

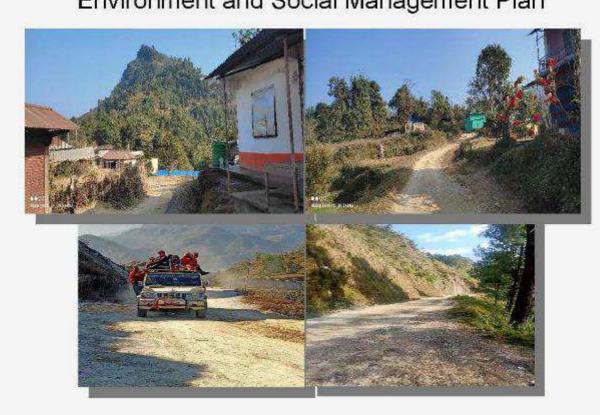
# Project Implementation Unit Nepal Urban Governance and Infrastructure Project

# **Putalibazar Municipality**

Office of the Municipal Executive Putalibazar, Syangja

# VOLUME IV

# Environment and Social Impact Assessment and Environment and Social Management Plan



Upgrading of
Pragatinagar-Bahakot-Namche-Kalku Road,
Putalibazar Municipality
Credit No: IDA - 6778-NP
Contract NO. NP-DUDBC-216334-CS-QCBS



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#### **Executive Summary**

#### Introduction

This Environmental and Social Impact Assessment (ESIA) covers 7.6 km length of road, Pragatinagar to Dandaswara of Bahakot section of Pragatinagar-Bahakot Namche Kalku Road. The road starts at Pragatinagr and end at Dandaswara passing through settlements and market area such as Pragatinagar, Geundanda, Aahaldanda, Kaliyathok, Bahakot, Dandaswara, Namche, Kalku, Khamare etc.. The subproject will provide easy vehicular access and pedestrian movement connecting municipality ward 3, 8 and 9. As the road connects the Syanga and Tanahun district via Pragatinagar at Siddhartha Highway to Dandaswara (Bahakot) and further connecting Shuklagandaki municipality of Tanahun district, will reduce travel time and cost by about 50% while travelling to Dulegaunnda of Prithivi Highway. The subproject will improve livelihood of the local people along the settlement. The subproject is expected to contribute towards the municipal capacity for urban development planning, infrastructure development and institutional development of the municipality.

The declared Right of Way (RoW) of proposed road is 15 meters. However, the upgrading works will be carried within the existing road width in public use that varies from 4.5m to 10m. Average road width is about 7.5m in most of the section. Additional land take and private structure clearance is not required except in the start chainage of private non title holder house owned by Bindu Shrestha. The road upgrading is proposed with intermediate lane carriageway with Asphalt concrete surface wearing coarse, side drain, cross drainage structures with 25 pipe culverts, 2 slab culvert and 1 box culvert, retaining structure, road safety measures etc. Relocating of 5 nos electric poles and drinking water pipes at two locations shall require. The road alignment passes through barren, agricultural, settlement and forest land. The existing road is earthen and graveled road and in poor condition with potholes and damaged pavements at several places.

# **Baseline Information**

Total population of Putalibazar Municipality is 41743 and total household is 11881(NPHC 2021). The average household size of the municipality is 3.51 which is lower than that of district household size 3.67. The major people living in the project area are 26.3% Brahmins, Chhetri 16.73%, Gurung 12.42% and Magar 11.27%. Other are Kami 6.76%, Damai 5.09%, Thakuri 4.51% etc. Hindus. Muslims, Christians, Sikhs, etc. are found living in religious communities. There is diversity in the cultural practices of the castes within the project area. Cultural festivals like Dashain, Tihar, Teej, Holi, Buddha Jyanti, Shivratri, Christmas. A total of 145 households will be directly benifited by the proposed subproject. The project influenced ward are 3 and 8 of Putalibazar municipality. Putalibazar has moderate climate. Temperature within the municipality varies from 6°C to 31.5°C annually. The municipality also gets good rainfall (i.e.; average annual rainfall 266.5 mm). No active landslide is present in the road alignment. The proposed road alignment starts from Pragatinagar at elevation of 818m to maximum elevation of 1316m above mean seal level. The rocks type Phyllite are also exposed along the road alignment. The water quality report of the kholsi and drinking water was found complied with National Drinking Water Quality Standards /GoN. Existing chautaras, pratikshalaya and temple will remains protected during the construction of road.

# **Legal and Regulatory Requirements**

The sectoral and cross-sectoral guidelines and standards promulgated by the GoN in various periods are adequate to mainstream the environmental and social safeguard dimensions in the project preparation and implementation phases. The report has included the applicable GoN plan, policies, act, regulations, guidelines, and standards. Similarly, the report has also included the environmental and social standards of the World Bank.

## Screening, Scoping, Impact identification, Prediction and Management

Direct Impact Zone of the project includes all the areas where activities related to the construction and operation will take place. The area within 10 m on either side from center line of road alignment along

with tree clearance site, camp site, stockpiling site, disposal site and quarry site is referred as DIZ. Indirect Impact area is the area where the construction and operation activities of the project experience minimal impacts. Indirect impact is fall within 15 meters from the edge of the RoW. Environmental and Social checklists were used for screening and summarizing the overall impacts. The site-specific impacts in construction and operation phases are included in the ESIA report. Some of the impacts include:

#### **Pre-Construction and Construction Phase**

#### o Physical Impacts

- Land Use change
- Landslide and soil erosion due to excavation works
- Quarrying material and operation
- Stockpiling and construction area
- Noise, Air and Water pollution
- Solid waste generation

#### o Biological environment Impacts

- Impact on the forest and wildlife during construction phase may occur
  - Socio-economic and Cultural Impacts
- Impact on physical resources like change in land use, temporary obstruction to structures
- Temporary impacts on Business
- Impacts to community infrastructures like school, water pipelines, health facilities
- Occupational health and safety
- Social disturbances/risk of SEA/SH and HIV AIDS
- Community health risk
- Traffic management issues etc.

#### **Operational Stage**

The mitigation measures corresponding to the impacts have been suggested in the report. Some of the mitigation measures are

## o Physical Impacts

- Road stability and management
- Water pollution

#### o Socio-economic and Cultural Impacts

- •Improved Transportation Facilities
- •Rise of Land Value
- •Enhancement of the social services

#### Sexual exploitation and Abuse and Sexual Harassment Prevention and Response Action Plan

Based on the Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) Risk Assessment checklist and assessment carried out for NUGIP by the World Bank, the Project's SEA/SH risks are assessed to be "Low". An SEA/SH Prevention and Response Action Plan has been developed for NUGIP based on this assessment and includes specific measures that aim to prevent and mitigate GBV, in particular SEA/SH risks that the project activities might trigger. But in the project area SEA/SH issue

have not been recorded. According to District Police Office and Municipality Social section no any case has been registered in project area.

## **Environment and Social Management Plan**

Environmental and Social Management Plan (ESMP) has been proposed with present report including issues identified, possible effects and impacts, measures for their mitigation, monitoring methods. The mitigation cost for environmental and social impacts in construction and operation phases are included in ESIA report. In addition, agencies responsible for executing environmental mitigation measures and monitoring have been identified in the ESMP. Different monitoring indicators on the physical, biological, socio-economic and cultural environment have also been identified. The project along with the stakeholders will monitor during reconstruction and operation phase. The project also includes a grievance redress mechanism (GRM) for timely update and resolution of of stakeholders' queries and grievances.

Institutional arrangements The Ministry of Urban Development (MoUD) has set up a Project Coordination Office (PCO) under the Department of Urban Development and Building Construction (DUDBC) to implement NUGIP. The PCO is responsible for overall project compliance including compliance with environmental and social measures. The PCO will be supported by a Project Management Support Team (PMST). A Project Implementation Unit (PIU) will be established in each municipality for implementation of the subproject project at the local level and will be responsible for implementation of the ESMP and other environmental and social instruments. Technical Assistance will be provided through a Design and Supervision Consultancy (DSC) which includes safeguards specialists.

# कार्यकारी सारांश

यो वातावरणीय तथा सामाजिक प्रभाव मूल्याङ्कन (ESIA) ले प्रगतिनगर-बहाकोट नाम्चे कल्कु सडक खण्डको प्रगतिनगर देखि डाँडास्वारा सम्म ७.६ किलोमिटर लम्बाइ सडक समेटेको छ। यो सडक प्रगतिनगरबाट सुरु भई प्रगतिनगर, गेउडाँडा, आहलडाँडा, कालियाथोक, बाहकोटका बस्ती र बजार क्षेत्र हुँदै डाँडास्वारा पुगेर टुङ्गिनेछ। यस उप-आयोजनाले नगरपालिकालाई जोड्ने सवारी साधन र पैदलयात्रुको सहज आवतजावतमा मद्धत गर्नेछ। वडा ३, ८ र ९ हुँदै जाने यस सडकले स्याडजा जिल्लाको सिद्धार्थ राजमार्गको प्रगतिनगर हुँदै डाँडाश्वारा (बहाकोट) र तनहुँ जिल्लाको शुक्लागण्डकी नगरपालिका जोड्ने भएकाले पृथ्वी राजमार्ग अन्तरगतको दुलेगौंडा पुग्नको लागि यात्राको समय र लागत झन्डै ५० प्रतिशत घटाउनेछ। यस उप-आयोजनाले बस्तीमा रहेका स्थानीय जनताको जीवनस्तरमा सुधार ल्याउनुका साथै नगरपालिकाको सहरी विकास योजना, पूर्वाधार विकास र संस्थागत विकासमा नगरपालिकाको क्षमता अभिवृद्धिमा योगदान पु¥याउने अपेक्षा गरिएको छ।

प्रस्तावित सडकको क्षेत्राधिकार(RoW) १५ मिटर रहेको छ । यद्यपि, सडकको स्तरोन्नित भने सार्वजिनक प्रयोगमा आइरहेको सडक चौडाइ भित्र रहेर गरिनेछ जुन ४.५ मिटरदेखि १० मिटरसम्म रहेको छ । अधिकांश खण्डमा सडकको औसत चौडाइ लगभग ७.५ मिटर रहेको छ । सडकको शुरुमा नै रहेको विन्दु श्रेष्ठको स्वामित्वमा रहेको निजी तर दर्ता प्रमाणपत्र नभएको घरको सुरुवात खण्ड बाहेक थप जग्गा र निजी संरचना आवश्यक पर्दैन । सडक स्तरोन्नितको लागि मध्यवर्ती लेन क्यारेजवेको प्रस्ताव गरिएको छ जसमा डामर(Asphalt) कंक्रीटको मोटे सतह, साइड ड्रेन, २५ पाइप कल्भर्ट, २ स्ल्याब कल्भर्ट र १ बक्स कल्भर्ट सहितको क्रस ड्रेनेज संरचना, रिटेनिङ स्ट्रक्चर, सडक सुरक्षा उपाय आदि, ५ वटा बिजुलीका पोलहरू स्थानान्तरण गर्ने प्रस्ताव गरिएको छ । दुई ठाँउमा पिउने पानीको पाइप स्थानतरन गर्नु पर्ने देखिन्छ । सडकको अधिकाँश भाग बाँझो, कृषि, बस्ती र जङ्गल क्षेत्र हुँदै जान्छ । यस सडक माटो र ग्राभेलयुक्त सडक हो र धेरै ठाउँमा खाल्डाहरू र पैदलमार्गहरू भित्कएकाले जीर्ण अवस्थामा छ ।

# आधारभूत जानकारी

राष्ट्रिय जनगणना २०७८ अनुसार पुतलीबजार नगरपालिकाको कूल जनसङ्ख्या ४१ हजार ७४३ र कुल घरपरिवार ११ हजार ८८१ रहेको छ । नगरपालिकाको औसत घरपरिवारको आकार ३.५१ रहेको छ जुन जिल्लाको घरपरिवारको आकार ३.६७ भन्दा कम छ । आयोजना क्षेत्रमा २६.३% ब्राह्मण, क्षेत्री १६.७३%, गुरुङ १२.४२% र मगर ११.२७% रहेका छन् भने कामी ६.७६%, दमाई ५.०९%, ठकुरी ४.५१% आदि छन । हिन्दू मुस्लिम, क्रिस्चियन, सिख आदि धार्मिक समुह आयोजना क्षेत्रमा बसोबास गर्दछन भने हिन्दुधर्म मान्नेहरुको संख्या अधिक रहेको छ । आयोजना क्षेत्र भित्र रहेका जातिहरुको सांस्कृतिक प्रचलनमा विविधता छ । दशैं, तिहार, तीज, होली, बुद्ध जयन्ती, शिवरात्रि, क्रिसमस जस्ता सांस्कृतिक पर्वहरू मनाउने गरीन्छ । प्रस्तावित उप-परियोजनाबाट कुल १ सय ४५ घरधुरी प्रत्यक्ष रूपमा लाभान्वित हुनेछन । आयोजनाबाट प्रत्यक्ष फाइदा लिनेमा पुतलीबजार नगरपालिकाको ३ र ८ वडा रहेका छन् । यस नगरपालिकाको हावापानी मध्यम खालको रहेको छ । नगरपालिका भित्रको तापक्रम वार्षिक ६ डिग्री सेल्सियस देखि ३१.५ डिग्री सेल्सियससम्म हुन्छ । नगरपालिका क्षेत्रमा औसत वर्षा हुने गरेको छ जसलाई राम्रो वर्षा (अर्थात् वार्षिक औसत २६६.५ मिलिमिटर) भन्ने गरीन्छ । सडक खण्डमा कुनै पनि सिक्रय पहिरोको जोखिम छैन । प्रस्तावित सडकखण्ड प्रगतिनगरदेखि ८९८ मिटरको उचाइमा सुरु भएर औसत समुन्द्री स्तरभन्दा बढीमा १३१६ मिटरसम्म हुनेछ । Phyllite प्रकारको चट्टान पनि यस सडक खण्डमा भेट्टीएका छन । यस सडक छेउका खोल्सा,खोल्सी र समुदायमा वितरण भएको पिउने पानीमा पानीको गुणस्तर प्रतिवेदन राष्ट्रिय खानेपानी गुणस्तर मापदण्ड/GoN अनुरूप रहेको पाइयो । सडक निर्माणका क्रममा विद्यमान चौतारा, प्रतिक्षाालय र मन्दिरलाई संरक्षण गरिनेछ ।

# कानूनी र नितिगत आवश्यकताहरू

परियोजनाको तयारी र कार्यान्वयन चरणहरूमा वातावरणीय र सामाजिक सुरक्षाका आयामहरूलाई मूलप्रवाहमा ल्याउनका लागि सरकारद्वारा विभिन्न अवधिहरूमा जारी गरिएका क्षेत्रीय र अन्तर-क्षेत्रीय निर्देशन तथा निर्देशिकाहरू र मापदण्डहरू पर्याप्त छन र पुर्णरूपमा पालना गरीनेछ। प्रतिवेदनमा लागू हुने सरकारी योजना, नीति, ऐन, नियमावली, निर्देशन र मापदण्डहरू समावेश गरिएको छ । त्यस्तै प्रतिवेदनमा विश्व बैंकको वातावरणीय र सामाजिक मापदण्ड पनि समेटिएको छ र यसलाई पनि पुर्णरूपमा लागु गरीनेछ ।

# वर्गीकरण, क्षेत्र निर्धारण, प्रभाव पहिचान, पुर्वानुमान र व्यवस्थापन

परियोजनाको प्रत्यक्ष प्रभाव क्षेत्रले निर्माण र सञ्चालन सम्बन्धी गतिविधिहरू हुने सबै क्षेत्रहरू समावेश गर्दछ। रुख कटान क्षेत्र, श्रमिक क्षेत्र, भण्डारण क्षेत्र, फोहोर व्यवस्थापन क्षेत्र र उत्खनन क्षेत्र सिंहत सडकखण्डको मध्यभागबाट दुबै तर्फ १० मिटर भित्रको क्षेत्रलाई DIZ भनिन्छ। अप्रत्यक्ष प्रभाव क्षेत्र भनेको आयोजनाको निर्माण र सञ्चालन गतिविधिले न्यूनतम प्रभाव पर्ने वा गर्ने क्षेत्र हो। अप्रत्यक्ष प्रभाव RoW को किनाराबाट १५ मिटर भित्र पर्छ। समग्र प्रभावहरूको वर्गीकरण र संक्षिप्तीकरणका लागि वातावरणीय र सामाजिक परिक्षणका संयन्त्रहरू प्रयोग गरिएको थियो। निर्माण र सञ्चालन चरणहरूमा स्थलगत भ्रमणमा देखा पर्नसक्ने प्रभावहरू ESIA प्रतिवेदनमा समावेश गरिएको छ। केही प्रभावहरू निम्नरुपमा समावेश गरीएका छन।

# पूर्व निर्माण र निर्माण चरण

- भौतिक प्रभावहरू
- भू-उपयोगमा परिर्वतन
- उत्खनन कार्यका कारण पहिरो र माटो बग्ने जोखिम
- उत्खनन सामग्री र सञ्चालन
- भण्डारण र निर्माण क्षेत्र
- ध्वनी प्रद्षण, वायु प्रद्षण, जल प्रद्षण
- ठोस फोहोरमैला निस्किन्
  - जैविक वातावरणीय प्रभावहरू
- निर्माण चरणमा वन र वन्यजन्तुमा असर पर्न सक्छ
  - सामाजिक-आर्थिक र सांस्कृतिक प्रभावहरू
- भौतिक स्रोतहरूमा प्रभाव जस्तै भू-उपयोगमा परिवर्तन, संरचनाहरूमा अस्थायी अवरोध
- व्यवसायमा आंशिक प्रभावहरू
- विद्यालय, खानेपानी पाइपलाइन, स्वास्थ्य सुविधा जस्ता सामुदायिक संरचनाहरूमा प्रभाव
- पेशागत स्वास्थ्य र सुरक्षामा प्रभाव
- सामाजिक असुरक्षा ÷लैंिगक तथा यौनिक शोषण,उत्पिडन तथा हिँसा र एड्सको जोखिम
- सामुदायिक स्वास्थ्यमा जोखिम
- ट्राफिक व्यवस्थापन समस्याहरू आदि।

# परियोजनाको परिचालन चरण

प्रतिवेदनमा विभिन्न प्रभावहरुका साथै त्यससँग सम्बन्धित न्यूनीकरणका उपायहरूलाई सुझावका रुपमा राखिएको छ । न्यूनीकरण सम्बन्धि केही उपायहरू निम्नानुसार रहेका छन् ।

भौतिक प्रभावहरू

- भू-उपयोग
- जल प्रदूषण

सामाजिक-आर्थिक र सांस्कृतिक प्रभावहरू

- स्धारिएको यातायात स्विधा
- जिमनको मूल्य वृद्धि
- सामाजिक सेवाको अभिवृद्धि

# यौन शोषण र दुर्व्यवहार र यौन उत्पीडन रोकथाम र प्रतिक्रिया कार्य योजना

यौन शोषण र दुर्व्यवहार र यौन उत्पीडन (SEA/SH)) जोखिम मूल्याङ्कन चेकलिस्ट र विश्व बैंक द्वारा NUGIP को लागि गिरएको मूल्याङ्कनको आधारमा, परियोजनाको SEA/SH जोखिम "कम " हो भनेर मूल्याङ्कन गरिएको छ। यस मूल्याङ्कनको आधारमा NUGIP को लागि SEA/SH रोकथाम र प्रतिक्रिया कार्य योजना विकसित गरिएको छ र यसमा GBV लाई रोक्न र न्यूनीकरण गर्ने उद्देश्यले विशेष उपायहरू समावेश गरिएको छ, विशेष गरी परियोजना गतिविधिहरूले ट्रिगर गर्न सक्ने SEA/SH जोखिमहरू। तर परियोजना क्षेत्रमा SEA/SH सम्बंधित मुद्दा रेकर्ड गरिएको छैन। जिल्ला प्रहरी कार्यालय र नगरपालिका सामाजिक शाखाका अनुसार आयोजना क्षेत्रमा कुनै उजुरी परेको छैन।

# वातावरणीय र सामाजिक व्यवस्थापन योजना

वातावरणीय तथा सामाजिक व्यवस्थापन योजना (ESMP) हालको प्रतिवेदनमा पहिचान गरिएका समस्याहरू, सम्भावित प्रभाव र प्रभावहरू, तिनको न्यूनीकरणका उपायहरू, अनुगमन विधिहरू समावेश गरी प्रस्ताव गरिएको छ । निर्माण र सञ्चालन चरणहरूमा वातावरणीय र सामाजिक प्रभावहरूको लागि न्यूनीकरण लागत ESIA प्रतिवेदनमा समावेश गरिएको छ । बिसतृत रूपमा, ESMP मा वातावरणीय न्यूनीकरण उपायहरू र अनुगमन गर्न जिम्मेवार निकायहरू पहिचान गरिएको छ । भौतिक, जैविक, सामाजिक-आर्थिक र सांस्कृतिक वातावरणमा पनि विभिन्न अनुगमन सूचकहरू पहिचान गरिएको छ । आयोजनाको निर्माण र सञ्चालन चरणमा सरोकारवालाहरूसँगको संलग्नतामा परियोजना अनुगमन हुनेछ । यस परियोजनामा सरोकारवालाहरूको जिज्ञासा र गुनासोहरूको लागि समयमै अद्यावधिक र समाधानको लागि गुनासो निवारण संयन्त्र (GRM) पनि निर्माण गरिएको छ । संस्थागत व्यवस्थापन गर्न शहरी विकास मन्त्रालयले शहरी विकास तथा भवन निर्माण विभाग (DUDBC) मातहत आयोजना समन्वय कार्यालय (PCO) स्थापना गरेको छ । PCO वातावरणीय र सामाजिक प्रभावहरूको नियमन तथा कार्यन्वयनको लागि समग्र परियोजना संचालनको लागि जिम्मेवार निकाय हो । PCO लाई परियोजना व्यवस्थापन सहायता टोली (PMST) को निर्माण गरिएको छ । स्थानीय स्तरमा उप परियोजना कार्यान्वयन गर्न प्रत्येक नगरपालिकामा परियोजना कार्यान्वयन इकाई (PIU) स्थापना गरिएको छ र ESMP र अन्य वातावरणीय र सामाजिक संन्त्रहरूको कार्यान्वयनको लागि जिम्मेवार हुनेछ । प्राविधिक सहायता डिजाइन र सुपरिवेक्षण परामर्शदाता(DSC) मार्फत प्रदान गरिनेछ जसमा विभिन्न सुरक्षा विशेषज्ञहरूको समुह समावेश गरिएको छ ।

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#### Acronym

BoQ Bill of Quantity

CBOs Community Based Organizations

CBS Central Bureau of Statistics

DIZ Direct Influence Zone
DPR Detailed Project Report

DTMP District Transport Master Plan

DTO District Transport Office

DUDBC Department of Urban Development & Building Construction

EA Environmental Assessment

EHS Environment, Health and Safety

EPR Environmental Protection Rule

ESIA Environmental Impact Assessment

ESMP Environmental and Social Management Plan

FGD Focus Group Discussion

FR Feasibility Report
GAP Gender Action Plan

HIVAIDS Human Immuno deficiency Virus Infection and Acquired Immune

**Deficiency Syndrome** 

HR Human Resources

IDA International Development Association

IEE Initial Environmental Examination

IIZ Indirect Influence Zone

ILO International Labor Organization

IP Indigenous People

ISR Implementation Status Review

KII Key Informant Interview

NGO Non-Governmental Organization

NUGIP Nepal Urban Governance and Infrastructure Project

OP Operational Policy

OP/BP Operational Policy/Bank Policy

PAP Project Affected Person

PCO Project Coordination Office

PCU Passenger Car Unit

PIM Project Implementation Manual

PIU Project Implementation Unit

PMC Pokhara Metropolitan City

PPE Personal Protective Equipment

RAP Resettlement Action Plan

RoW Right of Way

SHE Safety, Health and Environment
STD Sexually Transmitted Disease

TOR Terms of Reference

ULG Urban Local Governments



# 1 INTRODUCTION

## 1.1 Project Background

Nepal has recently transitioned from a unitary to a federal government system, comprised of three tiers of government with seven provinces and 753 local governments for which new legislation, institutions, and administrative procedures are being formalized as constitutionally prescribed. To enable the federal implementation process and to support Urban Local Governments (ULGs) in the efficient provision of assigned service delivery responsibilities in the context of rapid urbanization, the proposed Nepal Urban Governance and Infrastructure Project (NUGIP), with support from the World Bank (WB), aims to address two main challenges under the new federal context: (i) limited institutional systems and capacities of ULGs; and (ii) critical gaps in core municipal services and infrastructure.

The Government of Nepal (GoN) is receiving financing from the International Development Association ("World Bank") towards the cost of the Nepal Urban Governance and Infrastructure Project (NUGIP). The Department of Urban Development and Building Construction (DUDBC) within the Ministry of Urban Development (MoUD) is the primary implementing agency for NUGIP, and bears the complete responsibility of project implementation, management, supervision and coordination. A Project Coordination Office (PCO) has been established under the MOUD, DUDBC for carrying out activities related to the project and is responsible for coordinating implementation on a day-to-day basis. The PCO is comprised of a Project Director (PD), Deputy Project Director (DPD), Project Engineers (PE), and other key project management and technical staff.

The development objective of NUGIP is to expand municipal infrastructure and strengthen institutional and financial systems in participating ULGs in Nepal. NUGIP comprises three components. The first component is investment support for strategic city-wide municipal infrastructure development and local/regional economic development projects. In particular, NUGIP will aim at: a) improving access to core municipal services (includes expansion of coverage, and construction and rehabilitation of basic infrastructure systems, e.g., urban roads & storm water drainage etc) in participating municipalities; b) strengthening planning, budgeting and implementation systems for municipal service delivery; and c) strengthening municipal finances and financial management systems.

NUGIP is comprised of five components:

- ➤ Component One will provide urban development grants (UDGs) to participating ULLs for financing strategic municipal infrastructure sub-projects focusing on, amongst others, rehabilitation and improvements in municipal roads, drainage, drinking water supply and onsite sanitation as well as associated design and implementation support.
- ➤ Component Two will focus on strengthening institutional systems and capacities of participating ULLs for improved urban management and service delivery.
- ➤ Component Three will provide support and relief to vulnerable groups in the target municipalities to help mitigate the short and medium negative impact of the COVID 19 crisis through rapid labor-intensive public works (LIPW).
- ➤ Component 4 includes a Contingent Emergency Response (CER) component to respond rapidly at the Government's request in the event of an eligible disaster, including climate-related events and pandemics. supports a Contingent Emergency Response, and
- > Component 5 will provide support to the MoUD for managing, coordinating and monitoring the implementation of the proposed Project, and also for enhancing its federal policy and regulatory role for urban development.

#### 1.2 Objective of ESIA

The objective of ESIA is to address environmental and social impacts associated with the implementation of this project. The specific objectives are as follows

- To identify and assess the environmental and social risks/ impacts/ issues
- To ensure all environment and social management plans are aligned with the Nepal government and World Bank safeguard requirements.
- > To establish clear procedures and methodologies for the environmental and social risk management of the sub-projects to be financed under the Project
- > To ensure that mitigation measures are designed to effectively mitigate the potential adverse social and environmental impacts
- > Strengthen the institutional capacity of the ULGs on safeguards management and compliance
- Analysis of possible alternatives and to recommend the best alternative.
- > Outline the elements of environmental mitigation, management, monitoring and Environmental Management Plan.

## 1.3 Subproject Details

Putalibazar Municipality is the head quarter of Syangja district located in Gandaki Province. The Putalibazar municipality is established in 2053 BS. after merging five VDC namely Syangja Putalibazar, Karendanda, Satupasal, Ganeshpur and Chandikalika. As per the latest decision in 2073 B.S Phalgun 1, Putalibazaar municipality area was extended after the restructuring at local level was done by the Government of Nepal. The added wards as well as VDCs are Pauwegaude, Taksar, Thuladihi, Bahakot, Kolma, Rangvang (1-3 and 9), Barahachaur, and Pelkachaur (1, 2, 4-8) VDCs with 14 new wards. Putalibazaar Municipality is a major commercial center for the district as well.

Putalibazaar Municipality is surrounded by Phedi Khola Rural Municipality in the North of Kaski district, Biruwa Rural Municipality and Bhirkot Municipality in the South, Aandhi khola ,Arjunchaupari Rural Municipalitiesand Bhirkot Municipality in the West and Shuklagandaki Municipality of Tanahun and Pokhara Metropolitan City of Kaski districts in the East. The municipality comprises 14 wards and cover about 147.21 Sq. Km in area. The Siddhartha highway passes through the Putalibazar municipality.

The sub project is located in Putalibaar Municipality of Syangja District, Gandaki Province. The proposed road sub-project connects Siddhartha Highway from Pragatinagar to Ramche and further connects Shuklagandaki Municipality of Tanahun districts. This creates the opportunity for alternative alignment connecting the Siddhartha Highway at Pragatinagar to Prithivi Highway. The geographical location of the starting point at Pragatinagar with GPS coordinate 28°05'58.12"N and 83°52'35.38"E. Similarly, the end points lie near the Ramche with latitude 28°04'11.32"N and longitude 83°57'20.29"E.

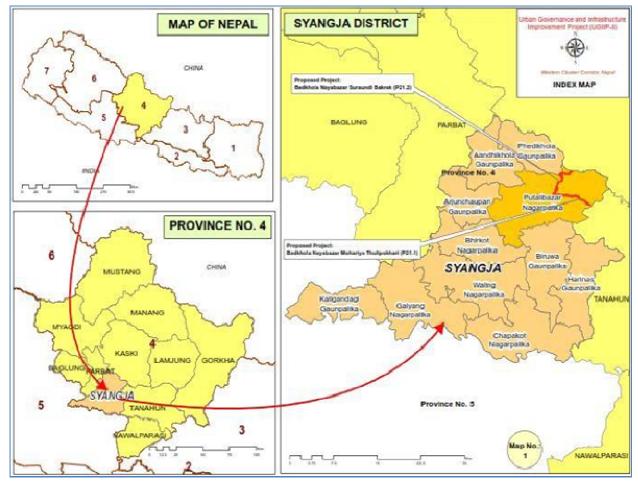


Figure 1-1: Project Location Map

The proposed subproject involves upgrading of 7.6 km length of road (Pragatinagar to Dandaswara of Bahakot) section of the Pragatinagar Namche Road in Putalibazar Municipality of Syangja district in Gandaki Province. The road under the subproject passes through wards 3 and 8 Putalibazar Municipality. The road connects as alternative link road from Siddhartha highway to the Prithivi Highway. The road starts from Pragatinagar at Siddhartha Highway and end at Ramche. The proposed subproject is located in hilly topography and passes through settlements, agricultural lands. The subproject road currently a single lane gravel road with 500 m section damaged blacktopped road at starting section. The road section requires pavement reconstruction to maintain acceptable levels of service. There are no alternative routes to the project road that serve the same function as that of the stated road.

The declared Right of Way (RoW) of proposed road is 15 meters (Refer Letter Cha. No. 3884 of Annex V). However, the upgrading works will be carried within the existing road width in public use that varies from 4.5m to 10m. (Table 1-1). Additional land take and private structure clearance is not required except in the start chainage of private non title holder house owned by Bindu Shrestha. Cost for replacement /maintenance has been presented in Table 2-10 and also shown in ESMP Matrix Table 6-1.

Mass consultation meeting was organized in participation of road users. Meeting minutes of the mass consultation organized on 2079-12-05/14/17 (21<sup>st</sup>/30<sup>th</sup> August and 2<sup>nd</sup> September, 2022) to gather perception/ views from the local community on the project implementation is attached in Annex II. From the mass meeting it is concluded that local community is positive towards the road upgrading work.

The proposed upgrading of road Pragatinagar - Bahakot-Namche-Kalku Road compared to the existing scenario is described in Table 1-1.

Table 1-1: Comparison of Existing road and proposed road

S. No.	Description	Existing Scenario	Proposed Scheme
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S. No.	Description	Existing Scenario	Proposed Scheme	
1	Length of Road	Pragatinagar - Bahakot - Namche - Kalku Road 13+126 km	Pragatinagar - Bahakot 7+600 Km (Designed length)	
2	Right of Way (RoW)-Declared by municipality	15 m	15 m	
	Total Road Width	4.5 to 10 m (Ch:5+740- 6m & 5+790- 4.5m) Average 7.5m	5.5 m - 7.5 m except drain (intermediate lane) As per DPR; Exceptional 4.5 m at Ch:5+790	
3	Traffic		<ul> <li>i. 507 PCU in Base Year 2025AD at CH 0+030.00 As per DPR</li> <li>ii. 1962 PCU in 2045AD at CH 0+030.00</li> </ul>	
4	Carriageway	Average 5 m Ch: 5+790- 4.5m	5.5 m Ch: 5+790- 4.5m	
5	Pavement type	First 500m section damaged blacktopped and remaining graveled and earthen	Asphalt concrete	
6	Median/Landscape or Green land areas	No median Provided and green land area	Median is not provided	
7	Parking	Nil	Nil	
8	Cycle track	Nil	Nil	
9	Side Drain	Damaged PCC drain 700m length	-	
10	Cross drainage Structures	11pipe culverts	25 Pipe culvert, 2 slab culvert and 1 box culvert proposed	
11	Protection Works	Nil	Retaining wall/slope protection measures as per requirement	
12	Traffic signs/signage and road marking Nil		Provided all along the road to ensure maximum safety to pedestrian and vehicular traffic.	
13	Total cost of road		NRs <b>522,708,309.77</b> (including VAT, PS and contingency)	
14	Per KM cost of road		NRs. <b>68,777,409.18</b> (including VAT, PS & Contingencies)	

Source: DPR 2023

# **Cross-sectional Elements**

Detail cross-sectional elements proposed in the Pragatinagar-Bahakot-Namche-Kalku Road are provided in the figure below:

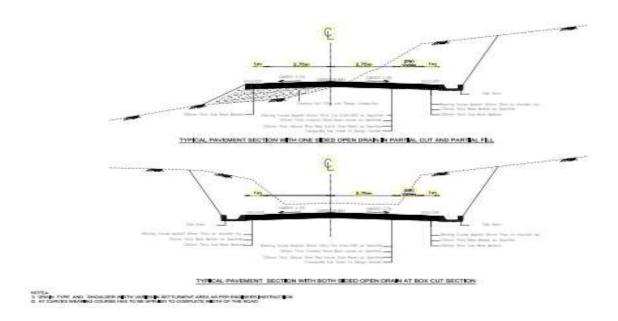


Figure 1-2: Typical Cross Section

# Carriageway

Based on the traffic volume studied presented in Annex-X the carriageway in Pragatinagar-Bahakot-Namche-Kalku Road is proposed to Intermediate lanes (5.5 m).

#### **Kerbs**

Kerbs indicate the boundary between the carriage way and the shoulder or islands or footpaths. Barrier kerbs are designed to discourage vehicles leaving the pavement. These type of kerbs are provided such that they encourage the traffic to remain in the through traffic lanes and also allow the driver to enter the shoulder area with little difficulty. The dimension of Kerb is provided according to NRS 2070.

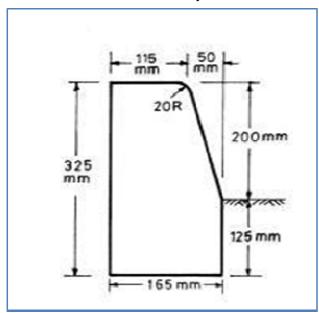


Figure 1-3: Barrier Kerbs Stone

## **Road Crossings**

Zebra crossings have been provided at locations with high pedestrian crossing areas as well as settlement areas. 10 nos. of such crossings have been provided along the alignment. In addition to that, 3 branch roads at 0+320, 1+002 and 3+800 with large width have also been provided with zebra crossing. Locations of road crossings have been provided below.

Table 1-2: Zebra Crossings Locations

SN	Chainage
1.	0+015
2.	0+100
3.	0+280
4.	2+620
5.	3+000
6.	4+620
7.	5+160
8.	5+720
9.	7+020
10.	7+540

#### **Intersections**

There is no major intersection existed. But there are Y/T type junctions at Chainage 0+000, 0+035, 0+105, 0+320,1+002, 2+045, 2+625, 3+020, 3+400, 3+800,4+620, 4+980, 5+165, 5+730, 5+955, 6+925, 7+020, 7+540 from where branch starts to go to other places. However, due to less availability of space, physical structures such as roundabouts and islands could not be installed there. Thus, the manual (traffic police) and automatic traffic system such as traffic lights and traffic signals can be installed at Pragatinagar at start point at future.

#### **Sewer Drainage**

As per discussion with the municipal officials, future planning of any type of sewer drainage projects has not been done. Currently the municipality is collecting the sewer through sewer collecting vehicles and disposing to specified location for the safe disposal area. As the municipality plans to continue the same system, no further improvement planning of sewer drainage is done within the scope of this project. If Municipality plans for sewer system in future the space below side of shoulder and carriageway can be used with minimal damage as the finishing surface of these space are proposed to be constructed with interlocking concrete block which can be reused.

# **Cross-Roads Development**

Stretch of 15 m of each cross-road will be developed under this project. Minimum radius of 5 m has been provided for cross roads. This development of cross-roads will include the following aspects:

- Improvement of Carriageway of all major as well as minor intersections.
- Installation of Road markings at all major as well as minor intersections.

# **Road Signs and Markings**

Road markings perform the important function of guiding and controlling traffic on a highway. The markings serve as psychological barriers and signify the delineation of traffic paths and their lateral clearance from traffic hazards for safe movement of traffic. Road Markings will be done as per Traffic sign and marking manual Volume I and II by DoR. Broken Line markings have been done to separate lanes. Line marking to separate parking spaces between cars/motorcycle has been provided. Continuous marking to separate carriageway from cycle lane/ parking has been provided.

#### **Hand Railings**

Hand railing is not provided between carriageway and footpath as there already exists a raised kerb which acts as a lane separator. Handrail is also avoided as it discourages the pedestrian to utilize the full width footpath width.

# Retaining/ Breast Wall

Plumb concrete, Masonry and Gabion Retaining and breast wall are provided along the alignment where required.

#### **Plum Concrete Drain**

Plum concrete drain has been provided throughout the alignment in hillside as per required site condition. Storm water collected are disposed through the nearest culvert sections.

