



Building Design Authority (P) Ltd

in joint Venture with

B.N. Consultancy Pvt. Ltd and

PLUSH Engineering & Architects (P) Ltd Kathmandu.

Semi-Annual Environmental Monitoring Report

(January – June 2018)

Regional Urban Development Project (RUDP)

Project Implementation Unit

Biratnagar, Nepal

ADB Loan 47252- NEP



July 2018

Biratnagar Metropolitan City (BMC), Nepal

Table of Contents

I. INTRODUCTION 1

II. DESCRIPTION OF SUB PROJECT 2

 a. Environmental category of Subprojects 8

 b. Project Safeguard Team 8

 c. Overall project and sub project progress and status..... 9

III. COMPLIANCE STATUS WITH NATIONAL/STATE/LOCAL STATUTORY ENVIRONMENTAL REQUIREMENTS.....11

IV. COMPLIANCE STATUS WITH ENVIRONMENTAL MANAGEMENT PLAN.....12

 a. Compliance Status12

 b. Summary of Environmental Monitoring Activities for the Reporting Period13

 c. Compliance Status with the Environmental Management and Monitoring Plans.....15

V. APPROACH AND METHODOLOGY FOR ENVIRONMENTAL MONITORING OF THE PROJECT16

VI. MONITORING OF ENVIRONMENTAL IMPACTS ON PROJECT SURROUNDINGS17

VI.GRIEVANCE REDRESS MECHANISM17

VII. COMPLAINTS RECEIVED DURING THE REPORTING PERIOD.....18

VIII. SUMMARY OF KEY ISSUES AND REMEDIAL ACTIONS18

Annex-1 Photographs

Annex-2 Safeguard Desk Meeting Minute

ABBREVIATIONS

ADB	=	Asian Development Bank
AP	=	Affected Persons
BMC	=	Biratnagar Metropolitan City
BS	=	Bikram Sambat
CAO	=	Chief Administration Officer
CDP	=	community development program
CRIPPF	=	Combined Resettlement and Indigenous Planning Framework
DSC	=	Design and Supervision Consultant
DUDBC	=	Department of Urban Development and Building construction
DWSS	=	Department of Water Supply and Sanitation
EMP	=	Environmental Monitoring Plan
EPR	=	Environment Protection Regulation
IEE	=	Initial Environmental Examination
GoN	=	Government of Nepal
GRC	=	Grievance Redress Committee
ISWM	=	Integrated Solid Waste Management
MoUD	=	Ministry of Urban Development
MPMC	=	Municipal Project Management Committee
NRs	=	Nepalese Rupees
NGO	=	Non-Government Organization
PCO	=	project coordination office
PIU	=	project implementation unit
PPE	=	Personal Protection Equipment
PPTA	=	Project Preparatory Technical Assistance
ROW	=	right of way
RP	=	resettlement plan
R&R	=	resettlement & rehabilitation
RUDP	=	regional urban development project
SDS	=	social development specialist
STIUEIP	=	Secondary Town Integrated Urban Environmental Improvement Project
SPS	=	Safeguard Policy Statement
SD	=	Safeguard Desk

