of good quality, with average gypsum content of 90 percent. Limestone is one of the most important industrial minerals used in the manufacture of cement, iron and steel, fertilizers, lime, etc. It is also used as a building material. Thick bands of limestone have been recorded at several places in the Doda district. Some of these are the limestone bands of Assar-Baggar area, Kalotran Anarsingpur area of Bhalessa, Thathri area. Marble is an important building stone. Six thick bands of marble occur within the Salkhalas in Thathri area. Semi-precious stones such as crystals of beryl, tour, malia, garnet, and quartx occur in pegmatites intruding into the Salkhala Formation in Thathri area. Slates are used for writing as well as roofing purposes. Good quality slates occur at Bhaderwah Jai area etc.

## 4.20 Animal Husbandry

Animal husbandry is the backbone of the farmers, particularly in the district. Doda is the only sector that can bring the revolution in the economic development of the district. Owing to its topography and agro climate condition, district Doda is the most suitable for goats and sheep rearing. The Department of Sheep Husbandry is playing a vital role in the rural economy by providing health and breeding coverage to the local sheep flocks.

**Table 14: Animal Husbandry** 

| Livestock, Sheep and Animal Husbandry during 2009-10(in Lac. No) |            |  |  |
|------------------------------------------------------------------|------------|--|--|
| Name                                                             | Population |  |  |
| Cattle                                                           | 2.239      |  |  |
| Buffaloes                                                        | 0.246      |  |  |
| Sheep                                                            | 3.47       |  |  |
| Goats                                                            | 1.036      |  |  |
| Hors/Ponies                                                      | 0.081      |  |  |
| Donkey/Mules                                                     | 0.072      |  |  |
| Yaks                                                             | 0.008      |  |  |

## 4.21 Fishery

Local variety of fishes including Himalayan trout are of common occurrence in the river Chenab and its tributaries. The total no. of license holders is 331 and the quantity of fish caught in Doda at 1396.20(Qtl.) during 2009.

## 4.22 Transport

Road Transport in the Doda district is a vital mode of transport. The District is well connected with road to its both Capital Winter Jammu(183 km) and Summer Srinagar (199 km). The District has Recorded 165 road accidents in the year 2009-10 in which 131 persons were killed and 319 persons were injured. The District is not connected with any railway link.

## 4.23 Electricity and Power

Power holds a key to any development effort. It is an essential component for sustained economic growth and commensurate growth in the power supply is required to ensure that the economy growing at 8-9 percent. The gradual increase in the demand for power means the country is growing and is leading to modernisation, industrialisation, and improvement in basic amenities culminating into the quality of life. Jammu and Kashmir have immense potential for development and hydraulic power. The Doda district has Bhaderwah(Hydro) with an installed capacity of power was 1.000 MW(As per digest of statistics 2008-09).

Percentage of inhabited census villages electrified in Doda district up to ending 2008-09 are:

**Table 15: Electrified Villages** 

| Inhabited Villages (2001 Census ) (N0.) | Villages Electrified(N0.) | Electrified Villages (%) |
|-----------------------------------------|---------------------------|--------------------------|
| 384                                     | 384                       | 100                      |

## 4.24 Socio-Economic Profile of Sub-Project villages

The socio-economic profile of the village falling under the proposed sub-project is given below:

**Village Jahnana-** Jahnana is a small village located in Bhaderwah Tehsil of Doda district, Jammu and Kashmir with a total of 37 families residing. The Jahnana village has a population of 172 of which 95 are males while 77 are females as per Population Census

<sup>&</sup>lt;sup>2</sup> Source: https://censusindia.gov.in/2011census/dchb/DCHB\_A/01/0116\_PART\_A\_DCHB\_DODA.pdf

2011. In Jahnana village population of children, age 0-6 is 25 which makes up 14.53 % of the total population of the village. The Average Sex Ratio of Jahnana village is 811 which is lower than the Jammu and Kashmir state average of 889. The child Sex Ratio for the Jahnana as per census is 471, lower than the Jammu and Kashmir average of 862. Jahnana village has a higher literacy rate compared to Jammu and Kashmir. In 2011, the literacy rate of Jahnana village was 72.79 % compared to 67.16 % of Jammu and Kashmir. In Jahnana Male literacy stands at 83.33 % while the female literacy rate was 60.87 %.

In Jahnana village out of the total population, 99 were engaged in work activities. 43.43 % of workers describe their work as Main Work (Employment or Earning more than 6 Months) while 56.57 % were involved in Marginal activity providing a livelihood for less than 6 months. Of 99 workers engaged in Main Work, 2 were cultivators (owner or coowner) while 0 were Agricultural laborers.

**Village Dranga** – Dranga is a medium size village located in Bhaderwah Tehsil of Doda district, Jammu and Kashmir with a total of 125 families residing. The Dranga village has a population of 649 of which 335 are males while 314 are females as per Population Census 2011. In Dranga village population of children, ages 0-6 is 80 which makes up 12.33 % of the total population of the village. The Average Sex Ratio of Dranga village is 937 which is higher than the Jammu and Kashmir state average of 889. The child Sex Ratio for the Dranga as per census is 951, higher than the Jammu and Kashmir average of 862.

Dranga village has a higher literacy rate compared to Jammu and Kashmir. In 2011, the literacy rate of Dranga village was 77.68 % compared to 67.16 % of Jammu and Kashmir. In Dranga Male literacy stands at 90.14 % while the female literacy rate was 64.36 %.

In Dranga village, most of the villagers are from Schedule Caste (SC). Schedule Caste (SC) constitutes 75.04 % while Schedule Tribe (ST) were 3.08 % of the total population in Dranga village.

In Dranga village out of the total population, 236 were engaged in work activities. 41.53 % of workers describe their work as Main Work (Employment or Earning more than 6 Months) while 58.47 % were involved in Marginal activity providing a livelihood for less than 6 months. Of 236 workers engaged in Main Work, 51 were cultivators (owner or coowner) while 0 were Agricultural laborers.

**Village Pendku-** Pendku is a medium size village located in Bhaderwah Tehsil of Doda district, Jammu and Kashmir with a total of 49 families residing. The Penske village has a population of 292 of which 139 are males while 153 are females as per Population Census

2011. In Pendku village population of children, age 0-6 is 53 which makes up 18.15 % of the total population of the village. The Average Sex Ratio of Pendku village is 1101 which is higher than the Jammu and Kashmir state average of 889. The child Sex Ratio for the Pendku as per census is 1409, higher than the Jammu and Kashmir average of 862.

In Pendku village, most of the villagers are from Schedule Caste (SC). Schedule Caste (SC) constitutes 77.74 % while Schedule Tribe (ST) was 3.42 % of the total population in Pendku village.

Penske village has a higher literacy rate compared to Jammu and Kashmir. In 2011, the literacy rate of Pendku village was 74.90 % compared to 67.16 % of Jammu and Kashmir. In Pendku Male literacy stands at 85.47 % while the female literacy rate was 64.75 %.

In Pendku village out of the total population, 146 were engaged in work activities. 19.86 % of workers describe their work as Main Work (Employment or Earning more than 6 Months) while 80.14 % were involved in Marginal activity providing a livelihood for less than 6 months. Of 146 workers engaged in Main Work, 1 were cultivators (owner or coowner) while 0 were Agricultural laborers.

**Village Mehrada -** Mehrada is a small village located in Bhaderwah Tehsil of Doda district, Jammu and Kashmir with a total of 22 families residing. The Mehrada village has a population of 107 of which 58 are males while 49 are females as per Population Census 2011. In Mehrada village the population of children with age 0-6 is 15 which makes up 14.02 % of the total population of the village. The Average Sex Ratio of Mehrada village is 845 which is lower than the Jammu and Kashmir state average of 889. Child Sex Ratio for the Mehrada as per census is 500, lower than the Jammu and Kashmir average of 862.

There is no population of Schedule Caste (SC) and Schedule Tribe(ST) in Mehrada village of Doda district.

Mehrada village has a higher literacy rate compared to Jammu and Kashmir. In 2011, the literacy rate of Mehrada village was 80.43 % compared to 67.16 % of Jammu and Kashmir. In Mehrada Male literacy stands at 93.75 % while the female literacy rate was 65.91 %.

In Mehrada village out of the total population, 62 were engaged in work activities. 40.32 % of workers describe their work as Main Work (Employment or Earning more than 6 Months) while 59.68 % were involved in Marginal activity providing a livelihood for less than 6 months. Of 62 workers engaged in Main Work, 0 were cultivators (owner or coowner) while 0 were Agricultural laborers

# 5. Analysis of Alternatives

For this sub-project, the analysis of alternatives has been made, considering the "with and without project scenarios" which considered the potential social impacts, both positive and negative, of the sub-project.

# 5.1 'Without' and 'With' Project Scenario'

## 5.1.1 'Without' Project Scenario

Development of the project road is essential for the betterment economy of Jammu Province. Project Road takes off from Km 7th of Pul-Doda – Bhaderwah and ends village Sundra. From the connectivity point of view, this particular road has high importance as through this alignment people of several villages namely Malaini, Jahnana, Dranga, Pendku, Mehrada and connect it with district town. Gravel/Earthen surface mostly exists. Due to the non-existence of the throughout CC drain, the earthen surface was badly damaged and the slope eroded at several locations. Necessary protection work requires at several stretches with the provision of CC drain. Project Stretch is mostly Gravel/Earthen. In winter and monsoon road conditions became non-motorable. The human life of the hillside villages becomes difficult during this period. Due to the development of this project stretch, socioeconomic profile of the entire area enhance.

## 5.1.2 'With' Project Scenario

The reconstruction of the proposed road will be a great help to the farmers to transport agricultural products, children would be able to travel faster and safer to go to school, as well as the local people when accessing to basic facilities such as health center/hospital, markets, working place, place of worship, and other areas. Improved road will reduce the dust and road will also not be slippery during rainy season. Restoration of roads will also serve as supply/rescue lines in the event of a disaster.

The project will not cause adverse impacts for the local people including women and there is no cultural heritage and forest that will be affected. Project will create employment opportunities for the local youths in the sub-project. After the construction, more people will travel outside for new employment opportunities. Many new income opportunities and small enterprises may flourish once the road gets constructed. With the improved roads and the travel time to the place of work will get reduced for many workers traveling outside the habitations on a daily basis.

The sub-project will not require any private land acquisition and is not impacting any other private asset. This has been confirmed through discussion with engineers from PMU, JTFRP

(Jammu division). Later on, Social Safeguard expert from PMU, JTFRP visited the site and has confirmed the same. However, Encumbrance free certificate issued by the Project Manager (Transport, Jammu division) confirms that sub-project does not require private land and available RoW for upgradation is 10.00 meters (annexure 3).

### 6. Stakeholder's Consultation

Stakeholder's Consultation is basically concerned with involving, informing and consulting the public in planning, implementation and other decision-making activities. It tries to ensure that due consideration is given to public views, concerns, and preferences when decisions were made.

One of the key aims of the stakeholder engagement exercise is to ensure that all relevant stakeholders are provided with the opportunity to express their concerns and opinions, which are incorporated as early as possible in the project development: at planning, implementation and operation phase and in the efforts to minimize the potential unexpected opposition of the proposed project and potential adverse effects to the environment and society at large.

#### 6.1 Identification of Stakeholder

Stakeholder's identification is the process of identifying stakeholders considering the legitimate representatives or the project-affected groups and whose views should take precedence in stakeholder consultations. Stakeholder's identification is the process of identifying stakeholders considering the legitimate representatives or the project-affected groups and whose views should take precedence in stakeholder consultations. Project related information has been shared with all the concerned stakeholders on 3.7.2019 and 15.7.2019. This was the first step to identify stakeholders who will be involved in the consultative processes. Since the sub-project does not envisage acquisition of assets such as land and structures and there is no adverse impact on the livelihood either. Therefore, only people residing along the sub-project road are the main stakeholders along with PIU and PMU.

# 6.2 Objective of Stakeholder's Consultation

The main objective of this exercise is to engage the locals in the project activities, to inform the local people about the project and its likely impacts. The specific objectives of the consultations are geared towards:

- Informing the stakeholders about the project and its potential impacts.
- Obtaining local and traditional knowledge that may be useful in decision making
- Facilitating consideration of alternatives, mitigation measures, and trade-offs (if any)

- Ensuring that important impacts are not overlooked and benefits are maximized
- Reducing chances of conflict through early identification of contentious issues
- Providing an opportunity for stakeholders to influence the Project design and operational plan in a positive manner
- Improving transparency and accountability of decision making
- Increasing public confidence in the SIA process

# **6.3 Approach for Consultation**

A very sensitive and pro people approach was adopted to engage locals in the sub-project activities. Project design and revenue record along with other project related information were shared with them in order to instil faith and confidence among them about the proposed project and its activities.

Following steps were taken to engage stakeholders.

- 1. Site visits and informal meetings with the local to know their views and perceptions about the sub-project.
- 2. Reconnaissance survey and transect walks.
- 3. Sharing of project design and revenue record with the locals.
- 4. Understanding their needs and requirement.
- 5. Collection of Baseline information.