# **Pavement Design**

Flexible pavement is proposed for the entire length of the proposed road. Pavement is designed as per the guidelines of Flexible pavement guidelines of DoR, Nepal. As per guideline, the thickness of different structural layers found to be as follows:

Granular Sub base course = 200 mm, Base= 150 mm

Wearing Coarse = 40 mm thick Asphalt

#### **Road Safety**

Road safety components such as rumble strips, road humps, visibility improvement at intersections and branch roads, pedestrian crossings, barring significant trees like Peepal trees with boundary walls and installing proper signs, traffic signs and signals has been incorporated in design. Considering the road safety aspects of the project adequate quantity and cost for the road furniture and signs has been allocated in BoQ.

## i. Pedestrian Crossings

Pedestrian crossing (zebra crossing) is proposed in intersections, major junctions, and branch roads and even in road alignment with major places such as schools and commercial establishments in order to cross the road safely across the flow of vehicular traffic. Signalized pedestrian crossings are proposed in order to separate when each type of traffic (pedestrians of road vehicles) can use the crossing.

## ii. Rumble Strips

Traverse rumble strips are proposed across the full width of the travel lanes to alert motorists of approaching intersections, schools, hospitals and horizontal curves. Raised rumble strips are proposed which include asphalt bars and raised pavement markers. Rumble strips are also proposed in all cross road connections (branch roads).

# Conservation of Chautaras and Pratikshalaya Significant Trees

Chautaras are present in various chainages on left and right side and is proposed to be protected with the boundary wall. Chautara at Ch 0+810, Ch 3+405 and 3+870 will be protected during construction of road. Installation of traffic sign showing the constricted carriageway due to the presence of chautaras is proposed in order to warn the motorists so sufficient tapering with respect to design speed has to be provided.

#### 1.4 Existing Road conditions

The existing road is earthen and graveled road and in poor condition. The road consists of potholes and damaged pavements at several places. The remaining section is earthen road and is also in poor condition. The existing road width varies from 4.5 m to about 10 m at some places and the average road width in most of the section of the road is about 7.5m. Most of the road alignment passes through agricultural land and few sections on settlement and forest land. The road passes through major

settlements and market are such as Pragatinagar, Geundanda, Aahaldanda, Kaliyathok, Bahakot, Dandaswara, Namche, Kalku, Khamare etc.

# 1.5 ESIA Methodology

The study is undertaken following an overarching approach for Environmental and Social Impact Assessment (ESIA) and subsequently developing an Environmental and Social Management Plan (ESMP) following guidance provided by the Environmental and Social Management Framework (ESMF). A consultative and participatory process was adopted to conduct the ESIA and prepare the ESMP for the sub-project of **Pragatinagar-Bahakot-Namche-Kalku** road. The strategies to undertake the ESIA and preparing the ESMP required both qualitative and quantitative information gathering at both primary and secondary levels. The project team at Project Coordination Office (PCO) of Department of Urban Development and Building Construction (DUDBC), the World Bank, different national and local level stakeholders involved in NUGIP and the interaction with the community and related stakeholders on technical, environmental and social issues and consultants' observation of the intervention sites were undertaken. The ESIA/ESMP is in compliance with the GoN and the World Bank's policies and builds on the recent approaches and incorporates learning and previous experiences. The stepwise process in the preparation of ESIA/ESMP includes the following activities:

- ➤ Reviewed scope of works for the ESIA/ESMP, Project Implementation Manual (PIM), feasibility reports of the sub-project
- Reviewed applicable laws of the GoN and the WB policies.
- Consulted project team, PCO, stakeholders, WB and experts.
- Reviewed the DPR of the proposed project, consulted PCO and DPR consultants.
- > Followed checklist for environmental and social data of DPR.
- > Prepared safeguard (including resettlement) checklists prior to the field visit.
- Visited sub-project site and consulted municipality office, district level.
- ➤ Conducted consultations, Focus Group Discussions (FGDs), Key Informant Interviews (KII), with several stakeholders and Community Forest User Groups (CFUGs).
- ➤ Collected primary data for physical, biological, and socio-economic baseline information. Instrumentation monitoring was performed for air, water, and noise. For biological assessment, vegetation survey and consultation was carried out.

The representation of the methodologies for the ESIA of sub-project is shown in **fig below** 

- · Environmental screening using the checklist
- ·Scoping of project to determine ToR of ESIA/IEE and AoI
- Collecting baseline data of physical, bioloigcal social characteristics of sub-project site and Aol
- ·Identification of key stakeholders and public consultation
- Determination, analysis and evaluation of potential environmental, cultural heritage and social impacts and issues and significance of the environmental and social risks
- · Analysis of alternatives
- ·Identification of environmental and social risk mitigation measures
- Preparation of ESMP implementation and monitoring plan
- ·ESMP Template for different sectoral projects, including cost and schedule
- ·Institutional arrangements including implementation and compliance monitoring
- · Capacity building

Figure 1-4: ESIA Process for all sub-projects

#### **1.5.1.** Baseline study

Baseline data was collected for both environmental (physical and biological) and social aspects in conducting the ESIA and was used in developing the ESMP, based on the ESMF.

#### 1.5.2. Stakeholder Analysis

A stakeholder analysis was carried out during the ESIA stage. The following activities were carried out during the analysis:

- Identified stakeholders of the sub-project
- Consulted stakeholders
- Incorporated feedback from the stakeholders into project design
- Incorporated recommendations and mitigation measures during construction and operation
- Involved stakeholders in stages of project implementation for ownership.

# 1.5.3. Gender assessment and GBV status analysis

The following activities were undertaken for gender assessment.

- Review of the legal policy framework of GoN
- Review of the set-up, capacity, and constrains within relevant institutions
- Analyze the culture amongst women of different cultural groups
- Analyze potential positive and negative impacts on women
- Analyze barriers, challenges, and constrains for the participation of women
- Identify potential entry points and interventions to enhance gender sensitivity
- Recommend project planning and implementation teams in addressing gender context

# 1.5.4. Assessment of potential environmental and social impacts

- Likely Beneficial Impacts
- Likely Adverse Impacts

## 1.5.5. Environmental and social screening

Every sub-project under the NUGIP is subject to an environmental and social screening process. The screening process establishes the level of environmental and social assessment required. The screening process intends to identify relevant possible environmental and social concerns as well as suggest any further investigation and assessment as necessary. Primarily, at planning stage prior the DPR preparation the environmental and social screening exercise is undertaken to determine the key environmental and social issues/concerns and the nature and magnitude of the potential impacts that are likely to arise on account of the proposed sub-projects. After screening of the proposed project the project falls on category B having medium impact on environment and social environment. The fundamental environmental and social issues to be identified were determined by the type, location, sensitivity and scale of the municipal investment and sub-grant intervention. The results were used to determine the need for detailed assessment and the extent and type of environmental and social assessment.

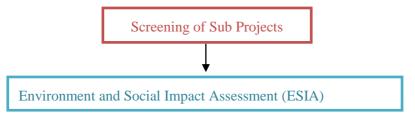


Figure 1-5: Flow of preparation of safeguard instruments for the project

#### 1.5.6. Revision and modification of ESMP

The ESIA and ESMP is a live document that will be publicly disclosed and disseminated. Unexpected situations in the sub-project or component design would therefore be assessed and appropriate management measures will be incorporated by updating the ESMP. Such revisions will also cover any modifications introduced in the design of sub-project at any stage of the project. Also, based on the experience of application and implementation of such a framework, provisions and procedures would be updated as applicable and when required with due process.

#### 1.5.7. Assessment of Affected Structure

Qualitative structural assessment of the building was carried out based on visual observation at the site jointly by the engineer of Putalibazar Municipality and engineer of Design and Supervision Consultant team. Since, there was only one affected structure and requiring partial demolition of certain portion of the structure, categorization of affected structure was not considered for the assessment. Further, the records (design, drawings of the affected structures) were unavailable, information was obtained based on the discussion/consultation with the owner of the affected structure. During, the consultation/discussion with house owner, its built-up date, materials used for construction, existing usages of the house space, daily sales from grocery shop operated by the house owner was recorded.

From the assessment, total plinth area of the ground floor and 1<sup>st</sup> floor was found to be 629.39sq. ft. each, having total 13 nos. of RCC column with 3 nos. of compartment in ground floor and two rooms in the first floor. This was verified through total area of the house measurement and from visual inspection. After, the inspection, the structural assessment team concluded that, out of the total 13 columns of the structure only one column of a room facing Siddartha Highway lying at the project road corner need to be dismantled/cleared and dismantling of certain portion of frame structure at outer edge will not affect the structure integrity of the structure as there are 12 remaining column and beam adjacent to the column to be dismantled is enough to transfer the load. The original floor area of the structure will be reduced by 64.01 sq.ft. after partial demolition of the notch portion of the room, which is 10% of the total area. Declaration for structural integrity from engineer's from Putalibazar Municipality and Design and Supervision Consultant (DSC) is attached in Annex VI.

#### 1.5.8. Valuation of Affected Land and Structure

The house owned by affected PAF Mrs. Bindu Shrestha is without any registered land ownership certificate and is within the RoW of Siddhartha Highway in the government land, compensation/assistance for land required for the road upgrading has not been evaluated due to the absence of provision for non-title holder land compensation in Nepal's legal system,

For the valuation of affected structures, Social Evaluation Report of NUGIP Project under Tilottama Municipality as of September 2024 is referred. Tilottama Social Evaluation Report of NUGIP has evaluated the valuation of the affected structure considering donor funded resettlement action plan of the recent nearby project, specifically the "Upgrading of Butwal-Gorusinghe road section of the east-west highway (2022)", market rate and Municipality rate with inflation rates. The Per unit area rate for the structure has been calculated adopting the higher rate adopted in the Tilottama Municipality NUGIP Project Social Evaluation Report considered for compensation amount fixation and the Putalibazar Municipality valuation rate. The two different costs have been compared and a higher unit rate has been adopted for the compensation cost calculation of the affected structures. The adopted rate was verified to ensure that it is at the replacement cost value and was without depreciated cost. Details of rate analysis for structure loss compensation is attached in Annex VI.

#### 1.5.9. Valuation of Business Loss

During, the assessment of affected structure, it was noted that grocery shop was being operated in the affected house from the affected house owner herself. Therefore, valuation for business loss from the partial dismantling works was also conducted. A total of 90 days was taken for evaluating the business loss considering the time period that may affect the grocery business from the dismantling and repair/maintenance disturbances. For calculating 90 days business loss assistance amount, 15% profit from daily average sales of the grocery shop and daily wages of a labor of Putalibazar was considered. Highet rate from the calculated comparative rates was adopted for fixing compensation/assistance amount. Details of rate analysis for business loss assistance is attached in Annex VI.

# 2 ENVIRONMENT AND SOCIO-ECONOMIC BASELINE

## 2.1 Background

A detailed ESIA was carried out as per the GoN's national laws and the WB safeguard policies, and Environmental Health and Safety (EHS) Guidelines, and covering any separate or additional requirements as per national laws. Further, the project's Detailed Design Report (August 2019, update 2022) presents the results of a topographical survey of all stations to be rehabilitated, including the existing conditions of the following physical environment:

- ➤ Carriageway, shoulder, footpath, median, land use and roadside drain location including its width, depth, type/ shape, material of construction etc.
- Tree details such as location, name of species, religious/social significance and girth. Details of road side vegetation and forest such as location, size, type etc.
- Location and details of over ground utilities like electrical and telecom lines, poles, junction boxes, transformers etc.
- ➤ Location and details of any water bodies, natural drainage/canals.
- ➤ Details of cross drainage structures like culverts and bridges mentioning type, number of spans, length, width, deck/crown level, invert level, formation level and road level.
- ➤ Highest Flood Level (HFL) data of natural drains, ponds, lakes and rivers along the road.
- ➤ Location of gates/ doors, height of boundary walls, and fencing of the existing houses and/or commercial establishments along with ramp.
- Location and RoW of connected roads (Min 50 mtrs beyond the RoW of the existing road).
- ➤ Location and area of existing as well as potential Bus/ Auto stands/ commercial vehicles etc.
- Existing landscaping features, land marks, road furniture etc.
- ➤ Important land marks like religious structures, schools, hospitals, cooperatives and other important establishments along the road.

# 2.2 Physical environment

# **Physiography**

Physiographically, Nepal is divided into eight different zones. i.e. Terai, Siwalik, Dun Valley, Mahabharat Range and Midlands (hills), Fore Himalaya (Middle mountain), Higher Himalaya and Trans Himalaya (High Mountain). Syangja lies in the hilly region at an altitude ranging from about 300 meters along the banks of Kaligandaki river up to 2512 mabove mean sea level. The proposed road alignment starts from Pragatinagar at elevation of 818m to maximum elevation of 1316m above mean seal level. Putalibazar Municipality is surrounded by Phedi Khola Gaunpalika in the North, Biruwa Gaunpalika in the South, Arjunchaupari Gaunpalika in the West and Syangja and Syanja districts in the East. Siddhartha Highway connects Putalibazar municipality to Butwal (127 Km) and Pokhara (39 Km). Siddhartha highway passes through the municipality where linear development along the highway can be seen.

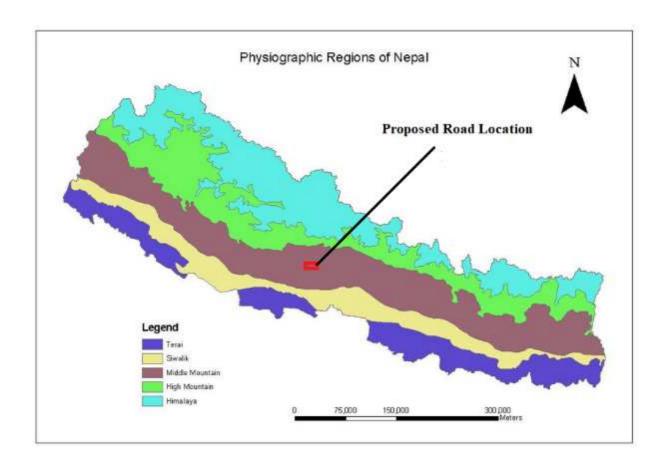


Figure 2-1: Physiographic Division of Nepal and project area

#### Geology

Geologically, Nepal is divided into 5 different regions. They are Terai, Siwaliks, Lesser Himalaya, Higher Himalaya and Tibetan Tethys Himalaya. The project area lies in lesser Himalaya. The road alignment follows the rocks of the Midland Group, Lesser Himalaya, Pokhara Formation. The rocks of Lesser Himalayan Zone have been transported southwards in several thrust slices. Generally, two types of sequences namely autochthonous and allochthonous can be distinguished in this Zone throughout the Himalayas. The both sequences of the Lesser Himalaya mainly have un-fossiliferous, sedimentary, and meta sedimentary rocks such as slate, phyllite, schist, quartzite, limestone, dolomite, etc., ranging in age from Precambrianto Eocene. There are also some granitic intrusions in this zone. No active landslide is present in the area. Some minor landslide/erosion seen at chainage 2+800, 3+740 and 6+520 chainages along the existing road alignment. Retaining structures and bio engineering item like, palisade, brush layering, fascines and grass plantation quantity in bill of quantity is also considered for enhancing the stability of such section for mitigation.

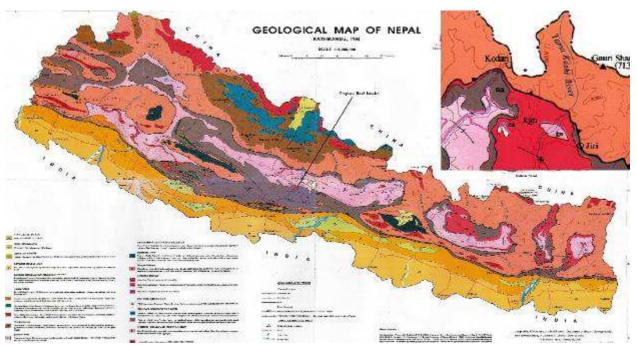


Figure 2-2: Geological map of Nepal

Along the road section, the rocks of Phyllite are also exposed along the road alignment. Road alignment is covered by the residual soil with thick colluvial deposits. A good portion of the alignment covered by residual soil and colluvial deposits. At many locations, bedrocks of phyllite can be seen along the road alignment.

# **Topography**

Syangja lies in the hilly region at an altitude ranging from about 366 meters (Keladi) along the banks of Kali gandaki river upto mamximum altitude of 2512 m (Panchase peak). Putalibazar Municipality is surrouneded by Phedi Khola Gaunpalika in the North, Biruwa Gaunpalika in the South, Arjunchaupari Gaunpalika in the West and Syangja and Syanja districts in the East. Siddhartha Highway connects Putalibazaar municipality to Butwal (127Km) and Pokhara (39Km). Siddhartha highway passes through the municipality where linear development along the highway can be seen. There is only one feeder road in the municipality that connects Putalibazaar to Karkineta and Kusma in Parbat district. In the proposed road alignment and in RoW there is no major landslide/flood prone area and other disaster-prone area.



Starting point Pragatinagr chowk

Toporaphical view of Project area



Existing road condition Shiva temple along the roadside Figure 2-3:Pictorial highlights of the Project Area

## Climate and Hydrology

The climate of the municipality is classified as warm and temperate. Putalibazar has moderate climate. Temperature within the municipality varies from 6°C to 31.5°C annually. The municipality also gets good rainfall (i.e.; average annual rainfall 266.5 mm) as it is surrounded by the forest and mountains in the North. As such in some river basin floods causes loss of land, creating distress particularly in low land area near river every year.

Climate Zone of Syangja District	Elevation range	% of Area
Upper Tropical	300 to 1,000 meters(or 1,000 to 3,300 ft).	53.6%
Subtropical	1,000 to 2,000 meters(or 3,300 to 6,600 ft).	45.3%

#### Rainfall in Project area

The frequency analysis of extreme rainfall of 33 years has been carried out to determine the rainfall intensity in mm/day in the project area. The trend analysis of extreme event shows that the extreme rainfall in the project site is in increasing order (Figure 2.4. From the analysis an average annual increment of 5% on an extreme rainfall is seen. This increment of 5% has been considered in a return period rainfall event analysis for the project.

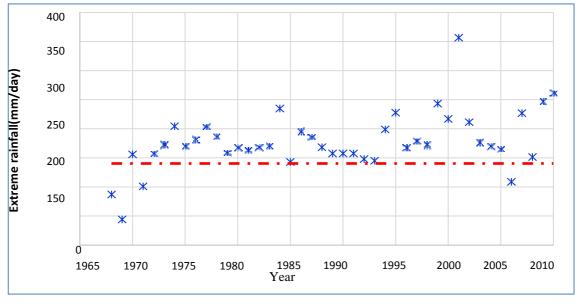


Figure 2-4: Trend of Extreme Rainfall in Project Site (Source: DPR, 2019)

## **Liquefaction Susceptibility**

Liquefaction is defined as the transformation of a granular material from a solid to a liquefied state as a consequence of increased pore-water pressure and reduced effective stress (Marcuson, 1978(4)). Increased pore pressure may be induced by the tendency of granular materials to compact when subjected to cyclic shear deformation, such as in the event of an earthquake. As per IS 1893 (Part-1): 2002, Clause 6.3.5.2 soil deposits consisting of submerged loose sands and soils falling under classification SP with corrected standard penetration test values N less than 15 in seismic zone V are subjected to liquefaction. However, simplified method of liquefaction potential analysis is provided. IS 1893 2016 shall be used to determine the liquefaction potential. The PGA for the Pragatinagar- Bahakot -Namche -Kalku road site shall be taken as 0.25g referred from the Seismic Hazard Map of Nepal published by Nepal Seismological Centre. As per the literature reviews the strata with corrected N value greater than 30 are not susceptible to liquefaction. The detail analysis has to be presented in each individual reports. As the site falls under Zone V of seismic zone, the design for seismic forces should be done considering the project in Zone-V.

The records of seismic activities are limited in the Nepal Himalayas and hence, correlation of seismic events within the adjacent Himalayan Region would be a useful source of information for designing the hydraulic structures. Several seismicity studies have been carried out for various projects in the country during feasibility study and engineering design phases.

#### **Land Use**

Most of the road alignment passes through agricultural land and few section on settlement and forest land. The road passes through major settlements and market area such as Pragatinagar, Geundanda, Bahakot, Dandaswara, Namche, Kalku etc. The alignment also passes through community forest at some sections of road alignment.

Table 2-1: Land use pattern of Putalibazar Municipality

S.N.	Land Use Type	Area (Sq. Km)	Percentage
1	Barren Land	0.01	0.01%
2	Bush	6.79	4.61%
3	Cultivation	79.81	54.22%
4	Embankment	0.08	0.05%
5	Forest	51.60	35.05%
6	Grass	6.07	4.12%
7	River/Waterbody	0.75	0.51%
8	Riverbed	2.10	1.43%
	Total	147.20	100

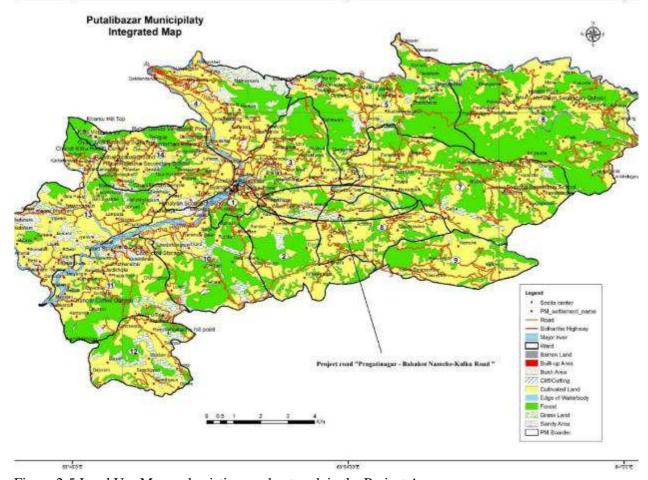


Figure 2-5:Land Use Map and existing road network in the Project Area

# Air and Water Quality

During the physical environment survey (air and water) on project road alignment at recipient level measurement data were obtained. The water samples of kholsi and drinking water form Bahakot village were collected from the project affected areas and tested in laboratory in April, 2023. The water quality report was found complied with National Drinking Water Quality Standards /GoN. The Water quality test report is attached in Annex IV.

Table 2-2: Water quality of Tap water of project area Upper Chisapani Garjyan (Bahakot village)

Parameters	Results	Unit	(RelevantStandard )
Colour	0	TCU	5(10)
Conductivity	170	μS/cm	1500(max)
рН	7.5	-	6.5-8.5
Total Solids	112	mg/L	1000
Turbidity	0.22	NTU	5(15)
Ammonia	< 0.02	mg/L	1.5
Nitrate	0.53	mg/L	50
Chloride	8.99	mg/L	250
Iron	< 0.01	mg/L	0.3(3)
Total Hardness	62	mg/L as CaCO <sub>3</sub>	500

Coliform*	Absent	-	-
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(Source: Field visit, 2023)

Table 2-3: Water quality of Tap water of project area Lower Chisapani (Bahakot village)

Parameters	Results	Unit	(Relevant Standard)
Colour	5	TCU	5(10)
Conductivity	200	μS/cm	1500(max)
рН	7.6	-	6.5-8.5
Total Solids	130	mg/L	1000
Turbidity	9.27	NTU	5(15)
Ammonia	< 0.02	mg/L	1.5
Nitrate	0.02	mg/L	50
Chloride	8.99	mg/L	250
Iron	< 0.01	mg/L	0.3(3)
Total Hardness	72	mg/L as CaCO <sub>3</sub>	500
Coliform*	Absent	-	-

(Source: Field visit, 2023)

Table 2-4: Water quality of Chiti Kholsi( Ch 0+150) of project area

Parameters	Results	Unit	(Relevant Standard)
Temperature	21		-
Appearance	Clear	-	Clear
Taste and Odour	Not Objectionable	-	Not Objectionable
Colour	0	TCU	5 (10)
Conductivity	170	μS/cm	1500(max)
рН	7.6	-	6.5-8.5
Total Dissolved Solids	200	mg/L	1000
Total Suspended Solids	14		1000
Turbidity	0.05	NTU	5 (15)
Ammonia	< 0.02	mg/L	1.5
Total Alkalinity	242	mg/L	2000
Biological Oxygen Demand	129.6	mg/L	500
Nitrate	0.39	mg/L	50
Chloride	5.99	mg/L	250
Iron	< 0.01	mg/L	0.3 (3)
Total Hardness	198	mg/L as CaCO <sub>3</sub>	500

(Source: Field visit, 2023)

Similarly, the air quality of the projection area is found to be good. There is no any big industries in the area. The vehicular movement in the proposed road is very minimum. So the only source of air pollution in the area is dust from road and firewood burning used for cooking.

# **Noise Quality**

The Sound pressure of project site was monitored on morning, daytime and nighttime were 50dB(A) at early morning and maximum of 59 dB(A) at daytime and similarly 49 dB(A) at night (Field survey, 2023). The observed daytime and nighttime average sound pressure levels complied the prescribed limits of GoN 2012. The details of noise are summarized

Table 2-5: Noise level of project area

Average Sound Pressure Level,dB(A)	Time,Hr					
	06:00	09:00	13:00	15:00	18:00	20:00
<b>Equivalent Sound Pressure Level,</b>	50	58	56	59	51	49
(Leq)						

# 2.3 Biological Environment

The proposed road passes through barren land of one community forest and barren land of a government forest. Government forest is adjacent to alignment at Ch 0+520 to Ch 0+680 and Basante Community forest is at Ch: 3+710 to Ch: 3+760 with barren land adjacent to alignment. Although the road passes through the forest, the upgrading does not require additional land of forest and fell down of the trees not required. A total of 53 trees shall fell down from private ownership only (Annex VIII). The compensation for the landowner will be provided by municipality and has been included in ESMP matrix (Table 6-1). So direct impact on the forest due to upgrading of the road have not anticipated but indirect impact on the forest and wildlife during construction phase may occur. Major trees found in the RoW of the project are presented in table below.

Table 2-6: Major tree species found in the RoW of the project

SN	Common Name	Scientific Name
1	Chilaune	Schima wallichana
2	Katus	Castonopsis indica
3	Bedulo	Ficus sarmentosa
4	Tooni	Toona ciliata
5	Khanyu	Ficus semicardata
6	Kaulo	Machilus odoratissima
7	Salla	Pinus roxburghii
8	Paiyu	Prunus cerasoides
9	Pipal	Ficus religiosa
10	Orange	Citrus sinensis

(Source: Field Survey, 2023)

#### 2.4 Socio-economic and Cultural Environment

Socio-economic overview

A total of 145 households will be directly benifited by the proposed sub-project. The project influenced ward are 3 and 8 of Putalibazar municipality. The proposed project lies in Putalibazar Municipality of Syangja District in Gandaki Province of Nepal. The total population of the district, according to the Census of Nepal, 2021 is 2,53,024 and the number of households is 68,923. The average family size of the district is 3.67. Similarly, the total population of Putalibazar Municipality is 41743 and total household is 11881. The average household size of the municipality is 3.51 which is lower than that of

district household size (3.67). The details of the demographic character of affected district and municipality are shown in Table 2-7.

Table 2-7: Demography of Project area

	HHs	Total Population	Male	Female	HH Size	Sex Ratio
Syangja	68,923	2,53,024	1,16,678	1,36,346	3.67	85.5
Putalibazar Municipality	11,881	41,743	19,285	22,457	3.51	85.71

Source: NPHC-2021

The major people living in the project area are Brahmins, Chhetri, Gurung and Magar. Other are Kami, Damai, Thakuri etc. Hindus. Muslims, Christians, Sikhs, etc. are found living in religious communities. There are also Shiva Temple, Radhakrishna Temple, Panchasedham, Ramche devi temple, Ramdi Ghat, Keladighat, Alamdevi Mandir. The indigenous people in project area are Gurung, Magar and Newars.

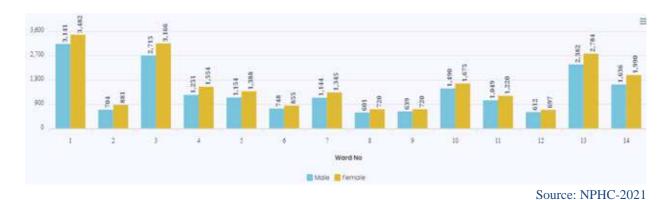


Figure 2-6: Wardwise population of Putalibazar Municipality

Table 2-8: Details of ethnic group residing within the project area

Caste	Brahmin	Chhetri	Gurung	Magar	Kami	damai	Thakuri	Gharti	Other	Total
Percentage	26.3	16.73	12.42	11.27	6.76	5.09	4.51	4.2	12.72	100

Source: NPHC-2021

#### Details of cultural practices of the castes living within the project area

There is diversity in the cultural practices of the castes within the project area. There is Radha Krishna Mandir at Ch 0+420, Siva Temple at Ch 3+380 and Ch: 7+020. These temples will not be affected during the construction of road. Cultural festivals like Dashain, Tihar, Chhath, Ram Navami, Shivaratri, Buddha Jayanti, Eid, Christmas are celebrated in this region which is inhabited by different castes and religions. Table 2-9: Details of the cultural practices of the castes living within the project area

Name of Local Level	Name and Ward No.	Cultural Rituals
Putalibazar Municipality	Ward 3 and 8	Dashain, Tihar, Teej, Holi, Buddha Jayanti, Christmas etc.
Municipality		

# **Existing Traffic Circulation Pattern**

The project road does not experience heavy traffic because of the present road condition. The traffic seen at the time of field survey is four wheel Jeep, Pickup, Car, Auto, Motorbike, Tractor, utility vehicle in the alignment of Pragatinagar Bahakot Namche Kalku road. Generally traffic nos. is high at 8am to 10am in the morning and 4pm to 6 pm at evening compared to the rest of the time in the day. People from the settlement areas along and nearby the alignment get served by this road. As the road connects the two district Syangja and Tanahun and municipality is planning to upgrade this road upto the district

boundary, traffic of Siddhartha highway will divert through this route to reach Prithivi Highway at Dulegaunda.

#### Infrastructure loss

During construction of road one private structure of non title holder lying within the RoW of Siddartha Highway will be partially damaged. The house is residential building with a small grocery shop on roadside shutter at ground floor. The structure was assessed jointly by civil engineer of DSC and municipality and found safe for partial demolishing of the notch of the structure. The partial demolishing of structure shall be carried taking precaution measures like erecting and supporting the structural member by steel member as required. Detail assessment of the loss of structure is given below in (Table 2-10).

Electric line passes alongside the alignment at various locations and during construction these electric poles may need to be relocated along the roadside beneath the new road edge. Altogether 5nos. of electrical poles that lies on the road alignment at Ch: 0+030, Ch: 5+750 to 6+000 area need to be relocated. The cost for relocation of electrical poles has been included in BoQ.

Table 2-10: Details of Private Infrastructure loss

Location	Description	Owner	Type of House	Area (Sqft.) to be dismantled partially
0+005 L/S	Partial demolishing of House at Kholsi, (Non title holder)	Late Laxman Shrestha (Recognizing name Binay Shrestha)	RCC 2 storied building	64.01

(Source: Field survey, 2023)



Figure 2-7: Google earth image showing camp location

# **Existing Waste Water/Sewerage Network**

Most of the households in Putalibazar Municipality are managing their waste themselves. They manage organic matters utilizing as food for domestic animal and also making compost manure, and inorganic matter either by burning or reusing. In context to peri-urban areas, solid waste is collected and brought to the nearest settlement having vehicle access in order to transport to the nearest dumping site.

## **Existing Water Supply Network**

Drinking water supply is one of the major challenges of Putalibazar rmunicipality. Currently, Syangja Bazar Drinking Water and Sanitation Project supplies drinking water to only certain portion of the core market area of Syangja Bazar. Numerous users' committee extract water directly from sources through pipeline connection. Putalibazar lacks an integrated system to operate, manage and upgrade the overall water supply system, also lacking to generate revenue from supply of water. During construction of road at Ch 0+320 a length of 50 m of drinking water pipe has to be relocated. Similarly, at Ch 2+750 a length of 100 m water pipe shall be relocated during upgrading of road construction. Though reservoir tank at L/S of alignment at Ch:3+410 is safe, retaining structure is provided nearby for protection. Other water tanks and taps will be protected during construction of road.

#### 3 LEGAL AND REGULATOTY REQUIREMENT

#### 3.1 Key applicable national environmental and social laws and regulations

A summary of applicable rules and regulations is provided under the Chapter 2 of the NUGIP ESMF. The sectoral and cross-sectoral guidelines and standards promulgated by the GoN in various periods are adequate to mainstream the environmental and social safeguard dimensions in the project preparation and implementation phases. This ESIA has given due attention on the above guidelines and standards in the identification and prediction of the project's impact and in the design of the mitigation actions and monitoring protocols.

The Constitution of Nepal provides local governments the autonomy to enact new laws in areas listed as their sole authority (Schedule-8, Constitution of Nepal). The GoN's applicable laws, regulations, guidelines, standards shall be followed during the construction and operation phases of the project.

## 3.2 List of National Policies, Rules, Laws, Regulations, Relevant to the Project (if construction activities triggers then it applies)

- 1. Constitution of Nepal
- 2. Ancient Monument Protection Act 1956
- 3. Aquatic Animal Protection Act 1961
- 4. Environment Protection Act 2019
- 5. Forest Act 2019
- 6. Labor Act 2017
- 7. Child Labor Act (CLA) 2001
- 8. Labor Act 2017
- 9. Gender Equality Act, 2006
- 10. Land Acquisition Act, 1977 (and amendments 2010) and Land Acquisition Regulations, 1969
- 11. Local Government Operation Act 2017
- 12. Motor vehicle and Transport Management Act, 2049
- 13. National Foundation for the Development of Indigenous Nationalities Act 2002,
- 14. Plant Protection Act 2007
- 15. Public Road Act, 1974 and amendment 2010
- 16. Road Board Act 2059
- 17. Soil and Watershed Conservation Act, 1982 and Subsequent Amendment
- 18. Solid Waste Management Act 2011 and Solid Waste Management Rules 2013
- 19. Water Resources Act 1992
- 20. Environment Protection Rule 2020
- 21. Forest Rules 2022
- 22. Water Resources Regulations 1993
- 23. 20 Year Road Plan, 2059 –2079BS (2002-2022AD)
- 24. 2002, National Dalit Commission 2002
- 25. Forest Policy 2015
- 26. Land Acquisition, Resettlement and Rehabilitation Policy for Infrastructure Development Project 2014

- 27. National Biodiversity Strategy and Action Plan (NBSAP) 2014-2020
- 28. National Environmental Standards Information Booklet 2018
- 29. National Human Rights Action Plan 2005, National Women Commission
- 30. Public Works Directive 2002
- 31. Work Procedure to Provide Forest Area for other Purposes, 2006
- 32. EIA guidelines for human settlement and Urban Development Sector 1996
- 33. EIA guidelines for Road Sector 1994
- 34. National EIA guidelines 1993
- 35. Operational Guideline for mainstreaming GESI in MoUD
- 36. GoN Policies supporting vulnerable communities (2004-2009)
- 37. Brief Environmental Study and Preliminary Environmental Examining Procedure

#### 3.3 Environmental Standards of GoN

- 1. Generic Tolerance Limits for Industrial Effluent Discharged into inland Surface water, 2001
- 2. Nepal Vehicle Mass Emission Standard, 2012
- 3. Nepal Ambient Air Quality Standard, 2012
- 4. Drinking Water Quality Standard, 2005
- 5. Nepal Noise Level Standard, 2012
- 6. National Indoor Air Quality Standards, 2009

#### 3.4 Relevant sectoral policies and guidelines prepared by DoR

- 1. Environmental Assessment in the Road Sector of Nepal, January 2000
- 2. Environment Management Guidelines, GESU/DoR, July 1997
- 3. Reference Manual for Environmental and Social Aspects of Integrated Road Development, MPPW/DoR, 2003
- 4. The National Transport Policy, 2001.
- 5. Land Infrastructure Development Policy 2004
- 6. Public Infrastructure Built and Operate Policy, (2000)

#### 3.5 International Obligations Conventions Relevant to the Project

- 1. Convention on Biological Diversity, 1992)
- 2. Convention on the International Trade in Endangered Wild Fauna and Flora (CITES), 1975
- 3. United Nations Framework Convention on Climate Change, 1992
- 4. Gender-Related International Conventions (including Convention on Elimination of All Forms of Discrimination Against Women, CEDAW)
- 5. ILO Convention on Indigenous and Tribal Peoples, 1989 (No.169)
- 6. ILO Convention on Worst Forms of Child Labor (C182)

#### 3.6 The World Bank Safeguard Policies

Table 3-1:Represents the World Bank Safeguard policies that are triggered in the sub-project environmental and social assessment.

