

ORIGINAL



Building Design Authority (P) Ltd

in joint Venture with

B.N. Consultancy Pvt. Ltd and

PLUSH Engineering & architects (P) Ltd Kathmandu.

Monthly Progress Report

Regional Urban Development Project (RUDP)

Project Implementation Unit

Biratnagar, Nepal



September 2019

Biratnagar Metropolitan City (BMC), Nepal

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EXECUTIVE SUMMARY

This Project Monitoring Report mainly covers the Progress achieved in the component of Regional Urban Development Project (RUDP) in Biratnagar Metropolitan City, Nepal. The information has been provided in the following Chapters are mentioned below:

- 1. Introduction/ Background-** It provide brief Account on the Project and its Background stating why, how and when the Project was started in Biratnagar Metropolitan City.
- 2. Salient Feature of Contract Package: RUDP/ICB/BRT/2-** It provides brief Account of Contract Data with Major components of works to be carried out.
- 3. Sub Project Components-** It provides a brief Account on the various Sectors of the Project component summarizing the respective Progress such as Sewer Line, Storm Water Drain, Road side Drain, Roads and Lanes and Electrification Work if any. This Chapter further covers Environment Mitigation Measures and Social Safeguard measures.
- 4. Objective and Scope of the Works-** This Chapter briefly describes the expected output of the Project and Scope of Consultant regarding execution of Work.
- 5. Progress of Sub – Project Components-** This Chapter comprises the status of Work stating what kind of works are under Progress and how much Progress has been achieved till date. It further elaborates on the status of actual achievement versus the Targeted achievement till date. Sometimes, the project gets delayed due to unforeseen obstacles which are rampant in the case of Nepal. Such events are also enlisted to clarify the reason for delay in the project.
- 6. Details of Pre Cast Activities-** In the urban area, as ongoing projects creates a lot of disturbances and difficulties in the life of the people living in the project area, the work has to be conducted in the speedy manner to finish it as soon as possible. Precast of the project components are the best alternative to overcome this issue and details of precast activities are provided in this chapter.
- 7. Contractor’s Manpower and Contractor’s Equipment-** Chapter 7 and Chapter 8 deal with summary of Manpower and Equipment respectively stating whether Resources owned by the Contractor are sufficient for the execution of Contract.

1. PROJECT DESCRIPTION

1.1. INTRODUCTION/BACKGROUND

GoN has negotiated loan with Asian Development Bank for the Regional Urban Development Project (RUDP) in Nepal. The RUDP, in the line with ADB's water and urban operation plans, will construct and upgrade urban infrastructure in eight towns in the Terai Region of Nepal, improve operational effectiveness of these eight municipalities. The project will also build institutional capacity of DUDBC for urban planning, project planning and project preparation in order to proactively shape urbanization in Nepal and implement the National Urban development strategy. 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 for Biratnagar Municipality. Building Design Authority (P) Ltd (Nepal), B.N. Consultancy Pvt. Ltd and PLUS Engineers & Architects (P) Ltd Kathmandu and have entered for a Contract of Consulting Services with Regional Urban Development Project (RUDP), Project Implementation Unit (PIU), Biratnagar Metropolitan City on 28th October 2017.

Regional Urban Development Project (RUDP) the Department of Urban Development and Building Construction (DUDBC), under the Ministry of Urban Development (MUD) through the Government of Nepal (GoN) has received the loan from Asian Development Bank (ADB) Loan 47252-NEP.

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 Regional Urban Development Project (RUDP) is forward to promote healthy cities by creating healthier urban environments and was formulated under the PPTA 2010.



2. CONTRACT DATA: - 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 |
| Package | 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. |
| Date of Sign of Design and Supervision Consulting Service | 28th August 2017 |
| Date of Commencement of Design and Supervision Consulting Service | 6th September 2017 |
| Date of Completion | 5th September 2020 |
| Contractor | ZHONGHENG Construction Group International Engineering Co Ltd. Beijing, China. |
| Date of Agreement Made | 10 th October 2017 |
| Date of Commencement | 2 nd November 2017 |
| Date of Completion | 1 st November 2019 |
| Contract Amount including PS and VAT | NRs. 2,611,092,249.63 |
| Contract Amount including PS and VAT (Corrected) | NRs. 2,611,088,390.60 |
| Progress | |
| Road Rehabilitation (Asphalt) | 52.34% |
| Sewer Line | 88.73% |
| Storm Drain | 100.00% |
| Road Side Drain | 114.50% |



| General Features | |
|---|---|
| Integrated Solid Waste Management (ISWM) Design | Inception Report as well as Stakeholder's Analysis, Communication Strategy and Consultation Plan for Integrated Solid Waste Management (ISWM) has already been submitted. Due to Socio Environment Problem, Progress of Integrated Solid Waste Management (ISWM) design has been hindered. |
| Physical Progress up to date | <p>With respect to Revised Work Program-01: Planned : 91.35%, Actual : 78.50%; Lead(+) or Lag(-) by (-) 12.85% Lag</p> <p>Physical progress lagging due to unseasonal monsoon, due to delay in relocation of electrical poles, shifting of telecom poles on time by Nepal Telecom (NTC) and unclear Right of Way (RoW), etc.</p> |
| Financial Progress up to date (<i>on the basis of IPC forwarded for disbursement</i>) | <p>In Percentage: 65.60%, In Figure: NRs. 1,712,795,677.24 (including VAT and PS) up to IPC – 11.</p> <p>In Words: NRs. One Billion Seven Hundred Twelve Millions Seven Hundred Ninety Five Thousand Six Hundred Seventy Seven and Twenty Four Paise Only.</p> |

3. SUMMARY OF PROGRESS STATUS OF ALL MAJOR COMPONENTS

| S. No. | Description | Unit | BoQ Quantity | Progress up to date | Remaining | Progress Status expressed in (%) | Remarks |
|----------|--------------------------|------|--------------|---------------------|-----------|----------------------------------|---------|
| 1 | Sewer Line | | | | | | |
| a | HDPE/RCC | m | 20,082.00 | 17,818.50 | 2,263.50 | 88.73% | |
| b | Manhole | No. | 685.00 | 549.00 | 136.00 | 80.15% | |
| c | Sewer Inlet | No. | 1,010.00 | 604.00 | 406.00 | 59.80% | |
| d | House Connection | No. | 3,784.00 | 1,449.00 | 2,335.00 | 38.29% | |
| 2 | Storm Water Drain | | | | | | |



| S. No. | Description | Unit | BoQ Quantity | Progress up to date | Remaining | Progress Status expressed in (%) | Remarks |
|--------------------------|-----------------|------|--------------|---------------------|------------|----------------------------------|------------------------|
| a | RCC Drain | m | 652.80 | 585.00 | 0.00 | 100.00% | Revised Length =585m |
| b | Piles | No. | 132.00 | 138.00 | 0.00 | 100.00% | Exceeded 6 Nos. Piles. |
| 3 Road | | | | | | | |
| a | Subgrade | m | 73,860.00 | 50,971.31 | 22,888.69 | 69.01% | |
| b | Sub base | m | 73,860.00 | 50,642.21 | 23,217.79 | 68.57% | |
| c | Base | m | 73,860.00 | 43,352.42 | 30,507.58 | 58.70% | |
| d | Prime | m | 73,860.00 | 38,657.36 | 35,202.64 | 52.34% | |
| e | Asphalt | m | 73,860.00 | 38,657.36 | 35,202.64 | 52.34% | |
| 4 Road Side Drain | | | | | | | |
| 4 | Road Side Drain | m | 26,050.00 | 29,827.19 | (3,777.19) | 114.50% | Exceeded |

3.1. SUB PROJECT COMPONENTS

3.1.1. SEWER LINES

Trunk Line T1 & T2 were already completed in STIUEIP (Secondary Town Integrated Urban Environmental Improvement Project) and remaining part of sewer lines in T4 completed and T3 have been identified and necessary survey and construction works were performed, almost all the lines were completed except some secondary sewer lines of T3. Details of proposed sewer lines are as below: -



Table 1: PROPOSED ALL MAJOR COMPONENTS OF THE PROJECT

| S. No. | Description | Unit | Original Quantity |
|---------------|---|-------------|--------------------------|
| 1 | Sewerage Pipe Supply and Installation | m | 20,082.00 |
| | Reinforced Concrete Pipe laying and jointing | | 2241.00 |
| | Line T2 (Secondary) | m | 206.00 |
| | Line T3 (Trunk) | m | 1905.00 |
| | Line T4 (Trunk) | m | 130.00 |
| | HDPE laying and jointing | m | 17,841.00 |
| | Line T1 (Secondary) | m | 1,825.00 |
| | Line T2 (Secondary) | m | 3,927.00 |
| | Line T3 (Secondary) | m | 9,997.00 |
| | Line T4 (Secondary) | m | 2,092.00 |
| 2 | Manhole (Brick / RCC) | no. | 685.00 |
| 3 | Sewer Inlet | no. | 1,010.00 |
| 4 | House Connection | no. | 3,784.00 |
| 5 | Reinstatement of Roads | km | 73.86 |
| 6 | Road side Drain | Km | 26.05 |
| 7 | Storm Water Drain | m | 652.8 |



Table: - 2 PHYSICAL PROGRESS IN SEWER LINES till date

| SN | Description | BoQ | | Up to Pre Month | | This month | | Total to date | | Progress % |
|------------------------|----------------|------------------|----------------|------------------|----------------|------------|----------------|------------------|----------------|------------|
| | | Length (m) | Manhole (Nos.) | Length (m) | Manhole (Nos.) | Length (m) | Manhole (Nos.) | Length (m) | Manhole (Nos.) | |
| Hume Pipe: | | | | | | | | | | |
| 1 | Hume pipe (T2) | 206.00 | 6.00 | 205.00 | 6.00 | | | 205.00 | 6.00 | |
| 2 | Hume pipe (T3) | 1,905.00 | 58.00 | 1,632.50 | 25.00 | | | 1,632.50 | 25.00 | |
| 3 | Hume Pipe (T4) | 130.00 | 4.00 | 130.00 | 4.00 | | | 130.00 | 4.00 | |
| Subtotal in (m) | | 2,241.00 | 68.00 | 1,967.50 | 35.00 | | | 1,967.50 | 35.00 | |
| HDPE Pipe: | | | | | | | | | | |
| 1 | HDPE (T1) | 1,825.00 | 57.00 | 1,743.20 | 54.00 | | | 1,743.20 | 54.00 | |
| 2 | HDPE (T2) | 3,927.00 | 147.00 | 3,153.40 | 121.00 | | | 3,153.40 | 121.00 | |
| 3 | HDPE (T3) | 9,997.00 | 316.00 | 8,902.50 | 283.00 | | | 8,902.50 | 283.00 | |
| 4 | HDPE (T4) | 2,092.00 | 68.00 | 2,051.90 | 56.00 | | | 2,051.90 | 56.00 | |
| Subtotal in (m) | | 17,841.00 | 588.00 | 15,851.00 | 514.00 | | | 15,851.00 | 514.00 | |



| SN | Description | BoQ | | Up to Pre Month | | This month | | Total to date | | Progress % |
|--------------|-------------|------------------|----------------|------------------|----------------|------------|----------------|------------------|----------------|---------------|
| | | Length (m) | Manhole (Nos.) | Length (m) | Manhole (Nos.) | Length (m) | Manhole (Nos.) | Length (m) | Manhole (Nos.) | |
| Total | | 20,082.00 | 656.00 | 17,818.50 | 549.00 | | | 17,818.50 | 549.00 | 88.73% |

| SN | Description | BoQ (Nos.) | Up to Pre Month | This month | Total to date | Progress % |
|----|------------------|------------|-----------------|------------|---------------|------------|
| 1 | Sewer inlet | 1,010.00 | 595.00 | 9.00 | 604.00 | 59.80% |
| 2 | House connection | 3,784.00 | 1,307.00 | 142.00 | 1,449.00 | 38.29% |



3.1.2. STORM WATER DRAIN

The storm water drain CN2, and CN3 has been provisioned in Regional Urban Development Project (RUDP). The Contractor has already completed the works except some minor works at inlet and outlet which have been proceeding soon. The detail of the progress is shown in the table:

Table: 3 PROPOSED and PHYSICAL PROGRESS in STORM WATER DRAINS till date.

| S N | Name of Drain | Length in m | | | | | Type of Drain | Work Completed | | | | Length of Covered Drain in m | Remarks |
|--------|------------------------------------|---------------------|---------|--------------|---------------|--------------------|---------------------|----------------|----------------|-----|----------------|--|------------------------------|
| | | Origin al | Revised | Progress | | Cum ulativ e | | Brick | | RCC | | | |
| | | | | Previo us | This Month | | | m | m ³ | m | m ³ | | |
| 1 | CN2-CN3 (Chyangh Baari Nala) | 652.89 | 585.00 | 585.00 | | 585 | RCC, closed | | | 585 | | 585 | completed |
| 2 | CN2-CN3 (Chyangh Baari Nala) | 132 Nos piles | 138 | 138 | | 138 Nos. | | | | | | | Piling works completed |

3.1.3. ROADS AND LANES

Most of the roads/lanes in Biratnagar are in a poor state due to lack of periodic maintenance, and need improvement where as some of the roads are graveled and would benefit from upgrading. In the areas where drainage and sewerage works are proposed there will be significant impact on the existing roads. The Project has considered on design based on reinstatement, rehabilitation and upgrading of existing roads length 73.86 km. Some of the roads of the project has been completed and some of them are in the process of being upgraded.

Out of 73.86 km. about 50.64 Km. has been attempted for Sub Base but due to start unseasonal monsoon, asphalt work is delaying.

About 38.65 km. asphalt work is completed. The summary of physical progress is presented below: -



Table No:-4 PROPOSED and PHYSICAL PROGRESS of pavement works till date

| SN | Road Number | Name of Road | Length in m | | | Work Completed | | | | | Remarks |
|----|-------------|--------------------|--------------------|------------|----------|----------------|----------|----------|--------|-------|---------|
| | | | Progress | | Total | Sub-base | Base | Asphalt | RCC | Paint | |
| | | | Previous (Revised) | This Month | | m | m | m | m | m | |
| 1 | R42 | Bhagwati Marg | 218.00 | | 218.00 | 218.00 | 218.00 | 218.00 | | | |
| 2 | R5 | College Road | 650.00 | | 650.00 | 650.00 | 650.00 | 544.50 | | | |
| 3 | B2 | Gauri Shankar Marg | 2,152.00 | | 2,152.00 | 2,152.00 | 2,152.00 | 2,152.00 | 210.00 | | |
| 4 | R65 | Satghumti Marg | 320.00 | | 320.00 | 320.00 | 320.00 | | | | |
| 5 | R107 | | 215.00 | | 215.00 | 215.00 | 215.00 | | | | |
| 6 | R107 a | | 50.00 | | 50.00 | 50.00 | 50.00 | | | | |
| 7 | R104 | VIP Marg | 273.00 | | 273.00 | 273.00 | 273.00 | 273.00 | | | |
| 8 | R8 | Madhumara Marg | 600.00 | | 600.00 | 600.00 | 600.00 | 582.00 | | | |



| SN | Road Number | Name of Road | Length in m | | | Work Completed | | | | | Remarks |
|----|-------------|------------------|--------------------|------------|----------|----------------|----------|----------|-----|----------|---------|
| | | | Progress | | Total | Sub-base | Base | Asphalt | RCC | Paint | |
| | | | Previous (Revised) | This Month | | m | m | m | m | m | |
| 9 | B1 | Kanchan Marg | 1,173.00 | | 1,173.00 | 1,173.00 | 1,106.00 | 1,106.00 | | 1,106.00 | |
| 10 | R21 | Pratibha Marg | 1,330.00 | | 1,330.00 | 1,330.00 | 1,330.00 | 1,330.00 | | 1,012.80 | |
| 11 | B3 | Keshaliya Marg | 1,574.00 | | 1,574.00 | 1,574.00 | 1,574.00 | 1,574.00 | | | |
| 12 | S13 | | 1,617.00 | | 1,617.00 | 1,617.00 | 1,417.00 | 1,417.00 | | 1,812.60 | |
| 13 | R12 | | 880.00 | | 880.00 | 880.00 | 880.00 | 740.00 | | | |
| 14 | R12 | Kanchha Dai Marg | 900.00 | | 900.00 | 900.00 | 900.00 | 289.50 | | | |
| 15 | Rani site | Rani | 4,023.00 | | 4,023.00 | 4,023.00 | 4,023.00 | 4,023.00 | | | |
| 16 | R16 | Satya Marg | 604.00 | | 604.00 | 604.00 | 604.00 | 604.00 | | | |
| 17 | R26 | Pasang Marg | 654.00 | | 654.00 | 654.00 | 654.00 | 654.00 | | | |
| 18 | R28 | Pustakalaya Marg | 635.00 | | 635.00 | 635.00 | 339.20 | 339.20 | | | |



| SN | Road Number | Name of Road | Length in m | | | Work Completed | | | | | Remarks | |
|----|-------------|-----------------------|--------------------|------------|--------|----------------|--------|---------|-----|-------|---------|--|
| | | | Progress | | Total | Sub-base | Base | Asphalt | RCC | Paint | | |
| | | | Previous (Revised) | This Month | | m | m | m | m | m | | |
| 19 | R27 | Peepal Marg | 734.32 | | 734.32 | 734.32 | 734.32 | 734.32 | | | 639.20 | |
| 20 | R25 | Devi Marg | 580.00 | | 580.00 | 580.00 | 580.00 | 561.70 | | | | |
| 21 | R24 | Prabhat Marg | 518.15 | | 518.15 | 518.15 | 518.15 | 518.15 | | | | |
| 22 | R37 | Banglamukhi Marg | 477.00 | | 477.00 | 477.00 | 477.00 | 477.00 | | | | |
| 23 | R7 | Manakamana Marg | 542.00 | | 542.00 | 542.00 | 542.00 | 426.87 | | | | |
| 24 | R7 | in between R18 to R27 | 400.00 | | 400.00 | 400.00 | 400.00 | 375.00 | | | | |
| 25 | R30 | Shanti Marg | 123.10 | | 123.10 | 123.10 | 123.10 | 123.10 | | | | |
| 26 | R9 | Fadindra Marg | 119.00 | | 119.00 | 119.00 | 119.00 | 119.00 | | | | |
| | R9 | | | 150.00 | 150.00 | 150.00 | 150.00 | | | | | |
| 27 | S11 | Samrat Marg | 660.00 | | 660.00 | 660.00 | 504.60 | 504.60 | | | 504.60 | |



| SN | Road Number | Name of Road | Length in m | | | Work Completed | | | | | Remarks |
|----|-------------|----------------------|--------------------|------------|----------|----------------|--------|---------|-----|--------|---------|
| | | | Progress | | Total | Sub-base | Base | Asphalt | RCC | Paint | |
| | | | Previous (Revised) | This Month | | m | m | m | m | m | |
| 28 | R22 | Amar Marga | 367.65 | | 367.65 | 367.65 | 367.65 | 367.65 | | | |
| 29 | R29 | Shanti Marg | 684.70 | | 684.70 | 684.70 | 684.70 | 684.70 | | 585.60 | |
| 30 | R36 | Gaurav Marg | 220.00 | | 220.00 | 220.00 | 220.00 | 220.00 | | 440.00 | |
| 31 | R33 | Tarun Marg | 280.00 | | 280.00 | 280.00 | 280.00 | 280.00 | | | |
| 32 | R64 | Satya Narayan Marg | 121.00 | | 121.00 | 121.00 | 121.00 | - | | | |
| 33 | R8 | | 225.00 | | 225.00 | 225.00 | 225.00 | 225.00 | | | |
| 34 | N36 | | 190.00 | | 190.00 | 190.00 | 186.95 | 186.95 | | | |
| 35 | R188 | Shakti Marg | 120.00 | | 120.00 | 120.00 | 120.00 | 120.00 | | | |
| 36 | R2 | Main Road | 2,800.00 | | 2,800.00 | 2,800.00 | 918.20 | 778.20 | | 350.00 | |
| 37 | T3 Line 6A | Pandit Meghnath Marg | 220.00 | | 220.00 | 220.00 | 220.00 | 220.00 | | | |



| SN | Road Number | Name of Road | Length in m | | | Work Completed | | | | | Remarks | |
|----|----------------|------------------|--------------------|------------|--------|----------------|--------|---------|-----|-------|---------|--|
| | | | Progress | | Total | Sub-base | Base | Asphalt | RCC | Paint | | |
| | | | Previous (Revised) | This Month | | m | m | m | m | m | | |
| 38 | T2 Line 24C | Nava Jyoti Marg | 205.00 | | 205.00 | 205.00 | | | | | | |
| 39 | T2 Line 24D | Nava Jyoti Marg | 210.00 | | 210.00 | 210.00 | | | | | | |
| 40 | R63 (DSP Road) | DSP Road | 420.00 | | 420.00 | 420.00 | 395.00 | 395.00 | | | | |
| 41 | R90 | Shakti Marg | 320.00 | | 320.00 | 320.00 | 320.00 | 320.00 | | | 640.00 | |
| 42 | R77 | Arniko Marg | 80.00 | | 80.00 | 80.00 | 80.00 | 80.00 | | | | |
| 43 | R76 | Mitra Marg | 270.00 | | 270.00 | 270.00 | 270.00 | 270.00 | | | 541.20 | |
| 44 | R183 | Nava Jyoti Marg | 240.00 | | 240.00 | 240.00 | 220.00 | 220.00 | | | | |
| 45 | T1 L16B | Xenial Front | 210.00 | | 210.00 | 210.00 | 205.00 | 205.00 | | | | |
| 46 | T1L16A | Xenial South | 180.00 | | 180.00 | 180.00 | 180.00 | 180.00 | | | | |
| 47 | R114 | Dharanidhar Marg | 560.00 | | 560.00 | 560.00 | 560.00 | 560.00 | | | 560.00 | |



| SN | Road Number | Name of Road | Length in m | | | Work Completed | | | | | Remarks |
|----|-------------|----------------------------|--------------------|------------|----------|----------------|----------|----------|-----|----------|---------|
| | | | Progress | | Total | Sub-base | Base | Asphalt | RCC | Paint | |
| | | | Previous (Revised) | This Month | | m | m | m | m | m | |
| 48 | R113 | Kavi Lekh Marg | 740.00 | | 740.00 | 740.00 | 740.00 | 740.00 | | | |
| 49 | R5a | | 54.70 | | 54.70 | 54.70 | 54.70 | 54.70 | | | |
| 50 | Rani site B | | 520.00 | | 520.00 | 520.00 | 520.00 | 520.00 | | | |
| 51 | R3 | Dharamban Marg | 2,233.00 | | 2,233.00 | 2,233.00 | 2,150.30 | 2,150.30 | | 2,080.30 | |
| | R3 | Tinpaini to Puspalal chowk | | | | | | | | 4,000.00 | |
| 52 | R78 | Sombare - Highway | 92.00 | | 92.00 | 92.00 | 92.00 | 92.00 | | | |
| 53 | R84 | West of school | 473.20 | | 473.20 | 473.20 | 236.00 | 236.00 | | | |
| 54 | R85 | Machha Line | 160.00 | | 160.00 | 160.00 | 160.00 | 160.00 | | | |
| 55 | R87 | Mahabir Chowk | 148.00 | | 148.00 | 148.00 | 110.00 | 110.00 | | | |
| 56 | R86 | Petrol pump side -R12 | 200.00 | | 200.00 | 200.00 | 120.00 | 120.00 | | | |



| SN | Road Number | Name of Road | Length in m | | | Work Completed | | | | | Remarks |
|----|-------------|--------------|--------------------|------------|--------|----------------|--------|---------|-----|--------|---------|
| | | | Progress | | Total | Sub-base | Base | Asphalt | RCC | Paint | |
| | | | Previous (Revised) | This Month | | m | m | m | m | m | |
| 57 | R11 | R18/R86 | 281.00 | | 281.00 | 281.00 | 205.00 | 205.00 | | | |
| 58 | N3 | Jatuwa | 117.00 | | 117.00 | 117.00 | 117.00 | 117.00 | | | |
| 59 | N4 | Jatuwa | 168.00 | | 168.00 | 168.00 | 168.00 | 168.00 | | | |
| 60 | R10 | Ram Marga | 292.00 | | 292.00 | 292.00 | 292.00 | 292.00 | | 853.20 | |
| 61 | T2L26F | APF | 55.00 | | 55.00 | 55.00 | | | | | |
| 62 | T2L27 | | 80.00 | | 80.00 | 80.00 | 80.00 | 80.00 | | | |
| 63 | R122 | | 265.55 | | 265.55 | 265.55 | 265.55 | 265.55 | | 497.40 | |
| 64 | N9 | | 220.42 | | 220.42 | 220.42 | 220.42 | 220.42 | | | |
| 65 | R17 | | 365.00 | | 365.00 | 365.00 | 365.00 | 365.00 | | 730.00 | |
| 66 | R18 | | 370.00 | | 370.00 | 370.00 | 370.00 | 180.00 | | | |



| SN | Road Number | Name of Road | Length in m | | | Work Completed | | | | | Remarks | |
|----|-------------|---------------------------|--------------------|------------|--------|----------------|--------|---------|-----|-------|---------|--|
| | | | Progress | | Total | Sub-base | Base | Asphalt | RCC | Paint | | |
| | | | Previous (Revised) | This Month | | m | m | m | m | m | | |
| 67 | N2 | | 75.84 | | 75.84 | 75.84 | | | | | | |
| 68 | T3L6 | Moti marga | 170.00 | | 170.00 | 170.00 | 170.00 | 170.00 | | | | |
| 69 | T3L6 | Elite club - CDO Office | 107.00 | | 107.00 | 107.00 | | | | | | |
| 70 | T3L6 | Balmandir - Ganesh Mandir | 380.00 | | 380.00 | 380.00 | | | | | | |
| 71 | T3L6 | CDO Office front | 49.40 | | 49.40 | 49.40 | | | | | | |
| 72 | T3L6A | Golchha Marga | 220.00 | | 220.00 | 220.00 | 220.00 | 220.00 | | | | |
| 73 | T3L23 | Madhumara road | 541.00 | | 541.00 | 541.00 | 541.00 | 541.00 | | | 358.40 | |
| 74 | R45 | Bata road | 505.00 | | 505.00 | 505.00 | 295.00 | 295.00 | | | | |
| 75 | T3L21 | | 400.00 | | 400.00 | 400.00 | 400.00 | 400.00 | | | 774.00 | |
| 76 | N5 | | 70.00 | | 70.00 | 70.00 | 70.00 | 70.00 | | | 122.00 | |



| SN | Road Number | Name of Road | Length in m | | | Work Completed | | | | | Remarks |
|----|--------------|--------------|--------------------|------------|----------|----------------|----------|----------|-----|--------|---------|
| | | | Progress | | Total | Sub-base | Base | Asphalt | RCC | Paint | |
| | | | Previous (Revised) | This Month | | m | m | m | m | m | |
| 77 | T3L39 | | 400.00 | | 400.00 | 400.00 | 245.80 | 245.80 | | 491.00 | |
| 78 | T3L39A | | 130.00 | | 130.00 | 130.00 | 130.00 | 130.00 | | 179.40 | |
| 79 | T3L39B | | 80.00 | | 80.00 | 80.00 | 80.00 | 80.00 | | 117.60 | |
| 80 | R68 - T2L24G | | 220.00 | | 220.00 | 220.00 | | | | | |
| 81 | N10 | | 194.00 | | 194.00 | 194.00 | | | | | |
| 82 | T3L24C | | 170.00 | | 170.00 | 170.00 | | | | | |
| 83 | T3L9 | | 278.00 | | 278.00 | 278.00 | | | | | |
| 84 | R6 | | 1,228.20 | | 1,228.20 | 1,228.20 | 1,228.20 | 1,228.20 | | | |
| 85 | N24 | | 136.00 | | 136.00 | 136.00 | 136.00 | 136.00 | | | |
| 86 | R31 | | 188.70 | | 188.70 | 188.70 | 188.70 | 188.70 | | | |



| SN | Road Number | Name of Road | Length in m | | | Work Completed | | | | | Remarks |
|----|---------------------------|----------------------|--------------------|------------|--------|----------------|--------|---------|-----|-------|---------|
| | | | Progress | | Total | Sub-base | Base | Asphalt | RCC | Paint | |
| | | | Previous (Revised) | This Month | | m | m | m | m | m | |
| 87 | Bindabasini Marga | | 352.28 | | 352.28 | 352.28 | 352.28 | 352.80 | | | |
| 88 | Bhattimode to Hartalihaat | | 166.50 | | 166.50 | 166.50 | 166.50 | 166.50 | | | |
| 89 | R73 | | 217.00 | | 217.00 | 217.00 | 217.00 | 217.00 | | | |
| 90 | R6 | Bata Galli | 269.00 | | 269.00 | 269.00 | 269.00 | 269.00 | | | |
| | R6 | | | 280.00 | 280.00 | 280.00 | 280.00 | 194.80 | | | |
| | R6 | Pratibha chowk to N2 | | 510.80 | 510.80 | 510.80 | 510.80 | 510.80 | | | |
| 91 | R9 (R41-R7) | | 194.80 | | 194.80 | 194.80 | 194.80 | 194.80 | | | |
| 92 | R44 | Thakurbari Road | 357.50 | | 357.50 | 357.50 | | | | | |
| 93 | R102 | Main | 140.00 | | 140.00 | 140.00 | 140.00 | | | | |



