

Social Impact Assessment Report

October: 2021

Project ID: P154990

Sub-Project: Improvement & Up-gradation of “Sidhra to Surnisar” Road (District Jammu)

**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 pre-project 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 "Sidhra to Surnisar Road" in district Jammu. The proposed subproject has a total length of 18.290 km and traverses through Sidhra, Bajalta, Pargalta, and Aitham villages.

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, size of the project and location of the project with a sensitive area criteria. The summary of screening exercise does not envisage any adverse impact due to sub-project activities.

In order to disseminate project information public consultation has been conducted with Gram Sabha, local people, PIU and PMU officers. Public consultation was conducted with people of Sidhra, Aithem, and Pargalta villages on 10.7.2019 and 20.12.2020. Information about the sub-project was shared with the Head of Gram Sabha along with other people during consultations.

Project Manager (Transport, Jammu Division) vide letter no PIU/T/ERA/2021/865 dated 16.03.2021 issued a non-encumbrance certificate which confirmed that no additional land acquisition is required for the proposed work and available RoW is 50 feet i.e., 25 feet on either side from the centre of the road. The site visits by Consultants, Social Safeguards expert, PMU during preparation of SIA report also confirms the same that PIU does not require additional land for the proposed sub-project.

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 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.

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 above 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 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 Objective¹

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:

- I. Reconstruction and strengthening of critical infrastructure
- II. Reconstruction of roads and bridges
- III. Restoration of urban flood management infrastructure
- IV. Strengthening and restoration of livelihoods
- V. Strengthening disaster risk management capacity
- VI. Contingent Emergency Response
- VII. 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. Project Road starts from Jammu – Srinagar National Highway (NH-44) and is proposed to be upgraded upto km 19th of Sidra Surinsar Road. The road is connected with Mansar village at Dhar Road. This road has importance from pilgrim, tourist as well as traffic point of view. Initially, 7 m carriage way available upto 4.763 Km and thereafter it is an intermediate lane (5.5m carriage way) road upto 18.763 Km (Wild life Sanctuary Gate). The road condition is good in most of the stretches. Protection work required at some particular land slide zone to protect slope with inclusion of CC drain.

¹ Source: JTFRP- Environmental & Social Management Framework (ESMF), 2015.

1.5 Sub-Project Description

The Project Road starts from Jammu – Srinagar National Highway (NH-44) and ends at KM 18.290. This road has importance from pilgrimage, tourism as well as traffic point of view. The existing length of the road is 18.537 km from Sidhra to Surinsar and the proposed designed length is Up to Km 18+450. This sub-project falls in the Jammu District of Jammu division. The road is passing through settlement areas at Baljata, Chilah, Chak Chilah, Badgah, Aitham Villages, and agricultural fields are sparsely spread in many locations.

In general, the proposed cross-section comprises of 7.00 m wide carriageway with both side 1.0 m wide usable hard shoulder propose from Ch 0.0 Km to Ch 4.763 Km. The camber on either side of the carriageway and hard shoulder is 2.5 % & on the earthen shoulder is 3.0% respectively. In addition to that, from Ch 4.763 Km to Ch 18.290 Km proposed cross-section comprises of 5.5 m wide carriageway with both side 1.0 m wide usable hard shoulder. The camber on either side of the carriageway and hard shoulder is 2.5 % & on the earthen shoulder is 3.0% respectively as flexible pavement considered for this section. As per traffic intensity, no need to upgrade lane configuration from Ch 4.763 Km to Ch 18.290 Km. Only Strengthening is require at Section I (from Km 0.0 to Km 4.763) and Section II (from Km 4.763 to Km 18.290).

1.6 Benefits of the Sub-Project

The Sidhra Surnisar Road give connectivity to Surnisar & Mansar lake which have high pilgrim importance. The lake supports CITES and IUCN Redlisted *Lissemys punctata*, *Aspideretes gangeticus*, and *Mansariella lacustric*. This composite lake is high in micro nutrients for which it is an attractive habitat, breeding and nursery ground for migratory waterfowls like *Fulica atra*, *Gallinula chloropus*, *Podiceps nigricollis*, *Aythya fuligula*, and various Anar species. The site is socially and culturally very important with many temples around owing to its mythical origin from the Mahabharata period. Mansar lake also a holy site, sharing the legend and sanctity of Lake Manasarovar. There is a wild life Sanctuary housing jungle life like Spotted Deer, Neelgai etc. besides other water birds such as Cranes, Ducks etc. 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 negative impacts of projects, such as dams, roads, power projects, mining, and other development projects. 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.

1.8 Need for SIA in Sidhra to Surnisar 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. However, Sidhra to Surnisar sub-project (upto 18.290 kms) road will be improved and upgraded only on available RoW which is 50 feet from the centre of the road i.e., 25 feet on either side from the centre line (annexure 3). No additional land is required for improvement and up-gradation of the road has also been confirmed by the Project Manager (Transport, Jammu Division) (annexure 4). Though the sub-project does not require private land acquisition, 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.

1.9 Objective and Scope of Social Impact Assessment

The objective of SIA is as follows:

1. to assess whether the proposed sub-project required land or not;
2. to assess whether the proposed sub-project require acquisition of structures or other assets;
3. To gather baseline data for assessment of impacts (both direct and indirect) on the communities of the project area;
4. To suggest appropriate mitigation measures to effectively manage potential adverse impacts;
5. To do the socio-economic profiling of the project;
6. To involve the stakeholders especially the people of the project impact area in the project activities.

1.10 The methodology adopted for the SIA

1. Defining the Impact area

The first step was to define the Area of Impact. For defining the project area (both directly and indirectly), a map which shows the project area has been prepared. In addition, field were undertaken on 10.7.2019 and 20.12.2020 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 has been reviewed and used for assessment purposes. This has provided disaggregated data according to caste, religion, sex and other administrative categories, such as persons below poverty line.

3. Public Consultations

Project related information has been shared with all the concerned stakeholders on 10.7.2019 and 20.12.2020. 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 Gram Sabha, people residing along the sub-project road along with PIU/PMU were involved in the consultation and identified as major stakeholders. 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 begins with screening. Screening is undertaken in the very beginning stages of project development. The purpose of screening is 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 helps in determining the scope of detailed SIA that would be subsequently carried out. The screening for the sub-project has been carried out and it does not envisage any significant impact as the proposed road will be upgraded in the available RoW and there is no structure 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 involved visit to the project site, and consultation with all stakeholders. It is important to confirm their understanding of key issues. The scope of the present study is to assess and identify land requirements, evaluate the temporary and permanent impacts, engaging different stakeholders in the project activities and to develop a sound social management plan on the basis of the study.

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.

1.11 Structure of SIA Report

To present the findings of the SIA study, the information has been presented in 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 than 70% 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.

2.2 Sub-Project Description

The Project Road starts from Jammu – Srinagar National Highway (NH-44) and ends at KM 18.290. This road has importance from pilgrimage, tourism as well as traffic point of view. The existing length of the road is 18.537 km from Sidhra to Surinsar and the proposed designed length is Up to Km 18+450. This sub-project falls in the Jammu District of Jammu division. The road is passing through settlement areas at Baljata, Chilah, Chak Chilah, Badgah, Aitham Villages, and agricultural fields are sparsely spread in many locations.

In general, the proposed cross-section comprises of 7.00 m wide carriageway with both side 1.0 m wide usable hard shoulder propose from Ch 0.0 Km to Ch 4.763 Km. The camber on either side of the carriageway and hard shoulder is 2.5 % & on the earthen shoulder is 3.0% respectively. In addition to that, from Ch 4.763 Km to Ch 18.290 Km proposed cross-section comprises of 5.5 m wide carriageway with both side 1.0 m wide usable hard shoulder. The camber on either side of the carriageway and hard shoulder is 2.5 % & on the earthen shoulder is 3.0% respectively as flexible pavement considered for this section. As per traffic intensity, no need to upgrade lane configuration from Ch 4.763 Km to Ch 18.290 Km. Only Strengthening is require at Section I (from Km 0.0 to Km 4.763) and Section II (from Km 4.763 to Km 18.290).

Table 1: Overview of the proposed road

Sl.No.	Description of item	Details	
1	Road length	Existing –18.290 km	Design – 18.290 km
2	Road Configuration	Existing-- 7 m wide carriageway Up to 5 Km and rest 5.5 m wide carriageway	Propose- 7 m wide carriageway Up to 5 Km and rest 5.5 m wide carriageway
3	Terrain	Hilly	
4	Land use pattern	Mixed land use between Open and Built-Up	
5	Existing Surface of the carriageway	Flexible pavement with BC.	
7	Existing Formation width	12.0 m - 9.0 m	
8	Right of Way (ROW)	15.0 m (avg.)	
9	Pavement Condition	Poor due to Asphalt Oxidation	

Sl.No.	Description of item	Details
10	New Flexible Pavement thickness (Overlay)	For 0.000 to 4.763 – BC-30 mm and DBM- 50mm For 4.763 to 18.450 – BC-30 mm and DBM- 65mm
11	Design CBR	7% for first 5 km & 7.2 % is rest of the stretch
12	Junctions	Major 1 and Minor 25
13	Traffic	ADT-3470 from Ch 0.000 Km to Km 4.763 km and 1133 for the rest of the stretch MSA-12 from Ch 0.0 Km to Km 4.763 km and 11.03 for the rest of the stretch
14	Cross drainage Structures	HP Culverts 66, Slab Culverts 27, Major Bridge 3 and Minor Bridge 1
15	Settlement	Bajalta, Chilah, Chak Chilah, Badgah, Aitham Villages

2.3 Project Location

The geographical location is 32°46'0.26"N (Start of the Road) and 32°42'20.48"N (End of the Road); 74°54'52.40"E (Start of the Road) and 74°59'2.92"E (annexure 2). Photographs of the existing road annexed as annexure 8.

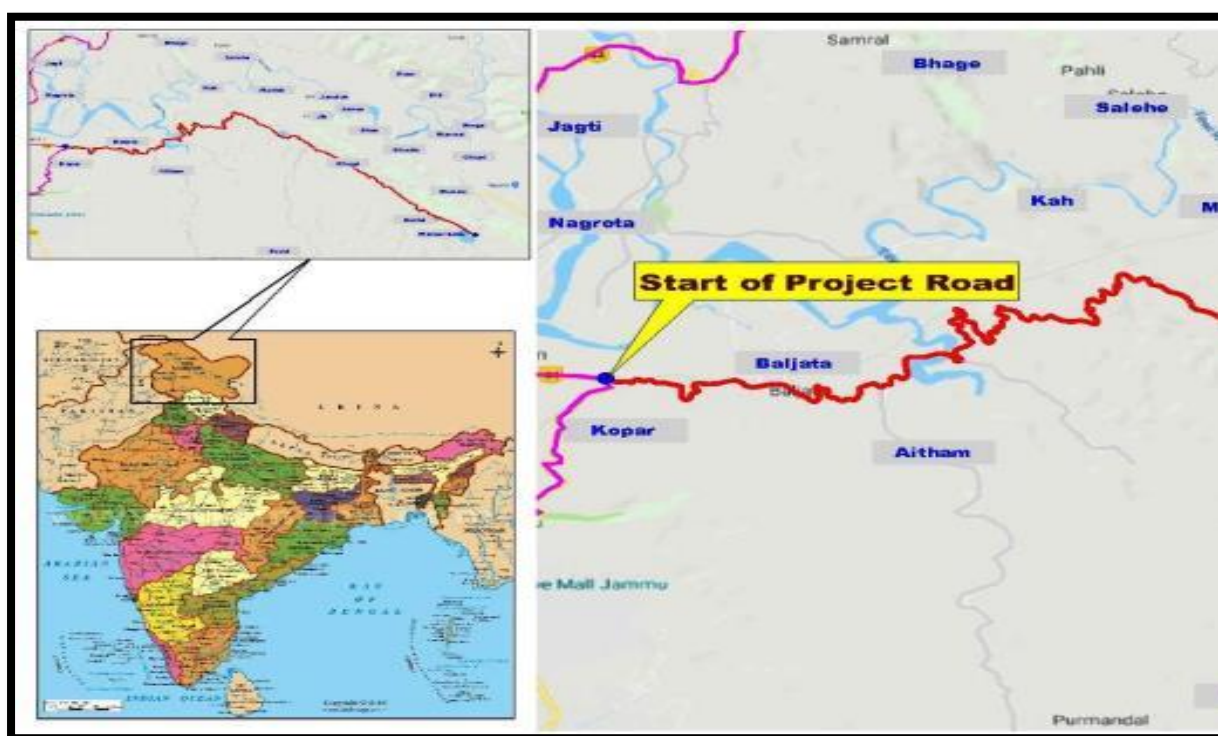


Figure 1: Overview of Proposed Road in Sidhra to Surnisar Road Sub Project

2.4 Details of the Existing Project Road

2.4.1 The embankment, Carriageway, and Shoulder

The width of the existing carriageway is 7 m with an average shoulder width of 1.0 m resulting in the average roadway width of 11 m to 12 m from Ch km 0.0 to km 4.763, But from Ch 4.763 Km to 18.290 Km width of the existing carriageway reduces and follow intermediate lane having average shoulder with 1 m on either side of the project road. The details of carriageway, Surface & Shoulder condition, etc are mentioned in the annexure III of DPR.

2.4.2 Horizontal and vertical alignment

Mostly the road runs through hilly terrain and the existing alignment is fair. The existing vertical alignment follows in the Hilly type.

2.4.3 Pavement Condition

The existing pavement is of flexible type from Ch km 0.0 to km 18.290 having a different thickness as reflected from pavement investigation are not in fair condition, longitudinal, crocodile cracks are significantly visualized. Asphalt oxidation was observed from Km 0.0 to Km 18.290; for the said reason pavement stiffens and becomes brittle as time progresses. Stiff pavement is prone to cracking and other forms of damage that require costly repairs and eventual replacement. Everything from temperature to time and exposure to oxygen affects the oxidation rate. Each of these factors is directly related to the rate in that the rate increases right along with the variables. Under such a situation, Milling/Scarification is necessary for the top bituminous layer for a thickness of 20 mm and thereafter after a provision of tack coat, DBM & BC of different required thickness as per derived by IIT PAVE to be laid only from Ch 0.0 Km to 18.290 Km. No additional layer of WMM is necessary to use for strengthening.

2.4.4 Cross Drainage Structures

There are 5 nos of Bridge that exist on a different stream. Apart from that, 27 nos of Slab culverts and 66 nos of HP culverts exist on the project road with varying dia 300 mm to 1200 mm. Amongst all cross-drainage structures, only 14 nos of HP culvert having lesser dia below 900 mm need to be replaced by 1200 mm dia HP culverts.

Table 2: List of Existing Cross Drainage Structures

Sl No.	Existing Structure	Proposed Structure
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Social Impact Assessment Report

	Chainage	Type of Structure	Span / Dia (mm)	Head Wall/Parapet Wall Width (mm)	Condition	Proposed Structure	Span / Dia
1	0+350	HP Culvert	1 x 300	500	C&P	R&NC	H.P 1200Dia
2	0+423	Slab Culvert	1 x 1200	1500	Good		
3	0+785	Slab Culvert	1 x 1100	1400	Good		
4	1+002	Slab Culvert	1 x 1100	1400	Good		
5	1+265	Slab Culvert	1 x 1000	1300	Good		
6	1+365	Slab Culvert	1 x 1000	1300	Good		
7	1+490	Slab Culvert	1 x 1000	1300	Good		
8	1+793	Slab Culvert	1 x 1000	1300	Good		
9	1+875	Slab Culvert	1 x 1300	1600	Good		
10	2+025	Slab Culvert	1 x 1500	1800	Good		
11	2+112	Slab Culvert	1 x 1200	1500	Good		
12	2+230	Slab Culvert	1 x 1000	1300	Good		
13	2+377	Slab Culvert	1 x 1300	1600	Good		
14	2+610	Slab Culvert	1 x 1300	1600	Good		
15	2+715	Slab Culvert	1 x 1600	1900	Good		
16	3+000	Bridge	-	-	Good		

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Sl No.	Existing Structure					Proposed Structure	
	Chainage	Type of Structure	Span / Dia (mm)	Head Wall/Parapet Wall Width (mm)	Condition	Proposed Structure	Span / Dia
17	3+632	Bridge	-	-	Good		
18	4+120	Slab Culvert	1 x 5600	5900	Good		
19	4+727	Bridge	-	-	Good		
20	4+920	HP Culvert	1 x 1200	1500	Fair		
21	5+280	HP Culvert	2 x 1200	1500	Fair		
22	5+395	HP Culvert	1 x 1200	1500	Fair		
23	6+683	HP Culvert	1 x 900	1100	Fair		
24	6+905	HP Culvert	1 x 600	800	C&P	R&NC	H.P 1200Dia
25	7+060	HP Culvert	1 x 900	1100	Fair		
26	7+130	HP Culvert	1 x 900	1100	Fair		
27	7+220	HP Culvert	1 x 900	1100	Fair		
28	7+335	HP Culvert	1 x 900	1100	Fair		
29	7+622	HP Culvert	1 x 900	1100	Fair		
30	7+660	HP Culvert	1 x 600	800	C&P	R&NC	H.P 1200Dia
31	7+735	HP Culvert	1 x 900	1100	Fair		
32	7+802	HP Culvert	2 x 900	2100	Fair		
33	7+854	HP Culvert	1 x 900	1100	Fair		
34	8+070	HP Culvert	1 x 600	800	C&P	R&NC	H.P 1200Dia
35	8+500	Bridge	-	-	Good		
36	8+690	HP Culvert	1 x 900	1100	Fair		

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Sl No.	Existing Structure					Proposed Structure	
	Chainage	Type of Structure	Span / Dia (mm)	Head Wall/Parapet Wall Width (mm)	Condition	Proposed Structure	Span / Dia
37	8+755	HP Culvert	1 x 900	1100	Fair		
38	8+890	HP Culvert	1 x 900	1100	Fair		
39	9+090	HP Culvert	1 x 900	1100	Fair		
40	9+310	HP Culvert	1 x 600	800	C&P	R&NC	H.P 1200Dia
41	9+340	HP Culvert	1 x 900	1100	Fair		
42	9+430	Slab Culvert	1 x 2800	3000	Good		
43	9+540	Slab Culvert	1 x 1900	2100	Good		
44	9+545	HP Culvert	1 x 900	1100	Fair		
45	9+635	HP Culvert	1 x 900	800	Good		
46	9+740	Slab Culvert	1 x 2100	2300	Good		
47	9+798	HP Culvert	1 x 900	1100	Fair		
48	10+060	HP Culvert	2 x 1200	2500	Fair		
49	10+220	HP Culvert	1 x 900	1100	Fair		
50	10+440	HP Culvert	1 x 900	800	Fair		
51	10+460	HP Culvert	1 x 600	800	C&P	R&NC	H.P 1200Dia
52	10+505	Slab Culvert	1x1500	1800	Good		
53	10+655	Slab Culvert	1x1300	1600	Good		
54	10+800	Slab Culvert	1x1500	1800	Good		

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Sl No.	Existing Structure					Proposed Structure	
	Chainage	Type of Structure	Span / Dia (mm)	Head Wall/Parapet Wall Width (mm)	Condition	Proposed Structure	Span / Dia
55	11+055	HP Culvert	1 x 900	1100	Fair		
56	11+150	HP Culvert	1 x 900	1100	Fair		
57	11+225	HP Culvert	1 x 900	1100	Fair		
58	11+340	HP Culvert	1 x 900	1100	Fair		
59	11+390	HP Culvert	1 x 900	800	Fair		
60	11+535	HP Culvert	1 x 900	1100	Fair		
61	11+635	HP Culvert	1 x 900	1100	Fair		
62	11+730	HP Culvert	1 x 900	1100	Fair		
63	11+810	HP Culvert	1 x 900	1100	Fair		
64	11+860	HP Culvert	1 x 900	1100	Fair		
65	11+925	HP Culvert	1 x 900	1100	Fair		
66	12+180	HP Culvert	1 x 1200	1500	Fair		
67	12+236	HP Culvert	1 x 900	800	Fair		
68	12+368	HP Culvert	1 x 900	800	Fair		
69	12+416	Slab Culvert	1 x 1700	2000	Good		
70	12+451	HP Culvert	1 x 1200	1500	Fair		
71	12+621	Slab Culvert	1 x 1800	2000	Good		
72	12+735	HP Culvert	1 x 1200	1500	Fair		
73	12+933	HP Culvert	1 x 900	1100	Fair		
74	13+003	HP Culvert	1 x 900	1100	Fair		
75	13+056	HP Culvert	1 x 900	1100	Fair		

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Sl No.	Existing Structure					Proposed Structure	
	Chainage	Type of Structure	Span / Dia (mm)	Head Wall/Parapet Wall Width (mm)	Condition	Proposed Structure	Span / Dia
76	13+095	HP Culvert	1 x 900	1100	Fair		
77	13+223	HP Culvert	1 x 900	1100	Fair		
78	13+277	HP Culvert	1 x 900	1100	Fair		
79	14+000	HP Culvert	1 x 900	1100	Fair		
80	14+335	HP Culvert	1 x 900	1100	Fair		
81	14+563	HP Culvert	1 x 900	1100	Fair		
82	14+620	HP Culvert	1 x 900	1100	Fair		
83	14+714	HP Culvert	1 x 900	1100	Fair		
84	14+830	HP Culvert	1 x 900	1100	Fair		
85	14+995	HP Culvert	1 x 900	1500	Fair		
86	15+100	HP Culvert	1 x 900	1500	Fair		
87	17+058	Slab Culvert	1 x 1300	1600	Good		
88	17+130	HP Culvert	1 x 900	1100	Fair		
89	17+238	HP Culvert	1 x 600	800	Fair		
90	17+315	Slab Culvert	1 x 1500	1800	Good		
91	17+418	Slab Culvert	1 x 1600	1900	Good		
92	17+538	Slab Culvert	1 x 1500	1800	Good		
93	17+815	HP Culvert	1 x 600	1500	Fair		
94	17+877	HP Culvert	1 x 1200	800	Fair		
95	17+782	HP Culvert	1 x 1200	1500	Fair		

Sl No.	Existing Structure					Proposed Structure	
	Chainage	Type of Structure	Span / Dia (mm)	Head Wall/Parapet Wall Width (mm)	Condition	Proposed Structure	Span / Dia
96	18+169	HP Culvert	1 x 600	800	Fair		
97	18+208	HP Culvert	1 x 600	800	Fair		

* C&P – Chocked & Poor, R&NC-Replaced & New Construction



2.4.5 Existing Drain

The existing road does not have the proper provision of longitudinal drains throughout the project stretch. At several locations, the existing drain not even properly visualize as it is full of slush material and cleanness not being executed from time to time which influences to increase surcharge pressure and cracks generated randomly. There are 6.863 Km long drain exists out of

which 2.356 Km drain length in RHS whereas 4.507 Km length in LHS. Table 3 given below shows the detail of existing stretches where drains are in Fair condition.

Table 3: Details of existing Drain

Sl.	Existing Side	Existing Stretches (Starting)	Existing Stretches (Ending)	Length (m)	Existing Side	Condition
1	LHS	0+000	0+461	0.461		Fair
2	LHS	0+498	0+611	0.113		Fair
3	LHS	0+636	1+016	0.380		Fair
4		1+915	1+972	0.057	RHS	Fair
5	LHS	2+725	2+885	0.16		Fair
6		3+979	4+015	0.036	RHS	Fair
7		4+119	4+138	0.019	RHS	Fair
8		4+204	4+286	0.082	RHS	Fair
9	LHS	5+982	6+099	0.117		Fair
10	LHS	6+564	6+955	0+391		Fair
11	LHS	6+994	7+039	0.045		Fair
12	LHS	7+087	7+184	0.097		Fair
13	LHS	7+394	7+501	0.107		Fair
14		9+000	9+039	0.039	RHS	Fair
15	LHS	9+221	9+247	0.026		Fair
16		10+000	10+149	0.149	RHS	Fair
17	LHS	10+083	10+106	0.023		Fair
18		10+741	10+847	0.106	RHS	Fair
19	LHS	10+996	11+086	0.090		Fair
20	LHS	11+103	11+138	0.035		Fair
21	LHS	11+406	11+432	0.026		Fair
22	LHS	11+575	11+587	0.012		Fair

Sl.	Existing Side	Existing Stretches (Starting)	Existing Stretches (Ending)	Length (m)	Existing Side	Condition
23	LHS	11+679	11+734	0.055		Fair
24	LHS	11+857	11+859	0.002		Fair
25	LHS	12+009	12+060	0.051		Fair
26	LHS	12+766	12+834	0.068		Fair
27	LHS	12+901	12+925	0.024		Fair
28	LHS	13+002	13+151	0.149		Fair
29	LHS	13+428	13+532	0.104		Fair
30	LHS	13+575	13+672	0.097		Fair
31	LHS	13+788	13+980	0.192		Fair
32	LHS	14+063	14+538	0.475		Fair
33	LHS	14+562	14+836	0.274		Fair
34		14+859	15+151	0.292	RHS	Fair
35	LHS	15+170	15+269	0.099		Fair
36		15+332	15+551	0.219	RHS	Fair
37	LHS	15+774	15+810	0.036		Fair
38	LHS	16+164	16+226	0.062		Fair
39	LHS	16+460	16+664	0.204		Fair
40		16+785	17+210	0.425	RHS	Fair
41		17+210	17+968	0.758	RHS	Fair
42	LHS	18+035	18+267	0.232		Fair
43	LHS	18+267	18+500	0.233		Fair
44		18+590	18+764	0.174	RHS	Fair

2.4.6 Protective Works

Hill, as well as valley side protection wall, exists throughout the road But from Ch. 10.900 to Ch 13.893. Hillside slope protection work is required at certain chainages, in addition to that

vegetation is also not formed uniformly in this stretch. As a result, slides came on the road here & there. Total 4898 m Breast Wall & 9356 m Retaining wall (Mostly Stone Masonry Works) exists on the road.