Table 3-1: World Bank Safeguard Policies relevant to Project

World Bank OP	Objective & Brief Description
Environmental Assessment (EA) OP/BP 4.01	An Environmental Assessment is conducted to ensure that Bank-financed projects are environmentally sound and sustainable, and that decision-making is improved through appropriate analysis of actions and of their likely environmental impacts. Any World Bank project that is likely to have potential adverse environmental risks and impacts in its area of influence requires an EA indicating the potential risks, mitigation measures and environmental management framework or plan.
Natural Habitats OP/BP 4.04	The Natural Habitats Policy is triggered by any project (including any subproject under a sector investment or financial intermediary loan) with the potential to cause significant conversion (loss) or degradation of natural habitats, whether directly (through construction) or indirectly (through human activities induced by the project). The policy has separate requirements for critical (either legally or proposed to be protected or high ecological value) and non-critical natural habitats. The Bank's interpretation of "significant conversion or degradation" is on a case-by-case basis for each project, based on the information obtained through the EA.
Forestry OP/BP 4.36	This policy is triggered by forest sector activities and other Bank sponsored interventions, which have the potential to impact significantly upon forested areas. The Bank does not finance commercial logging operations but aims to reduce deforestation, enhance the environmental contribution of forested areas, promote afforestation, reduce poverty and encourage economic development
Indigenous People OP/BP 4.10	This policy states that any development process under World Bank financing should fully respect the dignity, human rights, economies, and cultures of Indigenous Peoples (IPs). The project should engage in a process of free, prior, and informed consultation with IPs that should result in broad community support to the project by the affected Indigenous Peoples.  There is no impact on the indigenous people (no impact due to project). However, it is responsibility of the project to communicate and disseminated the project related information to the indigenous people in the project areas. The project ensures that ensure that the IPs receive social and economic benefits that are culturally
Physical Cultural Resources OP/BP 4.11	appropriate and gender and inter-generationally inclusive.  The Bank seeks to assist countries to manage their physical cultural resources and to avoid or mitigate adverse impact of development projects on these resources. This policy is triggered for any project that requires an EA.
Involuntary Resettlement OP/BP 4.12	Key objectives of the World Bank's policy on involuntary land acquisition are to avoid or minimize involuntary resettlement where feasible, exploring all viable alternative project designs; assist displaced persons in improving their former living standards, income earning capacity, and production level, or at least in restoring them; encourage community participation in planning and implementing resettlement; and provide assistance to affected people regardless of the legality of land tenure. The policy covers not only physical relocation, but any loss of land or other assets resulting in relocation or loss of shelter; loss of assets or access to assets; loss of income sources or means of livelihood whether or not the affected people must move to another location. When the policy is triggered, a Resettlement Action Plan must be prepared. An abbreviated plan may be developed when less than 200 people are affected by the project. In situations, where all the precise impacts cannot be assessed during project preparation, provision is made for

World Bank OP	Objective & Brief Description					
	preparing a Resettlement Policy Framework. The Resettlement Action Plan /					
	Resettlement Policy Framework must ensure that all the Bank's policy provisions					
	detailed in OP 4.12 are addressed particularly the payment of compensation for					
	affected assets at their replacement cost					

# 4 ENVIRONMENTAL AND SOCIAL SCREENING, SCOPING, IMPACT IDENTIFICATION, PREDICTION AND MANAGEMENT

#### 4.1 Introduction

This chapter is on environmental and social impacts in terms of magnitude, extent and duration likely to occur during construction and operation phases. The issues are separated as beneficial and adverse environmental impacts, including direct, indirect, and induced impacts in the project influence area. The impacts will be related to activities to be carried out during construction of the project and the operation stage of the project. The operational phase impacts of the project will be associated with the activities carried out within the premises. In addition, closure and decommissioning phase impacts of the project are also highlighted. The impacts of the project during each of its life cycle stages (construction, operation and decommissioning) can be categorized into impacts on the biophysical environment, health and safety impacts and socio-economic impacts. The Environmental and Social Management Plan (ESMP) will have measures to avoid, minimize, mitigate, and compensate the adverse impacts and measures to enhance the beneficial impacts. Based on the Safeguard Policies OP/BP 4.01 and OP/BP 4.12 are triggered.

#### 4.2 Zone of Influence of the Project

Direct Impact Zone of the project includes all the areas where activities related to the construction and operation will take place. The area within 10 m on either side from center line of road alignment along with tree clearance site, camp site, stockpiling site, disposal site and quarry site is referred as DIZ in the study. The area will have greater chances of impact upon human population, private land and resources and impacts on physical, biological as well as socio-economic and cultural environment

Indirect Impact area is the area where the construction and operation activities of the project experience minimal impacts. Indirect impact is fall within 15 meters from the edge of the RoW. In this area, physical, biological and socio-economic environment will experience minimal impacts. The zones within project affected municipality is considered as Indirect impact area.

#### 4.3 Environmental and Social Screening Checklist

Table 4-1: Checklist for Environment Screening

SN	Particulars	Yes	No	Remarks
1	Is the site vulnerable to major natural or induced hazards such as landslides flooding storm surge, Severe wind damage, earthquakes, fire, explosion, others (specify)	Yes		Possibility of Earthquake and landslide. As Nepal lies risk to earthquake zone. Minor land slide found at chainage 2+800, 3+740 and 6+520 in road alignment and during widening further landslide may occur in unstable slope in hilly areas.
2	Is the project area adjacent to or within any of the following environmentally sensitive areas?  Cultural heritage site historical religious		No	The project doesn't lies in historical cultural site and Protected area, national parks
	traditional or cultural significance  Protected areas national parks wildlife reserves hunting reserve conservation areas buffer zone etc.			
	Wetland/Ramsar site/Simsar			
	Forest			
	Special areas for protecting biodiversity			
	Breeding/ nesting ground of wildlife occurrence of migratory species			

SN	Particulars	Yes	No	Remarks
	Migration route Wildlife Corridor			
	Any site of national or International Importance			
3	Likely impacts on trees including Timber and fruit bearing and vegetable cover	Yes		During survey 53 private trees including orange tree lies within edge of the existing road width in public use. These trees are of private ownership.
4	Possibility of degradation of land and ecosystem of surroundings	Yes		During upgrading of road the spoil generated from cutting road
5	Is the project area densely populated?		No	Village area, scattered settlement
6	Big Industries nearby and Type		No	Rural village area
7	Alteration of surface water hydrology of waterways due to the protect resulting in increased sediment in streams affected by increase soil erosion at construction site?	Yes		ESMP measures applicable
8	Chance of deterioration of surface water due to silt runoff and sanitary waste from worker base camps and chemicals used	Yes		ESMP measures applicable
9	Does the sub project requires significant extraction of surface or groundwater		No	
10	Increased risk of water pollution from Oil grease fuel spills and other materials		No	
11	Impact on water quality due to release of sewage sludge	Yes		During construction from camp
12	Possibility of flooding due to sewage		No	
13	Possibility of increased air pollution during construction and operation phase	Yes		ESMP measures applicable
14	Other pollution concerns relating to the inconveniences in living conditions that may trigger cases of Upper respiratory problems?	Yes		ESMP measures applicable
15	Risk and Vulnerabilities related to occupational health and safety due to physical chemical biological hazards during project construction and operation	Yes		No Biological hazards
16	Noise and vibration due to Civil works	Yes		ESMP measures applicable
17	Possibility of poor sanitation and solid waste disposal	Yes		ESMP measures applicable
18	Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents		No	
19	Accident risk associated with pre construction and operation phases	Yes		ESMP measures applicable
20	Large population influx during project construction and operation that causes increased burden on social infrastructure and services such as water supply and sanitation systems		No	About 100-200 nos of working personnel from other area shall come temporarily during the construction period of the project that will not cause significant burden on social infrastructure
21	Risks to community health and safety due to transport storage and use of construction materials such as gravel and sand and all other disposable Fuel and other chemicals during construction and operation	Yes		ESMP measures applicable.

SN	Particulars	Yes	No	Remarks
22	Interference with other utilities and blocking of access to resource utility and households with entrances in the ROW	Yes		
23	Generation of solid waste and /or hazardous waste during construction/operation of project?	Yes		ESMP measures applicable.
24	Conduct of medical health screening and testing to identify the presence of suspected covid-19 positive individuals among the construction workers in the workers' labor camps or among the community members that might infect the construction workers	Yes		ESMP measures applicable.

Table 4-2: Checklist for Social Screening

SN	Particulars	Details
1	Proposed Site Location	Putalibazar Municipality of ward 3 & 8, Pragatinagar-Bahakot-Namche Kalku Raod
1.1	Land Requirement for the Project	It is an up-gradation of existing road so no additional land is required.
1.2	Land ownership of the project area by the government or private Land	RoW land is in jurisdiction of Municipality and already in public use however, land parcels are still privately owned.
1.3	Does the project require acquisition of government land structures?	No
1.4	Present use of government land that will be used for the project activities with persons households using	No
1.5	Does the project require acquisition of private land and structure?	No; The upgrading work will be implemented within the existing road width in public use and therefore acquisition of private land and structure is not required. However, one non title holder private house at start chainage needs partial clearance. Further, the contractor will have only temporary acquisition of land for establishment of camps, workshops, parking lots and other facilities taking individual consent with the owner during construction phase.
1.6	Present use of government land that will be used for the project activities with persons households using for agriculture residential commercial and other purposes	The land will be used for the construction of the project only
1.7	Does the project require relocation of encroachers and squatters	No
1.8	Does the project require relocation of community facilities government establishment or any objects that are out of religious and cultural and historical significance	No
1.9	Proposed project located in an area where residents are a) All mainstream, b) Indigenous people, c) Majority mainstream are non-indigenous people, d) Majority indigenous people	All Mainstream residents are living there, indigenous people also living in these area.
2	Potential social impacts of the project	
2.1	Involuntary resettlement of people? (Physical displacement and economic displacement)	No
2.2	Impacts on the poor, women and children, indigenous people or other for vulnerable groups	No such impact on poor women and children, indigenous people, and/or economic displacement.

2.3	Will Community facilities require relocation?	Yes, water supply pipes and five electric poles from the existing road section will be shifted to beneath the road edge of new road section
2.4	Will the sub project disturb any traditional activity on adjoining or nearby	No
2.5	Poor Sanitation and solid waste disposal in construction camps and work sites	No
2.6	Possible transmission of communicable diseases such as STI and HIV AIDS from workers to local population	No
2.7	Population influx during project construction and operation that causes increased burden on social infrastructure and services such as water supply and sanitation systems	No
2.8	Social conflicts relating to inconveniences in the living condition while the construction interferes with pre-existing roads	Yes, change in road morphology and disruption in the infrastructure like drinking water, sewer system will cause inconvenience
2.9	Describe any other impacts that have not been covered in the screening	Gender-based violence; road stability and management; impact on Water Supply System and Electricity Poles; impact on existing infrastructures
2.10	Describe alternatives if any to avoid or minimize displacement from private and public lands	No such displacement from private and public lands
2.11	RAP /ARAP requirement	Not required

## 4.4 Impact Summary

Table 4-3: Overall Impact Summary

	- :
Summary	Proposed Road
What are the main potential environment and social issues/ risks /impacts/ concerns and/or potential positive impacts	As the road connect the ward no. 3, 8 & 9 of the Putalibazar municipality and also the Dulegauda of Tanahun district, the major positive aspects of road improvement project include easier transportation facility with shorter distance from Pragatinagar (Siddartha Highway) to border of Syangja district at Kalku upto Dulegauda at Prithivi Highway, decreases travel time, decreases travel cost, increases employment opportunities, increases land value, and fostering the community-based tourism industry. The sub project component will most likely create the opportunities for local contractors and suppliers of the construction materials therefore stimulating income generation opportunities for local and employment for the low-skilled local workers. The subproject provides accessibility to schools, health post, ward offices, temples, and connection to other villages through village roads.
	The proposed road project shows limited adverse social impacts in comparison to the benefits. Problems likely to be created during the construction stage can be marginalized with the proper precaution and implementing the measures recommended in ESMP. However, one non title holder private house at start chainage needs partial clearance. The house is residential building with a small grocery shop on roadside shutter at ground floor. Detail assessment for the loss of structure was assessed jointly by civil engineer of DSC and municipality. The removal and compensation for the structure has been agreed by the municipality. The partial demolishing of structure shall be carried taking precaution measures like erecting and supporting the structural member by steel member as required.
	The environmental impacts will be air, water, and noise pollution; obstruction to drainage: issues of waste: issues related to health and safety (accidents): issues related to management of traffic: labour camp impacts: spoil disposal areas (specific impacts are also spelled out in impact section of report). Possible site-specific project foot prints like spoil disposal areas, camp sites, quarry sites, labour camps etc. is presented in the ESIA Report and if changed or added will be included during the preparation of Construction Environment and Social Management Plan (CESMP) by the contractor. The CESMP will be prepared by Contractor within 45 days of commencement of works and submit to the PIU for approval. The contractor will follow ESMP of ESIA and CESMP. Such site-specific details, likely impacts and mitigation measures could be used for

Summary	Proposed Road
	compliance monitoring and reporting. The sub-project will clear 53 existing road site trees that include kukath, fruit and timber trees
Expected positive impacts/benefits to the local communities	As the Putalibazar market area is developed along the Siddhartha Highway road with densely built houses without parking space the improved economic access to the project areas will potentially make them more attractive for business and investments thus stimulating economic growth and employment opportunities. The proposed sub project will help to provide in easy road access, reduce travel time, provide travel and transportation cost saving, promote employment generation, provide easy access to social service facilities, promote market creation for local product, increase land values as beneficial impacts related with the road improvement project. Other positive impacts of this sub-project include socio-economic benefits, environmental benefits, disaster risk management, climate resilience.
Options Analysis	This is an existing road and upgrading works will be carried. The RoW is clear, minor issues can be mitigated and managed through proper mitigation measures outlined in the ESMP. As there is no other option of this road, an option analysis was not carried out. However, there are existing routes joining the junctions which can be used as an alternative route by the road users for period of time during the construction phase.

#### 1.5.10. Impacts as per the National EIA Guidelines Numerical Scale

Numerical Scale mentioned as depicted in Table 4-4: is used to analyze the impact of the proposed subproject. The combine score below 40 shall be termed as insignificant impact (IS). The scores ranging between 40 and 79 shall be termed as significant impact (S), scores ranging between 80 and 99 shall be termed as very significant (VS) and the scores above 100 shall be termed as highly significant impact (HS).

Table 4-4: Impacts Quantification

Magnitude		Extend		Duration	
High (H)	60	Regional (R)	60	Long term (LT)	20
Medium (M)	20	Local (L)	20	Medium Term (MT)	10
Low (L)	10	Site Specific (SS)	10	Short Term (ST)	5

#### 4.5 Adverse Impacts - Physical Environment (Pre-Construction and Construction Phases)

#### Land use change

The track of the road is opened in 2056 BS by local community in coordination with local body. As per the cadastral survey study total of 299 land parcel of 145 household ward 3 and ward 8 of Putalibazar Municipality will fall under the proposed road. The declared Right of Way (RoW) of proposed road is 15 meters (Refer Letter Cha. No. 3884 of Annex V. The land parcel ownership of private land strips is yet to be transferred. However, the road construction works will be limited within the existing road width in public use and therefore land use change from the construction work is not expected. Temporary change in land use pattern from operation of labor camp, construction material storage yard is expected. Hence, impact from construction will be direct in nature, low in magnitude, site-specific in extent and of short-term in duration. The indirect area of influence adjacent to RoW contains built structures and cultivated lands.

#### Landslide & soil erosion due to excavations works

The road passes along a Chiti kholsi, and some minor unstable slopes. No active landslide is present in the area. Some minor landslide/erosion seen at chainage 2+800, 3+740and 6+520 chainages. During monsoon season, the soil erosion may high during construction as the proposed road is in hilly area. Retaining structures and bio engineering item like, palisade, brush layering, fascines and grass plantation quantity is also considered for enhancing the stability of such section for mitigation. Construction works should completely stop in monsoon season. The impact is direct in nature, moderate in magnitude, local in extent & short term in duration.

#### Quarrying material and operation

The upgrading of road will require boulders, sand and aggregates in activities like gravelling, construction of retaining walls and other structures. These construction materials will be brought from the established quarry sites at the Kotre Khola. The Contractor may also obtain required construction materials other than proposed quarry sites fulfilling the requirement of approval. The upgrading of road will require boulders, sand and aggregates in activities like gravelling, construction of retaining walls and other structures. These construction materials can be brought from the licensed quarry sites and from the legally operating crusher industries. So, the direct impact of quarries is not expected in this subproject.



Figure 4-1: Quarry Site for Construction Material at Kotre Khola

However, the quarry sites and amount of quarrying material will be included in Construction Environment and Social Management Plan (CESMP) within 45 days of commencement of works. PIU will check the site requirements and quality of quarrying material and approve it. DSC will also monitor whether the quarry sites has been legally operating or not.

#### Stockpiling area and construction material

For the upgrading of the road project; sand, stone and aggregates can be obtained from crusher industries. Likewise, reinforcement and cement can be obtained from Putalibazar and Pokhara whereas boulder, bricks sand soil are locally available materials. The construction materials need to be stockpiled on the barren land near to the project site during the construction period. The site is selected after the consultation with local including landowner and their approval to use the land. Prior consent with the landowner as well as with the local bodies have been obtained for the operation of stockpiling area. Consultation meeting minutes for the temporary acquisition of private land for the stockpiling has been attached in the Annex V. Locals are informed about the construction works. The impact will be direct in nature, medium in magnitude, site-specific in extent and of short term in duration.

Possible location for stockpiling of construction material are at Ch:1+000, Ch:2+000, Ch:3+800 as shown in Figure 4-2.



Figure 4-2: Construction material stockpiling area

#### Noise, air and water pollution

The main construction activities that cause air pollution are earthworks (excavation and dredging), asphalt plants operations etc. These activities generate dust, which directly affect the air quality. In addition, vehicles and machinery emit smoke and fine particles. These substances will increase the local air pollution significantly during the construction stage. Burning of fossil fuels will result air pollution due to emission of sulfur oxides (SO<sub>x</sub>), nitrogen oxide (NO<sub>x</sub>), carbon dioxide (CO<sub>2</sub>) and particulates. The anticipated impacts on air will be direct in nature, low in magnitude, local in extent and of short-term in duration.

Noise impacts will be significant in the RoW and vicinity of the proposed subproject upgradation of road during construction periods due to increase of vehicular movements and operation of machinery equipment in the settlement area like Pragatinagar(Ch:0+000), Geudanda(Ch:3+000), Aahaldanda(Ch:4+550), Kaliyathok(Ch:5+700), Dandaswara (Ch:7+500). The anticipated impacts of noise will be direct in nature, low in magnitude, local in extent and of short-term in duration.

The contaminated soil, oil or bitumen from construction activities if disposed near to Chiti khlosi affects aquatic fauna and flora. The construction debris, paints, oil and grease are likely to create water pollution both surface and subsurface. The dust and silt from the construction sites will also create water pollution of the receiving streams. If workers living in tents/camps do not have access to toilet facilities, open defecation may be practiced, which may contaminate water sources, causing health problems. The anticipated impacts on water pollution will be direct in nature, low in magnitude, local in extent and of short-term in duration.

Disposal of construction spoil in and near water bodies (Chiti kholsi) should be strictly prohibited. Such spoil should be disposed off at designated spoil sites mentioned in CESMP and approved by PIU and DSC and efforts should be made to minimize such waste as far as possible through reuse, reduction, and recycling concepts. Similarly, the contamination of water by the use of cement and bitumen should be avoided and strongly monitored by contractors, PIU and DSC.

#### Labour camps

The labour camp will be constructed in private land by taking agreement from landowners. Possible location (At Ch 2+070) has been identified for the camp construction (Table 4-5). The commitment agreement has also obtained from landowners and certified through municipality letter as presented in (Annex V). The Contractor needs to arrange for sufficient water supplies and proper sanitation facilities for their labour force. Separate arrangements are necessary for work camp and labour camps. The anticipated cost and specific conditions related to water pollution containment are included in the construction contract.

Table 4-5: Details of camp site

S.N	Location	Chainage	Area (Ha.)	Ownership	Remarks
1	Putalibazar Municipality ward	Ch 2+070	0.2	Private ( AnantaR. Marasani)	

(Source: Field survey, 2023)



Figure 4-3: Google earth image showing camp Location

#### Solid waste generation from camps and Spoil disposal

About 1,35,000m3 quantities of solid waste will be generated as a result of clearances, excavations and the final construction of the selected road. Such waste will consist of surplus materials, surplus soil and excavated materials among others. About 10kg solid waste per day shall be generated from the labour camp during construction. Such solid waste materials can cause negative impacts to the environment through blockage of drainage systems and negative impacts on human and animal health.

Construction debris should be disposed at designated spoil site only, far away from water resources and efforts should be made to minimize such waste as far as possible through reuse, reduction, and recycling concepts. For spoil disposal three possible locations has been proposed in private land and two possible location at barren government land. The municipality certified through letter regarding the approval of use of government land and private land. The specific conditions for stockpiling of construction materials and debris management are included in the ESMP Table 6-1.

Table 4-6: Details of Spoil disposal site

S.N	Location	Chainage	Area (Ha.)	Ownership	Remarks
1	Putalibazar muniucipality ward	0+440	0.12	Private( Ishwori prasad Upadhaya)	Ref. Annex V

2	Putalibazar muniucipality ward	1+020	0.15	Public land	Ref. Annex V
3	Putalibazar muniucipality ward	1+900	0.15	Private (Ananta R Marasini)	Ref. Annex V
4	Putalibazar muniucipality ward	3+780	0.06	Private (Pitam Bdr Shahi)	Ref. Annex V
5	Putalibazar muniucipality ward	7+080	0.16	Public land	Ref. Annex V

(Source: Field visit, 2023)



Figure 4-4: Google earth map showing Spoil disposal site

#### 4.6 Adverse Impacts - Physical environment (Operation Phases)

#### Road stability and management

During the operation phase, heavily-loaded vehicles may frequently pass through this route to haul raw materials, which may result in the destabilization of the road. On top of that, natural erosion, inadequate or inappropriate drainage work, faulty construction may also damage the entire road alignment. The impact will be direct in nature, medium in magnitude, site specific in extent and of long term in duration.

#### Water pollution

The inappropriate driver practices connected with car/truck washing in Chiti Kholsi(Ch 0+100)which can cause local water pollution by leakage of fuel, lubricants and hydrocarbons can be hazardous to people, animals and crops. The impact will be indirect in nature, low in magnitude, site specific in extent and of long term in duration.

#### 4.7 Adverse Impacts - Biological environment (Pre-Construction and Construction Phases)

The project will have no direct impact on wild life, avian fauna, aquatic life and reptiles. The project alignment is neither habitat nor biological corridor of the wild animals. Even though, the alignment passes through the Basante community forest (CF) and government forest no losses of shrub and tree seemed from the forest. Total of 53nos. of trees shall be fallen down from Private ownership only and

detail presented in Annex VIII. The compensation for the owner will be provided. So direct impact on the forest due to upgrading of the road have not anticipated but indirect impact on the forest and wildlife during construction phase may occur. Some Indirect impacts such as entry of labour force in forest for firewood and hunting of animals and forest fire may occur in road alignment. Noise and dust during construction might affect for nearby habitat of wild life and birds.

## 4.8 Adverse Impacts- Socio-economic and Cultural (Pre-Construction and Construction phases) Effect of Change in Land Use

Total of 299 land parcel of 145 household of ward 3 and ward 8 of Putalibazar Municipality will fall under the proposed road. The land within the RoW is already in use by the public and under the municipality jurisdiction. However, the above mentioned land parcel ownership of private land strips is yet to be transferred and municipality shall start the deed transfer of land within RoW at their convenient, tentatively by mid of April 2025). The upgrading works will be carried within the existing road width in public use that varies from 4.5m to 10m. To expedite the project work, the project-affected community has conducted mass consultations with the project-affected landowners and local road users group of the project alignment in the months of August and September 2022. (Appendix III).

#### **Loss of Standing Agricultural Crops due to Construction**

There may be loss of standing agricultural crops in the edge of construction width during time of construction works. The project area is famous for orange farming. During construction of road the orange farmland of two landowners namely Ramji Paudel and Kul Prasad Marasani will be also damaged during construction of road, that lies in the edge of road. 53 different tree species including 20 orange trees will be damage during the construction of the road in the stretch of Ch:0+030-0+500, Ch:1+730 to 1+880 (Annex VIII). The approval and compensation cost for the total 53 nos. of tree @NRs.2000 per tree is NRs.1,06,000. Removal of tree will be carried out in co-ordination with the Municipality



Figure 4-5: Orange farming nearby road alignment; CH: 1+730 area

#### **Obstruction to Structures**

The road upgrading throughout the entire length of project is limited to existing road width to avoid the structures along the alignment. However, there is only one structure that will need to be partially dismantled. House belonging to Mrs. Bindu Shrestha is a RCC two storied structure of non title holder lying within the RoW of Siddartha Highway. No any document was found regarding the year of establishment of the house. However, according to the owner ground floor of the house was built approximately twenty years ago (around 2003 AD) and first floor was built 7- 8 years ago (around 2017 AD). Total plinth area of the ground floor and 1<sup>st</sup> floor is 629.39 sq. ft. each, having total 13 nos. of RCC column with 3 nos. of compartment in ground floor and two rooms in the first floor. Out of the total 13

columns of the structure only one column of a room facing Siddartha Highway lying at the project road corner need to be dismantled. The original floor area of the structure will be reduced by 64.01 sq.ft. after partial demolition of the notch portion of the room, which is 10% of the total area. The demolished space was a part of grocery shop in ground floor and open terrace at first floor. However, space for grocery shop in the ground floor will remain sufficient and total nos. of room will remain unchanged having partial change in the size of a room. Hence, effect on livelihood will be of short duration (90 days) and physical displacement from partial demolition is not required.

Further, the house was constructed without any design and drawings and authentic and approved document was unavailable. The structure was assessed jointly by civil engineer of the municipality and DSC and concluded that structural integrity of the house will remain safe compared to its original integrity after the partial demolition of the structure (Annex VI).

A total amount of NRs. 1,85,317.00 was calculated as compensation/assistance amount for 90 days business loss and partial demolition of the structure i.e., business loss NRs. 76,500 & structure compensation NRs. 1,08,817 respectively. A comparative rate analysis was performed following Tilottama Social Evaluation report of NUGIP as of September 2024 and Putalibazar Municipality Valuation rate for adopting structure loss compensation rate. Similarly, for calculating 90 days business loss assistance amount, 15% profit from daily average sales of the grocery shop and daily wages of a labor of Putalibazar was considered. Details of rate analysis for structure loss compensation and business loss assistance is attached in Annex VI. A lump sum amount of NRs. 5,50,000.00 is already provided to Ms. Bindu Shrestha Bank account by Pragatinagar- Bahakot –Namche- Kalku Road users committee on 26th Baisakh, 2080 as a compensation/assistance amount for business and structure loss including additional amount support for improving livelihood. The proof of amount received by the house owner and proof of deposition in house owner bank account is attached in Annex VI.

The demolition and reconstruction work of the structure is already completed and was conducted by the house owner. The comparative photographs of the structure before demolition and after reconstruction is presented in Annex IX.

In the earlier stage of preparation of DPR house structure at Ch: 5+740 L/S, kitchen constructed with stone in mud mortar with GI sheet at roof and Ch: 5+790 L/S, house constructed with stone in mud mortar with GI sheet at roof completely damaged due to earthquake was also supposed to demolish for maintaining the 7.5m road width in the section. Later the road width in those section was decided to maintain within the available road width of minimum 4.5m to avoid the change in those structure.

#### Temporary Disturbances in House Owner's Mobility and Shop Consumer

There will be issue of access to some houses and business during the construction phase. This is very common in the road construction project in urban area. For a short period of time, the house owner may have difficulties for the access and there will be temporary structure provided by the contractor or the house owner themselves making some arrangements like placing of plank on the house way at drain construction site for time being as a common practice for the road projects. Some temporary structures during the construction is provided for those houses.

#### Road Safety Concerns and Health and Sanitation in Community

During construction phase, increased number of construction vehicles will be plying the road therefore due to pressure and mismanagement accidents may likely occur. Hence, traffic management measures and information signboards need to be placed with the precautionary measures. The haphazard disposal of construction waste will adversely affect the sanitation environment in the area and this problem needs to be minimized through regulatory measures and public awareness. However, the road may pose some adverse impacts on the environment at the operational stage, such as increase in traffic accidents due to higher vehicles speed, which must be controlled by putting up speed limit signs and enforcing them. It is recommended that traffic signs are placed at appropriate locations for road safety purposes. The

movement of trucks and other equipment in the project area during the works implementation will cause noise and dust if the works will be in dry weather. This noise and dust may also affect the businesses in the vicinity of the construction works.

#### **Occupational Health and Safety**

Because of the engineering and construction activities including minor excavations, concrete work, and sub-base, base, stone lying among others, construction workers will be exposed to risks of accidents and injuries. Such injuries can result from the hand tools and construction equipment and risk of vehicular accidents to local residents.

#### Social Disturbance / Risk of SEA/SH and HIV AIDs

The project construction may disturb the local population with interactions of non-local workers with residential communities. Girls and women trafficking may arise during the construction phase. Further, it may lead to GBV at household level and afterwards because the frequency of visitors or tourists may increase.

#### Limited access to elderly and differently-able

During the construction phase mobility is going to be very limited for elderly and differently-able people. Their daily routine might get affected. Warning signage of the construction work, temporary access as per need will be provided as far as possible. The people will be aware of the construction work and the alternate route will be provided.

#### Risk of Spreading of Diseases

This project may lead to an influx of workers in the area. Influx of labors usually attracts commercial sex workers into the town and that can lead to contractor workers and other personnel engage in risky sexual behavior that may lead to infections in HIV-AIDS or other sexually transmitted diseases. Other than sexually transmitted diseases (STD), in today's time the risk of the spreading of "corona" and its other variants are also the major concern for the community and eventually for all.

#### Child and forced labor

In conformance with Nepali law project will not employ under-aged workers. The Child Labor (Prohibition and Regulation) Act of 2000 establishes the minimum age for work at 14 and the minimum age for hazardous work at 16. The employer/contractor must ensure the age through citizenship certificates. Contractor will be strictly instructed to keep the record of the workers.

#### 4.9 Adverse Impacts – Socio-economic and cultural (Operational Stage)

There are expected to be no adverse impacts on the local economy during the operational stage, and significant long-term benefits are expected to arise from the proposed sub-project. However, the market will be competitive and the urbanization and semi-urbanization effect may contribute to a higher cost of living. The scale and trend of plotting of agricultural land will increase and there are possibilities of converting the agriculture land into residential and commercial areas. Some industries that are located near the road may also have tendency to relocate to other places with the purpose of developing their properties as commercial areas.

#### 4.10 Beneficial Impacts - Social-economic and cultural (Pre-Construction, Construction Phases)

#### 4.10.1 Social beneficial impacts

The main benefits of the proposed road will be access of all weathered blacktopped urban standard road which will be the milestone project leading to economic prosperity and increase in economic and social sector.

#### **Social Implications**

After implementation of this project, people will have access all weather transportation facilities and improve their socio-economic condition. The subproject will support the community to enhance their access on health facilities in low cost, increase attendance of students and teachers in the school and also increase in communication to other people, support to the poor, Dalit and other marginalized people because of employment generation during construction period, Initiation income generating activities like e.g. small business, groceries shop, and commercial agriculture production and off farm activities, increase in land price by using the improved transportation facilities. It contributes for the minimization in transportation cost of all types of goods as well travel cost, time and assists to minimize living cost. It stimulates to farmers to increase agriculture production, livestock commodities etc as well as support for increased in accessibility of villagers to market centers and major cities of the province.

#### Employment, Skill enhancement of workers and staff, Income Increment

As many local people seek interest in doing work in the road project, the contractors can hire them for unskilled laborers. For skilled laborers, they need to give some training which may help the project in the long run to protect and repair the road on a regular basis.

The sub-project will generate skilled and unskilled employment opportunities throughout the project life cycle. Priority will be given on sourcing labor requirements locally, specific ward, municipality, and district. In cases that skilled workers are not locally unavailable, they will be recruited from other parts of country. Apart from income, locals will get gain experience and training and open door to opportunities everywhere, thereby increasing the quality of life. Undoubtedly, project impacts can be considered significant, positive, long term, and cumulative people lives changed for the better. The residual impact is the up-lift of the quality of life of the sub-project beneficiaries.

#### Easy Access to different facilities and Mobility

The road will provide proper access for the people for the facilities like hospital, school /college and other required services. The land value itself will grow after the construction of the road. The mobility will be comfortable for women, children and elderly. The school children, differently-able and elderly people will benefit from this road after completion.

#### **Increase in Trade and Business**

Business opportunities are created during the construction and operation of the road for products and services such as basic building materials, construction equipment, laundry, clothing, food services, cleaning services, excavation, construction material supply, etc. Indirect economic impacts will also occur from increased demand for products and services due to the increased workforce in the area.

#### **4.10.2** Beneficial Impacts – Social and cultural (Operation stage)

#### **Improved Transportation Facilities**

The rehabilitation and upgrading of the road will produce benefits through better access and mobility and effective transportation facility. The transportation of goods will make goods cheaper, particularly vegetables and livestock. Importantly, the journey will be more comfortable, the wear and tear of the vehicles will be less, and fuel and maintenance cost of the vehicles also will be less, which will lead to an increase in private savings.

#### Rise of Land Value

Road up gradation often leads to increased land values along the road corridor of the proposed road and its vicinity and subsequently enhances local peoples/farmers' capability for borrowing loans on collateral. High value lands are acceptable to banks and financial institutions to provide loans. This impact will be an indirect, high, significant, local and long-term in nature.

#### **Enhancement of the Social Services**

This sub-project will increase the availability of safe and quick access to social services, development of the economic center, and increase in economic levels, which will help to improve school education and promote higher education outside the sub-project area. Similarly, local people may spend more on health care, sanitary facilities, education facilities and other social services.

# 5 SEXUAL EXPLOITATION AND ABUSE (SEA)/SEXUAL HARRASSMENT (SH) PREVENTION AND RESPONSE ACTION PLAN

#### 5.1 GBV/SEA/SH - National Scenario

The current status of gender inequality and gender-based violence (GBV)in Nepal reveals the serious need to mainstream gender sensitivity and GBV risk mitigation measures, and more specifically, sexual exploitation and abuse, and sexual harassment (SEA/SH) risk mitigation measures at all organization levels and in all phases of project cycles. In Nepal, SEA/SH is prevalent due to unequal gender relations and discrimination towards women in both the public and private sphere. It has direct implications on the reproductive health status of women and on the physical, emotional, and mental health of their children.

Based on the SEA/SH Risk Assessment checklist and assessment carried out for NUGIP by the World Bank, the Project's SEA/SH risks are assessed to be "Low". An SEA/SH Prevention and Response Action Plan has been developed for NUGIP based on this assessment and includes specific measures that aim to prevent and mitigate GBV, in particular SEA/SH risks that the project activities might trigger. But in the project area SEA/SH issue have not been recorded. According to District Police Office and Municipality Social section no any case has been registered in project area (Annex V, Municipality Letter).

#### 5.2 SEA/SH Risk Mitigation Action Plan Principal and Approach

The survivor-centric approach is a human-rights based approach which aims to create a supportive environment in which the survivor's rights are respected and in which he/she is treated with dignity and respect (UNICEF 2010). This approach helps to promote survivor's recovery and ability to identify and express needs and wishes, as well as to reinforce the survivor's capacity to make decisions about possible interventions (GPN – Addressing SEA/SH in civil works, World Bank 2020). The key principals of this approach are:

- To treat survivors with dignity and respect instead of being exposed to victim blaming attitude.
- Do not deal the issue through the feeling of powerlessness.
- To maintain privacy confidentiality and safety of the survivors.
- Do not discriminate survivor based on gender, age, race/ethnicity, ability, sexual orientation, HIV status or any other characteristics.
- Enable timely access to quality services as required by the survivor
- Ensure informed consent of the survivor since the survivor has the right to understand the options and decide whether to talk about the incidence or not

	Nepal Urban Governance Infrastructure Project (NUGIP)																													
	Action Plan of GBV,SEA/SH																													
				Year												Remarks														
SN	Activities		20	)23	3						2	02	4										2	02	5					Kemarks
		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
1	Awareness/ Orientation on SEA/SH,GBV measures to workers/ Labours																													2 event
2	HIV/AIDS Awareness Program to workers group																													1 event, Workers group
3	Code of conduct signing																													
4	Awareness on GBV,SEA/SH grievance response mechanism to stakeholders (Anti- Harassment Cell)																													1 event , communi ty

#### **6 ENVIRONMENT AND SOCIAL MANAGEMENT PLAN**

#### 6.1 Background

This Environmental and Social Management Plan (ESMP) for the project identifies the principles, approach, procedures and methods that will be used to control and minimize the environmental and social impacts of all construction and operational activities associated with the project development that is intended to ensure that commitments made to minimize project's related environmental and social impacts are upheld throughout all project phases. The management and monitoring program will involve the following: a) collection and analysis of appropriate environmental social and cultural data; b) preparation of periodic reports including an annual environmental and social performance report to DUDBC and the WB and liaison with other relevant bodies (e.g. ministries, departments and relevant agencies); c) identification of unexpected environmental and social impacts; and d) formulation of mitigation measures for the unexpected negative impacts.

#### 6.2 Implementation of Environmental and Social Management Plans

The mitigation measures will be integrated into project design and the agreements/contract documents. The project bid documents will include the implementation and reporting of the ESMP and contractor must follow it. The impact of the construction on the environment will be kept to a minimum and appropriate measures as brought out to in the ESMP are taken to mitigate any adverse effects during the construction. The Environment, Health, and Safety requirements of the construction contractor will be clearly spelled out in the contract document and the necessary cost will be included in the BOO. The contractor is required to submit the Construction Environment and Social Management Plan along with Contractor's Environment, Health, and Safety Management Plan within 45 days of the commencement of the work. The client/consultant will review the Contractors C-ESMP and EHS plans and provide approval along with necessary improvements. The regular monitoring will be followed by the PIU/Environmental and Social Monitoring team of DSC. It is in this context, the construction contractor is required to provide 1) a sound working environment to all employees involved in the design and construction of road as per national legislations, standards, and guidelines. 2) Must ensure HSE objectives are met during the entire construction, 3) Prepare and submit C-ESMP plan during construction period of the project. The C-ESMP should include; policy statement, roles and responsibilities, site regulations, risk management and hazard identifications, HSE trainings, PPE, Inspection and auditing, site security, medical care and first aid, 4) The contractor must ensure Environmental Management and Mitigations addressing ESMP and mitigation management.

As all the ESMP costs and activities are included in the BoQ, the budgetary activities lie within the contractor's responsibility. The DSC within the PIU, Project Management Support Team and Municipality are also responsible for the implementation of the mitigation activities and their monitoring. The public awareness campaign will be done through municipality and oversight by UDST.