## 6.4 Details of Public Consultation in sub-project road

The public consultation was conducted at the project location on 3.7.2019 and 15-07-2019 (annexure 9) with people of the Berare. JTFRP consultants, Social Safeguards expert, along with local people were present in the meeting. Detail discussions were held over JTFRP and its funding and other requirements. Major outcome during consultation was that people are aware that no private land or structure is being acquired for the sub-project. People requested to construct protection wall wherever EA does land cutting since the road is passing through hilly terrain and land cutting without giving protection walls can lead to soil erosion and put buildings on the risk.

### **6.5 Information shared**

The following information was shared with the people:

About project and its source of assistance, its implementation/execution, etc.

- Information on perceived benefits from the proposed sub-project including travel time, fuel costs, noise, and air pollution.
- Information of perceived losses from the proposed sub-project during the execution stage in terms of inconvenience to the public, air, and noise pollution, etc.
- The occurrence of a disaster like floods, cloud burst in past.
- Construction activity whether causing any type of health hazard or not? And mitigation measures.
- Discussion among the public for sharing of information related to project, policy of World Bank to address direct and indirect social impacts on the community during improvement/ construction work.
- Any loss of land/structure/ business or other community property due to construction activity;
- Safeguarding of religious/ cultural places like Temples, Mosques etc. along project road during the construction phase;
- Any impact on trees and measures to be taken for saving scheduled trees in close vicinity of the proposed road.
- Possible types of problems faced by the locals in their daily activities due to construction work.
- Livelihood generation by involving local labor with the project during the construction stage of the project.
- Potential loabour influx during construction.

#### 6.6 Feedback received

During the consultation process, people have expressed keen interest in the proposed subproject. The local people are expecting a good road to be developed and are aware of the upcoming work. People, in general, were aware about the benefits of the sub-project in terms of reduction in travel time and fuel cost. There will be an improvement in the air quality and a reduction in noise levels when the sub-project is completed. The major problems faced by people are related to the dilapidated condition of the existing road. In the time of emergency, like accidents, fast commutation is very difficult and sometimes impossible. People are ready to extend all types of support during the execution of the sub-project as their major difficulties will overcome after completion of the sub-project. They requested to provide retaining walls etc along the hills which EA cuts during execution.

# 7. Analysis of Social Impacts

## 7.1 Impact on Land

The total length of the sub-project road for reconstruction is 10.056 kms. The average width of the existing carriageway varies from 2.50 m to 3.00 m. The proposed carriageway is 3.75 m with a 1.000 m wide granular hard shoulder on either side of the carriageway.

Executive Engineer of the PWD (R&B) Bhaderwah division, video communication number 4673-75 dated 17.12.2018 had issued a certificate and confirms that the existing road is single lane and the RoW is 10.00 meters. Certificate also confirms that the ownership of the land lies with PWD, Bhadrwah division (annexure 3). Project Manager (Transport, Jammu division) vide letter no PIU/T/ERA/2021/865 dated 16.03.2021 provided a non-encumbrance certificate which confirms that RoW of 10 meters is available for road upgradation and its encumbrances free which means that no private or public structure exists on the whole alignmen (annexure 4).

The revenue record of the proposed sub-project could not be obtained from the concern department by JK ERA. Since the revenue record of the proposed sub-project was not available, therefore PMU, JTFRP published a notice in the two local newspapers namely "Amar Ujala" and "State Times" on 19.09.2021 and 20.9.2021 respectively, informing general people and those who are likely to be benefitted/affected in particular, about the upgradation of this road sub-project within the existing right of way under World Bank funding (annexure 5). It also called for any objection from the local people regarding use of RoW, along with supporting documentary evidence within 07 days of publication of the notice in the newspaper. The office of Director safeguards did not receive any objection or claim from anyone even after the lapse of one month of the publication of notice in two local newspapers. Thereafter, Director Safeguards issued an official letter vide no. ERA/DSG/PS/88-93 dated 25.10.2021 regarding encumbrance free RoW detailing therein the process followed to reconfirm the ROW ownership status (annexure 6).

Therefore, on the basis of certificate issued by Project Manager (Transport, Division Jammu), site visits, approved DPR and notice published in the newspaper it can be said that the sub-project does not have any adverse impact on the assets such as structures, land or on livelihood of anyone. However, if during execution, there is any unanticipated impact of the sub-project on any asset, the issue shall be addressed as per the provisions of Environment & Social Management Framework (ESMF) for the project, applicable policies of the WB and that of U.T of J&K.

## 7.2 Impact on Structures

As per the design of the sub-project no structure Residential, Commercial or Religious is falling in the alignment of the road. Further, there is no Community Property Resource in the alignment. Project Manager (Transport, Jammu division) vide letter no PIU/T/ERA/2021/865 dated 16.03.3021 provided non-encumbrance certificate and confirmed that no private or public structure exists on the existing alignment (annexure 3). Strip plan of the road (annexure 7) also confirms that there is no structure inside the alignment of the proposed road.

# 7.3 Impact on Livelihood

There are no commercial structures either temporary or permanent in the proposed alignment of the road. Further, there is no squatter on the road earning livelihood by using the available RoW and none has encroached upon the road. Therefore, sub-project has no impact on the livelihood of anyone.

# 8. Mitigation Measures

## 8.1 Social Management Plan

The Social Impact Assessment study does not envisage any significant impact of the subproject i.e., there is no involuntary displacement and land acquisition. Further, there is no temporary or permanent impact of any kind on the livelihood of people. Structures proposed shall be improved in the existing RoW. Technical department from PMU & PIU have made required modifications in design at initial stages to avoid negative impact as a part of mitigation measures.

DPR for the sub-project has been approved. The Social Management Plan suggests the mitigation measures needs to be adopted during execution to deal with unanticipated impact of the sub-project.

## 8.2 Objectives

The main objective of the Social Management Plan is to mitigate the various adverse social impacts which may arise during the pre-construction, construction, and post-construction of the sub-project. The objective of SMP in preconstruction, construction & post-construction stages are as follows:

## **Pre-construction Stage**

To discuss the design and technical proposal with the stakeholders to know their suggestions and inputs. To inform them about the project, its funding, land requirements, and policies and guidelines of funding agencies and applicable to the project.

### **Construction Stage**

To ensure that the provision of the SMP (Social Management Plan) is strictly followed and implemented by strengthening implementation arrangement.

To address the construction stage social impacts arising due to various project activities en route the corridor and particularly at habitations through specific measures that need to be applied across and certain specific measures that shall be determined on a case by case basis.

### **Post-construction Stage**

To ensure that all the issues that arose during the construction stage shall be addressed properly. In case land and other assets utilized by the EA or contractor shall be restored to the satisfaction of communities and owners of that assets.

## 8.3 Scope

The Social Management Plan (SMP) in the sub-project, consists of the set of mitigation, monitoring and institutional measures to be taken during the pre-construction, construction, and operation stages of the project to eliminate adverse social impacts, to compensate them, offset them, or to reduce them to acceptable levels following the mitigation hierarchy. The plan also includes the actions needed for the implementation of these measures.

The major components of the Social Management Plan are:

- Mitigation of potentially adverse impacts;
- Integration of SMP with Project in construction and operation phases;
- Institutional Capacity Building and Training;
- Monitoring during project implementation and operations;

#### 8.4 Context for the SMP

This Social Management Plan for Malani to Chakrabatti Road is based on the Social Impact Assessment study during which site visits carried out in the project corridor. Consultation and meeting were done with people and project design was discussed and evaluated on the ground. This Social Management Plan will assist PMU & PIU, JTFRP and the contractor to implement social management measures effectively.

The sub-project does not have any impact on private land and all the construction activities will be carried out within the available ROW which is encumbrances free as confirmed by PIU (annexure 3). There would be no impact on the private assets, CPRs and any other religious property due to any project activities. There can be few temporary impacts due to construction activities and to address these impacts, a Social Management Plan has been prepared which lays down mitigation measures that needs to implemented for any impact on site. SMP will be implemented by the contractor under the supervision of PMU & PIU, ITFRP.

## 8.5 Methodology for SMP Preparation

The comprehensive social management approach for the project involves following key steps and processes.

- Screening of social impacts during the SIA study
- Public consultation with the stakeholders.
- Discussion of Technical Proposal with the stakeholders.

- Transect walk and Identification of issues that can crop up during the construction stage.
- Development of measures aimed at avoiding, mitigating, and offsetting, or reducing impacts to levels that are socially accepted during implementation and operation of the project road.

## 8.6 Probable social issues that may arise during the construction stage

- Loss of land due to land-slides resulting from hill cutting activities.
- Cracks in structures or damage due to construction works e.g. hill cutting activities
- Temporary short duration or prolonged disruption to services such as water supply, power supply etc.
- Temporary Disruption to traffic movement leading to time delays.
- Possibility of gender-based violence arising from influx of migrant labour for construction works.
- Labour influx issues such as may wages to men and women, discrimination in employment opportunities, Child labour.
- Inconvenience and Nuisance to Public due to accumulation of excavated earth
- Stagnation of water leading to mosquito breeding and public health problems.
- Spread of diseases at construction and camp sites due to influx of labour like HIV AIDs, COVID 19 etc.

## 8.7 Social Management Plan

Based on the findings and issues identified during SIA study, Social Management Plan has been prepared for the sub-project. The mitigation measures for the potential impacts are presented in form of a matrix according to the sequential flow of activities in the project life cycle. These measures would be further updated by Contractor during the implementation of the SMP. The Social Management Plan will be a part of Bid document.

**Table 15: Social Management Plan** 

| Sl.N<br>o. | Project<br>Phase/Activity       | Issues/ Potential<br>impacts                                                                                                                                          | Proposed Mitigation<br>Measures                                                                                                                                          | Responsib<br>ility | Monitoring<br>Agency/<br>Frequency |  |  |  |
|------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------|--|--|--|
| Planr      | Planning/Pre-construction Phase |                                                                                                                                                                       |                                                                                                                                                                          |                    |                                    |  |  |  |
| 1          | Pre-<br>construction<br>phase   | <ul> <li>Sharing of design with<br/>the community.</li> <li>Utilization of private<br/>land temporarily if<br/>required.</li> <li>Provision of alternative</li> </ul> | <ul> <li>Consultation with local community and stakeholder engagement.</li> <li>Written consent from the community or owner of the land required for stocking</li> </ul> | Contractor         | PIU                                |  |  |  |

| Sl.N<br>o. | Project<br>Phase/Activity | Issues/ Potential<br>impacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Proposed Mitigation<br>Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Responsib<br>ility | Monitoring<br>Agency/<br>Frequency |
|------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------|
|            |                           | access to the community for commuting wherever required. • Restoration and relocation of Common Property Resources, if any.                                                                                                                                                                                                                                                                                                                                                                                              | construction material temporarily.  • Involving locals (Gram Sabha) wherever any issue arises.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                                    |
|            | ruction Phase             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                                    |
| 2          | Influx of labor           | <ul> <li>Construction Camp         Locations Selection,         Design, and Lay-out.</li> <li>Conflict with the         community due to social         and cultural differences         with the host         community.</li> <li>The potential impact of         spreading infectious         diseases from labor to         the local or vice versa.</li> <li>Possibility of Sexual         abuse and assault in the         labor camps or         otherwise.</li> <li>Drug abuse, gambling,         etc.</li> </ul> | <ul> <li>Minimize labor influx as much as possible by engaging the local labour force.</li> <li>Ensure labor camps for the labor (Away from religious places and localities to the extent possible).</li> <li>Awareness of the health and sanitation for the labor.</li> <li>Ensure the least contact between the host community and the labor.</li> <li>Awareness of sexual assault &amp; drug abuse.</li> </ul>                                                                                                                                                                                                                                                                                                                                              | Contractor         | PIU/ PMU<br>Monthly<br>Monitoring  |
|            |                           | • Facilities for the Labour in camp and on the worksite                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <ul> <li>Providing accommodation facilities to the migrant laborers with proper ventilations.</li> <li>Provision for safe drinking water and appropriate cooking arrangement at labor camps;</li> <li>Provision of Separate toilet and bathing facilities for men and women</li> <li>Provision of medical facility which includes first aid kit at the camp site and also ambulance facility to take patients to the hospital in case of emergency.</li> <li>Proper drainage facility at the camp site along with water sewerage treatment facilities. No waste water should be discharge to any surrounding area without required permission and proper treatment.</li> <li>Provision of prayer rooms as per the religious beliefs of the workers.</li> </ul> | Contractor         | PIU/ PMU<br>Monthly<br>Monitoring  |