Table 4: Details of Existing Protective Works

Sl.	Existing Side	Existing Stretches (Starting)	Existing Stretches (Endng)	Length (m)	Type of Protection Work	Side	Condition
1	LHS	0.063	0.387	0.324	Breast Wall		Fair
2		0.082	0.137	0.055	Retaining Wall	RHS	Fair
3		0.141	0.205	0.064	Retaining Wall	RHS	Fair
4		0.230	0.245	0.015	Retaining Wall	RHS	Fair
5		0.245	0.315	0.070	Retaining Wall	RHS	Fair
6		0.318	0.388	0.070	Retaining Wall	RHS	Fair
7		0.392	0.452	0.060	Retaining Wall	RHS	Fair
8		0.458	0.572	0.114	Retaining Wall	RHS	Fair
9	LHS	0.554	0.608	0.054	Breast Wall		Fair
10		0.602	0.628	0.026	Retaining Wall	RHS	Fair
11		0.625	0.651	0.026	Retaining Wall	RHS	Fair
12		0.657	0.677	0.020	Retaining Wall	RHS	Fair
13		0.681	0.702	0.021	Retaining Wall	RHS	Fair
14		0.706	0.714	0.008	Retaining Wall	RHS	Fair
15		0.724	0.749	0.025	Retaining Wall	RHS	Fair
16		0.754	0.762	0.008	Retaining Wall	RHS	Fair
17		0.767	0.795	0.028	Retaining Wall	RHS	Fair
18		0.797	0.817	0.020	Retaining Wall	RHS	Fair
19		0.822	0.855	0.033	Retaining Wall	RHS	Fair
20		0.883	0.926	0.043	Retaining Wall	RHS	Fair
21		0.930	1.004	0.074	Retaining Wall	RHS	Fair
22	LHS	0.636	1.122	0.486	Retaining Wall		Fair

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Sl.	Existing Side	Existing Stretches (Starting)	Existing Stretches (Endng)	Length (m)	Type of Protection Work	Side	Condition
23	LHS	1.022	1.096	0.074	Retaining Wall		Fair
24	LHS	1.129	1.158	0.029	Retaining Wall		Fair
25	LHS	1.163	1.200	0.037	Retaining Wall		Fair
26	LHS	1.200	1.229	0.029	Retaining Wall		Fair
27	LHS	1.237	1.291	0.054	Retaining Wall		Fair
28	LHS	1.296	1.315	0.019	Retaining Wall		Fair
29	LHS	1.322	1.341	0.019	Retaining Wall		Fair
30	LHS	1.374	1.461	0.087	Retaining Wall		Fair
31	LHS	1.461	1.500	0.039	Retaining Wall		Fair
32	LHS	1.500	1.516	0.016	Retaining Wall		Fair
33	LHS	1.528	1.546	0.018	Retaining Wall		Fair
34	LHS	1.556	1.580	0.024	Retaining Wall		Fair
35	LHS	1.584	1.600	0.016	Retaining Wall		Fair
36	LHS	1.600	1.623	0.023	Retaining Wall		Fair
37	LHS	1.630	1.638	0.008	Retaining Wall		Fair
38	LHS	1.640	1.680	0.040	Retaining Wall		Fair
39	LHS	1.724	1.783	0.059	Retaining Wall		Fair
40	LHS	1.814	1.852	0.038	Retaining Wall		Fair
41	LHS	1.902	1.922	0.020	Retaining Wall		Fair
42	LHS	1.932	1.946	0.014	Retaining Wall		Fair
43	LHS	2.007	2.085	0.078	Breast Wall		Fair
44	LHS	2.100	2.117	0.017	Breast Wall		Fair
45	LHS	3.700	3.785	0.085	Breast Wall		Fair
46	LHS	3.926	3.938	0.012	Breast Wall		Fair
47		3.926	3.938	0.012	Retaining Wall	RHS	Fair

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Sl.	Existing Side	Existing Stretches (Starting)	Existing Stretches (Endng)	Length (m)	Type of Protection Work	Side	Condition
48	LHS	4.526	4.572	0.046	Breast Wall		Fair
49		4.538	4.564	0.026	Breast Wall	RHS	Fair
50	LHS	4.631	4.698	0.067	Retaining Wall		Fair
51	LHS	4.700	4.713	0.013	Retaining Wall		Fair
52		4.727	4.800	0.073	Breast Wall	RHS	Fair
53	LHS	4.730	4.758	0.028	Retaining Wall		Fair
54	LHS	4.800	4.881	0.081	Retaining Wall		Fair
55		4.800	4.869	0.069	Breast Wall	RHS	Fair
56	LHS	4.930	4.996	0.066	Retaining Wall		Fair
57	LHS	5.010	5.530	0.520	Retaining Wall		Fair
58		5.053	5.100	0.047	Breast Wall	RHS	Fair
59		5.259	5.264	0.005	Breast Wall	RHS	Fair
60		5.271	5.277	0.006	Breast Wall	RHS	Fair
61		5.500	5.552	0.052	Breast Wall	RHS	Fair
62	LHS	5.421	5.511	0.090	Retaining Wall		Fair
63	LHS	5.546	5.580	0.034	Retaining Wall		Fair
64		5.561	5.581	0.020	Breast Wall	RHS	Fair
65	LHS	5.600	5.607	0.007	Retaining Wall		Fair
66		5.640	5.700	0.060	Breast Wall	RHS	Fair
67		5.700	5.725	0.025	Breast Wall	RHS	Fair
68		5.759	5.777	0.018	Breast Wall	RHS	Fair
69	LHS	5.837	6.126	0.289	Retaining Wall		Fair
70		5.814	5.823	0.009	Breast Wall	RHS	Fair
71		6.119	6.157	0.038	Retaining Wall	RHS	Fair
72	LHS	6.126	6.184	0.058	Breast Wall		Fair

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Sl.	Existing Side	Existing Stretches (Starting)	Existing Stretches (Endng)	Length (m)	Type of Protection Work	Side	Condition
73		6.204	6.225	0.021	Retaining Wall	RHS	Fair
74	LHS	6.213	6.263	0.050	Breast Wall		Fair
75	LHS	6.516	6.532	0.016	Breast Wall		Fair
76	LHS	6.538	6.558	0.020	Breast Wall		Fair
77		6.566	6.579	0.013	Retaining Wall	RHS	Fair
78		6.595	6.600	0.005	Retaining Wall	RHS	Fair
79		6.600	6.633	0.033	Retaining Wall	RHS	Fair
80		6.958	7.000	0.042	Retaining Wall	RHS	Fair
81		7.000	7.024	0.024	Retaining Wall	RHS	Fair
82		7.034	7.079	0.045	Retaining Wall	RHS	Fair
83		7.130	7.176	0.046	Retaining Wall	RHS	Fair
84	LHS	7.184	7.200	0.016	Breast Wall		Fair
85	LHS	7.200	7.203	0.003	Breast Wall		Fair
86		7.236	7.272	0.036	Retaining Wall	RHS	Fair
87		7.390	7.400	0.010	Retaining Wall	RHS	Fair
88	LHS	7.400	7.422	0.022	Breast Wall		Fair
89		7.400	7.422	0.022	Retaining Wall	RHS	Fair
90		7.654	7.700	0.046	Breast Wall	RHS	Fair
91	LHS	7.654	7.700	0.046	Retaining Wall		Fair
92	LHS	7.700	7.704	0.004	Retaining Wall		Fair
93		7.700	7.704	0.004	Breast Wall	RHS	Fair
94	LHS	7.730	7.766	0.036	Retaining Wall		Fair
95	LHS	7.780	7.811	0.031	Retaining Wall		Fair
96	LHS	7.848	7.896	0.048	Retaining Wall		Fair
97	LHS	7.910	7.935	0.025	Retaining Wall		Fair

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Sl.	Existing Side	Existing Stretches (Starting)	Existing Stretches (Endng)	Length (m)	Type of Protection Work	Side	Condition
98	LHS	7.982	8.000	0.018	Retaining Wall		Fair
99	LHS	8.000	8.044	0.044	Retaining Wall		Fair
100		8.025	8.038	0.013	Breast Wall	RHS	Fair
101		8.072	8.094	0.022	Breast Wall	RHS	Fair
102	LHS	8.516	8.850	0.334	Retaining Wall		Fair
103	LHS	8.725	8.783	0.058	Retaining Wall		Fair
104	LHS	8.800	8.862	0.062	Retaining Wall		Fair
105	LHS	8.873	8.904	0.031	Retaining Wall		Fair
106	LHS	8.911	8.956	0.045	Retaining Wall		Fair
107	LHS	8.880	9.000	0.120	Retaining Wall		Fair
108	LHS	9.000	9.025	0.025	Retaining Wall		Fair
109	LHS	9.035	9.197	0.162	Breast Wall		Fair
110	LHS	9.226	9.250	0.024	Breast Wall		Fair
111	LHS	9.289	9.304	0.015	Breast Wall		Fair
112	LHS	9.312	9.317	0.005	Breast Wall		Fair
113	LHS	9.329	9.359	0.030	Breast Wall		Fair
114	LHS	9.364	9.376	0.012	Breast Wall		Fair
115	LHS	9.386	9.400	0.014	Breast Wall		Fair
116	LHS	9.400	9.500	0.100	Breast Wall		Fair
117	LHS	9.500	9.700	0.200	Breast Wall		Fair
118	LHS	9.700	9.800	0.100	Breast Wall		Fair
119	LHS	9.800	10.000	0.200	Breast Wall		Fair
120		9.917	9.933	0.016	Breast Wall	RHS	Fair
121	LHS	10.000	10.100	0.100	Retaining Wall		Fair
122	LHS	10.100	10.300	0.200	Retaining Wall		Fair

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Sl.	Existing Side	Existing Stretches (Starting)	Existing Stretches (Endng)	Length (m)	Type of Protection Work	Side	Condition
123	LHS	10.300	10.500	0.200	Retaining Wall		Fair
124	LHS	10.500	10.800	0.300	Retaining Wall		Fair
125	LHS	10.800	10.852	0.052	Retaining Wall		Fair
126		10.872	10.900	0.028	Breast Wall	RHS	Fair
127	LHS	11.570	11.600	0.030	Retaining Wall		Fair
128	LHS	11.600	11.625	0.025	Retaining Wall		Fair
129		10.900	11.000	0.100	Retaining Wall	RHS	Fair
130		11.000	11.200	0.200	Retaining Wall	RHS	Fair
131		11.200	11.230	0.030	Retaining Wall	RHS	Fair
132		11.230	11.252	0.022	Retaining Wall	RHS	Fair
133		11.252	11.266	0.014	Retaining Wall	RHS	Fair
134		11.276	11.283	0.007	Retaining Wall	RHS	Fair
135		11.312	11.337	0.025	Retaining Wall	RHS	Fair
136		11.336	11.400	0.064	Retaining Wall	RHS	Fair
137		11.404	11.428	0.024	Retaining Wall	RHS	Fair
138		11.486	11.500	0.014	Retaining Wall	RHS	Fair
139		11.504	11.545	0.041	Retaining Wall	RHS	Fair
140		11.578	11.600	0.022	Retaining Wall	RHS	Fair
141		11.600	11.624	0.024	Retaining Wall	RHS	Fair
142		11.645	11.661	0.016	Retaining Wall	RHS	Fair
143		11.679	11.700	0.021	Retaining Wall	RHS	Fair
144		11.700	11.750	0.050	Retaining Wall	RHS	Fair
145		11.800	11.833	0.033	Retaining Wall	RHS	Fair
146		11.854	11.995	0.141	Retaining Wall	RHS	Fair
147		12.088	12.100	0.012	Retaining Wall	RHS	Fair

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Sl.	Existing Side	Existing Stretches (Starting)	Existing Stretches (Endng)	Length (m)	Type of Protection Work	Side	Condition
148		12.100	12.112	0.012	Retaining Wall	RHS	Fair
149		12.117	12.131	0.014	Retaining Wall	RHS	Fair
150		12.135	12.200	0.065	Retaining Wall	RHS	Fair
151		12.258	12.300	0.042	Retaining Wall	RHS	Fair
152		12.300	12.311	0.011	Retaining Wall	RHS	Fair
153		12.427	12.438	0.011	Retaining Wall	RHS	Fair
154		12.443	12.472	0.029	Retaining Wall	RHS	Fair
155		12.542	12.552	0.010	Retaining Wall	RHS	Fair
156		12.556	12.600	0.044	Retaining Wall	RHS	Fair
157		12.600	12.619	0.019	Retaining Wall	RHS	Fair
158		12.680	12.700	0.020	Retaining Wall	RHS	Fair
159		12.700	12.800	0.100	Retaining Wall	RHS	Fair
160		12.800	13.000	0.200	Retaining Wall	RHS	Fair
161		13.000	13.059	0.059	Retaining Wall	RHS	Fair
162		13.090	13.170	0.080	Retaining Wall	RHS	Fair
163		13.180	13.510	0.330	Retaining Wall	RHS	Fair
164		13.532	13.577	0.045	Retaining Wall	RHS	Fair
165		13.592	13.627	0.035	Retaining Wall	RHS	Fair
166		13.630	13.782	0.152	Retaining Wall	RHS	Fair
167	LHS	13.893	14.060	0.167	Breast Wall		Fair
168		13.985	14.042	0.057	Retaining Wall	RHS	Fair
169		14.200	14.380	0.180	Retaining Wall	RHS	Fair
170		14.440	14.449	0.009	Retaining Wall	RHS	Fair
171		14.454	14.462	0.008	Retaining Wall	RHS	Fair
172		14.493	14.561	0.068	Retaining Wall	RHS	Fair

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Sl.	Existing Side	Existing Stretches (Starting)	Existing Stretches (Endng)	Length (m)	Type of Protection Work	Side	Condition
173	LHS	14.592	14.639	0.047	Breast Wall		Fair
174	LHS	14.675	14.711	0.036	Breast Wall		Fair
175	LHS	14.723	14.784	0.061	Breast Wall		Fair
176	LHS	14.780	14.884	0.104	Breast Wall		Fair
177		14.780	14.841	0.061	Breast Wall	RHS	Fair
178		14.860	14.976	0.116	Breast Wall	RHS	Fair
179	LHS	14.930	14.941	0.011	Retaining Wall		Fair
180	LHS	14.990	15.000	0.010	Retaining Wall		Fair
181	LHS	15.025	15.036	0.011	Retaining Wall		Fair
182	LHS	15.093	15.161	0.068	Retaining Wall		Fair
183		15.200	15.220	0.020	Breast Wall	RHS	Fair
184		15.235	15.240	0.005	Breast Wall	RHS	Fair
185		15.260	15.274	0.014	Breast Wall	RHS	Fair
186		15.315	15.556	0.241	Breast Wall	RHS	Fair
187	LHS	15.343	15.530	0.187	Retaining Wall		Fair
190	LHS	15.546	15.571	0.025	Retaining Wall		Fair
188		15.566	15.623	0.057	Breast Wall	RHS	Fair
191	LHS	15.626	15.826	0.200	Breast Wall		Fair
189		15.715	15.855	0.140	Retaining Wall	RHS	Fair
192		15.616	15.656	0.040	Retaining Wall	RHS	Fair
193	LHS	15.626	15.754	0.128	Breast Wall		Fair
194	LHS	15.774	15.779	0.005	Breast Wall		Fair
195	LHS	15.798	15.812	0.014	Breast Wall		Fair
196		15.922	15.989	0.067	Retaining Wall	RHS	Fair
197	LHS	15.854	16.220	0.366	Breast Wall		Fair

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Sl.	Existing Side	Existing Stretches (Starting)	Existing Stretches (Endng)	Length (m)	Type of Protection Work	Side	Condition
198	LHS	16.230	16.350	0.120	Breast Wall		Fair
199		16.366	16.436	0.070	Retaining Wall	RHS	Fair
200	LHS	16.366	16.438	0.072	Breast Wall		Fair
201	LHS	16.471	16.605	0.134	Breast Wall		Fair
202	LHS	16.615	16.98	0.365	Breast Wall		Fair
203	LHS	17.000	17.025	0.025	Retaining Wall		Fair
204	LHS	17.050	17.185	0.135	Retaining Wall		Fair
205	LHS	17.200	17.275	0.075	Retaining Wall		Fair
206	LHS	17.290	17.305	0.015	Retaining Wall		Fair
207	LHS	17.325	17.347	0.022	Retaining Wall		Fair
208	LHS	17.450	17.510	0.060	Retaining Wall		Fair
209	LHS	17.560	17.621	0.061	Retaining Wall		Fair
210	LHS	17.696	17.721	0.025	Retaining Wall		Fair
211	LHS	17.762	17.835	0.073	Retaining Wall		Fair
212		17.816	17.913	0.097	Breast Wall	RHS	Fair
213	LHS	17.951	17.961	0.010	Retaining Wall		Fair
214	LHS	17.908	17.993	0.085	Retaining Wall		Fair
215		17.960	18.025	0.065	Breast Wall	RHS	Fair
216	LHS	18.000	18.040	0.040	Breast Wall		Fair
217		18.052	18.112	0.060	Retaining Wall	RHS	Fair
218	LHS	18.105	18.126	0.021	Breast Wall		Fair
219		18.135	18.185	0.050	Retaining Wall	RHS	Fair
220		18.200	18.223	0.023	Retaining Wall	RHS	Fair
221		18.290	18.355	0.065	Retaining Wall	RHS	Fair
222		18.390	18.406	0.016	Retaining Wall	RHS	Fair

Sl.	Existing Side	Existing Stretches (Starting)	Existing Stretches (Endng)	Length (m)	Type of Protection Work	Side	Condition
223		18.460	18.485	0.025	Retaining Wall	RHS	Fair
224		18.492	18.522	0.030	Breast Wall	RHS	Fair
225		18.540	18.573	0.033	Breast Wall	RHS	Fair
226		18.608	18.685	0.077	Breast Wall	RHS	Fair
227	LHS	18.650	18.715	0.065	Retaining Wall		Fair
228	LHS	18.730	18.802	0.072	Retaining Wall		Fair

2.4.7 Horizontal Curves

There are 108 nos of sharp curves which need to develop with higher radius curves within the available ROW.

2.4.8 Road Junctions

There is 1 Major junction at Ch 0.00 km with NH 44 which is also properly developed. Apart from that, 25 nos of minor junctions also exist.

2.4.9 Existing Pavement Composition

This said road is a very old one which was initially constructed not based on traffic but to connect different localities. During pavement investigation, it has been observed that stage-wise construction has been adopted at a different time. Initially, it is a single-lane road which has been upgraded to 2 lanes Up to first 5 km (km 4.763) and the rest to intermediate lane in the year 2007 - 2010. Afterward, several maintenance works have been undertaken over the road. Specification adopted for such maintenance widely varies from year to year as well as from stretches to stretches. So the road section does not have a homogeneous crust. Trial Pit Investigation has been conducted for detailing pavement composition at different locations. The average pavement thickness is 726 mm. If existing pavement thickness is analyzed after considering lane configuration-based criteria then for the first 5 km (km 4.763) average thickness is 1050 mm whereas for the rest stretches Up to Km 18.764 km it is 571 mm. Based on the traffic density, the existing pavement is divided into two sections, one from Ch 0.0 Km to 4.763 Km (Section I) and from Ch 4.763 Km to 18.290 Km (Section II); so that desired adapted thickness of different layers properly derived by using IIT PAVE.

2.5 RoW Details of the Sub-Project Road

On the basis of a report received from the Land and Revenue department, Collector Land Acquisition, Jammu confirmed that RoW for the sub-project is 50 feet (app 15 meters) (annexure 3). Further, Project Manager (Transport, Division Jammu) vide letter no PIU/T/ERA/2021/865 dated 16.03.2021 issued a non-encumbrance certificate and confirms that the available existing RoW is 15 meter and sub-project does not require land for the proposed-up gradation (annexure 4).

2.6 Major Utilities Along the Existing Road

A detailed road inventory survey was carried out at 100 m intervals mainly the proposed alignment. Detailed 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, the height of fill or depth of cut, the 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.

Following parameters were recorded during the road inventory survey:

- **Terrain:** The project road passes through Hilly terrain. The terrain along the project road has been classified as per IRC: 73-1980.
- **Land Use:** The project road traverses through many settlements such as Baljata, Chilah, Chak Chilah, Badgah. The land use along the project road is a combination of Open, Residential.
- **Carriageway/ Roadway Width:** The existing road is of standard 2 lane configuration Up to the first 5 Km and intermediate carriageway configuration of width 5.5 m for the remaining stretches till end Ch i.e 18.290 Km. Details of the existing carriageway and surface type are summarized in the following Table.

Table 5: Carriageway width along the project corridor

Sl. No.	Chainage (km)		Length (km)	Carriageway width (m)	Road Width (m)	ROW (m)
	From	To				
1	0+000	4+763	4.763	7.0	12	15.625
2	4+763	18+290	13.527	5.5	9	15.625

2.7 Proposed Activities (Improvement & Up-gradation)

2.7.1 Carriageway Width

In general, the proposed cross-section comprises of 7.00 m wide carriageway with both sides 1.0 m wide usable hard shoulder propose from Ch 0.0 Km to Ch 4.763 Km. The camber on either side of the carriageway and hard shoulder is 2.5 % & on the earthen shoulder is 3.0% respectively. In addition to that, from Ch 4.763 Km to Ch 18.290 Km proposed cross-section comprises of 5.5 m wide carriageway with both sides 1.0 m wide usable hard shoulder. The camber on either side of the carriageway and hard shoulder is 2.5 % & on the earthen shoulder is 3.0% respectively as flexible pavement considered for this section. As per traffic intensity, no need to upgrade lane configuration from Ch 4.763 Km to Ch 18.290 Km. Only Strengthening is required at Section I (from Km 0.0 to Km 4.763) and Section II (from Km 4.763 to Km 18.290). Based on the available Carriageway width, Strengthening at different chainages are mention below:-

Table 6: Detail of Strengthening stretches

Sl No.	Chainage		Length (m)	Type
	From	To		
1	0+000	1+175	1175	Type-3
2	1+175	2+200	1025	Type-2
3	2+200	3+840	1640	Type-1
4	3+840	3+965	125	Type-2
5	3+965	4+763	798	Type-1
6	4+763	5+800	1037	Type-4
7	5+800	6+250	450	Type-5
8	6+250	6+625	375	Type-4
9	6+625	8+750	2125	Type-5
10	8+750	8+875	125	Type-4
11	8+875	10+340	1465	Type-6
12	10+340	10+760	420	Type-7
13	10+760	10+950	190	Type-6
14	10+950	11+050	100	Type-4

Sl No.	Chainage		Length (m)	Type
	From	To		
15	11+050	12+075	1025	Type-5
16	12+075	12+180	105	Type-8
17	12+180	13+225	1045	Type-5
18	13+225	13+525	300	Type-4
19	13+525	13+725	200	Type-6
20	13+725	14+235	510	Type-4
21	14+235	14+825	590	Type-6
22	14+825	14+925	100	Type-4
23	14+925	15+700	775	Type-6
24	15+700	15+775	75	Type-7
25	15+775	16+290	515	Type-6
26	16+290	16+352	62	Type-7
27	16+352	16+485	133	Type-6
28	16+485	16+560	75	Type-7
29	16+560	16+685	125	Type-6
30	16+685	16+705	20	Type-7
31	16+705	16+787	82	Type-6
32	16+787	16+815	28	Type-7
33	16+815	17+680	865	Type-6
34	17+680	17+775	95	Type-4
35	17+775	18+290	515	Type-5

2.7.2 Horizontal and vertical alignment

Existing alignment is followed for strengthening of the existing road and it is found that mostly the required average design speed of 40 km/hour is maintained. The existing carriageway will be provided with the required grade after making the provision for a profile corrective course

with proper cambers over the existing carriageway surface. Due to land constraint, where curve radius is less than 60, 0.6 m to 0.9 m extra widening provide at those locations. Horizontal, Vertical Curve, and extra widening details are mentioned in annexure IV of DPR.

2.7.3 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.

2.7.4 Improvement of Cross Drainage Structures

There are 5 nos of Bridge that exist on a different stream. Apart from that, 27 nos of Slab culverts and 66 nos of HP culverts exist on the project road with varying dia 300 mm to 1200 mm. Amongst all cross-drainage structures, only 14 nos of HP culvert having lesser dia below 900 mm need to be replaced by 1200 mm dia HP culverts.

2.7.5 Protective works of the valley/hill slope

Hill, as well as valley side protection wall, exists throughout the road But from Ch. 10.900 to Ch 13.893. Hillside slope protection work does not exist, in addition to that vegetation is also not formed uniformly in this stretch. As a result, slides came on the road here & there. Chainage-wise details of Proposed Protective works are shown in the table below.

Table 7: List of Protective Work Stretches

Sl.	Chainage (From)	Chainage (To)	Length (m)	Breast Wall	Proposed Side
1	7380	7450	70	Breast Wall	LHS
2	9050	9150	100	Breast Wall	LHS
3	9305	9415	110	Breast Wall	LHS
4	10110	10220	95	Breast Wall	RHS
5	12075	12180	210	Breast Wall	LHS & RHS
6	15380	15500	120	Breast Wall	LHS
7	15695	15802	107	Breast Wall	LHS
8	16210	16310	100	Breast Wall	LHS
9	17370	17402	32	Breast Wall	LHS

10	17770	17830	60	Breast Wall	LHS
11	18160	18240	80	Breast Wall	LHS
Total Length			1084		

The existing road does not have the proper provision of longitudinal drains throughout the project stretch. At several locations, the existing drain not even properly visualize as it is full of slush material and cleanness not being executed from time to time which influences to increase surcharge pressure and cracks generated randomly. Proposed line drains are to be provided 652m length and breast wall drain length is about 1084m.

2.7.6 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 15 years for flexible pavement from the date of opening the road to traffic. Pavement design for various cases has been illustrated in the following paragraphs.

2.7.7 Rehabilitation of existing pavement

Strengthening design involves prudent engineering judgment and decision-making in analyzing and using the various investigations data for the purpose. It may be mentioned that deflection testing (generally use for strengthening design) is primarily related to traffic-associated fatigue cracking of a pavement. If the pavement is exhibiting deformation / without bitumen top surface / poor condition of the bituminous surface, it will be necessary to sample and test/observe component layers before deciding on an overlay/strengthening.

Design of flexible pavement for new construction has been done following "Tentative Guidelines for the Design of Flexible Pavement" (IRC: 37-2018).

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 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 an 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 for design level and WBM/GSB (depending upon the level difference of FRL and level after re-compaction). 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.

2.7.8 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 controlling 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: 35-1997 – “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”.

- Speed Limit Sign (Fig-14.37 of IRC-67, 2012) of 30km/h provided at sharp bends.
- Series of Bends Sign (Fig-15.07 of IRC-67, 2012) provided at every 200m in zigzag curves.

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 channelling islands close to intersections.

IV. Crash Barrier

Metal crash barriers are proposed/ provided for the safety of the traffic on the stretches on approaches of bridges. It is also proposed on the curves for the safety of traffic irrespective of embankment height as per NHAI Circular (NHAI/PH-II/NHDP/ADB/GM (NS)-I dated May 19, 2004).

V. 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. 833m long new parapet wall is to be constructed along the project stretches including painting and existing 3158m length parapet wall white painting is to be required.

VI. 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.

Table 8: Details of Convex Mirror

Sl no.	Location	Sl no.	Location	Sl no.	Location	Sl no.	Location
1	0+022	28	7+205	55	10+932	82	16+395
2	0+264	29	7+251	56	11+018	83	16+555
3	0+602	30	7+326	57	11+059	84	16+578
4	0+651	31	7+790	58	11+091	85	16+772

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SI no.	Location	SI no.	Location	SI no.	Location	SI no.	Location
5	0+903	32	8+764	59	11+119	86	16+838
6	1+005	33	8+820	60	11+151	87	16+908
7	1+041	34	8+845	61	11+227	88	17+008
8	1+330	35	9+007	62	11+307	89	17+202
9	1+442	36	9+173	63	11+343	90	17+386
10	1+481	37	9+298	64	11+637	91	17+438
11	1+522	38	9+341	65	12+305	92	17+641
12	1+550	39	9+540	66	12+453	93	17+781
13	1+874	40	9+706	67	12+524	94	17+880
14	1+929	41	9+736	68	12+594		
15	1+973	42	10+221	69	12+627		
16	2+057	43	10+262	70	12+753		
17	2+158	44	10+336	71	13+162		
18	2+243	45	10+416	72	13+166		
19	3+569	46	10+505	73	14+034		
20	5+002	47	10+546	74	14+260		
21	5+093	48	10+567	75	15+744		
22	5+289	49	10+659	76	15+894		
23	5+798	50	10+697	77	15+943		
24	5+880	51	10+740	78	15+996		
25	6+674	52	10+778	79	16+038		

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SI no.	Location	SI no.	Location	SI no.	Location	SI no.	Location
26	6+751	53	10+812	80	16+217		
27	7+157	54	10+891	81	16+313		

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 Resettlement (OP 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 (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 tribe population
Physical Cultural Resources (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 sub-project on the basis during pre-construction, construction, and operation phases.

3.3 National Policies and Policies of U.T.'s of J&K

Table 10: National Polices and Policies of U. Ts of J&K

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. This sub-project does not have any adverse impact on the private assets.
2	State Land Acquisition Act 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 acquisition of private assets.
5	Jammu and Kashmir Common 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. There is no requirement of common land for this sub-project. Therefore, its not applicable.

3.4 Other Central and State acts which may be applicable in the Sub-project:

- 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 Project Impact Area

6.1 Physical features

Jammu district is situated in the sub- mountainous region and at the foothills of the Himalayas. The northern and the north-western areas form a part of the Himalayan foothills with some low-lying ridges, strikes, and transverse valleys. The hills, in general, have their southern slope comparatively gentler than the northern prominent hill scraps. The hills gradually merge in plains where the topography is gently undulating and flat. The mean sea level increases from 325 meters at Jammu to 1,207 meters at Kalidhar near ChaukiChaura.

6.2 Location and size

Jammu district is located between 74°-24" and 75° -18" east longitude and 32°-50" and 33°-30" north latitude. It is bounded in the north and northeast by the tehsils of Reasi and Udhampur district, in the east southeast partly by tehsil Ramnagar of Udhampur district and Samba district, in south and south-west by Gurdaspur and Sialkot district of Rawalpindi (Pakistan) and in the north-west by tehsil Nowshehra of district Rajauri and parts of tehsil Bimber now under the occupation of Pakistan.

Jammu is the most populous district of the State. Having recorded a population of 1,529,958, it accounts for 12.16 percent of the total population of the State and ranks first in terms of population. It encompasses an area of 2342 sq. km and thus the density i.e population per sq. km works out to 653. Barring Srinagar, all other districts have recorded lower density than that of Jammu.

6.3 Physiography

The district has been divided into four sub-micro regions based on geophysical conditions of the district, the details of each region are given below:

Jammu Siwalik West

The region is located in the north-western corner of the district forms a part of the slopes of Siwalik Range which run at the top of the district.

The area is comprised of the lower hills of Siwalik which are locally called Kalidhar mountains which separate the district Jammu from district Rajauri. The road leading to Rajauri and punch districts pass through the Kalidhar mountains. Because of the

² Source: https://censusindia.gov.in/2011census/dchb/DCHB_A/01/0116_PART_A_DCHB_Jammu.pdf

irregular and uneven topography, the land is full of rivers / nallas. The forest areas are full of pine trees, shisham, and a variety of shrubs. The average height of the region is around about 608 meters with Kalidhar peak rising as high as 1024 meters. The main river of the sub-micro region is Chenab which enters just in the right-hand top corner of the region and leaves to enter the next region only after traveling about 4 Kilometres. The next important river of the region is Munawar Wali Tawi followed by Taooi Khad. Apart from these, there are also some small rivers /rivulets and streams flowing through the region. The area of the region is not easily accessible being comprised of undulating topography. However, the important road joining the districts of Rajauri and Punch passes through the Sub-micro region and connecting many places en -route.

Chenab -Tawi Plain

The region is located around the two main rivers of the district viz; river Chenab and river Tawi and includes plain areas only. The region is spread over the south-western and middle parts of the district. The region occupies a large part of tehsil Jammu but areas of Akhnoor and Ranbirsingh Pora tehsils also fall in the sub-micron region.