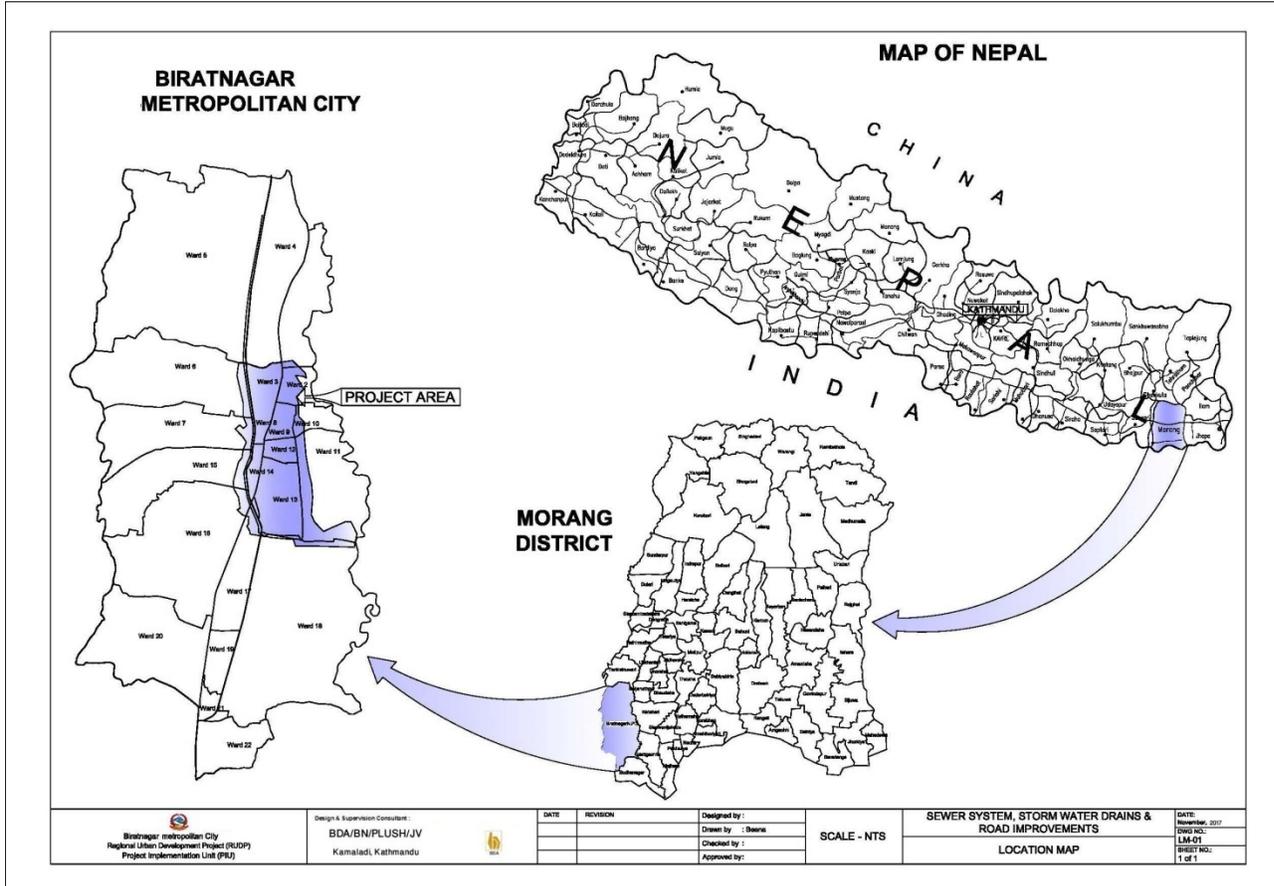
WEIGHTS AND MEASURES

Ha.	=	Hectare
Kg.	=	Kilogram
m.	=	meter
sqft.	=	Square fit
sqm.	=	Square meter
1 ha	=	1.47 bigha

I. INTRODUCTION

1. The Regional Urban Development Project (RUDP) is designed with the aim to improve livability and urban services in the municipalities of Godawari, Bhimdatta, Biratnagar, Birgunj, Dhangadhi, Shuklaphanta, Nepalgunj and Siddharthanagar in the Terai Region of Nepal through planning, infrastructure investments, and institutional strengthening. The eight cities have high population growth rates, are severely lacking investment, and are experiencing a high level of environmental degradation. The project is also in line with ADB's Nepal Country Partnership Strategy (2013-2017), which supports the government's development objective of accelerated, sustainable, and inclusive economic growth, and with the Asian Development Bank's (ADB) water and urban operational plans.
2. Biratnagar is one of the eight municipal towns included in the RUDP. The subcomponent of the RUDP covers the construction and improvement of sewerage, drainage and roads and design of Integrated Solid Waste Management System (ISWMS) for Biratnagar Municipality. Building Design Authority (P) Ltd (Nepal), B.N. Consultancy Pvt.ltd and PLUS Engineers & Architects (P) Ltd Kathmandu as a design and supervision consultant (DSC) and have entered for a Contract of Consulting Services with Regional Urban Development Project (RUDP), Project Implementation Unit (PIU), Biratnagar Metropolitan City (BMC) on 28th August 2017 and design and supervision were commencement on September 6th, September 2017.
3. RUDP, the Department of Urban Development and Building Construction (DUDBC), under the Ministry of Urban Development(MoUD) through the Government of Nepal (GoN) has received the loan from ADB.
4. In line with ADB's Strategy 2020 and based on Nepal's fundamental long term needs and on the GoN's priority, the ADB is continuing to support the Government in(i) improving urban infrastructure; improving access to water supply and sanitation (ii) supporting urban environmental improvement(iii) strengthening the operation and management skills of local governments. The RUDP will forward to promote healthy cities by creating healthier urban environments and was formulated under the PPTA 2010. *Figure 1* presented below shows project location of BMC.
5. The 2nd Semi-annual Environmental Monitoring Report (EMR) of RUDP, Biratnagar has been prepared on the basis of results of the regular environmental monitoring activities undertaken by the Contractor during the reporting period from January to June 2018 as required by the Environmental Management Plan (EMP).
6. Similarly regular monitoring visits by DSC Environmental Expert were made and standard environmental monitoring checklist was used to note the status of EMP compliance.

Figure 1: Project location of RUDP



II. DESCRIPTION OF SUB PROJECT

7 Since 2012 STIUEIP is implementing (i) drainage and sanitation including wastewater treatment plants (facultative and anaerobic pond), public and school toilets, and storm water drainage; and (ii) roads and lanes including upgrading of roads, footpaths, side drain and walkways in BMC. In most of the sections the drainage construction and earthen works of the roads has been completed but pavement improvements could not be done under STIUEIP due to cost overrun.