| SN | Road Number | Name of Road | Length in m | | | Work Completed | | | | | Remarks | |
|-----|-------------|----------------|--------------------|------------|--------|----------------|--------|---------|-----|-------|---------|--|
| | | | Progress | | Total | Sub-base | Base | Asphalt | RCC | Paint | | |
| | | | Previous (Revised) | This Month | | m | m | m | m | m | | |
| 94 | R102 | Branch | 71.30 | | 71.30 | 71.30 | | | | | | |
| 95 | R103 | | 170.40 | | 170.40 | 170.40 | | | | | | |
| 96 | R32 | | 188.00 | | 188.00 | 188.00 | 188.00 | 188.00 | | | | |
| 97 | T2L18Y | | 116.20 | | 116.20 | 116.20 | 116.20 | | | | | |
| 98 | R20 | | 108.00 | | 108.00 | 108.00 | 108.00 | | | | | |
| 99 | R82 | Everest School | 530.00 | | 530.00 | 530.00 | 530.00 | 530.00 | | | | |
| 100 | T1L5 | | 140.00 | | 140.00 | 140.00 | 140.00 | 140.00 | | | | |
| | T1L5A | | | 533.50 | 533.50 | 533.50 | 533.50 | 275.00 | | | | |
| 101 | T3L23C | Jay Nepal | 220.20 | | 220.20 | 220.20 | 155.00 | 65.20 | | | | |
| 102 | T3L25B | | 195.00 | | 195.00 | 195.00 | | | | | | |



| SN | Road Number | Name of Road | Length in m | | | Work Completed | | | | | Remarks |
|-----|-----------------|--------------|--------------------|------------|--------|----------------|--------|---------|-----|-------|---------|
| | | | Progress | | Total | Sub-base | Base | Asphalt | RCC | Paint | |
| | | | Previous (Revised) | This Month | | m | m | m | m | m | |
| 103 | T3L25C | | 140.00 | | 140.00 | 140.00 | | | | | |
| 104 | R3 | T3 Trunk | 465.00 | | 465.00 | 465.00 | 370.00 | | | | |
| 105 | Nagmandir to R3 | | 55.00 | | 55.00 | 55.00 | 55.00 | 55.00 | | | |
| 106 | R75 | | 130.00 | | 130.00 | 130.00 | 130.00 | 130.00 | | | |
| 107 | R43 | | 250.00 | | 250.00 | 250.00 | | | | | |
| 108 | T219P | | 90.00 | 34.80 | 124.80 | 124.80 | 124.80 | 124.80 | | | |
| 109 | T219Q | | 100.00 | 13.70 | 113.70 | 113.70 | 113.70 | 113.70 | | | |
| 110 | R106 | | - | 130.00 | 130.00 | 120.90 | 120.90 | | | | |
| 111 | T3L12 | | - | 80.00 | 80.00 | 80.00 | 80.00 | | | | |
| 112 | R46 | | - | 340.00 | 340.00 | 200.00 | | | | | |



| SN | Road Number | Name of Road | Length in m | | | Work Completed | | | | | Remarks |
|-----|-------------|--------------|--------------------|------------|--------|----------------|--------|---------|-----|-------|---------|
| | | | Progress | | Total | Sub-base | Base | Asphalt | RCC | Paint | |
| | | | Previous (Revised) | This Month | | m | m | m | m | m | |
| 113 | T3L11E | | - | 180.00 | 180.00 | | | | | | |
| 114 | T3L13D | | - | 70.00 | 70.00 | 70.00 | | | | | |
| 115 | R34 | | - | 157.00 | 157.00 | 157.00 | 157.00 | | | | |
| 116 | T3L13E | | - | 80.00 | 80.00 | 80.00 | | | | | |
| 117 | T3L13K | | - | 154.00 | 154.00 | 154.00 | 154.00 | | | | |
| 118 | R19 | | - | 220.00 | 220.00 | 220.00 | 220.00 | | | | |
| 119 | R41 | | - | 540.00 | 540.00 | 540.00 | 420.00 | | | | |
| 120 | R9B | | - | 90.00 | 90.00 | 90.00 | 90.00 | 83.85 | | | |
| 121 | R67 | | - | 119.40 | 119.40 | 119.40 | 119.40 | | | | |
| 122 | R9A | | - | 109.00 | 109.00 | 109.00 | 109.00 | 109.00 | | | |



| SN | Road Number | Name of Road | Length in m | | | Work Completed | | | | | Remarks |
|-----|--------------|--------------|--------------------|-----------------|------------------|------------------|------------------|------------------|---------------|------------------|---------|
| | | | Progress | | Total | Sub-base | Base | Asphalt | RCC | Paint | |
| | | | Previous (Revised) | This Month | | m | m | m | m | m | |
| 123 | T3L7A | | - | 190.00 | 190.00 | 190.00 | 190.00 | 158.00 | | | |
| | Total | | 46,989.11 | 3,982.20 | 50,971.31 | 50,642.21 | 43,352.42 | 38,657.36 | 210.00 | 18,395.30 | |



Table No:-4.1 Footpath (Work Progress till date)

| SN | Road Number | Type* | Progress in m | | | Footpath | | | Remarks |
|----|-------------|---------------|--------------------|------------|------------|------------|------------------|----------------------------|---------|
| | | | Previous (Revised) | This Month | Cumulative | Length (m) | Avg. Breadth (m) | Quantity (m ²) | |
| 1 | R2 | Precast block | 602.00 | | 602.00 | 602.00 | 1.10 | 662.20 | RHS |
| 2 | R2 | Precast block | 602.00 | | 602.00 | 602.00 | 1.10 | 662.20 | LHS |
| 3 | R29 | Precast block | 320.00 | 10.00 | 330.00 | 330.00 | 0.90 | 297.00 | RHS |
| 4 | R29 | Precast block | 322.00 | 8.00 | 330.00 | 330.00 | 0.90 | 297.00 | LHS |
| 5 | R28 | Precast block | 322.00 | | 322.00 | 322.00 | 0.90 | 289.80 | RHS |
| 6 | R28 | Precast block | 322.00 | 13.00 | 335.00 | 335.00 | 0.90 | 301.50 | LHS |
| 7 | R28 | Precast block | 322.00 | 19.00 | 341.00 | 341.00 | 0.90 | 306.90 | RHS |
| 8 | R21 | Precast block | 365.00 | - | 365.00 | 365.00 | 1.00 | 365.00 | RHS |
| 9 | R21 | Precast block | 765.00 | - | 765.00 | 765.00 | 1.00 | 765.00 | LHS |
| 10 | R78 | Precast block | 75.00 | | 75.00 | 75.00 | 1.20 | 90.00 | RHS |
| 11 | R78 | Precast block | 75.00 | | 75.00 | 75.00 | 1.20 | 90.00 | LHS |
| 12 | R77 | Precast block | 115.00 | | 115.00 | 115.00 | 0.90 | 103.50 | RHS |
| 13 | R77 | Precast block | 115.00 | | 115.00 | 115.00 | 0.90 | 103.50 | LHS |
| 14 | R76 | Precast block | 275.00 | | 275.00 | 275.00 | 0.95 | 261.25 | RHS |
| 15 | R76 | Precast block | 275.00 | | 275.00 | 275.00 | 0.95 | 261.25 | LHS |
| 16 | R75 | Precast block | 160.00 | | 160.00 | 160.00 | 0.95 | 152.00 | RHS |
| 17 | R75 | Precast block | 160.00 | | 160.00 | 160.00 | 0.95 | 152.00 | LHS |



| SN | Road Number | Type* | Progress in m | | | Footpath | | | Remarks |
|----|-------------|---------------|--------------------|------------|------------|------------|------------------|----------------------------|---------|
| | | | Previous (Revised) | This Month | Cumulative | Length (m) | Avg. Breadth (m) | Quantity (m ²) | |
| 18 | R10 | Precast block | 630.00 | 70.00 | 700.00 | 700.00 | 0.95 | 665.00 | RHS |
| 19 | R10 | Precast block | 630.00 | 70.00 | 700.00 | 700.00 | 0.95 | 665.00 | LHS |
| 20 | R31 | Precast block | 175.00 | | 175.00 | 175.00 | 0.95 | 166.25 | RHS |
| 21 | R31 | Precast block | 175.00 | | 175.00 | 175.00 | 0.95 | 166.25 | LHS |
| 22 | R32 | Precast block | 100.00 | 85.00 | 185.00 | 185.00 | 0.30 | 55.50 | RHS |
| 23 | R32 | Precast block | 100.00 | 85.00 | 185.00 | 185.00 | 0.30 | 55.50 | LHS |
| 24 | R33 | Precast block | 285.00 | | 285.00 | 285.00 | 0.90 | 256.50 | RHS |
| 25 | R33 | Precast block | 170.00 | | 170.00 | 170.00 | 0.90 | 153.00 | LHS |
| 26 | R16 | Precast block | 170.00 | | 170.00 | 170.00 | 1.20 | 204.00 | RHS |
| 27 | R16 | Precast block | 170.00 | | 170.00 | 170.00 | 1.20 | 204.00 | LHS |
| 28 | R6 | Precast block | 700.00 | | 700.00 | 700.00 | 1.20 | 840.00 | RHS |
| 29 | R6 | Precast block | 700.00 | | 700.00 | 700.00 | 1.20 | 840.00 | LHS |
| 30 | B1 | Precast block | 490.00 | | 490.00 | 490.00 | 1.20 | 588.00 | RHS |
| 31 | B1 | Precast block | 490.00 | | 490.00 | 490.00 | 3.40 | 1,666.00 | LHS |
| 32 | B2 (2) | Precast block | 715.00 | | 715.00 | 715.00 | 0.59 | 421.85 | RHS |
| 33 | B2 (2) | Precast block | 715.00 | | 715.00 | 715.00 | 1.65 | 1,179.75 | LHS |
| 34 | B2 (1) | Precast block | 131.00 | | 131.00 | 131.00 | 2.60 | 340.60 | RHS |
| 35 | B2 (1) | Precast block | 131.00 | | 131.00 | 131.00 | 0.90 | 117.90 | LHS |



| SN | Road Number | Type* | Progress in m | | | Footpath | | | Remarks |
|----|-------------|---------------|--------------------|------------|------------|------------|------------------|----------------------------|---------|
| | | | Previous (Revised) | This Month | Cumulative | Length (m) | Avg. Breadth (m) | Quantity (m ²) | |
| 36 | B3 | Precast block | 1,300.00 | (630.00) | 670.00 | 670.00 | 0.70 | 469.00 | RHS |
| 37 | B3 | Precast block | 2,201.00 | (1,531.00) | 670.00 | 670.00 | 0.70 | 469.00 | LHS |
| 38 | S11 | Precast block | 112.00 | | 112.00 | 112.00 | 0.95 | 106.40 | RHS |
| 39 | S11 | Precast block | 75.00 | | 75.00 | 75.00 | 1.21 | 90.75 | LHS |
| 40 | Rani | Precast block | 425.00 | | 425.00 | 425.00 | 1.00 | 425.00 | RHS |
| 41 | Rani | Precast block | 425.00 | | 425.00 | 425.00 | 1.00 | 425.00 | LHS |
| 42 | R3 | Precast block | | 250.00 | 250.00 | 250.00 | 1.10 | 275.00 | RHS |
| 43 | R3 | Precast block | | 1,050.00 | 1,050.00 | 1,050.00 | 1.10 | 1,155.00 | LHS |
| 44 | R27 | Precast block | | 400.00 | 400.00 | 400.00 | 1.10 | 440.00 | RHS |
| 45 | R27 | Precast block | | 400.00 | 400.00 | 400.00 | 0.85 | 340.00 | LHS |
| 46 | R26 | Precast block | | 300.00 | 300.00 | 300.00 | 1.23 | 369.00 | RHS |
| 47 | R26 | Precast block | | 285.00 | 285.00 | 285.00 | 1.10 | 313.50 | LHS |
| 48 | R25 | Precast block | | 205.00 | 205.00 | 205.00 | 1.00 | 205.00 | RHS |
| 49 | R25 | Precast block | | 201.00 | 201.00 | 201.00 | 1.00 | 201.00 | LHS |



Table No:-4.2 Road improvement Works (Work Progress till date)

| SN | Description | Unit | Proposed | Total Up to Previous Month | This Month | Total Up to this Month | Progress |
|-----------|--------------------|-------------|-----------------|-----------------------------------|-------------------|-------------------------------|-----------------|
| 1 | Subgrade | m | 73,860.00 | 46,989.11 | 3,982.20 | 50,971.31 | 69.01% |
| 2 | Sub Base | m | 73,860.00 | 46,989.11 | 3,653.10 | 50,642.21 | 68.57% |
| 3 | Base | m | 73,860.00 | 39,579.32 | 3,773.10 | 43,352.42 | 58.70% |
| 4 | Prime/Tack | m | 73,860.00 | 36,192.04 | 2,465.32 | 38,657.36 | 52.34% |
| 5 | Asphalt | m | 73,860.00 | 36,192.04 | 2,465.32 | 38,657.36 | 52.34% |
| 6 | Paint | m | 73,860.00 | 14,395.30 | 4,000.00 | 18,395.30 | 24.91% |



3.1.4. ROAD SIDE DRAIN

Most of the roads under this project for upgrading is without drain or existing drain are in poor condition, on instruction from the employer at various stretches the construction works were ongoing and some of them have been completed. The project has provisioned drain at both sides or one side as per available RoW of the road. The contractor has already started drain works at many locations. The progress for the drain works is listed below:

Table No:-4a PROPOSED and PHYSICAL PROGRESS of Road side drain works till date.

| SN | Road Number | Name of Road | Length in (m) | | | Work Completed | | Remarks |
|----|-------------|--------------------------|--------------------|------------|--------|----------------|-----|---------|
| | | | Progress | | Total | Brick | RCC | |
| | | | Previous (Revised) | This Month | | m | m | |
| 1 | B1 | Kanchan Marg | 90.00 | | 90.00 | 90.00 | | |
| 2 | R29 | Shanti Marg | 256.52 | | 256.52 | 256.52 | | |
| 3 | N36 | | 185.88 | | 185.88 | 185.88 | | |
| 4 | R8 | | 219.83 | | 219.83 | 219.83 | | |
| 5 | R7 | Devi Marg and Pipal Marg | 89.58 | 60.00 | 149.58 | 149.58 | | |
| 6 | R63 | DSP Road | 418.79 | | 418.79 | 418.79 | | |
| 7 | R9 | Baglamukhi path | 103.20 | | 103.20 | 103.20 | | |
| 8 | S13 | Udaya Marga | 158.10 | | 158.10 | 158.10 | | |
| 9 | N33 | | 70.00 | | 70.00 | 70.00 | | |
| 10 | R28 | Pustakalaya Marg | 278.00 | | 278.00 | 278.00 | | |
| 11 | R90 | Shakti Marg | 313.25 | | 313.25 | 313.25 | | |
| 12 | R114 | Dharanidhar Marg | 312.33 | | 312.33 | 312.33 | | |



| SN | Road Number | Name of Road | Length in (m) | | | Work Completed | | Remarks |
|----|-------------|--------------------|--------------------|------------|--------|----------------|-----|---------|
| | | | Progress | | Total | Brick | RCC | |
| | | | Previous (Revised) | This Month | | m | m | |
| 13 | R11 | Om Shiv Marg | 225.17 | | 225.17 | 225.17 | | |
| 14 | R18 | | 381.50 | | 381.50 | 381.50 | | |
| 15 | R17 | | 75.00 | | 75.00 | 75.00 | | |
| 16 | R113 | Kavi Lekhnath Marg | 72.45 | | 72.45 | 72.45 | | |
| 17 | R77 | Arniko Marg | 80.00 | | 80.00 | 80.00 | | |
| 18 | R76 | Mitra Marg | 270.00 | | 270.00 | 270.00 | | |
| 19 | N9 | Devi Marga | 22.70 | | 22.70 | 22.70 | | |
| 20 | N4 | | 146.38 | | 146.38 | 146.38 | | |
| 21 | R33 | Tarun Marg | 264.48 | | 264.48 | 264.48 | | |
| 22 | R36 | Gaurav Marg | 216.45 | | 216.45 | 216.45 | | |
| 23 | R86 | Janpath Marg | 187.55 | | 187.55 | 187.55 | | |
| 24 | R183 | Nava Jyoti Marg | 211.05 | | 211.05 | 211.05 | | |
| 25 | R7a | | 65.00 | | 65.00 | 65.00 | | |
| 26 | Rani site | Rani B | 530.00 | | 530.00 | 530.00 | | |
| 27 | Rani site | Rani A | 270.00 | | 270.00 | 270.00 | | |
| 28 | N3 | | 110.00 | | 110.00 | 110.00 | | |



| SN | Road Number | Name of Road | Length in (m) | | | Work Completed | | Remarks |
|----|----------------------------------|---------------------|--------------------|------------|----------|----------------|--------|---------|
| | | | Progress | | Total | Brick | RCC | |
| | | | Previous (Revised) | This Month | | m | m | |
| 29 | N5 | | 65.00 | | 65.00 | 65.00 | | |
| 30 | R21 | Binayak Marga | 388.25 | | 388.25 | 388.25 | | |
| 31 | R2 | Main Road | 1,992.50 | 100.00 | 2,092.50 | 2,092.50 | | |
| 32 | T1L16B | Xenial Front | 205.68 | | 205.68 | 205.68 | | |
| 33 | T1L16A | Xenial South | 150.20 | | 150.20 | 150.20 | | |
| 34 | R75 | Tintoliya Marga | 127.50 | | 127.50 | 127.50 | | |
| 35 | R122 | Amar Marga | 250.48 | | 250.48 | 250.48 | | |
| 36 | R18 Branch | | 30.00 | | 30.00 | 30.00 | | |
| 37 | R7(b) (Neuro to sidhartha chowk) | Siddhartha Marga | 330.00 | | 330.00 | 330.00 | | |
| 38 | R12 | Sukra Path | 290.00 | | 290.00 | 290.00 | | |
| 39 | R42 | Jahada Marga | 171.00 | | 171.00 | 171.00 | | |
| 40 | R6 | Shahi Marg | 760.00 | | 760.00 | - | 760.00 | |
| 41 | R21(a) | DharamBadh Junction | 80.00 | | 80.00 | 80.00 | | |
| 42 | R78 | Binayak Marga | 70.00 | | 70.00 | 70.00 | | |
| 43 | R188 | Shakti Marg | 115.60 | | 115.60 | 115.60 | | |
| 44 | R40 | Brahma Kumari Marga | 350.00 | | 350.00 | 350.00 | | |



| SN | Road Number | Name of Road | Length in (m) | | | Work Completed | | Remarks |
|----|-----------------|--------------------------|--------------------|------------|--------|----------------|-----|---------|
| | | | Progress | | Total | Brick | RCC | |
| | | | Previous (Revised) | This Month | | m | m | |
| 45 | Rani Site C | | 97.50 | | 97.50 | 97.50 | | |
| 46 | Ranit Site D | | 131.45 | | 131.45 | 131.45 | | |
| 47 | T3L21 | Moti Marga | 385.95 | | 385.95 | 385.95 | | |
| 48 | T3L39 | Gaheli Marga | 340.00 | | 340.00 | 340.00 | | |
| 49 | T3 Line 39A | | 90.00 | | 90.00 | 90.00 | | |
| 50 | T3 L39B | | 90.00 | | 90.00 | 90.00 | | |
| 51 | T2L27 | Bhumi Prashasan Junction | 79.50 | | 79.50 | 79.50 | | |
| 52 | T4 Line 1 | Sailesh Marg | 100.00 | | 100.00 | 100.00 | | |
| 53 | N2 | | 95.00 | | 95.00 | 95.00 | | |
| 54 | T2 Line 26E | College Road | 90.00 | | 90.00 | 90.00 | | |
| 55 | T2 Line 18C | Maisthan Marga | 102.00 | | 102.00 | 102.00 | | |
| 56 | T2Line 18A | Makalu Marga | 60.00 | | 60.00 | 60.00 | | |
| 57 | R6 (T3L11i) | | 247.50 | | 247.50 | 247.50 | | |
| 58 | R9 (T3L11k) | Tathasthu Marga | 180.00 | | 180.00 | 180.00 | | |
| 59 | R45 (T3Line10D) | Dadhiram Marga | 260.00 | | 260.00 | 260.00 | | |
| 60 | R9, T2 L19 | Fanindra Marga | 380.00 | | 380.00 | 380.00 | | |



| SN | Road Number | Name of Road | Length in (m) | | | Work Completed | | Remarks |
|----|-----------------------------|-----------------------|--------------------|------------|--------|----------------|-----|---------|
| | | | Progress | | Total | Brick | RCC | |
| | | | Previous (Revised) | This Month | | m | m | |
| 61 | R7c (Neuro to Shanti Chowk) | Siddhartha Marga | 305.00 | | 305.00 | 305.00 | | |
| 62 | R84 | School Marga | 663.00 | | 663.00 | 663.00 | | |
| 63 | R85 | Lekhanath Marga | 150.00 | | 150.00 | 150.00 | | |
| 64 | R87 | Byas Marga | 150.00 | | 150.00 | 150.00 | | |
| 65 | Rani B (Bus park) | | 90.00 | | 90.00 | 90.00 | | |
| 66 | R8(a) | Madhumara Marg | 285.00 | | 285.00 | 285.00 | | |
| 67 | T3L23A | | 100.00 | 180.00 | 280.00 | 280.00 | | |
| 68 | Rani E | | 85.00 | | 85.00 | 85.00 | | |
| 69 | R102 | Hamro Marg | 132.50 | | 132.50 | 132.50 | | |
| 70 | R10/R10a | Ram Marga | 740.36 | 200.00 | 940.36 | 940.36 | | |
| 71 | N10 | APF | 150.00 | | 150.00 | 150.00 | | |
| 72 | R23 | Bani Marg | 200.00 | | 200.00 | 200.00 | | |
| 73 | R103 | Vibuti Marga | 162.50 | | 162.50 | 162.50 | | |
| 74 | T3L6 | Sahid Marga | 350.00 | | 350.00 | 350.00 | | |
| 75 | P1, T3L6A | Pandit Meghnath Marga | 260.00 | | 260.00 | 260.00 | | |
| 76 | T2 L24C & D | Hanuman Das Marga | 130.00 | | 130.00 | 130.00 | | |



| SN | Road Number | Name of Road | Length in (m) | | | Work Completed | | Remarks |
|----|-------------|----------------------|--------------------|------------|--------|----------------|-----|---------|
| | | | Progress | | Total | Brick | RCC | |
| | | | Previous (Revised) | This Month | | m | m | |
| 77 | R99 | APF | 187.00 | | 187.00 | 187.00 | | |
| 78 | T2 L25 | | 150.00 | 150.00 | 300.00 | 300.00 | | |
| 79 | R20 | | 60.00 | | 60.00 | 60.00 | | |
| 80 | T2L24F | | 60.00 | | 60.00 | 60.00 | | |
| 81 | R105 | | 150.00 | | 150.00 | 150.00 | | |
| 82 | R34 | Prabhu Marg | 158.35 | | 158.35 | 158.35 | | |
| 83 | R35 | Garima Marg | 138.00 | | 138.00 | 138.00 | | |
| 84 | R107 | | 160.00 | | 160.00 | 160.00 | | |
| 85 | T3L13D | | 70.63 | | 70.63 | 70.63 | | |
| 86 | T3L13E | | 62.40 | | 62.40 | 62.40 | | |
| 87 | T3L11E | | 110.00 | | 110.00 | 110.00 | | |
| 88 | B2 | | 76.50 | | 76.50 | 76.50 | | |
| 89 | R78 | | 35.00 | | 35.00 | 35.00 | | |
| 90 | R7b | in between R26 & R27 | 288.50 | | 288.50 | 288.50 | | |
| 91 | T3L21A | | 25.00 | | 25.00 | 25.00 | | |
| 92 | R74 | | 96.00 | | 96.00 | 96.00 | | |



| SN | Road Number | Name of Road | Length in (m) | | | Work Completed | | Remarks |
|-----|-------------|--------------|--------------------|------------|--------|----------------|-----|---------|
| | | | Progress | | Total | Brick | RCC | |
| | | | Previous (Revised) | This Month | | m | m | |
| 93 | R46 | | 120.00 | | 120.00 | 120.00 | | |
| 94 | R101 | | 160.00 | | 160.00 | 160.00 | | |
| 95 | T3L7A | | 125.00 | | 125.00 | 125.00 | | |
| 96 | T3L8 | | 75.00 | | 75.00 | 75.00 | | |
| 97 | R20 | | 100.00 | | 100.00 | 100.00 | | |
| 98 | R5 | | 200.00 | | 200.00 | 200.00 | | |
| 99 | R67 | | 110.00 | | 110.00 | 110.00 | | |
| 100 | R82 | | 350.00 | | 350.00 | 350.00 | | |
| 101 | T1L13A | | 100.00 | | 100.00 | 100.00 | | |
| 102 | T1L14A | | 150.00 | | 150.00 | 150.00 | | |
| 103 | R68 | | 200.00 | | 200.00 | 200.00 | | |
| 104 | T3L22A | | 335.00 | | 335.00 | 335.00 | | |
| 105 | T3L22B | | 120.00 | | 120.00 | 120.00 | | |
| 106 | T3L25C | | 130.00 | | 130.00 | 130.00 | | |
| 107 | T3L11B | | 60.00 | | 60.00 | 60.00 | | |
| 108 | T3L11M | | 50.00 | | 50.00 | 50.00 | | |



| SN | Road Number | Name of Road | Length in (m) | | | Work Completed | | Remarks |
|-----|-------------|---------------|--------------------|------------|--------|----------------|-----|---------|
| | | | Progress | | Total | Brick | RCC | |
| | | | Previous (Revised) | This Month | | m | m | |
| 109 | R106 | | 70.00 | | 70.00 | 70.00 | | |
| 110 | R41 | | 520.00 | | 520.00 | 520.00 | | |
| 111 | T2L19B | | 110.00 | | 110.00 | 110.00 | | |
| 112 | R30 | | 180.00 | | 180.00 | 180.00 | | |
| 113 | T3L13C | | 225.00 | | 225.00 | 225.00 | | |
| 114 | T3L13J | | 72.53 | | 72.53 | 72.53 | | |
| 115 | T2L18Y | | 100.00 | | 100.00 | 100.00 | | |
| 116 | T2L19P | | 114.38 | | 114.38 | 114.38 | | |
| 117 | T2L19Q | | 126.55 | | 126.55 | 126.55 | | |
| 118 | R9A | | 208.73 | | 208.73 | 208.73 | | |
| 119 | R9B | | 25.00 | | 25.00 | 25.00 | | |
| 120 | T3L7 | Sahid Marga | 355.00 | | 355.00 | 355.00 | | |
| 121 | T2L18K | | 40.00 | | 40.00 | 40.00 | | |
| 122 | T3L23C | | 105.00 | | 105.00 | 105.00 | | |
| 123 | T2L24E | Mahabir Marga | 60.00 | | 60.00 | 60.00 | | |
| 124 | R44 | | 390.00 | | 390.00 | 390.00 | | |



| SN | Road Number | Name of Road | Length in (m) | | | Work Completed | | Remarks |
|-----|--------------------|---------------------------|--------------------|------------|----------|----------------|--------|---------|
| | | | Progress | | Total | Brick | RCC | |
| | | | Previous (Revised) | This Month | | m | m | |
| 125 | R110 | | 150.00 | | 150.00 | 150.00 | | |
| 126 | Parichaya Marga | | 130.00 | | 130.00 | 130.00 | | |
| 127 | T3L25B | | 200.00 | | 200.00 | 200.00 | | |
| 128 | T1L5, 5A | | 590.00 | | 590.00 | 590.00 | | |
| 129 | R82 | | 110.00 | | 110.00 | 110.00 | | |
| 130 | T2L19Y | | 150.00 | | 150.00 | 150.00 | | |
| 131 | T3 Trunk | Tinpaini to Devkota Chowk | 940.00 | 200.00 | 1,140.00 | 1,140.00 | | |
| 132 | T2L19F | | 55.00 | | 55.00 | 55.00 | | |
| 133 | T2L18D | | 20.00 | | 20.00 | 20.00 | | |
| 134 | R19 | | 175.00 | | 175.00 | 175.00 | | |
| 135 | R83 | Shiva Marga | 125.00 | | 125.00 | 125.00 | | |
| 136 | T310B, T3L7D (R46) | Rangeli Road | 360.00 | 40.00 | 400.00 | 400.00 | | |
| 137 | T2L19G | | 45.00 | 15.00 | 60.00 | 60.00 | | |
| 138 | R4 (T2 Trunk) | Jatuwa Marga | 50.00 | 80.00 | 130.00 | - | 130.00 | |
| 139 | T3L22 | Rangeli Road | 70.00 | | 70.00 | 70.00 | | |
| 140 | T3L25B, Outlet | Madhumara | 96.00 | | 96.00 | 96.00 | | |



| SN | Road Number | Name of Road | Length in (m) | | | Work Completed | | Remarks |
|-----|--------------|-----------------|--------------------|-----------------|------------------|------------------|---------------|---------|
| | | | Progress | | Total | Brick | RCC | |
| | | | Previous (Revised) | This Month | | m | m | |
| 141 | T3L7B | Matrika Marga | 75.00 | | 75.00 | 75.00 | | |
| 142 | T3L5 | Sanihat Marga | 100.00 | 180.00 | 280.00 | 280.00 | | |
| 143 | T2L19X | Parichaya Marga | 60.00 | 150.00 | 210.00 | 210.00 | | |
| 144 | T2L19H | | 30.00 | 45.00 | 75.00 | 75.00 | | |
| 145 | R181 | | 150.00 | | 150.00 | 150.00 | | |
| 146 | N38 | | | 150.00 | 150.00 | 150.00 | | |
| | Total | | 28,277.19 | 1,550.00 | 29,827.19 | 28,937.19 | 890.00 | |



3.2. ENVIRONMENTAL ASPECT

The environment has been defined to mean surrounding area including human and natural resources to be affected by execution and after completion of works. The Contractor shall take all precautions for safeguarding the environment during the course of the construction of the works. He shall abide by all prevalent laws, rules and regulations governing pollution and environmental protection mitigation measure specified in the latest publication of “Environmental Management Guidelines” published by the GoN and Projects Environmental management plan.