The region has an international boundary with Pakistan in the south and south-western parts and territory illegally occupied by Pakistan is in the west. District Udhampur touches the region in the north near the area where the river Chenab enters the district. The region is situated at an average height of below 750 meters having an undulating area in the north-eastern side and plain areas in the south-west which is very fertile because the major rivers accompanied by their tributaries bring the fertile soil with their waters which get settled in the plain areas. The important rivers which flow in the region are Chenab, Tawi, and Munawar WaliTawi. But there are also some streams forming tributaries of the above rivers during the rainy season. The accessibility to the sub –micro-region is very good with almost every place connected with one type of road or the other. National Highway 1A enters the region near

Bari- Brahmana, and leaves for the district Udhampur in the north. A broad-gauge railway line also runs in this region Up to Jammu in the southern parts.

Jammu Siwalik East

The region forms a part of the region of range, running in the northern part of the district. The region is split into two by the river Chenab and the plain areas on either side of it. The region is spread over the upper north-eastern parts of the district, with an average height of about 600 meters. The height of about 600 meters in the north gets gradually

merged with the plains, forming a sub-montane belt. The seasonal torrents which are large in number flow down the slopes of Siwalik and bring with the slit, gravel, boulders, etc which they spread in plains.

The main river of the region is Tawi Basantar and Devak, besides some small and large perennial and non-perennial streams and rivulets originating from Siwalik. Forests are spread over a large part of the region leaving a few patches mostly on the banks of rivers/streams for cultivation. The accessibility to the region cannot say to be good. The rainy season makes accessibility more difficult.

Jammu Foot – Hill Plain

The sub-micro region is situated in the southernmost part of the district and has undulating areas which are contiguous with the Punjab plain in the south and Siwalik range in the north. The region has an international boundary with Pakistan on its west and south whereas district Samba falls towards its south-eastern side. Chanab-Tawi Plain Jammu Siwalik East is located on its north-western and north-eastern sides respectively.

The sub-micro region is spread over a major part of tehsil Ranbirsingh Pora, the whole of Bishna, south-western part of Samba tehsil of Samba district, and south-eastern parts of Jammu where the maximum contour height does not exceed 500 meters. The land is very fertile and cultivation is plenty. There are no forests in the region but the growth of shrubs and scrubs is dense. The main rivers of the sub-micro region are the Basantar river and AikNalla which along with many tributaries spread sand, gravel, loamy soil, and boulders in the plain areas of the region.

The accessibility to the region is exceptionally good as compared to other areas of the district with National Highway No.1A passing from east to west and connecting many towns and villages of the areas. Apart from this, there are also some other roads of varying specifications giving access to its important places. A broad-gauge railway line also passes through this region.

6.4 Drainage

To make the environment clean, healthier, and hygienic, the Government of Jammu and Kashmir decided to create a new department that will address all the problems coming out of the wastewater of households. In this regard, in the year 1979 U.E.E Department was formed headed by Chief Engineer. J&K UEED Srinagar with one Circle office at Srinagar and one Circle office at Jammu.

The major rivers flowing through the district are Chenab, Jammu Tawi, Munawar Tawi, and Basantar. These rivers act as major drainage lines in the area and enter the outer plain part of the district. The Munawar Tawi coming from the Rajouri district and drains a very little part in the extreme west of the district and then enters Pakistan. The Chenab River enters from Udhampur and drains the central part of the district and here it divides into many distributaries before leaving the district. Jammu Tawi River coming from Doda district and drains Jammu district. Other than these rivers, innumerable seasonal nalas traverse the area which is generally boulder laden and have broad shallow channels having water only for short time after rains. All major rivers coming from the hills pass through Outer Plains and enter the Pakistan territory.

6.5 Climate

The climate of the district is more or less similar to that of the adjoining districts of Samba & Kathua and some districts of Punjab. The only difference is that the district lies at the terminus of a series of mountains. May, June, and July are the hottest months with mean daily temperature ranging between 24.9°C and 41.7°C and reaches up to 47°C. The nearest meteorological observatory is located in Water Management and Research Centre (SKUAST) at Pounichak and taken as representative of the study area. The sub-humid to sub-tropical district receives a normal annual rainfall of 1246 mm. January is the coldest month and the temperature comes as low as 1.3°C. Most of the rainfall is received through the southwest monsoon which lasts from the last week of June to the end of September. During the remaining period, rainfall is sporadic and scanty.

6.6 Soils

Two types of soils are mainly observed in the district viz. Litho sol and Alluvial soil and description of soils are given below.

1. Lithosols

These soils are found on steep slopes in the foothills of the Jammu district. The soil is gravelly loam to gravelly silty loam. The pH of the soil is nearly neutral in nature i.e. 7.1 to 7.8. The soils have a good water holding capacity.

2. Alluvial soils

The alluvial soils are mostly found in the flood plains of Ravi, Chenab, Jhelum, and Sind rivers and their tributaries. The soils are found in the plains of the Jammu district. These soils have been divided into two groups viz. old alluvial and new alluvial. The old alluvial soils are calcareous and neutrals to alkaline in their reaction (pH 7.6- 8.4) and low to medium in organic

carbon and nitrogen. The pH of the new alluvial soil ranges between 7.0-7.7 and is calcareous with low in organic carbon and nitrogen

6.7 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 the 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 electricity.

6.8 Population

The total population of the district is 1,529,958 constituting 813,821 males and 716,137 females.

6.9 Sex Ratio

As per census 2011, the sex ratio was worked out to be 880.

6.10 Workers

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

6.11 Literacy

From amongst the sub-districts, Jammu has registered the highest literacy rate at 85.10 percent which is higher than the district average

6.12 Cropping Patterns

The main food crops of the rabi season are wheat grain and barley and those of Kharif season rice, maize, and bajra. The details of these food crops during 2008-09 are given in the following table.

Table 11: Cropping Patterns

Sl.No.	Name of the Food Crops	Area Sown (000 Ha)
1.	Wheat	83005
2.	Rice	47993
3.	Maize	23536
4.	Bajra	7453
5.	Pulses	4877
6.	barley	345

7.	Fruits & Vegetables	784
8.	Condiment & Spices	85

Sowing of high-yielding varieties seeds of wheat, paddy crops continued extensively during the year 2008-09. Seeds of high-yielding varieties issued to farmers tremendously pushed up the yield of crops, namely; paddy, maize, wheat, etc.

6.13 Irrigation

The major sources of irrigation in the Jammu district are surface and groundwater sources. As per Digest of Statistics 2009-10, canal irrigation accounts for 567.26 Sq. Km., pond irrigation accounts for 0.07 Sq. Km. The area irrigated by wells 15.69 Sq. Km. The net area irrigated by other sources is 41.05 Sq. Km. In the Jammu area, two major irrigation schemes exist. 1.Ranbir Canal 2.New Pratap Canal. In Akhnoor Tehsil, the New Pratap canal is the major source of irrigation purpose.

In the Kandi area, there is water scarcity where ponds are playing an important role

6.14 Animal Husbandry

Livestock is playing a very vital role in the economic development of the State as well as the Jammu division. The data relating to the different activities being performed by the department are collected from the Directorate of Sheep and Animal Husbandry. The rearing of livestock is a very critical and core activity in the economic profile of the state.

Although it is adopted as a subsidiary occupation by the majority of the rural population, yet it constitutes a vital activity from the standpoint of the economic welfare of the farmers. Moreover, the nomadic, Gujjar, and Bakerwal populations depend exclusively on sheep rearing for their livelihood. Livestock activity has a contribution of about 11% in the Gross Domestic

Product of the state. It offers promising employment opportunities and handsome economic returns especially in rural mountainous areas of the State. Most of the livestock population, particularly sheep have been transformed into high quality by using the latest insemination techniques and through improved quality livestock imported from other countries. Still, a good portion of livestock is local and of inferior quality which needs improvement in both quality and quantity. Various steps are being taken to improve the quality and quantity of livestock

It may, however, be pointed out that the bulk of our livestock population is migratory and is recorded on a de-facto basis. There is a scope of good potential for livestock rearing in the district. As per the 2007 Livestock census, there were 189926 cattle, 188513 buffaloes, 40668 sheep, 112747 goats, 6041 horses, 78 ponies, 200 mules, and 42 donkeys.

6.15 Socio-Economic Profile of Sub-Project villages

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

Village Main Bajalta- Bain Majialta is a medium size village located in Jammu Tehsil of Jammu district, Jammu and Kashmir with a total of 278 families residing. The Bain Majialta village has a population of 1636 of which 854 are males while 782 are females as per Population Census 2011.

In Bain Majialta village population of children, age 0-6 is 242 which makes up 14.79 % of the total population of the village. The Average Sex Ratio of Bain Majialta village is 916 which is higher than the Jammu and Kashmir state average of 889. Child Sex Ratio for the Bain Majialta as per census is 921, higher than the Jammu and Kashmir average of 862.

Bain Majialta village has a lower literacy rate compared to Jammu and Kashmir. In 2011, the literacy rate of Bain Majialta village was 65.57 % compared to 67.16 % of Jammu and Kashmir. In Bain Majialta Male literacy stands at 73.08 % while the female literacy rate was 57.36 %.

Village Chak Chilah- Chak Chilah is a small village located in Jammu Tehsil of Jammu district, Jammu and Kashmir with a total of 22 families residing. The Chak Chilah village has a population of 109 of which 58 are males while 51 are females as per Population Census 2011.

In Chak Chilah village population of children, age 0-6 is 18 which makes up 16.51 % of the total population of the village. The Average Sex Ratio of Chak Chilah village is 879 which is lower than the Jammu and Kashmir state average of 889. Child Sex Ratio for the Chak Chilah as per census is 1250, higher than the Jammu and Kashmir average of 862.

Chak Chilah village has a higher literacy rate compared to Jammu and Kashmir. In 2011, the literacy rate of Chak Chilah village was 71.43 % compared to 67.16 % of Jammu and Kashmir. In Chak Chilah Male literacy stands at 82.00 % while the female literacy rate was 58.54 %.

Badgah Village- Badgah is a medium size village located in Jammu Tehsil of Jammu district, Jammu and Kashmir with a total of 48 families residing. The Badgah village has a population of 307 of which 165 are males while 142 are females as per Population Census 2011.

In Badgah village population of children, age 0-6 is 45 which makes up 14.66 % of the total population of the village. The Average Sex Ratio of Badgah village is 861 which is lower than the Jammu and Kashmir state average of 889. Child Sex Ratio for the Badgah as per census is 957, higher than the Jammu and Kashmir average of 862.

Badgah village has a higher literacy rate compared to Jammu and Kashmir. In 2011, the literacy rate of Badgah village was 77.48 % compared to 67.16 % of Jammu and Kashmir. In Badgah Male literacy stands at 84.51 % while the female literacy rate was 69.17 %.

Aitham Village- Aitham is a medium size village located in Jammu Tehsil of Jammu district, Jammu and Kashmir with a total of 322 families residing. The Aitham village has a population of 1688 of which 884 are males while 804 are females as per Population Census 2011.

In Aitham village the population of children with age 0-6 is 248 which makes up 14.69 % of the total population of the village. The Average Sex Ratio of Aitham village is 910 which is higher than the Jammu and Kashmir state average of 889. Child Sex Ratio for the Aitham as per census is 1033, higher than the Jammu and Kashmir average of 862.

Aitham village has a higher literacy rate compared to Jammu and Kashmir. In 2011, the literacy rate of Aitham village was 74.31 % compared to 67.16 % of Jammu and Kashmir. In Aitham Male literacy stands at 83.86 % while the female literacy rate was 63.57 %.

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

Project Road starts from Jammu – Srinagar National Highway (NH-44) and is proposed to be upgraded Up to km 19th of Sidra Saruinsar Road. The road is connected with Mansar village at Dhar Road, this road has importance from the pilgrim, tourist as well as traffic point of view. The 7m carriageway is available Up to km 5 and thereafter it is an intermediate lane (5.5m carriageway) road. Local Traffic mostly flows in this short stretch i.e., up to km 5. The Road mostly covers hilly terrain. Existing Pavement consisting of 252 mm Sub Base, 392 mm Base Course, 83 mm BT surface on an average. There is also a wildlife sanctuary that exists namely the Saruinsar Mansar sanctuary which starts from Km 18.5 (Existing Chainage) and continued till the end of the road.

Since the road serve to numerous villages besides serving tourists. Without the proposed sub-project, it comes out during different meetings that cab drivers are avoiding the tourist destinations which is direct loss to the local business houses which mostly depend on the tourists in the Mansar and Saruinsar locations. Further, it is hilly road and have lot of unmanaged curves which causes number of accidents frequently.

5.1.2 ‘With’ Project Scenario

After the completion of the proposed sub-project, tourist flow will increase in the area. Secondly, as per the DPR 108 number of sharp curves will be developed with higher radius curves within the available RoW. One major junction at ch. .000 km with NH 44 will also be developed besides developing 25 other minor junctions. Improvement of curves and junctions will avoid the accidents which frequently occurred on this road. The proposed sub-project will also improve and develop HP culverts 66 in number, Slab culverts 27 and 04 bridges. It can be said that the proposed sub-project will improve the socio-economic conditions of the locals.

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 PIU and PMU, JTFRP (Jammu division). Further, same has been confirmed by Project Manager (Division Jammu) that the proposed to be rehabilitated in the available RoW which is 15.00 meters and encumbrance free (annexure 4).

6. Stakeholder's Consultation

Stakeholder's Consultation is concerned with involving, informing, and consulting the public in planning, management implementation, and other decision-making activities. It tries to ensure that due consideration is given to public values, concerns, and preferences when decisions are 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 social impacts.

6.1 Identification of Stakeholder

Stakeholder 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 10.7.2019 and 20.12.2020. This was the first step to identify stakeholders who will be involved in the consultative processes. Design of the project along with report of revenue department was shared with the locals and Gram Sabha. They were consulted and transect walk also done for identifying stakeholders. Since the sub-project does not have any adverse impact in terms of land or asset acquisition, therefore, the stakeholders were the people of the Project corridor, Gram Panchayat, PIU and PMU.

6.2 Objective of Stakeholder's Consultation

The main objective of this exercise is to inform stakeholders about the project and its likely effects, which in turn would incorporate their inputs, views, and concerns, and thus enable their views to be taken into account during the decision-making. 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.
2. Reconnaissance survey and transect walks.
3. Involving Gram Panchayat in the consultations.
4. Sharing of project design and revenue record with the locals.
5. Understanding their needs and requirement.
6. Collection of Baseline information.

6.4 Details of Public Consultation in sub-project road

Public consultations had been organised to disseminate the project concept and plan among the stakeholders. Consultations were conducted successfully with the people of Sidhra, Aithem, and Pargalta villages. Social Safeguards Specialist (PMU) organised public meeting on 10.7.2019 and 20.12.2020. The objective of conducting consultation was to engage locals in the project activities, sharing information with them and inclusion of their inputs in the preparation of SMP (annexure 7).

6.5 Information Shared

The following information was shared with the people:

- Project design, its source of assistance and its implementation/execution etc.
- Land Requirement and available revenue record/report.
- Information on perceived losses from the proposed sub-project during the execution stage in terms of inconvenience to the public etc.
- Problems of transportation.
- Proposed Grievance Redressal Mechanism.
- Occurrence of disaster like floods, cloud burst, land slide in past.
- Social and Environment Policy of the World Bank.
- ESMP and its requirement.

6.6 Feedback received

During the consultation process about the proposed sub-project, people have expressed keen interest in the proposed sub-project. Major feedback was to provide protection walls wherever land cutting took place and improvement of curves to avoid accidents as the road is accident prone.

7. Analysis of Social Impacts

7.1 Impact on Land

The SIA study revealed that the sub-project does not require any land acquisition for the proposed sub-project and there is no loss of tree and crops either. Translated copy of the report provided by the revenue department of J&K clearly mentioned that the RoW is 50 feet i.e., 25 feet on either side from the centre of the road (annexure 3). Project Manager (Transport) vide letter no PIU/T/ERA/2021/8, also confirmed that no additional land acquisition is required for the proposed work (annexure 4). The site visits during preparation of SIA report also confirms the same that PIU does not require additional land for the proposed sub-project.

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 Impacts on Structures

The proposed alignment is devoid of any structure i.e., residential, commercial, and religious or any CPR. Project Manager (Transport) vide letter no PIU/T/ERA/2021/865 dated 16.03.2021 issued a non-encumbrance certificate which confirms that RoW is free of encumbrance

(annexure 4). Same has been verified and confirmed by site visit to the sub-project. Strip plan of the road annexed as annexure 7 also confirm that there is no structure inside the alignment of the proposed road.

7.3 Impacts on Livelihood

There is no commercial structure 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 proposed sub-project 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.

The Social Management Plan suggests the mitigation measures needs to be adopted during execution to deal with the envisaged and unanticipated impact of the sub-project.

8.2 Objectives

The main objective of the Social Management Plan is to avoid and 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

It's imperative to discuss the design and technical proposal with the stakeholders in order to know their suggestions and inputs. In the pre-construction stage, it is also important to inform them about the project, its funding, land requirements, and applicable guidelines and policies of the funding agencies. It helps in ensuring engagement of the people in the sub-project activities.

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 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 Sidhra Saruinsar Road sub-project is based on the social impact assessment study during which site visits were carried out in the project corridor. Consultation and meeting were done with people and project design was discussed and evaluated on the ground. There would be no impact on the private assets, CPRs and any other religious property due to any project activities. The same has been confirmed by the project Manager vide letter no. PIU/T/ERA/2021/865 dated 16.03.2021 which confirms that 15.00 meters of RoW is available for construction and no private land is required for the proposal (annexure 4). 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, JTFRP.

8.5 Methodology for SMP Preparation

The comprehensive approach followed for the preparation of Social Management plan. It 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 which can crop up during 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 Key probable social issues and impacts that need to be addressed

- Loss of land due to land-slides resulting from hill cutting activities;
- Cracks in structures or damage due to construction work e.g. hill cutting activities;
- Temporary – short duration or prolonged disruption to services such as water supply, power supply;
- Temporary Disruption to access from houses or shops to the road;
- Temporary Disruption to traffic movement leading to time delays;
- Dust emissions during construction leading to impacts on crops and trees resulting in lower yield or growth;
- Likelihood of minor accidents due to the slight increase in traffic movement following road improvements;
- Possibility of gender-based violence arising from the influx of migrant labor for construction works – a common practice in Jammu & Kashmir; and
- Likelihood of spread of HIV/AIDS among construction workers and roadside community.

8.7 Social Management Plan (SMP)

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 the bid document.

Table 12: Social Management Plan

S.No	Project Phase/Activity	Issues/ Potential impacts	Proposed Mitigation Measures	Responsibility	Monitoring Agency/ Frequency
Planning/Pre-construction Phase					
1	Pre-construction phase	<ul style="list-style-type: none"> • Sharing of design with the community. • Utilization of private land temporarily if required • Provision of alternative access to the community for commuting wherever 	<ul style="list-style-type: none"> • Consultation with local community and stakeholder engagement. • Written consent from the community or owner of the land required for stocking construction material temporarily. • Involving locals (Gram Sabha) wherever any issue arises. 	Contractor	PIU

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S.No	Project Phase/Activity	Issues/ Potential impacts	Proposed Mitigation Measures	Responsibility	Monitoring Agency/ Frequency
		<p>required.</p> <ul style="list-style-type: none"> Restoration and relocation of Common Property Resources if any 			
Construction Phase					
2	Influx of labor	<ul style="list-style-type: none"> Construction Camp Locations Selection, Design, and Lay-out. Conflict with the community due to social and cultural differences with the host community. The potential impact of spreading infectious diseases from labor to the local or vice versa. Possibility of Sexual abuse and assault in the labor camps or otherwise. Drug abuse, gambling, etc. 	<ul style="list-style-type: none"> Minimize labor influx as much as possible by engaging the local labour force. Ensure labor camps for the labor (Away from religious places and localities to the extent possible). Awareness of the health and sanitation for the labor. Ensure the least contact between the host community and the labor. Awareness of sexual assault & drug abuse. 	Contractor	PIU/ PMU Monthly Monitoring
		<ul style="list-style-type: none"> Facilities for the Labour in camp and on the worksite 	<ul style="list-style-type: none"> Providing accommodation facilities to the migrant laborers with proper ventilations. Provision for safe drinking water and appropriate cooking arrangement at labor camps; Provision of Separate toilet and bathing facilities for men and women 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. 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. 	Contractor	PIU/ PMU Monthly Monitoring

Social Impact Assessment Report

S.No	Project Phase/Activity	Issues/ Potential impacts	Proposed Mitigation Measures	Responsibility	Monitoring Agency/ Frequency
			<ul style="list-style-type: none"> • Provision of prayer rooms as per the religious beliefs of the workers. • Safe storage facilities for the gas cylinder, petroleum, and other chemicals, used by laborers. • Proper solid waste collection and disposal system at the camp site. • The camp should have proper security arrangements, like a Security fence. • Preparing a code of conduct for the migrant workers. • Conducting awareness programme about sexually transmitted diseases among the migrant workers, 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. • 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. • Labour Registration. • Awareness program for labor rights • No employment of child labor. 		
		<ul style="list-style-type: none"> • Registration of Complaints received from labor. 	<ul style="list-style-type: none"> • Arrangement to register and redress the grievance of workers. • Grievance Redressal System for the project to address such issues including sexual 	Contractor	PIU/ PMU Monthly Monitoring

Social Impact Assessment Report

S.No	Project Phase/Activity	Issues/ Potential impacts	Proposed Mitigation Measures	Responsibility	Monitoring Agency/ Frequency
			harassment at the workplace		
		<ul style="list-style-type: none"> Equality of opportunity to work. Equal Pay for equal work Preference to the Women Laborers 	<ul style="list-style-type: none"> To be ensured throughout the project cycle. Maintenance of payment registers by the contractor. 	Contractor,	PIU/ PMU Monthly Monitoring
3	Community Health and Safety	<ul style="list-style-type: none"> Injury & sickness due to construction work and movement of heavy vehicles, contamination, or other natural or human-made hazards. 	<ul style="list-style-type: none"> Provision of access to the community, shops, religious places during the construction phase. Better marking and signage. Provision of alternative transportation routes for vehicles and ambulances wherever required. Undertaking regular surveillance at the site to check on Hygiene conditions for disease control. Creating mass awareness on HIV and STDs and COVID-19. Ensure the least contact between the labor and the local population. Sharing grievance redressal system with the community and displaying contact numbers at the site to register any grievances due to the project. Contamination of water bodies due to stocking of construction material etc. Safeguarding pedestrians' safety including women, children. During construction of side, drains provide temporary/safe access to shops, kids, hospital/clinic, religious places, etc. Community Consultation 	Contractor	PIU/ PMU Monthly Monitoring
4	Occupational health and safety	<ul style="list-style-type: none"> Injury and sickness of labor 	<ul style="list-style-type: none"> Provide training on health and safety to all the workers. Provide PPE to workers as per work requirements. Regular checking of body temperature and other symptoms among the laborers for COVID-19 	Contractor	PIU/ PMU Monthly Monitoring

Social Impact Assessment Report

S.No	Project Phase/Activity	Issues/ Potential impacts	Proposed Mitigation Measures	Responsibility	Monitoring Agency/ Frequency
			<p>and maintaining a register.</p> <ul style="list-style-type: none"> • Awareness program on COVID-19. • Provision of hand sanitizer, masks in the labor camps and on the sites. • Displaying of COVID-19 help 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 Violence	<ul style="list-style-type: none"> • Sexual Exploitation and Abuse (SEA) • Workplace Sexual Harassment • Human Trafficking • Non-SEA 	<ul style="list-style-type: none"> • Awareness program for the Contractors, Local Communities, and laborers on national laws. • Introducing a worker's code of conduct. • Displaying of various legal provisions on-site, in labor camps, and at prominent locations in the project area. • Ensure that complaints of GBV are registered and confidentially maintained in a register. • Strict code of conduct for 	Contractor	PIU/ PMU Monthly Monitoring

S.No	Project Phase/Activity	Issues/ Potential impacts	Proposed Mitigation Measures	Responsibility	Monitoring Agency/ Frequency
			workers with no tolerance for physical or verbal abuse of women or children.		
Post Construction Phase					
6	Rehabilitation of site used for camp, storage etc.	<ul style="list-style-type: none"> Handing over temporarily used private/ community land to the landholders/ community by the contractor without restoration work and payment of dues/ lease amount. Non-removal of debris and other construction material from the site. 	<ul style="list-style-type: none"> Consultation with the private party or Community and restoration of their land. Removing extra left-over construction material from the site after civil work. Payment of lease amount/rent, if any due, to the private party or community for utilization of their resources. 	Contractor	PIU/PMU Within one Month

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 for 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 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 some 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 womenfolk 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. Ensure that the women are consulted and invited to participate in group-based activities, to gain access and control over the resources.
- 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 a 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 to help them have access to the benefits of project activities. The construction contractors set up their construction camps on identified locations, where the labor force required for the construction activities will be provided with temporary residential accommodation and other necessary infrastructure facilities.

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 for 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 Labor:** 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.
- Additional measures can aim to reduce incentives to engage with the local community by providing workers with the opportunity to spend their time off away from the host community, where feasible with a small transport allowance, ideally allowing workers to regularly return for brief visits to their families, spouses, and friends, or to visit nearby urban centres that provide a variety of legal social opportunities. For workers who need to travel further, it may be attractive to forego weekends off in exchange for longer breaks that would allow for such home leave travel

8.9 Labour influx and Labour Management

Since the construction activities are mostly labour-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 in the 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 a COVID-19 safeguards measures.
- **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 on 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 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, non-toxic materials;
- Food preparation tables are equipped with a smooth, durable, easily cleanable, non-corrosive 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
- Information and awareness of communicable diseases, AIDS, etc. shall be provided to workers.

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 fulfilment 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 policies and procedures, Director Safeguards through social expert 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 expenses. The committees' composition is detailed below:

10.1 Composition of 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 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 are 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 for 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 woman representative (Retired/ Development Professional/Academician)
- j. A PRI representative
- k. A representative of PAPs who can articulate well.

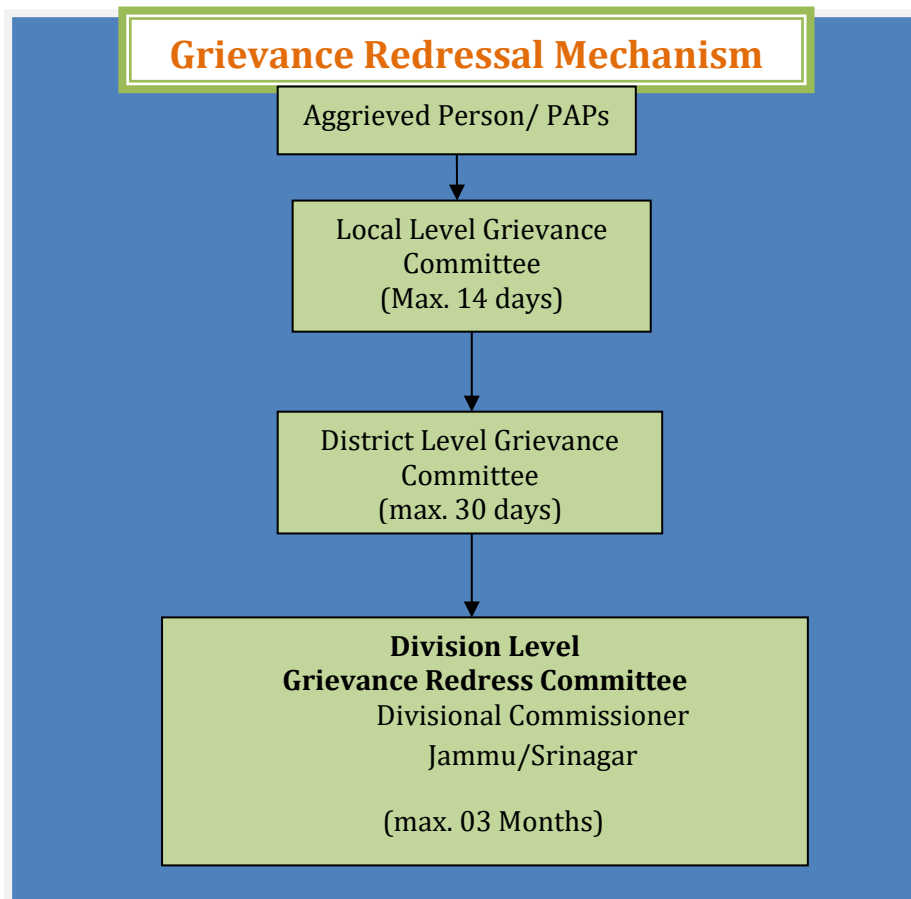


Figure 2: Structure of GRM

10.2 Approach to GRC

Project Affected Person/aggrieved party can approach GRC for the 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 an emergency.

4. Through PMU: PAPs/agrieved party can register/file grievance/s directly to the PMU also. PMU will enrout 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 <http://www.jkgrievance.nic.in>.