| Sl.N<br>o. | Project<br>Phase/Activity | Issues/ Potential<br>impacts                                                 | Proposed Mitigation<br>Measures                                                                                                                                                                                                                                                                                                                                                                                                                          | Responsib<br>ility | Monitoring<br>Agency/<br>Frequency    |
|------------|---------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------|
|            |                           |                                                                              | <ul> <li>Safe storage facilities for the gas cylinder, petroleum, and other chemicals, used by laborers.</li> <li>Proper solid waste collection and disposal system at the camp site.</li> <li>The camp should have proper security arrangements, like a Security fence.</li> <li>Preparing a code of conduct for the migrant workers.</li> <li>Conducting awareness programme about sexually transmitted diseases among the migrant workers,</li> </ul> |                    |                                       |
|            |                           |                                                                              | laborers and for the community around project site;  • Awareness program on COVID-19.  • Provision of hand sanitizer, masks in the labor camps.  • Provision a separate accommodation for COVID-19 infected labors or persons engaged by the contractor.  • Provision of crèche on site for children.                                                                                                                                                    |                    |                                       |
|            |                           |                                                                              | <ul> <li>Training programs for construction workers in basic sanitation and health care issues (e.g., how to avoid malaria and transmission of sexually transmitted infections (STI) HIV/AIDS.</li> <li>Labour Registration.</li> <li>Awareness program for labor rights</li> <li>No employment of child labor.</li> </ul>                                                                                                                               |                    |                                       |
|            |                           | Registration of Complaints received from labor.      Equality of opportunity | <ul> <li>Arrangement to register and redress the grievance of workers.</li> <li>Grievance Redressal System for the project to address such issues including sexual harassment at the workplace</li> <li>To be ensured throughout</li> </ul>                                                                                                                                                                                                              | Contractor,        | PIU/ PMU Monthly Monitoring  PIU/ PMU |
|            |                           | to work.                                                                     | the project cycle.                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    | Monthly<br>Monitoring                 |

| Sl.N<br>o. | Project<br>Phase/Activity            | Issues/ Potential<br>impacts                                                                                                        | Proposed Mitigation<br>Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Responsib<br>ility | Monitoring<br>Agency/<br>Frequency |
|------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------|
|            |                                      | <ul> <li>Equal Pay for equal<br/>work</li> <li>Preference to the<br/>Women Laborers</li> </ul>                                      | Maintenance of payment<br>registers by the contractor.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |                                    |
| 3          | Community Health and Safety          | • Injury & sickness due to construction work and movement of heavy vehicles, contamination, or other natural or human-made hazards. | <ul> <li>Provision of access to the community, shops, religious places during the construction phase.</li> <li>Better marking and signage.</li> <li>Provision of alternative transportation routes for vehicles and ambulances wherever required.</li> <li>Undertaking regular surveillance at the site to check on Hygiene conditions for disease control.</li> <li>Treating mass awareness on HIV and STDs and COVID-19.</li> <li>Ensure the least contact between the labor and the local population.</li> <li>Sharing grievance redressal system with the community and displaying contact numbers at the site to register any grievances due to the project.</li> <li>contamination of water bodies due to stocking of construction material etc.</li> <li>Safeguarding pedestrians' safety including women, children.</li> <li>During construction of side, drains provide temporary/safe access to shops, kids, hospital/clinic, religious places, etc.</li> <li>Community Consultation</li> </ul> | Contractor         | PIU/ PMU<br>Monthly<br>Monitoring  |
| 4          | Occupational<br>health and<br>safety | • Injury and sickness of labor                                                                                                      | <ul> <li>Provide training on health and safety to all the workers.</li> <li>Provide PPE to workers as per work requirements.</li> <li>Regular checking of body temperature and other symptoms among the laborers for COVID-19 and maintaining a register.</li> <li>Awareness program on COVID-19.</li> <li>Provision of hand sanitizer, masks in the labor camps and on the sites.</li> <li>Displaying of COVID-19 help</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Contractor         | PIU/ PMU<br>Monthly<br>Monitoring  |

| Sl.N<br>o. | Project<br>Phase/Activity                                             | Issues/ Potential<br>impacts                                                                                                                     | Proposed Mitigation<br>Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Responsib<br>ility | Monitoring<br>Agency/<br>Frequency |
|------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------|
|            |                                                                       |                                                                                                                                                  | line numbers on-site as well as in labor camps.  Provide separate toilets for male and female labor at the construction site  Provide safe drinking water at the construction site.  Providing a separate resting area at the site for breaks during the work period  Provide adequate lighting in the construction area and along the roads.  Conduct an initial health screening of the laborers working at the construction site, especially those who are coming from outside the project area.  Provide first aid facility at the construction site  Provide HIV awareness programming, including STI (Sexually Transmitted Infections) and HIV information, education, and communication for all workers on regular basis. |                    |                                    |
| 5          | Gender-Based<br>Violence                                              | <ul> <li>Sexual Exploitation and<br/>Abuse (SEA)</li> <li>Workplace Sexual<br/>Harassment</li> <li>Human Trafficking</li> <li>Non-SEA</li> </ul> | <ul> <li>Awareness program for the Contractors, Local Communities, and laborers on national laws.</li> <li>Introducing a worker's code of conduct.</li> <li>Displaying of various legal provisions on-site, in labor camps, and at prominent locations in the project area.</li> <li>Ensure that complaints of GBV are registered and confidentially maintained in a register.</li> <li>Strict code of conduct for workers with no tolerance for physical or verbal abuse of women or children.</li> </ul>                                                                                                                                                                                                                       | Contractor         | PIU/ PMU<br>Monthly<br>Monitoring  |
| Post 0     | Construction Phase Rehabilitation of site used for camp, storage etc. | Handing over temporarily used private/ community land to the landholders/ community by the contractor without restoration work and               | <ul> <li>Consultation with the private party or Community and restoration of their land.</li> <li>Removing left-over construction material from the site.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Contractor         | PIU/PMU<br>Within one<br>Month     |

| S | Sl.N<br>o. | Project<br>Phase/Activity | Issues/ Potential<br>impacts                                                                          | Proposed Mitigation<br>Measures                                                                                             | Responsib<br>ility | Monitoring<br>Agency/<br>Frequency |
|---|------------|---------------------------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------|
|   |            |                           | payment of dues/lease amount.  • Non-removal of debris and other construction material from the site. | Payment of lease<br>amount/rent, if any due, to<br>the private party or<br>community for utilization of<br>their resources. |                    |                                    |

### 8.8 Gender Action Plan

#### 8.8.1 Status of Women in J&K

Women constitute around 47% of the total population of the State. The development of women, no doubt, has been a part of the development planning process right from the inception of Five-Year Plans but the shift in approach from welfare to development toward women took place in a focused manner in the 6th and 7th Five Year Plans. The 8th Five Year Plan promised to ensure that benefits of development do not by-pass women. The 9th Five Year Plan changed the strategy for women from development to empowerment and emphasis on preparation of a separate Women Component Plan (WCP) by identifying specific Schemes/Projects having a direct bearing on the welfare and development of Women. The 10th Five Year Plan further strengthened the implementation of the Women Component Plan (WCP).

Moreover, the Women and Child Development Department in the Ministry of Social Justice and Empowerment has also enjoined upon the states to monitor closely the flow of benefits of various schemes for the empowerment of women on regular basis. These initiatives have helped in improving the status of women in various spheres to a great extent, but the imbalance still exists which needs to be addressed over the years. The 11th Plan had taken numerous steps forward. However, the targets set out could be only partially achieved. In the 12th plan, the Government's priority would be to consolidate the existing initiatives and interventions relating to women, build upon the achievements and also move beyond to respond to new challenges. The female population of J&K State slashed down from 47.15% of the total population in 2001 to 46.88% in 2011. As per details from Census 2011, Jammu and Kashmir have a population of 1.25 Crore souls over the figure of 1.01 Crore in the 2001 census. The total population of Jammu and Kashmir as per the 2011 census is 12,548,926 of which male and female are 6,665,561 and 5,883,365 respectively indicating a reduced sex ratio of 883. The corresponding figures of male and female as per Census 2001 were 5,360,926 and 4,782,774 respectively indicating a sex ratio of 892. Sex ratio (females per thousand of males) is an important indicator of the social conditions particularly concerning women's status in any society.

The low sex ratio shows indulgence of artificial interventions, distorting the biological trend and natural balance in terms of the number of females per thousand males. An important concern in the present status of Jammu and Kashmir's demographic transition relates to the adverse sex ratio. The sex-ratio as per census 2011 was 883 which is a matter of great concern and needs to be addressed on priority. Education of the women is a very effective tool for women's empowerment not only from the point of view of literacy, but it has inter-linkage with other social parameters viz. population growth, health care, education of children, etc. It enables rural women to acquire new knowledge and technology, required for improving and developing their tasks in all fields, besides availing new opportunities and combating emerging challenges of a dynamic society.

Female education is essential for higher standards of health and improved "maternal competence" which leads to lower infant mortality. It also raises women's economic productivity. Despite its linkage to so many positive outcomes and the progress made over the past 50 years, female literacy remains low in J&K State as compared to men. Jammu and Kashmir's literacy rate has increased by 13% in the last decade i.e. from 55% in the 2001 Census to 68% in the 2011 Census. While female literacy has increased from 42.22% in the 2001 Census to 58.01% in 2011. Gender differential still exists both in rural and urban areas but it is comparatively higher in rural areas. This can be attributed to several factors viz., lack of access to schools, parents feeling insecure about sending girl children to schools, their engagement in agricultural and other domestic activities, etc. Though still being at a disadvantageous position, the women folk are breaking the barriers/shackles to get an equal share in basic human rights. With a higher growth rate than male literacy, the goal is expected to be achieved in near future.

#### 8.8.2 Legal Provision Related to Women in J&K

- J&K Protection of Women from Domestic Violence Act, 2010
- Jammu and Kashmir Juvenile Justice (Care and Protection of Children) Act, 2013
- State Commission for Women Act, 1999

#### 8.8.3 Strategy

## Suggestive Actions to be taken in the sub-project

- Ensure participation of vulnerable groups in the project activities.
- Ensuring facilities in construction camps.
- Carrying out other responsibilities towards vulnerable groups.

### Suggestions for increasing the Women's Participation in the sub-project

- Allow women to take part in the consultation process.
- Encourage women to evaluate the project outputs from their point of view and their useful suggestions should be noted for taking necessary actions for further modifications in the project creating the better and congenial situation for increasing participation from women.
- Devise ways to make others vulnerable to participate in the project activities.

## **Involvement during Construction**

Wherever possible, women's involvement in construction activities should be encouraged in order to help them have access to benefits of project activities.

## **Ensuring Facilities in Construction Camps**

Foreseeing the involvement of women, both direct and indirect in the construction activities, PMU, PIU & PMC shall ensure certain measures that are required to be taken by the construction contractor towards welfare and well-being of women and children during the construction phase such as:

- **Temporary Housing:** During the construction, the families of laborers/workers should be provided with residential accommodation suitable to nuclear families.
- Health Centre: Health problems of the workers should be taken care of by providing basic health care facilities as and when required by labour.
- Day Crèche Facilities: It is expected that among the women workers there will be mothers with infants and small children. Provision of a day crèche may solve the problems of such women, who can leave behind their children in such a crèche and work for the day in the construction activities. If the construction work involves women in its day-night schedules, the provision of such a crèche should be made available on a 24-hour basis.
- Proper Scheduling of Construction Works: Owing to the demand of a fast
  construction work, it is expected that a 24 hours-long work-schedule would be in
  operation. Engaging women labour during night services should be avoided by the
  project or can be permitted only after getting written request from the women
  labour. In this case crèche facilities in the construction camps must be extended to
  them in the night.
- **Control on Child Labour:** Minors, i.e., persons below the age of 14 years, should be restricted from getting involved in construction activities. It will be the responsibility of the Social and Environmental experts of PMU, JTFRP to ensure that

no child laborer is engaged in the activities. PMU& PIU shall keep strong vigilance to ensure the cessation of such exploitation.

#### 8.8.4 Avoiding Gender Based Violence

The contractor will prepare and implement robust measures to address the risk of gender-based violence that include:

- Mandatory and repeated training and awareness-raising for the workforce about refraining from unacceptable conduct toward local community members, specifically women;
- informing workers about national laws that make sexual harassment and gender-based violence a punishable offense which is prosecuted;
- introducing a Worker Code of Conduct as part of the employment contract and including sanctions for non-compliance (e.g., termination), and (iv) contractors adopting a policy to cooperate with law enforcement agencies in investigating complaints about gender-based violence.

## 8.9 Labor influx and Labor Management

Since the construction activities are mostly labor intensive by nature, therefore, it is also envisaged that both local and migrant labor shall be employed by the project. These migrant laborers will be accommodated in a temporary campsite within the project area.

#### 8.9.1 Objectives

The influx of migrant labor will have both negative and positive impacts on the nearby community and local environment. The labor will be accommodated in a temporary campsite within the project area which can have a significant interface with the host community. The influx of migrant workers would lead to a transient increase of population near the project area for a limited time. This would put pressure on the local resources such as roads, fuel for cooking, water, etc. Hence, a plan has been designed to demonstrate the:

- Potential impacts associated with the influx on the host population and receiving environment are minimized;
- Provision of safe and healthy working conditions, and a comfortable environment for migrant labor; and
- To ensure compliance with the national labor laws, including guidance provided on the latest COVID 19 epidemic in the country.