The Contractor shall prohibit employees from unauthorized use of explosives, poaching wildlife and cutting trees. The contractor shall be responsible for the action of his employees. Environmental protection works, among others, shall also include the following.

3.2.1. BORROW/ QUARRY SITES

The engineer shall have the power to disallow the method of construction and / or the use of borrow or quarry area, if in this opinion, the stability and safety of the works or any adjacent structure is endangered, or there is undue interference with the natural or artificial drainage or the method or use of area will promote undue erosion.

Since the contractor has made agreement with the owner of crusher plant for the supply of required materials from the crusher, no approval for quarry and borrow sites are required till date.

3.2.2. DISPOSAL OF SPOIL AND CONSTRUCTION WASTE

Material excess of the requirements for permanent works and unsuitable materials shall be disposed off in location and in the manner as agreed with the Engineer. The location of disposal site shall be such as not to promote instability, destruction of properties and public service system. Exposed area of such disposal site shall be suitably dressed and be planted with suitable vegetation.

The contractor has already provided the safe tipping sites and the excess materials are dumped as per the approved tipped sites. Spoil and construction wastes are disposed at Madhumara site similarly excess construction materials are stocked at Madhumara site and at the open space of north side of Degree College (Rani Site).

Provision for maintenance of Camps/Office/Stores/Equipment.

This section describes about the works related to maintenance and upgrading of labor camps, contractor's employees camp, contractor's site office, contractor's equipment store yards, contractor's equipment store yards, contractor's precast production yards. The camp should have the proper roofing system. Besides that, it should be spacious, should have proper circulation of the fresh air, should be hygienic, and should have proper electric lightening system & water supply system. It should be neat and clean.

Labor camps are provided at various locations as per requirement and these sites are frequently visited and monitored. The condition is found to be satisfactory. The details of the labor camp is provided in annex.



3.2.3. PROVISION AND MAINTENANCE OF TOILETS

Provision of toilets for labor and employees shall be made to avoid public nuisance as well as pollution of water courses and air. The Contractor shall construct suitable septic tanks and soak pit along with rooms for pit type latrines. Sufficient water must be provided and maintained in the toilets.

Toilets have been provided at each labor camp. The contractor has been instructed to improve the toilet conditions where required.

Toilets in all the camps are found to be in the acceptable condition.

3.2.4. CRUSHING PLANTS

Crushing plants shall be located away from the population centers, water intakes, and should not disturb the sensitive echo system. Suitable dust control device should be fitted with crusher to control emission of dust from plant. The crusher plant is located at around 42 km north-east of Biratnagar at a place called Chis yang.

Since the contractor has made agreement with the owner of crusher plant for the supply of required materials from the crusher, no approval for quarry and borrow sites are required till date certainly minimize the dust pollution.

3.2.5. ASPHALT PLANTS AND BATCHING PLANTS

Hot mix plant and batching plant shall be located away from the population centers. The Contractor shall take every precaution to reduce levels of noise, vibration, dust and emission from his plants. No Bituminous material shall be discharged in to drains, nearby trees vegetation; property shall be protected during spray of bitumen etc.

As the concrete quantity of the project is very minimal, there is no need of the separate batch plant for concrete mixing. However, as there are a lot of asphalt concrete works to be done in the project, a separate asphalt plant has been installed, especially for the project, at about 6 Km south of the Biratnagar DSC office at a place called Rani.

3.2.6. OCCUPATIONAL HEALTH AND SAFETY MEASURES

The contractor shall provide personnel protective equipment (PPE) (Helmet, Boots, masks, gloves, jacket, protective glasses etc.) to use. Public notification, safety and warning signs and informative signboards in working sites for work safety shall be provided. The DSC engineer and DSC Environmental safeguard expert supervise and monitor the use of PPEs and other necessary safety measures regularly.

The project is the environmental improvement project and mainly constitutes sewerage and drainage improvement works in BMC besides others. As per ADB guide-lines on Environmental Assessment requirements, this project is classified as Environment Category B. According to Environmental Protection Regulation-2054BS, First Revised (2055 BS) schedule-3, IEE is required for Operations of Sewerage Schemes under Schedule 1.h.2.e (pertaining to Rule3). The final report was submitted to MoUD on 14th May, 2013 and has already been approved.

Installation of functioning sewers and functioning drainage system including roads/lanes improvement in BMC does not possess any adverse environmental impacts to its surrounding. In fact, these will greatly enhance the living conditions/hygiene of the in habitants and facilitate transportation. Nevertheless, it is imperative to look into positive as well as negative impacts of such infrastructure development works in the urban area.



Training and awareness program regarding health, safety and disease at Labour camps and yards on 3 and 4 March 2018 by Safety Prevention Officer Er. Dhiraj Sardar.

A regular monitoring visit by DSC was carried out and a standard site specific environmental monitoring checklist was used to record the present status of the project to verify if work has been done as per EMP Guidelines. A sample of environmental checklist is attached herewith as Annex.

3.3. SOCIAL ASPECT

Regional Urban development Project (RUDP) in Biratnagar has implemented to improve the quality of life and help to achieve higher and more socially inclusive economic growth of people through effective, efficient, and reliable delivery of improved and affordable municipal services. Infrastructure development of drainage and sewerage system as well as roads and lane improvement are the major components of RUDP in Biratnagar Metropolitan City (BMC). Establishment and functioning of Social Safeguard Desk in PIU is a major milestone of social development aspect which has been effective to address all social/community development issues and concerns with active initiation of the DSC. Local labors have been deployed in civil construction works (i.e. in Road side drain / Sub grading works). The Engineer has issued the format of Social Safeguard Monitoring plan which is attached here with.

3.4. SAFEGUARD/ GESI COMPONENT

3.4.1. COMMUNITY AWARENESS:

Conduct regular Community Awareness Consultations within Project Areas to build awareness on Project Objectives, Activities and implementation during site observation, Monitoring and Meetings. Different site visit has been conducted during May, 2018 such as DDC Pre cast yard, Chyangbari Naala Biratnagar-16, Asphalt work at Sai Marg, Sewer Line construction work at Hanumandas Road and Asphalt Plant at Rani Site. Except of Minor, no any major conflict has been found during construction work. The visit was conducted jointly with Environment Safeguard Expert and Social Safeguard Expert. Before commissioning of any works at any stretches, we paste the information templates at certain interval and provide sufficient information to the users regarding it.

3.4.2. GRIEVANCE REDRESSES MECHANISM:

Although many grievances were received verbally, only 9 (Nine) grievances have been registered formally which have immediately been addressed and resolved. This month, some grievances for some stretches were received verbally and were addressed immediately. Refer semi - annual report for details.

3.4.3. GENDER EQUITY AND SOCIAL INCLUSION (GESI):

Activities related to GESI has been monitored and supervised in all Construction sites. During site visit female workers were found in significant minority (7 numbers) at Construction sites, thus Contractor was instructed as follow:

- i. Encourage to Local female Employment as Labor and skilled man power.
- ii. Manage separate Camp and necessary facilities for female workers to encourage of female Employment. Camps and construction sites are regularly been monitored to find the status of



working force.

3.4.4. STATUS OF SOCIAL AND ENVIRONMENTAL SAFEGUARD MEASURES

The present status to this regard has been reported as below:

During the site visit for Socio Environment monitoring by DSC Environmental and Social Safeguard Expert on date 1st, 2nd and 3rd December, 2018 following issues were found. Social Safeguard revisited the site on 29th, 30th and 31st December.

- i. Efforts are being made to control dust emission at construction site by sprinkling water. As personal safety was given prime importance, construction workers were made to use helmet, globe and jacket while on the construction site.
- ii. Besides that, special attentions were given on the placement of safety board and traffic signboards, safety tools, barricades, tapes, etc. and special care were taken to make sign boards big enough to make them visible from distant.
- iii. Taking into consideration of the fact that the involvement of the significant numbers of female as employee in ADB project is the main project objective of ADB, contractor paid especial attention to have a separate toilet and separate labor camp for female that facilitates and encourages female to get work in the construction field.
- iv. Significant improvement was found to be done in health and sanitation issues in the labor camp than in the previous monitoring visit; like, quality and quantity of drinking water was improved and condition of toilet was found to be enhanced. However, to meet the sanitation condition to predetermined level, further instructions were given by contractor to make provision for sufficient water in toilet and soap for hand-wash. Furthermore, yard in charge was suggested to have sufficient medications, bandages and other necessary first aid equipment's.

The implementation of Social and Environmental Safeguard measures during this month were found partially satisfactory.

3.4.5. STATUS OF RELOCATION OF SERVICES

Relocation of water supply pipe lines were ongoing at R6, Tinpaini chowk, B2 and at Pratibha chowk, etc. The supply has been providing temporarily as per site condition where required. Relocation of electric poles in R2, Jahada road, R7 (Neuro to shanti chowk) & R3 are going on.

Table – 5: Status of Labor at Site

| Labour class | Labour | | Composition | | Ethnic composition | | | | |
|--------------|------------|------------|-------------|-----------|--------------------|-----------|-----------|------------|-----------------|
| | Skilled | Unskilled | Male | Female | Janjati | Dalit | Muslim | Madhesi | Brahmin/Chhetri |
| Local | 49 | 146 | 179 | 16 | 2 | 18 | 41 | 134 | 0 |
| Non local | 73 | 294 | 337 | 30 | 40 | 52 | 35 | 240 | 0 |
| Indian | 2 | 12 | 14 | 0 | 0 | 0 | 10 | 4 | 0 |
| TOTAL | 124 | 452 | 530 | 46 | 42 | 70 | 86 | 378 | 0 |



3.5. FINANCIAL PLAN

The Sub-project cost will be disbursed in three years starting from FY2074/2075 to 2076/2077

3.5.1. DISBURSEMENT RECORDS IN CONSTRUCTION

Table – 6: DISBURSEMENT RECORDS in CONSTRUCTION

| S. No. | Description | Submission date | Covering date | Submitted Amount(NRs) | Remarks |
|---|-------------|---------------------------------|--|-------------------------|----------------------|
| 1 | IPC 01 | 15 th October 2017 | | 339,105,000.00 | Mobilization Advance |
| 2 | IPC 02 | 2 nd April 2018 | 2nd November 2017 to 31st March 2018 | 261,501,492.21 | |
| 3 | IPC 03 | 1 st July 2018 | 1st April 2018 to 30th June 2018 | 316,582,708.58 | |
| 4 | IPC 04 | 1 st October 2018 | 1st July 2018 to 31st September 2019 | 105,227,887.16 | |
| 5 | IPC 05 | 2 nd December 2018 | 1st October 2018 to 30th November 2018 | 95,951,603.44 | |
| 6 | IPC 06 | 31 st January 2019 | 1st December 2018 to 31st January 2019 | 264,937,394.98 | |
| 7 | IPC 07 | 12 th April 2019 | 1st February 2019 to 31st March 2019 | 308,805,662.97 | |
| 8 | IPC 08 | 9 th May 2019 | 1st April 2019 to 30th April 2019 | 106,210,198.68 | |
| 9 | IPC 09 | 10 th June 2019 | 1st May 2019 to 31st May 2019 | 90,419,375.33 | |
| 10 | IPC 10 | 11th July 2019 | 1st June 2019 to 30th June 2019 | 67,863,056.59 | |
| 11 | IPC 11 | 30 th September 2019 | 1 st July 2019 to 30 th September 2019 | 95,296,297.30 | |
| Total amount excluding PA & Mobilization advance till date = | | | | 1,712,795,677.24 | |



4. OBJECTIVES AND SCOPE OF WORKS

4.1. OBJECTIVES

The following are the expected physical infrastructure improvement outputs of the project in Biratnagar:

- Drainage and sewerage systems improvement.
- Urban roads and lanes improvement.

Reference to the deliverables identified in the Project, indicates that there are a number of deliverables related specifically to the design aspects of the above infrastructure improvements with construction works.

4.2. SCOPE OF WORKS

The scope of works for consultant's services is fairly detailed in the TOR attached with contract Agreement. The main points are summarized below:

- Detailed Design and Procurement Assistance Phase for integrated solid waste management design (ISWM)
- Monthly progress report and quarterly progress report.
- Semi- annual Environmental monitoring report.
- Semi-annual Safeguard monitoring report.
- Annual progress report including annual Environmental / Social safeguard monitoring report, assets.
- Detailed draft final report for our puts, including to assist the PIU (Employer), status of all supervision and construction works issues, all deliverables under the contacts.
- Sub project completion report, and summary of all other reports, progress and issues under the project.

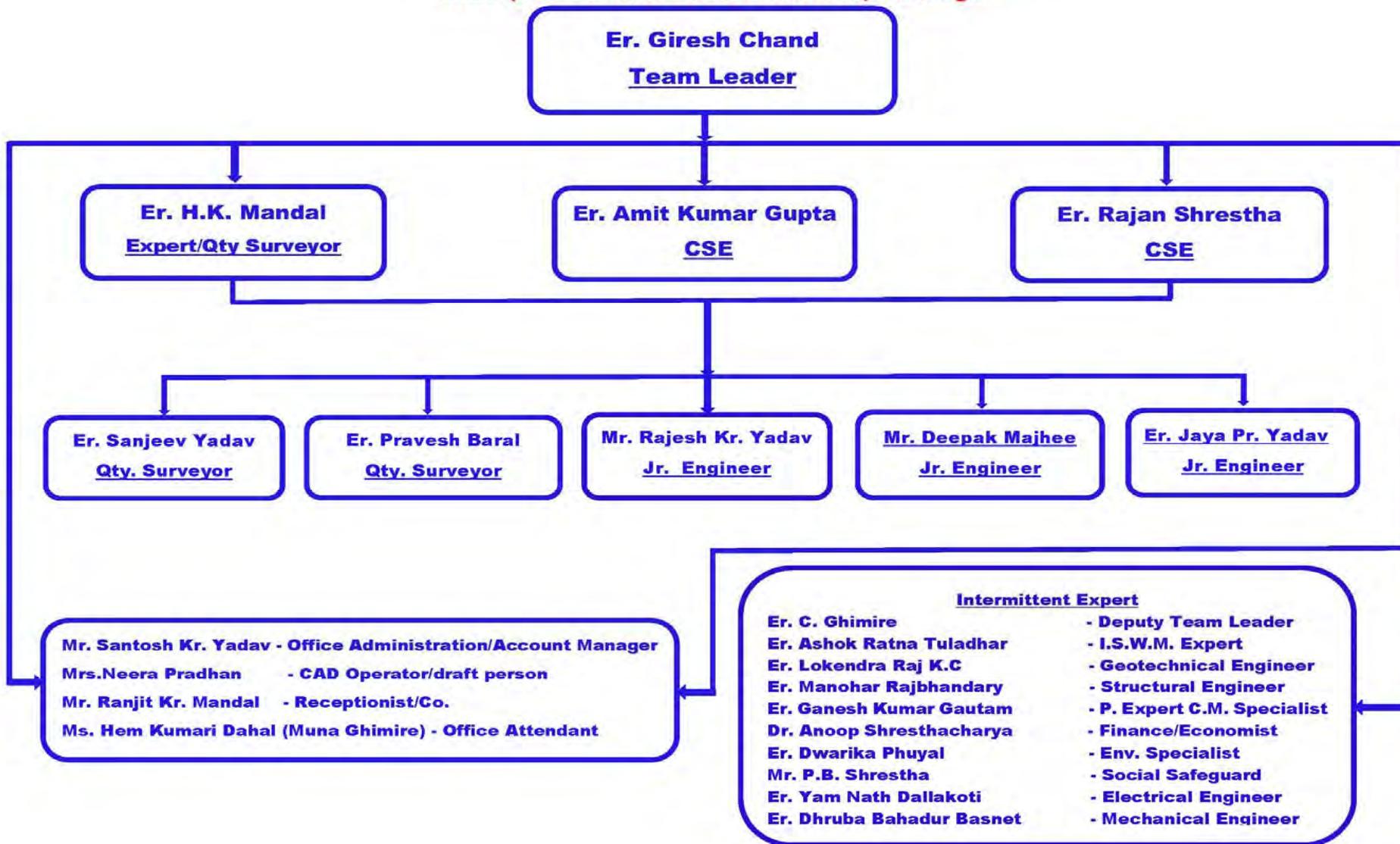


4.3. ORGANIZATION AND STAFFING

Attached



ORGANIZATION CHART
RUDP (ADB Loan No - 47252 Site Office, Biratnagar)



4.4. CONSULTANT’S ACTIVITIES IN CONSTRUCTION PHASE

The current staffing of the consultant at project site is as follows:

Table 7: CONSULTANT’S STAFF at Project Site, Biratnagar

| SN | Name | Designation | Joining date | Remarks |
|----|-------------------------------------|---------------------------------------|----------------------------|---|
| 1 | Mr. Giresh Chand | Team Leader | 6 th Sep 2017 | |
| 2 | Mr. Ashok Ratna Tuladhar | ISWM (Designer) | 6 th Sep 2017 | Intermittent |
| 3 | Mr. Dwarika Phuyal | Environmental Safeguard Expert | 1 Nov 2017 | Intermittent |
| 4 | Mr. Prakash Bhakata Shrestha | Social Safeguard Monitoring Expert | 26 th dec-2017 | Intermittent |
| 5 | Mr. Hare Krishna Mandal | Expert/Quantity surveyor | 1 st Nov 2017 | |
| 6 | Mr. Amit Kumar Gupta | Construction Supervision Engineer | 1 st March 2018 | |
| 7 | Mr. Rajan Shrestha | CSE/Quantity Surveyor | 7 th Nov 2017 | Working as CSE from 1 st May 2019. |
| 8 | Mr. Rajesh Kumar Yadav | Junior Engineer-1 | 6 th Sep 2017 | |
| 9 | Mr. Sanjeev Yadav | Qty. Surveyor | 5 th Nov 2017 | |
| 10 | Mr. Santosh Kumar Yadav | Office Administration/Account Manager | 6 th Sep 2017 | |
| 11 | Mr. Hem Kumari Dahal (Muna Ghimire) | Office Attendant | 6 th Sep 2017 | |
| 12 | Mr. Ranjit Kumar Mandal | Receptionist | 10 th Dec 2017 | |
| 13 | Mr. Pravesh Baral | Junior Engineer-2 | 10 th Dec 2017 | |
| 14 | Mr. J.P Yadav | Junior Engineer-3 | 1 st March 2018 | |
| 15 | Mr. Deepak Majhi | Junior Engineer-4 | 1 st March 2018 | |
| 16 | Mrs. Neera Pradhan | CAD operator/Draft Person | 10 th Dec 2017 | |
| 17 | Mr. Yubraj Poudel | Driver | 10 th Feb-2019 | |

The consultant has been constantly supervising the contractor's work in daily basis. The consultant is mainly focusing in construction management, contract administration and the following activities but not limited as listed below:

- i. Daily Construction supervision/Surveying works etc.
- ii. Quality control, cost control and time control
- iii. Measurement and Certification of Interim Payment Certificates (IPC)
- iv. Modification and design of Road side drain, storm drainage and sewer lines, manholes etc. as per site condition and approve working drawings as discussed/advised by employer.
- v. Supervise construction material testing and sampling
- vi. Monitor Environment Management Plan and its compliance
- vii. Monitor Social safeguard and Resettlement Plan and its compliance
- viii. Prepare Due Diligence Report of the Project
- ix. Maintain correspondences with the Employer and the Contractor
- x. Assisting PIU

5. PROGRESS OF SUB – PROJECT COMPONENTS

5.1. CONSTRUCTION MATERIALS.

Before using any construction material in the project, as per clause 7.3, engineer gave prior notice to contractor for joint inspection of the construction materials and all materials have been jointly checked and verified. Team leader issued letter to contractor to do the lab test of the construction materials from the authorized organizations and lab reports of the tested materials have been submitted by contractor. Engineer has emphasized on the production of the pre-cast item like (Kerb stone, drain cover slab, manhole etc.) for better work progress of the project. The Contractor has established three production yards at Koshi project, Madhumara and Judi contractor camp for pre-cast items like Kerb stone, drain cover slab, sewer precast elements, etc. but as more than 75% work done so that the production yard at Koshi project has been closed and production are going on.

The Contractor has informed to borrow RCC NP-3 pipes from Itahari Hume pipe factory or other location and also requested for three Edge bearing test. It has been tested in presence of consultant TL, PIU and contractor representative.

5.2. PROGRESS ACHIEVED TILL DATE

| Month | Target This Month | | Achievement This Month | | Leading | | Lagging | | Remarks |
|---------------------------------|-------------------|-------------------|------------------------|-------------------|---------|-------------|---------|--------------------|---------|
| | Monthly | Accumulated | Monthly | Accumulated | Monthly | Accumulated | Monthly | Accumulated | |
| July-18 | 0.15% | 25.17% | 0.78% | 25.18% | 0.63% | 0.01% | | | Leading |
| August-18 | 0.15% | 25.32% | 2.32% | 27.50% | 2.17% | 2.18% | | | Leading |
| September-18 | 5.71% | 31.03% | 1.22% | 28.72% | | | | -2.31% | Lagging |
| October-18 | 7.72% | 38.75% | 2.30% | 31.03% | | | | -7.72% | Lagging |
| November-18 | 7.72% | 46.47% | 5.20% | 36.22% | | | | -10.25% | Lagging |
| December-18 | 7.95% | 54.41% | 3.40% | 39.62% | | | | -14.79% | Lagging |
| January-19 | 7.96% | 62.37% | 5.65% | 45.27% | | | | -17.10% | Lagging |
| February-19 | 7.96% | 70.33% | 5.11% | 50.38% | | | | -19.95% | Lagging |
| February-19 (after Revision) | 5.33% | 50.03% | 5.11% | 50.38% | | 0.35% | | | Leading |
| March -19 | 7.75% | 57.77% | 7.84% | 58.21% | | 0.44% | | | Leading |
| April-19 | 6.82% | 64.59% | 4.53% | 62.74% | | | | -1.85% | Lagging |
| May-19 | 6.49% | 71.08% | 4.54% | 67.28% | | | | -3.80% | Lagging |
| June-19 | 3.95% | 75.03% | 2.05% | 69.33% | | | | -5.70% | Lagging |



| Month | Target This Month | | Achievement This Month | | Leading | | Lagging | | Remarks |
|--------------|-------------------|-------------|------------------------|-------------|---------|-------------|---------|-------------|---------|
| | Monthly | Accumulated | Monthly | Accumulated | Monthly | Accumulated | Monthly | Accumulated | |
| July-19 | 3.90% | 78.93% | 2.19% | 71.52% | | | | -7.41% | Lagging |
| August-19 | 4.97% | 83.90% | 2.01% | 73.53% | | | | -10.37% | Lagging |
| September-19 | 7.45% | 91.35% | 4.97% | 78.50% | NA | NA | -2.48% | -12.85% | Lagging |

5.3. KEY EVENTS

The consultant has noted the following key dates for this month.