### 6.3 Adverse impacts mitigation measures

Table 6-1: Adverse impacts mitigation measures

Stage	Impact	Mitigation Measure	Responsibility*	Cost (Remarks if any)
Physica	al (Construction Phase)			
	Impact on property from vibrations due to the use of heavy machinery and other construction activities	<ul> <li>Establish photographic and video graphic evidences of structures and properties in and alongside RoW.</li> <li>Awareness raising, information and dissemination about GRM</li> <li>Cracks caused by vibration due to construction activities need to be monitored closely in the location Ch: 5+740-1 private structures, Ch: 5+790-1 private structures (most of the structures situated close to the proposed road alignment are made up of stone and mud mortar with cement plaster).</li> </ul>	Contractor/ Municipality/DSC	Included in BoQ. Item No. 1.7&10.3
	Obstruction due to electric poles in the ROW	<ul> <li>Obtain all necessary permits for dismantling and relocation of electric poles from NEA and provide a copy to the Contractor.</li> <li>Relocate the electric poles along the alignment in coordination with the Nepal Electricity Authority.</li> <li>The process should be completed prior the beginning of the road construction</li> </ul>	Municipality/DSC and Contractor in coordination with NEA	Included in BoQ. Item No. 2.5 & 10.1
	Impact upon other infrastructures such as water supply pipelines and water storage tanks situated close to the ROW or construction width.	<ul> <li>The relocation of water pipe will be done by project</li> <li>Off hour time need to utilize for relocating pipe coordinating with all the stakeholder prior the start of work. Water supply through water tanker shall be the alternative means of drinking water for the disrupted period of water pipe</li> <li>The water tank and reservoir along the road alignments will be protected</li> </ul>	Municipality/Contractor	Included in BoQ. Item No.10.1
	Loss of Top Soil	<ul> <li>Topsoil will be stockpile in designated location and used for plantation in road side, bio-engineering works and site restoration (camps, quarry and borrow pit).</li> </ul>	Contractor	Included in BoQ. Item No. 2.1
	Landslide area	<ul> <li>Gabion structure as well as bioengineering works will be carried out at chainage 2+800, 3+740and 6+520.</li> <li>Construction works during monsoon season will be stopped.</li> </ul>	Contractor	Included in BoQ. Item No. 7.6 & 9
	Protection of water courses crossing the road and alongside the ROW	<ul> <li>Construct silt traps and ripraps to maintain the river channels. Dredge the river bottom to ensure free flow of the water</li> </ul>	Contractor	Included in BoQ. Item No. 9.8

Quarrying Material an Operation	• • • • • • • • • • • • • • • • • • •	Obtain approval from concern authorities of government quarrying site at Kotre Khola. The contractor will use the government-approved quarrying sites as far as possible. During the operation of quarry and borrow pit coordination will be done with local government.  Prepare a Contractor Environment and social management Plan and include the details of quarrying activities including required quantity, locations and required mitigation within 45 days of commencement of works and submit to the PIU for approval.	Municipality/DSC, Municipality instructs the quarry operators to reinstate the established quarry sites as per agreed norms during environment clearance	Included in BoQ. Item No. 1.2
	•	Restore the site as per restoration plan maintaining natural contours and revegetation after use.		
	•	The construction materials will be brought from the established quarry sites located within or outside the municipality. So, the direct impact of quarries is not expected in this Subproject.		
Road safety, Drainage etc	•	Cross-Roads: Junction improvement of 10m at major branch crossing will be developed under this project.	Contractor	Included in BoQ Item No.3, 5
	•	Installation of Road markings at all major as well as minor intersections. Road Signs and Markings Road Markings has been provided as per Traffic Sign and Marking manual as per DPR		6,7.3&7.5
	•	Retaining/ Breast wall: Stone Masonry Retaining wall has been provided along the alignment where s required		
	•	Guard Rails and Safety Barriers: Guard Rails and safety barriers must be provided in places where serious damage to vehicle and people may occur when an out-of-control vehicle may leave the roadway or hit other objects.		

Τ		
Issues of stockpiling	<ul> <li>Stockpiling of construction materials will be carried out only at the locations specified such as at Ch 1+000, Ch 2+000and Ch 3+800.</li> </ul>	This will be the part of
	<ul> <li>Stockpiling area will be barricaded during the time of constructionSafety and traffic signage boards will be in place to maintain safety during the construction.</li> </ul>	Contractor's Responsibility under Contractor
	<ul> <li>Stockpile area is located away from any water courses; more than 50m far from schools, hospitals and public standpipes; and will not affect locals and their properties.</li> </ul>	Cost. This will be included in CESMP
	<ul> <li>Only barren land will be used for stockpiling and proper insulator cover and proper drain will be managed to store the chemical to avoid the leakage of chemicals.</li> </ul>	CLSWI
	The places used for the stockpiling of construction materials will be cleaned promptly after the completion of the project. The area will be reinstated to their earlier condition after landscaping, maintaining natural drainage condition, promoting greenery and planting shrubs and covering vegetation substantially.	
	<ul> <li>Such area could be leased or rented based on price not lower than the prevailing market price.</li> </ul>	
Spoil Disposal	<ul> <li>Disposal of spoil will be carried out only at the designated disposal area as presented in the table 4.6 and figure 4-4.</li> </ul>	This will be the part
	<ul> <li>Disposal area will be rehabilitated after the completion of the disposal.</li> </ul>	Contractor's
	<ul> <li>Rehabilitation measures will comprises; slope stabilization, bio-engineering, construction of toe retaining structures as far as applicable.</li> </ul>	Responsibility under Contractor
	<ul> <li>The contractor will avoid haphazard disposal of spoil along the natural drainages, avoid disposal along the cultivated land, avoid disposal affecting public and private structures.</li> </ul>	Cost.Will be included in CESMP

Construction Safety	<ul> <li>Reinforced Cement Concrete covered drain must be provided throughout the alignment in integration with footpath.</li> </ul>	Included in BoQItem No.
	<ul> <li>Storm water collected should be disposed through the nearest culvert sections.</li> </ul>	1.2,3,1.8
	<ul> <li>The contractor will assign a safety officer and the PIU's safeguard specialist will monitor the implementation of the OHS measures.</li> </ul>	
	<ul> <li>Adequate lighting and safety signal devices be installed for work safety.</li> </ul>	
	<ul> <li>Adequate warning signs, safety barriers, traffic calming measures and persons with flags to control traffic will be provided for work safety.</li> </ul>	
	<ul> <li>Protective clothing including helmets, masks, boots, gloves, ear plugs and goggles should be provided for workers safety.</li> </ul>	
	<ul> <li>At every work place, a readily available first aid unit including an adequate supply of dressing materials will be provided.</li> </ul>	
	<ul> <li>Maintain health care system at construction camps including regular visits by trained medical staff for routine checkup of workers and avoidance of communicable disease.</li> </ul>	
	<ul> <li>Temporary diversions will be provided wherever necessary, with proper drainage facilities.</li> </ul>	
	Electrical Equipment will be checked and certified regularly.	
	Provide and install all road signs as per design.	
	<ul> <li>Impart road safety education to all community, schools, clubs and drivers of construction vehicles.</li> </ul>	
	Hazards will be identified, and workers will correctly wear PPE, will properly use safety equipment, and will follow work safety arrangements. Safety signs and information will be provided and the work space will be barricaded to prevent unauthorized entry. Workers and people at the construction site will be provided with proper training, and to help ensure that workers are trained on what to do in the event that an accident occurs on site.	
Traffic Management	<ul> <li>Emergency traffic management plan should be included in CESMP by the contractor and approved by the PIU/DSC. This is required to cope up with the restriction on the vehicular movement due to closure of road for reasons including construction. The plan may include informing about the scheduled road closure and the alternative routes identified to divert the normal traffic flow, transport material during off-peak time,</li> </ul>	Included in BOQ 1.6, 11
	<ul> <li>provide advance notice to stop vehicles by erecting indicator signs at a necessary distance in order to reduce congestion at the site of work, thus enabling making of proper security arrangements, or lane wise traffic management</li> </ul>	

Air/Dust Management	Road construction area shall be maintained damp by periodical spray of water.	Contractor/PIU/DSC	5,00000.
	<ul> <li>Delivery vehicles will be covered.</li> </ul>		
	Mixing equipment will be well sealed and equipped as per existing standards.		
	<ul> <li>All construction vehicles should comply with Motor Vehicles and Transportation Management Act as amended – mandatory Green Sticker.</li> </ul>		
	• Provide temporary hoardings where required to minimize dust impact on locations of temples at Ch:(0+400,3+380, health posts near 7+020 and schools at Ch:(3+000, 5+200,7+020).		
	<ul> <li>Provision of speed control measures in settlement and working areas to limit traffic speed.</li> </ul>		
	<ul> <li>Dust emission and air pollution due to construction activities and operation of heavy equipment and movement of transporting vehicles, to mitigate the impacts water will be sprinkled along the proposed road alignment and nearby dust prone area and repair and maintenance of equipment and vehicles regularly.</li> </ul>		
	<ul> <li>Air pollutant parameters (TSPM, PM10, Sox, NOx, Cox) will be monitored three times(ie.pre/mid/post construction)during construction. Conforming NAAQS of Nepal.</li> </ul>		
Noise, vibration	<ul> <li>Ensure plant and equipment used for construction conforms to best practices.</li> </ul>	Contractor/DSC	2,00000
	<ul> <li>Vehicles and equipment used will be fitted with silencer and maintained to keep noise at minimum levels. Regular servicing of vehicle done compulsory.</li> </ul>		
	• Sensitive locations like schools at Ch: 3+000, 5+200, 7+020 health post, ward office near Ch:7+020etc. will be avoided while placing the noise generating equipment.		
	<ul> <li>Cracks caused by vibration due to construction activities need to be monitored closely at location Ch:5+740(Kitchen built with mud and stone ie. kachhi), Ch:5+790 (Kachhi house already damaged due to earthquake).</li> </ul>		
	<ul> <li>Work will be restricted to day hours (not in night time) specifically at urban and sensitive locations.</li> </ul>		
	<ul> <li>Select equipment and machinery with lower sound power levels for the use</li> </ul>		
	<ul> <li>Restrict activities with significant noise impacts to outside school</li> </ul>		
	<ul> <li>Activities involving heavy machinery with significant noise impacts should be restricted to outside school hours.</li> </ul>		
	<ul> <li>Noise levels (1 hrLeq dB(A)) levels will be monitored regularly. Conforming WHO standards.</li> </ul>		

			1
Water Pollution	<ul> <li>Hazardous materials shall not be stored near surface waters sources</li> </ul>		250000
	<ul> <li>Used lubricants and oils shall be collected and recycled or disposed off site.</li> </ul>		
	<ul> <li>Plastic sheeting shall be placed under hazardous material storage area to collect and retain leaks and spills.</li> </ul>		
	<ul> <li>Contaminated runoff from storage areas shall be captured in ditches or ponds with an oil trap at the outlet.</li> </ul>		
	<ul> <li>Contaminated and worn plastic sheeting shall be packed into drums and disposed off site.</li> </ul>		
	Water Quality test (EC, PH, DO, TSS, Oil and Grease)three times (ie.pre/mid/post construction) of Chiti Khlosi at ch 0+150 and drinking water of project affected village.		
Siltation and contamination	<ul> <li>Protect disposal of excavated spoils and debris in to water bodies</li> </ul>	Contractor	Included in BOQ
of rivers	<ul> <li>All chemicals and oil will be stored away from water and concreted platform with catchments pits for spills collection</li> </ul>		Item No. 1.2,2.4,5.1
Hydrology and drainage-risk of increasing sedimentation and siltation of waterways during construction phase	Existing natural drainage system, including irrigation channels will not be disturbed. As per DPR, cross drainage and structures will be provided in each perennial and seasonal streams and rivulets. As suggested in DPR, adequate cross drainage structures will be provided to facilitate natural flow of water across road embankment.	Contractor	Included in BOQ Item No. 3& 8
Obstruction of access to structures	<ul> <li>Proper engineering measures to provide access to structures as per DPR, including the provision of constructing steps where required as per site condition</li> </ul>	Contractor	Cost is included in BOQ Item No. 7

Labour Camp Location and	<ul> <li>Locate, peg and seek approval from DSC for labor camp sites.</li> </ul>	Contractor	Included in
Management Location and	<ul> <li>Camps shall not be located near settlements; near water supply intakes; or sites that affect the access by local people to drinking water.</li> </ul>		Contractor's Cost
	<ul> <li>Install sanitary facilities for workers to avoid open defecation by construction of temporary toilet.</li> </ul>		
	<ul> <li>Camp shall not be in the vicinity of landslide and flood plains.</li> </ul>		
	<ul> <li>Provide and maintain proper drinking water, sewerage and waste disposal facilities at the camps.</li> </ul>		
	<ul> <li>Ensure no wood is burnt by any worker on or off site. Camps shall be provided free of cost, with electricity and regulator &amp; adequate fuel supplies of LPG or Kerosene or electricity for cooking.</li> </ul>		
	<ul> <li>After use, sites shall be cleared and restored to near natural or stable conditions with vegetative cover.</li> </ul>		
SEA/SH related risks	<ul> <li>Have separate, safe and easily accessible facilities for women and men working on site</li> </ul>	Contractor	Include in BoQ Item No. 10.2
	<ul> <li>Establish locker rooms/secured rooms/or latrines for workers, well-lit and include ability to lock from inside</li> </ul>		
	<ul> <li>Display signs around workplace on prohibition of SEA/SH</li> </ul>		
Physical-Operation			
Road Stability and Drainage Management	<ul> <li>Road side tree plantation, construction of gabion wall and drainage system to mitigate possible inundation in the settlements along the project alignment, Ensure proper compaction as per design</li> </ul>	Contractor/Municipality	Include in BoQ Item No. 3,8 & 9
Air pollution	<ul> <li>There should be a consensus between municipality, District Transportation Office, Transportation Entrepreneur, and the local people regarding the operation of conditioned vehicles</li> </ul>	DTO, transportation entrepreneur, local people	
Water pollution	<ul> <li>The operation of proposed work doesn't pose serious threat on water bodies; however, washing vehicles on fresh water streams will be avoided.</li> </ul>	Drivers, Ward, local	

Climata abanca and Dissets	Namel lies in Caiamia rone V. hance all the design will be best J. IC 1902	to DCO/DHI/Municipality	Designat
Climate change and Disaster Risk	Nepal lies in Seismic zone-V, hence all the design will be based on IS 1893 withstand the earthquake. The road is provided with safety features, whilikely reduce the chance of accidents in the road alignment. The road ass shall be designed to withstand seismic forces as per IS 1893.	ch	Project Construction Cost
	The project has also proposed tree plantation in road side areas. This helps creating a comfortable microclimate, thereby reducing the temperature of project area by some degrees. The cost of plantation has been included in cost estimate.	ne	
	No alteration to the existing drainage channels (natural or artificial) will done with the thought that they have been well adapted to the existic conditions over a long period of time.		
	Entire process from project selection up to the project design a implementation prioritize wider settlements along with the social and hea institutions like schools, hospitals, health posts and so on. These pub institutions are very helpful during disaster to use as temporary shelters well as centers for rescue and rehabilitation. The projects will incorpor various safety measures that also include signboards, information boar caution sign, barricades to disaster prone areas and accident-prone are within construction areas. This is also an attempt to incorporate disast mitigation in the project.	th ic as te s, as	
Landslide and soil erosion	Due to surface runoff and presence of natural streams which are fed by rain considerable risk (medium to high) is anticipated for surface soil erosion a landslide	phase by the contractor and operation phase by	
	Construction of retaining wall, gabion wall and application of bio-engineeri as per requirement.	ng municipality	
	Construction of road works is completely stopped during monsoon season minimize the landslide and soil erosion. section of road is vulnerable to min landslide.		

Road Safety	<ul> <li>Road safety components such as rumble strips, visibility improvement at intersections and branch roads, pedestrian crossings and installing proper</li> </ul>	DSC and Contractor during construction phase,	Include in BoQ Item No. 4,5,6
	signs, traffic signs and signals has been incorporated and recommended.  Pedestrian crossings (zebra crossing) are proposed in intersections, major junctions, and branch roads and even in road alignment with major places such as schools and commercial establishments in order to cross the road safely across the flow of vehicular traffic.	Operation phase monitoring and compliance by the municipality or concerned entity	1011110. 1,5,0
	The objective of the Road Safety Interventions is to assess it for potential shortfalls in safety and recommend corrective strategies to eliminate/reduce risks of crashes. Various road safety interventions are proposed to make the road safer and reduce traffic accidents.		
	<ul> <li>Improvement of intersections, traffic signs installation and improving visibility</li> </ul>		
	<ul> <li>Proper Traffic signs and signals and road markings throughout the alignment.</li> </ul>		
	<ul> <li>Provision of guard rails, street lights, bollard lights, rumble strips, pedestrian crossings, covered drain throughout the alignment</li> </ul>		
	<ul> <li>Provision of separate cycle lane and footpath</li> </ul>		
	<ul> <li>Use of Reflective Pavement Marker (RPM) for lane marking and delineation for night-time visibility. Delineators and Object Markers</li> </ul>		
	Roadway delineators are intended to mark the edges of the roadway to guide drivers on the alignment ahead. Object markers are used to indicate hazards and obstructions within the vehicle flow path, for example, channelizing islands close to the intersections.		
Biological-Construction			
Vegetation clearing	<ul> <li>As no additional tree should be cut down from forest, no compensatory plantation is required. But roadside plantation will be carried out as bioengineering and greenery on road side.</li> </ul>	PIU/Municipality /DCS.	Include in BoQ Item No. 2.1, 2.6,2.7
	<ul> <li>Uses of firewood in camp for cooking will be Prohibited LPG gas, kerosene, electricity will be used in labour camp for cooking and other heating purposes.</li> </ul>		
	Conservation of Chautaras and Significant Trees		
	Three Chautaras at Ch 0+810,Ch 3+405 and 3+870 found along the roadside		
	chainages remained protected. If any additional protection required will be done		
	during construction of structures at the site. Traffic sign post will be provided		
	where required.		
Biological-Operation Stage			

Impact on Vegetation	•	Encouraging local people for protection of roadside plantation carried out during construction.	Municipality	
Social- Construction Stage				
Loss of Land or property, If applicable and trigger then	•	As per design 1 nos. structure is effected and Pragatinagar Bahakot Namche Kalku road users committee provided the compensation/assistance amount If any new structure found, RAP shall be prepared and compensation for loss of property shall be as per the RAP	Municipality/DSC will confirm the record	Total LS amound of NRs. 5,50,00 is paid
Loss of 53 private trees	-	Compensation will be provided to private tree owner as per RPF	Municipality	106000
Health and Sanitation	•	Proper awareness of using latrines, construction of latrine for worker, Piyus (a chlorine solution) will be provided to workers to purify drinking water.  Provide proper PPE to worker during construction.	Contractor	Included in Bo Item No. 1.2
Child labor and forced labor	•	No child (below 16 years) and forced labor will be employed in project.	Contractor	No cost Require
Occupational Health and Safety	•	Provision of PPE that also includes the protection against COVID pandemic like use of mask, gloves, and distance maintaining wherever possible Provision of insurance to cover physical damage to workers.	Contractor	Included in Boo Item No. 1.2, 1.
	•	Induction and refresher training to the workers will also be provided with insurance to cover physical damage to workers.		
	•	Basic First aid		
Traffic and Transport Management	-	Mobilization of equipment of materials will occur at night (between 6 PM - 9 AM)  A detailed Traffic and Transportation Plan is to be contained in the Contractor	Contractor will submit the Traffic and Transportation Plan and approved by the PIU	
		Document	for effective monitoring	
	•	Traffic Safety such as street lights, traffic control devices and other features shall be covered through "Traffic Signs Manuals Vol-I and Vol II" and "Road safety manual" published by the DOR.		
	•	Conducting the road safety audit during construction and prior to opening for public		
	•	Bus bays are one of the most crucial factors to be considered in market areas as well as settlement areas.		
	•	Provision of alternative routes to ease the congestion and built up of traffic		

Community Health, Safety and Security	Carry out site management practice such as the fencing around work area and road signage  Increase public awareness of safety, health and environmental issues by providing information directly and indirectly through campaign  Display appropriate signage for use during construction and implementation of the project to enhance awareness creation on the potential hazards of the project	Contractor/ Public awareness campaign by the municipality	will be the par of Contractor's Responsibility Included in the BoQ Item No 1.2
Limited Access for elderly and Differently-able People	Diversions and proper crossings will be available for elderly and differently-able people in the construction phase to ensure their mobility is not impacted during construction. Elderly people should have access to socialize and meeting people and family to nurture their mental need/health.	Municipality/ DSC Contractor (engineer must ensure this in design)	will be the par of Contractor Responsibility under Contractor Cost
Working conditions and management of worker relationship	The contractor shall provide reasonable working conditions and terms of employment, and in conformance to working conditions established by National law. During construction, temporary accommodations will be constructed by the contractor and will comply with national and international standards for quality, security, safety, and professional competency.	Contractor in support of NGOs	Contractor responsibility
HIV-AIDS and COVID Management	Awareness creation and sensitization to workers and other persons post- project to reduce or eliminate chances of infections of HIV-AIDS and other sexually transmitted diseases  Distribute HIV & AIDS awareness materials in collaboration local health related agencies  Ensure protective measures for COVID is followed, prepare and follow SOPs by all workers and staff for COVID (social distancing, immunization, hand washing, using sanitizer, masks etc) including the community health and safety awareness and management	DSC, Contractor in support of Municipality/NGOs	Included in BoO Item No. 10.2
Impacts on Communities, disease, cultural drain on local resource, etc.	Conduct local cultural awareness orientation training for workforce.  Implement Public Health Awareness Raising Plan to address communicable diseases prevention, hygiene and sanitation, safe sex practices and other community Health issues  Impact Monitoring of Local resources, address gap, and problem as needed	Contractor in support of Municipality	will be the par of Contractor Responsibility under Contractor Cost
Grievance Redressal	Employ a grievance redress mechanism incorporating a negotiation and/or mediation team or party	DSC day to day compliance by the contractor	Included in Bo Item No. 10.3

GBV, SEA/SH risks		<ul> <li>Community based-awareness program</li> <li>School based awareness program</li> <li>Awareness program for women and against the gender-based violence</li> <li>Providing female labor-centric facilities such as separate female toilets, separate female camps, separate family camps and mother's rooms on the site.</li> <li>GRM will include mechanism for referring SEA/SH-related grievances</li> </ul>	Municipality/ PIU/ DSC	Included in BoQ Item No. 10.2	
Social Operation Stage					
Encroachment of ROW		The municipality will work with wards and local bazaar committees/groups to discourage encroachment into the RoW.	Municipality	Cost will be borne by municipality	
Traffic accidents a associated risks		<ul> <li>Raise awareness of traffic rules, pedestrian / cycle lanes and installation of speed bumps to control speed near pedestrian crossing areas</li> <li>Traffic management plan will be developed, especially along congested locations.</li> <li>Traffic control measures, including speed limits will be enforced strictly.</li> <li>Further encroachment and squatting within the ROW will be prevented.</li> </ul>	Municipality	will be borne by icipality	
Limited access for elde and differently-able people	•	Provide training on the use of facilities; maintain signboards, lights, instructions in strategic locations.	Municipality	will be borne by icipality	

Air and Noise Pollution	<ul> <li>Maintain signs and speed restrictions on the road section within settlements area to reduce vehicle speed, dust generation, and where horns will not be blown and traffic speed will be regulated.</li> <li>Strict enforcement of vehicle emission standards.</li> <li>Maintain road side tree plantation</li> </ul>	Municipality will be responsible during operation stage.
	<ul> <li>Air pollutant parameters (TSPM, PM10, SOx, NOx, COx, Pb). Conforming NAAQS of Nepal.</li> </ul>	
	<ul> <li>Water quality (EC, PH, DO, TSS, Oil and Grease). Conforming WHO Standards.</li> <li>Noise levels (1 hrLeq dB(A). Conforming WHO standards.</li> </ul>	

<sup>\*</sup>The DSC team will responsible for monitoring the above mentioned construction phase works

#### 6.4 Impact and Compliance Monitoring

Impact monitoring involves the monitoring of environmental and social changes and estimates inherent variation within the environment, identifies long term trends in the natural system, and derives conclusions by making comparison against a standard or target. Compliance monitoring is carried out to understand the implementation status of environmental and social requirements as documented in the ESMP and is shown below.

Municipalities will report on the implementation of the ESMP(s) and on the status of compliance with the instruments on a regular basis as part of the trimester progress report (to the DUDBC). Information shall include: 1) measures taken in furtherance of the safeguard instrument, ii) conditions, if any, which interfere or threaten to interfere with the smooth implementation of the safeguard instruments; iii) any feedback under the GRM of the ESMF, and iv) remedial measures taken or required to be taken to address such conditions.

Table 6-2: Selected monitoring indicators

Monitoring Sector	Parameters selected
Slope, stream protection	Effectiveness of slope protection, stream protection works
Socio-economic development in road alignment and ZoI	Number of employment opportunities created
	Number of workers received training on enhancement of technical skills
	Change in transportation costs and time
2.01	Number and type of enterprises, cottage industries established
	Change in status of basic services and utilities in the ZoI for e.g. education institutions, access to health infrastructures, water supply, energy status, trade and commerce ventures, shift in livelihood strategies among the populace from the ZoI
	Condition of affected infrastructures (if any)
	Occupational health and safety measures provided to workers
	Increase in number of people receiving social service facilities (school, health post)
	Increase in land value
	No. of accidents related to road
	State of settlement condition (no. of houses, shops, sanitation condition)
	Number and status of porter's livelihood

#### 6.5 Monitoring activities and methods

**Table 6-3:** identifies the specific compliance monitoring activities. Phase-wise/chronological details are provided for the methods, schedules, responsible implementing agency and the responsible monitoring agency. Compliance monitoring refers primarily to the pre-construction and construction stage of the project. The following government standards will be taken as reference for monitoring.

Table 6-3:Impacts and monitoring of the project

Parameters	Verifiable Indicators	Verification methods	Monitoring locations	Schedule	Monitor agency	Cost
Change in Land Use	Changing Agricultural land, forest land, settlement area and barren land	Site observation, photos, discussion with communities	DIZ, IIZ and project affected wards	Continuous / construction (Yearly)	DSC	Included in DSC Contract
Quarrying of Construction Materials	Initiated erosion, changes in river regime, erosion by river systems, degradation of vegetation, water logging, waterborne diseases	Site observation, photos Records from local health centres	Quarry site areas	construction (Quarterly)	DSC	Included in DSC Contract
Noise and dust pollution	Total Suspended Solid, Particulates, noise level	Visual inspection, measurement, and comparing baseline data,	construction sites and at sensitive spots	construction / operation (Quarterly)	DSC	Included in DSC Contract
Use of bitumen storage, heating, spreading	Contamination of bitumen near water sources, land contamination	Visual inspection, measurement, comparison with baseline data,	construction sites	construction (Quarterly)	DSC	Included in DSC Contract
Road safety measures	Speed controls, traffic signboards, ROW encroachment, Footpath	Observation, photos and interaction with local peoples	ROW	Yearly throughout the project cycle	DSC	Included in DSC Contract
Road accidents	Type and number of accidents occurred Adequacy of occupational safety measures provided	Observations, photos, spot checks, interview with local peoples	Road alignment	Yearly throughout the project cycle	DSC	Included in DSC Contract
Cultural, religious and historical sites	Cultural and religious infrastructure, people perception, practices	Records, observations, interview with local people	Project area	operation (Yearly for 2 years)	DSC	Included in DSC Contract
Occupational and safety hazard	Safety equipment like helmets, globes, boots etc., insurance, potable water, basic first aid kit	Observation, records and interview with workers	camp and working area	construction (daily)	DSC	Included in DSC Contract
Possible township/ribbon development along the road	Congestions to road users  Number of accidents, ROW encroachment	Records, observations	Project Area	operation (Yearly for 2 years)	DSC	Included in DSC Contract

#### ESMP for Beneficial and Adverse Impact

The measures and actions proposed for augmenting the identified beneficial aspects road upgrading project, as well as proposing a set of mitigation and precautionary measures to minimize or set off the potential adverse impacts is outlined in **Table 6-4:.** 

Table 6-4:Beneficial impacts of the project

Impact	Enhancement/Mitigation Measure	Enhancement/Mitigation Mechanism/Responsibility	Cost / Remarks				
Construction Stage	Construction Stage						
Employment opportunities for local people	Involve local people as per skills, qualifications (priority-based to the extent possible )	Contractor (DSC)	No additional cost				
Employment to the women and disadvantaged groups	The contractor will coordinate with representative of disadvantaged and women group to employ those people, as many as possible	Contractor	No additional cost				
Skills enhancement on construction, carpentry, masonry etc.	Organize skills enhancement training targeting the local youths, women, vulnerable, disadvantaged and skills enhancement of project workers	DSC	NRs 300000.00( municipality shall conduct through their plan and activities in their f/y municipal budget)				
			(for the people in the direct influence area)				
Operation Stage							
Improved access and reduced travel time /transport cost	Fixing the minimum transportation cost in agreement with DTO, transport entrepreneurs and local people	Municipality, Transport entrepreneurs and local people	No additional cost				
Environmentally friendly construction	The upgraded road shall use locally available materials, vegetations during construction	Municipality	No additional cost				
Change in livelihood through the promotion of business and industry	The municipality will facilitate measures to promote the establishment of new businesses and enterprises	Municipality	No additional cost				
	The PIU will create the suitable environment to promote business and industries based on local resources	PIU in coordination with local CBO/NGO/GoN offices					
Gender and social empowerment	The subproject will serve to mainstream women, dalit, and other marginalized people by providing several income generating trainings and programs	Municipality in consultation with UDST in collaboration with local organizations	NRs 300000.00( municipality will conduct through their plan and activities in their f/y municipal budget)				
			(for the people in the direct influence area)				

## 6.6 Costs of Executing the Environmental and Social Management Plan (ESMP)

All proposed mitigation measures will be integrated in the project design so that these measures may automatically form part of the construction and operational phases of the project. The cost of executing the suggested mitigation measures such as of slope stabilization, awareness, waste management measures, shall be included in contractor's environmental and social plans, whereas the and tree plantation, etc. comes under the BoQ. The other remaining total cost for the ESMP is outlined in Table 6-5.

Table 6-5:Cost of ESMP

S.N.	Activities/Measure	Total Cost (NPF	₹)	Remarks
1	Environment Mitigation (Pre construction phase)			
1.1	Five Electric /telephone Pole removal and reinstatement		325000	Cost included in BoQ Item No. 2.5, 10.1
2	Construction phase and operation mitigation (specific activities not related to construction related mitigation) including GBV, COVID, HIV/AIDs awareness, etc		300000	Cost included in BoQ Item No. 10.2
3	Waste Management (Construction Waste and Waste from Labour Camp), Top Soil Management, Road Safety, Sewer and Drainage Stockpiling Management Traffic Management Labour camp Management Dust Management by water spraying		1200000	Construction waste management by Contractor's package and will be prepared during CESMP. Waste from camp is considered during camp site management.
4	Environment Monitoring and Management Unit			The cost is already built in to DSC contract
5	Protection of Water Course Crossing			Included in BoQ Item No.3,8
6	Roadside Plantation		366815	Included in BoQ (171 nos. Saplings,171 rm single node, 1710sqm grass slips.)
7	Capacity Building Trainings to Municipality		-	The project has allocated this activity under component II UDST contracted
8	Construction of Retaining Wall		Included BoQ	in Chainages 2+800, 3+740,6+520
9	Road safety measures		4640700	Included in BoQ Item No. 59, 6 (Safety measures for Delineation, Crash barrier, Safety blocks, signpost, markings)
10	Quarry Sites monitoring and Material Quality Check Up			Municipality contingency cost,
	Half yearly Air, water and Noise measurement			PIU/DSC
11	Quaterly stakeholder consultations, maintaining GRM at project level		300000	Included in BoQ Item No. 10.3
	Total		8082515	Excluding Vat

#### **6.7** Monitoring Cost

There will be no cost for establishment of Environment and Social Monitoring Unit as the monitoring unit lies within PIU as a DSC. The social, gender and environment expert within the DSC will monitor environment and social components and cost will be provisioned under DSC contract. The DSC will also consider cost requiring items such as air, water and noise monitoring.

### 6.8 Institutional arrangements

The institutional setup plays a vital role in successful implementation of Environmental and Social Safeguards measures. The Ministry of Urban Development (MoUD), Nepal has setup a Project Coordination Office (PCO) under the Department of Urban Development and Building Construction (DUDBC) for NUGIP in Kathmandu. A Project Management and Support Team (PMST) will support the PCO in project implementation including ensuring compliance with environmental and social safeguards. A Project Implementation Unit (PIU) in each municipality is established for the implementation in the field. To ensure that the investment sub-projects are efficiently implemented, delivered on time, and completed in accordance with environmental and social safeguards requirements, technical assistance will be delivered through a Design and Supervision Consultancy (DSC). DSC will deploy engineering, procurement, E&S safeguards and other technical specialists to work closely with municipal engineers and other technical staff to design and supervise the implementation of the sub-projects in two clusters. The role of PIU/DSC includes implementation of ESMP, RAP, VCDP, etc. The PCO with support from PMST will review implementation support of environmental and social safeguard studies/ management plan prepared by PIUs/DSCs.

At subproject level, the contractor will be required to comply with the ESMP. Each municipality will need Environmental and Social Development (ESD) expert to review ESIA-ESMP, RAP-ARAP, etc. The E & S safeguard specialists of DSCs will regularly visit the subprojects to ensure project implementation in accordance to World Bank's safeguard standards and ESMP. The ESD will be a part of PIU. The role of DSC will also include ensuring compliance of pertaining laws, policies, regulation for all subprojects, coordination and liaising with government stakeholders as well as the World Bank with respect to various E&S issues. The PCO will have overall responsibility to ensure compliance with pertaining laws, policies, regulation for all sub projects, and development of sub-projects in sustainable way and allocation of fund for institutional capacity development. The reporting of the PMST on the monitoring and evaluation on the project's safeguard performance to WB is done internally by the PCO and externally by the WB experts.

Table 6-6: Roles and Responsibilities of the Stakeholders in ESMP Implementation

SN	Stakeholder	Roles and Responsibilities	Time Schedule
1	World Bank	<ul> <li>Review and final approval of ESIA and ESMP</li> <li>Review project design and contract documents, against approved ESMP measures and give comments for corrective actions</li> </ul>	Recommendations and implementation
		<ul> <li>Review of periodic monitoring reports of project construction and operation and taking of necessary actions in case of non- compliance</li> </ul>	
2	PCO/PMST	Review and approval of ESIA and ESMP	ESMP approval
		<ul> <li>Give permission for Project Implementation as per ESMP</li> <li>Review project design and contract documents, against approved ESMP measures and give comments for corrective actions</li> </ul>	Before contract bidding  As and when required
		<ul> <li>Ensure that contractor commitments under the ESMP are reflected in bidding documents</li> </ul>	construction and operation phases

SN	Stakeholder	Roles and Responsibilities	Time Schedule
		Monitoring subproject to ensure the implementation of ESMP	
		<ul> <li>Review of periodic monitoring reports of project construction and operation and taking of necessary actions in case of non- compliance</li> </ul>	
		<ul> <li>Environment and social monitoring Report preparation and submission to the WB</li> </ul>	
3	PIU/Municip ality	<ul> <li>Incorporate ESMP mitigation measures are incorporated in the final project design and tender documents of project construction and operation</li> </ul>	Before construction During
		<ul> <li>Acquire necessary permits and approval for project construction and operation</li> </ul>	construction, and operation phase
		<ul> <li>Monitoring and record keeping regarding environmental measures and impacts.</li> </ul>	Monitoring every month during
		<ul> <li>Compilation of environmental monitoring and performance report and dispatch for review through proponent to stakeholders</li> </ul>	construction
4	DSC	Elaborate ESMP, if necessary and assist field engineers on the site inspection before approval of CESMP	Pre-construction phase
		<ul> <li>Supervision of baseline, compliance and impact monitoring of construction contractor's activities as per responsibilities in the contract document and advise the PIU for needed actions at the site in regular environmental management meetings.</li> </ul>	Regularly during construction phase (daily, weekly, monthly)
		<ul> <li>Preparation of monitoring report as mentioned in ESMP with a list of compliance and non-compliance works with recommendations</li> </ul>	
		<ul> <li>Monitoring of contractor's performance on meeting the provisions of tender documents and ESMP</li> </ul>	
		Monitoring of the effectiveness of enhancement measures and mitigation measures	
5	UDST	Design Training, prepare training manual to include measures identified in ESMP	During Construction
		<ul> <li>Provide training to DSC, PIU or Contractors to implement the training part included in the ESMP</li> </ul>	Stage As per required
		Prepare report	
6	Construction Contractor	Prepare a detail CESMP for minimization of construction related impact and seek a prior approval	Pre-construction phase
		Provision of Environment Cum Safety Officer	Daily during
		<ul> <li>Ensure all preparatory works are carried out as per the tender document</li> </ul>	construction phase
		• Implement mitigation measures as specified in ESIA, ESMP or as instructed by supervising engineer	Regularly during construction phase.
		• First hand monitoring and record keeping of environmental mitigation measures implemented and their performance	. F
		<ul> <li>Carry out all corrective actions or other instruction given by supervising engineers/DSC/PCO</li> </ul>	

SN	Stakeholder	Roles and Responsibilities	Time Schedule
7	Affected Stakeholders	<ul> <li>Ensure that the local level complaints are adequately address</li> <li>Assist and provide suggestions to the PIU in the matters related to community</li> </ul>	As and when required

## 7 STAKEHOLDER ENGAGEMENT AND CONSULTATATIONS

### 7.1 Stakeholder engagement overview

Regular stakeholder engagement and consultations are necessary to ensure widespread and meaningful participation of key stakeholders with focus on the project affected people. Successful implementation of the subproject requires coordinated efforts of various stakeholders at different levels. Hence, communication and consultations at different levels were used as a tool to inform and educate stakeholders about the proposed project intervention.

There are two key objectives of effective stakeholder engagement and consultations. First, it is to keep all stakeholders informed of the project activities, and any potential beneficial and adverse impacts. Second, it is to ensure that stakeholders actively participate at all levels of the project cycle, to enable sharing of valuable local knowledge involvement in the development of mitigation plans to minimize the potential negative impacts of the project, and so are well equipped to take over the responsibilities of operation and management once the project phases out. These will ultimately contribute towards narrowing down the gaps between the project officials and beneficiaries, and to help create a conducive environment to mitigate against the adverse social and environmental issues through optimal cooperation from the project beneficiaries themselves.

Community participation can be effective if local people are empowered. The method of community participation needs to be planned to reflect the community profile and nature of the project. Different communication methods are integrated together communicates the community as focus group discussions, meetings, and workshop. The plan ensures the following:

- Ensure local ownership
- Include different types of stakeholder's group in participation process
- Generate and respond to feedback

Public consultation and community participation helps to remove such uncertainty and at the same time help the project implementation with its methodology as well as work plan. It is assisted in the identification of the problems associated with the project, as well as the needs of the population likely to be impacted. This participatory process helps in reducing the public resistance to change and enabling the participation of the local people in the decision-making process. The involvement of the various stakeholders ensures that the affected population and other stakeholders are informed consulted and are allowed to participate at various stages of project preparation. Different strategies have been adopted for communication/ consultation during implementation stages. Stakeholder engagement strategy outlines engagement through the project development phases and recommends a set of stakeholders' engagement activities to be carried out throughout the project development phases. This chapter also outlines the disclosure to be made and other communications to be made during the project cycle.