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, monitoring and implementation of SMP/ARAP wherever 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 acts and other provisions, 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 applicable to the project. For this sub-project, Only Social management Plan needs to be implemented during the execution of the sub-project.

Annexures

Annexure1: Environment and Social Screening Data Sheets

Part A: General information

1. Name of the sub-project	Improvement & Up-gradation of Sidhra- Surinsar road	
2. Type of proposed activity (tick the applicable option and provide details)		
• Road	<input checked="" type="checkbox"/>	√
• Bridge	<input type="checkbox"/>	-
• Fire Station	<input type="checkbox"/>	-
• Hospital/Health Facility	<input type="checkbox"/>	-
• Educational Institute	<input type="checkbox"/>	-
• Building for Livelihoods	<input type="checkbox"/>	-
• Flood Infrastructure Related	<input type="checkbox"/>	
• Other Public Building	<input type="checkbox"/>	-.
• Any Other (Please Specify)	<input type="checkbox"/>	-
3. Location of the proposed sub-project		
• Name of the Region	Kashmir (J&K State)	
• Name of the District	Jammu	
• Name of the Block	Nagrota	
• Name of the Settlement	Bajalta, Pargalta, Aitham Villages	
• Latitude	32°45'41.03"N at Sidhra (RD 0+000) to 32°41'53.06"N at Surinsar (RD 18+290)	

• Longitude	74°54'57.71"E at Sidhra (RD 0+000) to 75° 9'3.31"E at Surinsar (RD 18+290)
4a. Proposed Nature of Work (tick the applicable options)	
• Minor Repairs	-
• Major Repairs/Rehabilitation	-
• Upgrading/Major Improvement	√
• Expansion of the facility	-
• New Construction	-
• Any Other	-
4b. Size of the sub project (approx. area in sq. m/ha or length in m./km, as relevant)	18.290 km
5. Land Requirement (in ha./sq.m.)	
• Total Requirement	Nil. No land needs to be acquired as the road is being upgraded in the existing RoW.
• 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	9419187368
• E-mail Id	pmjkusdipjmu2@gmail.com
7. Screening Exercise Details	

• Date on which it was carried out	10 th July, 2019, 20.12.2020
• Name of the Person	`Vikash Sharma/ CharanJeet Singh
• Contact Number	+9419125803/9419893392
• 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 whole or part within 1 km of the following environmentally sensitive areas?			
a. Biosphere Reserve		No	-
b. National Park		No	-
c. Wildlife/Bird Sanctuary	Yes		The subproject terminates at the Km 18+290. The Surinsar Wildlife Sanctuary Gate begins at Km 18+550 onwards.
d. Wildlife/Bird Reserve		No	-
e. Important Bird Areas (IBAs)		No	-
f. Habitat of migratory birds (outside protected areas)		No	-
g. Breeding/Foraging/Migratory route of Wild Animals (outside protected areas)		No	-
h. Area with threatened/rare/ endangered fauna (outside protected areas)		No	-
i. Area with threatened/rare/ endangered flora (outside protected areas)		No	-
j. Reserved/Protected Forest		No	-

k. Other category of Forest	Yes		-
l. Wetland		No	
m. Natural Lakes		No	
n. Rivers/Streams	Yes		River Tawi is coming within the 1km of the project road at Bajalta and Chilah Sardan Nallah which is dry bed stream is coming within the 1 km of the project road
Question	Yes	No	Details
o. Swamps/Mudflats		No	-
p. Zoological Park		No	-
q. Botanical Garden		No	
2. Is the sub-project located in whole or part within 500 mts. of any of the following sensitive features?			
a. World Heritage Sites		No	-
b. Archaeological monuments/sites (under ASI's central/state list)		No	-
c. Historic Places/Monuments/Buildings/Other Assets (not listed under ASI list but considered locally important or carry a sentimental value)		No	
d. Religious Places (regionally or locally important)		No	-
e. Reservoirs/Dams		No	-
f. Canals		No	-

g. Public Water Supply Areas from Rivers/Surface Water Bodies/ 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 Required	No
2.	Environment Clearance Required	No
3.	Forest land Clearance/Diversion Required	No
4.	Tree Cutting Permission Required	No
5.	ASI (Centre/State) Permission Required	No
6.	Permission from ULB/Local Body/Department Required	No
7.	Any other clearance/permission required	Consent to Establish (CTE) and Consent to Operate (CTO) from SPCB will be required 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	√
Give the following details:	Private Land (sq.m/ha.)		Nil
	Govt. Land (sq.m/ha.)		Nil
	Forest Land (sq.m/ha.)		Nil
2. Does the proposed sub-project activity result in demolition/removal of existing structures?			
Yes		No	√
If so, give the following details:			
• Number of public structures/buildings			Nil
• Number of common property resources (such as religious/cultural/drinking water/wells/etc.)			Nil
• Number of private structures (located on private or public land)			Nil
3. Does the proposed project activity result in loss of crops/trees?			
Yes		No	√
4. Does the proposed Project activity result in loss of direct livelihood/employment?			
Yes		No	√
5. Does the proposed activity result in loss of community forest/pastures on which nearby residents/local population are dependent?			
Yes		No	√
If yes, give the details of the extent of area to be lost (in acres/hac).		-	
6. Does the proposed Project activity affect scheduled tribe/caste communities?			
Yes		No	√

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

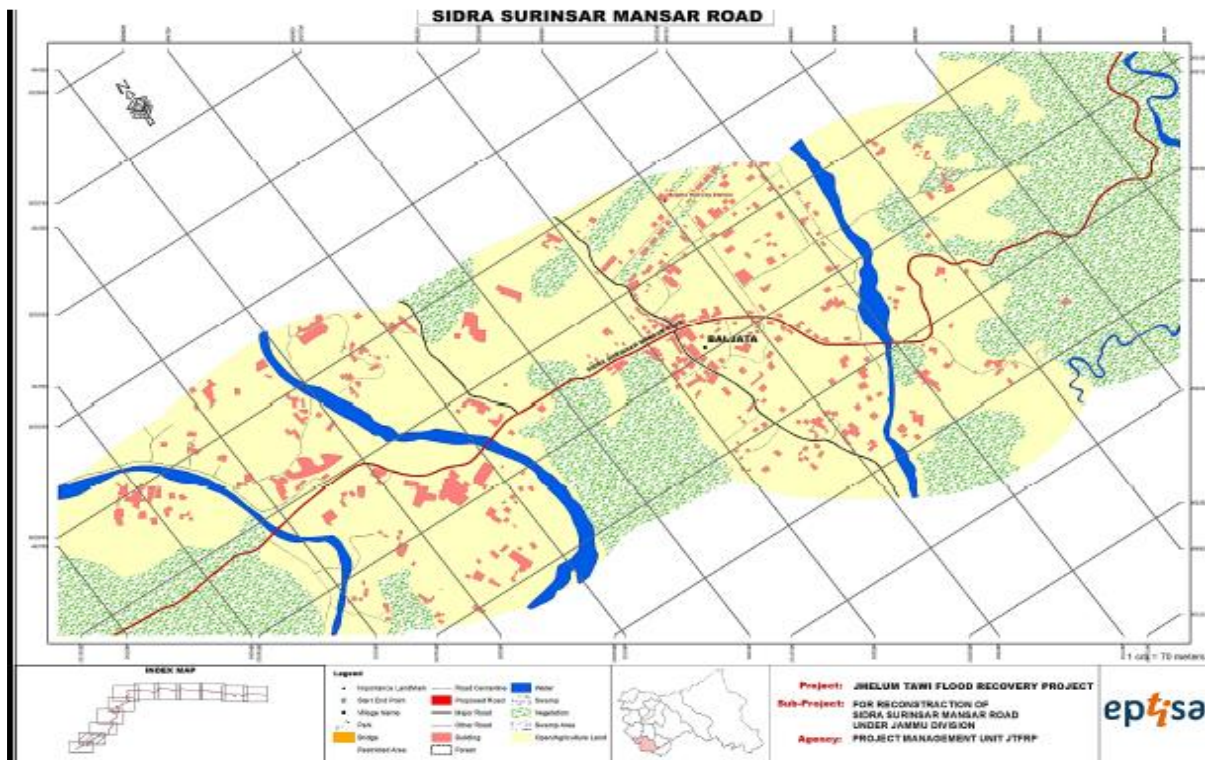
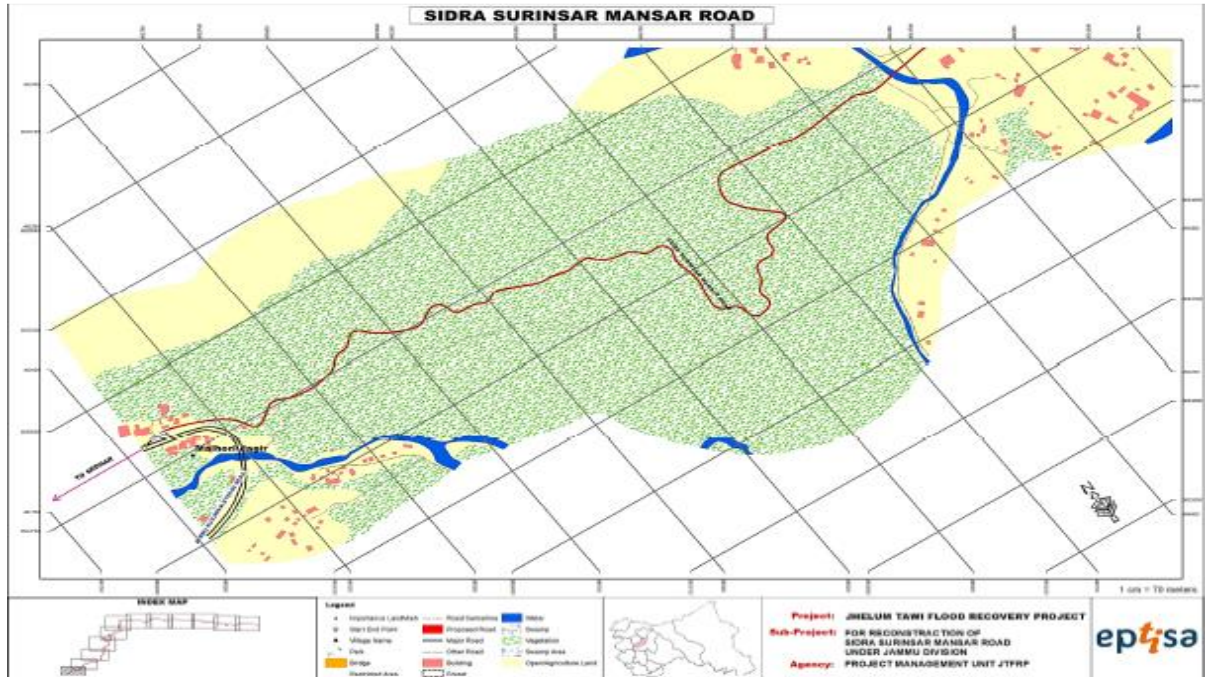
S.No.	Result/Outcome	Outcome
1.	Answer to all the questions is 'No' and only forest land is being acquired	No SIA/RAP required
2.	Answer to any question is 'Yes' and the sub-project does not affect more than 200 people (i.e. either complete or partial loss of assets and/or livelihood)	No Abbreviated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

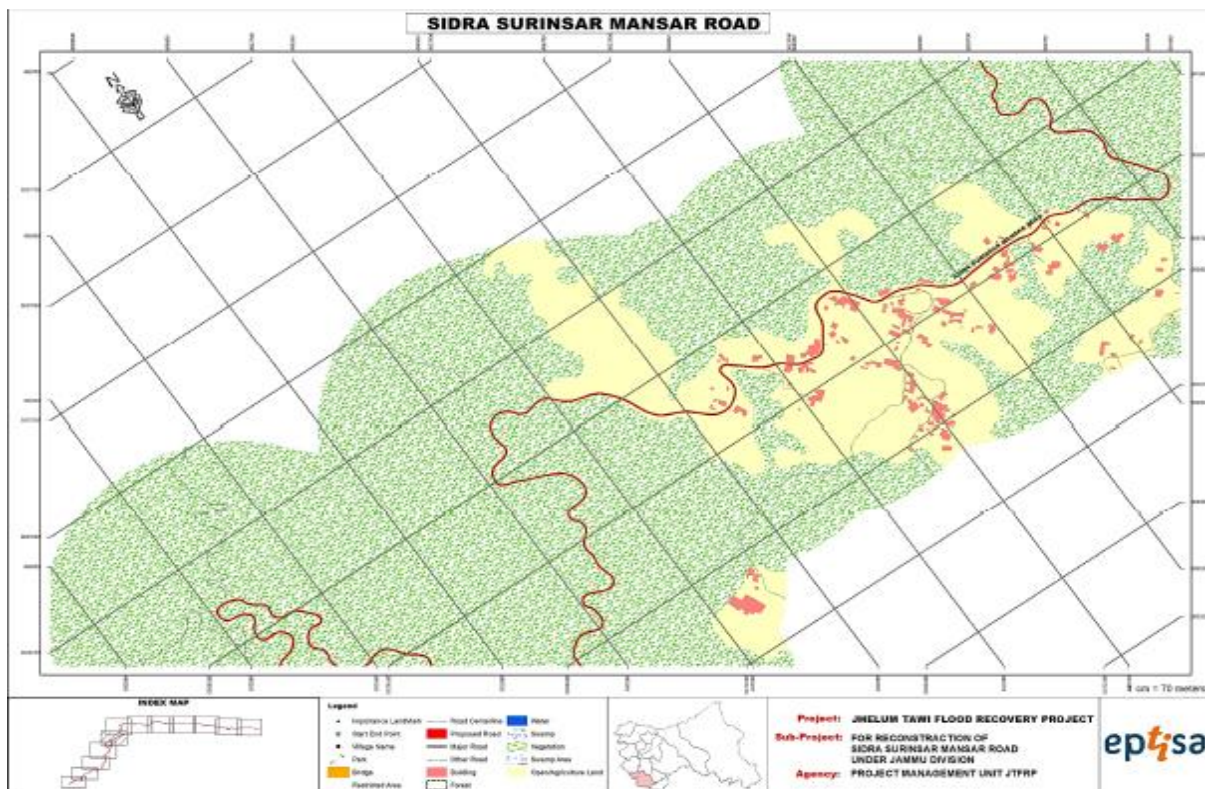
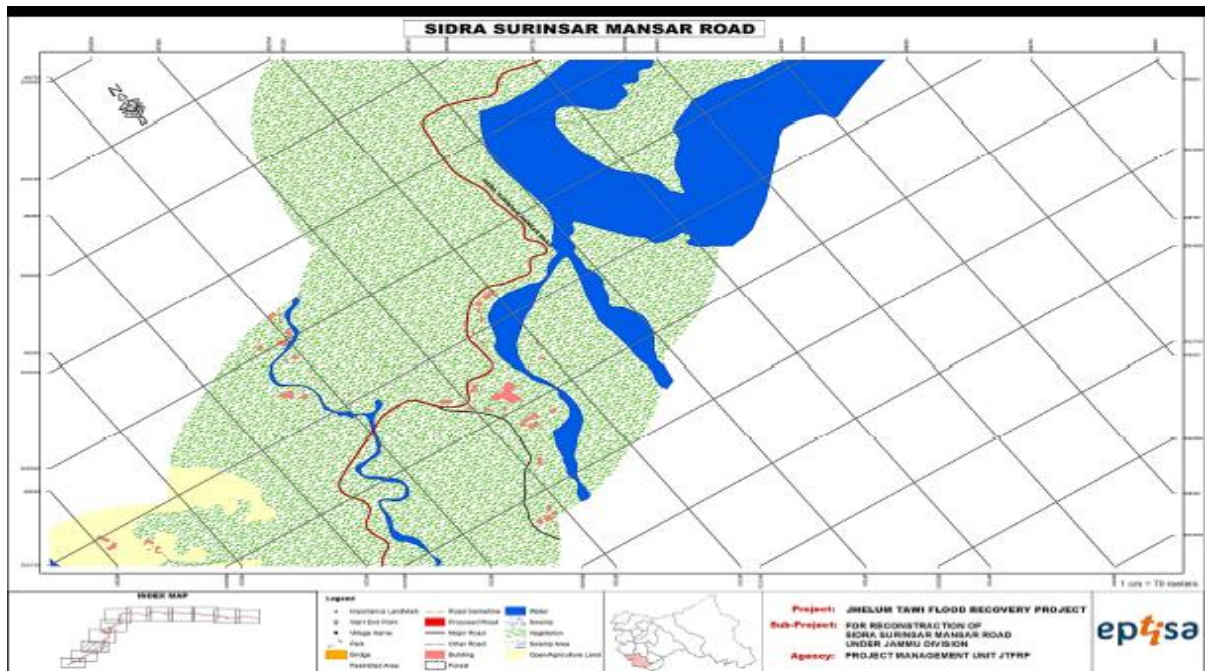
Outcome of Screening

As per the screening exercise, the proposed sub project does not have significant social issues. The proposed sub-project is only the Improvement & Up-gradation of the existing road and does not involve land acquisition of private or government land. Wherever the required land width is not available, the construction will be carried out in the available land width. Modification in the design has been completed as a part of the mitigation measures.

However, in order to assess the temporary impacts, existence of squatters and encroachers on the site SIA required for the proposed subproject. SIA study will also assist as tool for preparation of Social Management Plan for the sub-project.

Annexure 2:GIS MAPs of the Sub-Project Road





Annexure 3: Translation of RoW Certificate/Report

RoW certificate details issued by Land & Revenue department, UT J&K

As per report of Naib Tehsildar, Samba (copy enclosed) the road Sidhra to Surindar is 50 feet and also stand notified the Jammu & Kashmir prevention of Ribbon development act Svt 2007/1950 AD Act no: XXVI of Svt 2007 (1950 AD) ROW as 50' 25' on either side from centre of Road (copy enclosed).

Collector Land Acquisition
J&K ERA, Jammu

OFFICE OF THE DEPUTY COMMISSIONER, JAMMU

The Tehsildar,
Samba

No. DL 514/19.10.2006

Dated:- 27 -10-2006

Subject:-Right of way (ROW) of Sidhra Surinsar Road.

Sir,

The Collector Land Acquisition PWD has approached this office with the request that the Right of way (ROW) total width of Road leading from Sidhra to Surinsar is not forth coming from the office Records. He has further communicated that said Road was constructed some where in 1961-62 and its existing width might have been marked on Revenue Map (Latha) of the Patwar Haliqa available with your office.

As such you are requested to verify the relevant Revenue Record and furnish the detailed report alongwith its Tahsilhagra as well as Revenue papers direct to Executive Engineer PWD (R&B) Const. Div. No. IV Jammu for further necessary action at their end.

The copy of said Report shall be also sent to Collector Land Acquisition Jammu for necessary action.

Further, copy of referred letter dated 23.10.2006 is also enclosed for reference. Matter most urgent.

Yours faithfully,

Assistant Commissioner (R),
Jammu

Pls. To verify and report in respect of Revenue Map of Sidhra.

Collector Land Acquisition PWD, Jammu. This is in ref. to his No. LA/458-59 dated 30.10.2006.

Executive Engineer, PWD (R&B) Const. Div. IV, Jammu for inf. and n.a.

N-7 Concerned for verification and report in light of order of A.C.R. Jammu

Report in compliance to DC letter no. DCJ/CA/ACR/0607 dated 27/10/2006 submitted by Naib Tehsildar

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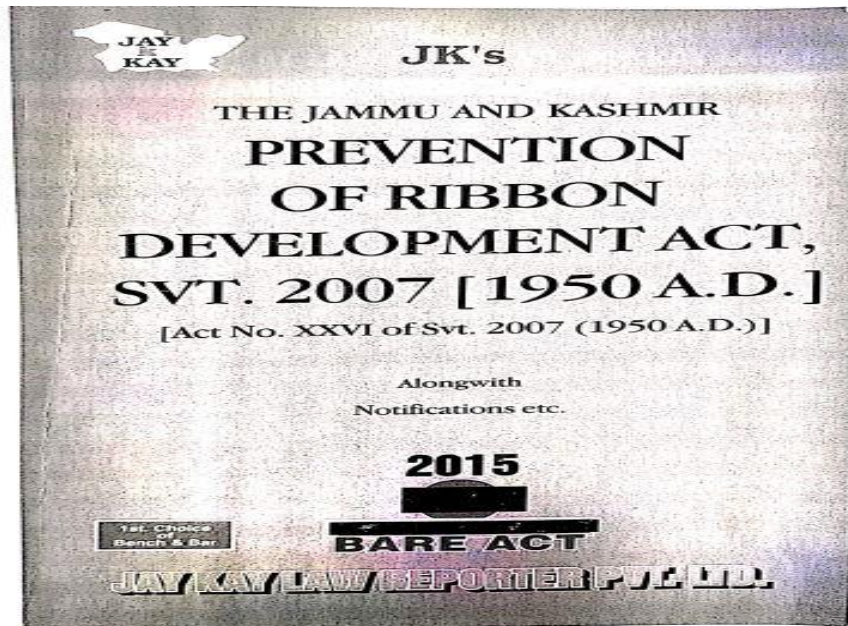
Submitt in original to the Teh (T) Saib, the report of the concerned Patwar Haldar. Hence compliance report is submitted.

16/11/06
Naib Tehsildar
(Bair Bahman)

Scanned by C

Annexure to the Report submitted by Naib Tehsildar

³ Translation of report submitted in Urdu is same as appendix B authenticated by Collector Land Acquisition, ERA, Jammu



S. No.	Description of Road.	Distance from centre line of road.
Major District Roads		
1.	Jammu Suriansar Road	25 Feet.
2.	Suriansar Mansar Road	... do.
3.	R. S. Pura Sachetghar Road	... do.
4.	Kalu Chak Purmandal Road	... do.
5.	Aghora Sarota Road	... do.
6.	Akhnoor Chhamb Road	... do.
7.	Patni Sannasar Road	... do.
8.	Thathri Kalotran Road	... do.
9.	Kishtwar Padder Road	... do.
10.	Reasi Arnas Road	... do.
11.	Ramnagar Dudoo Road	... do.
12.	Sudh Mahadev Dudoo Road	... do.
13.	Old Samba Kathua Road	... do.

1 Serial No. 12 added ibid.

Annexure 4: Encumbrance Free RoW Certificate issued by PIU



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



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 over from PW(R&B) Department. Further, no acquisition of land is required under the sub-projects:

S.N o.	Name of the road/Sub-project	Length	ROW information	Remarks
1	Sidhra-Surinsar road (Lot-1)	18.290 Kms.	15 m	It stands notified vide prevention of Ribbon development Act 2007, SRO 106 of 1969
2	Chirala Link Road	10.139 kms	10 m	Handing over note of Executive Engineer (PWD(R&B) Division Bhandarwah (Enclosed)
3	Malaini to Chakrabatti road	10.06 Kms	10m	-Do -
4	Deva Mai to Ohli Mandir Road	4.9 kms	6.0m	As per records 2.472 ha of land has been acquired from forest deppt. for 4 kms of road length (copy enclosed)
5	Anji Panasa Road	4.25 kms	6.0 m	Information provided by then SE/Nodal Officer vide email dated: 01-05-2019 (enclosed)
6	Tutan Di Khuei to Khada Madana Road	11.0 Kms	6.0 m	-Do -
7	Gulati to Shahdra Sharief road	27.280 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: *PM/T/ERA/2021/865*
 Date: *16.03.2021*

[Signature]
 Project Manager (Transport)
 J&K ERA, Jammu
T.O

Annexure 5: Newspaper Notification

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STATE TIMES • Monday • September 20, 2021

ERA 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 JKPC Building, Panama Chowk, Rail Head Complex, Jammu

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

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 no	Name of the Road	District	Length of the Road	Major settlements along the Road
1	Sidhra- Suinsar Road.	Jammu	18.290 kms	Bajalta, Pargalta, Chilah, Chak Chilah, Althem, Tutian Di Khui
2	Tutan Di Khuie to Khada-Madana Road	Jammu/ Samba	11.00 kms	Kanna, Chadgaal, Saandi, Degair
3	Ghulati to Shadra Shreif Road.	Rajouri	0 to 10 Kms and 15 to 32.28 Kms	Dehri Ralyot, Ghambeer Muglian, Bharot, Rajdhani, Shahdara Sharief
4	Malani to Chakrabatti Road.	Doda	10.059 kms	Malaini, Jahnana, Dranga, Pendku, Ghambeer Muglian, Mehrada
5	Chiralla Link Road.	Doda.	10.139 kms	Chiralla, Gosti, Rukali via Ponchai, 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.

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

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

अमर उजाला रविवार, 19 सितंबर 2021

ERA 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, JKPC Building, Panama Chowk, Rail Head Complex, Jammu

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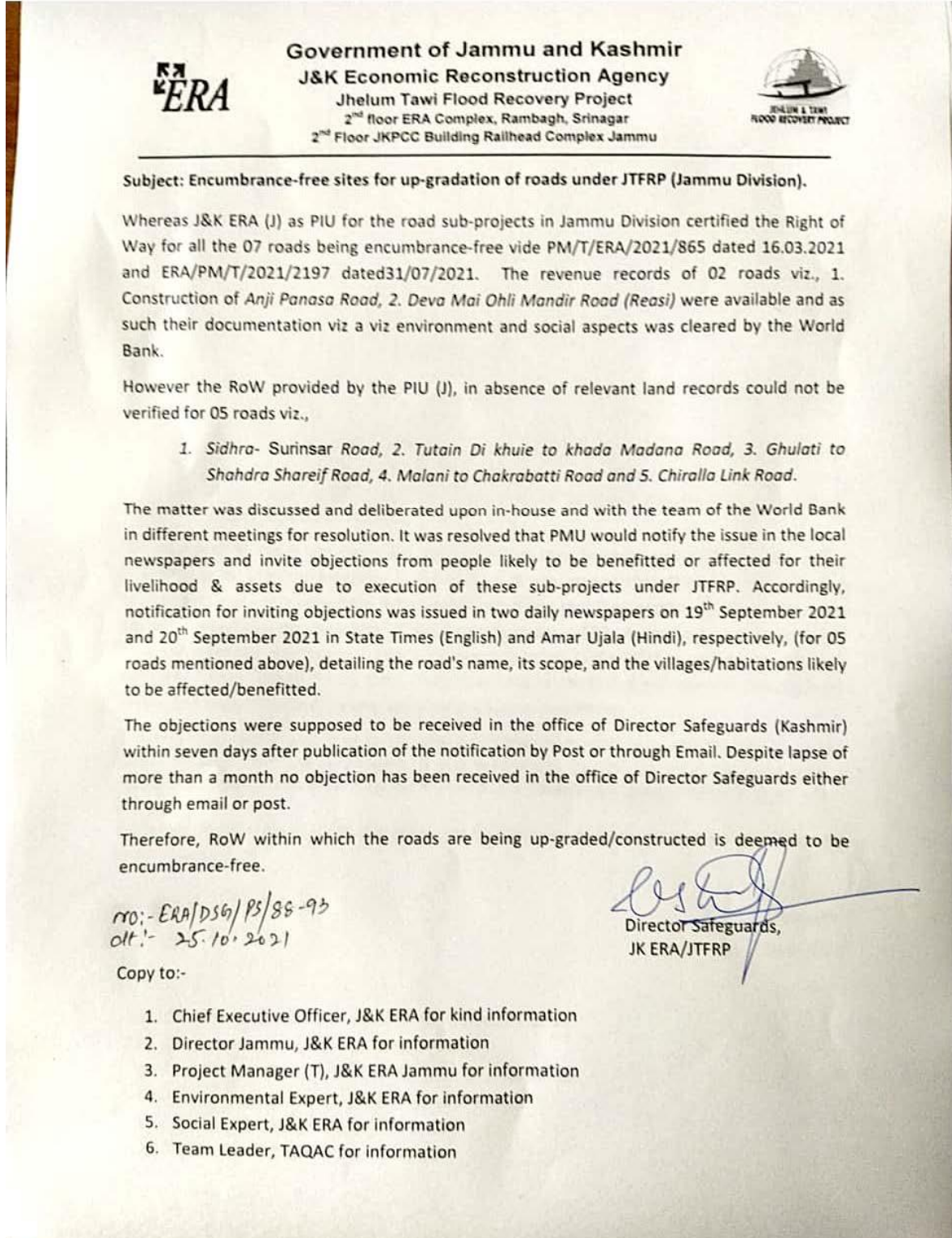
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4	Malani to Chakrabatti Road.	Doda	10.059 Kms	Malaini, Jahnana, Dranga, Pendku, Ghambeer Muglian, Mehrada
5	Chiralla Link Road.	Doda	10.139 Kms	Chiralla, Gosti, Rukali via Ponchai, Bhella, Bhalara

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.