## 8.9.2 General Requirements

All migrant workers are envisaged to be accommodated in a proper temporary campsite within the project area. If migrant workers are accompanied by their families, provisions should be made accordingly. As per the National Acts, the inclusion of requirements for labor camp to be established by contractors during the construction phase of the project. Contractor(s) shall ensure implementation of the following measures to minimise the potential negative impacts of worker accommodation and workers on local communities:

- Cleanliness and Sanitization: Pest extermination, vector control, and disinfection are to be carried out throughout the living facilities in compliance with local requirements and/or good practice. In light of the COVID-19 outbreak and increased risks to community health and safety and occupational health and safety, the contractor needs to put in place provision/mitigation measures need to meet the threat posed by Covid-19.
- Complaints and incident reporting: A formal Complaints Procedure will be implemented to ensure the timely and transparent response to complaints as received from labor.
- **Labor education:** The workforce will be sensitized to local social and cultural practices through the provision of an induction course for all employees that stipulates expected behaviour;
- Labor behaviour in the campsite provided: A Code of Behaviour governing appropriate behaviour in the accommodation facilities to be kept in place and to be strictly enforced. The contractor shall ensure implementation of the "rules of engagement" between laborers living in the campsite and community and shall be implemented by construction contractors for all engaged laborers.
- Labor Compensation and Accommodation: JTFRP shall ensure that laborers are provided with benefits such as leave, weekly rest day, etc. Accommodation to be provided for the construction labor which covers facilities (including catering facilities, dining areas, washing and laundry facilities, etc.) and supporting utilities.

#### 8.9.3 Hiring & Recruitment Procedures

• The manpower wherever possible shall be locally recruited by the contractor. The following general measures shall be considered for the workforce during their employment tenure:

- The implementing agency in consultation with the PMU will include a code of conduct relating to the accommodation to be signed with the contract document of contractors.
- The contractor shall not employ any person below the age of 18 years nor will have any forced labor; The construction laborers will be provided with documented information regarding their rights under national labor and employment law such as but not limited to Factories Act, Minimum Wages Act, 1948 Trade Unions Act, and Workmen's Compensation Act; 1923.
- The first priority for employment of labor should be given those impacted by the project such as landowners who have lost land / donated land;
- No discrimination shall be done by the construction contractor for recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, termination of employment or retirement, and disciplinary practices;
- The contractor to ensure that work hours are set at eight hours a day, 48 hours a week, with a weekly rest day for all engaged labor;
- Every labor is entitled to a maximum of only two hours a day as Overtime (OT) work. OT pay is twice the hourly remuneration;
- The project will ensure that equal wages for male and female workers for work of equal nature or value is maintained;
- A grievance redressal mechanism for workers to be put in place by the contractor to raise workplace concerns. The workers to be informed about the grievance mechanism at the time of recruitment; and
- The Contractor to ensure that they develop and implement a procedure to review the performance of their sub-contractors.
- The procedure developed should include regular inspection of the campsites, maintaining information of labor sourced by sub-contractors;

#### 8.9.4 Worker's Accommodation

The EA has to supervise and monitor the activities performed by their contractor and accommodation facilities provided in the campsite. The following measures shall be provided:

- The laborers to provide with accommodation made of insulating material and locally available building material, etc. along with storage of personal belongings;
- The migrant workers with families will be provided with individual accommodation comprising bedroom, sanitary, and cooking facilities;
- The units to be supported by common latrines and bathing facilities duly segregated for male and female labor; A minimum of 1 unit to 15 males and 1 unit for 10 females shall be provided;
- The contractor shall provide a canteen facility with the facility to cook food of appropriate nutritional value respecting religious/cultural backgrounds;
- All doors and windows shall be lockable and mobile partitions/curtains shall be provided for privacy;
- Dust bins to be provided for collection of garbage and to be removed daily;
- It is also required to provide first aid box in adequate numbers; and
- Ventilation should be appropriate for the climatic conditions and provide workers with a comfortable and healthy environment to rest and spend their spare time.

# 8.9.5 Security

The contractors shall put in place the following security measures to ensure the safety of the workers. The following measures shall be incorporated:

- Access to the campsite shall be limited to the residing workforce;
- The contractor shall be responsible for deploying an adequate number of guards;
- Adequate, day-time night-time lighting shall be provided;
- The security personnel shall be provided with training to respect the community traditions and in dealing with, use of force, etc.; and
- The rental accommodation shall be provided with firefighting equipment and portable fire extinguishers.

#### 8.9.6 Provisions for Drinking Water

- Access to an adequate and convenient supply of free potable water is a necessity for workers. The domestic water conforming to the IS 10500:2012 supply shall be made available by the contractor.
- The direct usage of water from bore well should not be allowed;

- The Contractor(s) should regularly monitor the quality of drinking water. In case of non-compliance with the Drinking Water Specifications, additional treatment shall be provided, or alternative sources of water supply shall be arranged; and
- All storage container of drinking water to be monitored from becoming polluted or Contaminated.

#### 8.9.7 Cooking Arrangements

- Places for food preparation are designed to permit good food hygiene practices, including protection against contamination between and during food preparation;
- Adequate personal hygiene including a sufficient number of washbasins designated for cleaning hands with clean, running water; and
- All kitchen floors, ceiling and wall surfaces adjacent to or above food preparation and cooking areas are built using durable, non-absorbent, easily cleanable, nontoxic materials;
- Food preparation tables are equipped with a smooth, durable, easily cleanable, noncorrosive surface made of non-toxic materials.
- To ensure that the fuel need of laborers in the project area does not interfere with the local requirements, necessary arrangements for the supply of fuel to the laborers shall be done by the contractor.

#### 8.9.8 Waste Water Generation

- There will of generation of wastewater from the campsite. About 80% of the water used shall be generated as sewage/wastewater.
- Contractors to ensure that the campsite is equipped with a septic tank and soak pit for disposal of sewage. It is also recommended that the stormwater and sewage system should be separated. The surface water drainage shall include all necessary gutters, downpipes, gullies, traps, catch pits, manholes, etc.
- Sanitary and toilet facilities are constructed of easily cleanable materials. Sanitary
  and toilet facilities are required to be cleaned frequently and kept in working
  condition.

#### 8.9.9 Medical facilities

The following medical facilities shall be provided by contractors for the construction workers:

- A first-aid centre shall be provided for the labor within the construction site equipped with medicines and other basic facilities;
- Adequate first aid kits shall be provided in the campsite in an accessible place. The kit shall contain all type of medicines and dressing material;
- The contractor shall identify and train an adequate number of workers to provide first aid during medical emergencies;
- Regular health check-ups shall be carried out for the construction laborers every six month and health records shall be maintained;
- Labors should have easy access to medical facilities and first aider; where possible, nurses should be available for female workers;
- First aid kits are adequately stocked. Where possible a 24/7 first aid service/facility is available.
- An adequate number of staff/workers is trained to provide first aid; and

# 9. Monitoring and Evaluation

The Project requires detailed supervision, monitoring, and evaluation of the impact on the environment and social aspects. Monitoring is the periodical checking of planned activities, which provides midway inputs, facilitates changes, if necessary, and provides feedback to Project Authority for better management of project activities. It helps in making suitable changes and modifications in safeguard documents during project implementation. Evaluation on the other hand assesses whether the activities have achieved the intended goal and objectives. Thus, monitoring and evaluation are critical to measuring the project performance and fulfillment of project objectives.

To carry out this, PMU has made specific arrangements. The executing agency has a dedicated unit to deal with the social and environmental safeguards. This unit is headed by Director Safeguards who is assisted by full-time Social Safeguards and Environmental Experts. To ensure compliance with the World Banks' social safeguard issues Director Safeguards will monitor and evaluate routine activities. Half-yearly Environmental and Social Audit, of ESMF implementation, will be done by the Technical Audits and Quality Control Consultants. Progress on social safeguards and other issues will be flagged in the MPR and QPRs.

#### 9.1 Safeguards Supervision

This will be done by PMU with the support of PIU and consultants. All the sub-projects will be visited at regular intervals by PMU to check if all safeguard requirements are met and to identify any issues that need to be addressed. PMU should submit quarterly progress reports to The World Bank on safeguards implementation.

#### 9.2 Concurrent Monitoring and Quarterly Reporting

The concurrent internal social monitoring will be done as part of the regular monitoring by the PIU, Implementing Agencies, and TAQAC. However, PMU, with the help of an in-house Social Specialist will do the regular social monitoring of sub-projects for safeguards compliance.

#### 9.3 Safeguards Monitoring Plan

Apart from the quarterly monitoring reports submitted to the World Bank, once every year, the PMU will prepare a report of the environmental and social situation in the project districts including data and analysis of relevant parameters as given in the plan below. This report also should give a listing of relevant new legislation and regulations that have a

bearing on the environmental and social performance of the project. PMU will submit this report to The World Bank.

# 9.4 Independent Safeguard Audits

The PMU will appoint Independent Project Implementation Quality Audit Consultants with expertise in social and environmental safeguards to conduct a half-yearly project quality audit, which will include Environmental and Social Audit of selected sub-projects for compliance with the ESMF.

#### 9.5 Right to Information and Disclosure

The Jammu and Kashmir Right to Information Act 2004 gives the right to persons to obtain any document or information relating to the affairs of the state or public body. In addition to the provisions of the above Act, the JTFRP provides for voluntary disclosure of information and project documents in English, Hindi, and Urdu on the Government and implementing agencies' websites for public consumption.

#### 10. Grievance Redressal Mechanism

Grievance Redressal Mechanism is a process to address people's grievances related to land acquisition, resettlement, and rehabilitation, or any other social issue arising out of the project-related activities; executing agency will establish two bodies, one at a local level (site level) and another at District level. In case, the grievances are not resolved at these two levels, then they will be forwarded to R&R Committee at the Divisional level for this project which will be established under the Divisional Commissioner, Jammu/Srinagar. The grievances will be registered at the Project site. The local level grievance committee will try to resolve the case in a maximum of 14 days. In case the aggrieved person is not satisfied with the decision delivered at the local level or the grievance/s is not resolved, the same shall be forwarded to the district level committee, headed by District Collector. No grievance can be kept pending for more than a month which means the committee has to meet every month. Executing Agency through PMU, JTFRP will monitor the implementation of the decision of the committee. In case the aggrieved party is not satisfied with the proposed redressal measures, it can approach the Divisional Level Redressal Committee, headed by Divisional Commissioner, Jammu/Srinagar. If the aggrieved party is not satisfied with the decision delivered or the committee is not successful in resolving the grievance/s, they can approach the court of law at their own expense. The committees' composition is detailed below:

# 10.1 Composition of Grievance Redress Committee (GRC) at various levels of the project

- A. **Grievance Redress** Committee **at Local Level:** This committee/cell will work at the local level i.e. site level. This will be comprised of the following members:
  - a. Engineer from PMU
  - b. Assistant Executive Engineer (PIU)
  - c. Site Engineer (PIU)
  - d. Local Revenue officer
  - e. Social Safeguard Officer
  - f. Ward Member/Halqa Panchayat member
  - g. Women representative (Retired Officer/Academicians/Development Professional)
- B. **Grievance Redress Committee at District Level:** In case of grievance/s are not addressed at the local level or PAP/ aggrieved person is not satisfied with the decision delivered at the local level, he/she can approach to the grievance redressal committee constituted at the district level. The following will be the composition of the committee.

- a) District Collector
- b) Director/Head PIU (Convener)
- c) Nodal officer of the Project Component (PMU)
- d) Nodal Officer (Social Safeguards, PMU)
- e) Representative of PRIs
- f) A Prominent Women (Retired Officer/Academicians/Development Professional)
- g) A senior representative of SC/ST Welfare Board
- C. Division Level Redressal Committee (DLC): In case, grievance/s is not addressed at the local and district level, the same will be forwarded to the Divisional Level Redressal Committee through PMU. The committee will provide a major platform to people who might have objections concerning the decisions taken at the two previous levels. The committee will look into the grievances of the people and will assign responsibilities to implement the decisions of the committee. This Committee (after formation) will be convened by the Chief Executive Officer, ERA/JTFRP, and headed by Divisional Commissioner Jammu/Srinagar. This committee should meet every quarter to solve any grievance/s and will decide within 03 months of receiving the grievance/complaint. Nodal Officer (Social Safeguards) will coordinate the meetings. This committee will also provide policy-related directions to the Grievance Redressal Committee and the participating departments about land acquisition and resettlement and rehabilitation.

The following will be the composition of the committee:

- a. Divisional Commissioner, (Chair)
- b. Chief Executive Officer, JPFRP/JK ERA (Convener)
- c. Heads of participating departments
- d. Director Technical (PMU/JTFRP)
- e. A senior representative, one each from BC & EBC and SC & ST Welfare
- f. A senior representative of the revenue department
- g. A senior representative of the Disaster Management Department
- h. Social Safeguard Specialist (Nodal officer, PMU)
- i. A prominent women representative (Retired/ Development Professional/Academician)
- j. A PRI representative
- k. A representative of PAPs who can articulate well.