Various stakeholder consultations were held during the design of the subproject to understand project questions and concerns, and to incorporate any concerns and feedback into project design. A table of the stakeholder consultations held to date has been included at Annex II. Stakeholder consultations including with vulnerable groups such as women's groups, and indigenous groups, and information dissemination will continue through project implementation as detailed further below.

#### 7.2 Stakeholder Engagement Procedures and process

The subproject will draw on existing mechanisms and procedures established at the local level to carry out stakeholder engagements. The municipality forums will be the primary mechanism for engaging with stakeholders and community participation, to ensure that projects identified reflect local needs and priorities. Other mechanisms for community engagement and consultations include community-based user committees in construction supervision and operations and maintenance, as a social accountability

and safeguard mechanism. The stakeholder consultations will draw on mechanisms already established at the local level. Where mechanisms for stakeholder engagement do not already exist, a mechanism elaborated below will be followed:

### 7.3 Stakeholder Mapping

The primary objective of stakeholder analysis is to map the stakeholders, their role, operational network, representation requirements and impact on type of activity in the project to strategically prioritize consultations with them. The stakeholder interactions will be through:

- Focused group discussions (FGD)
- Public consultations
- Key informant interview (KII)
- Indigenous and women groups discussion
- Consultation with institutional stakeholders

The stakeholder mapping is undertaken through formal and informal consultations and their interests concerned with the project activities should be identified throughout the project cycle. The stakeholders identified for the subproject are presented in **Table 7-1**.

Table 7-1: Stakeholder roles and responsibilities

Level	Stakeholder	Roles and Responsibilities		
Federal	MoUD DUDBC (PIU)	Facilitate the implementation of the subproject, coordina with agencies, undertake monitoring and reporting to WB		
	DoR, MoFE, (PIU)	Support coordination, and sectoral poli	cy implementation	
Local Municipality, Ward Offices Tole Development Committees		Support the process of subproject selection, identify beneficiary and their needs, support coordination, support grievance and dispute resolution		
	NEA, DFO, LRO, DoI DCC, Traffic Police, Water Users Committee	Provide specialized inputs on local conditions, permissions, technical input limitations and needs of the public, provide compensation estimation, provide required assistance during project implementation, and support monitoring		
Subproject Level	Ward representative Associations) and All types of local user groups	implementation		
	Extended users of the project			
PCO		Overall Monitoring and Coordination	Executing agency	
PMST		To support PCO in monitoring and control ,will work as a helping hand to PCO, coordinate with the municipalities and DSCs of municipalities	Executing Agency	
DSC (Design and Supervision Consultant)		Design and overall management of UDG contract in municipality Will help PIU of municipalities in	Consultant	

Level	Stakeholder	Roles and Responsibilities	
		overall design, contract management, supervision will coordinate with PMST	

### 7.4 Mechanism for Consultation

The consultation process envisages involvement of all the stakeholders at each stage of subproject planning and implementation. Involvement of the community is not limited to interactions with the community but also disclosing relevant information pertaining to the project tasks. Community participation is and will be ensured at all stages. Dissemination of project information to the community and relevant stakeholders will be carried out by the PIU. The community will be made aware of the project alternatives and necessary feedback will be obtained; other stakeholders will be involved in the decision making to the extent possible.

The outcome of consultations is incorporated as appropriate into the design and ESMP. As part of such consultations, the ESMP will be presented and explained to the people on the content and process of the implementation of the plans. Consultations with project affected persons and their profiling are conducted as per the requirements of ESIA.

### 7.5 Public/Community Consultation Plan

All consultations on social and environmental issues will be carried out during implementation of the project in an inclusive manner, including vulnerable social groups (such poor household, caste, persons with disabilities, among others) and women. Details of the Project Consultation Plan are presented in the following table.

Table 7-2: Project Consultation Plan

Objective and Target Goal	Method	Responsibility		
Build Local Ownership				
Introduce Project DPR Report and its components	Group Meeting/Workshops	DSC/ PCO/Municipality(PIU)		
Maintain efforts for two-way communication with relevant stakeholders through the project	Face to face meeting with concerned stakeholders	PCO, Design Supervision Consultant, Ward Level Authority		
Start Consultation Process with Potentially	Affected Communities by construction and	operation of road		
Identify communities to be potential affected by project	Electronic and face to face communication with relevant stakeholders and implementing agencies	PCO, DSC,PIU  Municipality Ward  Authority		
Consult with community representatives and ensure that their concerns with the proposed project are addressed	Face to face meeting with community representative (includes social officer of Municipality, women's representative etc.) Meeting will take place following protocol for meeting (social distancing, wearing of masks by all the participants, use of hand sanitizers, conducting meeting in a open and ventilated places)	PCO,DSC,PIU  Municipality Ward  Authority		
Ensure that the views and needs of vulnerable segment (if required) of communities, including but not limited to poor, women, elderly, and are addressed by the subproject	Face to face meeting with affected communities' representative (including social officer of Municipality, women's representative etc.)	PCO,DSC,PIU  Municipality Ward  Authority		
Implementation Phase				
Maintain effective communication with PIU	Electronic and face to face communication with representative of relevant agency /organization	PCO,DSC,PIU  Municipality Ward  Authority		

Objective and Target Goal	Method	Responsibility
Raise awareness of project activities	Media advertisements and targeted	PCO, DSC, PIU/
among potential beneficiaries	campaign	Municipality
Maintain consultation process with a potential affected communities and beneficiaries	Face to face meeting with affected communities' representative (including social officer of Municipality, women's representative etc.)	PCO,DSC,PIU  Municipality Ward  Authority
Monitoring and evaluation community involvement	Face to face meeting with affected communities' representative	PCO,DSC,PIU Municipality Ward Authority
Reports outlining progress of activities related to engagement and communication	Collation of progress report, self- evaluation by PCO	PCO
Agreement on operation and maintenance system	Electronic or face to face communication with relevant stakeholder Face to face meeting with local authority	PCO,DSC,PIU Municipality Ward Authority
Implementation of ESIA	The contractor will prepare the various standalone plans to comply with ESIA requirements By including all the stand alone plans, the contractor will prepare Contractor's Environmental and Social Management Plan (ESMP) and submit it to PIU. This requirements will be included in the contract BOQ	The requirements stipulated in ESIA shall be included in bid document of the contractor. The contractor will prepare the stand alone plans and submit it to the PIU before the construction begins and obtain approval. The standalone plan includes; environment, health and safety management plan, traffic management plan, grievance redress plan, spoil management plan, emergency preparedness plan, camp management plan, labor management plan, air/water/noise management plan to name a few.

## 7.6 Stakeholder Consultations during ESIA Preparation

Several stakeholder consultations were undertaken in order to prepare the ESIA, in presence of Municipality Mayor at meeting hall and group consultations and key information interviews (KIIs) were conducted at field. As the key concern and issues of IPs, vulnerable group and mainstream group are same separate consultation is not made. Details of these consultations, including key concerns and issues raised, are detailed below:

Table 7-3: Municipality meeting With DSC Team

Places	Date	No of Participant	Types of Participation	Key concern/Issues
Municipality Office 3	26 Feb 2023	21	<ul> <li>Mayor</li> <li>Deputy Mayor</li> <li>Admin Official of Municipality</li> <li>Municipality Focal Person</li> <li>DSC Team</li> <li>LRUC Team Member</li> </ul>	<ul> <li>Issues of Land and Assert with VLD</li> <li>Forest area along the alignment</li> <li>Electricity pole</li> <li>Water Supply</li> </ul>

• Different User	
Committee	

Table 7-4: Group Consultations (Focus Group Discussion)

Settlement /ward	No. of Participants	Key concern/Issues	Responsible Agencies
Sikshya Chowk 3	36	<ul> <li>Forest/ Community Forest</li> <li>Drinking Water Pipe</li> <li>Electricity Pole</li> <li>Project Status</li> <li>RoW of Road</li> <li>Land and Survey Mechanism</li> <li>Implementation and early completion of road</li> <li>Role of LRUC</li> <li>Community Involvement</li> <li>Issues of Compensation</li> <li>Letter of Land holder</li> </ul>	Municipality/PIU NEA DWSO Survey Office
Putalibazar 8 Dandaswara		<ul> <li>Road Migration to local bazar area due to poor road condition</li> <li>Construction of road sooner</li> <li>Support of people in road construction</li> </ul>	
Bahakot 8	13	<ul> <li>Project Status</li> <li>RoW of Road</li> <li>Land and Survey Mechanism</li> <li>Implementation and early completion of road Role of LRUC</li> <li>Minium loss in Forest/ Community Forest</li> <li>Plantation</li> <li>Drinking Water Pipe</li> <li>Electricity Poll Community Involvement</li> <li>Issues of Compensation</li> <li>Consent Letter of Land Holder</li> <li>Alternative of Road</li> </ul>	Municipality/PIU NEA DWSO Survey Office

Bahakot and Kalkhu 8	15	<ul> <li>Project Status</li> <li>RoW of Road</li> <li>Land and Survey Mechanism</li> <li>Implementation and early completion of road         Role of LRUC</li> <li>Forest/ Community Forest</li> <li>Drinking Water Pipe</li> <li>Electricity Poll Community Involvement</li> <li>Issues of Compensation</li> <li>Consent Letter of Land Holder</li> <li>Alternative of Road</li> </ul>	Municipality/PIU NEA DWSO Survey Office
Putalibazar DSC Office	17	<ul> <li>Issues of Compensation</li> <li>Consent Letter of Land Holder</li> <li>Alternative of Road</li> <li>Land and Survey Mechanism</li> <li>Implementation and early completion of road</li> <li>Role of LRUC</li> </ul>	DSC/LRUC Ward Office Women Group

Table 7-5: Key Informant Interviews (KII)

Place	Date	Details of Key Informants	Key concern/Issues
Bahakot	26 Fe 2023	Thakuri ward chair of ward 8 PB Mun	Earthen Road, Slope, no drain, dangerous turning, decreasing the agriculture production due to present road condition, very lower nos. of students in school, no business activity in project area,  Possibilities of home stay, view point, cultural village to promote local tourism
Bahakot 3	25 Fe 2023	Dalit LRUC member and Poultry Business	Earthen and rough road ,transportation is not easy, rainy season is more painful, flood and dust drain ruin the land, promotion of business is not easy due to current transportation, dust and earthen road decreasing student in school, sick person are suffering more problem,
Bahakot 8	25 Fe 2023	35 Years Female Janjati Teacher	Dangerous turning, decreasing the agriculture production due to present road condition, very lower nos. of students in school, no business activity in project area, Earthen and rough road, transportation is not easy, rainy season is more painful, flood and dust drain ruin the land, most of the family migrated from village have no any opportunity, youth stay at village, old or inactive man are only at village home, villagers are suffering more difficulties from dust road, complete the project on time, everyone is excited regarding commencement of project.

#### 7.7 Information Disclosure

For the success of the project, all information about the proposed activities and their expected results will be publicly shared with the affected people and interested stakeholder. In collaboration with the relevant local authorities, NGOs and other community groups, the project will disclose all the relevant information in the various stages of project cycle. Agencies working for environmental and social aspects will also be informed about the ongoing and planed activities, to identify jointly appropriate protective or corrective measures. The following approaches will be adopted to make information accessible to all the concerned stakeholders throughout the project cycle.

- Mass Media: Use local media like newspaper, radio and TV.
- Meeting/Workshops
- Distribution of project documents: Certain project documents will be disclosed in Nepali (or other relevant local language). Project-related information materials will be distributed prior to each construction work to local officials, local people, stakeholders and other concerned offices like municipality, Ward, Tole Committee etc.

An Information Centre will be established at the municipality office during implementation to disseminate all the documents related to the project activities. Based on the public information disclosure policy, PCO and the municipality will unveil the information through its website. The information dissemination plan for Proposed Road project is presented in **Table 7-6.** 

Table 7-6: Information dissemination plan

Means of Communication	Timeline & Frequency	Responsibility	Resources
Municipality Website (project details, grievance mechanism)	At the start of the project which will be maintained throughout the project	PIU/ Information Officer	Information Officer
Newspaper and local Radio (project salient features, dates, grievance mechanism etc.)	Project implementation phase Weekly basis	PIU, municipality Information Officer	Radio- program/Talk show, FM Radio Clip, Social media
Project leaflets and Fact Sheet	Project details, Implementing agencies, project period - 2 times	PIU, Information Officer	Doubled sided color A4 500 copies
Face to face engagements - meetings, focus group discussion with relevant stakeholders including vulnerable groups such as women's groups and indigenous groups.	Project Main Activities, Financial Assistance, Implementing agencies, project period etc. 2 time in year	PIU, Information Officer	

### 8 GRIEVANCE REDRESS MECHANISM

A grievance redress mechanism is established to allow stakeholders including PAPs to raise any concerns or complaints, or to appeal any disagreeable decisions, practices and activities arising from the project including compensation for land and assets (if applicable). Stakeholders will be made fully aware of their rights and the procedures.

#### 8.1 Grievance Redress Processes

As part of the implementation stage the PIU, PMC project engineers and Environment and Social staffs will directly interact and consult with the project affected persons. These would comprise of consultations towards relocation of the PAPs, relocation of cultural properties, and towards addressing the impacts on common property resources (CPRs) such as places of religious importance, community buildings, trees, etc. With the implementation of the rehabilitation provisions in progress, consultations and information dissemination will be undertaken to let the affected persons informed of the progress. Implementation stage also involves redress of grievances in case of rehabilitation aspects as well as relocation of common property resources through the grievance redress mechanisms.

The affected persons and groups identified above will be able to raise any grievances related the relocation of the above assets with the subproject grievance redress mechanism (GRM), to help ensure the successful implementation of resettlement measures. At first instance, the project-affected grievant should raise their grievance with the information office of the project, and the information office will determine whether it can be resolved within the project, at the ward level, or whether another mechanism should be used. PAPs will be exempt from all administrative fees incurred, pursuant to the grievance-redressed procedures except for cases filed in court. However, no any grievance raised and recorded until date. More details regarding the GRM are discussed in the following sections.

### 8.2 Structure of the GRM

A Grievance Redress Committee (GRC) will be formed for the sub-project. The composition of the proposed GRC is given below.

The first level of GRC sits at the project site level. It is composed of the following team:

Chairperson of ward 3 — Coordinator/Member
Chairperson of ward 8 — Coordinator/Member

Female ward member — Member Representative from Tole Land Organization (Project area) — Member

Representative from the DSC (Supervision Engineer/Social/Environmental Safeguard Specialist)—

Member Secretary

Representative from the construction company – Invited Member

The second level GRC at the municipality level. It is composed of the following team:

Mayor/Deputy mayor — Coordinator
Chief Administrative Officer — Member
Municipality's Grievance Officer — Member
Municipality's Social Development Officer — Member

Team leader or a representative from DSC — Member-secretary

#### 8.3 Processes of the GRM

Grievances shall be submitted through various mediums, including in person, in written form to a noted address, through a toll-free phone line or through direct calls to concerned officials, and emails. The PCO will appoint a person (Operator) at PCO- Kathmandu to receive such calls and online messages. The person (Operator) based on nature of complaint, will forward the same to the information office or ward committee. A ticket or a unique number will be generated for all such call, messages and letters. The complainant will follow up based that unique number with Operator at PCO-Kathmandu. All complaints will be responded within two weeks at any level. In case response is not received from 1stlevel within 15 days, the complaint will be escalated to next level. If complaint remains unaddressed at 1st and 2nd within maximum 30 days after registering the compliant, it will be elevated to 3rd level at PCO level. The PCO within 7 days of time should instruct the concerned person at PMC level to arrange for a hearing within maximum 5 days of time. Effort will be given by all levels of GRCs to conduct hearing and resolve the concern at their level up to the satisfaction of complainant within the stipulated timeframe. In case 1st and 2nd level GRCs are unable to resolve the concern up to the satisfaction of complainant, these GRCs' or Complainant may approach to 3rd level of GRC at PCO Level. After conducting hearing at any level of GRC, the decision will be communicated to complainant within maximum 30 Days of time.

All local contact information and options for complaint submission will be available on site, on Toles, Wards, municipality office, PCO on information boards and the project municipality websites. A half yearly report on Grievance Redress by the subproject project will be prepared and will be sent to the project municipality's GRCs by Wards' GRCs and ultimately to GRC of PCO. The PCO will forward the same to the World Bank.

The project GRM will include a process for addressing any SEA/SH-related grievances, including the appointment of a focal person to specifically address SEA/SH cases and to provide training/orientation on SEA/SH cases.

### **Status of grievances**

The GRC has been active since January 2023 allowing PAPs and other stakeholders to raise any concerns or complaints, or to appeal any disagreeable decisions, practices and activities arising from the project including compensation for land and assets (if applicable). Information about the GRC was put in public places, notice board of the municipality and ward offices so the PAPs are fully aware of their rights and the procedures. As of date, the committee has not received any grievances. The GRC will be active until the sub-project is complete.

### **8.3.1** Further details of the GRM

The functions of grievance mechanism include redressing grievances of community / beneficiaries /project affected persons in all project respects, providing rehabilitation and resettlement assistance and related activities, and hearing grievances from workers involved in the project at any level or phase. The system should be established to report back to the concerned community or persons regarding the decision on the complaint. The grievances related to women should be dealt by women officer. As required, the social mobilizers will be recruited. GRC will deal/hear the issues related to Environment, R&R and individual grievances and will give its decision/verdict within 30 days after hearing the aggrieved person. The final verdict of the GRC will be given by the Head of GRC in consultation with other members of the GRCs and will be binding to all other members. Potential grievances which may need to be addressed are listed below:

- Rehabilitation & Resettlement and Compensation issue
- Loss of livelihood
- Access to resource /utility/facility
- Ambient air and noise Quality
- Impact on water quality/resource

- Grievance from vulnerable community
- Gender related issues
- Grievances from workers
- Safety and risk repeated to project development

## 8.4 Other Mechanisms for Grievance Redress

All complainants have the option to approach court/judiciary or the World Bank's Grievance Redress Service in case he or she is not satisfied with the verdict provided.

## **ANNEXES**

## नेपाल शहरी शासकीय तथा पुर्वाधार आयोजना कार्य स्थलमा हुने यौनजन्य तथा महिला हिंसा सम्बन्धी आचार सहिता

### ब्याक्तिगत आचार सहिता

म,.....यो आचारसिहता पालना गर्नु मेरो दाहित्व हो भनी स्वीकारगर्दछु। म कुनैपिन यौनजन्य तथा महिला हिसा जस्ता कार्यमा सँलग्न हुने छैन। परियोजना को काम को शिलसिलामा यो आचार सिहता पालना गर्न सहमत छु।

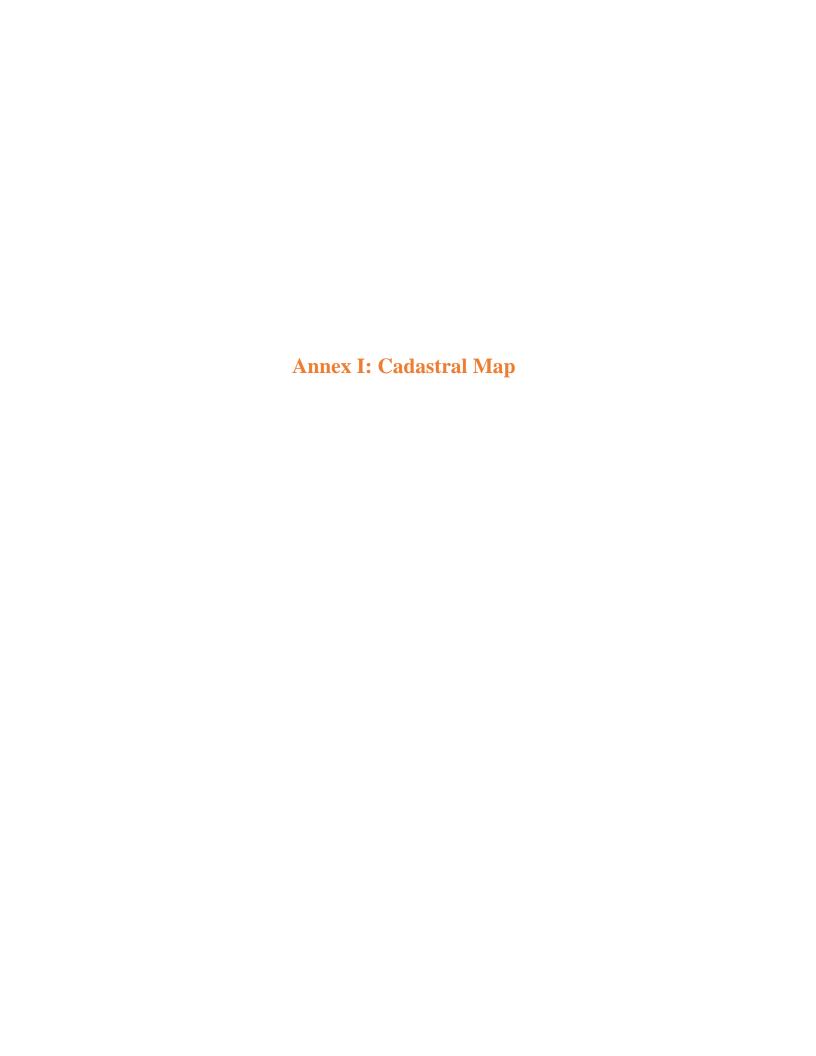
- 1. म जातजाति धर्म,भाषा,लिङ्ग,उमेर,राजनितीक वा सामाजिकहैसियत,भौगोलिकता,
- 2. पहुच, वैवाहिक स्थीती वा अन्य कुनै पिन आधारमा भेदभाव नगरी सबैलाई सम्मानजनक र समान रुपमा व्यवहार गर्नेछु।
  - 3. सामाजिक सन्जालको प्रयोग गरी अश्लील शब्द,दृष्य सामाग्री वा कार्यलय समय अघि पछी वार्तालाप मार्फत सहकर्मि/कामदार लाई यौन दुर्व्याहार गर्ने छैन।
  - 4. कार्यस्थलमा सिट्ठी बजाउने, चुम्बन गर्ने ,ब्यात्तिगत उपहार दिने आदि जस्ता कार्य गरी कर्मचारी, सहकर्मि / कामदार लाई यौन दुर्ब्याहार गर्ने छैन। कुनै पिन प्रलोभन / धम्की देखाई (जस्तै पदोन्नती लोभ देखाएर,जागीर निदने धम्कीदिएर शोषण गरेर आदि) यौन दुर्ब्याहार पक्षमा सलग्न हुनेछैन
  - 5. कार्य समयाविध भित्र कुनैपनि मिदराजन्य तथा लागुपदार्थको सेवन गर्ने छैन।
  - 6. परियोजका सरोकारवाला वा वरपरका समुदायका सदस्यहरुलाई कुनैपनि म लैङ्गिक हिसा तथा यौनजन्य दुर्ब्याहार गर्ने छैन।
  - 7. कुनै पिन कर्मचारी श्रिमिक विरुद्ध हिँसा गरिएको दोषी ठहरिएमा प्रचलित सिंघय, प्रादेशिक, स्थानीय सरकार वॉर्ड बैक को कानुन , निती नियम अनुसार सजाय दिण्डत जरिवाना तिर्न तयार हुनेछ ।
  - 8. कार्य गर्ने शिलशिलामा सम्मानजनक निर्देशनहरुको पालना गर्दछु ( वातावरणीयं+सामाजिक)
  - 9. मेरो जिम्मेवारी क्शलता र लगनशीलता पूर्वक पूरा गर्नेछ।
  - 10. सम्बधित कार्यलय/कम्पनीले सन्चालन गरेको विभीन्न प्रशिक्षण कार्यक्रममा सिक्य रुपमा भाग लिने छ।
  - 11. परियोजनाका प्रत्यक्ष लाभदायक सदस्य/सम्दायमा यौन दृर्व्याहार/शोषण गर्ने छैन।
  - 12. विश्वासनीयता नैतिक उपॅलघनको रिपोर्ट गरेमा कुनै कामदार विरुद्व बदला लिने छैन।
  - 13. कार्य स्थलमा लैङ्गिक सम्बेदनशिल भाषाको प्रयोग गर्दछु कार्यस्थलमा महिला हिसा तथा यौनजन्य कियाकलापलाई प्रोत्साहन गर्ने खालका गतिविधी गर्न दिने छैन।
  - 15. कार्य स्थलमा महिला तथा यौन हिसा गतिविधीहरुलाई प्रोत्साहन गर्ने छैन।
  - 16. १८ वर्ष भन्दा मुनिका बालिकाहरुमा कुनै डिजीटल मिडीया मार्फत वा कुनै माध्यमबाट/स्वीकृती लिई वा निलई यौनजन्य कियाकलापमा सहभागी हुनेछैन, यदि नाबालिका स्वीकृती लिई यौनजन्य कियाकलापमा गरेमा क्षमा हुदैन ।
  - 17. परियोजना कार्यन्वयनको बेलामा यौनजन्य दुर्ब्याहार/यौन शोषण भएमा वा आचार सिहता उपॅलघन गरेमा वडा/नगरपालिका स्तरमा रहेका ेग्नासा ेस्नवाई सयन्त्रमा त्रुन्त

निबेदन/जानकारी दिनेछु। कार्यस्थलमा कसैले यौनजन्य दुर्व्याहार सम्बन्धी शख्कापद ब्याबहार गरेमा वाशख्का पदकार्य गरेमा तुरुन्त टोली प्रमुख /प्रबन्धकलाई जानकारी/निबेदन दिनेछु।

माथि उल्लेखित आचार सिहता राम्ररी पढे र बुम्नेको छु र कार्यस्थलमा कडाईका साथ पालना गर्दछु भनी हस्ताक्षर गर्दछु ।

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व्यवस्थापक / टोलीप्रमुख	कर्मचारी / कामदार

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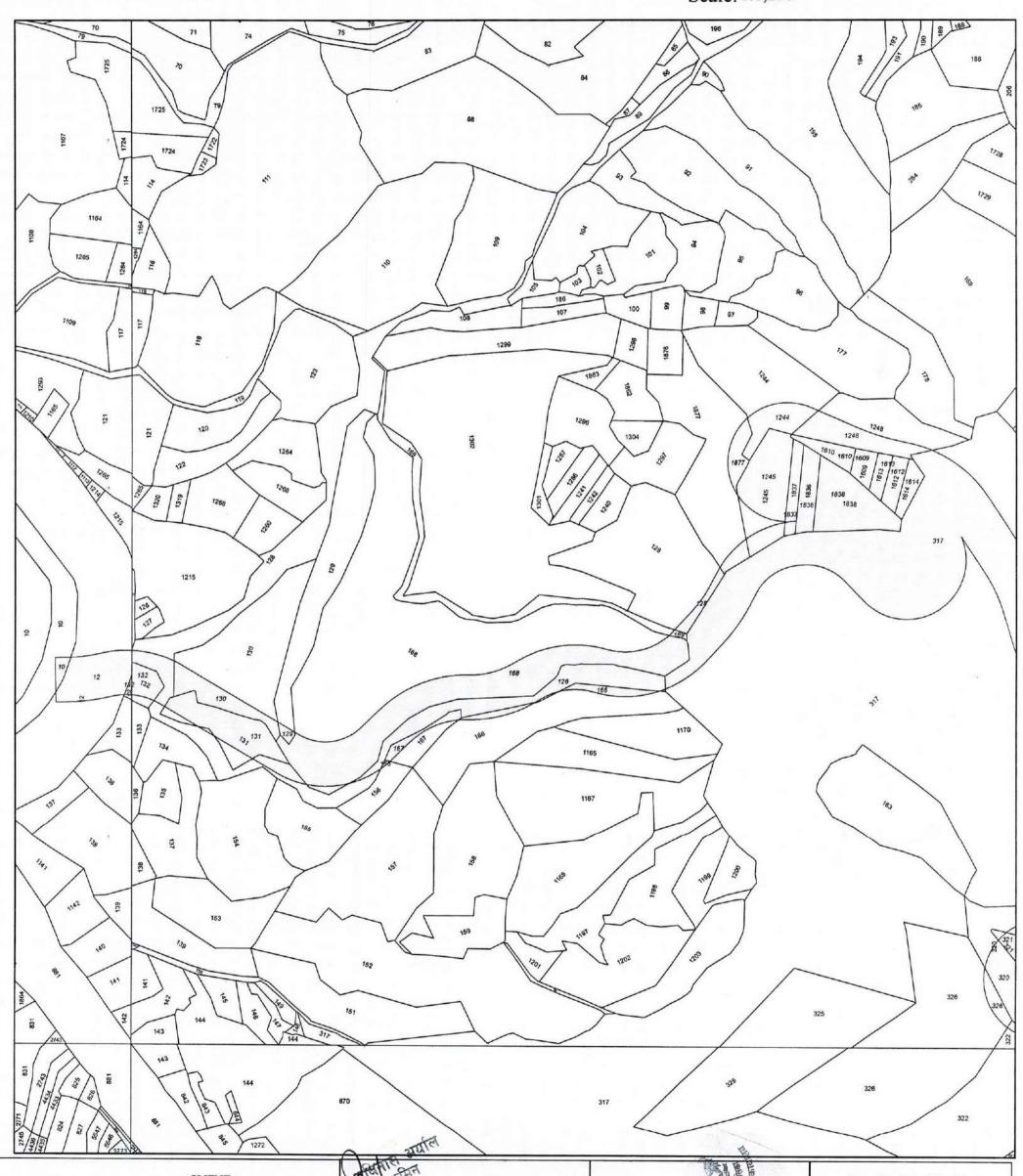


V.D.C.: Putalibajar

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CLIENT: Project Implementation Unit Nepal Urban Governance Infrastructure Project Putalibazar Municipality Office of Municipal Executive, Putalibazar, Syangja Gandaki Province, Nepal

CADASTRAL MAP PREPARATION AND DETAIL INFORMATION AND CUT-OFF AREAS OF EACH INDIVIDUAL PARCEL CALCULATION OF ROAD PLAN (PRAGATINAGAR-BAHAKOT-NAMCHE-KALKHU) PROJECT

DATE: 2023 April SCALE: 1:2500

DATE: 2023 April SCALE: 1:2500

MUNICIPALITY NOW: PUTALIBAZAR WARD NO: 3

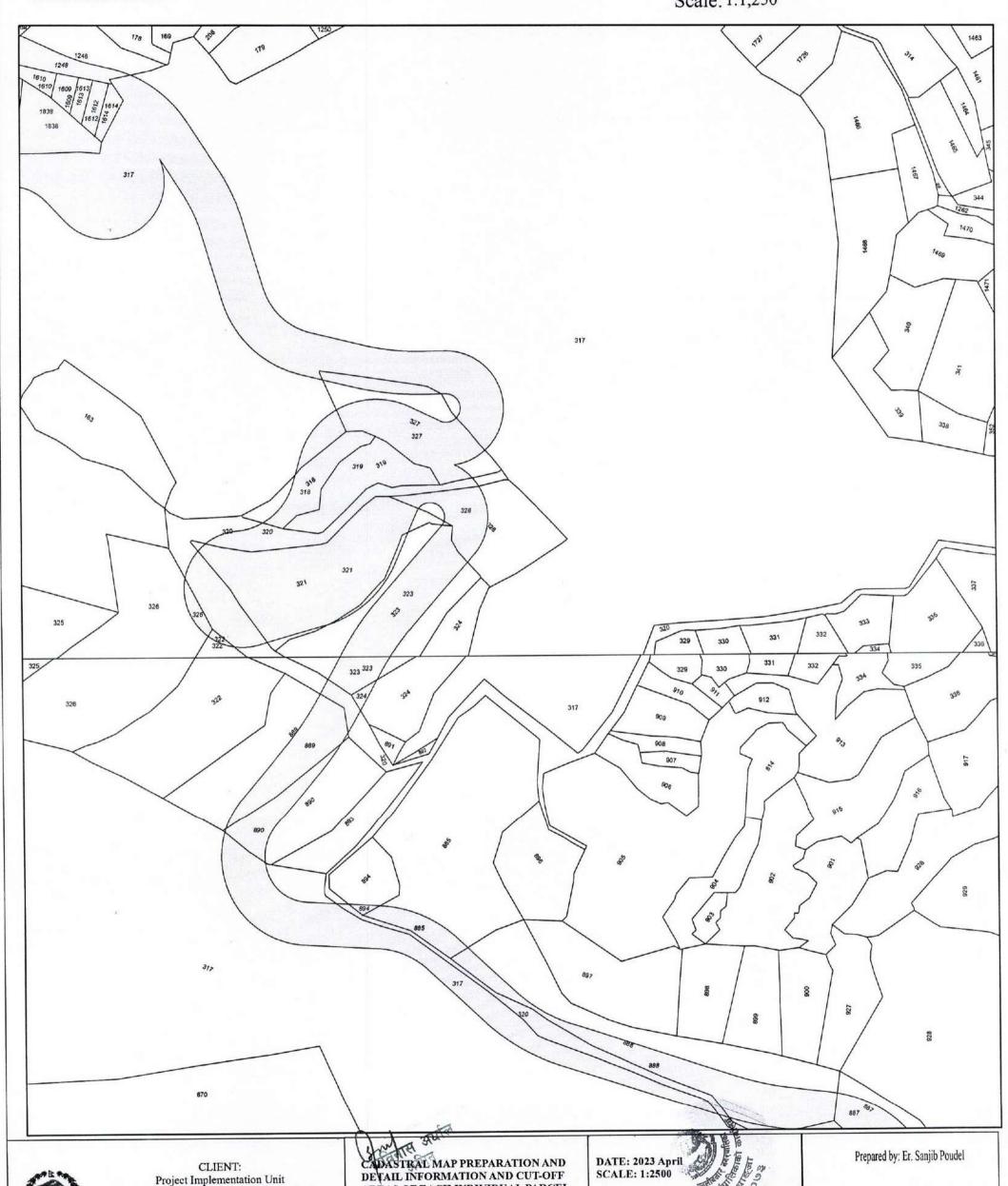
Prepared by: Er. Sanjib Poudel

V.D.C.: Putalibajar

Ward Number: 2

Sheet Number: 093-1311-4, 093-1351-2

Scale: 1:1,250





CLIENT:
Project Implementation Unit
Nepal Urban Governance Infrastructure Project
Putalibazar Municipality
Office of Municipal Executive, Putalibazar, Syangja
Gandaki Province, Nepal

CADASTRAL MAP PREPARATION AND DEVAIL INFORMATION AND CUT-OFF AREAS OF EACH INDIVIDUAL PARCEL CALCULATION OF ROAD PLAN (PRAGATINAGAR-BAHAKOT-NAMCHE-KALKHU) PROJECT

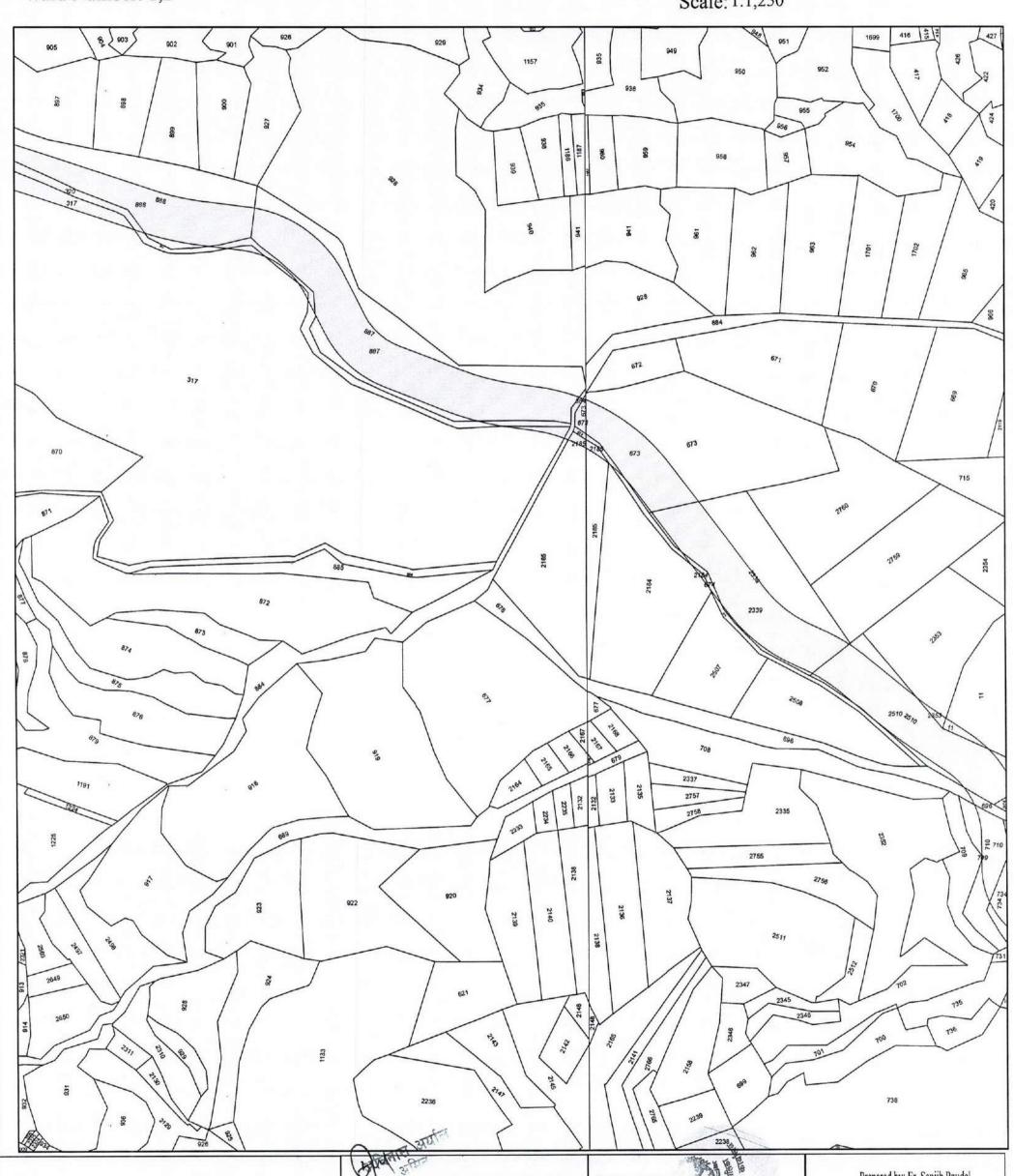
MUNICIPALITY NOW! PUTALIBAZAR WARD NO: 3