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

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

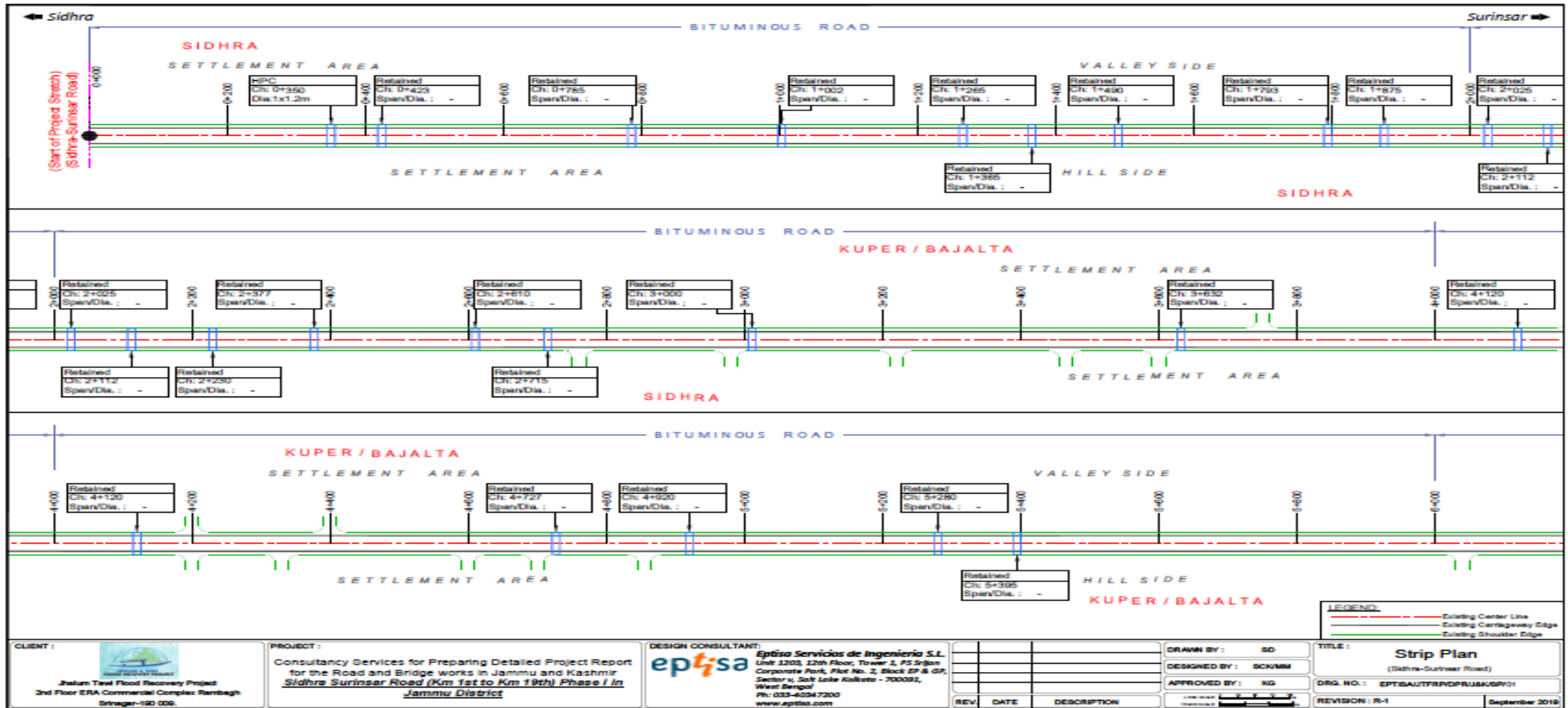
Annexure 6: Reconfirmation of RoW by PMU



Social Impact Assessment Report

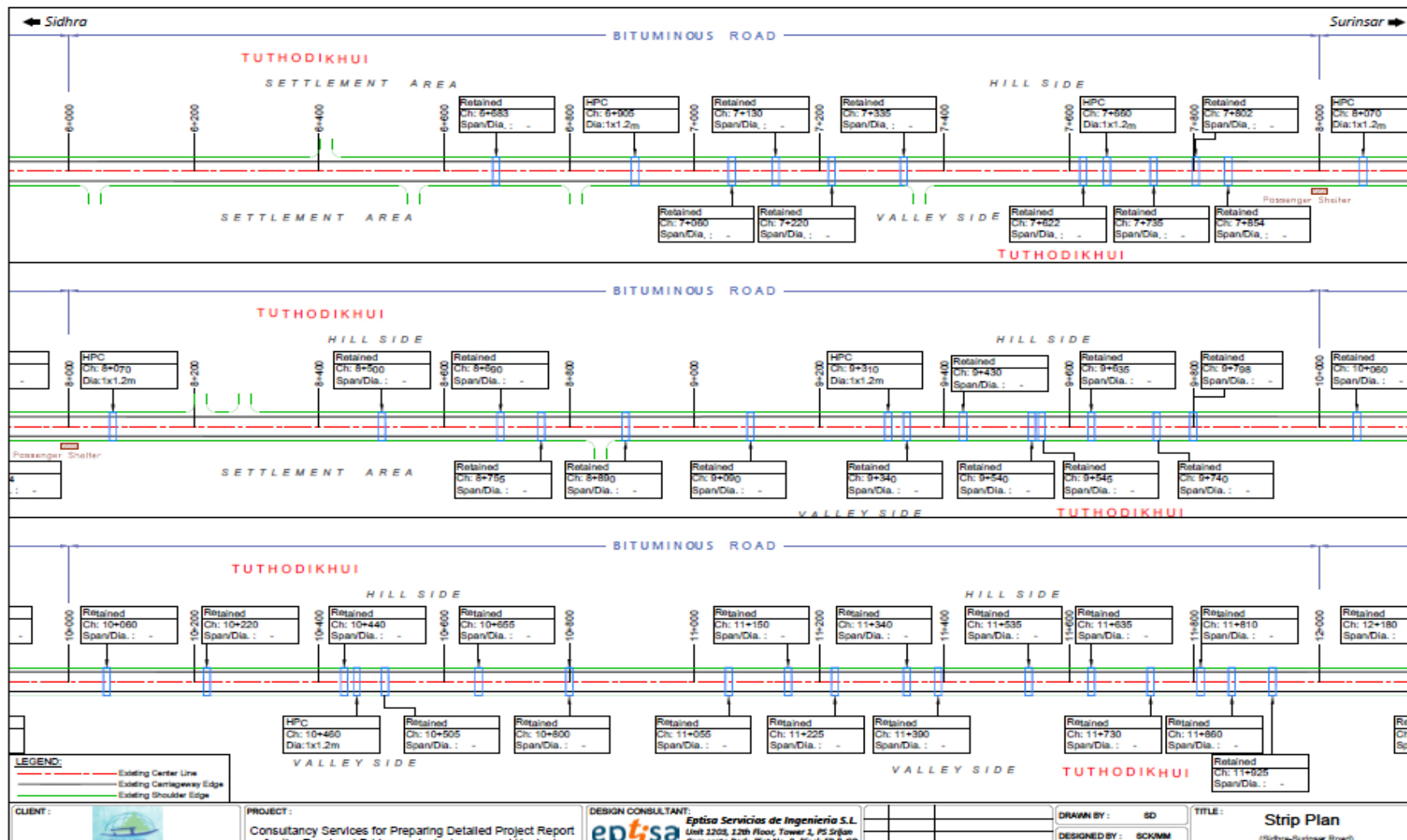
Annexure 7: Strip Plan & Profile

Strip Plan



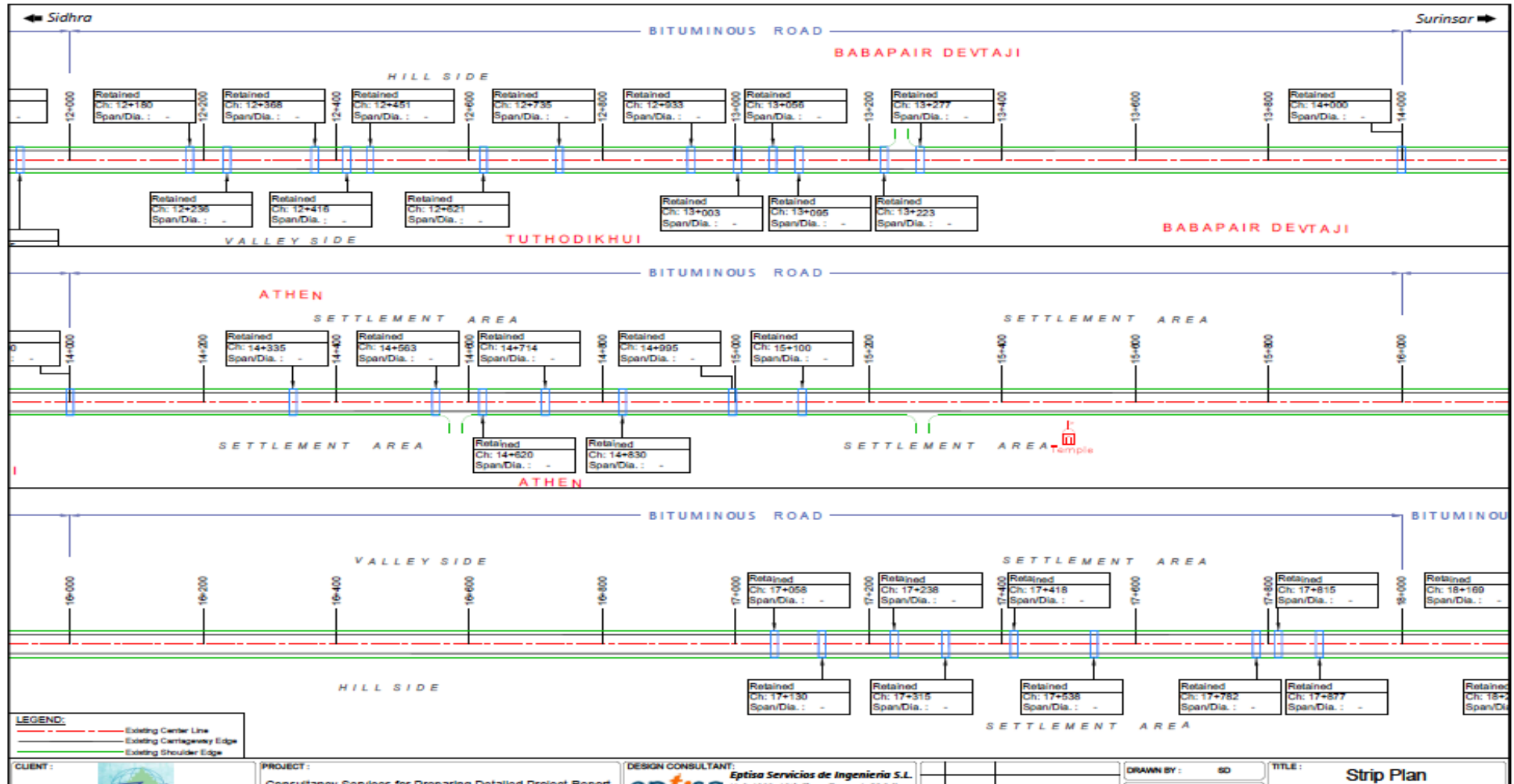
Social Impact Assessment Report

Strip Plan Contd.



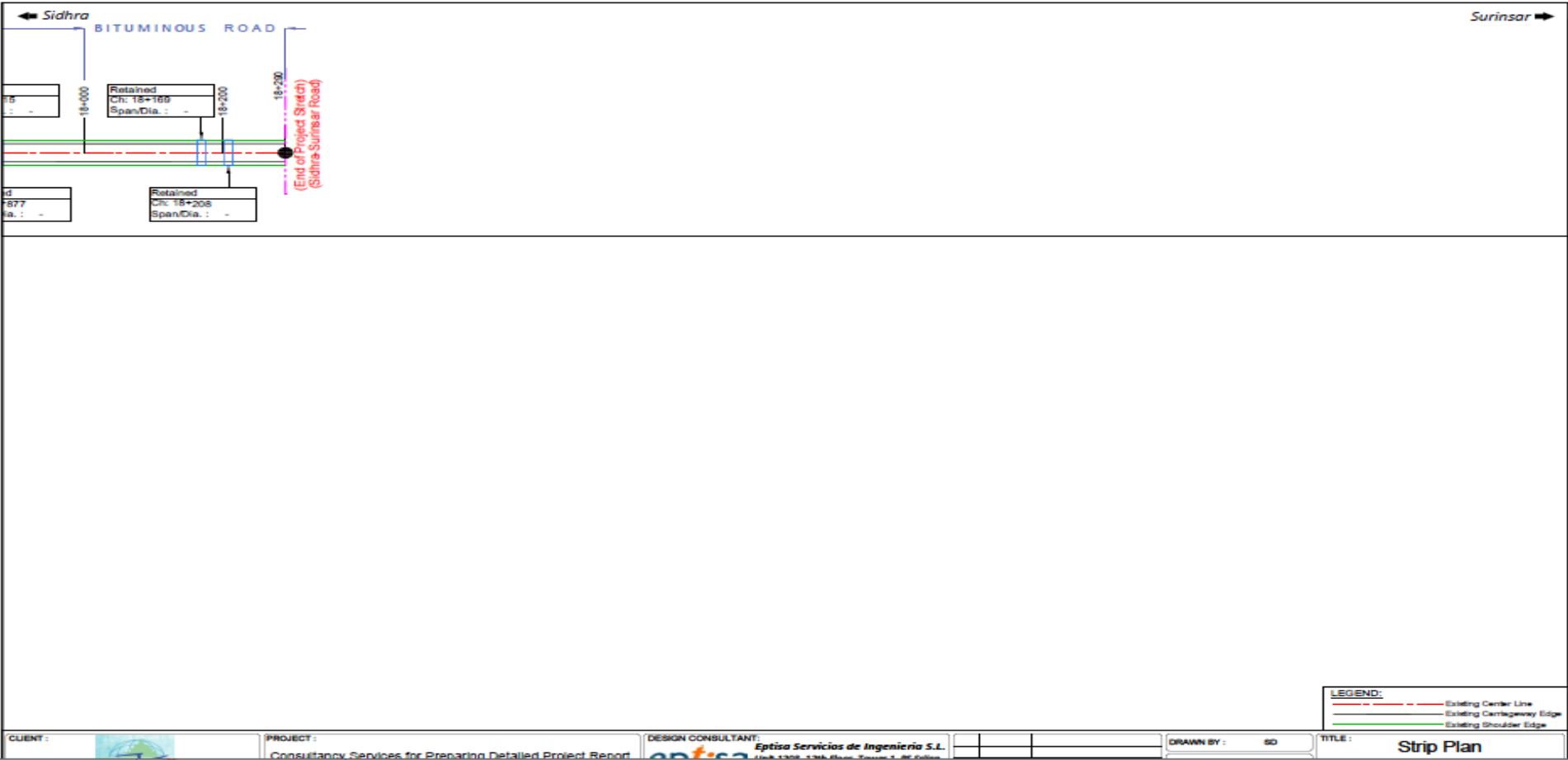
Social Impact Assessment Report

Strip Plan Contd.



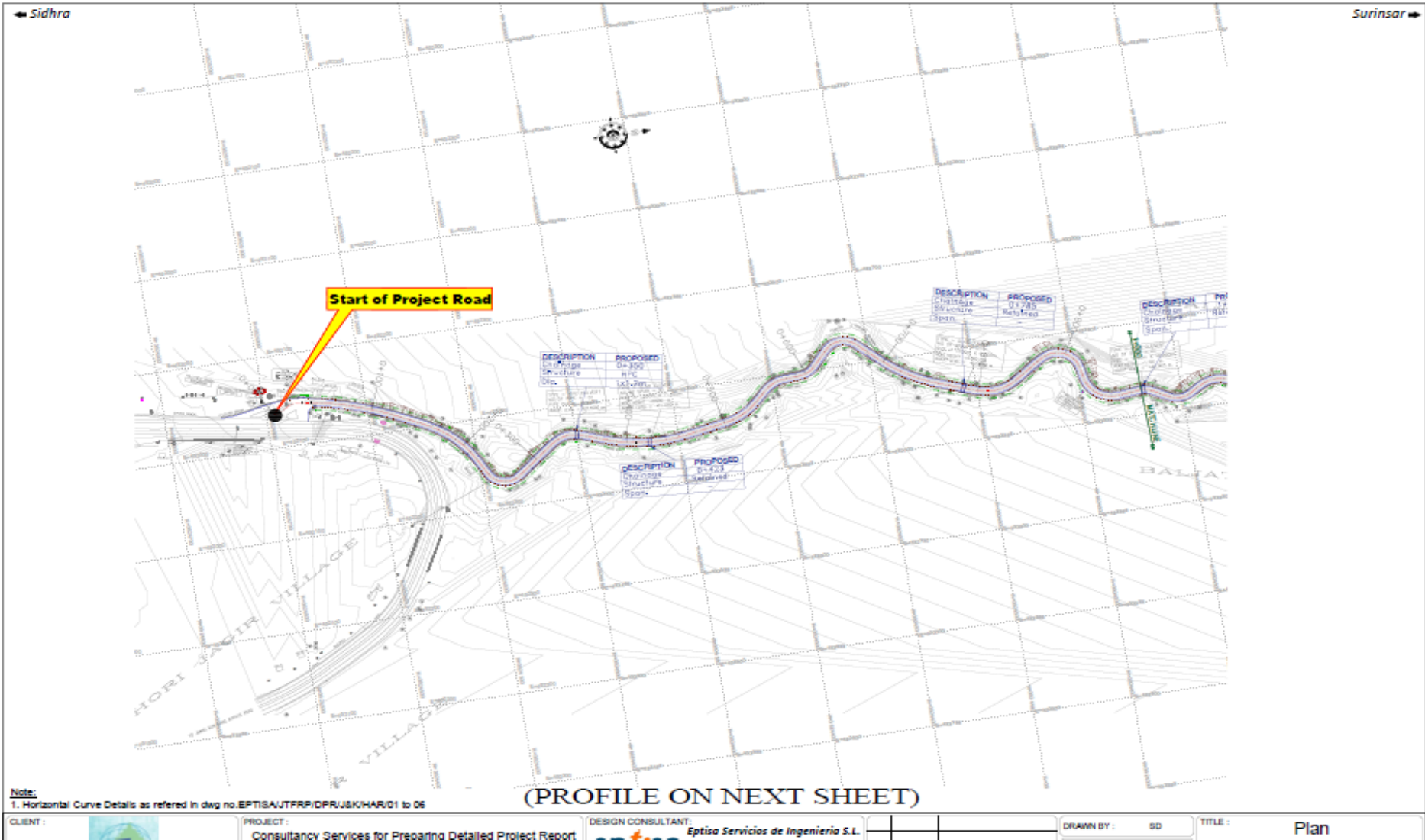
Social Impact Assessment Report

Strip Plan Contd.



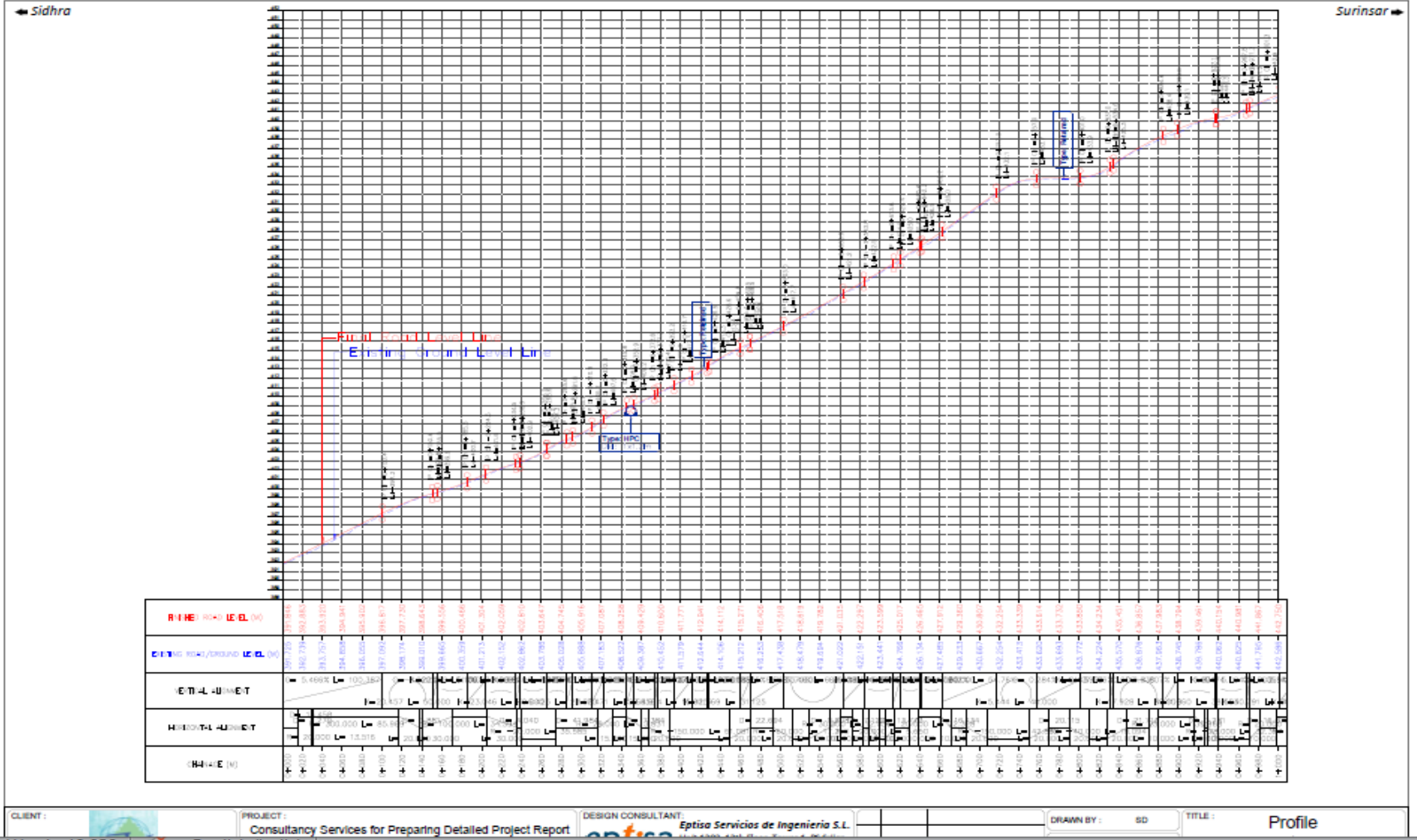
Social Impact Assessment Report

Plan & Profile



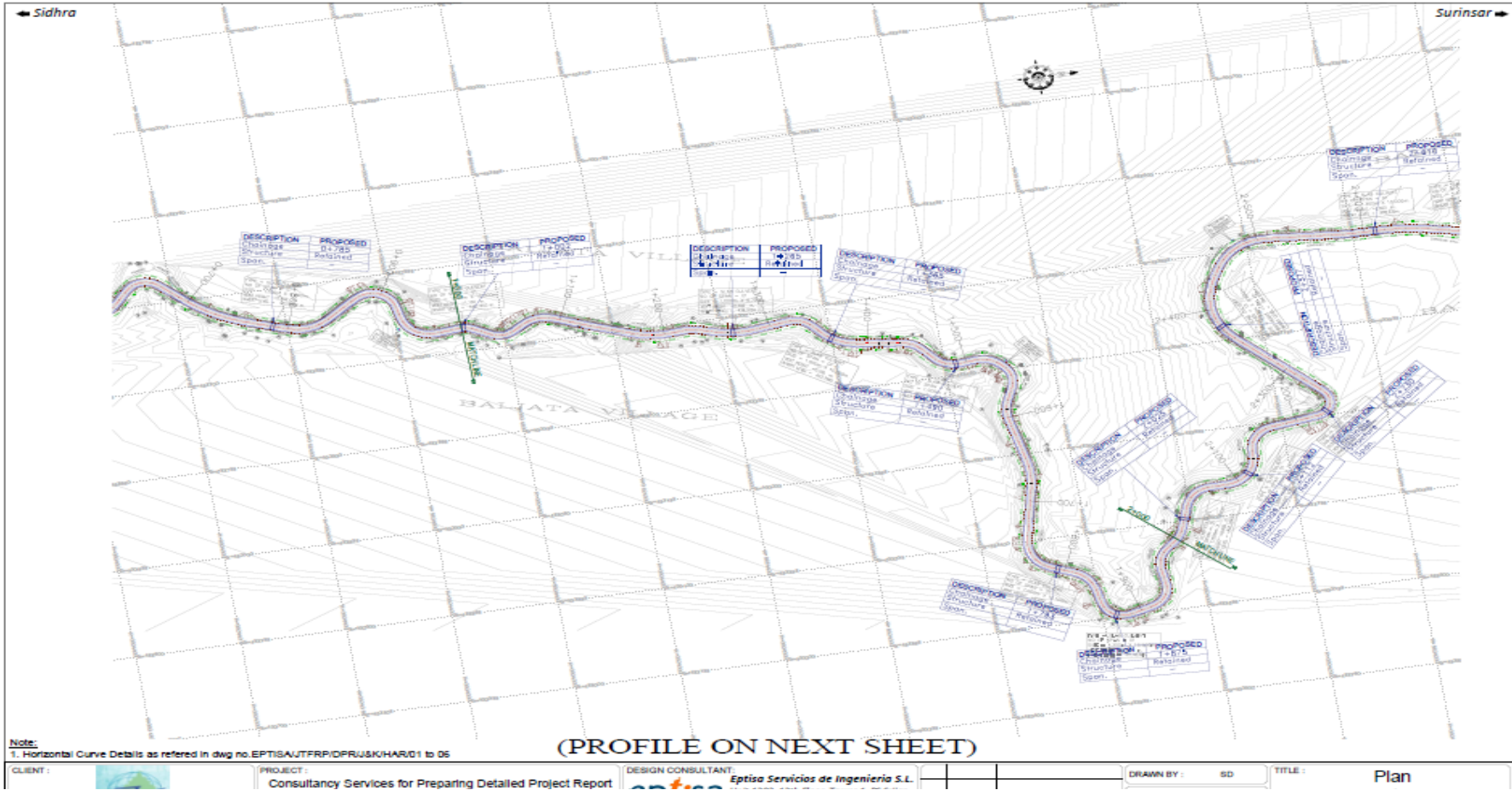
Social Impact Assessment Report

Plan & Profile Contd.



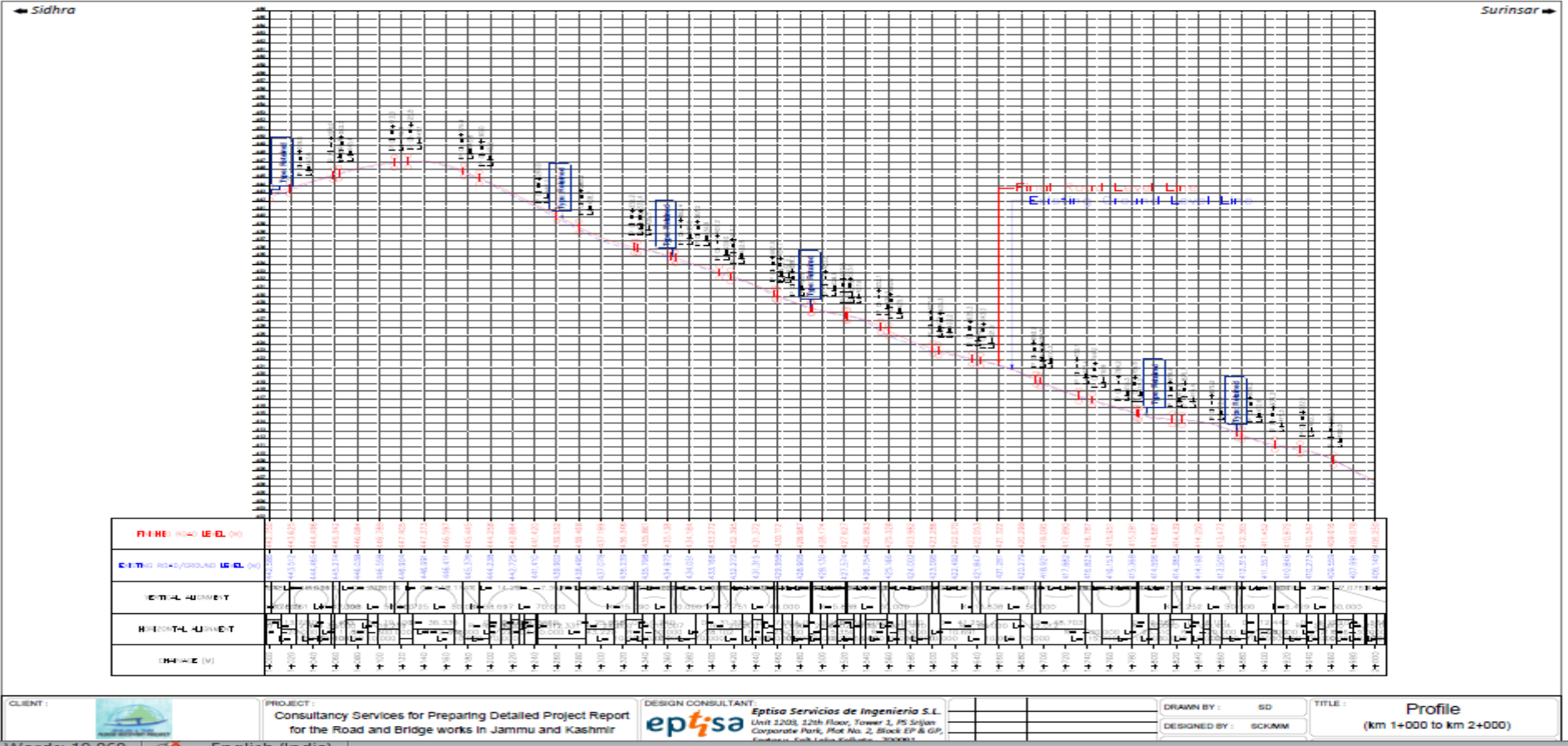
Social Impact Assessment Report

Plan & Profile Contd.