8 The additional works under RUDP are expected to complement STIUEIP and lead to

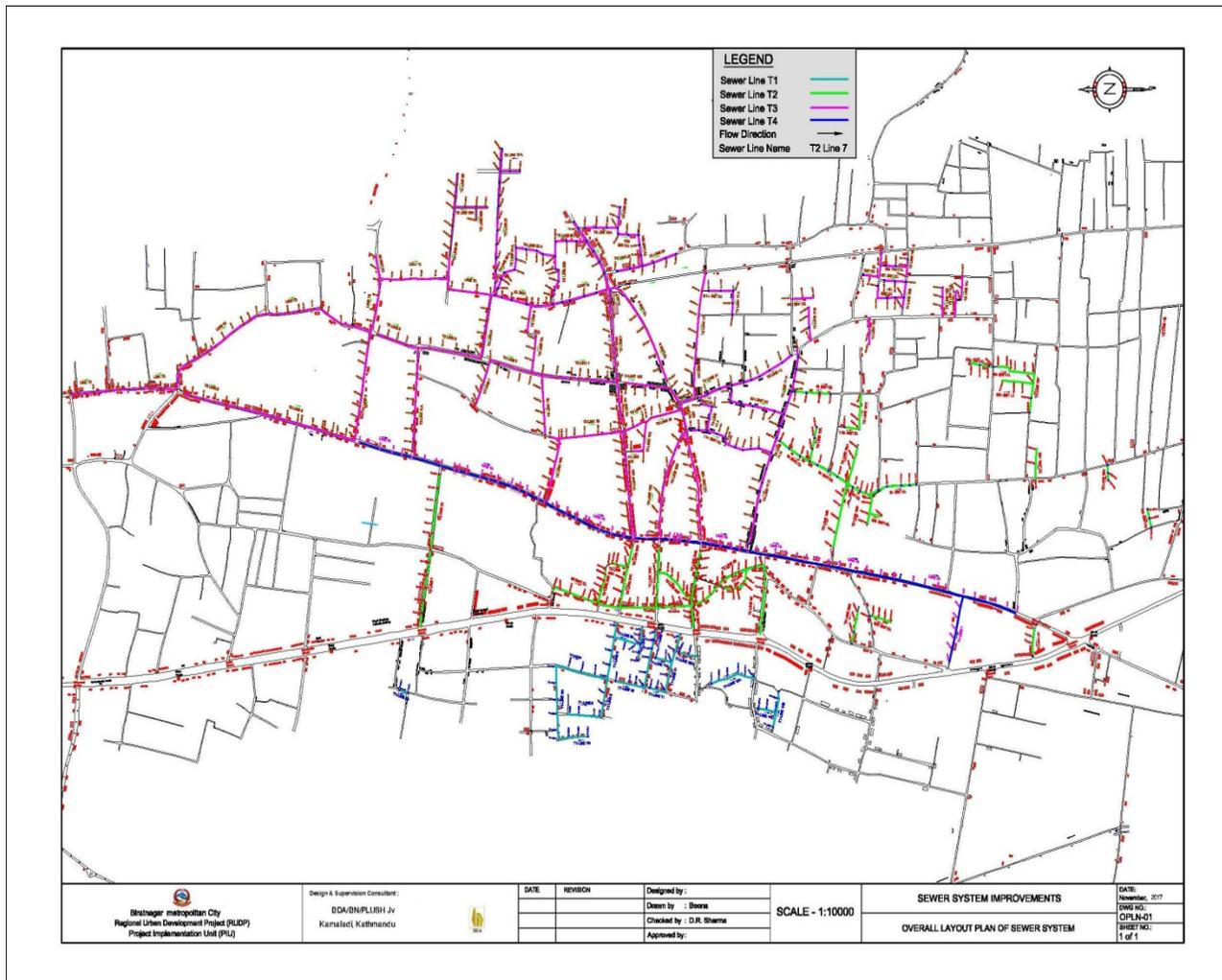
increased efficiencies, greater improvement in service delivery, and higher impact on the livelihood outcomes of inhabitants of BMC. The pre-project construction activities, including land acquisition have been almost completed by the RUDP. In many cases, RUDP is working on the same alignment as STIUEIP. STIUEIP installed the drain and RUDP will rehabilitate the road and construct a footpath. The table 1 provides a summary of the proposed alignments where STIUEIP is also working to show synergies between the two projects. The shaded rows denote new/additional alignments under RUDP.

Table 1: Summary of Project Components in Regional Urban Development Project Biratnagar

Components	Description of the Activities	Quantification of major construction items/ activities	Location
Drainage and sanitation			
Sewerage network	Sewerage pipe supply and installation; manhole; sewer inlet; house connections	Installation of 20.082 km sewerage pipeline; construction of 685 manholes; 1,010 sewer inlets and 3,784 house connections	At the central line of the existing roads within clear road width
Storm water drainage	RCC drains	Construction of Chyangbari Nala = 652.89 m	Within the clear width of existing Nala
Roads and Lanes			
Road improvements	Asphalt concrete, footpath and roadside drains	Road improvements with asphalt concrete: 73.86 km, including footpaths and roadside drains: 26.05km	Existing roads and footpaths
Integrated Solid Waste Management (ISWM)			
Design of ISWN		Preliminary design, detail design and final design	Municipality proposed Dangraha site is not finalized till date
Street Light			
Streetlight installation	Supply and installation of solar streetlights	Solar streetlights, including pole, battery and all solar system = 1.0 km	Existing roads and footpaths

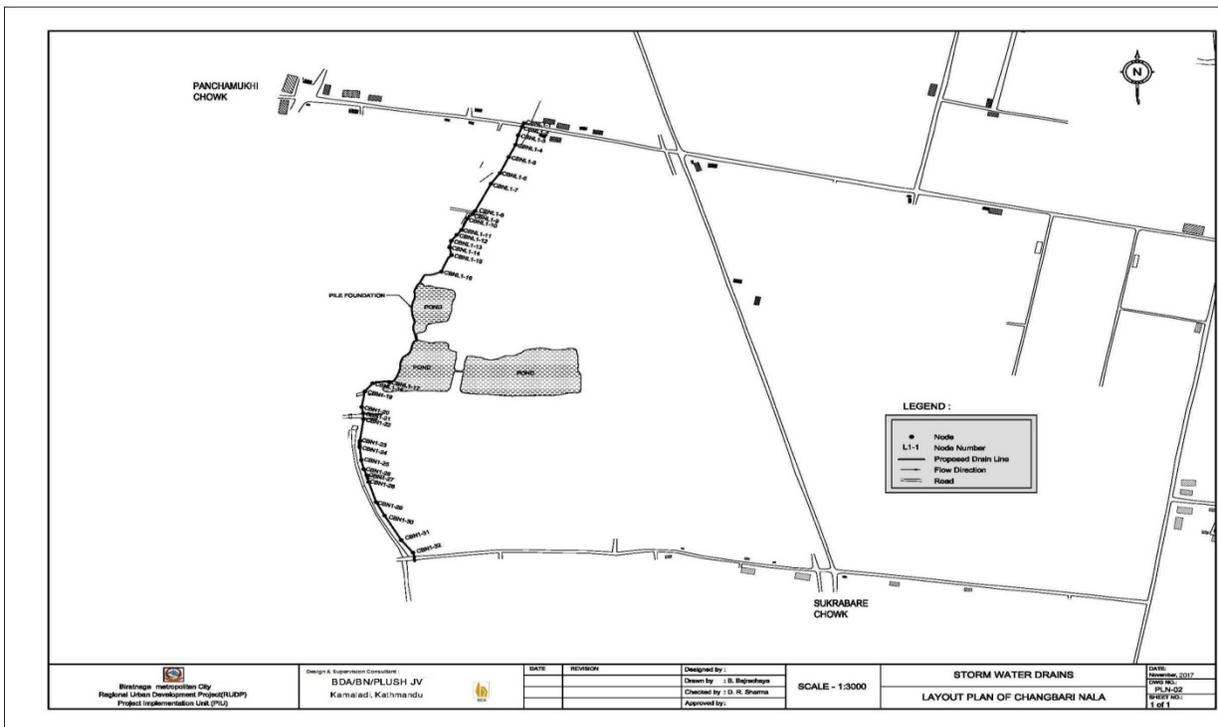
- 9 Total length of the proposed sewerage system will be 20.082 kilometers (kms). Similarly, 685 manholes are proposed in all sewerage sub systems. As indicated in design and drawings there will be 4 types of trunk and secondary sewerage system. Overall layout plan of the sewerage system as proposed for RUDP is given in *Figure 2*.