Table 8: KEY DATES of EVENTS / ACTIVITIES

| S. No. | Date | Activities/Events | Remarks |
|--------|---|---|--|
| 1 | | Frequent visit of sites by the representatives of the employer. | |
| 2 | 23 rd - 24 th September, 2019 | ADB Review Mission led by Senior Project Officer, Mr. Naresh Giri with his team. Team members were the representatives from PCO with Project Director and the representatives from PMC with team leader. | Conducted site visit and various meetings to improve the status of projects – RUDP as well as STIUEIP. |

Note: *Due to unseasonal monsoon, delay in relocation of electric & telecom services and unclear Right of Way (RoW), the work progress found very slow.*



6. DETAILS OF PRE CAST ACTIVITIES.

Table 9: PHYSICAL PROGRESS in PRODUCTION OF PRECAST ITEMS till date,

| Physical Progress till date | | | | | | | |
|-----------------------------|--------------|------|------------|----------------------------|------------------|---------------------|----------------|
| S.N. | Description | Unit | Progress | | | Total to Date (RM.) | Remarks |
| | | | BoQ | Up to Previous month (RM.) | This Month (RM.) | | |
| 1 | Precast Slab | No | | 65,871.00 | 12,000.00 | 77,871.00 | Under progress |
| 2 | Kerb Stone | Rm | 147,729.68 | 84,293.30 | 7,000.00 | 91,293.30 | 61.79% |

Table 10: PHYSICAL PROGRESS in PRODUCTION/PURCHASE OF RCC Hume Pipe at Itahari till date,

| Physical Progress till date | | | | | | | |
|-----------------------------|--------------|---------------|----------|----------------------------|------------------|---------------------|---------|
| S.N. | Description | Diameter (mm) | Progress | | | Total to Date (RM.) | Remarks |
| | | | BoQ (RM) | Up to Previous month (RM.) | This Month (RM.) | | |
| 1 | RCC Pipe | 300 | 336.00 | 336.00 | - | 336.00 | |
| 2 | RCC Pipe | 450 | 681.00 | 681.00 | - | 681.00 | |
| 3 | RCC Pipe | 500 | 842.00 | 842.00 | - | 842.00 | |
| 4 | RCC Pipe | 600 | 382.00 | 382.00 | - | 382.00 | |
| | Total | | | | | | |

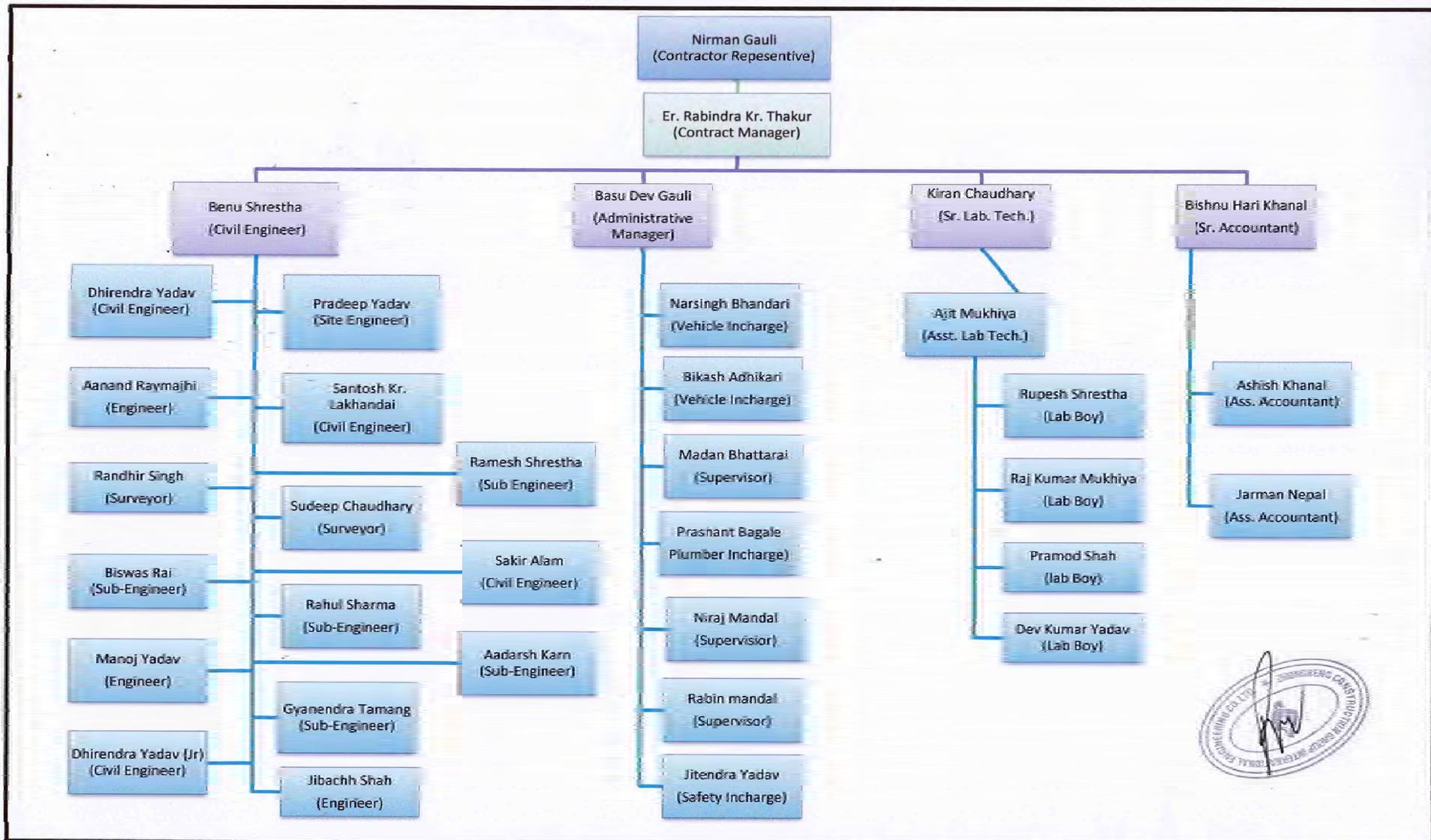
Table 11: PHYSICAL PROGRESS in PRODUCTION/PURCHASE OF HDPE Pipe till date.

| <i>Physical Progress till date</i> | | | | | | | |
|------------------------------------|--------------------|----------------------|-----------------|-----------------------------------|-------------------------|----------------------------|----------------------|
| <i>S.N.</i> | <i>Description</i> | <i>Diameter (mm)</i> | <i>Progress</i> | | | <i>Total to Date (RM.)</i> | <i>Remarks</i> |
| | | | <i>BoQ (RM)</i> | <i>Up to Previous month (RM.)</i> | <i>This Month (RM.)</i> | | |
| 1 | HDPE Pipe | 110.00 | 1,987.20 | 4,487.20 | - | 4,487.20 | Under process |
| 2 | HDPE Pipe | 200.00 | 16,656.00 | 16,500.00 | - | 16,500.00 | |
| 3 | HDPE Pipe | 250.00 | 115.00 | 450.00 | - | 450.00 | |
| Total | | | | | | | |

Table 12: PHYSICAL PROGRESS in PRODUCTION/PURCHASE OF UPVC Pipe till date.

| <i>Physical Progress till date</i> | | | | | | | |
|------------------------------------|--------------------|----------------------|-----------------|----------------------------------|-------------------------|----------------------------|----------------|
| <i>S.N.</i> | <i>Description</i> | <i>Diameter (mm)</i> | <i>Progress</i> | | | <i>Total to Date (RM.)</i> | <i>Remarks</i> |
| | | | <i>BoQ (RM)</i> | <i>Up to Previous month (RM)</i> | <i>This Month (Rm.)</i> | | |
| 1 | UPVC Pipe | 160.00 | 5,050.00 | 5,050.00 | 0.00 | 5,050.00 | |
| 2 | UPVC Pipe | 110.00 | 5,050.00 | 5,050.00 | 0.00 | 5,050.00 | |

Details of Contractor's Site Personnel



7. CONTRACTOR’S MANPOWER

Table 13: CONTRACTOR’S KEY STAFFS

| S. No. | Position | Minimum Number Required as per Contract | ZHONGHENG CONSTRUCTION Group | Remarks |
|---------------|---|--|-------------------------------------|----------------|
| 1 | Project/Contract Manager (1 No) 15/10 Yrs. (Total/Similar Exp.) | 1 | 1 | |
| 2 | Civil Engineer- 10/6 | 2 | 2 | |
| 3 | Sanitary Engineer- (1no.)- 12/8 | 1 | - | |
| 4 | Road Engineer- (1no.)-12/8 | 1 | 1 | |
| 5 | Electromechanical Engineer-(1no)- 10/5 | 1 | - | |
| 6 | Safety Engineer | - | 1 | |
| 7 | Site Engineer | - | 8 | |
| 8 | Sub- Engineer | - | 7 | |
| 9 | Accountant | - | 3 | |
| 10 | Lab Technician | - | 6 | |
| 11 | Store Keeper | - | 1 | |
| 12 | Vehicle In charge | - | 2 | |
| 13 | Skilled Labors | | 124 | |
| 14 | Unskilled Labors | | 452 | |



8. CONTRACTOR'S EQUIPMENT

Table 14: CONTRACTOR'S EQUIPMENT

| S. No. | Equipment Type and Characteristics | Min Number required as per Contract | ZHONGHENG CONSTRUCTION Group | Remarks |
|--------|---|-------------------------------------|------------------------------|----------------------------------|
| 1 | Excavator (200 above) | 5 | 2 | Backhoe loader-9 nos. |
| 2 | Crane (10 ton capacity) | 3 | - | |
| 3 | Asphalt plant of adequate capacity | 1 | 1 | |
| 4 | Asphalt pavers | 1 | 1 | |
| 5 | Vibrating roller | 2 | 5 | Among 5nos., 2ton rollers -2nos. |
| 6 | Pneumatic tyre roller 8 to 10 ton | 2 | 1 | |
| 7 | Smooth wheeled roller 8 to 10 ton | 1 | 0 | |
| 8 | Grader | 1 | 2 | |
| 9 | Track Dozer (120 to 180 HP) | 1 | - | |
| 10 | Bitumen distributor (4 to 6 Kilo Litres) | 1 | 1 | |
| 11 | Water browser (minimum 5000 Litres) | 3 | 9 | |
| 12 | Chips spreader | 1 | - | |
| 13 | Bitumen decanter minimum 4000 Litres. (preheating container) | 2 | 2 | |
| | Air compressor | 2 | 2 | |
| 14 | Tipping Trucks | 5 | 2 | |
| 15 | Service vehicle | 15 | 4 | |
| 16 | Survey equipment (Total station with accessories) | 2 | 1 | |



| S. No. | Equipment Type and Characteristics | Min Number required as per Contract | ZHONGHENG CONSTRUCTION Group | Remarks |
|---------------|---|--|-------------------------------------|----------------|
| 17 | Theodolite | 1 | - | |
| 18 | Levelling | 2 | 27 | |
| 19 | Mobile Generator 15-20 KVA | 5 | 10 | |
| 20 | Mixer Machine | 3 | 5 | |
| 21 | Concrete Batching Plant | 1 | - | |
| 22 | Concrete pump | 1 | - | |
| 23 | Drain cleaner/ Nala cleaner | 2 | - | |
| 24 | Broomer | - | 1 | |
| 25 | Motor Bike | - | 11 | |
| 26 | Plate Compactor | - | 5 | |
| 27 | Water Pump | - | 14 | |

9. WORK PLAN FOR THE NEXT MONTH

Following are the Contractor's works in the next month program.

- Detail Surveying works at various Road sections.
- Road works
- Precast elements production works at contractor's yard.
- Road Side drain works.
- Laying of Kerb Stone, cover slab and interlocking tiles.
- Placement of Sewer inlet and House Connection works.
- Relocation of electric poles and water supply works, etc.



ANNEX-1: Photographs of September, 2019





Laying of concrete for crossing slab at R2 – Main road



During ADB Review Mission – 23-24 September 2019 presentation by TL, DSC





Sub grade at R3



Interlocking work on footpath – B1



Pre cast slab casting at Madhumara Yard



Asphalt work at T2L19Q



Pre cast top cover slab for HCC at Madhumara Yard



Pre cast HCC ring at Madhumara Yard



ADB review mission site visit - from 23-24 Sept 2019



Field density test – Sand replacement method for sub base

ANNEX-2: Minutes of Meeting September, 2019



Meeting Minute: 14

Regional Urban Development Project (RUDP), Biratnagar

14th Safeguard Desk (SD) Meeting,

The 14th Safeguard Desk meeting was held on 25th September, 2019 at PIU office under the Chairmanship of Project Manager Er. Bharat Kumar Neupane, discussed over following agendas and the decision were made.

Participants:

Safeguard Desk members:

- Er. Bharat Kumar Neupane Project Manager, PIU/RUDP, Biratnagar
- Mr. Punam Kumar Dahal Chief, social Development, PIU/RUDP, Biratnagar
- Mr. Prakash Bhakta Shrestha Social Safeguard Expert, DSC/RUDP, Biratnagar
- Er. Dwarika Phuyal Environmental Safeguard Expert DSC/RUDP, Biratnagar

Invitee:

- Er. Prakash Chaudhari Deputy Project Manager
- Er. Giresh Chand Team Leader, DSC/RUDP, Biratnagar

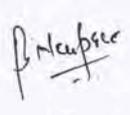
Agenda no-1: ADB Mission Progress Review meeting and Site Visit

Discussion and Decision: Joint meeting and site visit of ADB, PCO, PIU, DSC and Contractors was held on 23rd and 24th September, 2019. The meeting was held at Metropolitan City Office under the chairmanship of Mayor Mr. Bhim Parajuli and discussed over the progress of project and safeguard issues. In meeting presentation on status of project were made by PM Er. Bharat Kumar Neupane and TL Er. Giresh Chand and the issues raised in meeting were clarified.

Agenda no-2: Progress on Safeguard Measures

Discussion and Decision:

Discussed over the dust emission during construction dust contractor has been sprinkling water over dust prone area, however was not sufficient, contractor therefore instructed to increase the frequency of water sprinkling in dust prone area within construction sites and nearby unpaved road surfaces.



Discussed over the Use of personnel Protective Equipment like, helmet, boots, glove, and jackets by labors was found partly compliance. The contractor requested for full compliance. The contractor has provided proper barricades and traffic signs.

Discussed over the matter of drain cover, almost completed road side drains found cover with RCC cover.

Agenda-3: Encourage of Female employment

Discussion and Decision:

Discussed over the low number of female employee; Contractor instructed to encourage employing as labor and skilled man power to local female.

Contractor instructed to manage separate camp and necessary facilities for female workers to encourage of employment.

Priority should be given to employ local labors.

Agenda -4: Others

Discussion and Decision:

The overall safeguard compliance found satisfactory.

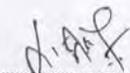
[Handwritten signatures and initials]



ANNEX-3: Laboratory Test Results of September,
2019

ATTACHED



| REGIONAL URBAN DEVELOPMENT PROJECT | | | | | | | | | | |
|--|-------------|--|------------------|---|---|---|---------------------|-----------|---------|--|
| Biratnagar Metropolitan City | | | | | | | | | | |
| Contract No:- RUDP/ICB/BRT-02 | | | | | | | | | | |
| Summary Sheet of Monthly Test Report | | | | | | | | | | |
| Location:-T3L13J | | | | | | | Month: September | | | |
| | | | | | | | Year 2019 | | | |
| | | | | | | | Type of Material | Sub grade | | |
| Sn. | Lab.Ref no. | Location/Chainage | Source of Sample | Date of Testing | MDD | OMC | PI% | CBR% | Remarks | |
| 1 | RUDP-SG-01 | T3L13J,(0+050) | Existing Road | 2-Sep-19 | 1.990 | 8.65 | 8.80 | 6.61 | | |
| Sp. Limit | | | | | | | <18 | >3 | | |
| Contractor | | | | | Consultant | | | | | |
| ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD. | | | | | BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL | | | | | |
|  Checked By Engineer Benu Shrestha | |  Submitted By Contract Manager Rabindra kr. Thakur | |  Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha | |  Approved By Team Leader Giresh Chand | | | | |



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

Contract No: RUDP/ICB/BRT-02

Summary Sheet of Monthly Test Report

| S.N. | Lab. Ref no. | Location of Sample | Source of Sample | Date of Testing | Sieve Size in mm / % passing By Weight | | | | | | | | | | MDD | OMC | PI% | L.A.A. % | FI and EI % | A.I.V. % | Base | | Remarks |
|---------------|--------------|--------------------|------------------|-----------------|--|--------|-------|-------|-------|-------|-------|-------|-------|------|-----|-------|-------------|----------|-------------|----------|------|-----|---------|
| | | | | | 40 | 34.5 | 20 | 10 | 4.75 | 2.36 | 0.6 | 0.075 | 75 | 150 | | | | | | | 300 | 600 | |
| 1 | RUDP-B-01 | R-7,(T3L7),0+450 | Chisang Khola | 21-Sep-19 | 100 | 89.54 | 72.18 | 52.75 | 32.23 | 25.23 | 13.23 | 5.85 | 2.248 | 5.40 | NP | 27.50 | 22.50/19.50 | 22.32 | 61.30 | 86.00 | | | |
| 2 | RUDP-B-02 | R-7,(T3L7),0+570 | Chisang Khola | 22-Sep-19 | 100 | 91.94 | 66.17 | 41.85 | 23.17 | 13.37 | 6.41 | | | | NP | 30.10 | 22.47/20.61 | 21.88 | 67.74 | | | | |
| 3 | RUDP-B-03 | R-7,(T3L7),0+680 | Chisang Khola | 23-Sep-19 | 100 | 91.62 | 65.39 | 50.95 | 37.58 | 30.02 | 12.61 | 6.70 | | | NP | 29.80 | 23.91/17.47 | 22.83 | 88.49 | | | | |
| Spec. Limit : | | | | | 100 | 85-100 | 62-92 | 40-70 | 26-55 | 21-53 | 12-28 | 2-10 | | | | <45 | <35 | <35 | >80 | >80 | | | |

Location:-R-7,(T3L7)

Contractor



ZHONGHENG CONSTRUCTION GROUP IN INTERNATIONAL ENGINEERING CO. LTD

Checked By
Engineer
Benu shrestha

Submitted By
Contract Manager
Rabindra Kr. Thakur

Verified By
Expert Qty Surveyor/CSE
H.K. Mandal/Rajjan Shrestha

Approved By
Team Leader
Giresh Chand

Consultant



BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH
B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS &
ARCHITECTS (P) LTD, KATHMANDU, NEPAL

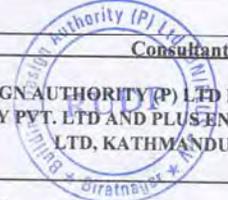
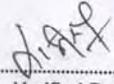


REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City
Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Field Density Test

| Sn. | Lab.Ref.no | Testing Date | Chainage | Moisture content % | | Density(gm/cc) | | Compaction % | |
|----------------------|------------------|--------------|----------|--------------------|-----------|-----------------|--------------------|--------------------|-------------|
| | | | | OMC% | Field MC% | Max.Dry density | Field Dry density. | Compaction % | Specified % |
| | | | | | | | | | |
| Location:-R-7,(T3L7) | | | | | | | | Month September | |
| | | | | | | | | Year 2019 | |
| 1 | RUDP-B-FD-1, L/S | 26-Sep-19 | 0+410 | 5.80 | 5.71 | 2.248 | 2.208 | 98.24 | 98 |
| 2 | RUDP-B-FD-1, C/L | 26-Sep-19 | 0+450 | 5.80 | 4.63 | 2.248 | 2.211 | 98.37 | 98 |
| 3 | RUDP-B-FD-1, L/S | 26-Sep-19 | 0+520 | 5.80 | 5.07 | 2.248 | 2.221 | 98.81 | 98 |
| 4 | RUDP-B-FD-1, R/S | 26-Sep-19 | 0+580 | 5.80 | 4.42 | 2.248 | 2.246 | 99.89 | 98 |
| 5 | RUDP-B-FD-1, R/S | 26-Sep-19 | 0+630 | 5.80 | 4.87 | 2.248 | 2.246 | 99.90 | 98 |
| 6 | RUDP-B-FD-1, R/S | 26-Sep-19 | 0+690 | 5.80 | 5.68 | 2.248 | 2.223 | 98.87 | 98 |
| 7 | RUDP-B-FD-1, R/S | 26-Sep-19 | 0+730 | 5.80 | 5.91 | 2.248 | 2.224 | 99.50 | 98 |

| | | | |
|---|--|--|--|
|  <p>Contractor ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p> | |  <p>Consultant BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL</p> | |
|  Checked By Engineer Benu shrestha |  Submitted By Contract Manager Rabindra Kr. Thakur |  Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha |  Approved By Team Leader Gresh Chand |



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City
Contract No: RUDP/ICB/BRT-02

Summary Sheet of Monthly Test Report

| S.N. | Lab. Ref no. | Location of Sample | Source of Sample | Date of Testing | Sieve Size in mm / % passing By Weight | | | | | | | MDD | OMC | PI% | L.A.A. % | Fl and El % | A.I.V. % | CR % | CBR % | Remarks | |
|------|--------------|--------------------|------------------|-----------------|---|-------|-------|-------|-------|-------|-------|------|-------|------|----------|-------------|-------------|-------|-------|---------|-------|
| | | | | | 40 | 31.5 | 20 | 10 | 4.75 | 2.36 | 0.6 | | | | | | | | | | 0.075 |
| 1 | RUDP-B-01 | R-34,(0+090) | Chising Khola | 24-Sep-19 | 100 | 92.04 | 71.24 | 49.37 | 24.30 | 24.81 | 12.58 | 8.84 | 2.244 | 5.20 | NP | 30.98 | 22.46/17.79 | 23.94 | 89.94 | 85.60 | |
| | | | | | Spec. Limit : 100 85-100 62-92 40-70 26-55 21-53 12-28 2-10 | | | | | | | | | | | | | | | | |

Location:-R-34

| | |
|---|--|
| <p>Contractor</p> <p>ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p>  | <p>Consultant</p> <p>BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL</p>  |
| <p>Checked By Engineer Benu shrestha</p> | <p>Submitted By Contract Manager Rabindra Kr. Thakur</p> |
| <p>Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha</p> | <p>Approved By Team Leader Gireesh Chand</p> |



| REGIONAL URBAN DEVELOPMENT PROJECT | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|--------------------|------------------|-----------------|---|--------|-------|-------|-------|--|-------|------|-------|------|--|-------------|-------------|---------|-------|-------|--|
| Biratnagar Metropolitan City | | | | | | | | | | | | | | | | | | | | | |
| Contract No: RUDP/ICB/BRT-02 | | | | | | | | | | | | | | | | | | | | | |
| Summary Sheet of Monthly Test Report | | | | | | | | | | | | | | | | | | | | | |
| Location:-R-107 | | | | | | | | | | | | | | | | | | | | | |
| S.N. | Lab.Ref no. | Location of Sample | Source of Sample | Date of Testing | Sieve Size in mm / % passing By Weight | | | | | | | MDD | OMC | PP% | Type of Material | | | Remarks | | | |
| | | | | | 40 | 31.5 | 20 | 10 | 4.75 | 0.6 | 0.075 | | | | L.A.A. % | FI and EI % | A.I.V. % | | CR % | CBR % | |
| 1 | RUDP-B-01 | R-107,(0+050) | Chising Khola | 15-Sep-19 | 100 | 93.17 | 71.22 | 55.53 | 41.57 | 32.01 | 21.76 | 7.32 | 2.243 | 5.80 | NP | 32.10 | 22.44/19.69 | 23.51 | 81.75 | 82.00 | |
| Spec. Limit : | | | | | 100 | 85-100 | 62-92 | 40-70 | 26-55 | 21-53 | 12-28 | 2-10 | | | | <45 | <35 | <35 | >80 | >80 | |
| Contractor | | | | | | | | | | | | | | | | | | | | | |
| ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD.  | | | | | | | | | | | | | | | | | | | | | |
| Consultant | | | | | | | | | | | | | | | | | | | | | |
| BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL  | | | | | | | | | | | | | | | | | | | | | |
| Checked By Engineer Benu Shrestha | | | | | Submitted By Contract Manager Rabindra Kr. Thakur | | | | | Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha | | | | | Approved By Team Leader Giresh Chand | | | | | | |



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City
Contract No: RUDP/ICB/BRT-02

Summary Sheet of Monthly Test Report

| | | Month | | Year | | September | | 2019 | | | | | | | | | | | | | |
|---------------|--------------|--------------------|------------------|-----------------|--|-----------|-------|-------|-------|-------|-------|---------------------------------|-------------|----------|------|-------|-------------|-------|-------|-------|--|
| | | Type of Material | | (Base) | | | | | | | | | | | | | | | | | |
| S.N. | Lab. Ref no. | Location of Sample | Source of Sample | Date of Testing | Sieve Size in mm / % passing By Weight | | | | | MDD | OMC | L _v A _v % | FI and EI % | A.I.V. % | CR % | CBR % | Remarks | | | | |
| | | | | | 40 | 31.5 | 20 | 10 | 4.75 | | | | | | | | | 2.36 | 0.6 | 0.075 | |
| 1 | RUDP-B-01 | R-9,(0+100) | Chisang Khola | 8-Jul-19 | 100 | 88.25 | 65.17 | 52.09 | 39.33 | 30.08 | 20.06 | 6.98 | 2.254 | 5.70 | NP | 32.96 | 22.24/19.94 | 25.38 | 82.85 | 83.40 | |
| Spec. Limit : | | | | | 100 | 85-100 | 62-92 | 40-70 | 26-55 | 21-53 | 12-28 | 2-10 | <45 | <35 | <35 | >80 | >80 | | | | |

| Contractor | Consultant |
|--|--|
| ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD  | BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL  |
| Checked By Engineer Benu Shrestha | Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajam Shrestha |
| Submitted By Contract Manager Rabindra Kr. Thakur | Approved By Team Leader Girish Chand |



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City
Contract No: RUDP/ICB/BRT-02

Summary Sheet of Monthly Test Report

| S.N. | Lab. Ref no. | Location of Sample | Source of Sample | Date of Testing | Sieve Size in mm / % passing By Weight | | | | | | MDD | OMC | PI% | L.A.A. % | FI and EI % | A.I.V. % | CR % | CBR % | Remarks | | |
|---|--------------|--------------------|------------------|-----------------|--|-------|-------|-------|-------|-------|-------|------|-------|----------|-------------|----------|-------------|-------|---------|------|-------|
| | | | | | 40 | 31.5 | 20 | 10 | 4.75 | 2.36 | | | | | | | | | | 0.6 | 0.075 |
| 1 | RUDP-B-01 | T3L7A,(0+050) | Chisang Khola | 16-Sep-19 | 100 | 91.83 | 76.39 | 60.61 | 36.48 | 25.05 | 15.75 | 8.75 | 2.250 | 5.80 | NP | 27.60 | 22.89/19.91 | 24.13 | 82.72 | 4.00 | |
| Spec. Limit : 100 85-100 62-92 40-70 26-55 21-53 12-28 2-10 | | | | | | | | | | | | | | | | | | | | | |

Location: T3L7A

| Month Year | September 2019 |
|------------------|----------------|
| Type of Material | Base |

Contractor


ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD

Consultant


BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY-PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL

.....
Checked By
Engineer
Benu shrestha

.....
Submitted By
Contract Manager
Rabindra Kr. Thakur

.....
Verified By
Expert Qty Surveyor/CSE
H.K. Mandal/Rajan Shrestha

.....
Approved By
Team Leader
Gireesh Chand



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

Contract No: RUDP/ICB/BRT-02

Summary Sheet of Monthly Test Report

| S.N. | Lab Ref no. | Location of Sample | Source of Sample | Date of Testing | Sieve Size in mm / % passing By Weight | | | | | | | | | | MDD | OMC | PP% | L.A.A. % | Fl and El % | A.I.V. % | CR | CBR % | Remarks |
|------|-------------|--------------------|------------------|-----------------|---|-------|-------|-------|-------|-------|-------|-------|-------|------|-----|-------|-------|----------|-------------|----------|-------|-------|---------|
| | | | | | 40 | 31.5 | 20 | 10 | 4.75 | 2.36 | 0.6 | 0.075 | | | | | | | | | | | |
| 1 | RUDP-B-01 | R-7,(0+100) | Chisang Khola | 8-Sep-19 | 100 | 88.54 | 64.13 | 48.33 | 36.10 | 27.63 | 13.88 | 6.80 | 2.254 | 5.75 | NP | 33.23 | 22.30 | 17.86 | 20.53 | 63.23 | 82.00 | | |
| 2 | RUDP-B-02 | R-7,(0+200) | Chisang Khola | 8-Sep-19 | 100 | 90.06 | 68.02 | 54.95 | 45.09 | 31.63 | 20.28 | 8.11 | 2.248 | 6.00 | NP | 34.76 | 23.32 | 14.24 | 23.34 | 64.76 | 86.60 | | |
| 3 | RUDP-B-03 | R-7,(0+300) | Chisang Khola | 8-Sep-19 | 100 | 91.74 | 69.57 | 60.01 | 48.35 | 39.55 | 22.31 | 6.53 | 2.248 | 6.00 | NP | 32.70 | 21.67 | 20.40 | 22.36 | 88.83 | 86.60 | | |
| 4 | RUDP-B-04 | R-7,(0+450) | Chisang Khola | 8-Sep-19 | 100 | 88.98 | 69.00 | 58.57 | 46.35 | 36.90 | 22.32 | 6.75 | | | NP | 27.98 | 19.65 | 17.51 | 21.82 | 85.03 | | | |
| | | | | | Spec. Limit : 100 85-100 62-92 40-70 26-55 21-53 12-28 2-10 | | | | | | | | | | | | | < 45 | < 35 | < 35 | > 80 | > 80 | |

Location:-R-7 (South of Neuro Chowk)

Contractor

ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD

BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL

Approved By
Team Leader
Giresh Chandra

Checked By
Engineer
Benu Shrestha

Submitted By
Contract Manager
Rabindra Kr. Thakur

Verified By
Export Qty Surveyor/CSE
H.K. Mandal/Rajjan Shrestha

Approved By
Team Leader
Giresh Chandra



REGIONAL URBAN DEVELOPMENT PROJECT

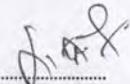
Biratnagar Metropolitan City
Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Field Density Test