V.D.C.: Putalibajar

Ward Number: 1,2

Sheet Number: 093-1351-2, 093-1352-1

Scale: 1:1,250





CLIENT:

Project Implementation Unit Nepal Urban Governance Infrastructure Project Putalibazar Municipality
Office of Municipal Executive, Putalibazar, Syangja Gandaki Province, Nepal

CADASTRAL MAP PREPARATION AND DETAIL INFORMATION AND CUT-OFF AREAS OF EACH INDIVIDUAL PARCEL CALCULATION OF ROAD PLAN (PRAGATINAGAR-BAHAKOT-NAMCHE-KALKHU) PROJECT

DATE: 2023 April SCALE: 1:2500

MUNICIPALITY NOW PUTALIBAZAR WARD NO. 3 WARD NO: 3

Prepared by: Er. Sanjib Poudel

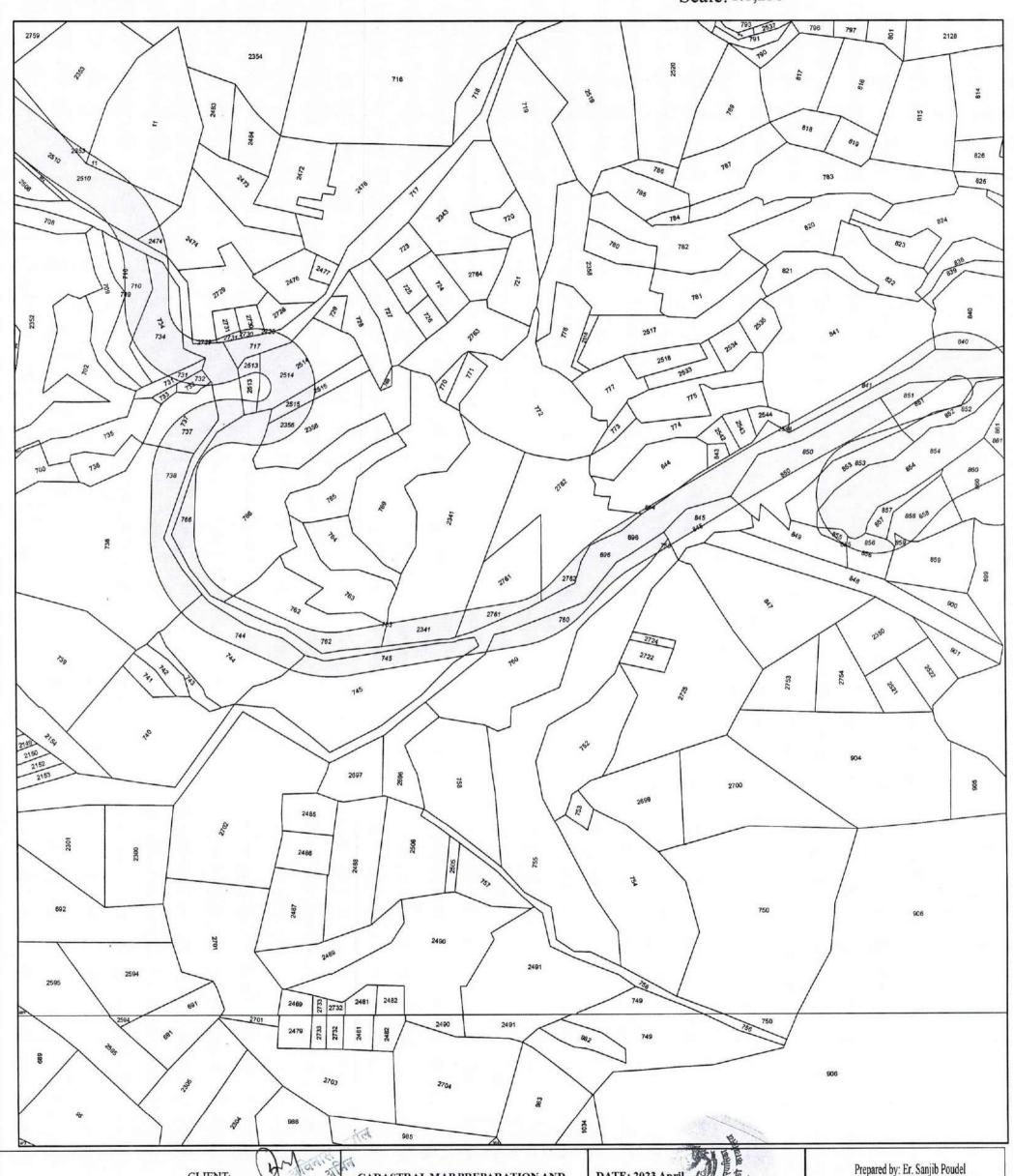


V.D.C.: Putalibajar

Ward Number: 1

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CLIENT:
Project Implementation Unit
Nepal Urban Governance Infrastructure Project
Putalibazar Municipality
Office of Municipal Executive, Putalibazar, Syangja
Gandaki Province, Nepal

CADASTRAL MAP PREPARATION AND DETAIL INFORMATION AND CUT-OFF AREAS OF EACH INDIVIDUAL PARCEL CALCULATION OF ROAD PLAN (PRAGATINAGAR-BAHAKOT-NAMCHE-KALKHU) PROJECT

DATE: 2023 April SCALE: 1:2500

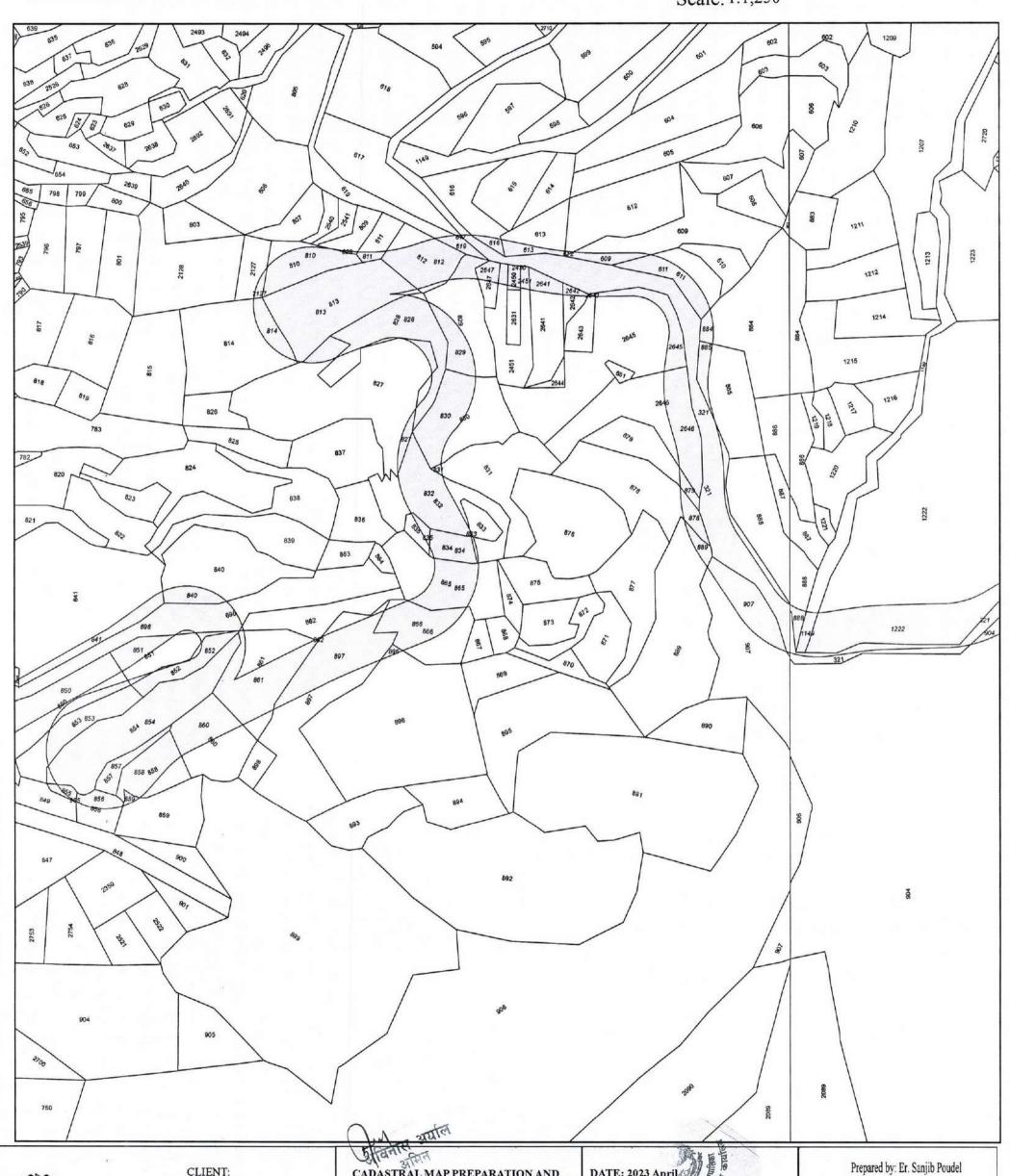
MUNICIPALITY NOW: PUTALIBAZAR WARD NO: 3

V.D.C.: Putalibajar

Ward Number: 1

Sheet Number: 093-1352-1, 093-1352-2

Scale: 1:1,250





CLIENT:
Project Implementation Unit
Nepal Urban Governance Infrastructure Project Putalibazar Municipality
Office of Municipal Executive, Putalibazar, Syangja

Gandaki Province, Nepal

CADASTRAL MAP PREPARATION AND DETAIL INFORMATION AND CUT-OFF AREAS OF EACH INDIVIDUAL PARCEL CALCULATION OF ROAD PLAN (PRAGATINAGAR-BAHAKOT-NAMCHE-KALKHU) PROJECT

DATE: 2023 April SCALE: 1:2500 April SCALE: 1:



V.D.C.: Putalibajar

Ward Number: 1

Sheet Number: 093-1352-2

Scale: 1:1,250





CLIENT:
Project Implementation Unit
Nepal Urban Governance Infrastructure Project
Putalibazar Municipality
Office of Municipal Executive, Putalibazar, Syangja Gandaki Province, Nepal

CADASTRAL MAP PREPARATION AND DETAIL INFORMATION AND CUT-OFF AREAS OF EACH INDIVIDUAL PARCEL CALCULATION OF ROAD PLAN (PRAGATINAGAR-BAHAKOT-NAMCHE-KALKHU) PROJECT

DATE: 2023 April SCALE: 1:2500

SCALE: 1:2500 THE TOTAL TO SCALE: 1:2500 MUNICIPALITY NOW: PUTALIBAZAR WARD NO. 2 WARD NO: 3

Prepared by: Er. Sanjib Poudel

Checked and Verified By: Department of Survey Syangja, Putalibazar

Note: This map is prepared from scanning and digitization of cadastral map received from Survey Office Syangja.



V.D.C.: Putalibajar

Ward Number: 1

Sheet Number: 093-1352-2

Scale: 1:1,250





Nepal Urban Governance Infrastructure Project Putalibazar Municipality Office of Municipal Executive, Putalibazar, Syangja

Gandaki Province, Nepal

CADASTRAL MAP PREPARATION AND DETAIL INFORMATION AND CUT-OFF AREAS OF EACH INDIVIDUAL PARCEL CALCULATION OF ROAD PLAN (PRAGATINAGAR-BAHAKOT-NAMCHE-KALKHU) PROJECT

WARD NO: 3

V.D.C.: Bahakot

Sheet Number: 093-1352, 093-1353

Scale: 1:2,500





CLIENT:
Project Implementation Unit
Nepal Urban Governance Infrastructure Project Putalibazar Municipality
Office of Municipal Executive, Putalibazar, Syangja Gandaki Province, Nepal

CADASTRAL MAP PREPARATION AND DETAIL INFORMATION AND CUT-OFF AREAS OF EACH INDIVIDUAL PARCEL CALCULATION OF ROAD PLAN (PRAGATINAGAR-BAHAKOT-NAMCHE-KALKHU) PROJECT

DATE: 2023 April SCALE: 1:2500

SCALE: 1:2500 granter of the second of the s WARD NO: 8

Prepared by: Er. Sanjib Poudel

Checked and Verified By: Department of Survey Syangja, Putalibazar

Note: This map is prepared from scanning and digitization of cadastral map received from Survey Office Syangja.

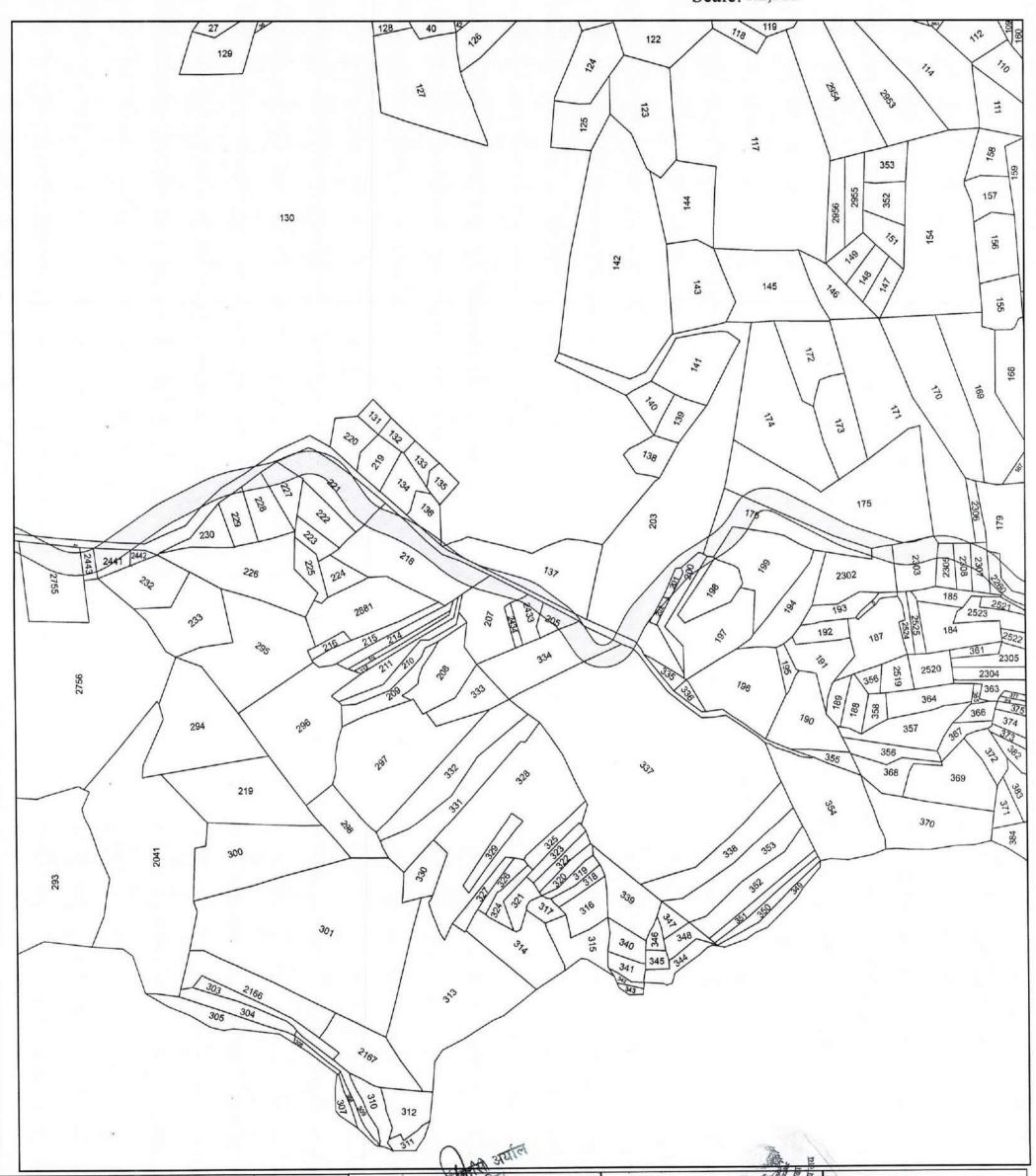


V.D.C.: Bahakot

Ward Number: 9

Sheet Number: 093-1353

Scale: 1:2,500





CLIENT:

Project Implementation Unit
Nepal Urban Governance Infrastructure Project
Putalibazar Municipality
Office of Municipal Executive, Putalibazar, Syangja
Gandaki Province, Nepal

CADASTRAL MAP PREPARATION AND DETAIL INFORMATION AND CUT-OFF AREAS OF EACH INDIVIDUAL PARCEL CALCULATION OF ROAD PLAN (PRAGATINAGAR-BAHAKOT-NAMCHE-KALKHU) PROJECT

DATE: 2023 April SCALE: 1:2500

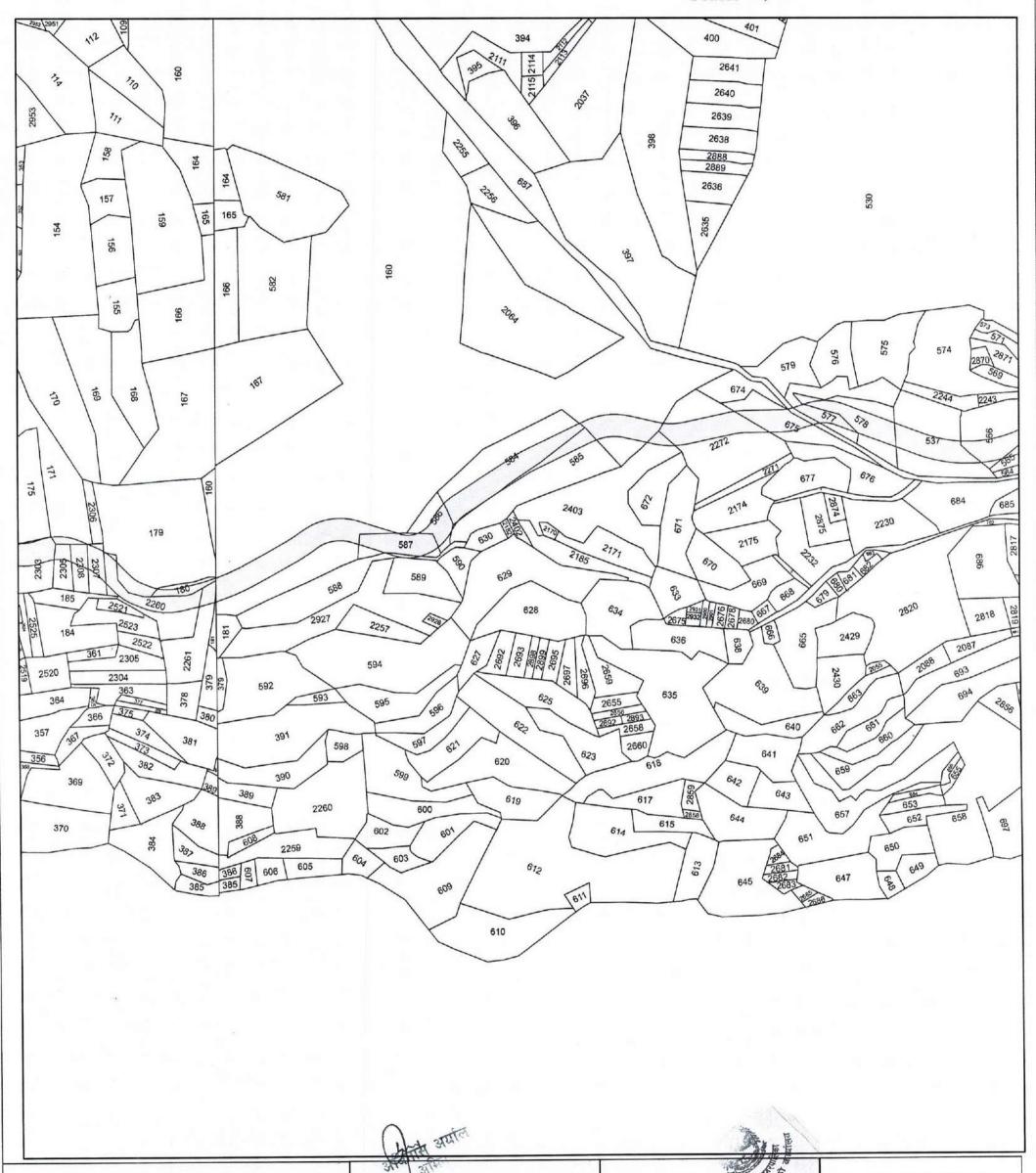
MUNICIPALITY NOW: PUTALIBAZAR WARD NO: 8

Prepared by: Er. Sanjib Poudel

V.D.C.: Bahakot Ward Number: 9

Sheet Number: 093-1353, 093-1354

Scale: 1:2,500





CLIENT:
Project Implementation Unit
Nepal Urban Governance Infrastructure Project
Putalibazar Municipality
Office of Municipal Executive, Putalibazar, Syangja
Gandaki Province, Nepal

CADASTRAL MAP PREPARATION AND DETAIL INFORMATION AND CUT-OFF AREAS OF EACH INDIVIDUAL PARCEL CALCULATION OF ROAD PLAN (PRAGATINAGAR-BAHAKOT-NAMCHE-KALKHU) PROJECT

DATE: 2023 April SCALE: 1:2500

MUNICIPALITY NOW: PUTALIBAZAR WARD NO: 8

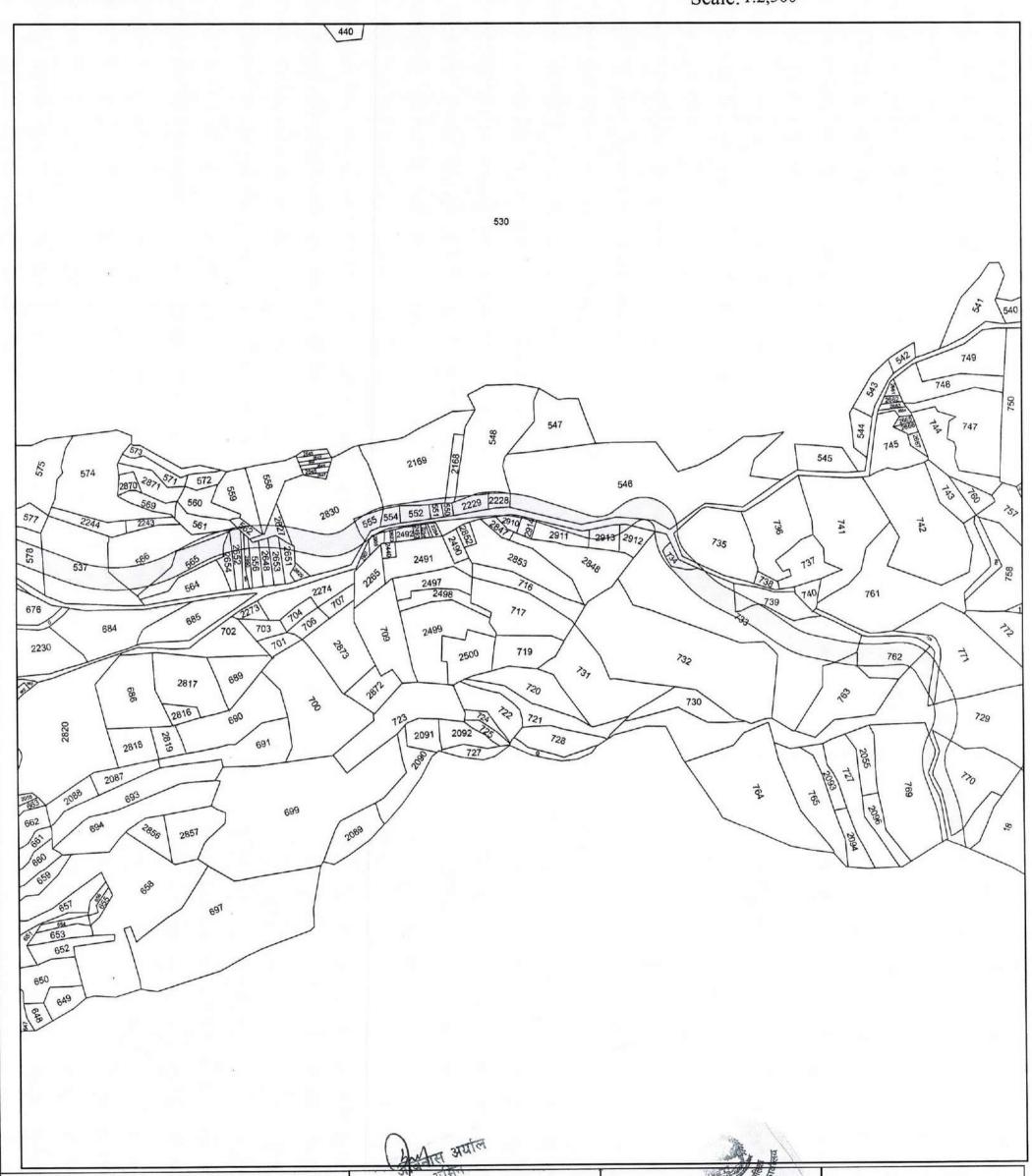
Prepared by: Er. Sanjib Poudel



V.D.C.: Bahakot Ward Number: 9

Sheet Number: 093-1354

Scale: 1:2,500





CLIENT:
Project Implementation Unit
Nepal Urban Governance Infrastructure Project
Putalibazar Municipality
Office of Municipal Executive, Putalibazar, Syangja
Gandaki Province, Nepal

CADASTRAL MAP PREPARATION AND DETAIL INFORMATION AND CUT-OFF AREAS OF EACH INDIVIDUAL PARCEL CALCULATION OF ROAD PLAN (PRAGATINAGAR-BAHAKOT-NAMCHE-KALKHU) PROJECT

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WARD NO: 8

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Checked and Verified By: Department of Survey Syangja, Putalibazar

Prepared by: Er. Sanjib Poudel

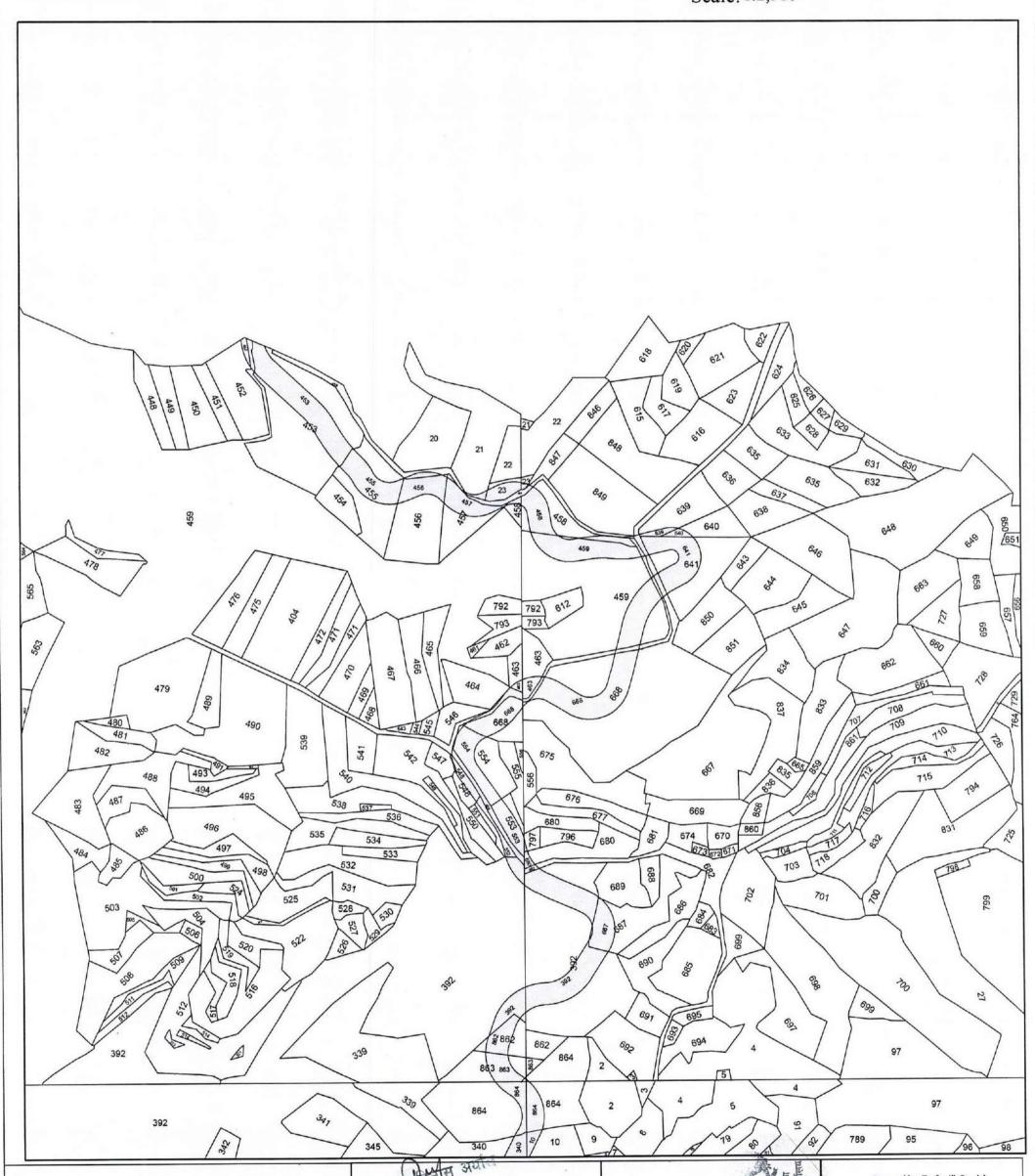
Note: This map is prepared from scanning and digitization of cadastral map received from Survey Office Syangia.

V.D.C.: Kolma Barahchaur

Ward Number: 9

Sheet Number: 093-1354, 093-1355

Scale: 1:2,500





CLIENT: Project Implementation Unit Nepal Urban Governance Infrastructure Project Putalibazar Municipality Office of Municipal Executive, Putalibazar, Syangja Gandaki Province, Nepal

CADASTRAL MAP PREPARATION AND DETAIL INFORMATION AND CUT-OFF AREAS OF EACH INDIVIDUAL PARCEL CALCULATION OF ROAD PLAN (PRAGATINAGAR-BAHAKOT-NAMCHE-KALKHU) PROJECT

DATE: 2023 April

MUNICIPALITY NOW: PETALBAZAR WARD NO: 9

Prepared by: Er. Sanjib Poudel

Checked and Verified By: Department of Survey Syangja, Putalibazar

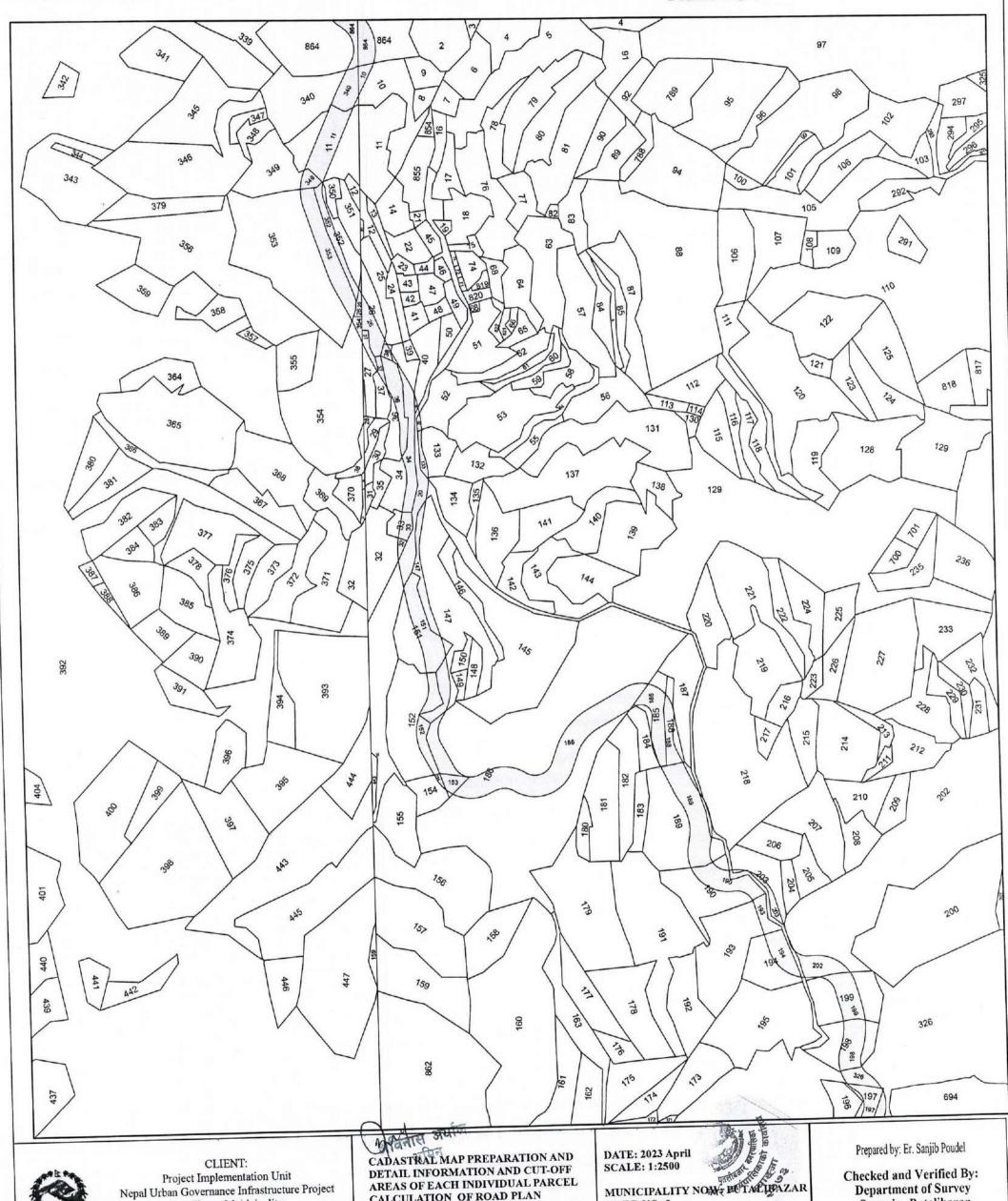
Note: This map is prepared from scanning and digitization of cadastral map received from Survey Office Syangja.