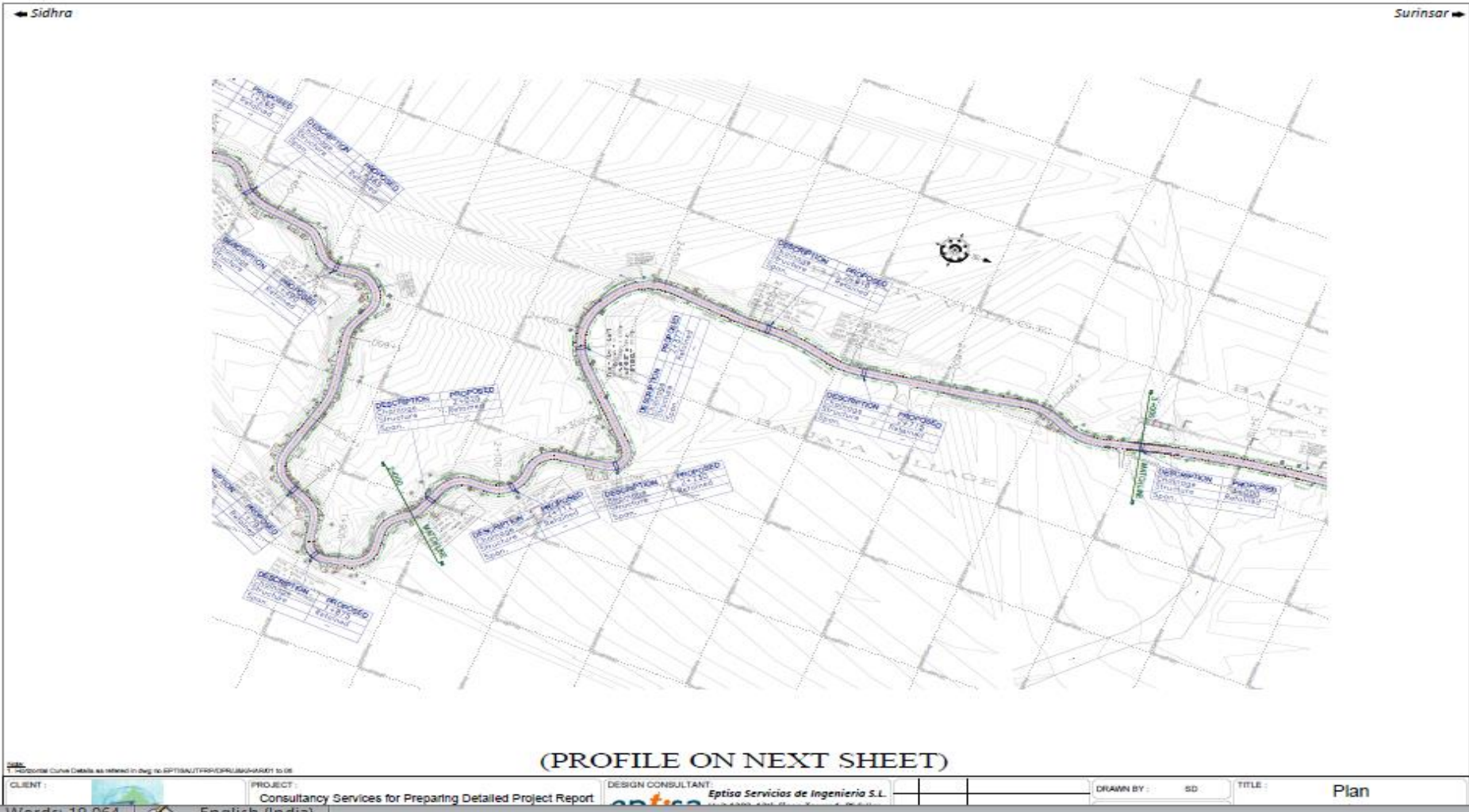
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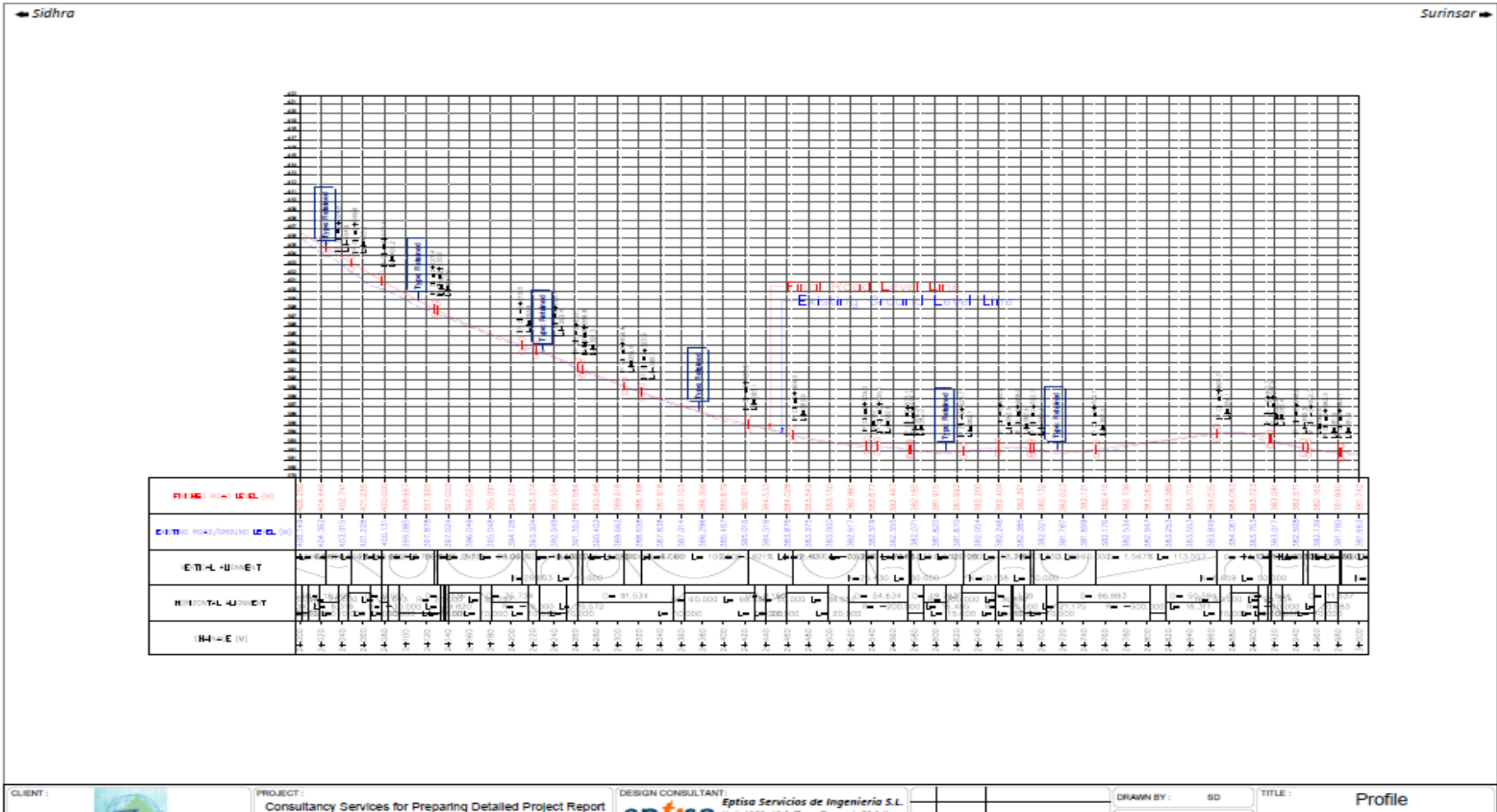
Social Impact Assessment Report

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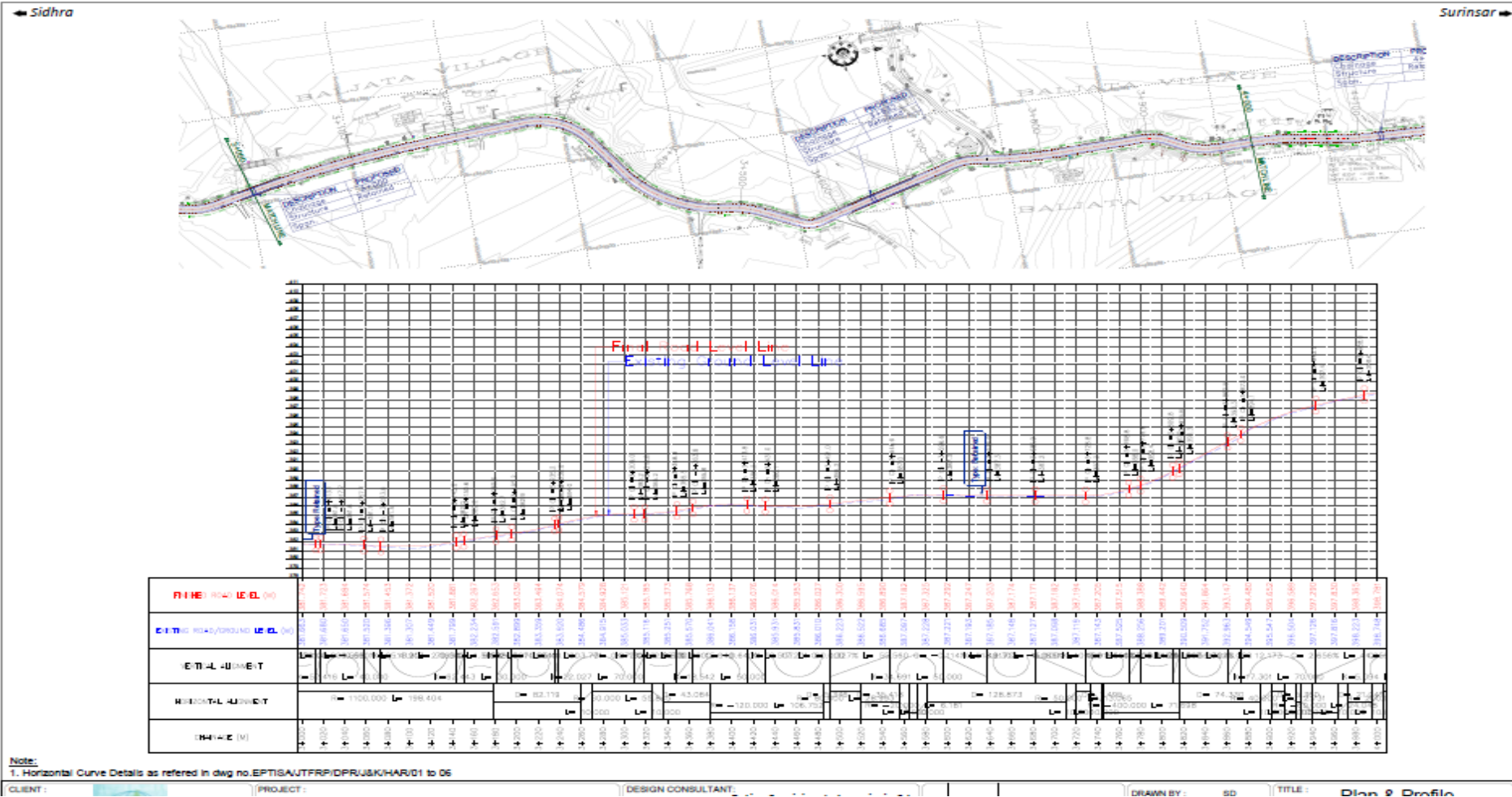
Social Impact Assessment Report

Plan & Profile Contd.



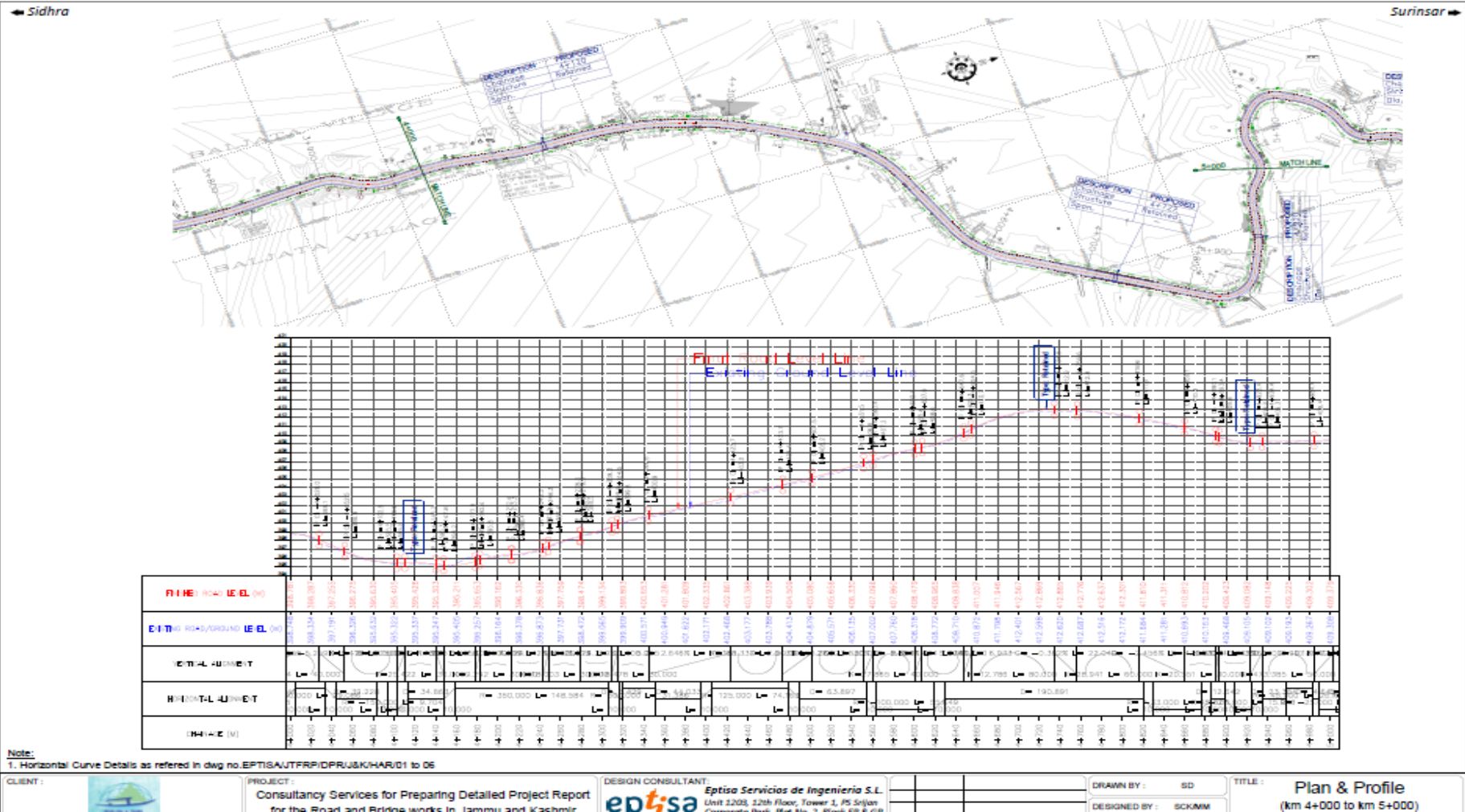
Social Impact Assessment Report

Plan & Profile Contd.



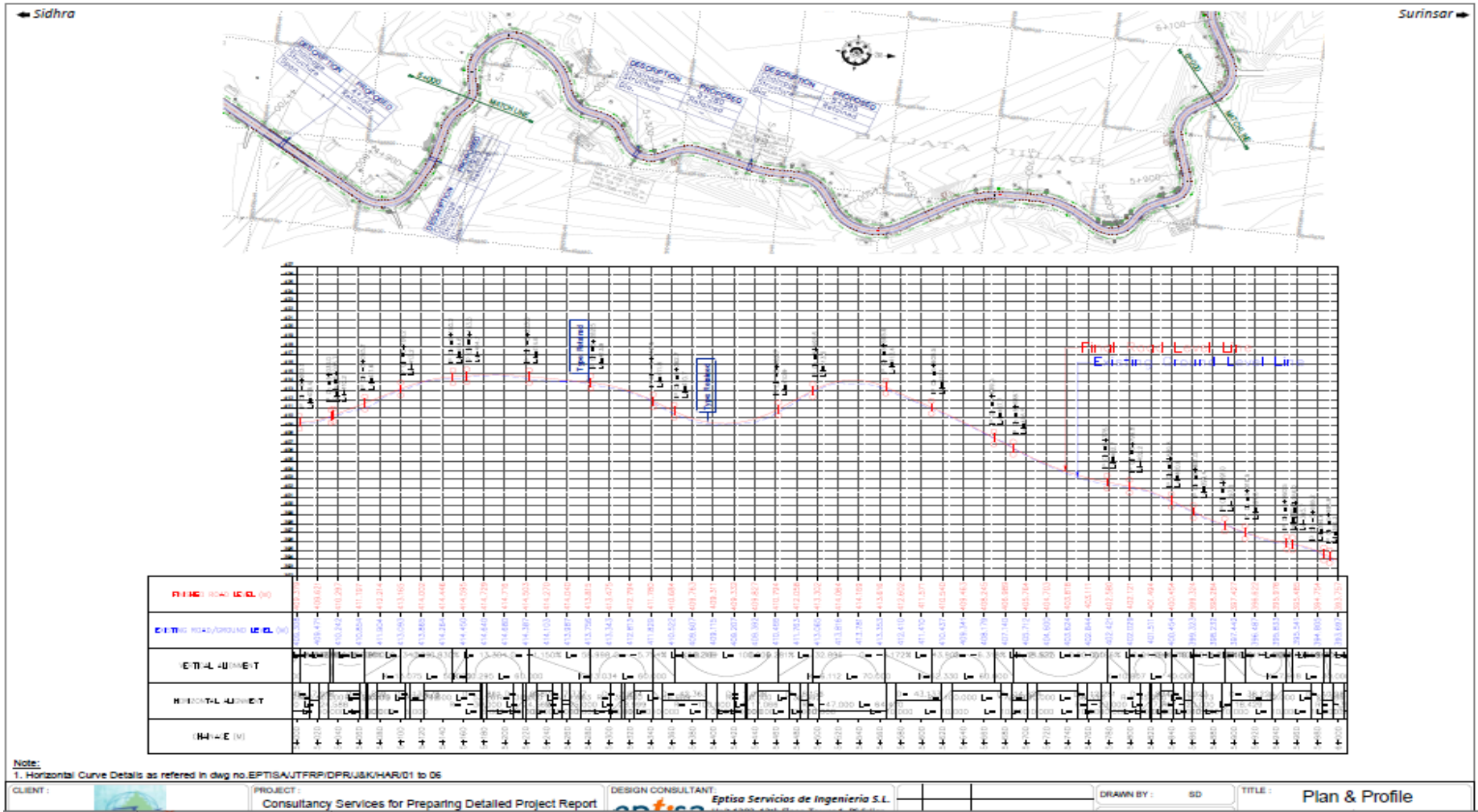
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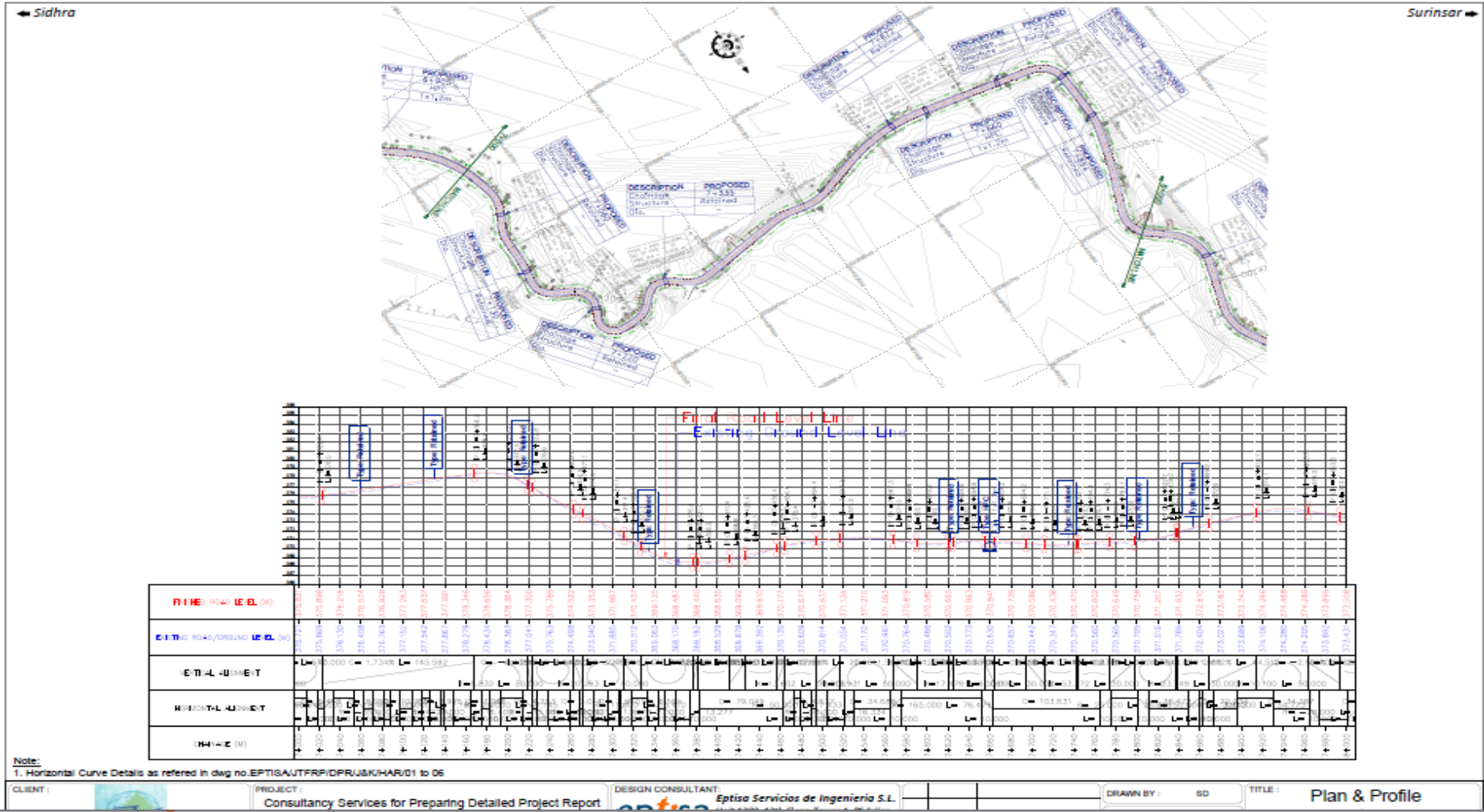
Social Impact Assessment Report

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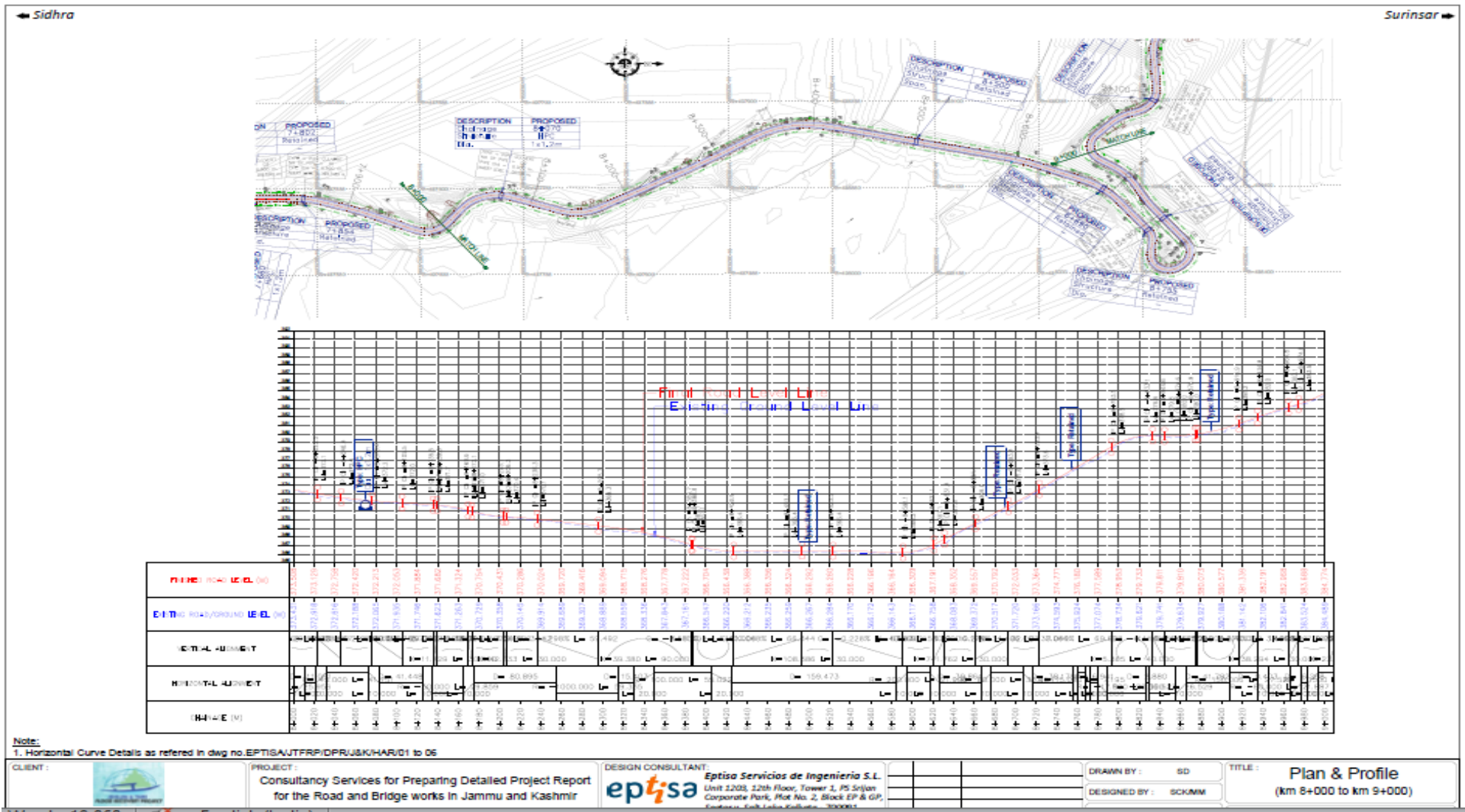
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Plan & Profile Contd