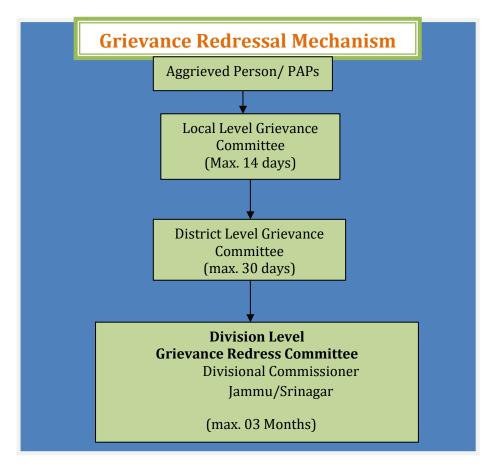


Figure 3: Structure of GRM

#### 10.2 Approach to GRC

Project Affected Person/aggrieved party can approach GRC for a redress of their grievances through **any** of the following modes:

- **1. Web-based:** The grievance corner will be provided at the website of PIU/PMU so that the affected person can register their complaint online.
- **2. Telecom-based:** If needed a toll-free number will be issued by the PMU/ PIU so that affected people can register their complaints through telephone / mobile phone to the PIU/PMU office.
- 3. Through LGC: The LGC will collect the problems & issues of the community or affected persons and pass on the same to PIU/PMU and try to resolve them. A grievance register will be maintained by the contractor/PIU at each site office. The phone number of the concerned engineer shall be displayed at the site so that the aggrieved person can contact the concerned site engineer in case of emergency.
- **4. Through PMU:** PAPs/aggrieved party can register/file grievance/s directly to the PMU also. PMU will enroute the same through PIU to the site engineer who will try to resolve it within the stipulated time and the rest process will follow.

Besides the grievance redress mechanism of JTFRP, the state has an online grievance monitoring system known as Awaz-A-Awam (People's voice). The PAPs can also lodge their grievance online at <a href="http://www.jkgrievance.nic.in">http://www.jkgrievance.nic.in</a>.

# 10.3 Legal Options to Aggrieved persons/PAPs

In case PAPs are not satisfied with the decision of GRC at the local/district level and Divisional Level committee, they are free to approach the court of law on their own will and expenses at any time to redress their grievance/s. The general public and PAPs specifically will be informed about the Grievance/s redress committee and mechanism through public consultations, disclosures, and distribution of PIBs. All PIBS will be translated into Urdu and will be distributed to the PAPs.

# 11. Institutional Arrangement

#### 11.1 Institutional Arrangement in the project

A project steering committee has been set up for the overall strategic guidance and monitoring of the project. It is headed by Chief Secretary and comprises of all involved line departments and additionally departments of planning, environment and social welfare. A Project Management Unit (PMU) for the project (JTFRP), housed in Jammu & Kashmir Economic Reconstruction Agency (JK ERA) is responsible for the overall management of the "Jhelum Tawi Flood Recovery Project (JTFRP)". This PMU is headed by Chief Executive Officer (CEO). Social Development Specialist has been positioned in PMU to provide assistance and support to Director Safeguards to address all safeguard-related issues during documentation, execution, and implementation of ARAP and monitoring (wherever ARAP is required).

The Chief Executive Officer (JKERA/JTFRP) will be responsible for overall coordination, reporting, technical assistance, monitoring, and budgeting of all the components associated with the project. The CEO will have the administrative and financial powers for the implementation of the project including the implementation of ARAP wherever required. The Chief Executive Officer (CEO) will be supported by Director Technical, Director Safeguards, Director Planning and Coordination, Director Disaster Management, Executive Engineers, AEEs, and Social Development Specialist. The PMU will be responsible for providing overall policy guidance, training, and capacity-building support to PIU (JK ERA) to ensure compliance with World Bank's Safeguard Policies and applicable Union Territories and other acts, notifications, guidelines, etc. Director Safeguards with the assistance of a Social Development Specialist in EA will ensure that all social safeguards issues are complied with as detailed out in Social Management Plan. Social issues will be coordinated by Social Development Specialist (SDS) within the PMU and PIU. PMU will be assisted by Project Management Consultants (Technical Assistance and Quality Audit Consultants) for technical support and advice, monitoring and impact evaluation, etc.

#### 11.2 Implementation Stage

The sub-project does not involve involuntary displacement, land acquisition, and livelihood loss either temporary or permanent. The Project Implementation Unit is headed by the Project Manager (Transport) in JK ERA. Overall civil work shall be carried out under his supervision and guidance. Director Safeguards with the support of the Social Development Specialist in PMU, JK ERA will ensure compliance with the WB policies and other provisions

| mplemented | l during the ex | ecution of th | ie sub-proje | ct. |  |  |
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# Annexures

# **Annexure1: Environment and Social Screening Data Sheets**

# Part A: General information

| 1. Name of the sub-<br>project                 | Improvement & Up-gradation of Malani Chakarabatti<br>Road in District Doda  |  |  |  |  |  |
|------------------------------------------------|-----------------------------------------------------------------------------|--|--|--|--|--|
| 2. Type of proposed activ                      | vity (tick the applicable option and provide details)                       |  |  |  |  |  |
| • Road                                         | $\sqrt{}$                                                                   |  |  |  |  |  |
| • Bridge                                       | -                                                                           |  |  |  |  |  |
| Fire Station                                   | -                                                                           |  |  |  |  |  |
| Hospital/Health     Facility                   | -                                                                           |  |  |  |  |  |
| Educational     Institute                      | -                                                                           |  |  |  |  |  |
| • Building for Livelihoods                     | -                                                                           |  |  |  |  |  |
| • Flood Infrastructure Related                 |                                                                             |  |  |  |  |  |
| Other Public     Building                      |                                                                             |  |  |  |  |  |
| <ul> <li>Any Other (Please Specify)</li> </ul> | -                                                                           |  |  |  |  |  |
| 3. Location of the propos                      | ed sub-project                                                              |  |  |  |  |  |
| Name of the Region                             | Jammu (J&K State)                                                           |  |  |  |  |  |
| Name of the District                           | Doda                                                                        |  |  |  |  |  |
| Name of the Block                              | Bhaderwah                                                                   |  |  |  |  |  |
| • Name of the Settlement                       | Malaini, Berraru Jahnana, Dranga, Pendku, Ghambeer<br>Muglian, Mehrada      |  |  |  |  |  |
| • Latitude                                     | 33° 5'31.95"N (start of the project) and 33° 5'56.10"N (End of the Project) |  |  |  |  |  |
| • Longitude                                    | 75°35'16.95"E (Start of the project) and 75°36'4.38"E (End of the Project)  |  |  |  |  |  |

| 4a. Proposed Nature of W                                                                                | ork (tick the applicable options)           |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Minor Repairs                                                                                           | -                                           |
| Major     Repairs/Rehabilitatio                                                                         | -                                           |
| <ul> <li>Upgrading/Major<br/>Improvement</li> </ul>                                                     | $\checkmark$                                |
| • Expansion of the facility                                                                             | -                                           |
| New Construction                                                                                        | -                                           |
| Any Other                                                                                               | -                                           |
| 4b. Size of the sub-<br>project<br>(approx. area in sq. mt/hac<br>or length in mtr./km, as<br>relevant) | 10.012 Km                                   |
| 5. Land Requirement (in                                                                                 | hac./sq.mt.)                                |
| Total Requirement                                                                                       | Nil                                         |
| Private Land                                                                                            | Nil                                         |
| • Govt. Land                                                                                            | Nil                                         |
| Forest Land                                                                                             | Nil                                         |
| 6. Implementing Agency                                                                                  | Details (sub-project level)                 |
| • Name of the Department/Agency                                                                         | PIU-ERA (Jammu)                             |
| Name of the contact person                                                                              | Mr. Nand Kishore Gupta                      |
| • Designation                                                                                           | Project Manager (Transport)                 |
| Contact Number                                                                                          | 9419193872                                  |
| • E-mail Id                                                                                             | pmtransportera@gmail.com                    |
| 7. Screening Exercise De                                                                                | tails                                       |
| Date on which it was carried out                                                                        | 15 <sup>th</sup> July, 2019, 2 July, 2019   |
| Name of the Person                                                                                      | Vikash Sharma/ CharanJeet Singh             |
| Contact Number                                                                                          | 9419125803/9419893391                       |
| • E-mail Id                                                                                             | jkerasocial@gmail.com jcharan.sim@gmail.com |

Part B (1): Environment Screening

| Question                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes | No       | Details                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------|---------------------------------------------------------------|
| 1. Is the sub-project located in when the sub-project located in whether the sub-project located in which is a sub-project located in which is |     | art witl | nin 1 km of the following                                     |
| a. Biosphere Reserve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     | No       | -                                                             |
| b. National Park                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |     | No       | -                                                             |
| c. Wildlife/Bird Sanctuary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     | No       | -                                                             |
| d. Wildlife/Bird Reserve                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     | No       | -                                                             |
| e. Important Bird Areas (IBAs)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |     | No       | -                                                             |
| f. Habitat of migratory birds (outside protected areas)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     | No       | -                                                             |
| g. Breeding/Foraging/Migrator<br>y route of Wild Animals<br>(outside protected areas)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |     | No       | -                                                             |
| h. Area with threatened/rare/<br>endangered fauna (outside<br>protected areas)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |     | No       | -                                                             |
| i. Area with threatened/rare/<br>endangered flora (outside<br>protected areas)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |     | No       |                                                               |
| j. Reserved/Protected Forest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     | No       | -                                                             |
| k. Other category of Forest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     | No       | -                                                             |
| l. Wetland                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     | No       |                                                               |
| m. Natural Lakes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |     | No       |                                                               |
| n. Rivers/Streams                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Yes |          | River Chenab is within 1 km from the proposed road at Malaini |
| Question                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes | No       | Details                                                       |
| o. Swamps/Mudflats                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |     | No       | -                                                             |
| p. Zoological Park                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |     | No       | -                                                             |

| q.       | Botanical Garden                                                                                                                                     |   | No    |                                  |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------|----------------------------------|
| 2.       | Is the sub-project located in following sensitive features?                                                                                          |   | or pa | rt within 500 mts. of any of the |
| a.       | World Heritage Sites                                                                                                                                 |   | No    | -                                |
| b.       | Archaeological monuments/<br>sites (under ASI's<br>central/state list)                                                                               |   | No    | -                                |
| c.       | Historic Places/Monuments/<br>Buildings/Other Assets (not<br>listed under ASI list but<br>considered locally important<br>carry a sentimental value) |   | No    |                                  |
| d.<br>or | Religious Places (regionally locally important)                                                                                                      |   | No    | -                                |
| e.       | Reservoirs/Dams                                                                                                                                      |   | No    | -                                |
| f.       | Canals                                                                                                                                               |   | No    | -                                |
| g.       | Public Water Supply Areas<br>from Rivers/Surface<br>Water Bodies/<br>Ground Water Sources                                                            |   | No    |                                  |
| 3.       | What is the High Flood Level in the sub-project area?                                                                                                | - |       |                                  |
| 4.       | Is any scheduled/protected tree like Chinar, Mulberry or Deodar likely to be affected/cut due to the project?                                        |   | No    |                                  |
| 5.       | Is the sub-project located in a landslide/heavy erosion prone area or affected by such a problem?                                                    |   | No    |                                  |
| 6.       | Is sub-project located in an area that faces water paucity or water quality issues?                                                                  |   | No    |                                  |

Part B (2): Result/Outcome of Environmental Screening Exercise

| 1. | Environment Impact Assessment<br>Required             | No                                                                                                                                                                                                                          |
|----|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2. | Environment Clearance Required                        | No                                                                                                                                                                                                                          |
| 3. | Forest land Clearance/Diversion<br>Required           | No                                                                                                                                                                                                                          |
| 4. | Tree Cutting Permission Required                      | No                                                                                                                                                                                                                          |
| 5. | ASI (Centre/State) Permission<br>Required             | No                                                                                                                                                                                                                          |
| 6. | Permission from ULB/Local<br>Body/Department Required | No                                                                                                                                                                                                                          |
| 7. | Any other clearance/permission required               | Consent to Establish (CTE) and Consent to Operate (CTO) from SPCB will be required to be taken by the Contractor for Hot mix Plants, Wet Mix Plants, Stone Crushers, PUC's and other fitness certificates of equipment etc. |

# Part C (1): Social Screening

| 1. Does the sub-project activity require acquisition of land? |  |                           |                  |                   |  |
|---------------------------------------------------------------|--|---------------------------|------------------|-------------------|--|
| Yes                                                           |  |                           | No               | $\sqrt{}$         |  |
| Give the following details:                                   |  | Private Land (sqmts/hac.) |                  | Nil               |  |
|                                                               |  | Govt. Land (sqm           | Nil              |                   |  |
|                                                               |  | Forest Land (sq           | Nil              |                   |  |
| 2. Does the propose existing structure                        |  | b-project activit         | y result in demo | lition/removal of |  |
| Yes                                                           |  |                           | No               | √                 |  |
| If so, give the following details:                            |  |                           |                  |                   |  |
| Number of public<br>structures/buildings                      |  |                           | Nil              |                   |  |

| Number of resources religious/cultuwater/wells/et                         | (such as ral/ drinking                                                          | Nil                                |                      |  |  |
|---------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------------------|----------------------|--|--|
| Number of (located on pri                                                 | private structures<br>vate or public land)                                      | Nil                                |                      |  |  |
| 3. Does the propo                                                         | sed project activity                                                            | result in loss of crop             | s/trees?             |  |  |
| Yes                                                                       |                                                                                 | No                                 | $\checkmark$         |  |  |
| 4. Does the prop employment?                                              | osed Project activi                                                             | ty result in loss of               | direct livelihood/   |  |  |
| Yes                                                                       |                                                                                 | No                                 | $\sqrt{}$            |  |  |
|                                                                           | ed activity result in los/<br>s/local population are                            | ess of community forest dependent? | st/pastures on which |  |  |
| Yes                                                                       |                                                                                 | No                                 |                      |  |  |
| If yes, give the details of the extent of area to be lost (in acres/hac). |                                                                                 |                                    |                      |  |  |
| 6. Does the propos                                                        | 6. Does the proposed Project activity affect scheduled tribe/caste communities? |                                    |                      |  |  |
|                                                                           |                                                                                 |                                    | _                    |  |  |