Figure 2: Sewerage Layout Plan



- 10 A total of 652.8m storm water drainage is proposed under the RUDP. *Figure 3* presented below shows overall storm water drainage plan for BMC. All planned drainage system has already been constructed by STIEUIP except for 652.89 m which passes through the existing Chyangbari Nala (Sagarmatha tole to Sukrabare Hatiya). The right side of blue shaded area in the *Figure 3* is proposed under the RUDP. The existing ROW of the drainage will be sufficient to improve the proposed section. There are no registered private lands, tenants and sharecroppers or seasonal encroachers at either site of the proposed drain.

Figure 3: Storm Water Drainage Layout Plan



11 A total of 74 km road improvement is proposed in the RUDP. The roads included for improvements are those roads which were damaged due to pipeline installation, storm drain construction and other project related works of STIUEIP and couldn't be restored due to unavailability of funds. The overall road network layout plan is shown in *Figure 4a and 4b*.

Figure 4a: Overall Layout Plan of Road Improvement Networks (Northern part/main road)

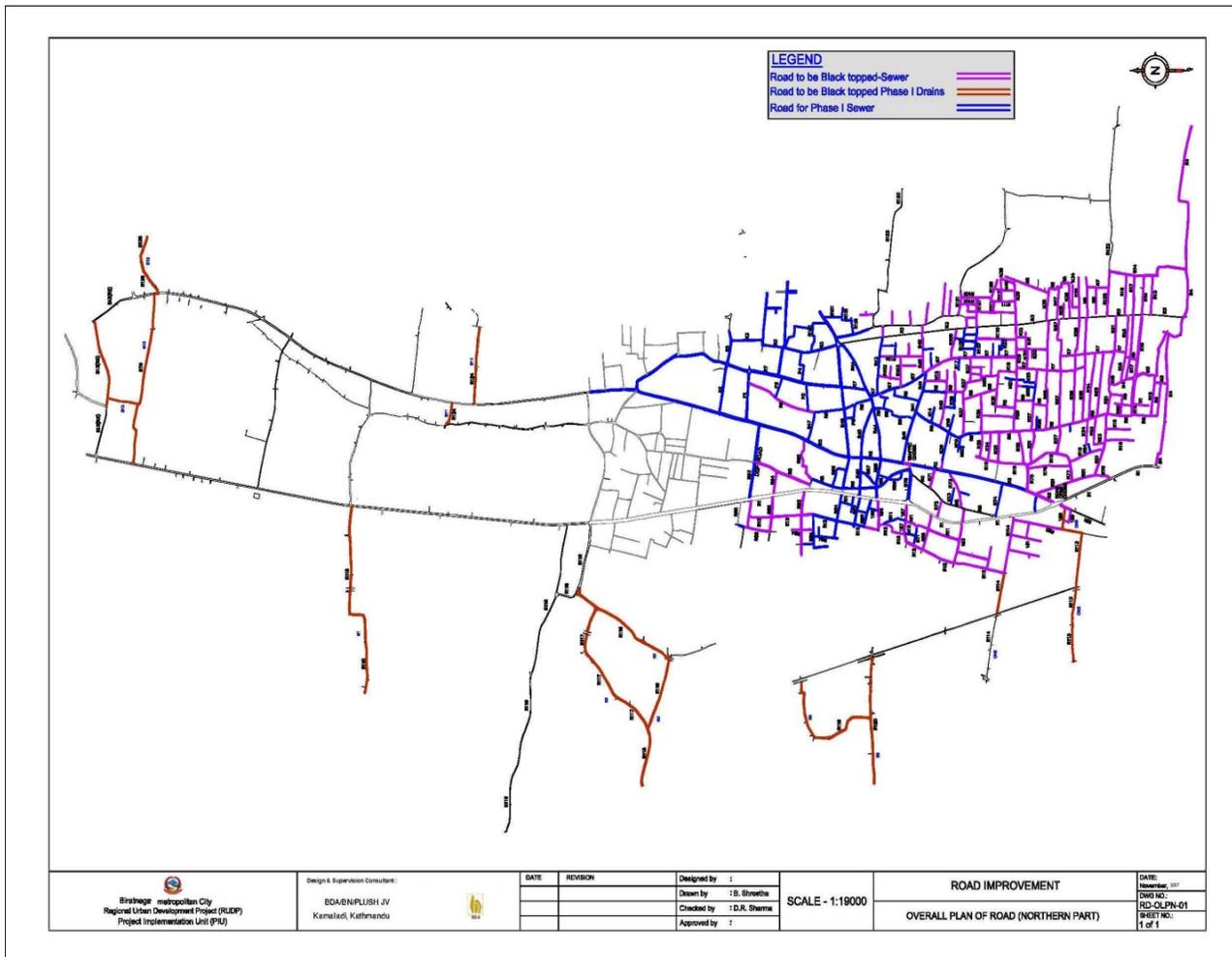
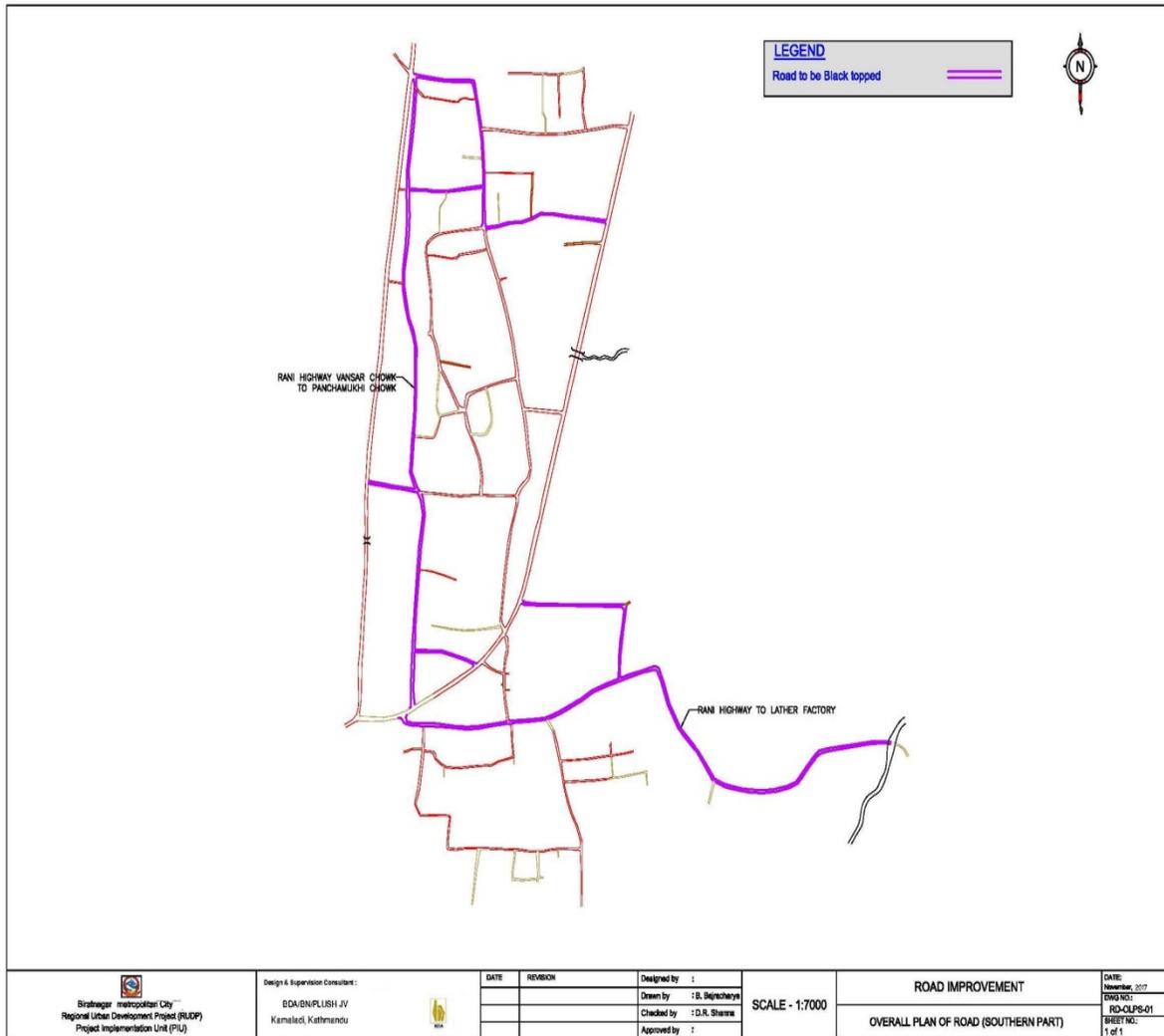