V.D.C.: Kolma Barahchaur

Ward Number: 9

Sheet Number: 093-1394, 093-1395

Scale: 1:2,500





Nepal Urban Governance Infrastructure Project Putalibazar Municipality Office of Municipal Executive, Putalibazar, Syangja Gandaki Province, Nepal

CALCULATION OF ROAD PLAN (PRAGATINAGAR-BAHAKOT-NAMCHE-KALKHU) PROJECT

WARD NO: 9

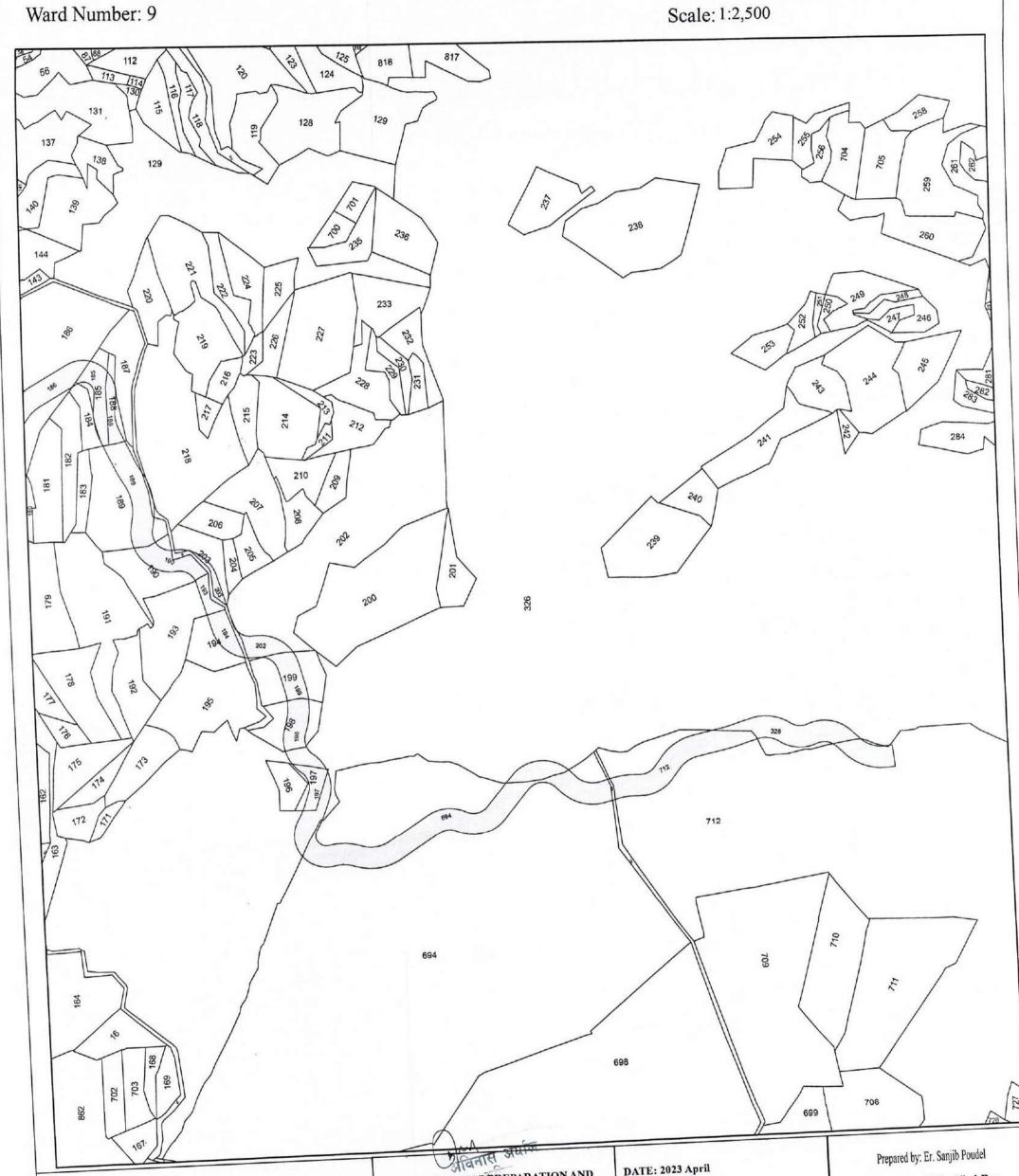
Department of Survey Syangja, Putalibazar



V.D.C.: Kolma Barahchaur

Ward Number: 9

Sheet Number: 093-1395





CLIENT:

Project Implementation Unit Nepal Urban Governance Infrastructure Project Putalibazar Municipality
Office of Municipal Executive, Putalibazar, Syangja Gandaki Province, Nepal

CADASTRAL MAP PREPARATION AND DETAIL INFORMATION AND CUT-OFF AREAS OF EACH INDIVIDUAL PARCEL CALCULATION OF ROAD PLAN (PRAGATINAGAR-BAHAKOT-NAMCHE-KALKHIN PROJECT KALKHU) PROJECT

DATE: 2023 April SCALE: 1:2500

MUNICIPALITY NOW: PUTALIBAZAR WARD NO: 9



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2045/99/98 Taxin 34 (12N) Y4181 1845. Sab acig( 2118) Bunca 2001 gens जीवन भाषा कार् Elora (4) Ja4466 9. 21122 9121 Taniolal 21424 Tala data make tor, HIMINSON OUT TIMESTON TOTALESTER XISTAN 4(148) 2. Byn) + tonida) (31/4) 1/4) 1/4 1/4 (4/4) 2. सामातका नाम संवर्धा Trois 4.9: aist propolar about any at you and 201 का बाना पन हान / कासका वार्ता प्राप्त भाषी / प्रा de कार्मिक कार्मा मिर्म 2005/2/9 के में प्रिक्ति Jada aman ZIEVINNI Some Sills 44 812/31/4-67311 थानका धी, जागा, पनिमार्थ वी वी भ्रमले स्पठ्य पान ना परिलोधां ल नाकी मार्थित द्वार में कार्म कार्म कार्म के प्रायम है। Gody उतिका, यसका लाउन सम्बन यान नराम अस्मिन केंद्र प्रिका दि TAOLY 2 - यम अपा / (तिति तेक) प्रमुखकी नामका रिष्ट क्रारिशंह र वडा म. ५ को युठी कुलार रामाला । इसमीनमन जान पिनविष्ठारित

### **Consultation Meeting with Community**

#### **Attendance Sheet**

Pròject: Upgrading of Pragatinagar-Bahakot-Namche-Kalku Road Section

**Putalibazar Municipality** 

Date: 2049 41 - 12

Venue: Dada swara, -8, putalibazas N.P

Purpose: Dissemination of Project related information, Environmental, Socio-economic, cultural issues due to project construction, collection of comments and suggestions

S.N	Name	Address/Organization	Contact no	Signature
1	Bhakta Bdr. Malla.	ward Badosware	49856689K	- Harel
2	Ram Bdr Century	ŋ	98 469 82187	
3	Many Gurung		98 058 33997	2 mg
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10	Aruna Curung.			37-5011
11	Kamel Gurung			fr.
12	Baranta Thata	Namche -9	3806546499	200
13	Balchat Giri	")	3841355950	dus
14				
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### Key Issues/comments and sugestion:

### **Consultation Meeting with Womens Group**

#### **Attendance Sheet**

Project: Upgrading of Pragatinagar-Bahakot-Namche-Kalku Road Section

**Putalibazar Municipality** 

Date: 2075-11- 13

Venue: putalibozon

Purpose: Dissemination of Project related information, Environmental, Socio-economic, cultural issues due to project construction, collection of comments and suggestions

S.N	Name			Address/Organization	Contact no	Signature
1	हिमा की	-m	स्कि	,		
2	अज्बी	ठाज				amee
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Key Issues/comments and sugestion:

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### **Consultation Meeting with Community**

#### **Attendance Sheet**

Project: Upgrading of Pragatinagar-Bahakot-Namche-Kalku Road Section

**Putalibazar Municipality** 

Date: 2079-11-12

Venue: Dec office, Pulatibozar,

Purpose: Dissemination of Project related information, Environmental, Socio-economic, cultural issues due to project construction, collection of comments and suggestions

S.N	Name	Address/Organization	Contact no	Signature
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1	Dowbrakach Shama	Johnnahiets	9856027371	
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5	Deg " Shalu		9846072038	4
6	Lams' Paudel		9846038366	20har
7	Amanta Marasa	į.	9846038951	700
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9	Bishny P. Parajuli		9846062826	
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Key Issues/comments and sugestion:

### **Consultation Meeting with Community**

#### **Attendance Sheet**

Project: Upgrading of Pragatinagar-Bahakot-Namche-Kalku Road Section

**Putalibazar Municipality** 

Date: 2.79 - 11 - 12

Pahaliot Venue: Matthilo Kikhu, - 8, Putalibazar.

Purpose: Dissemination of Project related information, Environmental, Socio-economic, cultural issues due to project construction, collection of comments and suggestions

S.N	Name	Address/Organization	Contact no	Signature
1	Kerhar Reymi	ex vice chairendo	Living 2 3526566	E 2 Be
2	Natendra Dr. Shurma	TEACHERY 1	93460 92033	f112141 X-1
3	Tara Bahadus Rang	,	9819167268	Danie
4	mina Thatag		9817109365	mina
5	Bighny Thata		9805140846	$\square$
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7	Der Maya Thata			3334
8	Janaam Raya		9826180126	Longan
9	Khim B. Thapa.		9748416196	
10	Craneth Regni		9884138147	comme
11	Sushmita Ushata		38<167 \$90292	: 56
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| Key Issues/comments and sugestion:
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- मड़क तिमार्शिक्ष व्यक्ति से रिक शुक्र हुन । न्यतिम सर्वे जला
- यहक तिमार्शिक्ष व्यक्ति से रिक शिक्ष ग्राह्म ।
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#### Stakeholders/Community Key concern/Issues raised on date 2079.11.12-13 addressed by DSC:

During the consultation dated 2079.11.12 to 2079.11.13 with the stakeholders/community prior the ESIA preparation, DSC team including Social and Environmental expert presented the provision and requirement of NUGIP project for the construction of Putalibazar-Bahakot-Namche-Kalku Road Project. Interaction and discussion on several Key concern/Issues were held and clarified as elaborated below. All the stakeholders showed their keen interest for the early start of project assuring their complete support in all the aspects like land availability, site clearance of the construction width requesting for the implementation of the project.

- Due to poor accessibility people of the project area is self compelled to stay on rent at market area for their children education.
- They said construction of the road is being heard since longtime but not constructed till date.
- Everybody showed their willingness and assured for the complete support from their side for the construction of Pragatinagar-Bahakot-Namche-Kalku Road Project.
- They requested for the early start of construction of the road.
- Attendees expressed their grievances stating the extreme difficulties facing in the monsoon period while travelling from the project area to the city for fulfilling their needs.
- Regarding the compensation concerns, people were informed regarding the provision of the NUGIP project. People showed their willingness for availability of land and site clearance without any compensation provided that the road construction work should be started as soon as possible.
- Requested to the project official for the start date of detailed engineering survey.
- Asked when the construction of work will be started.
- Assured willingness of the people for availability of land for the construction of the project.
- Requested for qualitative construction work.
- Pragatinagar-Bahakot-Namche-Kalku Road users committee assured for their presence and support to manage the social issues during the course of construction without hampering the project working time.
- Due to the poor condition of current road people of the project area facing difficulties to get the basic needs and right of the humanity.



# बसन्ते सामुदायिक वन उपभोक्ता समिति



वहाकोट-७, स्याङजा

पत्र संख्याः- ० ७८/०८० चलानी नम्बरः- ८ (ग.अ. नेपाल) मिति. २०*७८/19-2/9* ७

विषय:- सहमती मेवन्यमा।

भी भी जस संग्रा संविष्टा है।

> नित्र विराष्ट्र ( भेलाता) किर्मेड्र देन ४६२७७ ३६७

काला मिति २०७९ विश्वाव गते खुराकार की दिन यस ठाव्डकी प्रदेश स्थाइ, जा ीपलला पुत्लीवजार नगर्-पालिका ट रिधित मेंढान ब्यानी सामुदायिक वन उपीमीन-ता क्रिकी भेका यस सामुद्धायिक वन उपीमीन-ता अहथका भी निल पहाइस मिललको ज्युकी अहथकातामा सेंडक वसी तपिरालका उपिरमतीका उपमियती गरी निमनामुसारकी निर्णाश जिल्ली। नितल अ मलल उपाध्यक्ष - अने हम जारायन समि हिट्ट विस्राल ल ्रिप्प - भी कला नुमारी सारी नीपाएश्स -भी इस क रहेन मीविन्छ सेन। सब्दय - शी विद्राल मल्ल र्यस्य - श्रीमती भ्रीमाना नेपाली । (भक्क प्रमुख) नाह ) व्नवस्य ~ " व्यख्य -म्हा अल्ल 1) नी छोर व सेन। च्यवस्य -न-डीमती कलपना नैपाली Q-162-21 -स्वरूय - शीमती आसमापा भुजेल स्वरूय - शीमती २व गल्पना नेपाली STIMBLING 99] - मिलभग व्यहाकेर टम्ल 93 न्याविनी अंग्रील रेजत कु स्माल 92) - न्दुद्विवल यापा 182> चुर्ल चापा 76> अ यमा द्वीप शर्मा स्मा 927 विववा माया मरासिनी 98) न्सिता है परियर सीता 20) भाग नु होपाली 29) ١) युगमाया मैपाली संकाया परिचार मेन में या A2) 23) " मिमला क्षेपाली 28) 1) श्राणि परियार 11 मान जु कपाली 2&> Hard 26.

२७) हिरा गल्ल - हिरा २८७ विवा अरी हमाल विव ता अरे २८० क्रिंग परियार पति २०० क्रिंग परियार क्रिंगी २०० क्रिंग परियार क्रिंगी २०० क्रिंग परियार क्रिंगी २०० क्रिंग क्रिंगार क्रिंगी २०० क्रिंग क्रिंगार क्रिंगारी २०० क्रिंग क्रिंगारी क्रिंगारी २०० क्रिंगां क्रिंगांसी क्रिंगांसी

क्रापिकी प्रस्तावहर्ता : १) वसकेत सामुद्धारिक जनकी मातहतमा रहेकी खारी।. १) विविद्य 1-

प्रस्ताव न न. भाग्य छलाजल जाही यस मस्हेत सामुद्यायिक जानको भाताहतमा यहेको जातेले केही हाती नापु-यावते हुनाते यक्सम्मत निर्वाध के जारियो।

साचि हला कार्ज रामा यही निसंजल जार्न निर्णय जीरयो।





SWAT/F/C/04 Version no: 01 Issue no: 02 Revision no: 03

Effective date: 2021/08/01



Soil Water and Air Testing Laboratories Pvt. Ltd.

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Sisir Marga 11, Babarmahal, Kathmandu, Nepal

### **WATER ANALYSIS REPORT**

Name of Client:	Putalibazar Municipality	Lab Code:	23/04-987 (a)
Collector:	Shrijana Neupane	Location:	Syangja, Bahakot
Source:	Water (Upper Chisapani Garjyan)	Sampled By:	Client
Sampling Date:	-	Test performance Date:	2023/04/21-2023/04/25
Receipt Date:	2023/04/21	Issued Date:	2023/04/27
Project's Name:	Nepal Urban Governance and Infras	structure Project	

Parameters	Results	Unit	(Relevant Standard)	Method
		Phy	rsical	
Colour	0	TCU	5 (10)	2120 B. APHA 23 <sup>rd</sup> edition
Conductivity	170	μS/cm	1500 (max)	2510 B. APHA 23 <sup>rd</sup> edition
рН	7.5	-	6.5-8.5	4500 H+ B. APHA 23 <sup>rd</sup> edition
Total Solids	112	mg/L	1000	2540 B. APHA 23 <sup>rd</sup> edition
Turbidity	0.22	NTU	5 (15)	2130 B. APHA 23 <sup>rd</sup> edition
		Che	mical	
Ammonia	<0.02	mg/L	1.5	4500 NH <sub>3</sub> F. APHA 23 <sup>rd</sup> edition
Nitrate	0.53	mg/L	50	4500 NO <sub>3</sub> - B. APHA 23 <sup>rd</sup> edition
Chloride	8.99	mg/L	250	4500-Cl- B. APHA 23 <sup>rd</sup> edition
Iron	< 0.01	mg/L	0.3 (3)	3500-Fe B. APHA 23 <sup>rd</sup> edition
Total Hardness	62	mg/L as CaCO <sub>3</sub>	500	2340 C. APHA 23 <sup>rd</sup> edition
		Micro	biology	
Coliform*	Absent	-	-	P/A Vials

Relevant Standard: NDWOS = National Drinking Water Quality Standard (2062)

**Note:** The integrity of the sample and results are dependent on the quality of sampling. The results refer only to the parameters tested of the samples provided/collected for analysis. Statements of conformity have been made without taking Measurement Uncertainty into account except when specifically requested by the customer.

\*These parameters are not within the scope of Nepal Standard.

Remarks: All the observed values of tested parameters are found to be within the limit of NDWQS 2062.

Analyzed By

Checked and Authorized By
Er. Lokesh Sapkota



SWAT/F/C/04 Version no: 01 Issue no: 02 Revision no: 03

Effective date: 2021/08/01



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Sisir Marga 11, Babarmahal, Kathmandu, Nepal

### **WATER ANALYSIS REPORT**

Name of Client:	Putalibazar Municipality	Lab Code:	23/04-987 (b)
Collector:	Shrijana Neupane	Location:	Syangja, Bahakot
Source:	Water (Lower Chisapani, Bahakot)	Sampled By:	Client
Sampling Date:	-	Test performance Date:	2023/04/21-2023/04/25
Receipt Date:	2023/04/21	Issued Date:	2023/04/27
Project's Name:	Nepal Urban Governance and Infras	tructure Project	

Parameters	Results	Unit	(Relevant Standard)	Method
		Phy	rsical	
Colour	5	TCU	5 (10)	2120 B. APHA 23 <sup>rd</sup> edition
Conductivity	200	μS/cm	1500 (max)	2510 B. APHA 23 <sup>rd</sup> edition
рН	7.6	-	6.5-8.5	4500 H+ B. APHA 23 <sup>rd</sup> edition
Total Solids	130	mg/L	1000	2540 B. APHA 23 <sup>rd</sup> edition
Turbidity	9.27	NTU	5 (15)	2130 B. APHA 23 <sup>rd</sup> edition
		Che	mical	
Ammonia	<0.02	mg/L	1.5	4500 NH <sub>3</sub> F. APHA 23 <sup>rd</sup> edition
Nitrate	0.02	mg/L	50	4500 NO <sub>3</sub> - B. APHA 23 <sup>rd</sup> edition
Chloride	8.99	mg/L	250	4500-Cl- B. APHA 23 <sup>rd</sup> edition
Iron	<0.01	mg/L	0.3 (3)	3500-Fe B. APHA 23 <sup>rd</sup> edition
Total Hardness	72	mg/L as CaCO <sub>3</sub>	500	2340 C. APHA 23 <sup>rd</sup> edition
	1	Micro	biology	
Coliform*	Absent	-	-	P/A Vials

Relevant Standard: NDWOS = National Drinking Water Quality Standard (2062)

**Note:** The integrity of the sample and results are dependent on the quality of sampling. The results refer only to the parameters tested of the samples provided/collected for analysis. Statements of conformity have been made without taking Measurement Uncertainty into account except when specifically requested by the customer.

\*These parameters are not within the scope of Nepal Standard.

Remarks: Except for Turbidity, all the observed values of other tested parameters are found to be within the limit of NDWQS 2062.

Analyzed By

Checked and Authorized By Er. Lokesh Sapkota



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Sisir Marga 11, Babarmahal, Kathmandu, Nepal

### WATER ANALYSIS REPORT

Name of Client:	Putalibazar Municipality	Lab Code:	23/04-987 (c)
Collector:	Shrijana Neupane	Location:	Putalibazar M03
Source:	Water (City Kholsi)	Sampled By:	Client
Sampling Date:	-	Test performance Date:	2023/04/21-2023/04/26
Receipt Date:	2023/04/21	Issued Date:	2023/04/27
Project's Name:	Nepal Urban Governance and Infras	tructure Project	

Parameters	Results	Unit	(Relevant Standard)	Method
		Physical	Standard	
Temperature	21	°C	-	-
Appearance	Clear	-	Clear	-
Taste and Odour	Not Objectionable	-	Not Objectionable	-
Colour	0	TCU	5 (10)	2120 B. APHA 23 <sup>rd</sup> edition
Conductivity	170	μS/cm	1500 (max)	2510 B. APHA 23 <sup>rd</sup> edition
рН	7.6	-	6.5-8.5	4500 H+ B. APHA 23 <sup>rd</sup> edition
Total Dissolved Solids	200	mg/L	1000	2540 C. APHA 23 <sup>rd</sup> edition
Total Suspended Solids	14		1000	2540 D. APHA 23 <sup>rd</sup> edition
Turbidity	0.05	NTU	5 (15)	2130 B. APHA 23 <sup>rd</sup> edition
		Chemical		
Ammonia	<0.02	mg/L	1.5	4500 NH <sub>3</sub> F. APHA 23 <sup>rd</sup> edition
Total Alkalinity	242	mg/L	2000	2320 B. APHA 23 <sup>rd</sup> edition
Biological Oxygen Demand	129.6	mg/L	500	5210 B., APHA 23 <sup>rd</sup> edition
Nitrate	0.39	mg/L	50	4500 NO <sub>3</sub> - B. APHA 23 <sup>rd</sup> edition
Chloride	5.99	mg/L	250	4500-Cl- B. APHA 23 <sup>rd</sup> edition
Iron	<0.01	mg/L	0.3 (3)	3500-Fe B. APHA 23 <sup>rd</sup> edition
Total Hardness	198	mg/L as CaCO <sub>3</sub>	500	2340 C. APHA 23 <sup>rd</sup> edition

Relevant Standard: NDWQS = National Drinking Water Quality Standard (2062)

**Note:** The integrity of the sample and results are dependent on the quality of sampling. The results refer only to the parameters tested of the samples provided/collected for analysis. Statements of conformity have been made without taking Measurement Uncertainty into account except when specifically requested by the customer. \*These parameters are not within the scope of Nepal Standard.

Remarks: All the observed values of tested parameters are found to be within the limit of NDWQS 2062.

Analyzed By

Checke

Checked and Authorized By Er. Lokesh Sapkota





### पुतलीबजार नगर्मी लैंका नगर कार्यपालिकाको कार्यालय

स्याङ्जा, गण्डकी प्रदेश, नेपाल

पत्र संख्याः०७९/८०

च.नं. 3८८२

श्री नेपाल शहरी शासकीय तथा पूर्वाधार आयोजना आयोजना समन्वय कार्यालय बबरमहल, काठमाडौं

बिषय : जानकारी सम्बन्धमा ।

उपरोक्त सम्बन्धमा यस पुतलीबजार नगरपालिकाको महिला तथा बालबालिका शाखाको अभिलेख अनुसार पुतलीबजार नगरपालिका वडा न. ३,८ र ९ मा पर्ने प्रगतिनगर बहाकोट नाम्चे काल्खु सडक खण्ड को बस्तीहरुमा हालको बर्षहरुमा कुनै पनि खालको लैंगिक हिंसाको घटना घटेको नदेखिएको व्यहोरा अनुरोध छ ।

हरिराम नागिला प्रमुख प्रशासकीय अधिकृत

मिति:-२०८०/०३/२५



# पुतलीबजार नगरपालका

# नगर कार्यपालिकाको कार्यालय

स्याङ्जा, गण्डकी प्रदेश, नेपाल

पत्र संख्याः०७९/८० च.नं. ७८८४ मितिः-२०८०/०३/२५

श्री नेपाल शहरी शासकीय तथा पूर्वाधार आयोजना आयोजना समन्वय कार्यालय बबरमहल, काठमाडौं

बिषय: जानकारी सम्बन्धमा ।

उपरोक्त सम्बन्धमा यस पुतलीबजार नगरपालिका अन्तर्गत प्रगतिनगर बहाकोट नाम्चे कल्खु सडक खण्डको निर्माण कार्य (स्तरोन्नती) गर्न विभिन्न मिति मा भएका निर्णय, सहमती र सरोकारवालाहरु बाट प्राप्त पत्र र सुझाब निम्न अनुसार रहेको व्यहोरा जानकारीको लागि अनुरोध छ ।

क) नेपाल शहरी शासकीय तथा पूर्वाधार आयोजना तथा पूर्वाधार आयोजना अन्तर्गत प्रस्तावित ३ ओटा सडकहरु मध्ये प्रगतिनगर बाहकोट नाम्चे काल्खु सडक कार्यान्वयन मा लैजाने निर्णय गरिएको छ |निर्णय मिति २०७९/०८/१३ कार्यपालिका बैठक

ख) प्रगतिनगर बाहकोट सडक(39DR031) District Road Core Network रुपमा छनोट गरिएको ( निर्णय मिति २०७०/१२/२६ ,जिल्ला यातायात गुरुयोजना तयार पर्दा ) रNRSS2071 ,2nd Revision 2071 अनुसार DRCNRoad को लागि Right of Way(ROW) २० मिटर (१० मिटर दायाँ र १० मिटर बायाँ ) कायम गरिएकोमा हाल आर्थिक बर्ष २०७९/०८० मा पुतलीबजार नगरपालिकाले प्रगतिनगर बाहकोट नाम्चे कल्खु सडक खण्डको लागि ROW १५ मिटर (७.५ मिटर दायाँ र ७.५ मिटर बायाँ र सेड ब्याक दुवै तर्फ २.५ /२.५ मिटर कायम गारिएको छ।

ग) नेपाल सरकार सङ्घीय सडक सुपरबेक्षण तथा अनुगमन कार्यालय, सडक बिभाग, पोखरा को पत्र संख्या २०७९/०८० च.न. १८० अनुसार प्रगतिनगर बहाकोट नाम्चे कल्खु सडक खण्डको सुरु बिन्दु सिद्दार्थ हाइवेको प्रगतिनगर,शिक्षाचोकमा रहेको Slab Culvert Extension गर्दाकुनै फरक नपर्ने कुराको जानकारी गराइएको छ | तसर्थ अहिले कायम रहेको सिद्धार्थ राजमार्ग सग जोडिएको सुरु विन्दुमा निर्माण काम गर्न मिल्ने व्यहोरा छ

घ) मिति २०७९/०५/१९ को पत्र अनुसार प्रगतिनगर शिक्षा चोक बहाकोट नाम्चे कल्खु राम्चे मोटर बाटो उपभोक्ता समिति पुतालिबजार ३,८,९ स्याङ्गजा २०५४ को तर्फ बाट यस सडक निर्माणको लागि घर जग्गाधनिको सहमती पेश गरिएको छ |

ङ) मिति २०७९/०५/२९ पत्र संख्या ०७९/०८० च.न. ३४२ अनुसार पुतलीबजार नगरपालिका ३ वडा कार्यालयले यस वडा ३ भित्र पर्ने शिक्षाचोक प्रगतिनगर देखि गेम डाँडा सम्मको सडक खण्डमा र मिति २०७९/०५/२९पत्र संख्या ०७९/०८० च.न. २१८ अनुसार पुतलीबजार नगरपालिकावडा ८ भित्र पर्ने खण्डको सडक विस्तार गर्न लाई





# नगर कार्यपालिकाको कार्यालय

स्याङ्जा, गण्डकी प्रदेश, नेपाल

आबस्यक पर्ने जग्गा उपलब्ध गराउने साथै सडक मापदण्ड भित्र पर्ने घर टहरा जस्ता भौतिक संरचना हरु सम्बन्धित जग्गा धनीले पुतलीबजार नगरपालिका NUGIP ले तोकेको समय सिमा भित्र राजीखुशी मंजुरिका साथ् जग्गा दिन संरचना हटाउन सहमत रहेको व्यहोरा जानकारी भए अनुरुप यस सडक खण्डमा सडक विस्तारमा बाधा नरहेको

जानकारी गराईन्छ।

च) मिति २०८०/०३/१० पत्र संख्या २०७९/०८० च. न. १७८५ पुतलीबजार नगरपालिका वडा न. ३ वडा कार्यालयले र मिति २०८०/०३/१० पत्र सख्या २०७९/०८० च.न. ११९२ पुतलीबजार नगरपालिका ८ न. वडा कार्यालयले सहमती दिएको पत्र र पुतलीबजार नगरपालिकाले सरोकारवाला पक्ष् को सम्बन्धित व्यक्ति सग को छलफलमा प्रगतिनगर बहाकोट नाम्चे कल्खु सडक बिस्तार गर्ने क्रममा यस वडा भित्र रहेका सार्बजनिक बनको बोट बिरुवा लाई असर नगर्ने र हाल बाटो समेत रहेको खाली जग्गाले सडक बिस्तार लाई पुग्ने भएको हुदाँ सडक निर्माणमा बाधा नरहेको जानकारी गराईन्छ| साथै निर्माणको क्रममा कटिंग गर्दा निस्कने माटो ,ग्रावेल, कंक्रिट नोक्सान नहुने गरी ब्यबस्थित गर्ने गरी राख्न सहमती प्रदान गरिएको छ | chainage 0+840R/S ( tipping site ) chainage 1+020 to 1+080 R/S tipping site, chainage 2+950 to 2+970R/S tipping site, Chainage 7+060 to 7+080 R/S tipping site.

छ) व्यक्तिगत जग्गा को सम्भावित प्रस्तावित tipping site र साइट क्याम्प राख्न सिकने स्थान हरु क्रमश: ०+४५० L/S tipping site जग्गा धनि ईश्वरी प्रसाद उपाध्यय पुतलीबजार ३ ,स्याङ्गजा, ch१+८०० देखि १+९२० R/S tipping site and site camp जग्गा धनि अनन्त राज मरासिनी पुतालिबार ३ ,स्याङ्गजा,ch २+०२० देखि २+०७० R/S site camp जग्गा धनि अनन्त राज मरासिनी पुतलीबजार ३ ,स्याङ्गजा, ch ३+७२० देखि ३+७८० R/S tipping site जग्गा धनि पितम बहादुर

शाही, पुतलीबजार ८ स्याङ्गजाले सहमती पत्र दिएको जानकारी गराईन्छ |

ज) प्रगतिनगर बहाकोट नाम्चे काल्खु सडकको सुरु बिन्दु प्रगतिनगर शिक्षा चोकमा सिद्धार्थ राजमार्ग को खोल्सी क्षेत्रमा रहेको बिनय श्रेष्ठको घरको खोल्सी पट्टिको सडक लाई आबस्यक पर्ने भाग राजीखुशी हटाउन मन्जुर रहेको जानकारी गराईछ|कलिया थोक ch ५+७४० l/s मा चुडामणि परियारको ढुगा माटो र जस्ता को छाना भएको सानो किचन राजीखुसी सार्न सहमत रहेको जानकारी गराईन्छ| कलिया थोक ch ५+७९० L/S सकुन्तला मल्ल को घर (ढुंगा माटो जस्ताले बनेको) भूकम्पले पहिले भत्काएको, बस्न अयोग्य रहेको अवस्थाको घरको मुआब्जा / राहत पाईसकेको र घर भत्काउन बाकीं रहेकाले सो घर हटाउन कुनै बाधा नपर्ने जानकारी गराईन्छ |

अत: यस सडक खण्डको हरेक सरोकारवाला सडक निर्माण कार्य अगाडि बढेको र सम्पन्न भएको अभिलाषा सहित आयोजनालाई जग्गा उपलब्ध गराउन, आबश्यक घर टहरा,बोट





# नगर कार्यपालिकाको कार्यालय

स्याङ्जा, गण्डकी प्रदेश, नेपाल

बिरुवा हटाउन तयार रही आयोजनाको निर्माण कार्य सुरु भएको हेर्न प्रतिक्षारत छन् । यस आयोजना लाई पुतलीबजार नगरपालिकाको तर्फबाट गर्नु पर्ने प्रक्रिया पुर्याउन प्रतिबद्द रहेको व्यहोरा अनुरोध छ |

> हरिराम नागिला प्रमुख प्रशासकीय अधिकृत



# पुतलीबजार नगरपालिका ३ नं. वडा कार्यालय

बाड्खोला स्याङ्गा २०७३

गण्डकी प्रदेश,नेपाल

पत्रसंख्या : ०७९/०८० चलानी नं : ३४-१

मिति :२०७९/०५/२९

बिषयः जानकारी सम्बन्धमा ।



श्री पुतली बजार नगरपालिका नगरकार्यपालिकाको कार्यालय स्याङ्जा ।

प्रस्तुत विषयमा यस पुतलीबजार नगरपालिका वडा नं. ३,८र९ भएर जाने प्रगतिनगर शिक्षाचोक बहाकोट नाम्चे काल्खु कोल्मा सडक अर्न्तगत शिक्षाचोकदेखी गेमडाँडासम्मको सडक खण्ड पुतली बजार न.पा.३ मा पर्ने सडकमा सडक विस्तार गर्नलाई आवश्यक पर्ने जग्गा उपलब्ध गराउने साथै सडक मापदण्ड भित्र पर्ने घर टहरा जस्ता भौतिक संरचनाहरु सम्बन्धित जग्गाधनीले पुतलीबजार न. पा.NUGIP(PIU)ले तोकेको समय सिमाभित्र राजीखुशी मंजुरीका साथ जग्गा दिन संरचना हटाउन सहमत रहेको व्यहोरा जानकारी गराईन्छ

बोधार्थ

श्री डि. एस.सि. पुतलीबजार,स्याङ्गजा

पुतलीबजार नगरपालिका

दर्ता नं. :- ८४०

मिति: २०६९ १६१०२

राजेन्द्र प्रसाद श्रेष्ठ वडा अध्यक्ष राजेन्द्र प्रसाद श्रेष्ठ वडा अध्यक्ष



## पुतलीबजार नगरपालिका ८ नं. वडा कार्यालय

वहाकोट, स्याङ्जा

स्थापित: २०७३

गण्डकीप्रदेश,नेपाल

प.सं : २०७९/०८० च.न.≈9€

मिति:-२०७९ /०५ /२९

श्री पुतलीबजार नगरपालीका नगर कार्यापालीकाको कार्यालय स्याङ्जा।

पुतलीवजारं नजरपालिका

ढ्रत नं. :- ८×¶

विषय:- जानकारी सिफारीस सम्बन्धमा । मिति: 2068/६(02

प्रस्तुत विषयमा स्याङ्जा जिल्ला पुतलीबजार नगरपालीका अर्न्तगत वडा नं. ३,८,९ भएर जाने प्रगतीनगर (शिक्षा चोक) बाहाकोट ,कोल्मा, नाम्चे , काल्खु, राम्चे सडक खण्डको वडा नं. ८ मा पर्ने सडक खण्डमा सडक विस्तार गर्नलाई आवश्यक पर्ने जग्गा उपलब्ध गराउने साथै सडक मापदण्ड भित्र पर्ने घर टहरा आदी जस्ता भौतीक संरचनाहरु सम्बन्धित धनिले पुतलीबजार नगरपालीका NUGIP(PIU) ले तोकेको समय सिमा भित्र राजी खुसी मंज्रीका साथ जग्गा दिन संरचना हटाउन सहमत रहेको व्यहोरा जानकारी गराईन्छ ।

वोधार्थ :-

DSC पुतलीबजार स्याङ्जा।

Ja. Or 25 वडा अध्यक्ष

Date : \_\_\_\_\_\_\_\_



भाज मिति २०६० विशेष गते विहिवार् द्या दिन शीमान् स्थानीय विद्यास भिर्म द्यारी ज्यू दें। भे ह्य क्षातामा RTI Sector Maintenance Pilot (RAP3) - Do LIDAR हो सहयोशमा यस स्थार्जा जिल्लाहें। जिल्ला यातामात गुरु पोजना (DTMP) लेगार ग्रांने सिल्लिस्लामा जिल्ले स्थानमा जिल्ले स्थानमा जिल्ले स्थानमा जिल्ले स्थानमा जिल्ले स्थानमा जिल्ले स्थानमा प्राचिकारी एवं अन्म सर्वे ह्यारियाला हरू हो सहभागितामा परिच्यातमा स्थे विल्ला सङ्द्र निर्धारण (DRCM Finglization) गोहिं जिल्ला सङ्द्र निर्धारण (DRCM Finglization) गोहिं जिल्ला सङ्द्र निर्धारण (DRCM Finglization) गोहिं जिल्ला सङ्द्र निर्धारण शास्मा निम्न उपस्थितिमा तपिरालका विशेष गरी सम्यन शास्मा।

### डपार्श्वात

क्र.सं.	नाम, थर	पद/निकाय	दस्तखत	कै.
9,	अरीजीवलप्रकाश विले	ला रूपा वि.द्व. वि.वि. इन्द्रे दार्गलयं, सा	JAD T	
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98.	सुधिर कुमार पीडला	सचिव - स्मि त्रिष्ट्रण (एमाले)	2 dari	
-20.		इन्जिनियर जिल्ला प्राविधिक कार्या अप स्पाडणा	क्षेत्रानी भी	2
29.	विन्ध् राज बराल	त्रेर्वः आंबेरुत जिल्हा कि हार्य संगितिस्याह्मा	ahen	4-
22	मराद्रेस स्वाहिया	रिकार्य के पा का र्याक्की	- Ch	
23	व्याष्ट्र वाद्याला	25 m B. 46. 65 -	B	1
22	1.50	भारत् । जिने प्रामिनिक अन्यास्त्र य स्वाहरूना	101	
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26	7127 Drig 21/12/	काः मः । पे ल्ला जावि तरि र राप्ता त्यु	4	

पद/निकाय क्र.सं. नाम, थर दस्तखत २८ व्यानाया में क्योपाने २८. केअनाय असी २०. देश्रम हत्त कार्मा 27. Pa. Crs. R. Parx7. 25 \$ . 4. 131.5.37. SITIY मेसस महास्व र्गार्जा - कल्पूल 39. भीया चलत महिला तथा बालवानिकी कापालाप The on 514 Tops on wider 1916 51 55 32. In gril Trader 39. पडाश जीडल 38. शानायर अयोल मा. पु. ही. पुर की. स्थारमा 3x. 2/10 - C g. 100/ 38. 24 2 17 5 100/ 36. 8/8 9 17 0 22) The L Z118,17 214412175 3C 8 9 29 5 38. 5129 -572 9307/4/2 B- 17-61 分子子。 ४८ जुन नेपा 国·河·初· BA17 ४६ दिस माग्यक भूकिका 区图片

### निर्णयहरू:

यस बैठकले प्रस्तावित सडकहरू मध्ये निम्न अनुसारका सडकहरूलाई मुख्य जिल्ला सडक (DRCN) को रूपमा Data Collection प्रयोजनको लागि छुनौट गर्ने निर्णय गरियो ।

SN	Name of Road	Service To VDC Centre	
1	Naudada-Karkineta	Setidobhan, Bicharichautara	
2	Waling-Dumrebhanjyang-Kalikakot	Kalikakot	
3	Mirdi-Jagatbhanjyang-Chapakot	Jagatbhanjyang, Chapakot	
4	Galyang-Chapakot-Keladighat-Sakhar VDC	Ratnapur, Sakhar	
5	Rangkhola-Machabari-Biruwa-Chinnebas	Biruwa Archale, Chinnebs	
6	Badkhola - Taksar (Dulegauda)	Pauwegaude, Taksar	
7	Helu-Arjunchaupari-Rapakot-Aruchaur	Rapakot, Arjunchaupari, Aruchaur	
8	Ghumti-Chisapani-Chitrebhanjyang	Magyam Chisapani	
9	Mirmi-Birgha-Deurali-Chandibhanjyang	Birgha , Chandibhanjyang	
10	Putalibazar- Panchamul - Aruchaur	Darau, Panchamul, Aruchaur	
11	Galyang-Pelakot -Pindikhola (Setibeni)	Pelakot, Pidikhola	
12	Triyasi-Manakamana	Yeladi, Manakamana	
13	Khadketari-Panchase-Panchadham (Dobilla)	Bhatkhola, Bagephadke, Bansing Deurali	
14	Bayerghari-Banethowk	Banethowk, Chhangchhangdi	
15	Birgha (Lasarga)-Alamdevi (Rudrabeni)	Alamdevi	
16	Nayabazar-Thuladihi	Thuladihi	
17	Jagatbhanjyang-Malyangkot-JyagdiKyakmi- Chitrebhanjyang	Malyangkot, Kyakmi, Chitrebhanjyang	
18	Galyang-Nibuwakharka	Nibuwakharka	
19	Malunga-Tunibot (VDC building)	Malunga	
20	Banyatari-Sirsekot-Dumrebhanjyang	Sirsekot	
21	Majhkot-Kewarebhanjyang	Kewarebhanjyang	
22	Bayarghari-Mohandanda-Dhapuk Simalbhanjyang- Bhorle	Dhapuk simal bhanjyang	
23	Balmata-Pakan-Amale	Sworek	
24	Darsing-Khanigaon-Ghurpal-Sankhar	Sekham	
25	Simalchaupari-Sirubari-Majhkot OR Ratne-Tinghare- Majhkot	Majhkot Sivalaya	
26	Setidobhan-Bhudrumkhola	Faparthum	
27	Pragatinagar-Bahakot	Bahakot,	
28	Botetar-Bayadanda-Chhapbhanjyang	Kuwakot	
29	Karadi-Pakwadi-Amilathum-Gaumukh	Pakwadi	
30	Saldanda-Kitchnas	Kitchnas	





31	Jugle-Chilaunebas	Chilaunebas	
32	Bayarghari-Khilungdeurali	Khilungdeurali	
33	Sarketari-Arukharka	Arukharka	
34	Kaule-Rangvang	Rangvang	
35	Archaledanda-Thumpokhara	Thumpokhara	
36	Kaule-Kolmabarahachaur	Kolmabarahachaur	
37	Jadkhola-Pelkachaur	Pelkachaur	
38	Madkina-Oraste	Oraste	
39	Kubhide-Nuwakot-Pauwegaude		
40	Modikhola-Devibhanjyang-Pakwadi	Pakwadi	
	Total		

#### Note:

- SN 39 and 40 roads are added during discussion, which will be technically verified and wheather these roads meet the criteria of DRCN or not.
- In SN 25 two roads has proposed for Majhkot VDC, It will be finalized after field verification during data collection then be selected any one .