# Part C (2): Result/Outcome of Social Screening Exercise

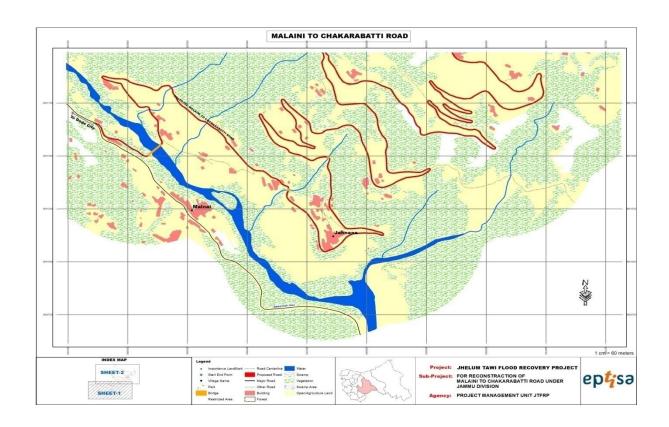
| S.No. | Result/Outcome                                                                                                                                              | Outcome                           |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 1.    | Answer to all the questions is 'No' and only forest land is being acquired                                                                                  | No SIA/RAP<br>required            |
| 2.    | Answer to any question is 'Yes' and the sub-project does not affect more than 200 people (i.e. either complete or partial loss of assets and/or livelihood) | No Abbreviated<br>RAP is required |
| 3.    | Answer to any question is 'Yes' and the sub-project affects more than 200 people (i.e. either complete or partial loss of assets and/or livelihood)         | No SIA/RAP<br>Required            |

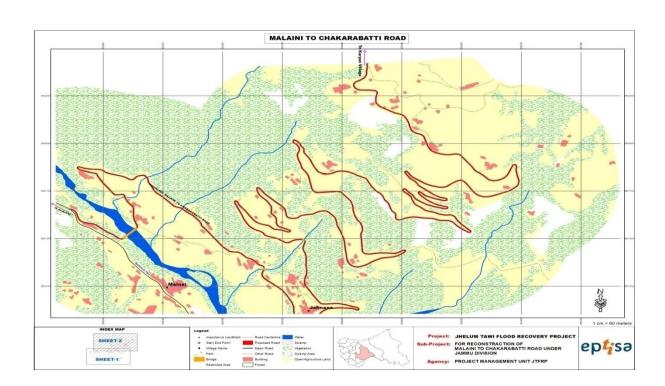
# **Outcome of Screening:**

As per the screening exercise, the proposed sub project does not have adverse social impacts. The proposed sub-project is only the strengthening of the existing road and does not involve acquisition of private land. Therefore, no issue of involuntary resettlement, displacement and livelihood loss (temporary or permanent) will be triggered by the proposed sub project. The sub-project also does not involve diversion of forest land, destruction of ecological resources and does not have major Environmental threat/risks.

However, ESMP will be prepared and implemented for addressing the social and environmental issues during the construction period.

# Annexure 2: GIS MAPs of the Sub-Project Road





# Annexure 3: Encumbrance free RoW issued by PIU.



# Office of the Project Manager (Transport) J&K Economic Reconstruction Agency 2nd Floor, JKPCC Building, Rail Head Complex



# To Whom It May Concern

Subject: Non-encumbrance certificate.

Certified that the below mentioned sub-projects are being upgraded in the existing available Right of Way under World Bank funding for already existing established roads taken out from PW(R&B) Department. Further, no acquisition of land is required under the sub-projects:

| S.N<br>o. | Name of the road/Sub-<br>project          | Length         | ROW information | Remarks                                                                                                                                                                                                                |
|-----------|-------------------------------------------|----------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1         | Sidhra-Surinsar<br>road (Lot-1)           | 18.290<br>Kms. | 15 m _          | It stands notified vide prevention of Ribbon development Act 2007, SRO 106 of 1969                                                                                                                                     |
| 2         | Chirala Link<br>Road                      | 10.139<br>kms  | 10 m            | Handing over note of Executive Engineer (PWD(R&B) Division Bhaderwah (Enclosed)                                                                                                                                        |
| 3         | Malaini to<br>Chakrabatti road            | 10.06<br>Kms   | 10m             | -Do -                                                                                                                                                                                                                  |
| 4         | Deva Mai to Ohli<br>Mandir Road           | 4.9<br>kms     | 6.0m            | As per records 2.472 ha of land has been acquired from forest depptt. for 4 kms of road length (copy enclosed)                                                                                                         |
| 5         | Anji Panasa<br>Road                       | 4.25<br>kms    | 6.0 m           | Information provided by then SE/Nodal Officer vide email dated: 01-05-2019 (enclosed)                                                                                                                                  |
| 6         | Tutan Di Khuei<br>to Khada<br>Madana Road | 11.0<br>Kms    | 6.0 m           | -Do -                                                                                                                                                                                                                  |
| 7         | Gulati to<br>Shahdra Sharief<br>road      | 27.280<br>kms  | 6.5 m           | Information provided by then SE/Nodal Officer vide email dated: 01-05-2019 (enclosed). However as per the revenue record provided by the Land Collector ERA, Jammu, the ROW is 10 mtrs from Shahadra to Gambhir Muglan |

Hence the RoW is encumbrance free.

No: PW/T/ERM/2021/865 Date: 16.03.2021

Project Manager (Transport)

# Annexure 4: RoW certificate issued by PWD (R&B) Division Bhaderwah

# RoW certificate details issued by PWD Bhaderwah Division

# STATUS OF ROAD PROPOSED FOR UP-GRADATION UNDER JTFRP (WORLD BANK FUNDED) FALLING UNDER JURISDUCTION OF PWD (R&B) BC ROAD

|       |                                     | 在1000mm 1000mm 10000mm 1000mm 1000mm 1000mm 1000mm 1000mm 10000mm 10000mm 10000mm 10000mm 1000mm 10000mm 10000mm 10000mm 10000mm 10000mm 10000mm 100 | DIVISION BHADE         | KWAN CIVUING                                  | 11/2016                                                                                                                                           |                         |                               |
|-------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------------|
| S.No. | Name of Scheme                      | Whether it is Fair-weather /<br>Single Lane / Intermediate /<br>Double Lane road                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ROW of road (in Mtrs.) | Traffic Volume<br>(Light / Heavy<br>Vehiches) | Inventory of X-drianage structures                                                                                                                | Length of road (in Kms) | Remarks                       |
| 1     | Sule Gwari to Chiralla<br>link road | Single Lane                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 10.00                  | 200                                           | HP 900mm dia Culvert = 32 Nos.  RCC Culvert 1.5 mtr. = 1 No.  Sucpper = 1 No.  (Detail of location enclosed as Annexure "A")                      | 9.40                    | BT = 9.40 Kms                 |
| 2     | Malnai to Chakrabati<br>link road   | Single Lane                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 10.00                  | 50                                            | HP 900mm dia Culvert = 10 Nos.<br>RCC Culvert 3 mtr. = 8 No.<br>Steel Motorable Bridge = 54 mtr. Span<br>(Detail of location enclosed as Annexure | 10.25                   | BT = 0.30 Kms<br>MT = 9.95 Km |

No.:- 4673-13 Dated:- 17-12-2018

Executive Engineer
PWD (R&B) BC Road Division
Bhaderwah

#### Submitted to the:-

- 1. Superintending Engineer PWD (R&B) Circle Doda for favour of information please.
- 2. Er. Ajay Kapahi Co-ordinating Officer PMU JTFRP Jammu for information. This is in reference to his request dated:- 13-11-2018.
- 3. Assistant Executive Engineer PWD (R&B) HQ Sub-Division Bhaderwah for information.



# STATETIMES • Monday • September 20, 2021

#### Government of Jammu & Kashmir J&K Economic Reconstruction Agency (ERA) Project Management Unit (JTFRP) (World Bank Funded)

2nd floor ERA Complex, Rambagh, Srinagar 2nd Floor JKPCC Building, Panama Chowk. Rail Head Complex, Jammu

Subject: Up-gradation of Roads in Jammu Division of UT of Jammu & Kashmir under JTFRP

Public Notice

129

This is for the information of public in general and those likely to be benefitted/affected in particular that the following road sub-projects have been taken up for their up-gradation within the existing width-of-road/right-of-way under the World Bank funded Jhelum & Tawi Flood Recovery Project by Jammu and Kashmir Edonomic Reconstruction Agency in Jammu Division of the UT of Jammu & Kashmir.

| S no | Name of the Road                       | District        | Length of the                      | Major settlements along the Road                                      |
|------|----------------------------------------|-----------------|------------------------------------|-----------------------------------------------------------------------|
| lin. | Sidhra- Suinsar Road.                  | Jammu           | 18.290 kms                         | Baljata, Pargalta, Chilah, Chak Chilah<br>Althem, Tutian Di Khui      |
| 2    | Tutan Di Khuie to<br>Khada-Madana Road | Jammu/<br>Samba |                                    | Kanna, Chadgaal, Saandi, Degair                                       |
| 3    | Ghulati to Shadra Shreif<br>Road.      | Rajouri         | 0 to 10 Kms and<br>15 to 32 28 Kms | Dehri Ralyot, Ghambeer Muglian,<br>Bharot, Rajdhani, Shahdara Sharief |
| 4    | Malani to Chakrabatti<br>Road.         | Doda            |                                    | Malaini, Jahnana, Dranga, Pendku,<br>Ghambeer Muglian, Mehrada        |
| 5    | Chiralla Link Road.                    | Doda.           | 10.139 kms                         | Chiralla, Gosti, Rukali via Ponchai,<br>Bhella, Bhalara               |

Objections if any, so far as right of way is concerned duly supported by authentic documentary evince, shall be received in the office of the undersigned either through email or by post on the address given low within 07 days from the date of publication of this notice in the newspaper.

DIP/J-3029-P/21 Dated: 19-09-2021

Director Safeguards, J&K ERA 2nd Floor, ERA Complex, Rambagh Srinagar; Pin: 190009 Email: directorsgikera@gmail.com



रविवार, 19 सितंबर 2021



#### Government of Jammu & Kashmir J&K Economic Reconstruction Agency (ERA) Project Management Unit (JTFRP) (World Bank Funded)

2nd Floor, ERA Complex, Rambagh, Srinagar 2nd Floor, JKPCC Building, Panama Chowk, Rail Head Complex, Jammu Subject: Up-gradation of Roads in Jammu Division of UT of Jammu & Kashmir under JTERP.

# PUBLIC NOTICE

This is for the information of public in general and those likely to be benefitted/affected in particular that the following road sub-projects have been taken up for their up-gradation within the existing width-of-road/right-of-way under the World Bank funded Jhelum & Tawi Flood Recovery Project by Jammu and Kashmir Economic Reconstruction Agency in Jammu Division of the UT of Jammu & Kashmir.

| S.<br>No. | Name of the Road                       | District | Length of the Road                 | Major settlement along the Road Bajalta, Pargalta, Chilah, Chak Chilah, Aithem, Tutian Di Khui |  |
|-----------|----------------------------------------|----------|------------------------------------|------------------------------------------------------------------------------------------------|--|
| 1         | Sidhra-Suinsar Road,                   | Jammu    | 18.290 kms                         |                                                                                                |  |
|           | Tutan Di Khule to<br>Khada-Madana Road |          | 11.00 kms                          | Kanna, Chadgaal, Saandi, Degair                                                                |  |
| 3         | Ghuláti to Shadra<br>Shreif Road       | Rajouri  | 0 to 10 Kms and<br>15 to 32,28 Kms | Dehri , Ralyot, Ghambeer Muglian,<br>Bharot, Rajdhani, Shahdara Sharief                        |  |
| 4.        | Malani to Chakrabatti<br>Road          | Doda     | 10.059 Kms                         | Malaini, Jahnana, Dranga, Pendku,<br>Ghambeer Muglian, Mehrada                                 |  |
| 5         | Chiralla Link Road                     | Doda     |                                    | Chiralla, Gosti, Rukali via Ponchai,<br>Bhella, Bhalara                                        |  |

Objections if any, so far as right of way is concerned duly supported by authentic documentary evidence, shall be received in the office of the undersigned either through email or by post on the address given below within 07 days from the date of publication of this notice in the newspaper.