Figure 4b: Overall Layout Plan of Road Improvement Networks (Southern part/rani area)



SALIENT FEATURES OF CONTRACT PACKAGE - RUDP/ICB/BRT/2

General Features	
Name of Project	Regional Urban Development Project(RUDP)
Executing Agency	Government of Nepal, Ministry of Urban Development Department of Urban Development and Building Construction (DUDBC)
Implementing Agency	Biratnagar Metropolitan City, Biratnagar
Funded By	Asian Development Bank & Government of Nepal
Components	Construction and Completion of Sewerage, Drainage, Road, Footpath and Road furniture works
Contract No.	RUDP/ICB/BRT/2
Location	Biratnagar Metropolitan City, Biratnagar
Consultant	Building Design Authority (P) LTD in Joint Venture With B.N. consultancy Pvt and PLUS Engineers and Architects (P) Ltd Kathmandu.
Contractor	ZHONGHENG Construction Group International Engineering co Ltd. Beijing, China.
Date of Commencement	2nd November 2017
Completion Date	1st November 2019
Contract Amount including PS and VAT	NRs. 2,611,092,249.63
Physical Progress	Construction works are under progress. Overall physical progress till June 2018 is 24.40%

a. Environmental category of Subprojects

12 The project is environmental improvement project, and mainly constitutes works on sewerage/ drainage improvement works Road works and design for Integrated Solid Waste Management in BMC besides others. As per ADB Safeguard Policy Statement (SPS), 2009 on Environmental Assessment requirements, this project is classified as Environment Category B.

13 According to GoN's Environmental Protection Rules, 2054 BS, schedule -1, IEE is required for Operations of Sewerage Schemes under Schedule 1.h.2.e (Pertaining to Rule 3). IEE report was approved by MoUD on May 14, 2013.