My man

फोन/फ्याक्स नं. ०६३-४२०४५८

### संघीय मामिला तथा स्थानीय विकास मन्त्रालय जिल्ला विकास स्थानीय किना कार्यालय स्याङ्जा

पत्र संख्या : ०७०७७ चलानी नं. : १८८३

मिति :- २०७१/१/१४

बिषय: गोछी सम्वन्धमा।

### श्री जो जस सँग सम्वन्ध छ।

उपरोक्त सम्बन्धमा मिति २०७०।१२।२७ गतेका दिन स्थानीय विकास अधिकारी श्री जीवनप्रकाश सिटौलाज्यूको अध्यक्षतामा स्याङजा जिल्लाको यातायात गुरुयोजना तयार गर्ने सन्दर्भमा सरोकारवालाहरुको सहभागितामा परिचयात्म एवं जिल्ला सडक निर्धारण (DRCN ) छनौटको प्रारम्भिक छलफल गोष्ठी सम्पन्न भएको व्यहोरा अनुरोध छ ।

(महेन्द्र वहादुर वानिया ) नि.स्था.वि.अ.



# पुतलीबजार नगरपालिका ३ नं. वर्जु कर्मू लूय

बाडर्गा लात्स्य के जिल्हा स्थानिक कर्म

गण्डकी प्रदेश, नेपाल

मिति: २०८०-०३-१०

पत्र संख्या : २०७९/८० चलानी नं. : १७८५

श्री प्रमुख प्रशासकीय अधिकृत ज्यू पुतलीबजार नगरपालिका, नगरकार्यपालिकाको कार्यालय स्याङ्गजा ।

### विषय: सिफारिस सम्बन्ध मा ।

प्रस्तुत विषयमा पुतलीबजार नगरपालिका वडा नं ३ प्रगतिनगर हुदै वडा नं ६ बहाकोट वडा नं ९ नाम्चे काल्खु सम्म को कच्ची सडक लाई स्तरोन्नति तथा विस्तारको निर्माण कार्य गर्दा पुतलीबजार नगरपालिका वडा नं ३ मा वन जंगल सामुदायिक वनको कुनै क्षति नहुने र क्षति नहुने गरि निर्माण कार्य गर्न तथा निर्माणको ऋम मा निस्कने माटो कंकिट जस्ता बस्तु हरु अन्य कुनै हानी नोक्सनी नहुने गरी सार्वजनिक जिमनमा राखी व्यवस्थित गर्ने गरी सहमित प्रदान गरिएको व्यहोरा अनुरोध छ ।

2/2

राजेन्द्र प्रसाद श्रेष्ठ

वडा अध्यक्ष

राजेन्द्र प्रसाद श्रेष्ठ वडा अध्यक्ष

### सहमति पत्र

स्याङ्जा जिल्ला पुतलीबजार नगरपालिका वडा नं. ३ प्रगतिनगर हुँदै वडा नं. ८ बहाकोट वडा नं. ९ नाम्चे काल्खुसम्मको किच्च सडकलाई स्तरोन्नत्तभी तथा विस्तारको निर्माण कार्य गर्ने कममा निर्माणसंग सम्बन्धित इक्यूटमेन्ट, निर्माण सामग्री, निर्माणसंग सम्बन्धित अदक्ष, दक्ष कर्मचारी कामदार राख्न, बस्नको लागी निर्माण कार्य समाप्त भए पश्चात व्यवस्थित गर्ने गरी मेरो नाममा दर्ता श्रेस्ता कायम रहेको पुतलीबजार नगरपालिका वडा नं. २ त्राह्म स्थत पादिन्द्रांत्र राष्ट्राह्म राष्ट्राह्म स्थत पादिन्द्रांत्र राष्ट्राह्म राष्ट्राह्म स्थत पादिन्द्रांत्र राष्ट्राह्म राष्ट्राह्म स्था स्था सहिछाप गरी श्री प्रगतिनगर बहाकोट नाम्चे काल्खु मोटर वाटो उपभोक्ता समिति मार्फत श्री पुतलीबजार नगरपालिकाको कार्यालयमा स्याङ्जामा चढाएँ।

निर्मः - 2+020 - 2+070 दस्तखतः निर्मा जगगा धनीको नामः दुनन न राजा अराधिन ने ठेगानाः प्रतालिको नामः दुनन न राजा अराधिन ने उत्तर्भा लामः विकास करें। वि



# पुतलीबजार नगरपालिका **८ नं. वडा कार्यालय**

वहाकोट साइजा

गण्डकीप्रदेश,नेपाल

प.सं : २०७९/०८० च.न.

मिति:-२०८०/०६/१७

बिषय :- सूचना ! सूचना !! सूचना !!!

श्री यो जो जस संग सम्वन्ध छ।

प्रस्तुत बिषयमा पुतलीवजार नगरपालिका वडा नं ३ प्रगतीनगर देखी वहाकोट - नाम्चे - काल्खु - राम्चे मोटरवाटो निर्माण सम्बन्धमा तपशिलको मिति समय र स्थानमा छलफलका लागी वैठक वस्ने भएकाले उक्त वैठकमा मोटरवाटो संग सरोकारवाला सवै व्यक्तिहरुलाई उपस्थितीका लागी अनुरोध गरीन्छ।

### तपशिल

मिति:- २०८०/०६/२५ गते विहीवार।

स्थान:- पुतलीवजार न.पा. वडा नं ८ को टोल नं ७ सिमलडांडां।

समय:- विहान ठीक ११.०० वजे।

इस बहादुर संव

20-50/08/27 317 - 1717 A 2000 105/27 51001 16 स्थितिको वेदक काराना भना क्षापु मन्तानी है। किर्यस्ति स्था निर्धा कार्याना की विष्ण र निर्धामहरू तिर्धित कार्रिक स्तिनी है। 34247-81100 71416491 45(-4 4564 MAN XMM XKY 15 EY 751-4 4364 1 48/14 BYPLSIA इम वहापु (र्वा - वडा क्रायका वडा तः ट भी सीवता चीडल -वडासाम् वहा में दे MI ST + 1121401 8105 M- Team Leader PSC Putalibasar

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2000/04/24 Park Tilan acial 21121

Annex VI: Document related to Infrastructure loss & Business Loss of Ms. Bindu Shrestha

### व्यवसाय भतिपृतिं सम्बन्धमा भएको सम्कौता /सहमति पत्र

स्याहजा जिल्ला पुन पा बार्ड न ३ ८ वरने 49 व्यास्त्रात / १००४ की नाति नातिनी को छोरा छोरी म की श्रीमती बिन्दु श्रेष्ठ,नेपाल शहरी शासकिय तथा पूर्वाचार बाबोजनाको वातावरणीय तथा सामाजिक व्यवस्थापन प्रावधान अनुसार नेपास शहरी शासकिय तथा पूर्वाधार जायोजना जन्तरांत प्रगतिनगर बहाकोट नाम्ये काल्यु सहकको साथिक बहाकोट र हाल पु नपा बडा न ३ ८ मा हुन नारोको सडक सुधार तथा स्तरोन्नती का लागि परियोजनाका अधिकारक्षेत्र मित्र पर्ने मेरो जस्मामा निर्माण भएकी सरचना हटाउनु पर्ने भएकाले उक्त सरचना हटाउवा मैलै संचालन गरेको व्यवसायमा अवरोधका साबै अति समेत हुने भएकाले हामी दुवै पक्षको सहमति अनुसार पुत्रलीवजार न पाको अतिपृति निधारण समितिको निणय अनुसार तोकिएको रकम लिन माध्यवसाय धनी किंदु किंडी दिन नगरपालिका सहसत भएका छी । तपसिलमा हस्ताक्षर भएका साक्षीहरूको रोहवरमा हामी दुवै पक्षहरू एक आपसभा सहमत गई यो सम्मतीता पत्रमा हस्ताक्षर गरि लियो दियो ।

यो सम्भीता दुवै पक्षवाट हस्ताक्षर भएको मिति देखी लाग् हुने छ ।

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सरचना धनीको हस्ताक्षर

महक उपभोक्ता मामातक अयुष्य हर्

ma 2000/04/2/

पाति 20109184 \_ वसा को प्रतिनिक्षी पुरेश - पिक्सप्वर्श में वसा करवाल र राज्ये हिलाडु भी 88 पाति 20109184 \_ वसा करवाल र राज्ये हिलाडु भी 88

### **Declaration for Structure Integrity and Functionality Assessment**

We observed and measured the RCC frame building of Ms. Bindu Shrestha (House Owner Name) constructed on plot no. Public land, area 629.30 sq. ft. located at Putalibazar ward no. 3, Putalibazar Municiaplity and measured the components which needed removal. The widening of the road by 2m needs to remove 64,01sq. ft. and additional 0 sq. ft. for ensuring the structural integrity and functionality of the building. After removing the above said part, it is confirmed that the existing structural integrity and functionality of the structure will not be deteriorated.

The following procedure has been adopted to determine the structural integrity of the structure.

#### RCC framed Structure:

- बाटोमा पर्ने संरचनाको जम्मा क्षेत्रफल 64.01 बर्ग फिट (ल+चौ) रहेको।
- २. संरचनाको स्थिरताको (सुरक्षा) हिसाबले र बांकि रहेको घरको उपयोगिता हेरी क्षेत्रफल <u>0</u> बर्ग फिट समेत गरी जम्मा क्षेत्रफल <u>64.01</u> बर्ग फिट भत्काउन उपयुक्त हुने देखिएको।
- 3. संरचनाको स्थिरता सुनिश्चितता निर्धारण गर्दा खम्बा (Column, Beam)को अवस्थिति समेतको आधार लिईएको।

Name and Signature of the Engineer:	Organization	Organization Stamp	Date
Er. G. Doranga	Putalibazar Municipality	भागात तारपातिका भागातिकाको कार्यात स्याङ्जा २०७३	2080-09-11
Er. I N Mandal	DSC, Putalibazar Municipality	GOEC-DIGICOZIA	2080-09-11
		Zoo-38-3870	

### Fasta 2000/05/99

औ नेपान यहरी यासिक्य तथा पूर्नाधार आधानमा नाथानथ पुतनी नमार मार्गानिन १ स्थाङ्मा

विषय - धरका आंचित्र भाग हराको सम्बद्धमा ।

HEIGH,

उण्योक सम्बन्धमा यस आयोजना अन्तरीत प्रजातनगर कराके सम्बन्धमा सम्बन्धा स्तरी न्तरीत प्रजातनगर कराके सम्बन्धमा सम्बन्धा स्तरी न्तरीत लगी सिर्वाय सम्बन्ध अधिकरण क्षेत्रमा (Row) पर्ने सी सहक के क्षुक्ष बिन्द्रमा स्टेको मेरो धरको स्वाल्सा पिट्ट सिर्वायराजमाठी पिट्टिको मीहरा अदेने ६४.०१ वर्षा फिट मेंगाकल (भीसिक्याम) जीसीभाम म स्थामके भीरी राजी रक्षीके नियान भटकाम तथार द्व र सी सहक अमुशोद्य महिन्द्रमा मार्थ प्रकृति साथे मेरी हारको आयोजमा कार्याक्षय कार्य हार्दिक मार्ग कार्य प्रवायमा कार्य कार्य प्रवायमा मार्थ साथे भीरी हारको आग्ना मार्थ कार्य कार्य प्रवायमा साथ साथे मार्थ साथे भीरी हारको आग्ना साथीक आम भटकाम हो। साथे भीरा साथ आग्ना आग्ना साथाना कार्य मार्थ साथ साथ साथाना कार्य साथ साथाना हो। पाउँदा भाक्ता राज साथाना कार्य साथाना हो। पाउँदा भाक्ताई सहस्था भान साथाना कार्य साथाना निर्मारार्थ सहयाम भाम अनुभवको सहस्य आनकारी ग्रायक्ष कार्य के हिस्सामा भीरववानी त

भविद्य रिक्टर भी मीत विन्दु क्रीव्ह ए व रुषा, व प्राल्मार स्याङ्ग्रा

### **Calculation of compensation cost for structures and Business Loss**

#### 1. Compensation Rate Calculation for RCC Structure of Ms. Bindu Shrestha

Types of Structure	Tilottama adopted	Putalibazar	Adopted Rate	Remarks
	Rate	Municipality Rate Per	(NRs.)	
	(NRs.)-(R1)	Sqm Rate(NRs)-(R2)		
RCC Structure	18289.28/m2; 1700/sqft.	12264.5/m2; 1140/sqft	18289.28/m2; 1700/sqft.	Adopted Highest Rate among Rate R1 & R2

Note: Tilottama adopted rate is referred as per Tilottama Social Evaluation Report for NUGIP as of Sep 2024

#### 2. Detail of Business Loss:

Location	Description	Owner	No of Days	Rate (NRs.)	Amount (NRs)
0+005 L/S	Business Loss for small grocery shop at the time of dismantling and repairing of effected portion of house at Kholsi for non title holder structure	Bindu Shrestha (Spouse of Late Laxman Shrestha; recognizing name Binay Shrestha)	90	850	76,500

(Source: Field Survey, 2023)

Business Loss estimated as: 1 Unskill worker daily wages rate \* Total effective loss days

Loss =1 Unskill worker daily wages rate\*2\* dismantling and repairing pd. (45 days) of effected structure

Loss=1 Unskill worker daily wages rate\*Total Effective no. of loss days

Also assessing as per daily average sale basis, Average selling per day is NRs. 1000 as per discussion with owner, Total Selling per month is (30days\*NRs.1000=NRS. 30,000.00); Considering 15% profit of the gross sell, Saving per day is calculated as 15% of 30,000/30= 150 NRs. per day. Therefore, total estimated amount for business loss is NRs. 150\*90days=NRs. 13,500. Business loss compensation amount recommended is taken higher of the two estimates ie. NRs. 76,500.



## पुतलीबजार नगरपालिका ३ नं. वडाकार्यालय

बाडखोली समहता जार महिला कोला, स्टब्स केला, स्टब्स केला, स्टब्स केला, स्टब्स

गण्डकी प्रदेश, नेपाल

मिति: २०८०-०८-०७

पत्र संख्या : २०८०/८१ चलानी नं. : ५६५

श्री जो जस संग सम्बन्ध छ ।

### विषयः सिफारिस सम्बन्ध मा ।

प्रस्तुत विषयमा पुतलीबजार नगरपालिका वडा नं ३ शिक्षा चोक स्थित सिद्धार्थ राजमार्गको क्षेत्र भित्र पर्ने स्व लक्ष्मण श्रेष्ठको घर हाल निजको श्रीमती बिन्दु श्रेष्ठले हक भोक गरेको जग्गा धनी पुर्जा नभएको र सो घरमा विधुत जडान भई संचालन मा रहेको ( नामः लक्ष्मण श्रेष्ठ नं - ००१-२४-०५२, जिन १६६१, आइडी नं १८०२) व्यहोरा प्रमाणित गरिन्छ ।

2/2

राजेन्द्र प्रसाद श्रेष्ठ

वडा अध्यक्ष

राजेन्द्र प्रसाद श्रेक्ट वडा अध्यक्ष







#### सम्भौता पत्र

स्याङ्जा जिल्ला पुतलीवजार न.पा. वडा नं. ३ प्रगतिनगर शिक्षाचोक वस्ने स्व. श्री लक्ष्मण श्रेष्ठकी पत्नि विन्दु श्रेष्ठ र प्रगतिनगर, शिक्षाचोक, बहाकोट नाम्चे काल्खु राम्चे मोटरवाटो उपभोक्ता समितिका बीचमा देहाय अनुसारको सम्भौता भई एक एक प्रति लियौ. दियौ ।

- १ प्रगतिनगर शिक्षाचोक (बहाकोटचोक) मा रहेको घर विन्दु श्रेष्ठले उपरोक्त मोटरवाटोको निर्माण स्तरोन्नती गर्नको लागी मापदण्ड अनुसारको जग्गाको क्षेत्रफल नपुगेकाले उपभोक्ता समितिको अनुरोधमा यस चोकमा रहेको मेरो घरको सडकनाली खोल्सादेखि माथि रहेको दक्षिण पट्टिको पिल्लरदेखि उत्तर र खोल्सा पट्टिको दोस्रो पिल्लर (दक्षिण तर्फ) सम्मको र सो भन्दा माथि छतसम्मको समेत गरी जम्मा ६४.०१ वर्ग फुट घरको भाग फ्टाई (उपभोक्ता समितिले भत्काउने) मोटरवाटोको लागी प्रयोग गर्न राजिखुंशिले दिने ।
- २ घर भत्काउदा निस्केको सटर भ्र्याल, ढोका, रड, ब्लक, इट्टा आदि उपभोक्ता समितिले विन्दु श्रेष्ठले तोकेको स्थलमा राखि दिने ।
- ३. तोकिएको घरको क्षेत्रफल भत्काउँदा बाँकी रहेको घरलाई क्षेति नपुग्ने गरी भत्काउने ।
- ४. भत्काई वाँकी रहेको स्थानमा मर्मत गराउनु पर्ने जिम्मेवारी विन्दु श्रेष्ठको हुने ।
- ५. घर भत्काई समस्या देखापरेमा दुवै पक्षको छलफलवाट निरुपण गर्ने ।
- ६. यस सम्भौतासँग अर्को एक पुरक सम्भौता अनुसार गर्ने ।



ALISONS SOURCE S

भक्त बहादुर मल्लं , अ हिंगू न बहाकोट शिक्षाचोक बहाकोट नाम्चे काल्खु मोटरवाटो उपभोक्ता समिति, पुतलीवजार न.पा. बडा नं. ३, ८,, ९ स्याङ्जा फोन नं. ९८५६०८८९१४

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विन्दु श्रेष्ठ ना.प्र.नं. १३७/४२/२/२१ काठमाण्डौ पुतलीवजार न.पा. वडा नं. ३ शिक्षाचोक, स्याड्जा फोन नं. ९८०६७७५२८६

तिलक राम श्रेष्ठ पुतलीयजार न .पा. वडा न. २ देवीस्थान अर्जुनप्रसाद श्रेष्ठ पुतलीवजार न.पा. ३ याडखोला, स्याइजा

रोहवर.

राजेन्द्र प्रसाद श्रेष्ठ पुतलीवजार न पा. वडा ३ वडा अध्यक्ष इम बहादुर सेन पुतलीवजार न पा वडा स = वडा अध्यक्ष लिल प्रसाद गुरुड् पुतलीवजार न पा. वड़ा सं. ९ वडा अध्यक्ष

इति सम्वत् २०७९ साल आश्विन ३ गते रोज २ श्भम्।

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# गरिमा विकास बैक लिमिटेड अ Garima Bikas Bank Limited

ALLIANT.

page No.

STATESA Branch, Syanera BINDU SEKESTAN PUTALI BATAS -- SYTEMENDONE

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Opening Balance

Dr. Entry

Annex VII: I trees consent	<b>Document relat</b>	ed to Electri	city, Water	Supply and	Priva



नेपाल विद्युत प्राधिकरण

(नेपाल प्राक्तिको स्वामित्व) वितरण तथा प्राहिक सेवा निर्देशनालय स्याहर्गा वितरण केन्द्र

फ्याक्स ने. ०६३-४२३३७७email:Syangja@nea.org.np

फोन नं ०६३-४२३१७७

प.स. २०८०।२०८१ च.न 288

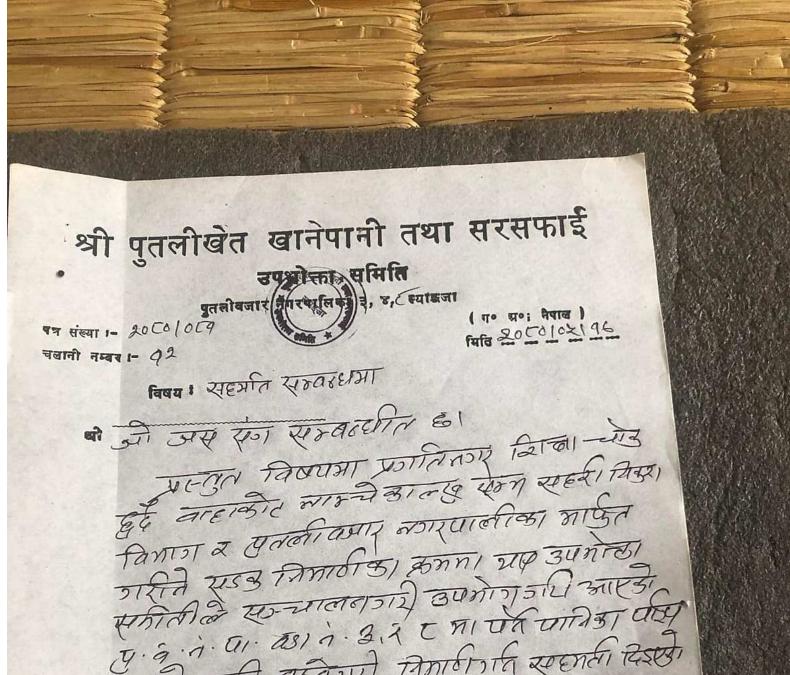
मिति २०५०/०५/०५

विषय: जो जस संग सम्बन्ध छ ।

नेपाल सरकार, NUGIP र पुतलीवजार नगरपालिका द्वारा विस्तार गर्न लागिरहेको प्रगतिनगर-बाहाकोट-नाम्चे-काल्खु सडकको हाल सडक छेउमा रहेका विद्युतीय संरचना आवश्यकता अनुसार पुतलीवजार नगरपालिका, सम्बन्धित वडा कार्यालय, सम्बन्धित आयोजना र सम्बन्धित उपभोक्ता समिति संग आपसी समन्वय गरी व्यवस्थापन गर्न सिकने व्यहोरा जानकारी गराइन्छ।

> (ई. रमेश वन्जाडे) केन्द्र प्रमुख

तेन्द्र प्रमुख



यु. वु. ते. वा. वडा ते . दे द मा पर्य पारिता विस् हरूडी कारी महतापे निमार्गित रक्टमित दिस्की ह्व। मास्वाली उपमाला समीती समेर हो सहर्पण व समत्वपूका पारित्रे पार्य लावनभीतानीत व्यहार। जान्साध हा।

3/6/16/ भारापु रामी पुत्रतीक्त खात्रपाती तथा स्राप्ति इपमेला समित्री

(9856029728)

# विर्खेखोला (अरौदी सिरान) आम्बोट स्वाँरा खा.पा.उ.भो. सरसफाई समिति

पु.ब.स.पा.-३, आम्बोट, स्याङ्जा स्थाः२०७४

पत्र संख्या:- ० ८०/८९

चलानी नं.:- 🗶

HAR: 2000/00/00

विषयः सहस्रीत सम्बन्धमा /

जी जान स्कंज (मन्वमं है)

महाकोट नाम्ने कुल्ल पम्म (पहरी विकाम किमा) (NUGT
क) र पुल्ली वर्णा ना पाति । मापी के गाँची एउट किमा
का उपमें कुल्ला माप पाति । मापी के गाँची एउट किमा
का उपमें कुल्ला माप उपमें लहा पामिति एउट्या लगा। 3प
भोड़ा गा किमार्ड, पु. विवाद पाड़ पहरी पाति कु पाड़ प्री पाली है।

पाइ प्राप्ती अभी भएमा पाइ प र भएकी पाइ प्री भेती

प्रमान अमें गर्मी की स्मान पाइ प अम्बन्ध पाड़ प्री भेती

विकाद के गर्मी की रामी का प्रमान पाइ प अम्बन्ध पाड़ प्री पाड़

(3 CX20-268X2)

20 colos/do 13) 4 (31) A 20-00/02/9651245) 147 4517)11/ a12 AEIA12 7124 ANTIG (88) क (सिक्षाई राजारी) दुनिश्वास्य में रिम्प्रिक वर्ष दिनान 140 3 4 4 4 31 31 P Arta-8 Are Af 511 Parg' 4/15 341041 (111) मान्य (110) - TETAT JUTULIY 712140/ 8 (416 DEING 100 Nat 1 1 912 84/2/2) SHEN THAT THERED) रिल में के काला -

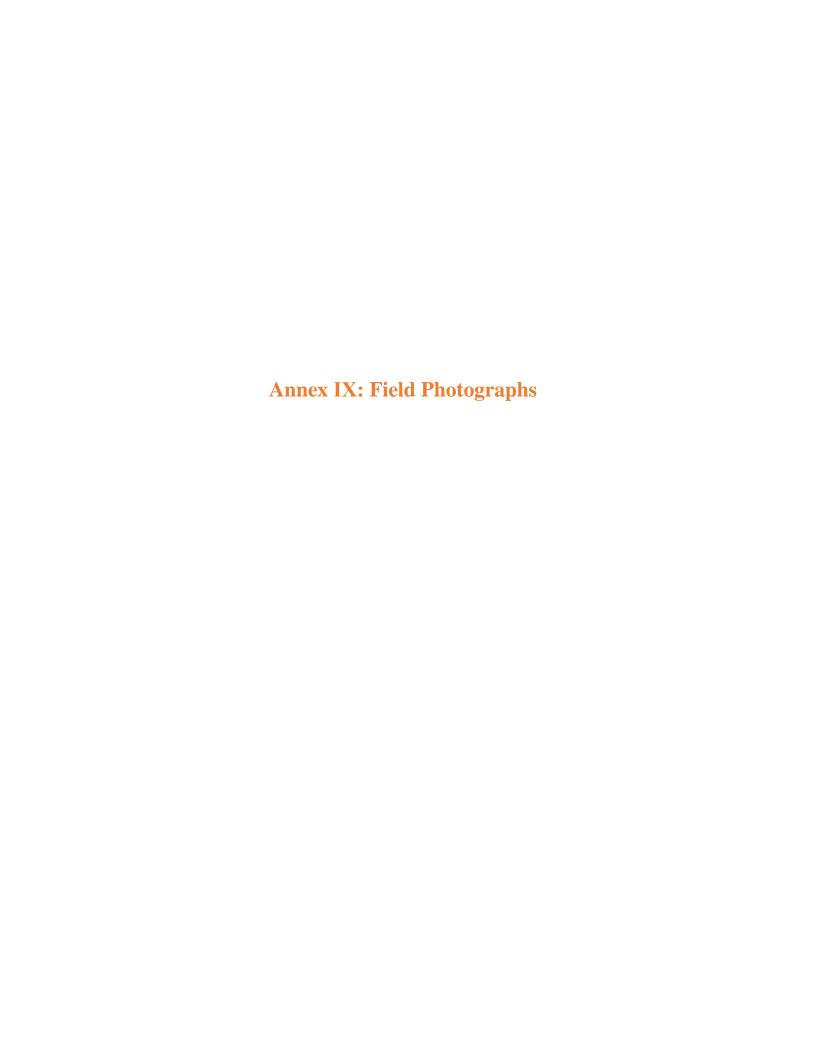
20-0108130 Color (201) y 20-018/26:17 31 (1) -41-7 9+600-9+300 2-181 45 45-3 FT मो प्रका किरो मार्प जिला राष्ट्र किराहत नापा कि का की नोकिश कार कि हराइमें इ मा करव को प्रकार कार प्रीत नीन की महाम की ग्रिका का का का प्रीत नीन की की महाम की ग्रिका का का का का का का की की J. G. 6 Kd 49N 9. 510 m 214 2 (0 1017 . P Q. Bon 18/19 716/15) BANTAN (MANAS) NONAIC BIBLINA) रिक्ती अपापराने भराष्ट्र) Duy 13 m 98/9 Orm - 100 01/6 MS (

**Annex VIII: Details of Tree Loss** 

#### **Details of tree loss**

S.N	Species	dbh (cm)	Height (feet)	Volume (m3)
1	Chilaune	26	35	0.38
2	Chilaune	22	25	0.23
3	Chilaune	23	22	0.23
4	Khanyu	25	17	0.25
5	Khanyu	26	27	0.33
6	Bedulo	27	25	0.34
7	Katus	25	27	0.31
8	Paiyu	21	19	0.18
9	Paiyu	23	24	0.24
10	Chilaune	26	35	0.38
11	Chilaune	28	38	0.46
12	Chilaune	23	33	0.29
13	Orange	12	12	0.05
14	Orange	15	14	0.08
15	Orange	18	15	0.12
16	Orange	13	13	0.05
17	Orange	14	9	0.06
18	Orange	17	15	0.1
19	Orange	11	17	0.04
20	Orange	14	12	0.06
21	Orange	15	13	0.08
22	Chilaune	19	22	0.16
23	Chilaune	18	24	0.15
24	Chilaune	14	19	0.08
25	Chilaune	23	28	0.26
26	Chilaune	21	29	0.22
27	Chilaune	22	32	0.26
28	Paiyu	13	17	0.06
29	Paiyu	17	21	0.12
30	Paiyu	27	30	0.38
31	Orange	12	14	0.05
32	Orange	17	13	0.1
33	Orange	17	14	0.1
34	Orange	16	15	0.09
35	Orange	18	16	0.12
36	Orange	17	13	0.1
37	Orange	16	14	0.09
38	Orange	17	16	0.11
39	Orange	18	18	0.13
40	Orange	16	17	0.1

41	Orange	17	15	0.1
42	Khiro	16	15	0.09
43	Khiro	18	14	0.12
44	Chilaune	24	27	0.28
45	Chilaune	18	21	0.14
46	Tooni	17	24	0.13
47	Tooni	25	23	0.29
48	Tooni	19	27	0.18
49	Tooni	24	24	0.26
50	Chilaune	18	21	0.14
51	Khanyu	17	19	0.12
52	Khanyu	27	34	0.41
53	Khanyu	24	32	0.31





Starting point Pragatinagar chowk



Existing road condition



View of Project area



Shiva temple along the roadside



Discussion with local people during the preparation of ESIA



FDG with local community and women group



Meeting with Mayor of Putalibazar



Consultation with Samittee



Orange Farming with in RoW



Wating shade along the roadside



Vegetation along RoW



House falls within the RoW where the existing road width finalised to  $4.5\ m$  at Ch:5+790

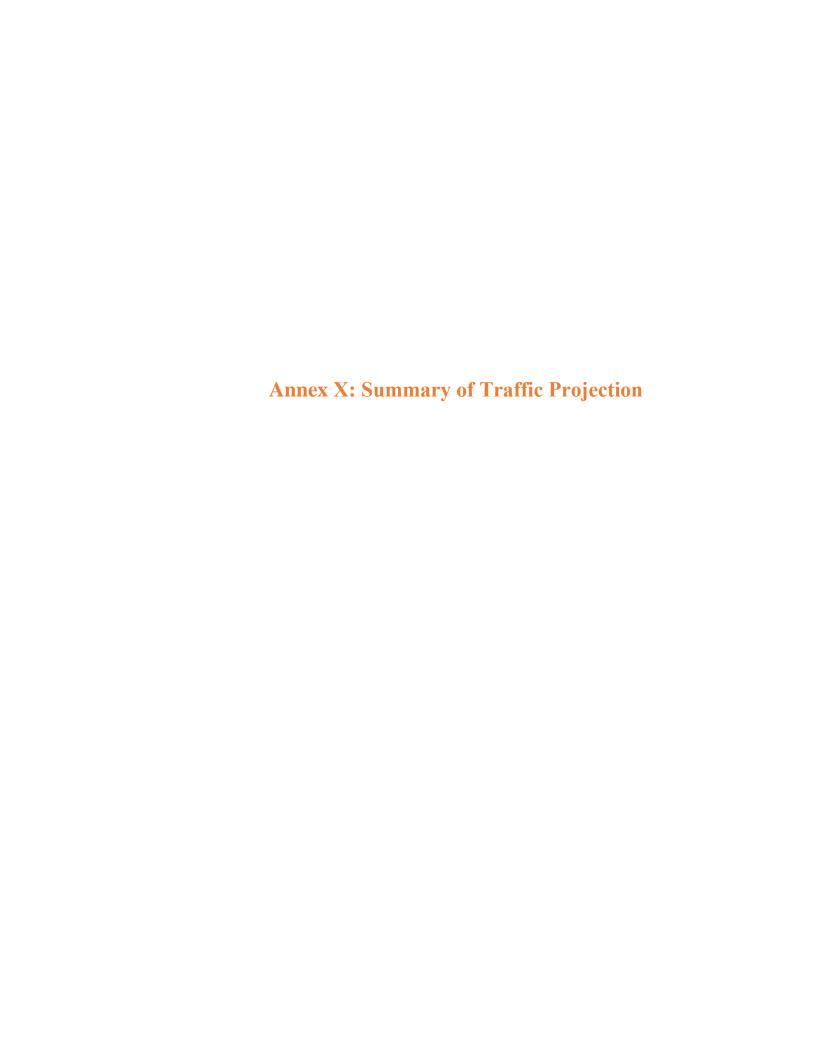
### **Comparative Photographs of Bindu Shrestha House at Start Chainage:**



Bindu Shrestha House at start Chainage (L/S) before demolishing



Bindu Shrestha House at start Chainage(L/S) after partial demolishing and reconstruction



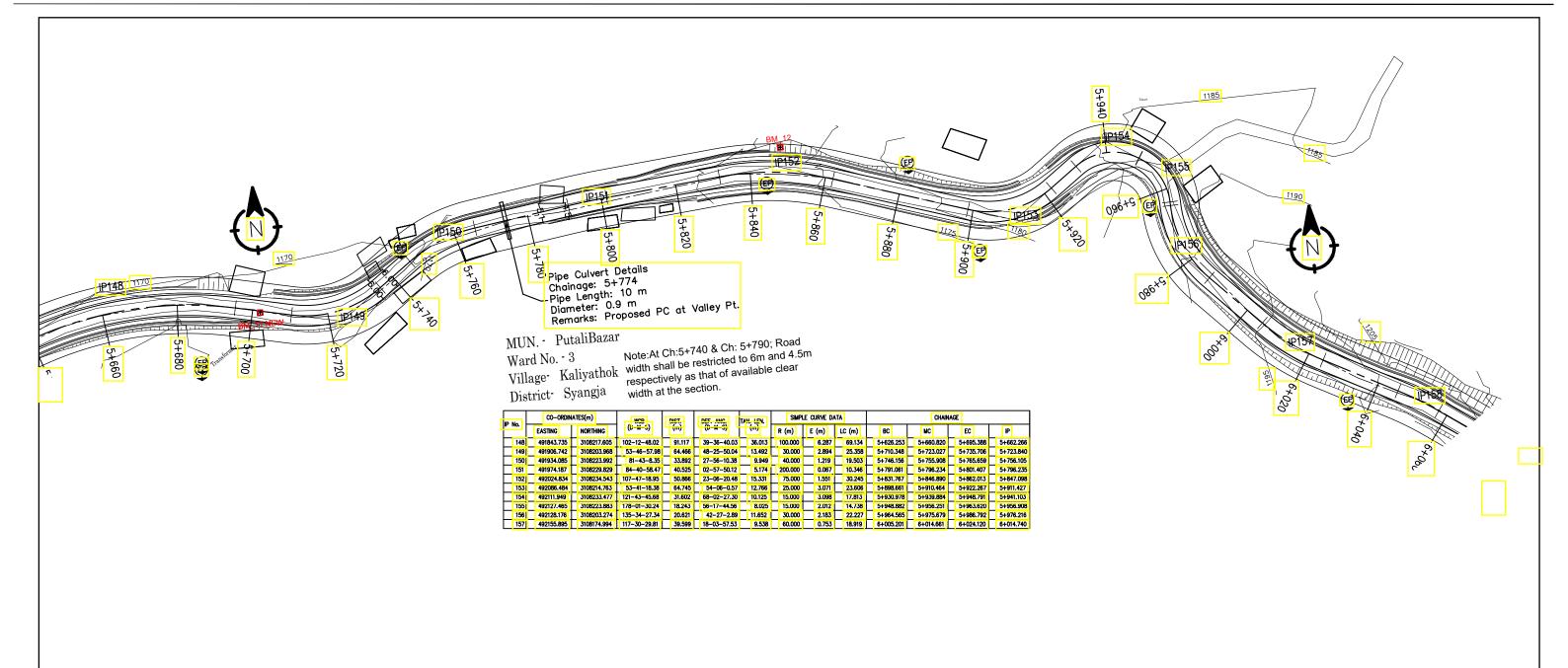
#### Summary of Traffic Projection for 20 Years

PCU Calculation of traffic in base year 2025 and next 20 years(2045)

SN	Type of traffic	Present Count in base year 2025	Generated Traffic	TOTAL	pcu Factor	Total PCU in Base Yr.(2025)	Growth Rate,R 2025to 2045	PCU in next 20 Years (2045)
1	3 Axle	5	0	5	3	15	0.07	58
2	2Axle	19	0	19	3	57	0.07	221
3	Mini Truck	9	0	9	1.5	13.5	0.07	52
4	Large Bus	7	2	9	3	27	0.07	104
5	Mini Bus	24	2	26	3	78	0.07	302
6	Micro Bus	25	4	29	1.5	43.5	0.07	168
7	C/t/J	157	1	158	1	158	0.07	611
8	Utility Pickups	34	0	34	1	34	0.07	132
9	3 Wheeler	20	0	20	1.5	30	0.07	116
10	Tractor	17	0	17	3	51	0.07	197
11	Motorcycle	381	12	393	0.5	196.5	0.07	760
12	Bicycle	0	0	0	0.5	0	0.07	0
	Grand Total 703.5							2722
	Not considering the motorbike							1962

The functional classification of the road as per NRS 2070 is CLASS-IV Road and as per NURS classification our proposed road is classified as collector road.

Annex XI: Details of Road width reduced at Chainage 5+740 and 5+790



CLIENT:

Project Implementation Unit Vepal Urban Governance and Infrastructure Project **Putalibazar Municipality** Office of the Municipal Executive Putalibazar, Syangja

GOEC Nepal (P) LTD, DIGICON Engineering Consult (P) Ltd, BEAM Consultant Pvt. Ltd, IMPULSE Consultants Pv Ltd. and Smart Engineering and Design Solution Pvt. (GOEC-DIGICON-BEAM-IMPULSE-SEDS JV),

Sanepa, Lalitpur Email: dscputalibazar@gmail.com

Upgrading of Pragatinagar-Bahakot-Namche-Kalku Road, Putalibazar Municipality Credit No: IDA - 6778-NP Contract NO, NP-DUDBC-216334-CS-QCBS

	DESIGNED BY:	SC
	DRAWN BY:	ľ
	CHECKED BY :	V
S	APPROVED BY :	Ι.

DATE: PLAN&PROFILE DRG NO : 5+700-6+000 20A SHEET NO :