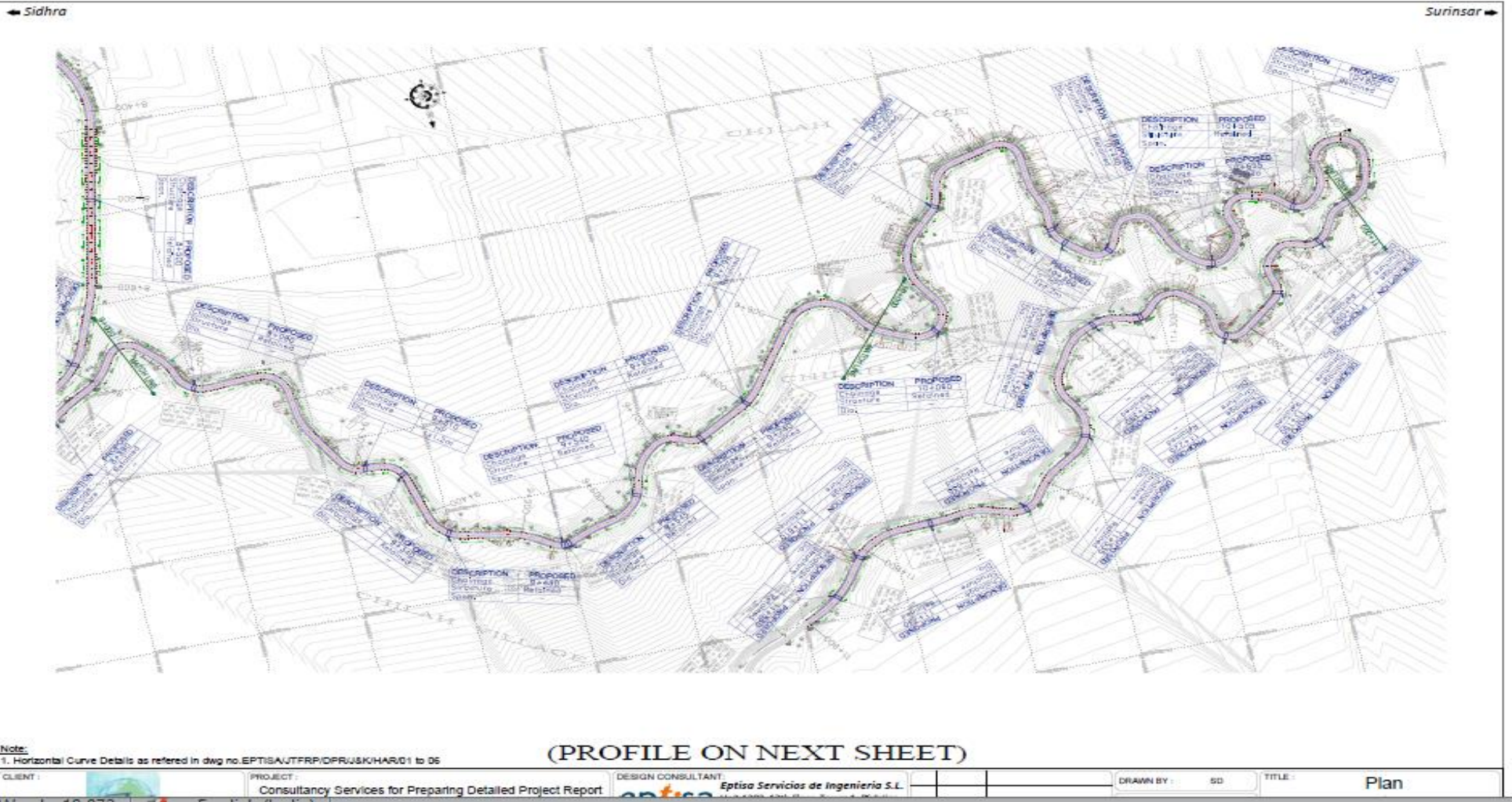
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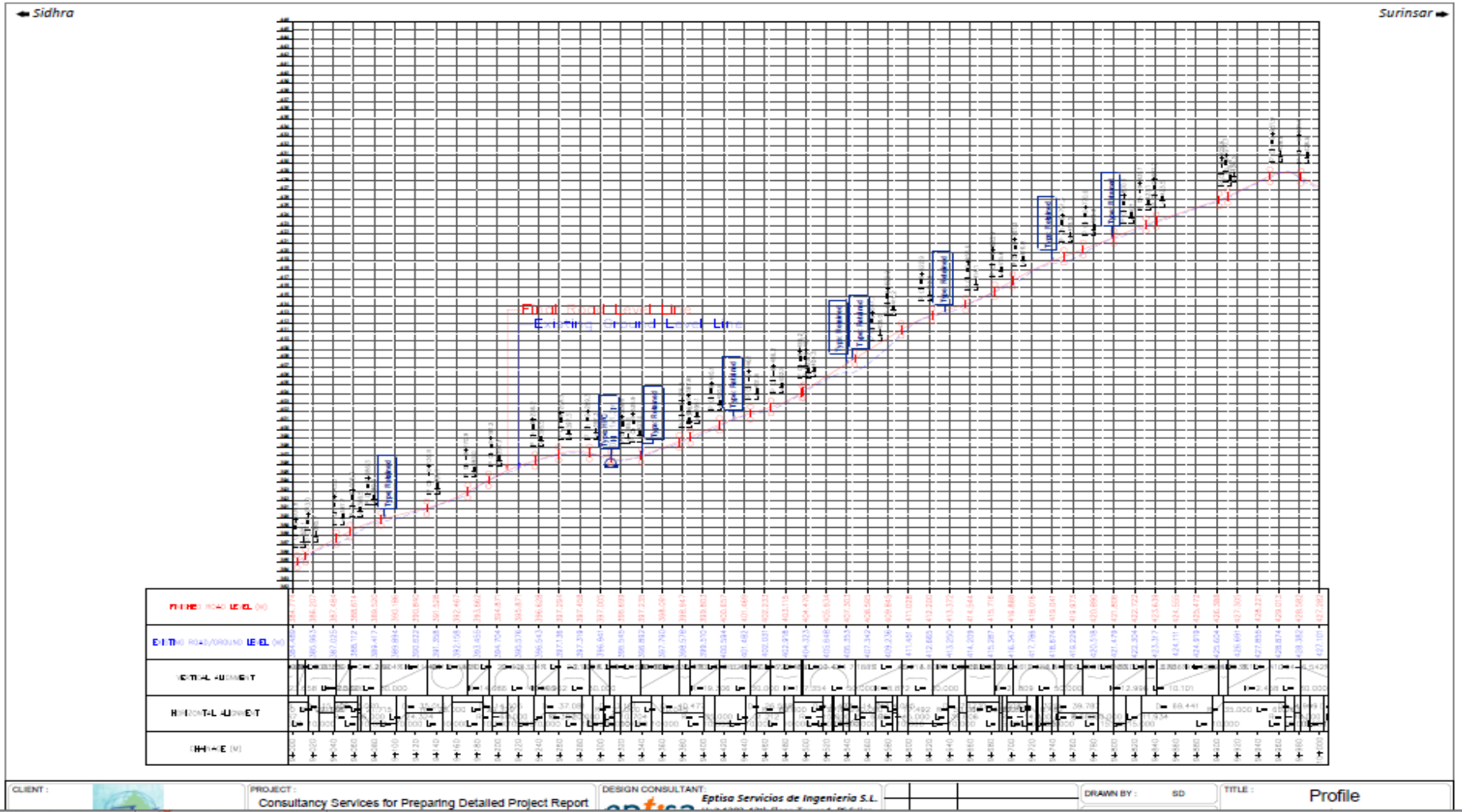
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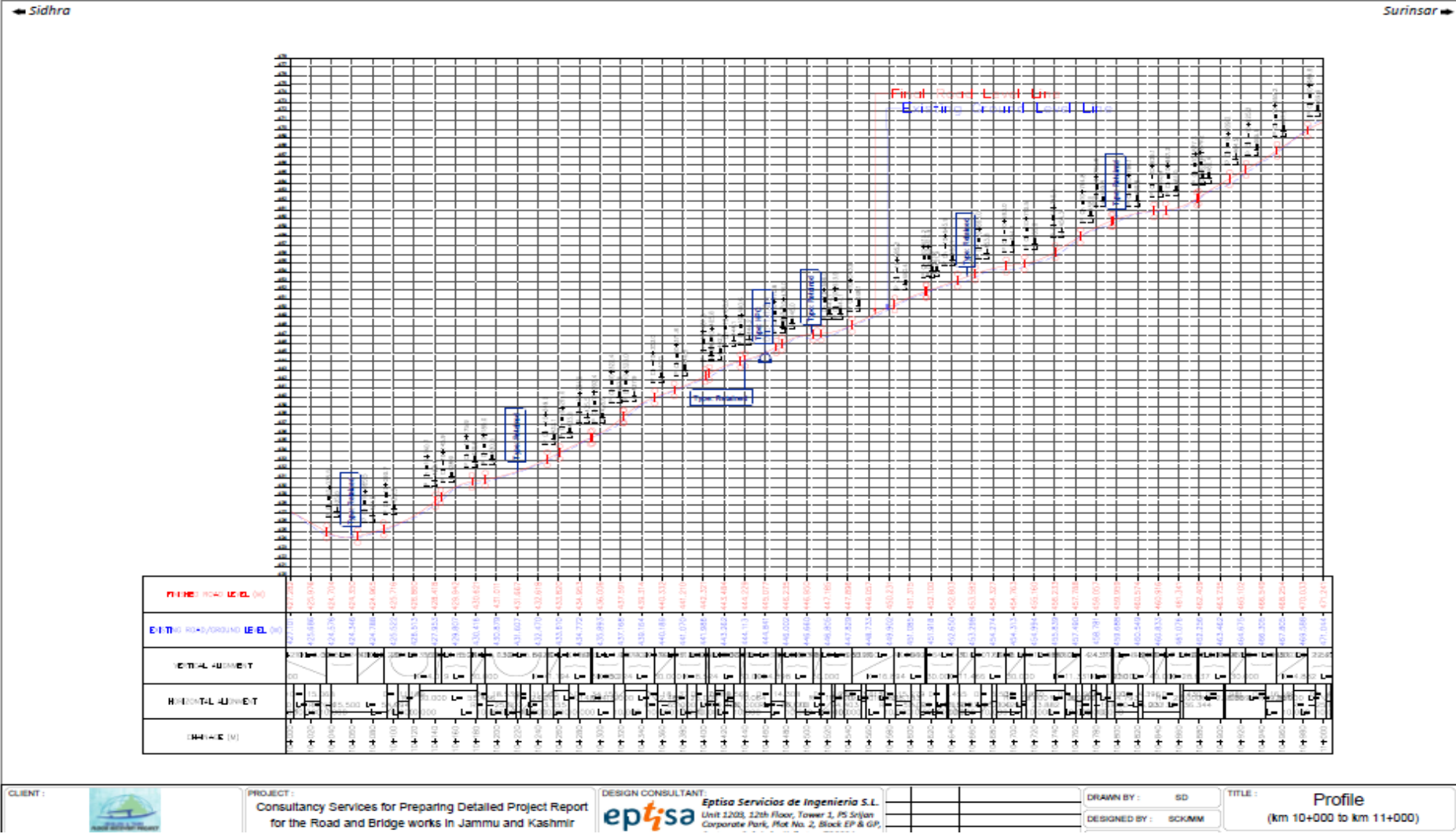
Social Impact Assessment Report

Plan & Profile Contd



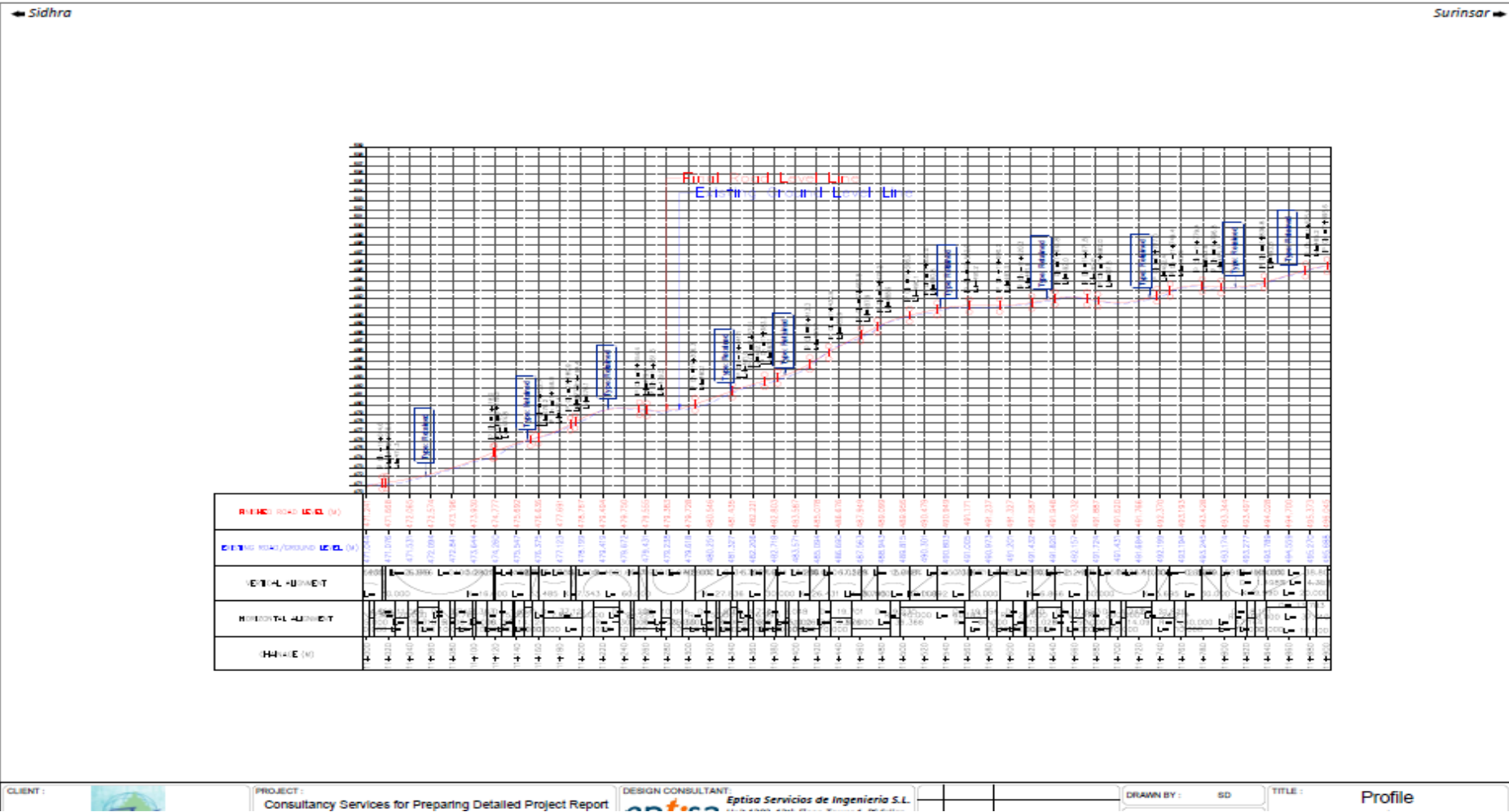
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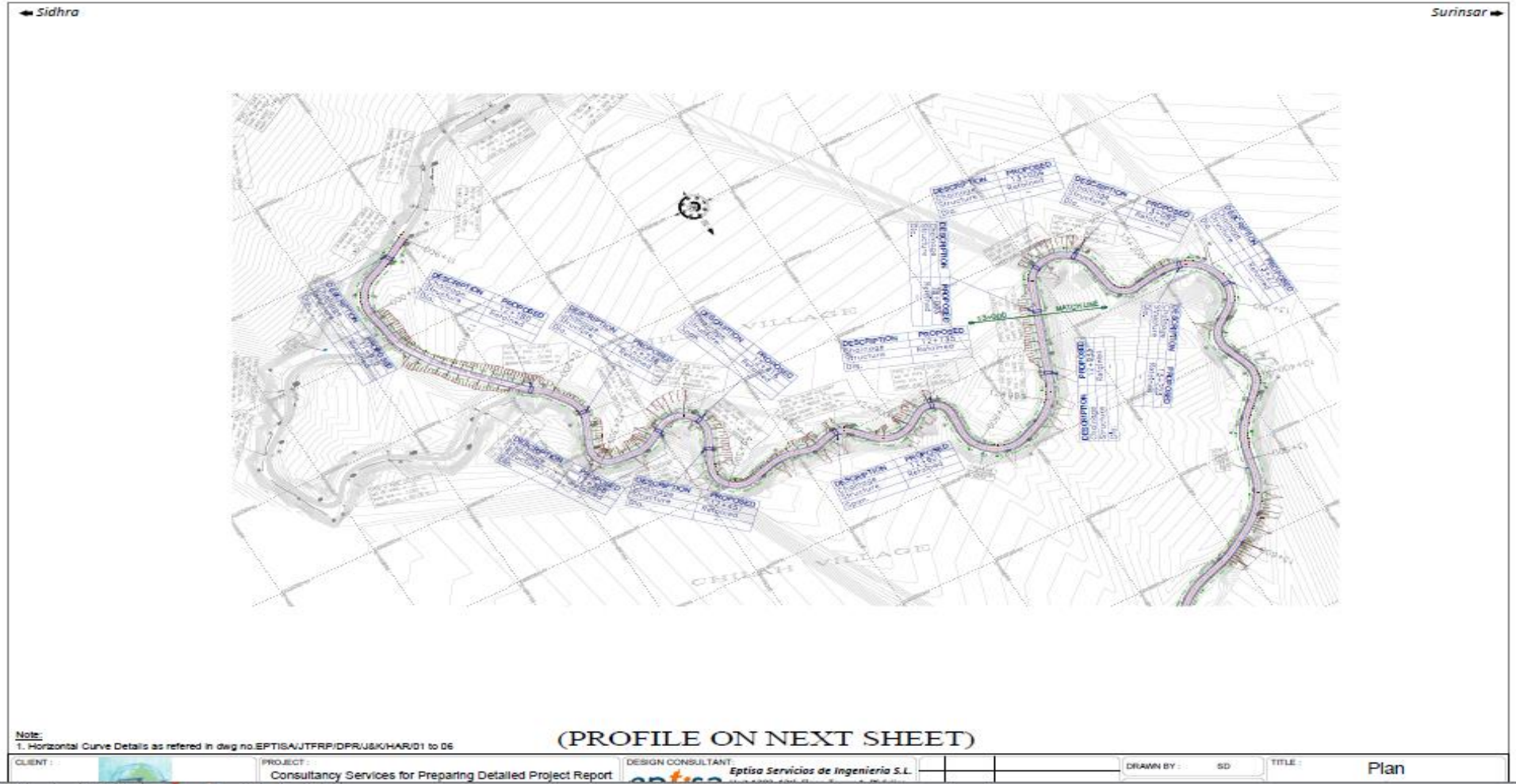
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Plan & Profile Contd.



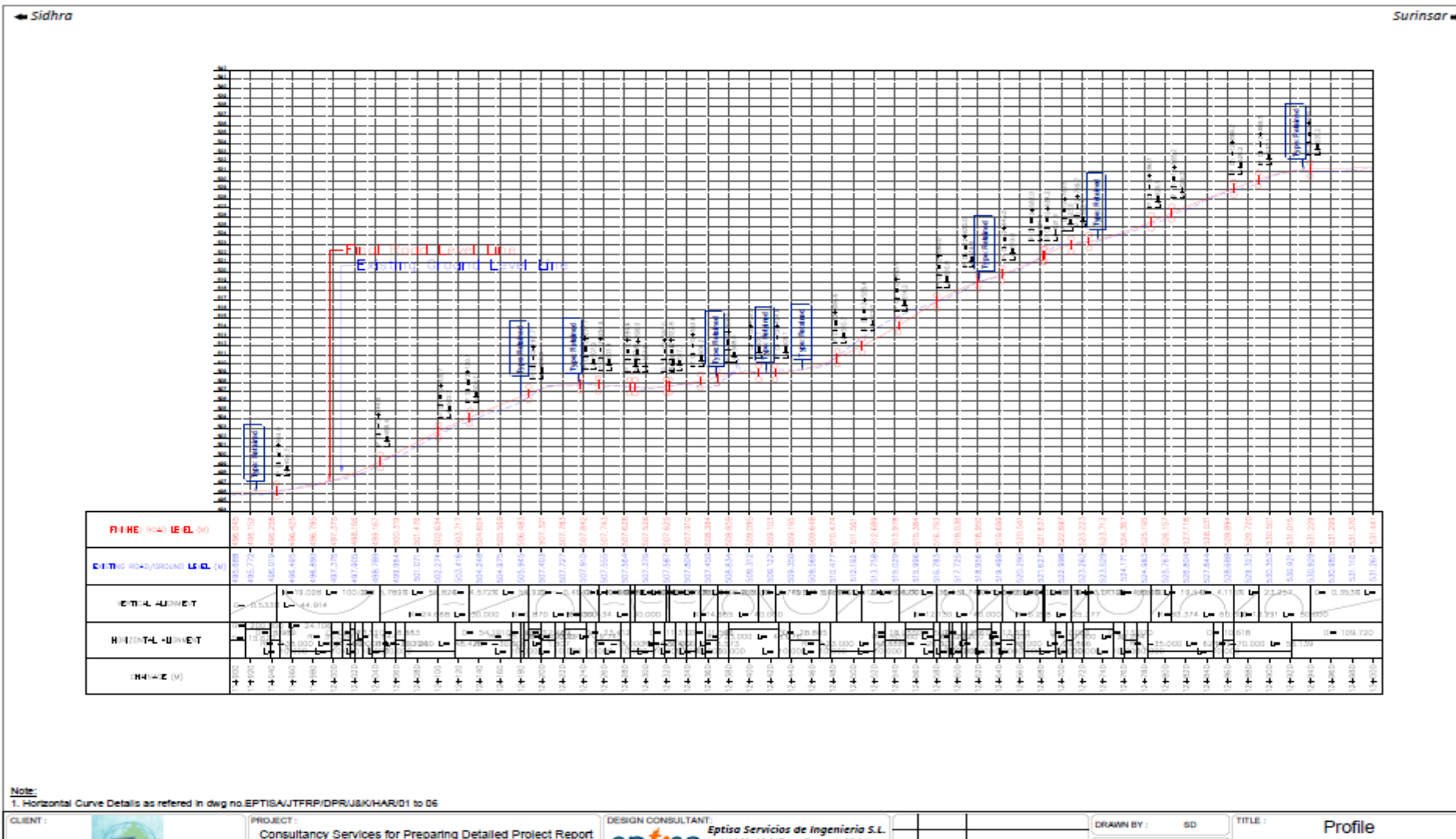
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Social Impact Assessment Report

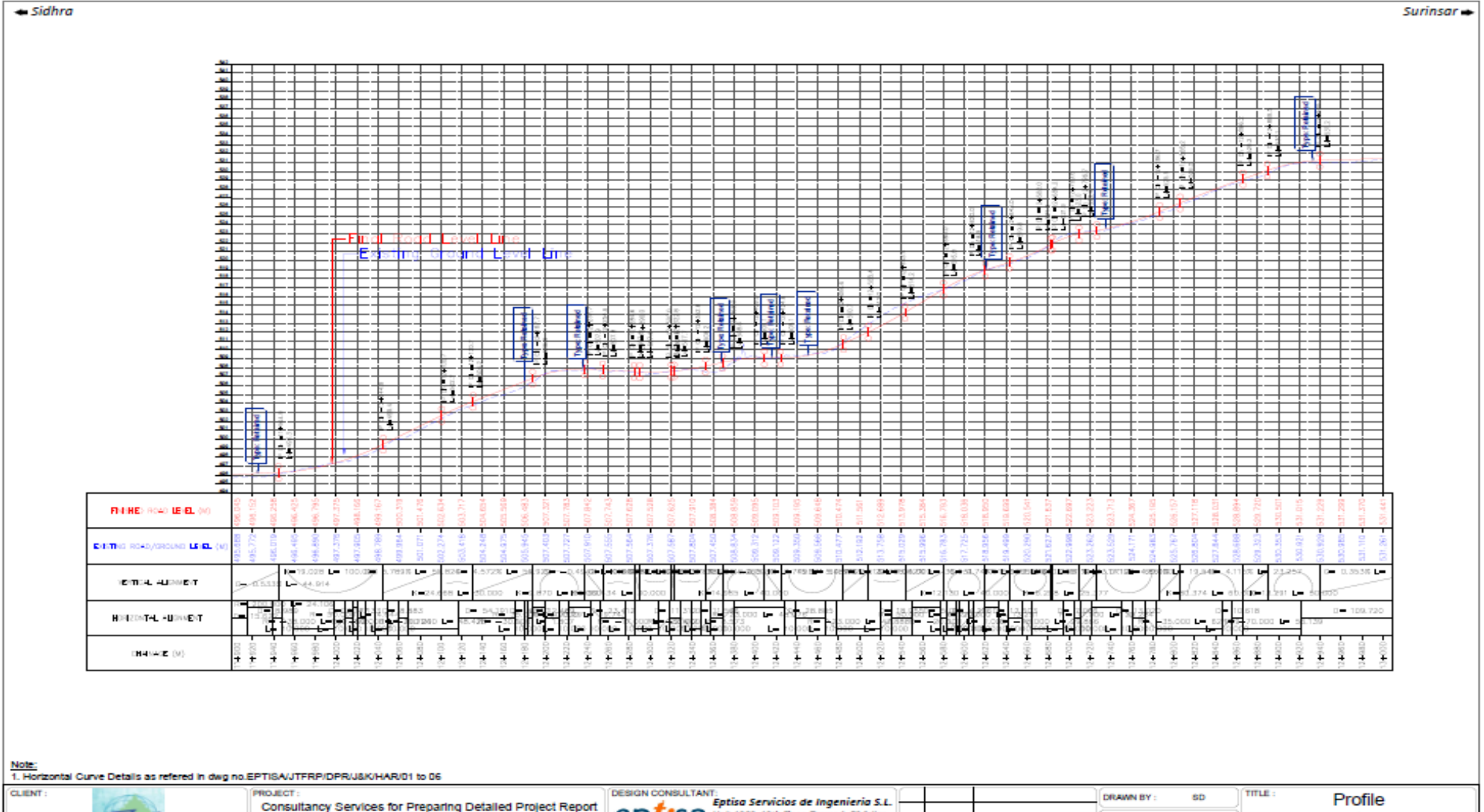
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Note:
1. Horizontal Curve Details as referred in dwg no.EPTISA/JTFRP/DPR/US/KHAR/01 to 06

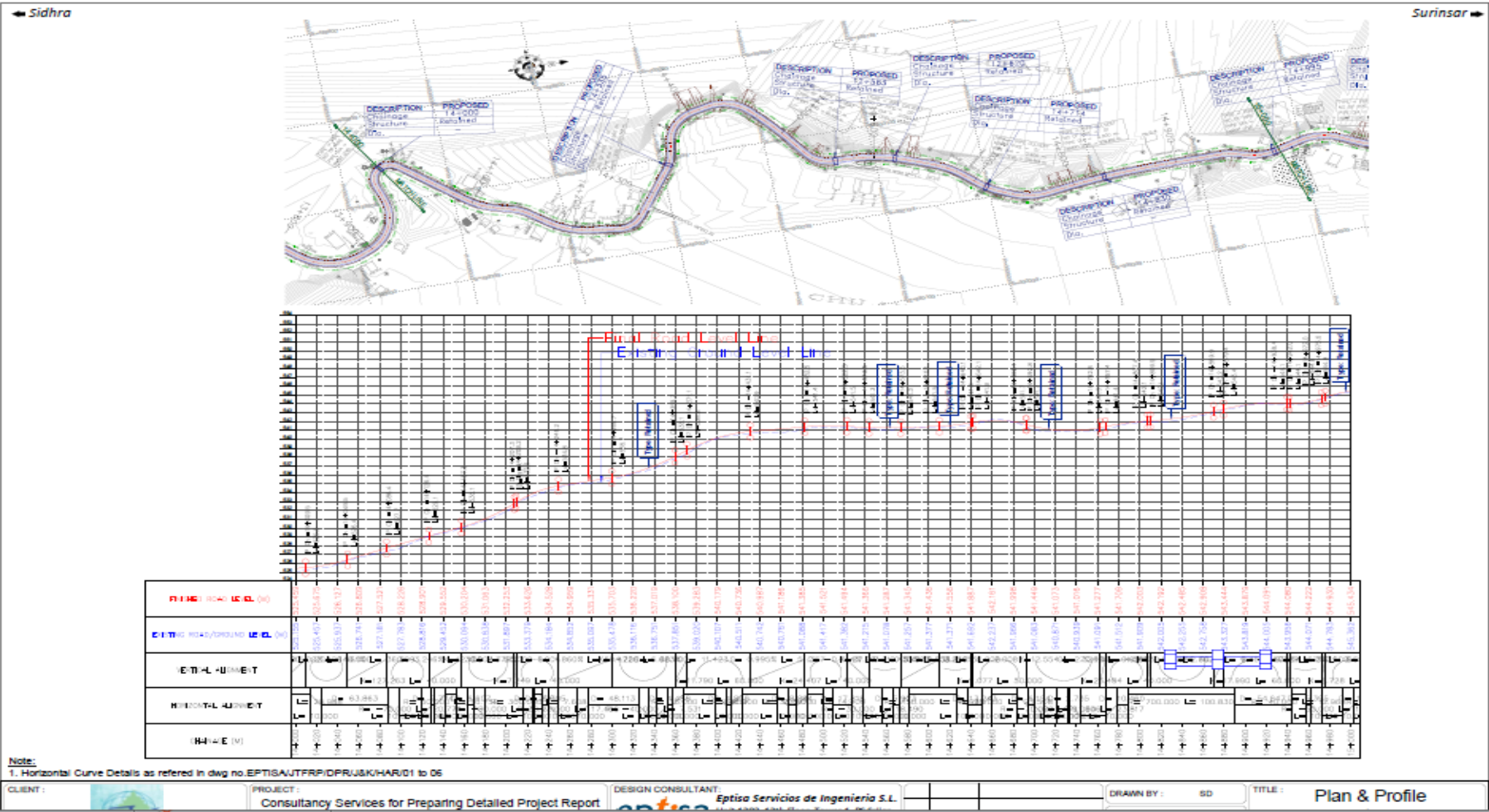
Social Impact Assessment Report

Plan & Profile Contd.