14 The Inception report on Integrated Solid Waste Management has already been prepared and submitted to PIU.

b. Project Safeguard Team

15 A Safeguard Desk (SD) of 4 members has already been formed to monitor the overall project's safeguard issues. The details of the safeguard team is as follows:

Name	Designation/ Office	Email Address	Contact Number	Roles
PIU				
Mr. Bharat Kumar Neupane	Project Manager/ Biratnagar Metropolitan City	stiueip.brt@gmail.com	9852026869	Overall management and monitoring of the project activities
Mr. Punam Kumar Dahal	Social Safeguard Officer/Birat nagar Metropolitan City	punamkdahal@yahoo.com	9852022729	Monitoring the Issues of social safeguard, GESI and resettlement of the project, check and monitoring the safeguard activities of contractor and consultant
Consultants				
Mr. Prakash Bhakta Shrestha	Social Safequard Expert/ DSC	pbs026@gmail.com	9841329719	Monitoring the Issues of social safeguard, GESI and resettlement of the project, Prepare

				Social Monitoring Report and resettlement plan and check and monitor the safeguard activities of the contractor
Mr. Dwarika Phuyal	Environmental Safeguard Expert/ DSC	phuyaldwarika@gmail.com	9851086137	Monitoring the Issues of environmental safeguard of the project, Prepare Environmental Monitoring Report(EMR) check and monitor the safeguard activities of the contractor.

c. Overall project and sub project progress and status

16 The Overall Project Progress till the month of June is 24.4%. The progress till June, 2018 is as shown in table:

The physical progress till June 2018

S No	Sub Project Components	Progress % (as end of May)
1	Road and Lane Rehabilitation with Asphalt	18.91%
2	Sewer Line	39.95%
3	Storm Drain	81.18%
4	Road Side Drain	55.90%
5	Design of Integrated Solid Waste Management (ISWM)	Inception Report as well as Stakeholder's Analysis, Communication Strategy and Consultation Plan has already been submitted. Due to Social Problem, Progress on design has been hindered.
6	Overall Physical Progress	24.4%.

1.Drainage and sanitation

i) Sewer Lines

Detailed Surveying works for construction has been completed after identifying the all sewer lines and construction work is under progress. The total length of sewer lines is 20.08Km. Laying of RCC Hume pipe as well as HDPE has been started to accelerate the progress.

ii) Storm Water Drainage

Layout for foundation and construction of drainage is under progress. Total length of 652.89m. storm water drainage has been proposed.

2. Road and Lanes

17 Similarly, Construction and upgrading of roads and lanes with road side drains are ongoing. The total length of proposed road sections is 73.86 Km. Further the construction of road side drain in almost Road Sections are under progress. Similarly Pavement works (laying of base and sub base with asphalt concrete) in those road sections are also under progress. The total length of road side drain is 26.05 Km.

3. Street Light

18 Supply and installation of solar street light including pole, battery is in the contract of length 1.0km not yet sorted.

4. Integrated Solid West Management

19 The inception report as well as Stakeholder's Analysis, Communication Strategy and Consultation Plan for Integrated Solid Waste Management (ISWM) has been already submitted to the PIU but due to Socio Environment Problem such as unclear/uncertain of ISWM site (Demarcation of land bound any at site.) The Engineer could not proceed the further work of design as per TOR hindering the Progress.

Description of subprojects (package wise) and status of implementation:

Package Number	Component s/List of Works	Contract Status (specify if under bidding or contract awarded)	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M)	If On-going Construction	
				Physical Progress	Expected Completion Date
	Sewer lines	Contract awarded	On-going Construction	Construction under progress (39.95%)	1 st November 2019
	Storm Water Drainage	Contract awarded	On-going Construction	Construction work under progress (81.18%).	1 st November 2019

	Roads and Lanes	Contract awarded	On-going Construction	Road pavement with asphalt concreting under progress (18.91%)	1 st November 2019
	Street light	Contract awarded	Not yet	-	1 st Nov 2019
	ISWM	Contract awarded	Not yet, Inception report submitted	-	12 months from Commencement Date for ISWM.

III. COMPLIANCE STATUS WITH NATIONAL/STATE/LOCAL STATUTORY ENVIRONMENTAL REQUIREMENTS

Table: Compliance Status

Package Number	Sub project name	Statutory Environmental Requirements	Status of Compliance	Action Required	Specific Condition that will require environmental monitoring as per Environmental Clearance, Consent/Permit to establish
RUD P/ICB /BRT/ 2	Sewerage and Drainage Networks, and Road & Lane Improvement	As per ADB guidelines on Environmental Assessment requirements, this project is classified as Environment Category B, and therefore Initial Environmental Examination (IEE) has to be done. GoN's Environmental Protection Regulations (1997) also stipulate that an IEE is necessary. The project is environmental improvement project, and mainly constitutes works on sewerage/ drainage improvement works in BMC besides others. According to Environmental Protection Regulation, 2054 BS, IEE is required for Operations of Sewerage Schemes under Schedule 1 (Pertaining to Rule 3).	Complied	IEE already approved by MoUD on May 14, 2013	

IV. COMPLIANCE STATUS WITH ENVIRONMENTAL MANAGEMENT PLAN

a. Compliance Status

20 The IEE report and Site Specific EMP as a part of Contract document have already been approved. The monitoring of sub project components under implementation has been carried out. The contractor has been mobilized since 2nd November, 2017 and construction work is under progress.

Compliance Status of IEE and EMP:

Package Number	Final IEE based on Detailed Design				Site-specific EMP (or Construction EMP) approved by Project Director?(Yes/No)	Remarks
	Not yet due (detailed design not yet completed)	Submitted to ADB (Provide Date of Submission)	Disclosed on project website (Provide Link)	Final IEE provided to Contractor/s (Yes/No)		
RUDP/I CB/BRT/ 2	Final IEE approved on May 14, 2013	Yes	https://www.adb.org/.../36188-023-iee-07	Yes	Yes	

21 The internal environmental monitoring activity focuses on the current status of implementation of the environmental safeguard measures, effectiveness in implementation and provision of feedbacks and suggestions for the full compliance with ADB Environmental Safeguard Policy and GoN rules and regulations.

The EMR therefore is necessary to know the status of safeguard measures implementation and to recommend the corrective action for full compliance of safeguard measures.