Location:-R-7,(South of Neuro chowk)

| | |
|------------------|-----------|
| Month | September |
| Year | 2019 |
| Type of Material | Base |

| Sn. | Lab.Ref.no | Testing Date | Chainage | Moisture content % | | Density(gm/cc) | | Compaction % | |
|-----|------------------|--------------|----------|--------------------|-----------|-----------------|--------------------|--------------|-------------|
| | | | | OMC% | Field MC% | Max.Dry density | Field Dry density, | Compaction % | Specified % |
| 1 | RUDP-B-FD-1, L/S | 13-Sep-19 | 0+060 | 5.70 | 5.92 | 2.254 | 2.233 | 99.09 | 98 |
| 2 | RUDP-B-FD-1, C/L | 13-Sep-19 | 0+120 | 5.70 | 5.46 | 2.254 | 2.238 | 99.30 | 98 |
| 3 | RUDP-B-FD-1, L/S | 13-Sep-19 | 0+190 | 5.70 | 5.27 | 2.254 | 2.226 | 98.75 | 98 |
| 4 | RUDP-B-FD-1, C/L | 13-Sep-19 | 0+260 | 5.70 | 5.02 | 2.254 | 2.235 | 99.17 | 98 |
| 5 | RUDP-B-FD-1, L/S | 13-Sep-19 | 0+300 | 6.00 | 5.65 | 2.248 | 2.240 | 99.63 | 98 |
| 6 | RUDP-B-FD-1, R/S | 13-Sep-19 | 0+350 | 6.00 | 5.89 | 2.248 | 2.241 | 99.71 | 98 |
| 7 | RUDP-B-FD-1, C/L | 13-Sep-19 | 0+400 | 6.00 | 5.91 | 2.248 | 2.224 | 98.94 | 98 |
| 8 | RUDP-B-FD-1, L/S | 13-Sep-19 | 0+450 | 6.00 | 5.95 | 2.248 | 2.211 | 98.34 | 98 |
| 9 | RUDP-B-FD-1, R/S | 13-Sep-19 | 0+500 | 6.00 | 6.13 | 2.248 | 2.242 | 99.73 | 98 |
| 9 | RUDP-B-FD-1, L/S | 13-Sep-19 | 0+520 | 6.00 | 5.71 | 2.248 | 2.243 | 99.77 | 98 |
| 9 | RUDP-B-FD-1, R/S | 13-Sep-19 | 0+550 | 6.00 | 5.62 | 2.248 | 2.230 | 99.20 | 98 |

| | | | |
|--|---|--|---|
| Contractor | | Consultant | |
|  ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD | |  BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL. | |
|  Checked By Engineer Benu Shrestha |  Submitted By Contract Manager Rabintra Kr. Thakur |  Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha |  Approved By Team Leader Gresh Chand |



| REGIONAL URBAN DEVELOPMENT PROJECT Biratnagar Metropolitan City Contract No: RUDP/ICB/BRT-02 Daily Application Rate Check for Priming work SUMMARY FOR THE MONTH OF SEPTEMBER 2019 | | | | | | | | | | | | |
|--|----------|-----------------|---|------------|-----------------|--|----------------------|---------------|---|---------------------------------|--------------------------------------|--|
| Type of Bitumen: 80/100 P.G Cutter Percentage/MC 70:MC30 | | | | | | | | | | | | |
| SN NO | Location | Date of Priming | Station From | Station to | Side of Priming | Area of Priming (M) | Intersection Area m2 | Total Area M2 | Bitumen Consumption (Ltr) | Application Rate By Deep Ltr/m2 | Application Rate Bl Tray Test Ltr/m2 | |
| 1 | S13-A | 7-Sep | 0+000 | 0+237 | Both side | 1066.5 | 0 | 1066.5 | 1150 | 1.08 | 1.04 | |
| 2 | R-20 | 9-Sep | 0+000 | 0+112 | Both Side | 456.96 | 0 | 456.96 | 500 | 1.09 | 1.04 | |
| 3 | T2L18Y | 9-Sep | 0+000 | 0+118 | Both Side | 416.54 | 0 | 416.54 | 450 | 1.08 | 1.06 | |
| 4 | R-26 | 9-Sep | 0+000 | 0+090 | Both Side | 378 | 0 | 378 | 400 | 1.06 | 1.03 | |
| 5 | T3L23C | 10-Sep-19 | 0+000 | 0+064 | Both Side | 581.12 | 0 | 581.12 | 600 | 1.03 | 1.05 | |
| 6 | T3L11K | 10-Sep-19 | 0+000 | 0+193 | Both Side | 511.45 | 0 | 511.45 | 550 | 1.08 | 1.03 | |
| 7 | T2L19P | 10-Sep-19 | 0+000 | 0+125 | Both Side | 488.75 | 0 | 488.75 | 500 | 1.02 | 1.03 | |
| 8 | T2L19Q | 12-Sep-19 | 0+000 | 0+113 | Both Side | 457.65 | 0 | 457.65 | 500 | 1.09 | 1.06 | |
| 9 | R-9A | 12-Sep | 0+000 | 0+110 | Both Side | 377.3 | 0 | 377.3 | 400 | 1.060 | 1.04 | |
| Required specification for Prime coat 1.0 Lit/M2 ± 5% Specific Gravity of Bitumen 1.034 | | | | | | | | | | | | |
| Consultant BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL | | | | | | | | | | | | |
| Contractor ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD | | | | | | | | | | | | |
| Checked By Engineer Benu Shrestha | | | Submitted By Contract Manager Rabindra Kr. Thakur | | | Verified By Expert Qty Surveyor/CSE H.K. Mandal/RajjanShrestha | | | Approved By Team Leader Gireesh Chand | | | |



| REGIONAL URBAN DEVELOPMENT PROJECT Biratnagar Metropolitan City Contract No: RUDP/ICB/BRT-02 Daily Application Rate Check for Priming work SUMMARY FOR THE MONTH OF SEPTEMBER, 2019 | | | | | | | | | | | | |
|---|----------|-----------------|--------------|------------|-----------------|---|----------------------|---------------|---------------------------|---------------------------------|--------------------------------------|---|
| Type of Bitumen: 80/100 P.G Cutter Percentage: MC 70:MC30 | | | | | | | | | | | | |
| SN NO | Location | Date of Priming | Station From | Station to | Side of Priming | Area of Priming (M) | Intersection Area m2 | Total Area M2 | Bitumen Consumption (Ltr) | Application Rate By Deep Ltr/m2 | Application Rate By Tray Test Ltr/m2 | |
| 10 | R9-B | 14-Sep | 0+000 | 0+085 | Both side | 382.5 | 0 | 382.5 | 400 | 1.05 | 1.03 | |
| 11 | L R-12 | 14-Sep | 0+000 | 0+140 | Both Side | 700 | 0 | 700 | 750 | 1.07 | 1.02 | |
| 12 | R-42 | 14-Sep | 0+000 | 0+105 | Both Side | 611.28 | 0 | 611.28 | 650 | 1.06 | 1.04 | |
| 13 | R-102 | 23-Sep | 0+000 | 0+140 | Both Side | 525 | 0 | 525 | 550 | 1.05 | 1.03 | |
| Total | | | | | | | | | 7400 | | | |
| Required specification for Prime coat 1.0 Lit/M2 ± 5% Specific Gravity of Bitumen 1.034 | | | | | | | | | | | | |
| Contractor | | | | | | Consultant | | | | | | Contractor |
| ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO., LTD | | | | | | BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL | | | | | | Contractor |
| Checked By Engineer Benu Shrestha | | | | | | Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajjan Shrestha | | | | | | Approved By Team Leader Gresh Chaud |



REGIONAL URBAN DEVELOPMENT PROJECT
Biratnagar Metropolitan City
Contract No: RUDP/ICB/BRT-02
Daily Application Rate Check for TACK COAT
SUMMARY FOR THE MONTH OF SEPTEMBER 2019

Type of Bitumen: 60/100 P.G

| S.N. | Location | Date of Tack coat | Station From | Station to | Side of Tack coat | Area of Tack coat | Intersection Area m2 | Total Area M2 | Bitumen Consumption | Application Rate By Dig/Lit/m2 | Application Rate By Tray Test L/U/m2 |
|------|----------|-------------------|--------------|------------|-------------------|-------------------|----------------------|---------------|---------------------|--------------------------------|--------------------------------------|
| 1 | S13-A | 20-Sep-19 | 0+000 | 0+237 | BHS | 1076.54 | 0 | 1076.54 | 600 | 0.56 | 0.51 |
| 2 | T2L19P | 21-Sep-19 | 0+000 | 0+126 | BHS | 502.5 | 0 | 502.5 | 300 | 0.60 | 0.51 |
| 3 | T2L18Y | 22-Sep-19 | 0+000 | 0+051 | BHS | 180.03 | 0 | 180.03 | 100 | 0.56 | 0.52 |
| 4 | R-20 | 22-Sep-19 | 0+000 | 0+112 | BHS | 453.6 | 0 | 453.60 | 250 | 0.55 | 0.53 |
| 5 | R-26 | 22-Sep-19 | 0+000 | 0+090 | BHS | 378 | 0 | 378.00 | 200 | 0.53 | 0.51 |
| 6 | R9-B | 22-Sep-19 | 0+000 | 0+085 | BHS | 382.5 | 0 | 382.50 | 200 | 0.52 | 0.51 |
| 7 | R9-A | 22-Sep-19 | 0+000 | 0+110 | BHS | 377.3 | 0 | 377.30 | 200 | 0.53 | 0.52 |

Required tack coat is 0.40 to 0.60 Lit/M2 According to Road Note -3, Section 711.2
Specific Gravity of Bitumen: 1.034

| | |
|---|---|
| <p>Contractor</p> <p>ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p> <p>Checked By Engineer Benu Shrestha</p> | <p>Consultant</p> <p>BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL</p> <p>Approved By Team Leader Giresh Chand</p> |
| <p>Submitted By Contract Manager Rabintra K. Thakur</p> | <p>Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha</p> |



REGIONAL URBAN DEVELOPMENT PROJECT
Biratnagar Metropolitan City
Contract No: RUDP/ICB/BRT-02
Daily Application Rate Check for TACK COAT
SUMMARY FOR THE MONTH OF SEPTEMBER 2019

Type of Bitumen: 80/100 P.G

| S.N. | Location | Date of Tack coat | From | Station to | Side of Tack coat | Area of Tack coat | Intersection Area m2 | Total Area M2 | Bitumen Consumption | Application Rate By Dip Lit/m2 | Application Rate By Tray Test Lit/m2 |
|--------------|-------------|-------------------|-------|------------|-------------------|-------------------|----------------------|---------------|---------------------|--------------------------------|--------------------------------------|
| 8 | T2L19Q | 22-Sep-19 | 0+000 | 0+113 | BHS | 448.64 | 0 | 448.64 | 250 | 0.56 | 0.55 |
| 9 | T2L18Y | 23-Sep-19 | 0+000 | 0+118 | BHS | 261.3 | 0 | 261.3 | 150 | 0.57 | 0.54 |
| 10 | R-9(T3L11k) | 23-Sep-19 | 0+000 | 0+193 | BHS | 514.34 | 0 | 514.34 | 300 | 0.58 | 0.55 |
| 11 | T3L23C | 23-Sep-19 | 0+000 | 0+064 | BHS | 581.12 | 0 | 581.12 | 300 | 0.52 | 0.51 |
| 12 | R-42 | 23-Sep-19 | 0+000 | 0+105 | BHS | 567.18 | 0 | 567.18 | 300 | 0.53 | 0.51 |
| 13 | R-102 | 26-Sep-19 | 0+000 | 0+140 | BHS | 525 | 0 | 525.00 | 300 | 0.57 | 0.56 |
| 14 | R-12 | 26-Sep-19 | 0+000 | 0+140 | BHS | 714 | 0 | 714.00 | 400 | 0.66 | 0.54 |
| Total | | | | | | | | | 3850 | | |

Required tack coat is 0.40 to 0.60 Lit/M2 According to Road Note -3, Section 711.2
Specific Gravity of Bitumen 1.034

| | |
|---|---|
| <p>Contractor</p> <p style="text-align: center;">ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p> <p style="text-align: center;">  Submitted By Contract Manager Rabindra Kr. Thakur </p> | <p>Consultant</p> <p style="text-align: center;">BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL</p> <p style="text-align: center;">  Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajjan Shrestha </p> |
| <p>Checked By Engineer Benu Shrestha</p> | <p>Approved By Team Leader Gireesh Chand</p> |



| REGIONAL URBAN DEVELOPMENT PROJECT Biratnagar Metropolitan City Contract No: RUDP/ICB/BRT-02 | | | | | | | | | | | | | | | | | |
|--|--------------|----------------|-----------------------------|---|---------|-------|-------|---|-------|-----------------------------|-------------------|---|-------|-------------|---------|-------|--|
| Test Result by MARSHALL METHOD - (AASHTO T 245-78) | | | | | | | | | | | | | | | | | |
| SUMMARY FOR THE MONTH OF September 2019 | | | | | | | | | | | | | | | | | |
| S. No. | LAB REF. NO. | Date of Laying | Location of Work ch: | Mix Agg Gradation | | | | | | Bitumen Content From Test % | Mix Density gm/cc | Air Voids % | VMA % | Stability N | Flow mm | | |
| | | | | 20 | 16 | 9.5 | 4.75 | 2.36 | 0.6 | | | | | | | 0.075 | |
| 1 | 102 | 20/09/2019 | S13-A, 0+000 to 0+237 | 100 | 100 | 77.10 | 56.69 | 35.35 | 16.99 | 6.90 | 5.80 | 2.375 | 3.05 | 16.37 | 11580 | 2.43 | |
| 2 | 103 | 21/09/2019 | T2L19P, 0+000 To 0+125 | 100 | 100 | 78.78 | 56.08 | 35.28 | 17.46 | 6.85 | 5.74 | 2.452 | 3.19 | 16.37 | 11625 | 2.33 | |
| 3 | 104 | 22/09/2019 | T2L18Y, 0+000 To 0+051 | 100 | 100 | 78.24 | 56.79 | 36.94 | 18.68 | 7.01 | 5.80 | 2.373 | 3.11 | 16.43 | 11570 | 2.35 | |
| 4 | 105 | 22/09/2019 | R-20, 0+000 To 0+112 | 100 | 100 | 78.26 | 55.57 | 34.37 | 16.76 | 6.58 | 5.69 | 2.371 | 3.37 | 16.42 | 11565 | 2.50 | |
| 5 | 106 | 22/09/2019 | R-26, 0+000 To 0+090 | 100 | 100 | 78.46 | 55.43 | 34.63 | 16.91 | 6.61 | 5.77 | 2.373 | 3.16 | 16.40 | 11650 | 2.45 | |
| 6 | 107 | 22/09/2019 | R-9B, 0+000 To 0+085 | 100 | 100 | 77.92 | 54.68 | 33.66 | 16.36 | 6.27 | 5.79 | 2.374 | 3.10 | 16.37 | 11576 | 2.40 | |
| 7 | 108 | 22/09/2019 | R-9A, 0+000 To 0+110 | 100 | 100 | 78.89 | 55.98 | 35.71 | 16.41 | 6.01 | 5.74 | 2.372 | 3.30 | 16.47 | 11540 | 2.45 | |
| 8 | 109 | 22/09/2019 | T2L19Q, 0+000 To 0+113 | 100 | 100 | 79.00 | 56.20 | 36.06 | 16.76 | 6.36 | 5.70 | 2.372 | 3.36 | 16.44 | 11585 | 2.40 | |
| 9 | 110 | 23/09/2019 | T2L18Y, 0+000 To 0+118 | 100 | 100 | 78.14 | 56.07 | 36.45 | 16.60 | 6.42 | 5.75 | 2.453 | 3.33 | 16.51 | 11620 | 2.40 | |
| 10 | 111 | 23/09/2019 | R-9(T3L11K), 0+000 to 0+193 | 100 | 100 | 79.43 | 56.31 | 35.85 | 15.92 | 5.95 | 5.69 | 2.455 | 3.57 | 16.59 | 11952 | 2.45 | |
| 11 | 112 | 23/09/2019 | T3L23C, 0+000 to 0+064 | 100 | 100 | 78.89 | 55.88 | 36.37 | 17.06 | 6.46 | 5.71 | 2.376 | 3.18 | 16.30 | 11731 | 2.40 | |
| 12 | 113 | 23/09/2019 | R-43, 000 to 0+105 | 100 | 100 | 78.89 | 56.08 | 36.67 | 17.58 | 6.76 | 5.73 | 2.374 | 3.24 | 16.39 | 12284 | 2.27 | |
| 13 | 114 | 26/09/2019 | R-102, 0+000 to 0+140 | 100 | 100 | 78.15 | 55.14 | 35.09 | 16.53 | 6.03 | 5.71 | 2.369 | 3.47 | 16.55 | 11841 | 2.60 | |
| 14 | 115 | 26/09/2019 | R-12, 0+000 to 0+140 | 100 | 100 | 81.86 | 57.25 | 34.54 | 15.98 | 7.07 | 5.74 | 2.374 | 3.23 | 16.41 | 11465 | 2.57 | |
| Specifications | | | | 100 | 100-100 | 76-82 | 54-59 | 33-37 | 16-21 | 6 to 9 | 5.703 | Min 2.368 | 3-6% | ≥ 15 | ≥ 8500 | 2-3 | |
| Job Mix Tolerances from RUDP Specification Table 2-4-10 | | | | ±5% | Nil | ±5% | ±3% | ±2% | ±1% | Nil | ±0.3% | For (25-51)mm Thickness W/C Course | | | | | |
| REMARKS: | | | | | | | | | | | | | | | | | |
| ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD | | | |  | | | |  | | | | BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.M. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL | | | | | |
| Checked By Benu Shrestha | | | | Submitted By Rabindra Kr. Thakur | | | | Verified By H.K. Mendal | | | | Approved By Gresh Chard | | | | | |



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Concrete Cube Test Report

| S.N. | Location | Lab Ref.no. | Type of Cement | Brand of Cement | Source of Sand+Agg. | Date of Casting | Month | | September | | Concrete Grade |
|------|----------------|-------------|----------------|-----------------|---------------------|-----------------|------------------|-----------|-----------------------------|-------|----------------|
| | | | | | | | Year | | 2019 | | |
| | | | | | | | Type of Material | | Conc. Cube | | |
| | | | | | | | Date of Testing | | Strength, N/mm ² | | |
| | | | | | | 7 Days | 28 Days | 7 Days | 28 Days | | |
| 1 | R-4 | RUDP-2410 | Saptakoshi | OPC | Chisang Khola | 5-Aug-19 | 12-Aug-19 | 2-Sep-19 | | 16.54 | M13 |
| 2 | R-46 | RUDP-2411 | Saptakoshi | OPC | Chisang Khola | 5-Aug-19 | 12-Aug-19 | 2-Sep-19 | | 21.10 | M20 |
| 3 | T3L23C | RUDP-2412 | Saptakoshi | OPC | Chisang Khola | 5-Aug-19 | 12-Aug-19 | 2-Sep-19 | | 23.65 | M20 |
| 4 | Judi-yard | RUDP-2413 | Saptakoshi | OPC | Chisang Khola | 5-Aug-19 | 12-Aug-19 | 2-Sep-19 | | 22.00 | M20 |
| 5 | Judi-yard | RUDP-2414 | Saptakoshi | OPC | Chisang Khola | 5-Aug-19 | 12-Aug-19 | 2-Sep-19 | | 22.81 | M20 |
| 6 | Judi-yard | RUDP-2415 | Saptakoshi | OPC | Chisang Khola | 6-Aug-19 | 13-Aug-19 | 3-Sep-19 | | 22.08 | M20 |
| 7 | Madhumara-yard | RUDP-2416 | Saptakoshi | OPC | Chisang Khola | 7-Aug-19 | 14-Aug-19 | 4-Sep-19 | | 22.73 | M20 |
| 8 | Madhumara-yard | RUDP-2417 | Saptakoshi | OPC | Chisang Khola | 7-Aug-19 | 14-Aug-19 | 4-Sep-19 | | 27.16 | M25 |
| 9 | B-1 | RUDP-2418 | Saptakoshi | OPC | Chisang Khola | 7-Aug-19 | 14-Aug-19 | 4-Sep-19 | | 23.03 | M20 |
| 10 | R-2 | RUDP-2419 | Saptakoshi | OPC | Chisang Khola | 7-Aug-19 | 14-Aug-19 | 4-Sep-19 | | 23.43 | M20 |
| 11 | R-4 | RUDP-2420 | Saptakoshi | OPC | Chisang Khola | 9-Aug-19 | 16-Aug-19 | 6-Sep-19 | | 17.14 | M15 |
| 12 | T3L Trunk line | RUDP-2421 | Saptakoshi | OPC | Chisang Khola | 9-Aug-19 | 16-Aug-19 | 6-Sep-19 | | 23.10 | M20 |
| 13 | Judi-yard | RUDP-2422 | Saptakoshi | OPC | Chisang Khola | 9-Aug-19 | 16-Aug-19 | 6-Sep-19 | | 24.47 | M20 |
| 14 | Judi-yard | RUDP-2423 | Saptakoshi | OPC | Chisang Khola | 9-Aug-19 | 16-Aug-19 | 6-Sep-19 | | 22.15 | M20 |
| 15 | T3L39 | RUDP-2424 | Saptakoshi | OPC | Chisang Khola | 9-Aug-19 | 16-Aug-19 | 6-Sep-19 | | 23.5 | M20 |
| 16 | R-9(T3L11K) | RUDP-2425 | Saptakoshi | OPC | Chisang Khola | 11-Aug-19 | 18-Aug-19 | 8-Sep-19 | | 23.03 | M20 |
| 17 | R-4 | RUDP-2426 | Saptakoshi | OPC | Chisang Khola | 11-Aug-19 | 18-Aug-19 | 8-Sep-19 | | 24.10 | M20 |
| 18 | T3L5 | RUDP-2427 | Saptakoshi | OPC | Chisang Khola | 11-Aug-19 | 18-Aug-19 | 8-Sep-19 | | 22.81 | M20 |
| 19 | R-2 | RUDP-2428 | Saptakoshi | OPC | Chisang Khola | 11-Aug-19 | 18-Aug-19 | 8-Sep-19 | | 22.73 | M20 |
| 20 | Madhumara-yard | RUDP-2429 | Saptakoshi | OPC | Chisang Khola | 11-Aug-19 | 18-Aug-19 | 8-Sep-19 | | 22.00 | M20 |
| 21 | Madhumara-yard | RUDP-2430 | Saptakoshi | OPC | Chisang Khola | 11-Aug-19 | 18-Aug-19 | 8-Sep-19 | | 27.01 | M25 |
| 22 | R-82 | RUDP-2431 | Saptakoshi | OPC | Chisang Khola | 12-Aug-19 | 19-Aug-19 | 9-Sep-19 | | 22.73 | M20 |
| 23 | B-1 | RUDP-2432 | Saptakoshi | OPC | Chisang Khola | 12-Aug-19 | 19-Aug-19 | 9-Sep-19 | | 22.76 | M20 |
| 24 | T3L23C | RUDP-2433 | Saptakoshi | OPC | Chisang Khola | 12-Aug-19 | 19-Aug-19 | 9-Sep-19 | | 23.33 | M20 |
| 25 | T3L39 | RUDP-2434 | Saptakoshi | OPC | Chisang Khola | 12-Aug-19 | 19-Aug-19 | 9-Sep-19 | | 22.73 | M20 |
| 26 | Judi-yard | RUDP-2435 | Saptakoshi | OPC | Chisang Khola | 12-Aug-19 | 19-Aug-19 | 9-Sep-19 | | 23.65 | M20 |
| 27 | Judi-yard | RUDP-2436 | Saptakoshi | OPC | Chisang Khola | 12-Aug-19 | 19-Aug-19 | 9-Sep-19 | | 22.18 | M20 |
| 28 | Judi-yard | RUDP-2437 | Saptakoshi | OPC | Chisang Khola | 12-Aug-19 | 19-Aug-19 | 9-Sep-19 | | 22.66 | M20 |
| 29 | R-4 | RUDP-2438 | Saptakoshi | OPC | Chisang Khola | 12-Aug-19 | 19-Aug-19 | 9-Sep-19 | | 17.67 | M15 |
| 30 | T3L Trunk line | RUDP-2439 | Saptakoshi | OPC | Chisang Khola | 12-Aug-19 | 19-Aug-19 | 9-Sep-19 | | 23.33 | M20 |
| 31 | R-2 | RUDP-2440 | Saptakoshi | OPC | Chisang Khola | 12-Aug-19 | 19-Aug-19 | 9-Sep-19 | | 24.39 | M20 |
| 32 | Madhumara-yard | RUDP-2441 | Saptakoshi | OPC | Chisang Khola | 13-Aug-19 | 20-Aug-19 | 10-Sep-19 | | 22.51 | M20 |
| 33 | Madhumara-yard | RUDP-2442 | Saptakoshi | OPC | Chisang Khola | 13-Aug-19 | 20-Aug-19 | 10-Sep-19 | | 22.96 | M20 |
| 34 | Madhumara-yard | RUDP-2443 | Saptakoshi | OPC | Chisang Khola | 13-Aug-19 | 20-Aug-19 | 10-Sep-19 | | 32.29 | M30 |
| 35 | Madhumara-yard | RUDP-2444 | Saptakoshi | OPC | Chisang Khola | 13-Aug-19 | 20-Aug-19 | 10-Sep-19 | | 26.70 | M25 |
| 36 | R-4 | RUDP-2445 | Saptakoshi | OPC | Chisang Khola | 13-Aug-19 | 20-Aug-19 | 10-Sep-19 | | 18.12 | M15 |
| 37 | T3L23C | RUDP-2446 | Saptakoshi | OPC | Chisang Khola | 13-Aug-19 | 20-Aug-19 | 10-Sep-19 | | 23.21 | M20 |
| 38 | T3L5 | RUDP-2447 | Saptakoshi | OPC | Chisang Khola | 13-Aug-19 | 20-Aug-19 | 10-Sep-19 | | 22.51 | M20 |
| 39 | R-4 | RUDP-2448 | Saptakoshi | OPC | Chisang Khola | 13-Aug-19 | 20-Aug-19 | 10-Sep-19 | | 18.12 | M15 |
| 40 | Judi-yard | RUDP-2449 | Saptakoshi | OPC | Chisang Khola | 13-Aug-19 | 20-Aug-19 | 10-Sep-19 | | 23.47 | M20 |
| 41 | Judi-yard | RUDP-2450 | Saptakoshi | OPC | Chisang Khola | 13-Aug-19 | 20-Aug-19 | 10-Sep-19 | | 22.66 | M20 |
| 42 | R-4 | RUDP-2451 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | | 22.48 | M20 |
| 43 | R-2 | RUDP-2452 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | | 23.28 | M20 |
| 44 | T3L Trunk line | RUDP-2453 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | | 22.84 | M20 |
| 45 | T3L Trunk line | RUDP-2454 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | | 22.96 | M20 |
| 46 | R-3 | RUDP-2455 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | | 23.18 | M20 |
| 47 | T3L5 | RUDP-2456 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | | 22.73 | M20 |

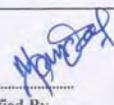
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|--|---|
| <p>Contractor</p> <p>ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p> | <p>Consultant</p> <p>BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL</p> |
| <p>Checked By Engineer Benu Srestha</p> | <p>Submitted By Contract Manager Rabinora K.Thakur</p> |
| <p>Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha</p> | <p>Approved By Team Leader Giresch Chand</p> |



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City
Contract No:- RUDP/ICB/BRT-02
Summary Sheet of Concrete Cube Test Report

| S.N | Location | Lab Ref.No | Type of Cement | Brand of Cement | Source of Sand + Agg. | Date of Casting | Month | | September | | Concrete Grade |
|-----|----------------|------------|----------------|-----------------|-----------------------|-----------------|------------------|-----------|-----------------------------|-------|----------------|
| | | | | | | | Year | | 2019 | | |
| | | | | | | | Type of Material | | Conc. Cube | | |
| | | | | | | | Date of Testing | | Strength, N/mm ² | | |
| | | | | | | 7 Days | 28 Days | 7 Days | 28 Days | | |
| 48 | Madhumara-yard | RUDP-2457 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | | 23.65 | M20 |
| 49 | Madhumara-yard | RUDP-2458 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | | 22.91 | M20 |
| 50 | Madhumara-yard | RUDP-2459 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | | 27.45 | M25 |
| 51 | Judi-yard | RUDP-2460 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | | 22.81 | M20 |
| 52 | R-4 | RUDP-2461 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | | 17.74 | M15 |
| 53 | R-4 | RUDP-2462 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | | 18.49 | M15 |
| 54 | R-3 | RUDP-2463 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 23.65 | M20 |
| 55 | R-3 | RUDP-2464 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 22.69 | M20 |
| 56 | T3L Trunk line | RUDP-2465 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 22.81 | M20 |
| 57 | T3L Trunk line | RUDP-2466 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 22.73 | M20 |
| 58 | T3L5 | RUDP-2467 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 23.65 | M20 |
| 59 | T2L19G | RUDP-2468 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 23.28 | M20 |
| 60 | T3L39 | RUDP-2469 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 23.10 | M20 |
| 61 | T3L39 | RUDP-2470 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 22.81 | M20 |
| 62 | Judi-yard | RUDP-2471 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 22.73 | M20 |
| 63 | Judi-yard | RUDP-2472 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 22.26 | M20 |
| 64 | Judi-yard | RUDP-2473 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 23.65 | M20 |
| 65 | R-4 | RUDP-2474 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 17.74 | M15 |
| 66 | R-4 | RUDP-2475 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 16.92 | M15 |
| 67 | R-4 | RUDP-2476 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 22.00 | M20 |
| 68 | Madhumara-yard | RUDP-2477 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 22.96 | M20 |
| 69 | Madhumara-yard | RUDP-2478 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 22.60 | M20 |
| 70 | Madhumara-yard | RUDP-2479 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 26.78 | M25 |
| 71 | T3L Trunk line | RUDP-2480 | Saptakoshi | OPC | Chisang Khola | 16-Aug-19 | 23-Aug-19 | 13-Sep-19 | | 23.21 | M20 |
| 72 | R-3 | RUDP-2481 | Saptakoshi | OPC | Chisang Khola | 17-Aug-19 | 24-Aug-19 | 14-Sep-19 | | 22.08 | M20 |
| 73 | T3L39 | RUDP-2482 | Saptakoshi | OPC | Chisang Khola | 17-Aug-19 | 24-Aug-19 | 14-Sep-19 | | 23.50 | M20 |
| 74 | T3L5 | RUDP-2483 | Saptakoshi | OPC | Chisang Khola | 17-Aug-19 | 24-Aug-19 | 14-Sep-19 | | 23.10 | M20 |
| 75 | Judi-yard | RUDP-2484 | Saptakoshi | OPC | Chisang Khola | 17-Aug-19 | 24-Aug-19 | 14-Sep-19 | | 24.17 | M20 |
| 76 | Judi-yard | RUDP-2485 | Saptakoshi | OPC | Chisang Khola | 17-Aug-19 | 24-Aug-19 | 14-Sep-19 | | 22.41 | M20 |
| 77 | R-4 | RUDP-2486 | Saptakoshi | OPC | Chisang Khola | 17-Aug-19 | 24-Aug-19 | 14-Sep-19 | | 16.99 | M15 |
| 78 | R-4 | RUDP-2487 | Saptakoshi | OPC | Chisang Khola | 17-Aug-19 | 24-Aug-19 | 14-Sep-19 | | 17.59 | M15 |
| 79 | Madhumara-yard | RUDP-2488 | Saptakoshi | OPC | Chisang Khola | 17-Aug-19 | 24-Aug-19 | 14-Sep-19 | | 22.73 | M20 |
| 80 | Madhumara-yard | RUDP-2489 | Saptakoshi | OPC | Chisang Khola | 17-Aug-19 | 24-Aug-19 | 14-Sep-19 | | 21.93 | M20 |
| 81 | T3L Trunk line | RUDP-2490 | Saptakoshi | OPC | Chisang Khola | 17-Aug-19 | 24-Aug-19 | 14-Sep-19 | | 22.73 | M20 |
| 82 | T3L Trunk line | RUDP-2491 | Saptakoshi | OPC | Chisang Khola | 19-Aug-19 | 26-Aug-19 | 16-Sep-19 | | 23.06 | M20 |
| 83 | T3L Trunk line | RUDP-2492 | Saptakoshi | OPC | Chisang Khola | 19-Aug-19 | 26-Aug-19 | 16-Sep-19 | | 22.88 | M20 |
| 84 | R-3 | RUDP-2493 | Saptakoshi | OPC | Chisang Khola | 19-Aug-19 | 26-Aug-19 | 16-Sep-19 | | 23.13 | M20 |
| 85 | R-181A | RUDP-2494 | Saptakoshi | OPC | Chisang Khola | 19-Aug-19 | 26-Aug-19 | 16-Sep-19 | | 22.81 | M20 |
| 86 | T3L5 | RUDP-2495 | Saptakoshi | OPC | Chisang Khola | 19-Aug-19 | 26-Aug-19 | 16-Sep-19 | | 24.25 | M20 |
| 87 | R-4 | RUDP-2496 | Saptakoshi | OPC | Chisang Khola | 19-Aug-19 | 26-Aug-19 | 16-Sep-19 | | 23.18 | M20 |
| 88 | R-4 | RUDP-2497 | Saptakoshi | OPC | Chisang Khola | 19-Aug-19 | 26-Aug-19 | 16-Sep-19 | | 23.58 | M20 |
| 89 | Judi-yard | RUDP-2498 | Saptakoshi | OPC | Chisang Khola | 19-Aug-19 | 26-Aug-19 | 16-Sep-19 | | 23.21 | M20 |
| 90 | Judi-yard | RUDP-2499 | Saptakoshi | OPC | Chisang Khola | 19-Aug-19 | 26-Aug-19 | 16-Sep-19 | | 21.58 | M20 |
| 91 | Madhumara-yard | RUDP-2500 | Saptakoshi | OPC | Chisang Khola | 19-Aug-19 | 26-Aug-19 | 16-Sep-19 | | 22.26 | M20 |
| 92 | Madhumara-yard | RUDP-2501 | Saptakoshi | OPC | Chisang Khola | 19-Aug-19 | 26-Aug-19 | 16-Sep-19 | | 32.44 | M30 |
| 93 | T3L Trunk line | RUDP-2502 | Saptakoshi | OPC | Chisang Khola | 21-Aug-19 | 28-Aug-19 | 18-Sep-19 | | 23.58 | M20 |
| 94 | T3L Trunk line | RUDP-2503 | Saptakoshi | OPC | Chisang Khola | 21-Aug-19 | 28-Aug-19 | 18-Sep-19 | | 22.84 | M20 |