DIP/J-3029-P/21 Dtd: 18-09-2021

Director Safeguards, J&K ERA 2nd Floor, ERA Complex, Rambagh Srinagar; Pin : 190009 Email : directorsgikera@gmail.com

ERA

# Government of Jammu and Kashmir J&K Economic Reconstruction Agency

Jhelum Tawi Flood Recovery Project 2<sup>nd</sup> floor ERA Complex, Rambagh, Srinagar 2<sup>nd</sup> Floor JKPCC Building Railhead Complex Jammu



Subject: Encumbrance-free sites for up-gradation of roads under JTFRP (Jammu Division).

Whereas J&K ERA (J) as PIU for the road sub-projects in Jammu Division certified the Right of Way for all the 07 roads being encumbrance-free vide PM/T/ERA/2021/865 dated 16.03.2021 and ERA/PM/T/2021/2197 dated31/07/2021. The revenue records of 02 roads viz., 1. Construction of Anji Panasa Road, 2. Deva Mai Ohli Mandir Road (Reasi) were available and as such their documentation viz a viz environment and social aspects was cleared by the World Bank

However the RoW provided by the PIU (J), in absence of relevant land records could not be verified for 05 roads viz.,

 Sidhra- Surinsar Road, 2. Tutain Di khuie to khada Madana Road, 3. Ghulati to Shahdra Shareif Road, 4. Malani to Chakrabatti Road and 5. Chiralla Link Road.

The matter was discussed and deliberated upon in-house and with the team of the World Bank in different meetings for resolution. It was resolved that PMU would notify the issue in the local newspapers and invite objections from people likely to be benefitted or affected for their livelihood & assets due to execution of these sub-projects under JTFRP. Accordingly, notification for inviting objections was issued in two daily newspapers on 19<sup>th</sup> September 2021 and 20<sup>th</sup> September 2021 in State Times (English) and Amar Ujala (Hindi), respectively, (for 05 roads mentioned above), detailing the road's name, its scope, and the villages/habitations likely to be affected/benefitted.

The objections were supposed to be received in the office of Director Safeguards (Kashmir) within seven days after publication of the notification by Post or through Email. Despite lapse of more than a month no objection has been received in the office of Director Safeguards either through email or post.

Therefore, RoW within which the roads are being up-graded/constructed is deemed to be

Director Safeguards, JK ERA/JTFRP

MO: - ERA/DSG/PS/88-93 Ott: 25.10.2021

Copy to:-

1. Chief Executive Officer, J&K ERA for kind information

2. Director Jammu, J&K ERA for information

3. Project Manager (T), J&K ERA Jammu for information

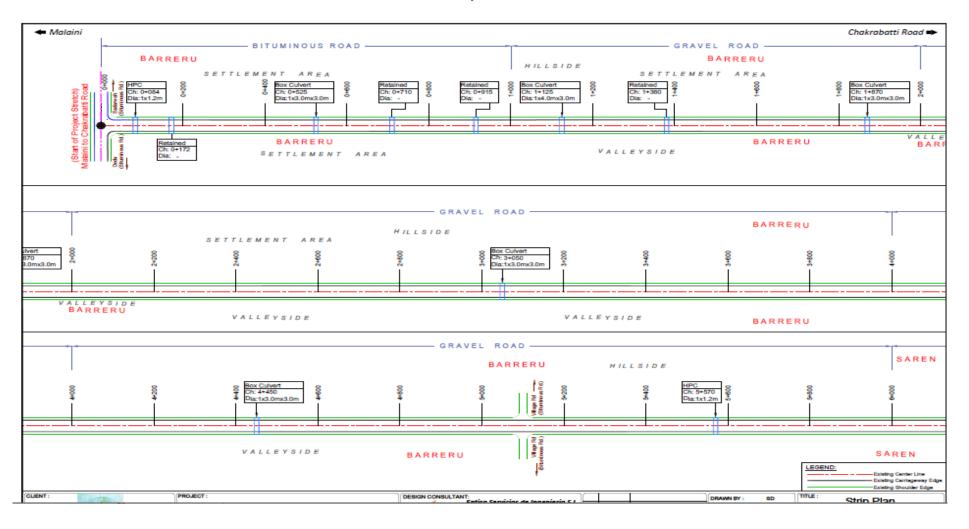
4. Environmental Expert, J&K ERA for information

5. Social Expert, J&K ERA for information

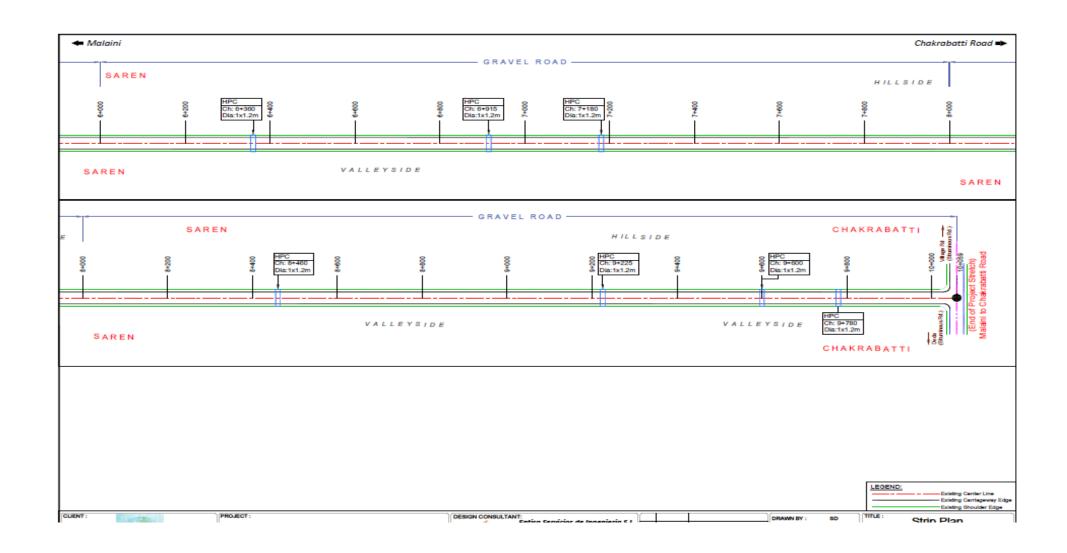
6. Team Leader, TAQAC for information

# **Annexure 7: Strip Plan Profile**

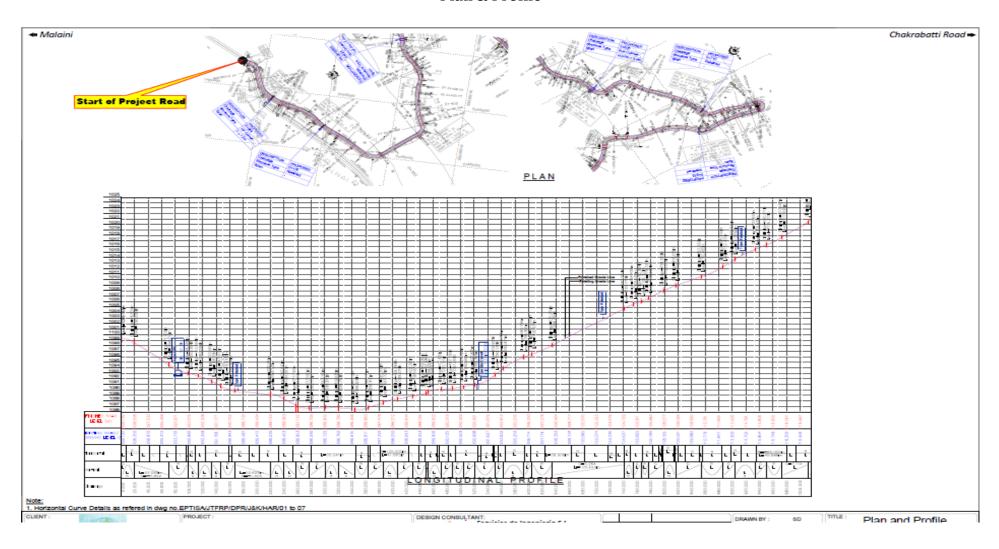
# **Strip Plan**

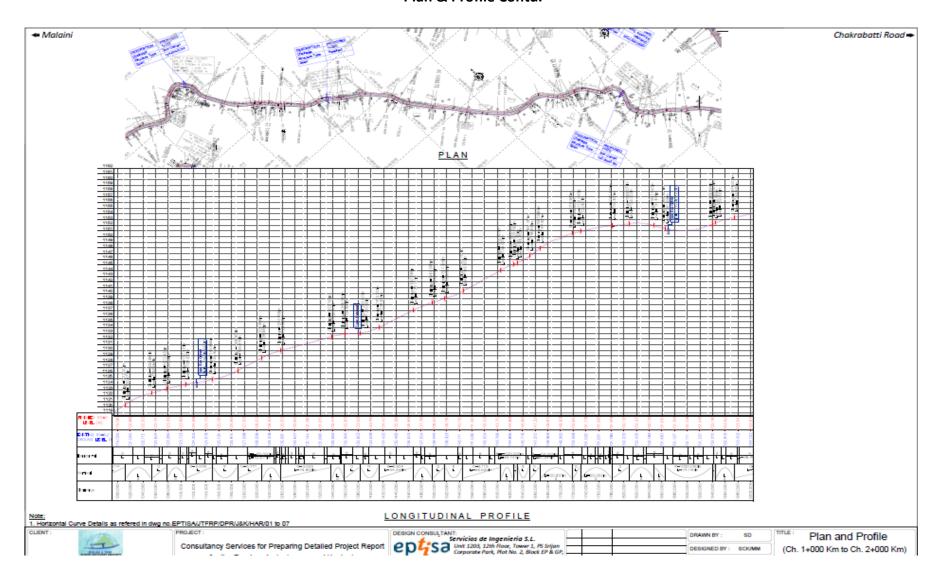


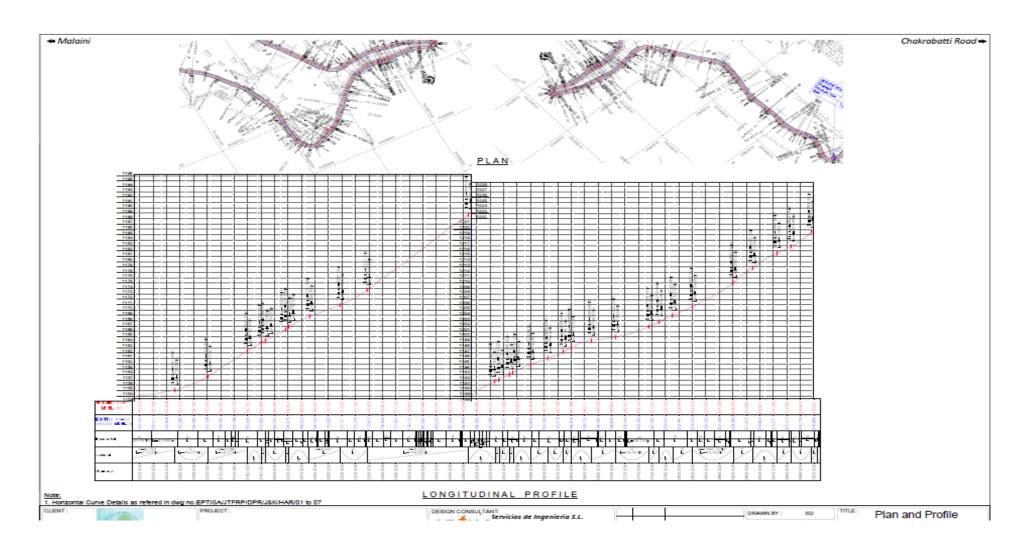
# Strip Plan Contd.