22 For the contract package there is a provision of Accident Prevention Officer as a contractor's person for environmental safeguard. The previously appointed Accident Prevention Officer Mr. Dhiraj Sardar was absent since May 2018 and DSC already instructed contractor to appoint a new Accident Prevention Officer immediately to look after the environment, health and safety issues at site.

b. Summary of Environmental Monitoring Activities for the Reporting Period

Impacts	Mitigation Measures	Parameters monitored	Method of monitoring	Location of Monitoring	Date of monitoring conducted	Monitored by
Design Phase						
Pre -construction phase						
No such impact is anticipated as the works involve only about review of detailed design, site investigation, detailed survey etc.						
Construction Phase						
Deterioration of air quality, increase in dust/suspended particulate matters	-Sprinkling of water on road surface and across diversion two to three times a day or as required -Cover stockpiled construction materials with tarpulin -Provision of dust masks to workers	Dust emission Frequency of Sprinkling of water Use of dust preventive mask by workers	Observation Observation	Construction Site Construction Site	May 30-31, June 01, 2018	Environmental Safeguard Expert

July,2018

<p>Inconvenience to pedestrians and vehicles</p> <p>Issue of management of excavated surplus</p> <p>Insufficient number of labours</p>	<p>-Plan transportation route</p> <p>-Inform public about the nature and duration of construction</p> <p>-Do not block public road and pedestrian footpath</p> <p>-Provide diversion with proper traffic sign boards</p> <p>Place precast slab cover immediately as early as possible on completion of construction of side drain</p> <p>Immediate back fill of sewer line/side drain after laying of sewer lines and constructing road side or/and storm drain,</p> <p>-Minimize the period of construction by increasing workers.</p>	<p>Transportation Plan and schedule of working</p> <p>Proper diversion</p> <p>Traffic signs and barricades</p> <p>Road side drain cover</p> <p>Proper excess surplus management</p> <p>No. of labours</p>	<p>Observation</p> <p>Observation</p>	<p>Construction Site</p> <p>Construction Site</p>	<p>May 30-31 and June 01, , 2018</p>	<p>Environmental Safeguard Expert</p>
<p>Occupational Health and Safety Issues</p> <p>Accidents and Injuries</p>	<p>Implement a site Health and Safety Plan</p> <p>-Provide adequate Personnel Protective Equipment (PPE) to workers (helmets, boots, gloves and masks etc.) to workers</p>	<p>Provision of PPE on site</p>	<p>Observation</p>	<p>Construction Site</p>	<p>May 30-31, and June 01 , 2018</p>	<p>Environmental Safeguard Expert</p>
<p>Operation Phase</p>						
<p>Construction phase under progress</p>						

c. Compliance Status with the Environmental Management and Monitoring Plans
Overall Compliance with EMP

No. Sub-Project Name	EMP Part of Contract Documents (Y/N)	EMP Being Implemented (Y/N)	Status of Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfactory)	Action Proposed and Additional Measures Required
Sewerage and Drainage Networks, Road & Lane Improvement	Y	Y	Satisfactory	

V. APPROACH AND METHODOLOGY FOR ENVIRONMENTAL MONITORING OF THE PROJECT

23 This Environmental Monitoring Report has been prepared based on the Environmental Management Plan (EMP). Contractor submits regularly monthly report along with Site-specific Environmental Monitoring Checklist to DSC. The DSC will check and verify the reports whether or not the EMP complied. The contractor nodal person (Accident Prevention Officer) who is involved in looking over health, safety and environmental issues and fills monitoring checklist.

A copy of the sample site specific monitoring checklist is attached in Annex 1.

Besides this, other major activities undertaken by the Environmental Specialist in ensuring environmental compliance and monitoring are listed as follows;

Desk review: National policies and legislations relevant to the projects sub-components were reviewed timely. Site specific Environmental Monitoring Checklist was prepared and used to note the status of project activities and EMP compliance.

Field Work: Potential environmental impacts identified by the contractors and the suggested mitigation measures' compliance or non-compliance mentioned in the Site-specific Monitoring Checklist was validated through field observations every month by the DSC.

Interaction and consultation with the local community and other stakeholders: A Safeguard Desk was established in the project for effective planning, monitoring and follow up of all environmental, social development/ safeguard issues including the resettlement plan. It was started as a functional mechanism consisting of PIU and DSC. The desk consists of the PM and Social Safeguard Officer of PIU, Environmental and Social Safeguard Experts of DSC.

The desk will review, update and discuss the progress, issues, constraints and challenges of social and environmental aspects, Community Development Program and implementation of resettlement plan as well as monitoring of social development activities.

The Environment Expert of DSC also has made regular field monitoring visits to the project site, interact with the Contractor and verify that the mitigation activities are being carried out as required.

Labours and other Work-force are questioned each time during field visit about the environmental safeguard measures they are taking and materials being provided by the contractor along with direct observation of the work force camps for accommodation and the quality of water supply, hygiene and sanitation.

DSC prepares Semi-annual environmental monitoring reports and submits to PIU, PMC and ADB after reviewing the Contractor's reports.

VI. MONITORING OF ENVIRONMENTAL IMPACTS ON PROJECT SURROUNDINGS

24 Dust Pollution was noticed as a major problem in the initial stage of improvement of roads and lanes because of storage of construction materials like sub-base course and base course, other construction materials and excavated spoilage along roadside for a long time. Movement of vehicles over those materials and unpaved road surface within project area cause trouble of dust emission and air pollution.

25 To minimize it, the contractor is instructed to store debris and materials properly when stored along roadside with the intention of reuse of the same immediately in filling and laying as road surface course and compacting with the use of sufficient water. Water spray should be continued at least two to three or more during the day as required.

There are no data with the Contractor on monitoring of environmental impacts on surrounding (ambient air, water quality and noise levels), which is reported to have not been performed.

26 Sign boards with barricades were installed at construction sites, however these are not sufficient. Therefore the contractor is requested to install adequate signboards with safety information, barricade and caution tape for demarcation of project site and its enclosure. Safeguard tools like helmets, gloves, boots and masks have not been adequately used by the labours.