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| Contractor | | Consultant | |
| ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD | | BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL | |
|  Checked By Engineer Benu Shrestha |  Submitted By Contract Manager Rabindra K.Thakur |  Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha |  Approved By Team Leader Giresh Chand |



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Concrete Cube Test Report

| S.N | Location | Lab Ref.no | Type of Cement | Brand of Cement | Source of Sand+Agg | Date of Casting | Month | | September | | Concrete Grade |
|-----|----------------|------------|----------------|-----------------|--------------------|-----------------|------------------|-----------|-----------------------------|-------|----------------|
| | | | | | | | Year | | 2019 | | |
| | | | | | | | Type of Material | | Conc. Cube | | |
| | | | | | | | Date of Testing | | Strength, N/mm ² | | |
| | | 7 Days | 28 Days | 7 Days | 28 Days | | | | | | |
| 95 | T3L5 | RUDP-2504 | Saptakoshi | OPC | Chisang Khola | 21-Aug-19 | 28-Aug-19 | 18-Sep-19 | | 23.80 | M20 |
| 96 | R-4 | RUDP-2505 | Saptakoshi | OPC | Chisang Khola | 21-Aug-19 | 28-Aug-19 | 18-Sep-19 | | 16.54 | M15 |
| 97 | R-4 | RUDP-2506 | Saptakoshi | OPC | Chisang Khola | 21-Aug-19 | 28-Aug-19 | 18-Sep-19 | | 17.29 | M15 |
| 98 | Judi-yard | RUDP-2507 | Saptakoshi | OPC | Chisang Khola | 23-Aug-19 | 30-Aug-19 | 20-Sep-19 | | 23.36 | M20 |
| 99 | Judi-yard | RUDP-2508 | Saptakoshi | OPC | Chisang Khola | 23-Aug-19 | 30-Aug-19 | 20-Sep-19 | | 22.33 | M20 |
| 100 | Madhumara-yard | RUDP-2509 | Saptakoshi | OPC | Chisang Khola | 23-Aug-19 | 30-Aug-19 | 20-Sep-19 | | 22.88 | M20 |
| 101 | Madhumara-yard | RUDP-2510 | Saptakoshi | OPC | Chisang Khola | 23-Aug-19 | 30-Aug-19 | 20-Sep-19 | | 27.91 | M25 |
| 102 | R-4 | RUDP-2511 | Saptakoshi | OPC | Chisang Khola | 25-Aug-19 | 1-Sep-19 | 22-Sep-19 | 15.43 | 21.71 | M20 |
| 103 | R-3(Telecom) | RUDP-2512 | Saptakoshi | OPC | Chisang Khola | 25-Aug-19 | 1-Sep-19 | 22-Sep-19 | 16.32 | 21.78 | M20 |
| 104 | Judi-yard | RUDP-2513 | Saptakoshi | OPC | Chisang Khola | 25-Aug-19 | 1-Sep-19 | 22-Sep-19 | 16.32 | 22.41 | M20 |
| 105 | R-181A | RUDP-2514 | Saptakoshi | OPC | Chisang Khola | 25-Aug-19 | 1-Sep-19 | 22-Sep-19 | 16.69 | 22.26 | M20 |
| 106 | Madhumara-yard | RUDP-2515 | Saptakoshi | OPC | Chisang Khola | 25-Aug-19 | 1-Sep-19 | 22-Sep-19 | 14.23 | 21.22 | M20 |
| 107 | Judi-sant | RUDP-2516 | Saptakoshi | OPC | Chisang Khola | 25-Aug-19 | 1-Sep-19 | 22-Sep-19 | 14.68 | 21.11 | M20 |
| 108 | T3L Trunk line | RUDP-2517 | Saptakoshi | OPC | Chisang Khola | 25-Aug-19 | 1-Sep-19 | 22-Sep-19 | 16.32 | 21.71 | M20 |
| 109 | R-3(T3L5) | RUDP-2518 | Saptakoshi | OPC | Chisang Khola | 25-Aug-19 | 1-Sep-19 | 22-Sep-19 | 17.36 | 22.62 | M20 |
| 110 | T2L19X | RUDP-2519 | Saptakoshi | OPC | Chisang Khola | 25-Aug-19 | 1-Sep-19 | 22-Sep-19 | 16.69 | 21.58 | M20 |
| 111 | T3L Trunk Line | RUDP-2520 | Saptakoshi | OPC | Chisang Khola | 25-Aug-19 | 1-Sep-19 | 22-Sep-19 | 17.21 | 23.06 | M20 |
| 112 | Judi-yard | RUDP-2521 | Saptakoshi | OPC | Chisang Khola | 26-Aug-19 | 2-Sep-19 | 23-Sep-19 | 16.54 | 23.36 | M20 |
| 113 | R-46 | RUDP-2522 | Saptakoshi | OPC | Chisang Khola | 26-Aug-19 | 2-Sep-19 | 23-Sep-19 | 15.43 | 22.65 | M20 |
| 114 | Madhumara-yard | RUDP-2523 | Saptakoshi | OPC | Chisang Khola | 26-Aug-19 | 2-Sep-19 | 23-Sep-19 | 19.39 | 26.17 | M20 |
| 115 | R-4 | RUDP-2524 | Saptakoshi | OPC | Chisang Khola | 26-Aug-19 | 2-Sep-19 | 23-Sep-19 | 11.11 | 16.32 | M15 |
| 116 | T3L10F | RUDP-2525 | Saptakoshi | OPC | Chisang Khola | 26-Aug-19 | 2-Sep-19 | 23-Sep-19 | 16.39 | 22.76 | M20 |
| 117 | T3L10F | RUDP-2526 | Saptakoshi | OPC | Chisang Khola | 26-Aug-19 | 2-Sep-19 | 23-Sep-19 | 15.80 | 22.84 | M20 |
| 118 | Judi-yard | RUDP-2527 | Saptakoshi | OPC | Chisang Khola | 26-Aug-19 | 2-Sep-19 | 23-Sep-19 | 15.80 | 22.84 | M20 |
| 119 | T3L Trunk Line | RUDP-2528 | Saptakoshi | OPC | Chisang Khola | 26-Aug-19 | 2-Sep-19 | 23-Sep-19 | 16.32 | 23.21 | M20 |
| 120 | R-4 | RUDP-2529 | Saptakoshi | OPC | Chisang Khola | 26-Aug-19 | 2-Sep-19 | 23-Sep-19 | 17.21 | 23.65 | M20 |
| 121 | R-46 | RUDP-2530 | Saptakoshi | OPC | Chisang Khola | 27-Aug-19 | 3-Sep-19 | 24-Sep-19 | 15.53 | 22.91 | M20 |
| 122 | T2L10A | RUDP-2531 | Saptakoshi | OPC | Chisang Khola | 27-Aug-19 | 3-Sep-19 | 24-Sep-19 | 15.43 | 21.43 | M20 |
| 123 | R-181A | RUDP-2532 | Saptakoshi | OPC | Chisang Khola | 27-Aug-19 | 3-Sep-19 | 24-Sep-19 | 16.62 | 23.06 | M20 |
| 124 | Madhumara-yard | RUDP-2533 | Saptakoshi | OPC | Chisang Khola | 27-Aug-19 | 3-Sep-19 | 24-Sep-19 | 18.19 | 26.03 | M25 |
| 125 | R-4 | RUDP-2534 | Saptakoshi | OPC | Chisang Khola | 27-Aug-19 | 3-Sep-19 | 24-Sep-19 | 12.42 | 16.32 | M20 |
| 126 | R-102 | RUDP-2535 | Saptakoshi | OPC | Chisang Khola | 28-Aug-19 | 4-Sep-19 | 25-Sep-19 | 15.87 | 23.06 | M20 |
| 127 | R-3(T3L5) | RUDP-2536 | Saptakoshi | OPC | Chisang Khola | 28-Aug-19 | 4-Sep-19 | 25-Sep-19 | 16.25 | 24.02 | M20 |
| 128 | R-46 | RUDP-2537 | Saptakoshi | OPC | Chisang Khola | 28-Aug-19 | 4-Sep-19 | 25-Sep-19 | 16.32 | 22.62 | M20 |
| 129 | T3L10F | RUDP-2538 | Saptakoshi | OPC | Chisang Khola | 29-Aug-19 | 5-Sep-19 | 26-Sep-19 | 15.43 | 22.81 | M20 |
| 130 | Madhumara-yard | RUDP-2539 | Saptakoshi | OPC | Chisang Khola | 29-Aug-19 | 5-Sep-19 | 26-Sep-19 | 14.31 | 21.71 | M20 |
| 131 | T3L13C | RUDP-2540 | Saptakoshi | OPC | Chisang Khola | 30-Aug-19 | 6-Sep-19 | 27-Sep-19 | 15.35 | 24.43 | M20 |
| 132 | R-46 | RUDP-2541 | Saptakoshi | OPC | Chisang Khola | 30-Aug-19 | 6-Sep-19 | 27-Sep-19 | 15.35 | 21.71 | M20 |
| 133 | Madhumara-yard | RUDP-2542 | Saptakoshi | OPC | Chisang Khola | 30-Aug-19 | 6-Sep-19 | 27-Sep-19 | 17.21 | 26.03 | M25 |
| 134 | R-4 | RUDP-2543 | Saptakoshi | OPC | Chisang Khola | 30-Aug-19 | 6-Sep-19 | 27-Sep-19 | 15.43 | 23.06 | M20 |
| 135 | T3(Telecom) | RUDP-2544 | Saptakoshi | OPC | Chisang Khola | 30-Aug-19 | 6-Sep-19 | 27-Sep-19 | 15.87 | 21.58 | M20 |
| 136 | T3L7B | RUDP-2545 | Saptakoshi | OPC | Chisang Khola | 30-Aug-19 | 6-Sep-19 | 27-Sep-19 | 16.32 | 23.21 | M20 |
| 137 | T2L19G | RUDP-2546 | Saptakoshi | OPC | Chisang Khola | 30-Aug-19 | 6-Sep-19 | 27-Sep-19 | 17.36 | 23.50 | M20 |
| 138 | R-4 | RUDP-2547 | Saptakoshi | OPC | Chisang Khola | 30-Aug-19 | 6-Sep-19 | 27-Sep-19 | 10.99 | 16.32 | M20 |
| 139 | R-4 | RUDP-2548 | Saptakoshi | OPC | Chisang Khola | 31-Aug-19 | 7-Sep-19 | 28-Sep-19 | 15.87 | 21.71 | M20 |
| 140 | T3L Trunk line | RUDP-2549 | Saptakoshi | OPC | Chisang Khola | 31-Aug-19 | 7-Sep-19 | 28-Sep-19 | 15.43 | 23.05 | M20 |
| 141 | Madhumara-yard | RUDP-2550 | Saptakoshi | OPC | Chisang Khola | 1-Sep-19 | 8-Sep-19 | 29-Sep-19 | 17.14 | 26.91 | M25 |

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| Contractor  ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD | Consultant BUILDING DESIGN AUTHORITY (B.D.A.) CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL |
| Checked By Engineer Benu Shrestha | Submitted By Contract Manager Rabindra K.Thakur |
| Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha | Approved By Team Leader Giresch Chand |



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Concrete Cube Test Report

| S.N | Location | Lab Ref no | Type of Cement | Brand of Cement | Source of Sand+Agg. | Date of Casting | Month | | | September | | Concrete Grade |
|-----|----------------|------------|----------------|-----------------|---------------------|-----------------|------------------|-----------|-------|-----------------------------|-----|----------------|
| | | | | | | | Year | | | 2019 | | |
| | | | | | | | Type of Material | | | Conc. Cube | | |
| | | | | | | | Date of Testing | | | Strength, N/mm ² | | |
| | | | 7 Days | 28 Days | 7 Days | 28 Days | | | | | | |
| 142 | T2L19H | RUDP-2551 | Saptakoshi | OPC | Chisang Khola | 1-Sep-19 | 8-Sep-19 | 29-Sep-19 | 15.87 | 22.29 | M20 | |
| 143 | T3L7B | RUDP-2552 | Saptakoshi | OPC | Chisang Khola | 1-Sep-19 | 8-Sep-19 | 29-Sep-19 | 15.50 | 22.81 | M20 | |
| 144 | T3L13C | RUDP-2553 | Saptakoshi | OPC | Chisang Khola | 2-Sep-19 | 9-Sep-19 | 30-Sep-19 | 15.65 | 21.71 | M20 | |
| 145 | T2L10A | RUDP-2554 | Saptakoshi | OPC | Chisang Khola | 2-Sep-19 | 9-Sep-19 | 30-Sep-19 | 16.25 | 22.33 | M20 | |
| 146 | R3(T3L5) | RUDP-2555 | Saptakoshi | OPC | Chisang Khola | 2-Sep-19 | 9-Sep-19 | 30-Sep-19 | 15.43 | 23.21 | M20 | |
| 147 | R3(T3L5) | RUDP-2556 | Saptakoshi | OPC | Chisang Khola | 2-Sep-19 | 9-Sep-19 | 30-Sep-19 | 15.87 | 21.48 | M20 | |
| 148 | Madhumara-yard | RUDP-2557 | Saptakoshi | OPC | Chisang Khola | 2-Sep-19 | 9-Sep-19 | 30-Sep-19 | 18.27 | 27.24 | M25 | |
| 149 | R-4 | RUDP-2558 | Saptakoshi | OPC | Chisang Khola | 2-Sep-19 | 9-Sep-19 | 30-Sep-19 | 14.31 | | M20 | |
| 150 | T2L19H | RUDP-2559 | Saptakoshi | OPC | Chisang Khola | 3-Sep-19 | 10-Sep-19 | 1-Oct-19 | 16.32 | | M20 | |
| 151 | T3L10F | RUDP-2560 | Saptakoshi | OPC | Chisang Khola | 3-Sep-19 | 10-Sep-19 | 1-Oct-19 | 15.43 | | M20 | |
| 152 | Madhumara-yard | RUDP-2561 | Saptakoshi | OPC | Chisang Khola | 3-Sep-19 | 10-Sep-19 | 1-Oct-19 | 17.44 | | M20 | |
| 153 | T3L7B | RUDP-2562 | Saptakoshi | OPC | Chisang Khola | 3-Sep-19 | 10-Sep-19 | 1-Oct-19 | 14.82 | | M20 | |
| 154 | Judl-yard | RUDP-2563 | Saptakoshi | OPC | Chisang Khola | 3-Sep-19 | 10-Sep-19 | 1-Oct-19 | 16.02 | | M20 | |
| 155 | R181A | RUDP-2564 | Saptakoshi | OPC | Chisang Khola | 3-Sep-19 | 10-Sep-19 | 1-Oct-19 | 15.43 | | M20 | |
| 156 | T3L21 | RUDP-2565 | Saptakoshi | OPC | Chisang Khola | 3-Sep-19 | 10-Sep-19 | 1-Oct-19 | 14.83 | | M20 | |
| 157 | T3L Trunk Lane | RUDP-2566 | Saptakoshi | OPC | Chisang Khola | 3-Sep-19 | 10-Sep-19 | 1-Oct-19 | 16.32 | | M20 | |
| 158 | R-2 | RUDP-2567 | Saptakoshi | OPC | Chisang Khola | 3-Sep-19 | 10-Sep-19 | 1-Oct-19 | 16.32 | | M20 | |
| 159 | T3L19H | RUDP-2568 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 15.57 | | M20 | |
| 160 | R-3(T3L5) | RUDP-2569 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 16.47 | | M20 | |
| 161 | T3L19X | RUDP-2570 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 15.87 | | M20 | |
| 162 | Judl-yard | RUDP-2571 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 15.35 | | M20 | |
| 163 | R-3(Telecom) | RUDP-2572 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 16.62 | | M20 | |
| 164 | Madhumara-yard | RUDP-2573 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 17.36 | | M25 | |
| 165 | R-46 | RUDP-2574 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 14.75 | | M20 | |
| 166 | T3L10F | RUDP-2575 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 15.21 | | M20 | |
| 167 | Judl-yard | RUDP-2576 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 15.43 | | M20 | |
| 168 | T3L13C | RUDP-2577 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 16.32 | | M20 | |
| 169 | Madhumara-yard | RUDP-2578 | Saptakoshi | OPC | Chisang Khola | 5-Sep-19 | 12-Sep-19 | 3-Oct-19 | 17.90 | | M25 | |
| 170 | T3L13C | RUDP-2579 | Saptakoshi | OPC | Chisang Khola | 5-Sep-19 | 12-Sep-19 | 3-Oct-19 | 15.88 | | M20 | |
| 171 | T3L13C | RUDP-2580 | Saptakoshi | OPC | Chisang Khola | 6-Sep-19 | 13-Sep-19 | 4-Oct-19 | 14.76 | | M20 | |
| 172 | R-4 | RUDP-2581 | Saptakoshi | OPC | Chisang Khola | 6-Sep-19 | 13-Sep-19 | 4-Oct-19 | 15.44 | | M20 | |
| 173 | R-12 | RUDP-2582 | Saptakoshi | OPC | Chisang Khola | 6-Sep-19 | 13-Sep-19 | 4-Oct-19 | 16.78 | | M20 | |
| 174 | R-46 | RUDP-2583 | Saptakoshi | OPC | Chisang Khola | 6-Sep-19 | 13-Sep-19 | 4-Oct-19 | 15.73 | | M20 | |
| 175 | Judl-yard | RUDP-2584 | Saptakoshi | OPC | Chisang Khola | 6-Sep-19 | 13-Sep-19 | 4-Oct-19 | 16.85 | | M20 | |
| 176 | T3L10F | RUDP-2585 | Saptakoshi | OPC | Chisang Khola | 6-Sep-19 | 13-Sep-19 | 4-Oct-19 | 15.58 | | M20 | |
| 177 | T3L13C | RUDP-2586 | Saptakoshi | OPC | Chisang Khola | 7-Sep-19 | 14-Sep-19 | 5-Oct-19 | 16.78 | | M20 | |
| 178 | R-7 | RUDP-2587 | Saptakoshi | OPC | Chisang Khola | 8-Sep-19 | 15-Sep-19 | 6-Oct-19 | 15.36 | | M20 | |
| 179 | T2L19X | RUDP-2588 | Saptakoshi | OPC | Chisang Khola | 8-Sep-19 | 15-Sep-19 | 6-Oct-19 | 16.85 | | M20 | |
| 180 | R-42 | RUDP-2589 | Saptakoshi | OPC | Chisang Khola | 8-Sep-19 | 15-Sep-19 | 6-Oct-19 | 15.88 | | M20 | |
| 181 | Madhumara-yard | RUDP-2590 | Saptakoshi | OPC | Chisang Khola | 8-Sep-19 | 15-Sep-19 | 6-Oct-19 | 17.59 | | M25 | |
| 182 | Madhumara-yard | RUDP-2591 | Saptakoshi | OPC | Chisang Khola | 8-Sep-19 | 15-Sep-19 | 6-Oct-19 | 18.42 | | M25 | |
| 183 | R-4 | RUDP-2592 | Saptakoshi | OPC | Chisang Khola | 8-Sep-19 | 15-Sep-19 | 6-Oct-19 | 12.87 | | M15 | |
| 184 | R-4 | RUDP-2593 | Saptakoshi | OPC | Chisang Khola | 9-Sep-19 | 16-Sep-19 | 7-Oct-19 | 15.57 | | M20 | |
| 185 | R-2 | RUDP-2594 | Shalimar Gold | OPC | Chisang Khola | 9-Sep-19 | 16-Sep-19 | 7-Oct-19 | 14.75 | | M20 | |
| 186 | T2L10A | RUDP-2595 | Shalimar Gold | OPC | Chisang Khola | 9-Sep-19 | 16-Sep-19 | 7-Oct-19 | 15.65 | | M20 | |
| 187 | T3L10F | RUDP-2596 | Shalimar Gold | OPC | Chisang Khola | 9-Sep-19 | 16-Sep-19 | 7-Oct-19 | 15.20 | | M20 | |
| 188 | T3L13C | RUDP-2597 | Shalimar Gold | OPC | Chisang Khola | 10-Sep-19 | 17-Sep-19 | 8-Oct-19 | 16.32 | | M20 | |

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|  <p>Contractor</p> | |  <p>Consultant</p> | |
|  Checked By Engineer Benu Shrestha |  Submitted By Contract Manager Rabintra K. Thakur |  Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha |  Approved By Team Leader Giresch Chand |



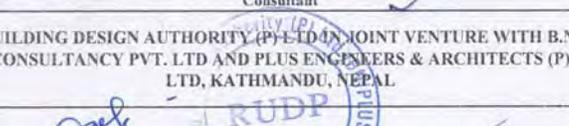
REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Concrete Cube Test Report

| S.N. | Location | Lab Ref. no. | Type of Cement | Brand of Cement | Source of Sand+Agg. | Date of Casting | Month | | September | | Concrete Grade |
|--------|----------------|--------------|----------------|-----------------|---------------------|-----------------|------------------|-----------|-----------------------------|---|----------------|
| | | | | | | | Year | | 2019 | | |
| | | | | | | | Type of Material | | Conc. Cube | | |
| | | | | | | | Date of Testing | | Strength, N/mm ² | | |
| 7 Days | 28 Days | 7 Days | 28 Days | | | | | | | | |
| 189 | T2L19H | RUDP-2598 | Shalimar Gold | OPC | Chisang Khola | 10-Sep-19 | 17-Sep-19 | 8-Oct-19 | 15.87 | ✓ | M20 |
| 190 | T2L19G | RUDP-2599 | Shalimar Gold | OPC | Chisang Khola | 11-Sep-19 | 18-Sep-19 | 9-Oct-19 | 16.39 | | M20 |
| 191 | Judi Yard | RUDP-2600 | Shalimar Gold | OPC | Chisang Khola | 12-Sep-19 | 19-Sep-19 | 10-Oct-19 | 16.25 | | M20 |
| 192 | Judi Yard | RUDP-2601 | Shalimar Gold | OPC | Chisang Khola | 12-Sep-19 | 19-Sep-19 | 10-Oct-19 | 13.79 | | M20 |
| 193 | R-46 | RUDP-2602 | Shalimar Gold | OPC | Chisang Khola | 12-Sep-19 | 19-Sep-19 | 10-Oct-19 | 14.75 | | M20 |
| 194 | T3L10A | RUDP-2603 | Shalimar Gold | OPC | Chisang Khola | 13-Sep-19 | 20-Sep-19 | 11-Oct-19 | 16.62 | | M20 |
| 195 | R-181A | RUDP-2604 | Shalimar Gold | OPC | Chisang Khola | 13-Sep-19 | 20-Sep-19 | 11-Oct-19 | 15.87 | | M20 |
| 196 | T3L13C | RUDP-2605 | Shalimar Gold | OPC | Chisang Khola | 13-Sep-19 | 20-Sep-19 | 11-Oct-19 | 16.69 | | M20 |
| 197 | T3L10F | RUDP-2606 | Shalimar Gold | OPC | Chisang Khola | 14-Sep-19 | 21-Sep-19 | 12-Oct-19 | 15.72 | | M20 |
| 198 | T3L13C | RUDP-2607 | Shalimar Gold | OPC | Chisang Khola | 14-Sep-19 | 21-Sep-19 | 12-Oct-19 | 16.25 | | M20 |
| 199 | T3L7B | RUDP-2608 | Shalimar Gold | OPC | Chisang Khola | 14-Sep-19 | 21-Sep-19 | 12-Oct-19 | 16.32 | | M20 |
| 200 | N-38 | RUDP-2609 | Shalimar Gold | OPC | Chisang Khola | 14-Sep-19 | 21-Sep-19 | 12-Oct-19 | 16.92 | | M20 |
| 201 | N-38 | RUDP-2610 | Shalimar Gold | OPC | Chisang Khola | 14-Sep-19 | 21-Sep-19 | 12-Oct-19 | 16.62 | | M20 |
| 202 | R-181A | RUDP-2611 | Shalimar Gold | OPC | Chisang Khola | 15-Sep-19 | 22-Sep-19 | 13-Oct-19 | 15.72 | | M20 |
| 203 | T3L7B | RUDP-2612 | Shalimar Gold | OPC | Chisang Khola | 15-Sep-19 | 22-Sep-19 | 13-Oct-19 | 15.87 | | M20 |
| 204 | T3L10F | RUDP-2613 | Shalimar Gold | OPC | Chisang Khola | 15-Sep-19 | 22-Sep-19 | 13-Oct-19 | 16.62 | | M20 |
| 205 | Madhumara yard | RUDP-2614 | Shalimar Gold | OPC | Chisang Khola | 15-Sep-19 | 22-Sep-19 | 13-Oct-19 | 17.36 | | M25 |
| 206 | Madhumara yard | RUDP-2615 | Shalimar Gold | OPC | Chisang Khola | 15-Sep-19 | 22-Sep-19 | 13-Oct-19 | 17.74 | | M25 |
| 207 | T3L10F | RUDP-2616 | Shalimar Gold | OPC | Chisang Khola | 15-Sep-19 | 22-Sep-19 | 13-Oct-19 | 15.06 | | M20 |
| 208 | T2L19H | RUDP-2617 | Shalimar Gold | OPC | Chisang Khola | 15-Sep-19 | 22-Sep-19 | 13-Oct-19 | 15.65 | | M20 |
| 209 | R-7 | RUDP-2618 | Shalimar Gold | OPC | Chisang Khola | 15-Sep-19 | 22-Sep-19 | 13-Oct-19 | 17.14 | | M20 |
| 210 | R-42 | RUDP-2619 | Shalimar Gold | OPC | Chisang Khola | 15-Sep-19 | 22-Sep-19 | 13-Oct-19 | 15.36 | | M20 |
| 211 | T3L10F | RUDP-2620 | Shalimar Gold | OPC | Chisang Khola | 16-Sep-19 | 23-Sep-19 | 14-Oct-19 | 15.65 | | M20 |
| 212 | R-4 | RUDP-2621 | Shalimar Gold | OPC | Chisang Khola | 16-Sep-19 | 23-Sep-19 | 14-Oct-19 | 12.27 | | M15 |
| 213 | R-4 | RUDP-2622 | Shalimar Gold | OPC | Chisang Khola | 17-Sep-19 | 24-Sep-19 | 15-Oct-19 | 15.05 | | M20 |
| 214 | T2L19H | RUDP-2623 | Shalimar Gold | OPC | Chisang Khola | 17-Sep-19 | 24-Sep-19 | 15-Oct-19 | 16.10 | | M20 |
| 215 | R-42 | RUDP-2624 | Shalimar Gold | OPC | Chisang Khola | 17-Sep-19 | 24-Sep-19 | 15-Oct-19 | 16.62 | | M20 |
| 216 | T3L7B | RUDP-2625 | Shalimar Gold | OPC | Chisang Khola | 17-Sep-19 | 24-Sep-19 | 15-Oct-19 | 15.35 | | M20 |
| 217 | Judi Yard | RUDP-2626 | Shalimar Gold | OPC | Chisang Khola | 17-Sep-19 | 24-Sep-19 | 15-Oct-19 | 16.77 | | M20 |
| 218 | T2L10A | RUDP-2627 | Shalimar Gold | OPC | Chisang Khola | 17-Sep-19 | 24-Sep-19 | 15-Oct-19 | 15.43 | | M20 |
| 219 | R-181A | RUDP-2628 | Shalimar Gold | OPC | Chisang Khola | 18-Sep-19 | 25-Sep-19 | 16-Oct-19 | 15.87 | | M20 |
| 220 | T3L13C | RUDP-2629 | Shalimar Gold | OPC | Chisang Khola | 18-Sep-19 | 25-Sep-19 | 16-Oct-19 | 15.20 | | M20 |
| 221 | T3L7B | RUDP-2630 | Shalimar Gold | OPC | Chisang Khola | 18-Sep-19 | 25-Sep-19 | 16-Oct-19 | 16.32 | | M20 |
| 222 | Judi Yard | RUDP-2631 | Shalimar Gold | OPC | Chisang Khola | 18-Sep-19 | 25-Sep-19 | 16-Oct-19 | 15.35 | | M20 |
| 223 | R-3(T3L38) | RUDP-2632 | Shalimar Gold | OPC | Chisang Khola | 19-Sep-19 | 26-Sep-19 | 17-Oct-19 | 18.27 | | M25 |
| 224 | T2L19G | RUDP-2633 | Shalimar Gold | OPC | Chisang Khola | 19-Sep-19 | 26-Sep-19 | 17-Oct-19 | 15.81 | | M20 |
| 225 | R-7 | RUDP-2634 | Shalimar Gold | OPC | Chisang Khola | 19-Sep-19 | 26-Sep-19 | 17-Oct-19 | 14.99 | | M20 |
| 226 | R-4 | RUDP-2635 | Shalimar Gold | OPC | Chisang Khola | 19-Sep-19 | 26-Sep-19 | 17-Oct-19 | 11.78 | | M15 |
| 227 | R-4 | RUDP-2636 | Shalimar Gold | OPC | Chisang Khola | 19-Sep-19 | 26-Sep-19 | 17-Oct-19 | 11.51 | | M15 |
| 228 | T2L19G | RUDP-2637 | Shalimar Gold | OPC | Chisang Khola | 19-Sep-19 | 26-Sep-19 | 17-Oct-19 | 15.13 | | M20 |
| 229 | Madhumara yard | RUDP-2638 | Shalimar Gold | OPC | Chisang Khola | 19-Sep-19 | 26-Sep-19 | 17-Oct-19 | 17.97 | | M25 |
| 230 | T3L7B | RUDP-2639 | Shalimar Gold | OPC | Chisang Khola | 20-Sep-19 | 27-Sep-19 | 18-Oct-19 | 14.38 | | M20 |
| 231 | Judi Yard | RUDP-2640 | Shalimar Gold | OPC | Chisang Khola | 20-Sep-19 | 27-Sep-19 | 18-Oct-19 | 15.65 | | M20 |
| 232 | T3L7A | RUDP-2641 | Shalimar Gold | OPC | Chisang Khola | 20-Sep-19 | 27-Sep-19 | 18-Oct-19 | 14.75 | | M20 |
| 233 | Madhumara yard | RUDP-2642 | Shalimar Gold | OPC | Chisang Khola | 20-Sep-19 | 27-Sep-19 | 18-Oct-19 | 17.21 | | M25 |
| 234 | T3L10F | RUDP-2643 | Shalimar Gold | OPC | Chisang Khola | 20-Sep-19 | 27-Sep-19 | 18-Oct-19 | 16.69 | | M20 |
| 235 | R-4 | RUDP-2644 | Shalimar Gold | OPC | Chisang Khola | 21-Sep-19 | 28-Sep-19 | 19-Oct-19 | 16.32 | | M20 |