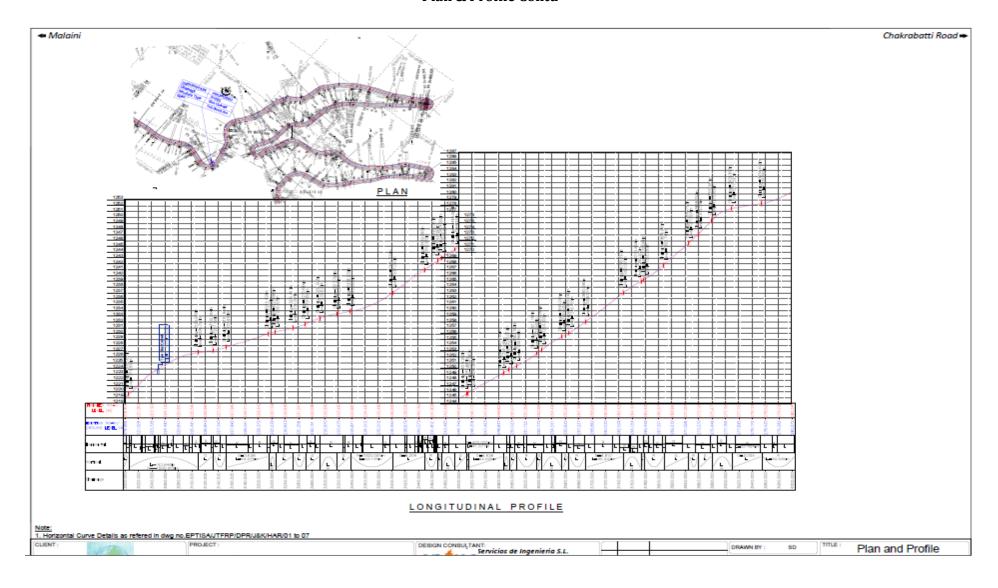


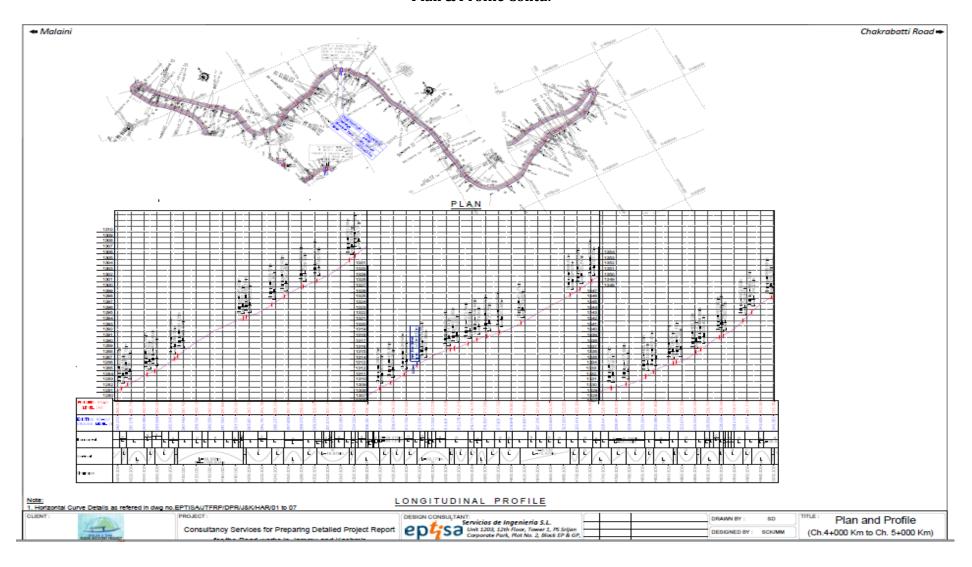
# Plan & Profile



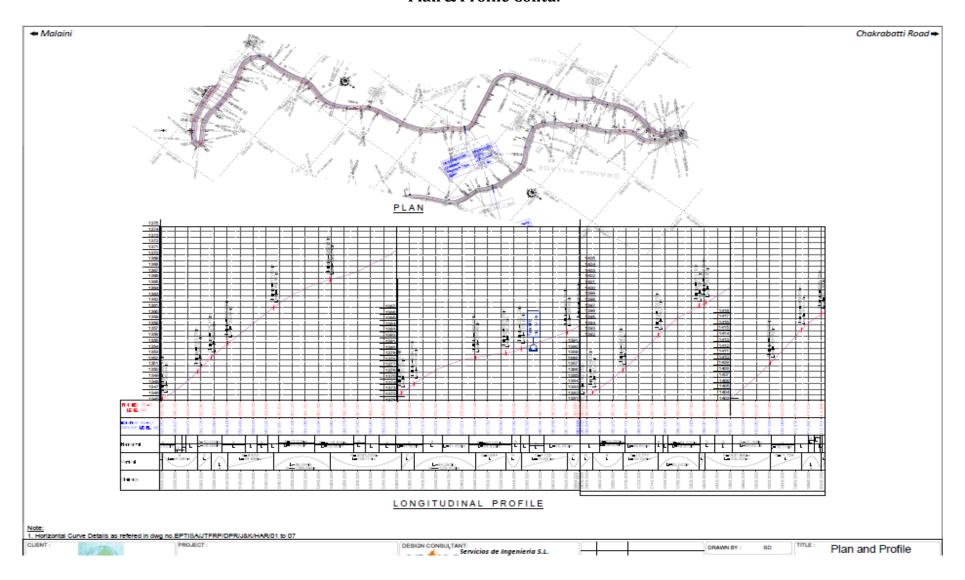


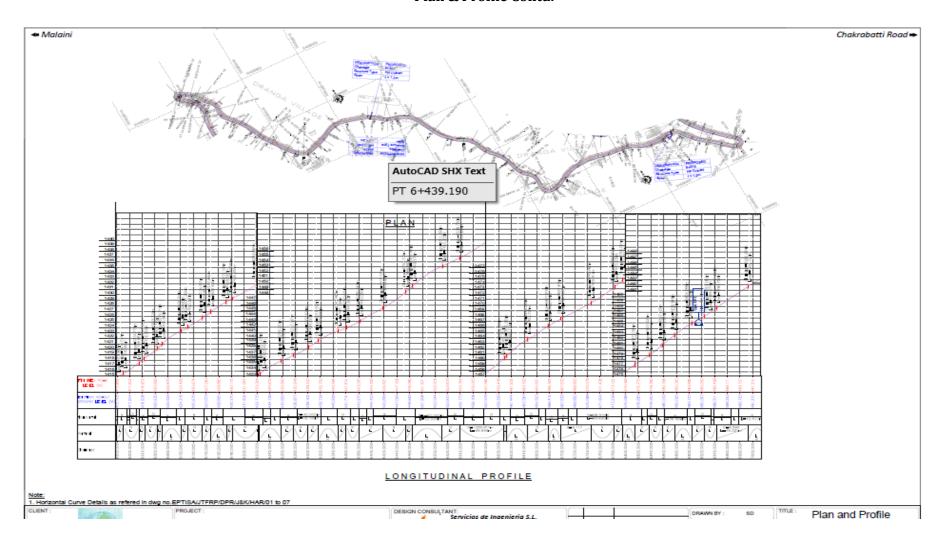


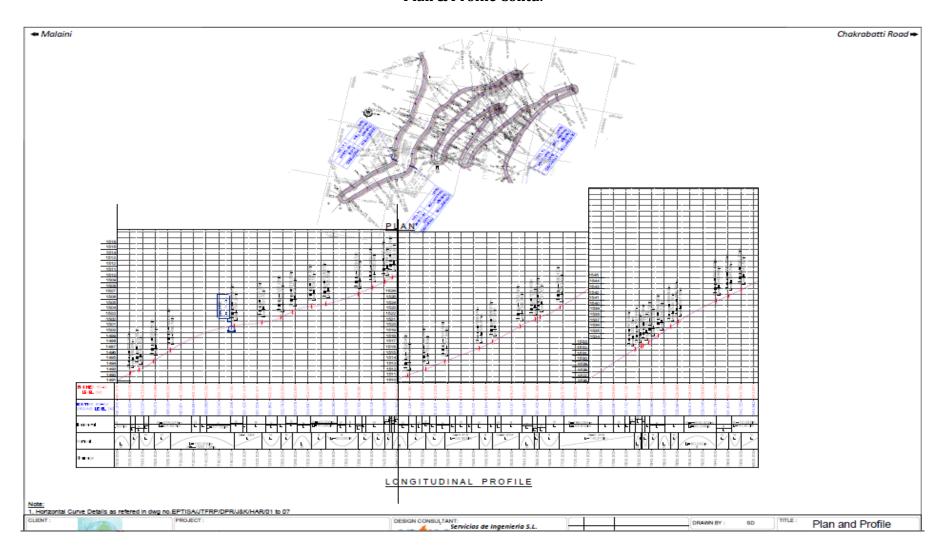


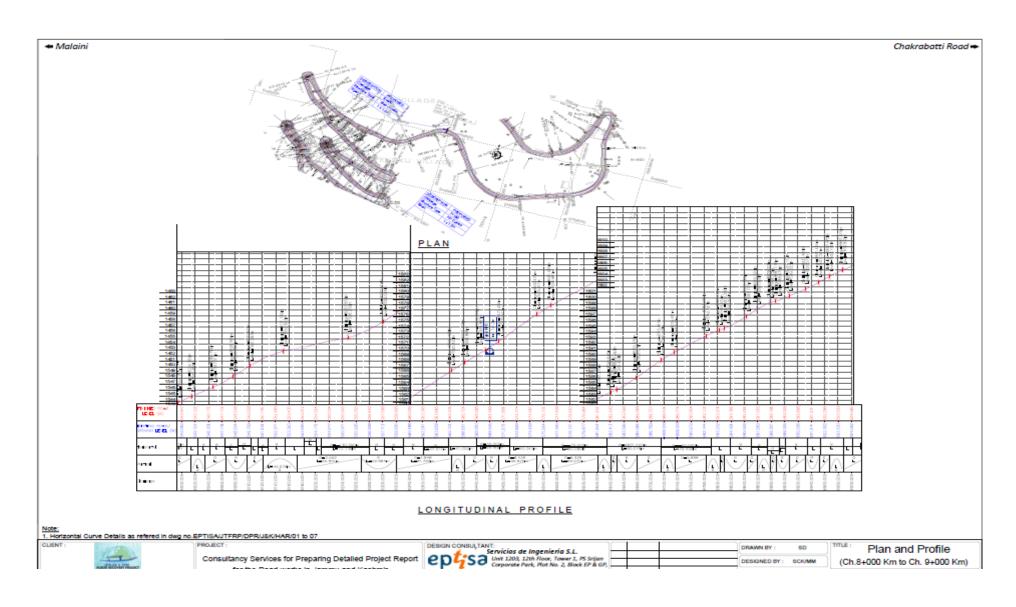


Plan & Profile Contd.

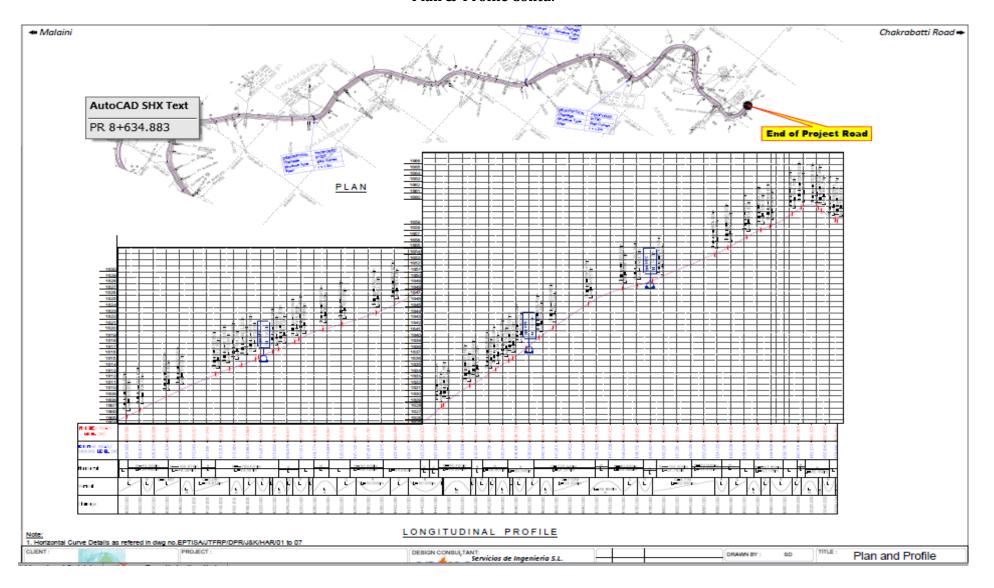








Plan & Profile Contd.



# **Annexure 8: Photographs of the Road**



Start of project road at Ch 0.000 Km (Malaini village)



Survey team of project visiting the site



Neeru Nallah under Chenab Division along the project road



An iron bridge over Neeru Nalla at Ch 0.050 Km



A mosque at Ch 0.100 Km RHS

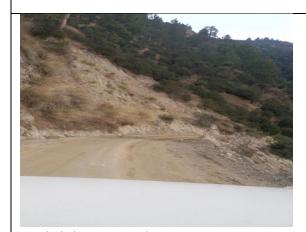
Road Condition at Ch 0.0150 Km



Land slide area at Ch 0.150 Km



Poor Road condition at 0.200 Km



Land Slide area at Ch 1.100 Km



Sub Cente at Berraru Ch 1.800 Km LHS



Land Slide area at Ch 2.400 Km LHS



Sharp turning and poor gradient at Ch 5.100 Km



Sharp turning and poor gradient at Ch 6.100 Km



Road condition at Ch 8.500 Km



Road condition at Ch10.000 Km



End Point Chainage-10.3km

# **Annexure 9: Public Consultation (15.7.2019)**

|           | 15/9/2019         |             | Name       | of Village |  |
|-----------|-------------------|-------------|------------|------------|--|
| Name      |                   | Chatraborh' |            |            |  |
| Sr.<br>No | Name of person    | Contact No  | Signature  | Remark     |  |
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# **Public Consultation (03.7.2019)**

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| 8. Smax Snigh Farmer                                  | ')        |
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# Photographs of Public Meeting (15.7.2019)





Photgraphs Public Meeting(3.7.2019)





Public Consultation at Barrare Village