Similarly constructed road side drain left open at few road sections, where there may be problem for pedestrian and may chance of falling of pedestrian into drain. Therefore contractor instructed to cover the open drain immediately with slab cover.

VI.GRIEVANCE REDRESS MECHANISM

27 The subproject will utilize the GRM proposed in CRIPPF of RUDP to hear grievances and concerns raised from affected persons and project beneficiaries during construction of the project.

28 A Local/Metropolitan level grievance redresses committee (GRC) comprising 7 members is formed to receive grievances filed in relation to RUDP implementation in BMC. The Mayor of BMC is the chairperson of the GRC with CAO of BMC and Project Manager as member and chief, social development of PIU as member secretary of the committee. This committee has been effectively addressing grievances and concerns raised by the concerned stakeholders including project beneficiaries. The GRC composition is presented in the below 3.

Table 3: Composition of GRC for RUDP

Name	Designation	Portfolio
Mr. BhimPrasad Parajuli	Mayor, Biratnagar Metropolitan City Office	Chairperson
Ms. Indira Karki	Deputy mayor, Metropolitan City Office	Member
Mr. Pradip Kumar Niraula	CAO, Biratnagar Metropolitan City Office	Member

		caution tape, sign boards at construction sites.		
2	Dust emission and air pollution	Sprinkling of water has been carried out by contractor on road surfaces but not sufficient, Increase frequency of sprinkling water on construction sites and nearby other unpaved public roads used by transporting vehicles.	Contractor	Partially complied.
3	At few road sections, constructed side drains found open	Place immediately the drain cover slab in every completed drain sections	Contractor	Partly complied

Annex 1: Photograph

Annex 1: Photographs



Photo 1: Sign board and barricade in Road section after laying of base course and making ready for asphalt concreting



Photo 2: Open Road Side Drain at DSP road section



Photo 3: Road section with drain cover at DSP road section



Photo 4: Labour working at Storm drainage at Chyangbari



Photo 5: Laying of Sewrerage line along Hanuman Das road section



Photo 5: Labour camp(CGI sheet) at Asphalt plant area (Rani) with ceiling fan, mosquito net and solid floor

Annex 2:

1. Environmental Monitoring Checklist Format
2. Meeting of Safeguard Help Desk

**1. Environmental Monitoring Format
Regional Urban Development Project(RUDP)/Biratnagar**

Name of SubProject:RUDP/ Biratnagar

Contract Package: RUDP/ICB/BRT/02

Sub-project Component: Road Lanes Improvement/ Sewerage Drainage

Month:June 2018

Checklist

S.No	Activity	Description/Present Status (Compliance/Partially Compliance/Non Compliance)	Remarks/ Corrective actions for Non-Compliance
1 1.1 1.2	Training Health, Safety and EMP trainings and awareness Others awareness and skill trainings	Awareness training organised No	Contractor organized 2day Awareness Training on March 3 and 4
2 2.1 2.2 2.3	Occupational health and safety Insurance for workers Personal Protective Equipment (PPE) provided to labours and are using (helmet, face masks, muffles, gloves, boots, jacket, goggles etc.) Public notification Safety and warning signs and informative signboards in working sites for work safety	Yes Yes (distributed to labour but partially used) Partially complied	Enforce contractor to fully use of PPE Enforced to fully complied Enforced to fully complied

2.4	Use of barricades, caution tape and flag	Partially complied	
3	Camp site management		
3.1	Location		Enforce to place first aid kit in working site
3.2	First aid facilities available at camp and worksites	Yes/Partly complied	
3.3	Drinking water supply and sanitation facilities/ pit latrines	Yes (Water quality not tested)	Enforce to test water quality prior to use for drinking NDWQS 2062
	Waste Disposal and Management facilities	No (No waste management provision)	Provide separate Bins to collect biodegradable and non bio-degradable waste.
3.4	Type of fuel used for cooking	LPG	
4	Spoil and Construction material Management		
4.1	Cut and fill balance maintained or not, Reuse of spoil materials	Reused in Backfilling	Instructed contractor to use spoil in backfilling immediately and manage excess surplus safely at specified location
4.2	Use of safe spoil disposal locations	Partly compliance	
4.3	Disturbance to Pedestrian and traffic movement,	Partly installed drain cover	Place immediately drain cover as drain construction completes
		N/A	
4.4	Use of private land and agreement with land owners		
5	Air,NoiseandWaterPollution		
5.1	Dust emission and Noise pollution sites	Water has been sprinkled to minimize dust pollution but not enough	Instructed to increase the frequency of sprinkling water
5.2	Water quality monitoring resultand locations		
5.3	Blockage of natural drainages,waterlogging,drain water discharge into farm land/risky areas	No water quality test	Contractor instructed to test immediately

		No	
6	Quarryingofconstructionmaterials and Plants Installment		
6.1	Quarry/borrow operation sites	No	
6.2	Crusher plant and Asphalt plant operation restoration	Yes	Asphalt plant is in Operation in Rani
7	Impact/Disruption of Private properties		
7.1	Building structures	No	
7.2	Other utilities	No	
8	Impact/disruption of public infrastructures		
8.1	Irrigation canal	No	Contractor instructed to repair other remaining part immediately
8.2	Water supply pipe	Disturbed and relocation of pipeline is on going	
8.3	Access road	No (Traffic diversion with sign board)	Relocation of poles also under progress
8.4	Electric/Telephonepole	Poles within RoW	
8.5	Others		
9	Sites for cultural and religious values		
9.1	Cultural an dreligious sensitive spots (if any)	N/A	

10	Forest and vegetation		
10.1	Number of trees removal	N/A	
10.2	No of tree plantation (Roadside)	N/A	
11	Accident cases and records	No cases of accident	
12	Employment to local people		Record of labour maintained
12.1	Men and women	Male-429 Female-15,	
12.2	Child labour (if any)	No	
13	Establishment of Safeguard desk and meeting	Yes	Meetings have been conducted regularly.
14	Grievances from local people and addressed	Yes	GRM recorded and addressed