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| Contractor  ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD | | Consultant  BUILDING DESIGN AUTHORITY (P) LTD JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL | |
|  Checked By Engineer Benu Shrestha |  Submitted By Contract Manager Rabindra K. Thakur |  Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha |  Approved By Team Leader Giresch Chand |



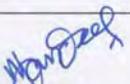
REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Concrete Cube Test Report

| S N | Location | Lab Ref no. | Type of Cement | Brand of Cement | Source of Sand+Agg. | Date of Casting | Month | | September | | Concrete Grade |
|-----|--------------|-------------|----------------|-----------------|---------------------|-----------------|------------------|-----------|-----------------------------|---------|----------------|
| | | | | | | | Year | | 2019 | | |
| | | | | | | | Type of Material | | Cone, Cube | | |
| | | | | | | | Date of Testing | | Strength, N/mm ² | | |
| | | | | | | | 7 Days | 28 Days | 7 Days | 28 Days | |
| 236 | T3LJ0F | RUDP-2545 | Shalimar Gold | OPC | Chisang Khola | 22-Sep-19 | 29-Sep-19 | 20-Oct-19 | 44.75 | | M20 |
| 237 | N-38 | RUDP-2546 | Shalimar Gold | OPC | Chisang Khola | 22-Sep-19 | 29-Sep-19 | 20-Oct-19 | 15.35 | | M20 |
| 238 | R-46(T2L24C) | RUDP-2547 | Shalimar Gold | OPC | Chisang Khola | 22-Sep-19 | 29-Sep-19 | 20-Oct-19 | 16.54 | | M20 |
| 239 | N-38 | RUDP-2548 | Shalimar Gold | OPC | Chisang Khola | 23-Sep-19 | 30-Sep-19 | 21-Oct-19 | 15.43 | | M20 |
| 240 | Judi yard | RUDP-2549 | Shalimar Gold | OPC | Chisang Khola | 23-Sep-19 | 30-Sep-19 | 21-Oct-19 | 15.80 | | M20 |

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|  | | Consultant BUILDING DESIGN AUTHORITY (P) LTD BY JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL | |
|  Checked By Engineer Benu Shrestha |  Submitted By Contract Manager Rabindra K.Thakur |  Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha |  Approved By Team Leader Gresh Chand |



| REGIONAL URBAN DEVELOPMENT PROJECT | | | | | | | | | | | | |
|---|-------------|-----------------|--------------------|------------------|--|-------|-------|-------|------|-------------|-------------|---------|
| Biratnagar Metropolitan City | | | | | | | | | | | | |
| Contract No:- RUDP/ICB/BRT-02 | | | | | | | | | | | | |
| Summary Sheet of Monthly Test Report of 20mm Agg. | | | | | | | | | | | | |
| S.n. | Lab.Ref no. | Date of Testing | Location of Sample | Source of Sample | Sieve Size in mm / % Passing by weight | | | | | Fl and EI % | A.I.V.% | Remarks |
| | | | | | 37.5 | 20 | 14 | 10 | 5 | | | |
| 1 | RUDP-CA-409 | 2-Sep-19 | Madhumara Yard | Chisang Khola | 100.00 | 97.87 | 53.46 | 16.42 | 2.08 | 18.52/17.34 | 19.28 | |
| 2 | RUDP-CA-410 | 3-Sep-19 | R-4 | Chisang Khola | 100.00 | 97.33 | 50.39 | 15.66 | 1.63 | 19.25/18.04 | 20.20 | |
| 3 | RUDP-CA-411 | 4-Sep-19 | T3(T3L5) | Chisang Khola | 100.00 | 95.80 | 56.45 | 17.35 | 1.67 | 18.79/17.59 | 19.53 | |
| 4 | RUDP-CA-412 | 5-Sep-19 | T2L19X | Chisang Khola | 100.00 | 94.43 | 59.88 | 17.06 | 1.69 | 18.45/16.27 | 22.11 | |
| 5 | RUDP-CA-413 | 6-Sep-19 | T3L10F | Chisang Khola | 100.00 | 94.68 | 63.51 | 9.22 | 1.38 | 18.52/17.63 | 22.94 | |
| 6 | RUDP-CA-414 | 7-Sep-19 | R-3 | Chisang Khola | 100.00 | 97.57 | 57.13 | 13.68 | 2.43 | 17.69/16.97 | 21.80 | |
| 7 | RUDP-CA-415 | 8-Sep-19 | R-46 | Chisang Khola | 100.00 | 95.37 | 48.94 | 11.34 | 2.02 | 17.32/16.00 | 17.54 | |
| 8 | RUDP-CA-416 | 9-Sep-19 | T2L10A | Chisang Khola | 100.00 | 95.47 | 47.99 | 11.06 | 2.00 | 21.97/17.84 | 20.08 | |
| 9 | RUDP-CA-417 | 10-Sep-19 | T2L19G | Chisang Khola | 100.00 | 96.89 | 46.23 | 7.56 | 2.12 | 24.74/15.06 | 19.98 | |
| 10 | RUDP-CA-418 | 12-Sep-19 | T3L10F | Chisang Khola | 100.00 | 95.41 | 49.68 | 17.54 | 1.93 | 23.75/16.07 | 19.83 | |
| 11 | RUDP-CA-419 | 13-Sep-19 | R-181A | Chisang Khola | 100.00 | 96.44 | 39.63 | 5.65 | 1.30 | 20.06/15.79 | 20.47 | |
| 12 | RUDP-CA-420 | 14-Sep-19 | R-12 | Chisang Khola | 100.00 | 95.58 | 34.27 | 4.92 | 1.91 | 17.59/13.07 | 19.03 | |
| 13 | RUDP-CA-421 | 15-Sep-19 | Madhumara Yard | Chisang Khola | 100.00 | 96.19 | 31.00 | 5.15 | 2.97 | 24.70 | 18.58/17.48 | 17.88 |
| 14 | RUDP-CA-422 | 17-Sep-19 | Judi-yard | Chisang Khola | 100.00 | 95.58 | 22.68 | 3.22 | 1.37 | 26.82 | 17.95/15.10 | 18.86 |
| 15 | RUDP-CA-423 | 18-Sep-19 | T3L7C | Chisang Khola | 100.00 | 96.81 | 28.22 | 2.97 | 1.11 | 18.90/17.17 | 20.00 | |
| 16 | RUDP-CA-424 | 19-Sep-19 | R-2 | Chisang Khola | 100.00 | 95.81 | 29.15 | 3.74 | 1.90 | 30.24 | 18.03/15.42 | 19.67 |
| 17 | RUDP-CA-425 | 20-Sep-19 | R-3(T3L38) | Chisang Khola | 100.00 | 96.16 | 30.46 | 3.57 | 1.54 | 25.08 | 19.98/15.88 | 21.70 |
| 18 | RUDP-CA-426 | 21-Sep-19 | N-38 | Chisang Khola | 100.00 | 95.61 | 30.22 | 3.36 | 1.41 | 24.24 | 20.04/15.86 | 21.24 |
| 19 | RUDP-CA-427 | 22-Sep-19 | R-7 | Chisang Khola | 100.00 | 96.39 | 30.10 | 3.45 | 1.16 | 26.08 | 19.80/19.60 | 21.31 |

Contractor
 ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL
 ENGINEERING CO LTD
 (Stamp: ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD. * zhongheng construction group international engineering co. ltd. Biratnagar)

Checked By
 Engineer
 Benu Shrestha

Submitted By
 Contract Manager
 Rabindra K. Thakur

Verified By
 Expert Qty Surveyor/CSE
 H.K. Mandal/Rajan Shrestha

Consultant
 BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH
 B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS &
 ARCHITECTS (P) LTD, KATHMANDU, NEPAL
 (Stamp: B.N. CONSULTANCY PVT. LTD. * Biratnagar)

Approved By
 Team Leader
 Gitesh Chand



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Mortar Test Report

| S.N. | Location | Lab Ref.no. | Type of Cement | Brand of Cement | Source of Sand | Date of Casting | Month | | September | | Type of Grade |
|-----------------|----------------|-----------------------------|----------------|-----------------|----------------|-----------------|-----------------------|-----------|---------------|----------|---------------|
| | | | | | | | Year | | 2019 | | |
| | | | | | | | Description of Sample | | Brick Wall | | |
| Date of Testing | | Strength, N/mm ² | | 7 Days | 28 Days | 7 Days | 28 Days | | | | |
| 1 | R-46 | MR-2167 | Saptakoshi | | | | | OPC | Chisang Khola | 4-Aug-19 | 11-Aug-19 |
| 2 | R-46 | MR-2168 | Saptakoshi | OPC | Chisang Khola | 4-Aug-19 | 11-Aug-19 | 1-Sep-19 | 9.89 | 7.5 | |
| 3 | T3L Trunk line | MR-2169 | Saptakoshi | OPC | Chisang Khola | 4-Aug-19 | 11-Aug-19 | 1-Sep-19 | 8.93 | 7.5 | |
| 4 | R-46 | MR-2170 | Saptakoshi | OPC | Chisang Khola | 4-Aug-19 | 11-Aug-19 | 1-Sep-19 | 8.93 | 7.5 | |
| 5 | R-46 | MR-2171 | Saptakoshi | OPC | Chisang Khola | 6-Aug-19 | 13-Aug-19 | 3-Sep-19 | 9.07 | 7.5 | |
| 6 | R-3 | MR-2172 | Saptakoshi | OPC | Chisang Khola | 6-Aug-19 | 13-Aug-19 | 3-Sep-19 | 9.07 | 7.5 | |
| 7 | T3L Trunk line | MR-2173 | Saptakoshi | OPC | Chisang Khola | 6-Aug-19 | 13-Aug-19 | 3-Sep-19 | 8.38 | 7.5 | |
| 8 | T3L Trunk line | MR-2174 | Saptakoshi | OPC | Chisang Khola | 6-Aug-19 | 13-Aug-19 | 3-Sep-19 | 9.20 | 7.5 | |
| 9 | R-46 | MR-2175 | Saptakoshi | OPC | Chisang Khola | 6-Aug-19 | 13-Aug-19 | 3-Sep-19 | 8.65 | 7.5 | |
| 10 | R-46 | MR-2176 | Saptakoshi | OPC | Chisang Khola | 9-Aug-19 | 16-Aug-19 | 6-Sep-19 | 9.89 | 7.5 | |
| 11 | R-46 | MR-2177 | Saptakoshi | OPC | Chisang Khola | 9-Aug-19 | 16-Aug-19 | 6-Sep-19 | 8.52 | 7.5 | |
| 12 | T3L Trunk line | MR-2178 | Saptakoshi | OPC | Chisang Khola | 9-Aug-19 | 16-Aug-19 | 6-Sep-19 | 9.48 | 7.5 | |
| 13 | R-3 | MR-2179 | Saptakoshi | OPC | Chisang Khola | 9-Aug-19 | 16-Aug-19 | 6-Sep-19 | 9.34 | 7.5 | |
| 14 | T3L5 | MR-2180 | Saptakoshi | OPC | Chisang Khola | 9-Aug-19 | 16-Aug-19 | 6-Sep-19 | 8.52 | 7.5 | |
| 15 | R-46 | MR-2181 | Saptakoshi | OPC | Chisang Khola | 10-Aug-19 | 17-Aug-19 | 7-Sep-19 | 8.79 | 7.5 | |
| 16 | R-3 | MR-2182 | Saptakoshi | OPC | Chisang Khola | 10-Aug-19 | 17-Aug-19 | 7-Sep-19 | 9.20 | 7.5 | |
| 17 | T3L Trunk line | MR-2183 | Saptakoshi | OPC | Chisang Khola | 10-Aug-19 | 17-Aug-19 | 7-Sep-19 | 9.75 | 7.5 | |
| 18 | T3L5 | MR-2184 | Saptakoshi | OPC | Chisang Khola | 10-Aug-19 | 17-Aug-19 | 7-Sep-19 | 9.34 | 7.5 | |
| 19 | R-46 | MR-2185 | Saptakoshi | OPC | Chisang Khola | 10-Aug-19 | 17-Aug-19 | 7-Sep-19 | 10.03 | 7.5 | |
| 20 | T3L Trunk line | MR-2186 | Saptakoshi | OPC | Chisang Khola | 10-Aug-19 | 17-Aug-19 | 7-Sep-19 | 8.52 | 7.5 | |
| 21 | T3L5 | MR-2187 | Saptakoshi | OPC | Chisang Khola | 13-Aug-19 | 20-Aug-19 | 10-Sep-19 | 9.34 | 7.5 | |
| 22 | R-46 | MR-2188 | Saptakoshi | OPC | Chisang Khola | 13-Aug-19 | 20-Aug-19 | 10-Sep-19 | 8.79 | 7.5 | |
| 23 | R-46 | MR-2189 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | 9.20 | 7.5 | |
| 24 | R-3 | MR-2190 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | 8.52 | 7.5 | |
| 25 | R-3 | MR-2191 | Saptakoshi | OPC | Chisang Khola | 14-Aug-19 | 21-Aug-19 | 11-Sep-19 | 8.79 | 7.5 | |
| 26 | T3L Trunk line | MR-2192 | Saptakoshi | OPC | Chisang Khola | 15-Aug-19 | 22-Aug-19 | 12-Sep-19 | 9.20 | 7.5 | |
| 27 | R-46 | MR-2193 | Saptakoshi | OPC | Chisang Khola | 15-Aug-19 | 22-Aug-19 | 12-Sep-19 | 10.03 | 7.5 | |
| 28 | T3L5 | MR-2194 | Saptakoshi | OPC | Chisang Khola | 15-Aug-19 | 22-Aug-19 | 12-Sep-19 | 9.07 | 7.5 | |
| 29 | T3L Trunk line | MR-2195 | Saptakoshi | OPC | Chisang Khola | 15-Aug-19 | 22-Aug-19 | 12-Sep-19 | 8.93 | 7.5 | |
| 30 | R-3 | MR-2196 | Saptakoshi | OPC | Chisang Khola | 15-Aug-19 | 22-Aug-19 | 12-Sep-19 | 10.99 | 7.5 | |
| 31 | R-181A | MR-2197 | Saptakoshi | OPC | Chisang Khola | 15-Aug-19 | 22-Aug-19 | 12-Sep-19 | 10.17 | 7.5 | |
| 32 | T3L19G | MR-2198 | Saptakoshi | OPC | Chisang Khola | 15-Aug-19 | 22-Aug-19 | 12-Sep-19 | 9.07 | 7.5 | |
| 33 | T3L5 | MR-2199 | Saptakoshi | OPC | Chisang Khola | 17-Aug-19 | 24-Aug-19 | 14-Sep-19 | 8.24 | 7.5 | |
| 34 | R-46 | MR-2200 | Saptakoshi | OPC | Chisang Khola | 20-Jul-19 | 27-Jul-19 | 17-Aug-19 | 8.93 | 7.5 | |

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| <p align="center">Contractor</p> <p align="center">ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p> | | <p align="center">Consultant</p> <p align="center">BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL</p> | |
| <p>Checked By Engineer Benu Shrestha</p> | <p>Submitted By Contract Manager Rabindra Kr. Thakur</p> | <p>Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha</p> | <p>Approved By Team Leader Giresh Chand</p> |



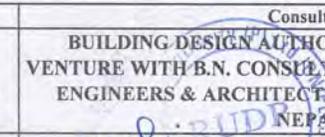
REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Mortar Test Report

| | | | | | | | Month | | September | | |
|------|----------------|-------------|----------------|-----------------|----------------|-----------------|-----------------------|-----------|-----------------------------|---------|---------------|
| | | | | | | | Year | | 2019 | | |
| | | | | | | | Description of Sample | | Brick Wall | | |
| S.N. | Location | Lab Ref.no. | Type of Cement | Brand of Cement | Source of Sand | Date of Casting | Date of Testing | | Strength, N/mm ² | | Type of Grade |
| | | | | | | | 7 Days | 28 Days | 7 Days | 28 Days | |
| 35 | T3L Trunk line | MR-2201 | Saptakoshi | OPC | Chisang Khola | 17-Aug-19 | 24-Aug-19 | 14-Sep-19 | | 8.52 | 7.5 |
| 36 | T3L5 | MR-2202 | Saptakoshi | OPC | Chisang Khola | 17-Aug-19 | 24-Aug-19 | 14-Sep-19 | | 9.20 | 7.5 |
| 37 | T3L5 | MR-2203 | Saptakoshi | OPC | Chisang Khola | 18-Aug-19 | 25-Aug-19 | 15-Sep-19 | | 9.48 | 7.5 |
| 38 | T3L5 | MR-2204 | Saptakoshi | OPC | Chisang Khola | 18-Aug-19 | 25-Aug-19 | 15-Sep-19 | | 9.89 | 7.5 |
| 39 | T3L Trunk line | MR-2205 | Saptakoshi | OPC | Chisang Khola | 18-Aug-19 | 25-Aug-19 | 15-Sep-19 | | 9.34 | 7.5 |
| 40 | R-181A | MR-2206 | Saptakoshi | OPC | Chisang Khola | 20-Aug-19 | 27-Aug-19 | 17-Sep-19 | | 9.62 | 7.5 |
| 41 | R-3 | MR-2207 | Saptakoshi | OPC | Chisang Khola | 20-Aug-19 | 27-Aug-19 | 17-Sep-19 | | 8.79 | 7.5 |
| 42 | T3L Trunk line | MR-2208 | Saptakoshi | OPC | Chisang Khola | 20-Aug-19 | 27-Aug-19 | 17-Sep-19 | | 10.30 | 7.5 |
| 43 | T3L5 | MR-2209 | Saptakoshi | OPC | Chisang Khola | 22-Aug-19 | 29-Aug-19 | 19-Sep-19 | | 9.48 | 7.5 |
| 44 | R-181A | MR-2210 | Saptakoshi | OPC | Chisang Khola | 22-Aug-19 | 29-Aug-19 | 19-Sep-19 | | 8.52 | 7.5 |
| 45 | R-3 | MR-2211 | Saptakoshi | OPC | Chisang Khola | 22-Aug-19 | 29-Aug-19 | 19-Sep-19 | | 8.65 | 7.5 |
| 46 | T3L Trunk line | MR-2212 | Saptakoshi | OPC | Chisang Khola | 22-Aug-19 | 29-Aug-19 | 19-Sep-19 | | 8.52 | 7.5 |
| 47 | R-181A | MR-2213 | Saptakoshi | OPC | Chisang Khola | 24-Aug-19 | 31-Aug-19 | 21-Sep-19 | | 9.75 | 7.5 |
| 48 | R-3 | MR-2214 | Saptakoshi | OPC | Chisang Khola | 24-Aug-19 | 31-Aug-19 | 21-Sep-19 | | 8.38 | 7.5 |
| 49 | T3L Trunk line | MR-2215 | Saptakoshi | OPC | Chisang Khola | 24-Aug-19 | 31-Aug-19 | 21-Sep-19 | | 9.64 | 7.5 |
| 50 | T3L5 | MR-2216 | Saptakoshi | OPC | Chisang Khola | 24-Aug-19 | 31-Aug-19 | 21-Sep-19 | | 8.38 | 7.5 |
| 51 | T2L19H | MR-2217 | Saptakoshi | OPC | Chisang Khola | 26-Aug-19 | 2-Sep-19 | 23-Sep-19 | 5.87 | 8.24 | 7.5 |
| 52 | R-3(T3L5) | MR-2218 | Saptakoshi | OPC | Chisang Khola | 26-Aug-19 | 2-Sep-19 | 23-Sep-19 | 6.29 | 8.10 | 7.5 |
| 53 | T2L19X | MR-2219 | Saptakoshi | OPC | Chisang Khola | 26-Aug-19 | 2-Sep-19 | 23-Sep-19 | 5.59 | 7.69 | 7.5 |
| 54 | T3L10F | MR-2220 | Saptakoshi | OPC | Chisang Khola | 26-Aug-19 | 2-Sep-19 | 23-Sep-19 | 5.87 | 8.66 | 7.5 |
| 55 | R-3(Telecom) | MR-2221 | Saptakoshi | OPC | Chisang Khola | 26-Aug-19 | 2-Sep-19 | 23-Sep-19 | 5.59 | 8.24 | 7.5 |
| 56 | R-46 | MR-2222 | Saptakoshi | OPC | Chisang Khola | 27-Aug-19 | 3-Sep-19 | 24-Sep-19 | 5.87 | 9.50 | 7.5 |
| 57 | T2L10A | MR-2223 | Saptakoshi | OPC | Chisang Khola | 27-Aug-19 | 3-Sep-19 | 24-Sep-19 | 5.59 | 9.08 | 7.5 |
| 58 | T3L10F | MR-2224 | Saptakoshi | OPC | Chisang Khola | 28-Aug-19 | 4-Sep-19 | 25-Sep-19 | 5.45 | 8.52 | 7.5 |
| 59 | R-181A | MR-2225 | Saptakoshi | OPC | Chisang Khola | 28-Aug-19 | 4-Sep-19 | 25-Sep-19 | 6.99 | 9.50 | 7.5 |
| 60 | T2L10A | MR-2226 | Saptakoshi | OPC | Chisang Khola | 28-Aug-19 | 4-Sep-19 | 25-Sep-19 | 6.01 | 8.10 | 7.5 |
| 61 | R-3(Telecom) | MR-2227 | Saptakoshi | OPC | Chisang Khola | 29-Aug-19 | 5-Sep-19 | 26-Sep-19 | 6.43 | 8.52 | 7.5 |
| 62 | R-181A | MR-2228 | Saptakoshi | OPC | Chisang Khola | 29-Aug-19 | 5-Sep-19 | 26-Sep-19 | 6.71 | 9.92 | 7.5 |
| 63 | R-46 | MR-2229 | Saptakoshi | OPC | Chisang Khola | 29-Aug-19 | 5-Sep-19 | 26-Sep-19 | 6.01 | 8.94 | 7.5 |
| 64 | T2L19G | MR-2230 | Saptakoshi | OPC | Chisang Khola | 29-Aug-19 | 5-Sep-19 | 26-Sep-19 | 6.43 | 9.50 | 7.5 |
| 65 | T3L Trunk line | MR-2231 | Saptakoshi | OPC | Chisang Khola | 29-Aug-19 | 5-Sep-19 | 26-Sep-19 | 6.01 | 8.80 | 7.5 |
| 66 | R-181A | MR-2232 | Saptakoshi | OPC | Chisang Khola | 30-Aug-19 | 6-Sep-19 | 27-Sep-19 | 6.99/ | 9.22 | 7.5 |