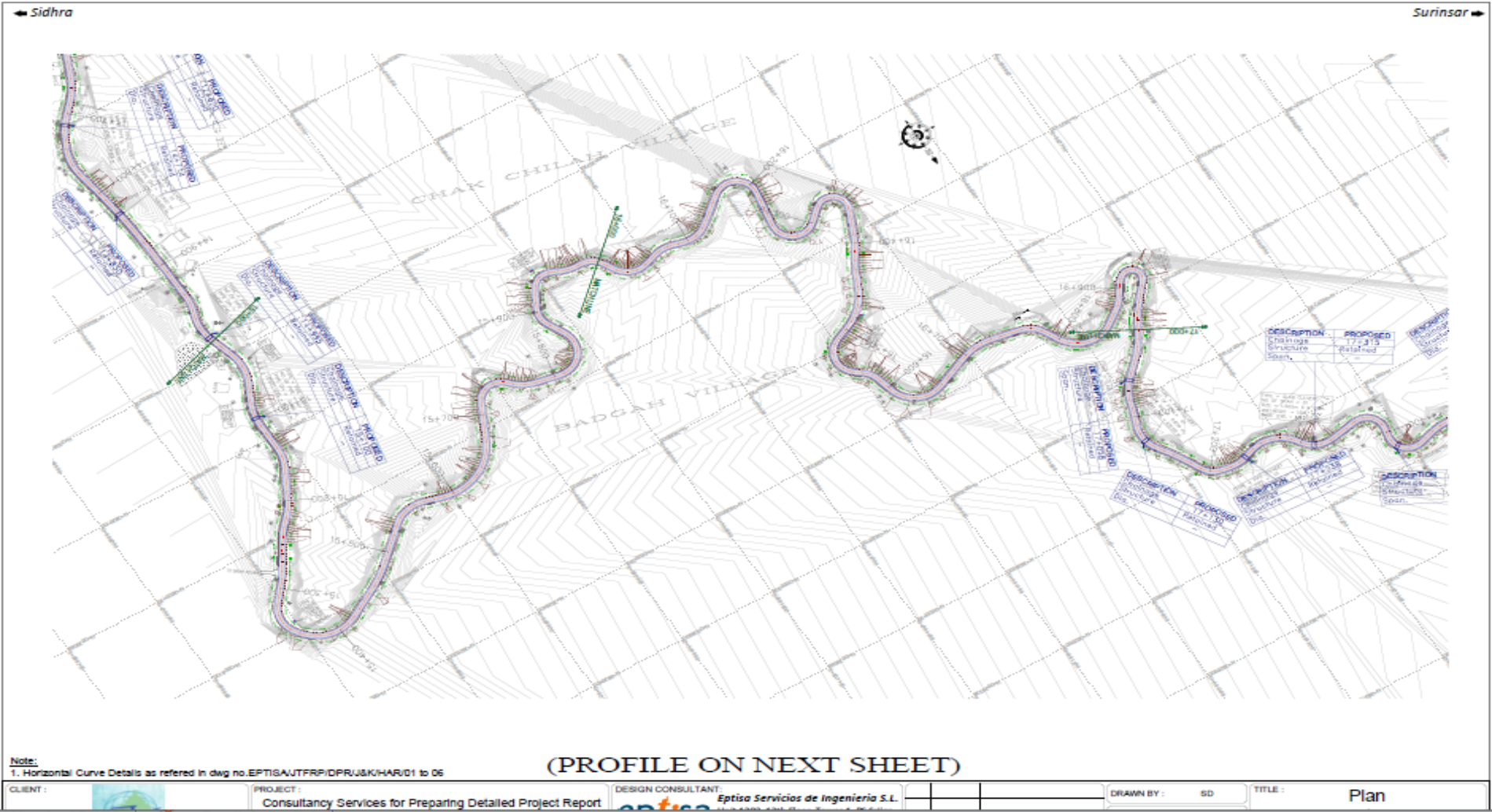
Social Impact Assessment Report

Plan & Profile Contd.



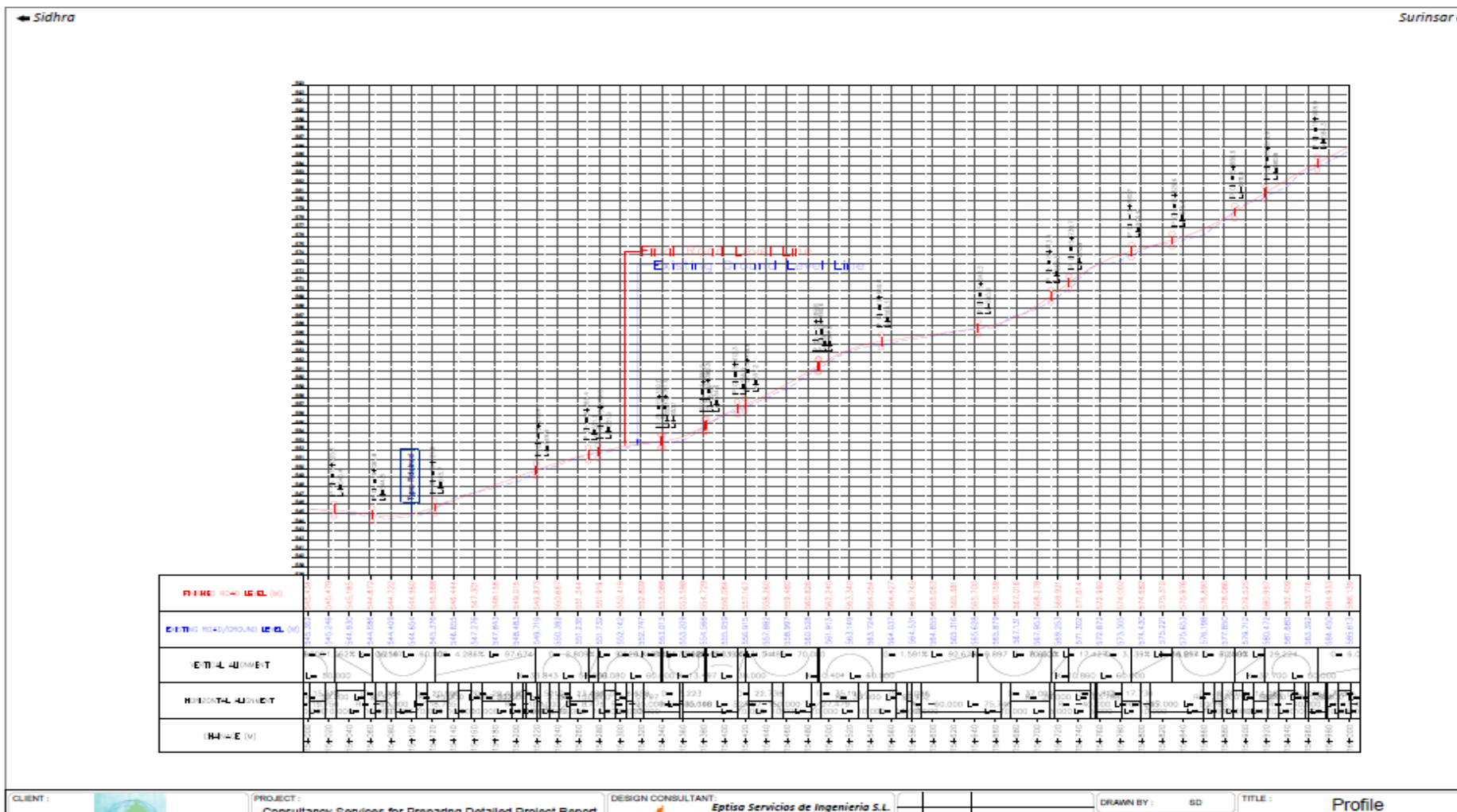
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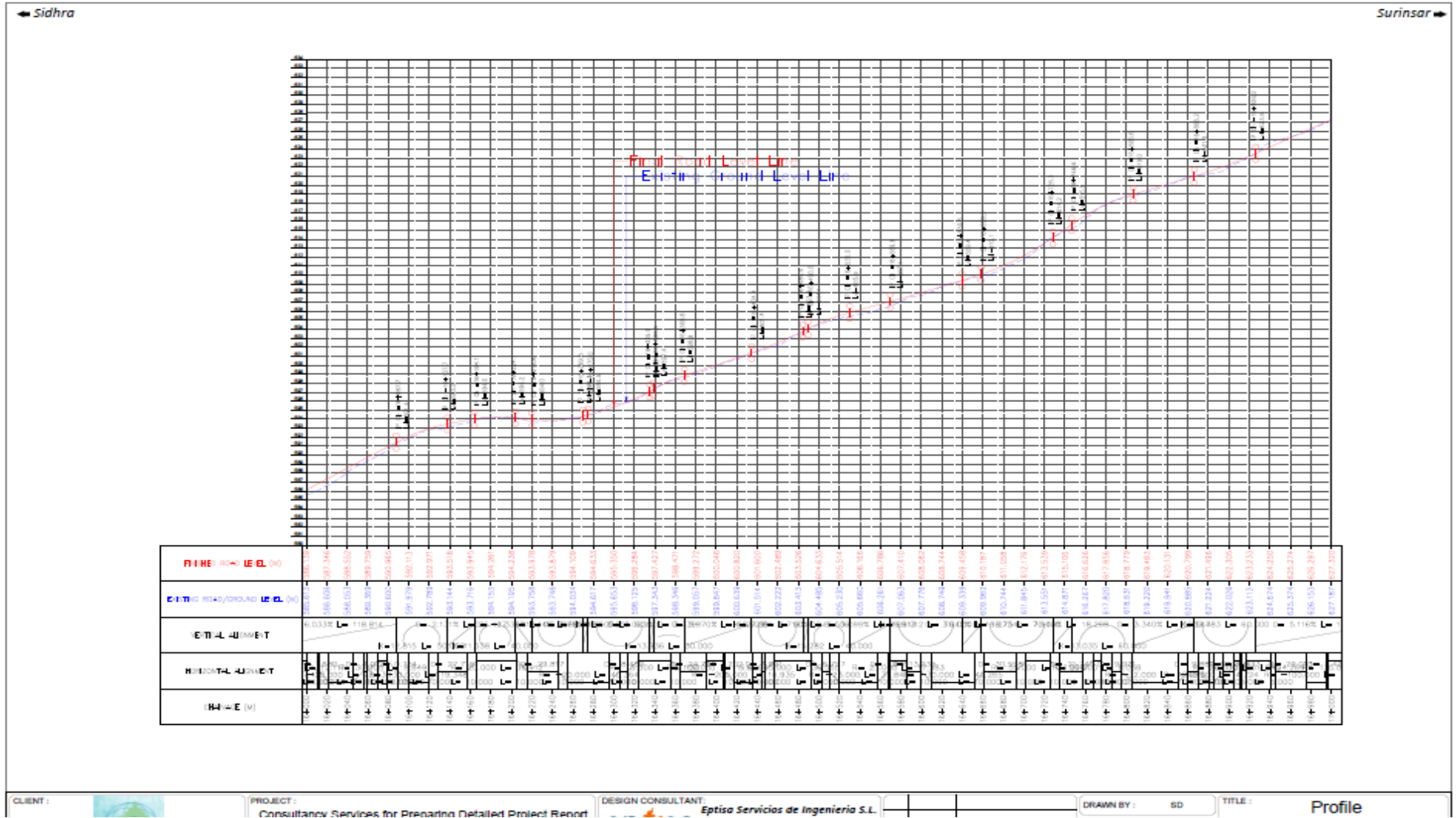
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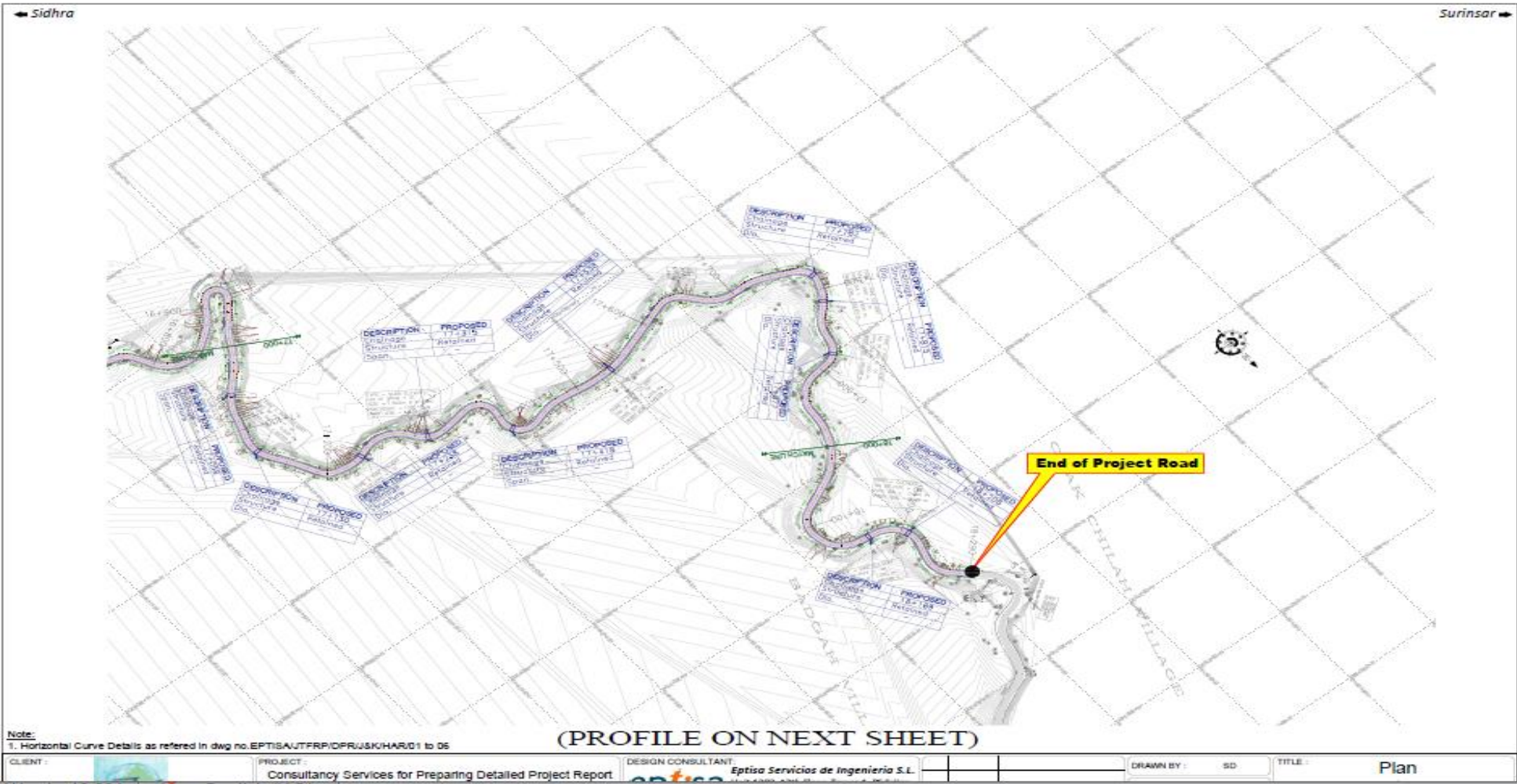
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Plan & Profile Contd.



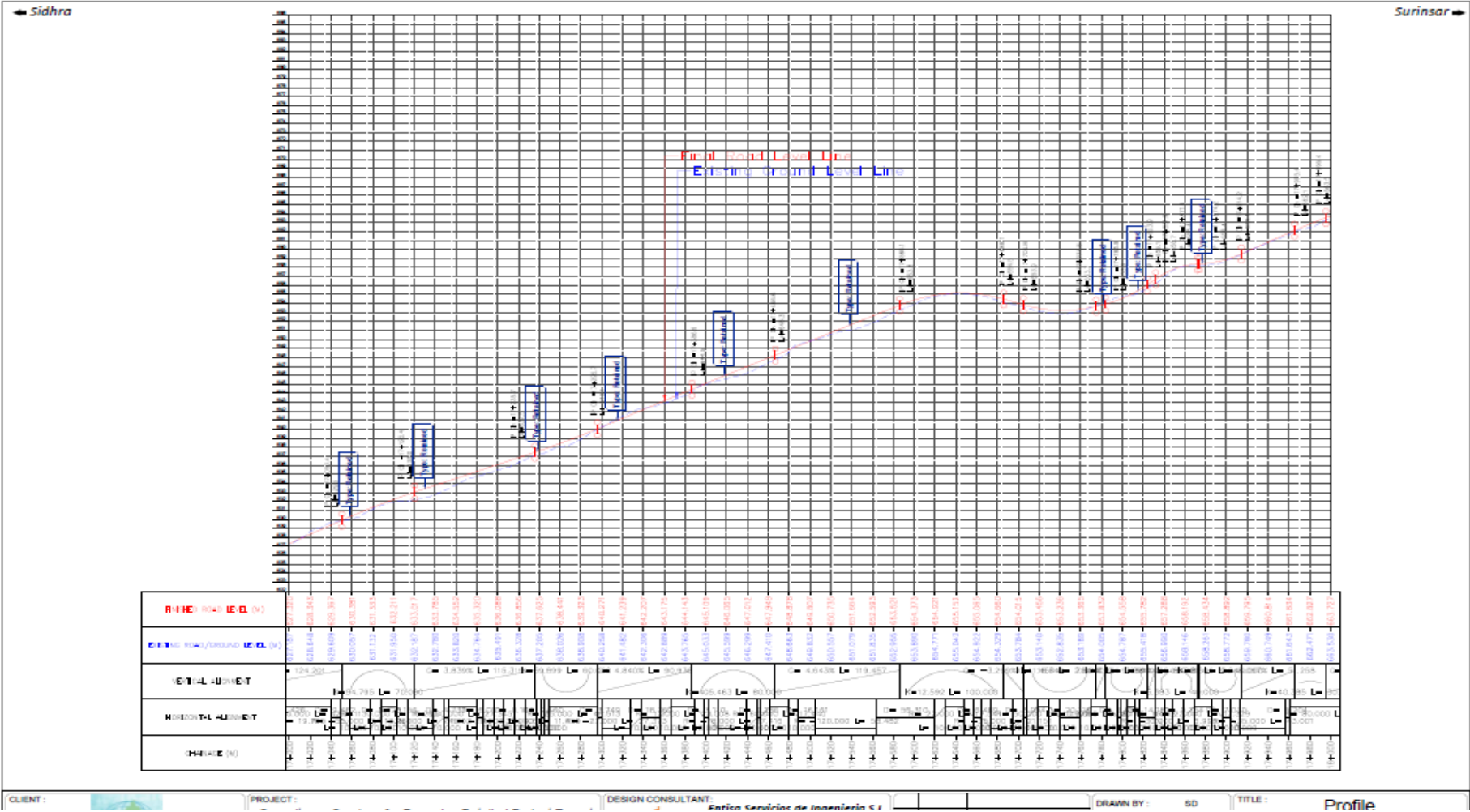
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Plan & Profile contd.



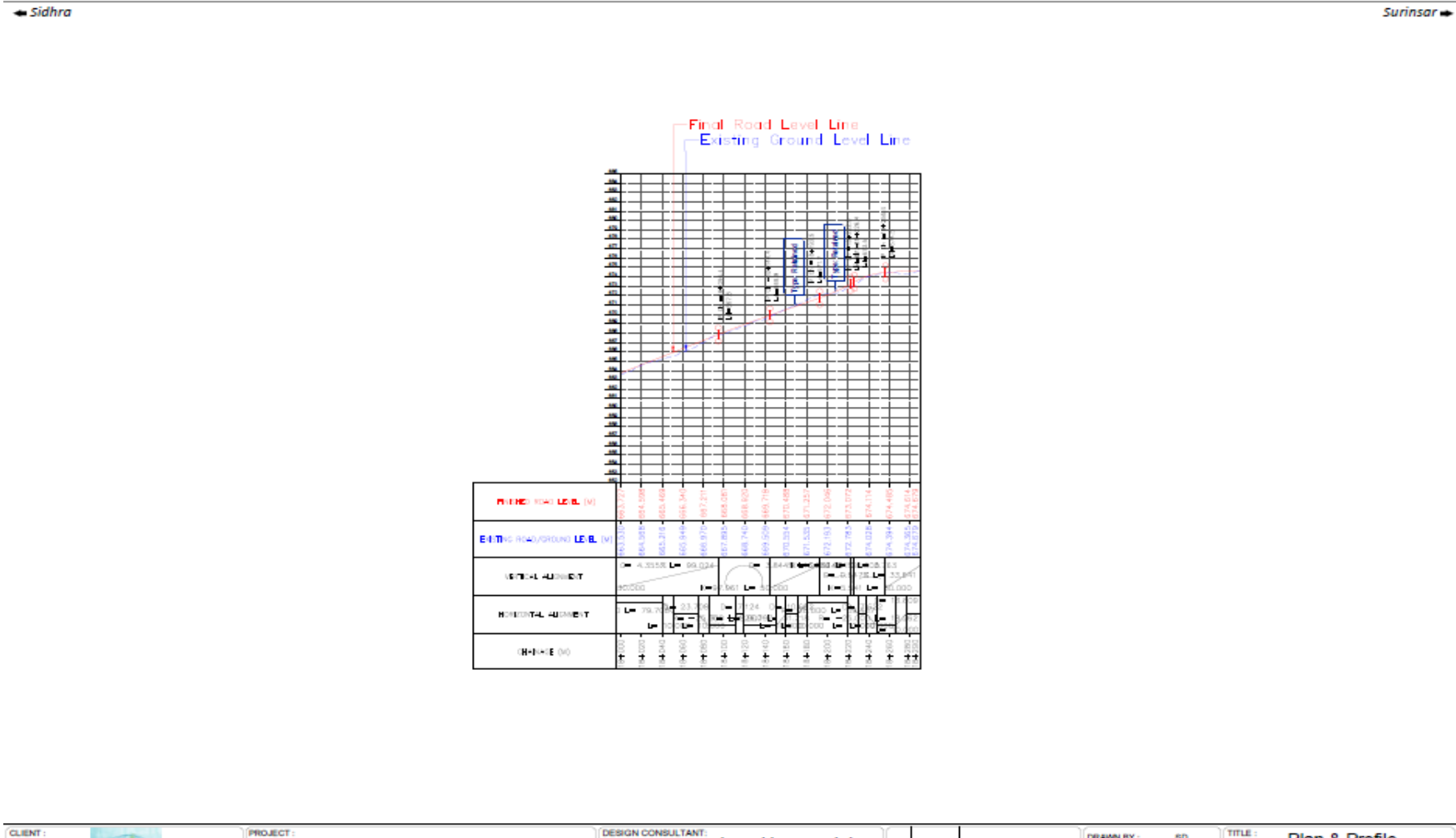
Social Impact Assessment Report

Plan & Profile Contd.



Social Impact Assessment Report

Plan & Profile Contd.



Annexure 8: Photographs of the Road



NH 44 at Sidhra



Project road starts at Sidhra (view from NH44)



Project road starts at Sidhra



A bridge and a railway track (at Ch 2.950 Km)



The railway crossing (at Ch 3.150 Km Bajalta)



Bajalta village (4.200 Km)



Madha Vaishno temple close to the road
(4.200 Km RHS)



Sardan Nallah (7.800 Km RHS)



Crossing of Tutian Di Khui road at
Ch 6.400 Km



Road Side Temple at Ch10.300 RHL



Landslide area (8.200 Km RHS)

Annexure 9: Public Consultation (10.7.2019 & 20.12.20)

Photographs of public consultation at Sidhra Surnisar Road (10.07.2019)



Public Consultation at Sidhra Village with Shop owners



Public Consultation at Sidhra Village



Public Consultation at Sidhra Village



Public Consultation at Aitham Village



Public Consultation at Aitham Village

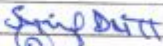






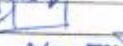




Social Impact Assessment Report

Public Consultation Attendance Sheet

Date: 10/7/2019

Name of Village
Sidhra

Name of the Road Sidhra Surinsar Mansar Road

Sr. No	Name of person	Contact No	Signature	Remarks
1.	Sunil Dutt.			
2.	Rashpal Singh			
3.	Bhubani Singh	8492		
4.	Mahesh was Bigh			
5.	Ramesh Kumar			
6.	Vijay Shasma.			
7.	Maharaja Kumar			
8.	Abdul Hussain	9419115678		Sarpanch (Bajalta)
9.	Kabir Choudhary			
10.	Amarat			
11.	Razzaq choudhary			
12.	Abdul Majeed			

Public Meeting (Village Aitham dated 20.12.2020)



Office of the Sarpanch, Panchayat Jhalpa Aithem
Post Office Aithem, Block Nagrota, Tehsil & District Jammu (J&K)-180017
Mob. No. 9419284185, 9596984512

Ref. No.: 907(SPHA) 20-21

Dated: 20-12-2020

Road Subject: - Sidhra - Sarwim sur Road upto 18.290 km (Distt Jammu)

Public Consultation.

On 20/12/20, a public meeting held today at Aitham Panchayat. The meeting is chaired by Gram Sabha Head Smt. Shoba Rani (Sarpanch) Aitham. From JKERA, Mr. Vikash Sharma (Social & Resettlement Expert) present in the meeting.

Following Information was shared with people by Mr. Vikash Sharma.

- ① Project proposal & its funding
- ② Requirement of land & WB. Social safeguard policy.
- ③ Social Impact Assessment.
- ④ Grievances addressed (ISSUES HIGHLIGHTED BY SARPANCH + LOCAL PEOPLE)
- ⑤ Road width available in village Aitham & few points is 8 MT. We request to construct road in available formation width without acquiring extra land & site.
- ⑥ Drainage both side of road throughout the road length.
- ⑦ There is a pond along the road in village Aitham where people perform rituals after death. Request to construction retaining wall because its water comes on the road & damaged blacktop.

(8) There is a seasonal Nallah (Baba Saruji) which during rainy season & flash floods bring large amount of mulla on road. In almost all seasons destroy the road at the location & also leads to accidents.

We request to Construct a retaining wall / breast wall to stop accumulation of sedimental road.

(9) Protection work near Shiv Temple (Aitham) near house of Chunt Lal.

(10) We will voluntarily give land for improvement of curves. We request to provide protection wall at those locations.

We will assure full cooperation for the successful completion of project.


Pritam Singh
PANCH Ward No: 9
Panchayat Halqa Aitham
Block Nagrota


SHOBHA RANI
SARPANCH
Panchayat Halqa Aitham
Block Nagrota
Teh. & Distt. Jammu-180017

Signature Sheet

Name of Sub-Project: Improvement & Upgradation of Sidhra- Surinsar road upto km18.290 District Jammu (World Bank Funded)

Location: Athem (Panchayat Block Nagaria)

Date: 20/12/20



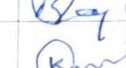

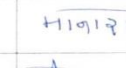



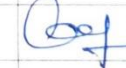
Sl no.	Name	Gender	Mobile number	Address	Signature
①	Shoba Ram (Saarpach)	Female	9596984512	Athem	
②	Narayam Singh	M.	9906256468	"	
③	Pritham Singh (Saarpar)	M	9149472819	"	
4	Indrjyoti		9596872789	"	
5	Sardari Jai	M	9797567528	"	
6	Ram Dass			"	
7	Sumita Ram			"	
8	Ramchand			"	
9	Jai Singh		9469011473	"	
10	Kuldeep Singh		9997500865	"	
11	Uttam Singh		9596828862	"	
12	Ajay Singh Sujeet Singh		9797454532 9469302557	"	
13	Surinder Singh		788954977	"	

Signature Sheet

Name of Sub-Project: Improvement & Upgradation of Sidhra- Surinsar road upto km18.290 District Jammu (World Bank Funded)

Location: Aithan

Date: 20/12/20

Sl no.	Name	Gender	Mobile number	Address	Signature
1	Ashok Kumar.		9906276514		
2	Buender Kumar		7889891429		
3	Baldev Rajv		9906040390		
4	Kandar Singh		9149403467		
5	Arjun Singh		9419214971		
6	HADI SINGH		9797671924		
7	Ashok Kumar		9899464853		
8	Kanishk Lal		7051672105		
9	SHARAD SINGH		7051624564		
10	THOXY RAM		9797620789		
11	CHANDER. SHARMA		9419284185		

Signature Sheet

Name of Sub-Project: Improvement & Upgradation of Sidhra- Surinsar road upto km18.290 District Jammu (World Bank Funded)

Location: Pargalta

Date: 20/12/20

Sl no.	Name	Gender	Mobile number	Address	Signature
①	Darshana Devi (Sarpanch)	Female	9682166519	Pargalta	
②	Deepak Kumar	M.	9086190724	"	Deepak
③	Godharsi Lal	M	9086147996	"	Godharsi Lal
④	Harveen Kumar	M	8803171170	"	
⑤	Rajkumar	M	9622169043	"	
⑥	Rajkumar	M	979792558	"	
⑦	Panni Kumar	M.	7869411752	M	
⑧	Chander Mohan	M.	9797329781	M	Chander Mohan

Photographs: Aitham Consultation and transect walk



Social Impact Assessment Report



Consultation at village Pargalta (20.12.2020)