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|  <p>Contractor</p> <p>ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p> | |  <p>Consultant</p> <p>BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL</p> | |
|  Checked By Engineer Benu Shrestha |  Submitted By Contract Manager Rabindra Kr. Thakur |  Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha |  Approved By Team Leader Giresh Chand |



| REGIONAL URBAN DEVELOPMENT PROJECT | | | | | | | | | | | |
|-------------------------------------|-------------|-------------|----------------|-----------------|----------------|-----------------|-----------------------|-----------|-----------------------------|---------|---------------|
| Biratnagar Metropolitan City | | | | | | | | | | | |
| Contract No:- RUDP/ICB/BRT-02 | | | | | | | | | | | |
| Summary Sheet of Mortar Test Report | | | | | | | | | | | |
| S.N. | Location | Lab Ref.no. | Type of Cement | Brand of Cement | Source of Sand | Date of Casting | Month | | September | | Type of Grade |
| | | | | | | | Year | | 2019 | | |
| | | | | | | | Description of Sample | | Brick Wall | | |
| | | | | | | | Date of Testing | | Strength, N/mm ² | | |
| | | | | | | | 7 Days | 28 Days | 7 Days | 28 Days | |
| 67 | T2L19X | MR-2233 | Saptakoshi | OPC | Chisang Khola | 31-Aug-19 | 7-Sep-19 | 28-Sep-19 | 6.85 | 9.78 | 7.5 |
| 68 | T2L19G | MR-2234 | Saptakoshi | OPC | Chisang Khola | 31-Aug-19 | 7-Sep-19 | 28-Sep-19 | 6.15 | 8.52 | 7.5 |
| 69 | T3L10F | MR-2235 | Saptakoshi | OPC | Chisang Khola | 1-Sep-19 | 8-Sep-19 | 29-Sep-19 | 6.71 | 8.80 | 7.5 |
| 70 | T2L19H | MR-2236 | Saptakoshi | OPC | Chisang Khola | 2-Sep-19 | 9-Sep-19 | 30-Sep-19 | 6.01 | 8.80 | 7.5 |
| 71 | R-3(Telcom) | MR-2237 | Saptakoshi | OPC | Chisang Khola | 2-Sep-19 | 9-Sep-19 | 30-Sep-19 | 5.59 | 8.52 | 7.5 |
| 72 | R-46 | MR-2238 | Saptakoshi | OPC | Chisang Khola | 2-Sep-19 | 9-Sep-19 | 30-Sep-19 | 6.01 | 8.80 | 7.5 |
| 73 | R-46 | MR-2239 | Saptakoshi | OPC | Chisang Khola | 3-Sep-19 | 10-Sep-19 | 1-Oct-19 | 6.99 | ✓ 7.5 | 7.5 |
| 74 | T3L10F | MR-2240 | Saptakoshi | OPC | Chisang Khola | 3-Sep-19 | 10-Sep-19 | 1-Oct-19 | 6.01 | | 7.5 |
| 75 | R-46 | MR-2241 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 6.99 | | 7.5 |
| 76 | T3L7B | MR-2242 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 6.57 | | 7.5 |
| 77 | T2L19X | MR-2243 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 6.71 | | 7.5 |
| 78 | R-3(T3L5) | MR-2244 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 6.43 | | 7.5 |
| 79 | T3L10F | MR-2245 | Saptakoshi | OPC | Chisang Khola | 4-Sep-19 | 11-Sep-19 | 2-Oct-19 | 5.73 | | 7.5 |
| 80 | T3L7B | MR-2246 | Shalimar Gold | OPC | Chisang Khola | 5-Sep-19 | 12-Sep-19 | 3-Oct-19 | 6.15 | | 7.5 |
| 81 | T2L19H | MR-2247 | Shalimar Gold | OPC | Chisang Khola | 5-Sep-19 | 12-Sep-19 | 3-Oct-19 | 6.01 | | 7.5 |
| 82 | R-3(Telcom) | MR-2248 | Shalimar Gold | OPC | Chisang Khola | 5-Sep-19 | 12-Sep-19 | 3-Oct-19 | 6.99 | | 7.5 |
| 83 | T2L19G | MR-2249 | Shalimar Gold | OPC | Chisang Khola | 5-Sep-19 | 12-Sep-19 | 3-Oct-19 | 6.85 | | 7.5 |
| 84 | R-46 | MR-2250 | Shalimar Gold | OPC | Chisang Khola | 6-Sep-19 | 13-Sep-19 | 4-Oct-19 | 6.43 | | 7.5 |
| 85 | T2L19X | MR-2251 | Shalimar Gold | OPC | Chisang Khola | 7-Sep-19 | 14-Sep-19 | 5-Oct-19 | 6.85 | | 7.5 |
| 86 | T3L7B | MR-2252 | Shalimar Gold | OPC | Chisang Khola | 8-Sep-19 | 15-Sep-19 | 6-Oct-19 | 6.43 | | 7.5 |
| 87 | R-181A | MR-2253 | Shalimar Gold | OPC | Chisang Khola | 8-Sep-19 | 15-Sep-19 | 6-Oct-19 | 6.01 | | 7.5 |
| 88 | T3L7B | MR-2254 | Shalimar Gold | OPC | Chisang Khola | 9-Sep-19 | 16-Sep-19 | 7-Oct-19 | 5.87 | | 7.5 |
| 89 | T3L10F | MR-2255 | Shalimar Gold | OPC | Chisang Khola | 9-Sep-19 | 16-Sep-19 | 7-Oct-19 | 6.15 | | 7.5 |
| 90 | T2L19X | MR-2256 | Shalimar Gold | OPC | Chisang Khola | 9-Sep-19 | 16-Sep-19 | 7-Oct-19 | 6.99 | | 7.5 |
| 91 | T2L19X | MR-2257 | Shalimar Gold | OPC | Chisang Khola | 10-Sep-19 | 17-Sep-19 | 8-Oct-19 | 6.43 | | 7.5 |
| 92 | R-181A | MR-2258 | Shalimar Gold | OPC | Chisang Khola | 11-Sep-19 | 18-Sep-19 | 9-Oct-19 | 6.57 | | 7.5 |
| 93 | T2L19H | MR-2259 | Shalimar Gold | OPC | Chisang Khola | 12-Sep-19 | 19-Sep-19 | 10-Oct-19 | 5.73 | | 7.5 |
| 94 | R-3(Telcom) | MR-2260 | Shalimar Gold | OPC | Chisang Khola | 12-Sep-19 | 19-Sep-19 | 10-Oct-19 | 6.85 | | 7.5 |
| 95 | T2L19H | MR-2261 | Shalimar Gold | OPC | Chisang Khola | 13-Sep-19 | 20-Sep-19 | 11-Oct-19 | 6.15 | | 7.5 |
| 96 | R-46 | MR-2262 | Shalimar Gold | OPC | Chisang Khola | 14-Sep-19 | 21-Sep-19 | 12-Oct-19 | 6.43 | | 7.5 |
| 97 | R-3(Telcom) | MR-2263 | Shalimar Gold | OPC | Chisang Khola | 14-Sep-19 | 21-Sep-19 | 12-Oct-19 | 6.99 | | 7.5 |
| 98 | T2L19H | MR-2264 | Shalimar Gold | OPC | Chisang Khola | 15-Sep-19 | 22-Sep-19 | 13-Oct-19 | 6.85 | | 7.5 |

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| Contractor  ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD | Consultant BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL  | | |
| Checked By Engineer Benu Shrestha | Submitted By Contract Manager Rabindra Kr. Thakur | Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha | Approved By Team Leader Giresh Chand |



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City

Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Mortar Test Report

| S.N. | Location | Lab Ref.no. | Type of Cement | Brand of Cement | Source of Sand | Date of Casting | Month | | September | | Type of Grade |
|-----------------|----------|-----------------------------|----------------|-----------------|----------------|-----------------|-----------------------|-----------|---------------|-----------|---------------|
| | | | | | | | Year | | 2019 | | |
| | | | | | | | Description of Sample | | Brick Wall | | |
| Date of Testing | | Strength, N/mm ² | | 7 Days | 28 Days | 7 Days | 28 Days | | | | |
| 99 | T2L19X | MR-2265 | Shalimar Gold | | | | | OPC | Chisang Khola | 16-Sep-19 | 23-Sep-19 |
| 100 | T2L10A | MR-2266 | Shalimar Gold | OPC | Chisang Khola | 17-Sep-19 | 24-Sep-19 | 15-Oct-19 | 6.01 | | 7.5 |
| 101 | R-46 | MR-2267 | Shalimar Gold | OPC | Chisang Khola | 17-Sep-19 | 24-Sep-19 | 15-Oct-19 | 6.85 | | 7.5 |
| 102 | N-38 | MR-2268 | Shalimar Gold | OPC | Chisang Khola | 18-Sep-19 | 25-Sep-19 | 16-Oct-19 | 6.57 | | 7.5 |
| 103 | T3L7B | MR-2269 | Shalimar Gold | OPC | Chisang Khola | 18-Sep-19 | 25-Sep-19 | 16-Oct-19 | 6.43 | | 7.5 |
| 104 | T3L10F | MR-2270 | Shalimar Gold | OPC | Chisang Khola | 18-Sep-19 | 25-Sep-19 | 16-Oct-19 | 6.85 | | 7.5 |
| 105 | T2L19X | MR-2271 | Shalimar Gold | OPC | Chisang Khola | 20-Sep-19 | 27-Sep-19 | 18-Oct-19 | 6.15 | | 7.5 |
| 106 | T3L10F | MR-2272 | Shalimar Gold | OPC | Chisang Khola | 20-Sep-19 | 27-Sep-19 | 18-Oct-19 | 6.85 | | 7.5 |
| 107 | T2L24C | MR-2273 | Shalimar Gold | OPC | Chisang Khola | 20-Sep-19 | 27-Sep-19 | 18-Oct-19 | 6.29 | | 7.5 |
| 108 | T3L10A | MR-2274 | Shalimar Gold | OPC | Chisang Khola | 20-Sep-19 | 27-Sep-19 | 18-Oct-19 | 6.01 | | 7.5 |
| 109 | T3L13C | MR-2275 | Shalimar Gold | OPC | Chisang Khola | 21-Sep-19 | 28-Sep-19 | 19-Oct-19 | 6.99 | | 7.5 |
| 110 | T2L19H | MR-2276 | Shalimar Gold | OPC | Chisang Khola | 21-Sep-19 | 28-Sep-19 | 19-Oct-19 | 6.15 | | 7.5 |
| 111 | T3L13C | MR-2277 | Shalimar Gold | OPC | Chisang Khola | 21-Sep-19 | 28-Sep-19 | 19-Oct-19 | 5.73 | | 7.5 |
| 112 | T3L10F | MR-2278 | Shalimar Gold | OPC | Chisang Khola | 21-Sep-19 | 28-Sep-19 | 19-Oct-19 | 6.15 | | 7.5 |
| 113 | T3L7B | MR-2279 | Shalimar Gold | OPC | Chisang Khola | 21-Sep-19 | 28-Sep-19 | 19-Oct-19 | 6.43 | | 7.5 |
| 114 | T3L7C | MR-2280 | Shalimar Gold | OPC | Chisang Khola | 21-Sep-19 | 28-Sep-19 | 19-Oct-19 | 5.87 | | 7.5 |
| 115 | N-38 | MR-2281 | Shalimar Gold | OPC | Chisang Khola | 22-Sep-19 | 29-Sep-19 | 20-Oct-19 | 6.01 | | 7.5 |
| 116 | T2L19H | MR-2282 | Shalimar Gold | OPC | Chisang Khola | 22-Sep-19 | 29-Sep-19 | 20-Oct-19 | 6.57 | | 7.5 |
| 117 | T3L7B | MR-2283 | Shalimar Gold | OPC | Chisang Khola | 22-Sep-19 | 29-Sep-19 | 20-Oct-19 | 6.99 | | 7.5 |
| 118 | T3L10A | MR-2284 | Shalimar Gold | OPC | Chisang Khola | 22-Sep-19 | 29-Sep-19 | 20-Oct-19 | 6.85 | | 7.5 |
| 119 | T3L10F | MR-2285 | Shalimar Gold | OPC | Chisang Khola | 22-Sep-19 | 29-Sep-19 | 20-Oct-19 | 6.15 | | 7.5 |
| 120 | T3L7B | MR-2286 | Shalimar Gold | OPC | Chisang Khola | 23-Sep-19 | 30-Sep-19 | 21-Oct-19 | 6.85 | | 7.5 |
| 121 | R-181A | MR-2287 | Shalimar Gold | OPC | Chisang Khola | 23-Sep-19 | 30-Sep-19 | 21-Oct-19 | 5.73 | | 7.5 |
| 122 | N-38 | MR-2288 | Shalimar Gold | OPC | Chisang Khola | 23-Sep-19 | 30-Sep-19 | 21-Oct-19 | 6.85 | | 7.5 |
| 123 | R-181A | MR-2289 | Shalimar Gold | OPC | Chisang Khola | 23-Sep-19 | 30-Sep-19 | 21-Oct-19 | 6.01 | | 7.5 |
| 124 | T3L10F | MR-2290 | Shalimar Gold | OPC | Chisang Khola | 23-Sep-19 | 30-Sep-19 | 21-Oct-19 | 6.71 | | 7.5 |
| 125 | R-181A | MR-2291 | Shalimar Gold | OPC | Chisang Khola | 23-Sep-19 | 30-Sep-19 | 21-Oct-19 | 6.29 | | 7.5 |
| 126 | N-38 | MR-2292 | Shalimar Gold | OPC | Chisang Khola | 23-Sep-19 | 30-Sep-19 | 21-Oct-19 | 5.73 | | 7.5 |

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| Contractor | | Consultant | |
|  ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD | |  BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL | |
| Checked By Engineer Benu Shrestha | Submitted By Contract Manager Rabindra Kr. Thakur | Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha | Approved By Team Leader Giresch Chand |



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City
Contract No.- RUDP/ICB/BRT-02

Summary Sheet of Monthly Test Report of Concrete Sand

| S.n. | Lab. Ref no. | Date of Testing | Location of Sample | Source of Sample | Sieve Size in mm / % Passing by weight | | | | | | | | | | Clay Content% | Remarks |
|---------------|--------------|-----------------|--------------------|------------------|--|--------|--------|--------|--------|-------|-------|------|--|--|---------------|---------|
| | | | | | Concrete Sand | | | | | | | | | | | |
| | | | | | 10 | 5.0 | 2.36 | 1.18 | 0.600 | 0.300 | 0.150 | | | | | |
| 1 | RUDP-CS-441 | 2-Sep-19 | T2L19H | Chisang Khola | 100.00 | 95.31 | 81.36 | 53.71 | 17.11 | 8.43 | 3.95 | 1.57 | | | | |
| 2 | RUDP-CS-442 | 3-Sep-19 | R-4 | Chisang Khola | 100.00 | 92.77 | 77.31 | 55.19 | 30.16 | 10.42 | 4.71 | 1.21 | | | | |
| 3 | RUDP-CS-443 | 5-Sep-19 | R-3(T3L5) | Chisang Khola | 100.00 | 92.77 | 74.80 | 52.82 | 29.96 | 9.89 | 4.15 | 1.47 | | | | |
| 4 | RUDP-CS-444 | 6-Sep-19 | T2L19X | Chisang Khola | 100.00 | 92.97 | 74.71 | 53.40 | 30.68 | 10.44 | 4.26 | 1.10 | | | | |
| 5 | RUDP-CS-445 | 6-Sep-19 | R-46 | Chisang Khola | 100.00 | 92.72 | 75.66 | 54.46 | 32.71 | 11.69 | 4.78 | 1.40 | | | | |
| 6 | RUDP-CS-446 | 6-Sep-19 | T3(Telecom) | Chisang Khola | 100.00 | 92.46 | 76.28 | 54.94 | 32.77 | 12.16 | 4.89 | 1.44 | | | | |
| 7 | RUDP-CS-447 | 6-Sep-19 | R-46 | Chisang Khola | 100.00 | 92.62 | 72.67 | 53.48 | 30.89 | 12.35 | 4.69 | 1.64 | | | | |
| 8 | RUDP-CS-448 | 6-Sep-19 | T2L10A | Chisang Khola | 100.00 | 95.01 | 77.47 | 55.51 | 31.99 | 11.45 | 4.71 | 1.54 | | | | |
| 9 | RUDP-CS-449 | 6-Sep-19 | T2L19G | Chisang Khola | 100.00 | 96.05 | 83.10 | 51.53 | 43.87 | 9.14 | 4.17 | 1.21 | | | | |
| 10 | RUDP-CS-450 | 6-Sep-19 | T3L10F | Chisang Khola | 100.00 | 94.99 | 77.44 | 54.84 | 31.94 | 11.47 | 5.25 | 1.03 | | | | |
| 11 | RUDP-CS-451 | 7-Sep-19 | T3L10F | Chisang Khola | 100.00 | 94.92 | 77.27 | 54.64 | 31.90 | 11.54 | 5.47 | 1.20 | | | | |
| 12 | RUDP-CS-452 | 7-Sep-19 | R-12 | Chisang Khola | 100.00 | 94.53 | 76.73 | 53.55 | 32.35 | 12.24 | 5.37 | 1.11 | | | | |
| 13 | RUDP-CS-453 | 7-Sep-19 | T3L7C | Chisang Khola | 100.00 | 93.98 | 73.70 | 52.39 | 32.22 | 12.58 | 5.03 | 1.92 | | | | |
| 14 | RUDP-CS-454 | 9-Sep-19 | R-2 | Chisang Khola | 100.00 | 94.59 | 87.12 | 62.09 | 35.66 | 16.22 | 6.38 | 1.18 | | | | |
| 15 | RUDP-CS-455 | 9-Sep-19 | R-3(T3L38) | Chisang Khola | 100.00 | 94.90 | 87.51 | 63.87 | 39.44 | 19.44 | 10.92 | 1.28 | | | | |
| 16 | RUDP-CS-456 | 9-Sep-19 | Madhumara-Yard | Chisang Khola | 100.00 | 95.01 | 86.97 | 61.33 | 34.84 | 15.04 | 5.18 | 1.55 | | | | |
| 17 | RUDP-CS-457 | 10-Sep-19 | Judi Yard | Chisang Khola | 100.00 | 94.40 | 85.83 | 60.22 | 33.76 | 13.99 | 5.17 | 0.80 | | | | |
| 18 | RUDP-CS-458 | 11-Sep-19 | N-38 | Chisang Khola | 100.00 | 94.85 | 84.68 | 98.19 | 36.10 | 13.37 | 5.59 | 0.88 | | | | |
| 19 | RUDP-CS-459 | 11-Sep-19 | R-7 | Chisang Khola | 100.00 | 95.35 | 84.87 | 97.40 | 34.00 | 13.32 | 5.24 | 0.90 | | | | |
| 20 | RUDP-CS-460 | 11-Sep-19 | R-41 | Chisang Khola | 100.00 | 94.99 | 86.42 | 60.66 | 42.97 | 23.94 | 4.84 | 0.95 | | | | |
| Spec. Limit : | | | | | 100 | 89-100 | 60-100 | 30-100 | 15-100 | 5-70 | 0-15 | <3% | | | | |

Contractor

ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL
ENGINEERING CO. LTD

BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH
B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS &
ARCHITECTS (P) LTD, KATHMANDU, NEPAL

Checked By
Engineer
Benu Shrestha

Submitted By
Contract Manager
Rabindra K. Thakur

Verified By
Expert Qty Surveyor/CSE
H.K. Mandal/Rajan Shrestha

Approved By
Team Leader
Giresh Chand



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City
Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Monthly Test Report of Concrete Sand

| S.n. | Lab. Ref no. | Date of Testing | Location of Sample | Source of Sample | Sieve Size in mm / % Passing by weight | | | | | | | Clay Content % | Remarks |
|------|--------------|-----------------|--------------------|------------------|--|--------|--------|--------|--------|-------|-------|----------------|---------|
| | | | | | 10 | 5.0 | 2.36 | 1.18 | 0.600 | 0.300 | 0.150 | | |
| | | | | | 100.00 | 95.16 | 86.01 | 63.86 | 46.96 | 29.02 | 8.79 | | |
| 21 | RUDP-CS-461 | 12-Sep-19 | R-9 | Chisang Khola | 100.00 | 93.96 | 82.84 | 97.45 | 37.61 | 15.87 | 5.43 | 1.49 | |
| 22 | RUDP-CS-462 | 13-Sep-19 | T3L7A | Chisang Khola | 100.00 | 92.79 | 65.15 | 55.43 | 29.82 | 18.88 | 7.21 | 1.51 | |
| 23 | RUDP-CS-463 | 13-Sep-19 | R-42 | Chisang Khola | 100.00 | 91.42 | 70.52 | 58.53 | 28.39 | 17.40 | 7.08 | 1.25 | |
| 24 | RUDP-CS-464 | 15-Sep-19 | R-102 | Chisang Khola | 100.00 | 91.32 | 74.04 | 58.89 | 27.35 | 18.84 | 7.78 | 1.14 | |
| 25 | RUDP-CS-465 | 15-Sep-19 | T3L13C | Chisang Khola | 100.00 | 94.75 | 69.92 | 60.92 | 29.99 | 18.84 | 7.50 | 1.70 | |
| 26 | RUDP-CS-466 | 15-Sep-19 | T2L19H | Chisang Khola | 100.00 | 91.69 | 63.00 | 53.71 | 30.89 | 20.78 | 7.74 | 1.06 | |
| 27 | RUDP-CS-467 | 15-Sep-19 | R-2 | Chisang Khola | 100.00 | 92.30 | 64.75 | 53.55 | 32.33 | 22.53 | 6.48 | 1.37 | |
| 28 | RUDP-CS-468 | 16-Sep-19 | R-4 | Chisang Khola | 100.00 | 91.04 | 69.01 | 56.72 | 37.84 | 25.11 | 7.46 | 1.79 | |
| 29 | RUDP-CS-469 | 16-Sep-19 | R-3(T3L5) | Chisang Khola | 100.00 | 91.63 | 70.44 | 57.34 | 31.13 | 16.85 | 7.49 | 1.45 | |
| 30 | RUDP-CS-470 | 16-Sep-19 | R-102 | Chisang Khola | 100.00 | 93.53 | 81.53 | 67.41 | 38.00 | 21.41 | 9.41 | 1.13 | |
| 31 | RUDP-CS-471 | 17-Sep-19 | T3L10F | Chisang Khola | 100.00 | 89.81 | 71.03 | 45.95 | 32.67 | 22.18 | 9.99 | 1.99 | |
| 32 | RUDP-CS-472 | 17-Sep-19 | R-3(Telecom) | Chisang Khola | 100.00 | 91.53 | 75.91 | 45.01 | 27.58 | 16.43 | 7.96 | 1.03 | |
| 33 | RUDP-CS-473 | 17-Sep-19 | R-46 | Chisang Khola | 100.00 | 97.29 | 68.74 | 54.94 | 35.32 | 22.33 | 8.53 | 1.59 | |
| 34 | RUDP-CS-474 | 16-Sep-19 | T2L10A | Chisang Khola | 100.00 | 92.97 | 72.21 | 63.52 | 33.33 | 24.65 | 8.19 | 1.27 | |
| 35 | RUDP-CS-475 | 18-Sep-19 | R-4 | Chisang Khola | 100.00 | 91.79 | 67.54 | 57.39 | 37.10 | 26.96 | 7.73 | 1.79 | |
| 36 | RUDP-CS-476 | 18-Sep-19 | T3L10F | Chisang Khola | 100.00 | 91.15 | 78.56 | 48.28 | 23.95 | 13.51 | 6.06 | 1.48 | |
| 37 | RUDP-CS-477 | 18-Sep-19 | R-181A | Chisang Khola | 100.00 | 93.46 | 74.35 | 52.72 | 29.28 | 14.19 | 4.63 | 1.28 | |
| 38 | RUDP-CS-478 | 18-Sep-19 | R-4 | Chisang Khola | 100.00 | 93.46 | 74.35 | 52.72 | 29.28 | 14.19 | 4.63 | 1.28 | |
| 39 | RUDP-CS-479 | 18-Sep-19 | R-12 | Chisang Khola | 100.00 | 93.33 | 61.93 | 42.51 | 26.57 | 16.91 | 8.21 | 1.48 | |
| 40 | RUDP-CS-480 | 18-Sep-19 | T3L13C | Chisang Khola | 100.00 | 89-100 | 60-100 | 30-100 | 15-100 | 5-70 | 0-15 | <3% | |

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| <p>Contractor</p> <p>ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p>  | <p>Consultant</p> <p>BUILDING DESIGN AUTHORITY (B) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (B) LTD, KATHMANDU, NEPAL</p> |
| <p>Checked By Engineer Benu Shrestha</p>  | <p>Submitted By Contract Manager Rabindra K. Thakur</p>  |
| <p>Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha</p>  | <p>Approved By Team Leader Gitesh Chand</p>  |



| REGIONAL URBAN DEVELOPMENT PROJECT | | | | | | | | | | | | | |
|---|-------------|-----------------|--------------------|------------------|--|--------|--------|--------|--------|-------|---------|-------|---------------|
| Biratnagar Metropolitan City | | | | | | | | | | | | | |
| Contract No.- RUDP/ICB/BRT-02 | | | | | | | | | | | | | |
| Summary Sheet of Monthly Test Report of Concrete Sand | | | | | | | | | | | | | |
| S.n. | Lab.Ref no. | Date of Testing | Location of Sample | Source of Sample | Sieve Size in mm / % Passing by weight | | | | | | Remarks | | |
| | | | | | 10 | 5.0 | 2.36 | 1.18 | 0.600 | 0.300 | | 0.150 | Clay Content% |
| 41 | RUDP-CS-481 | 18-Sep-19 | T3L7C | Chisang Khola | 100.00 | 91.01 | 79.72 | 53.34 | 22.07 | 13.45 | 7.06 | 1.19 | |
| 42 | RUDP-CS-482 | 18-Sep-19 | R-4 | Chisang Khola | 100.00 | 93.28 | 78.13 | 53.36 | 20.67 | 12.88 | 7.22 | 1.69 | |
| 43 | RUDP-CS-483 | 18-Sep-19 | T3L13C | Chisang Khola | 100.00 | 91.52 | 81.56 | 54.50 | 21.89 | 12.53 | 6.43 | 1.13 | |
| 44 | RUDP-CS-484 | 19-Sep-19 | R-4 | Chisang Khola | 100.00 | 92.55 | 80.45 | 54.93 | 20.17 | 11.48 | 5.34 | 1.42 | |
| 45 | RUDP-CS-485 | 19-Aug-19 | R-3 | Chisang Khola | 100.00 | 92.65 | 73.36 | 59.91 | 24.13 | 14.80 | 6.82 | 1.05 | |
| 46 | RUDP-CS-486 | 19-Sep-19 | Judi-yard | Chisang Khola | 100.00 | 95.23 | 67.69 | 35.46 | 22.13 | 14.54 | 7.67 | 1.12 | |
| 47 | RUDP-CS-487 | 19-Sep-19 | Madhumara-yard | Chisang Khola | 100.00 | 93.96 | 63.31 | 33.10 | 23.91 | 15.24 | 7.44 | 1.15 | |
| 48 | RUDP-CS-488 | 19-Sep-19 | N-38 | Chisang Khola | 100.00 | 94.13 | 76.83 | 55.35 | 40.25 | 29.25 | 8.39 | 1.49 | |
| 49 | RUDP-CS-489 | 20-Sep-19 | R-7 | Chisang Khola | 100.00 | 91.55 | 68.86 | 50.89 | 36.21 | 25.00 | 8.63 | 1.71 | |
| 50 | RUDP-CS-490 | 21-Sep-19 | T3L7C | Chisang Khola | 100.00 | 92.48 | 63.07 | 47.88 | 28.97 | 14.45 | 6.70 | 1.42 | |
| 51 | RUDP-CS-491 | 21-Sep-19 | T2L19G | Chisang Khola | 100.00 | 92.64 | 66.10 | 51.09 | 35.79 | 14.89 | 5.18 | 1.62 | |
| 52 | RUDP-CS-492 | 21-Sep-19 | R18/A | Chisang Khola | 100.00 | 93.30 | 66.41 | 50.82 | 35.39 | 18.71 | 7.01 | 1.41 | |
| 53 | RUDP-CS-493 | 21-Sep-19 | R-4 | Chisang Khola | 100.00 | 94.41 | 62.83 | 50.28 | 33.77 | 18.79 | 7.94 | 1.78 | |
| 54 | RUDP-CS-494 | 22-Sep-19 | T3L7C | Chisang Khola | 100.00 | 93.70 | 73.37 | 45.85 | 30.30 | 15.95 | 2.71 | 1.96 | |
| 55 | RUDP-CS-495 | 22-Sep-19 | T3L10F | Chisang Khola | 100.00 | 94.13 | 74.71 | 51.76 | 42.28 | 24.30 | 5.78 | 2.30 | |
| 56 | RUDP-CS-496 | 23-Sep-19 | T2L10A | Chisang Khola | 100.00 | 94.13 | 74.71 | 51.76 | 42.28 | 24.30 | 5.78 | 2.30 | |
| 57 | RUDP-CS-497 | 23-Sep-19 | T2L19H | Chisang Khola | 100.00 | 95.30 | 74.79 | 42.98 | 34.54 | 22.35 | 8.44 | 2.05 | |
| 58 | RUDP-CS-498 | 23-Sep-19 | T2L19H | Chisang Khola | 100.00 | 92.49 | 70.02 | 35.38 | 27.50 | 16.13 | 8.73 | 1.21 | |
| 60 | RUDP-CS-499 | 24-Sep-19 | T3L13C | Chisang Khola | 100.00 | 90.76 | 69.06 | 40.24 | 33.73 | 18.60 | 6.51 | 1.05 | |
| Spec. Limit : | | | | | 100 | 89-100 | 60-100 | 30-100 | 15-100 | 5-70 | 0-15 | <3% | |

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| <p>Contractor</p> <p>ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p> <p>Checked By Engineer Benu Shrestha</p> | <p>Consultant</p> <p>BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL</p> <p>Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha</p> |
| <p>Submitted By Contract Manager Rabindra K. Thakur</p> | <p>Approved By Team Leader Giresh Chand</p> |



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City
Contract No:- RUDP/ICB/BRT-02

Summary Sheet of Monthly Test Report of Concrete Sand

| S.n. | Lab. Ref no. | Date of Testing | Location of Sample | Source of Sample | Sieve Size in mm / % Passing by weight | | | | | | | | | | Clay Content % | Remarks |
|------|--------------|-----------------|--------------------|------------------|--|-------|-------|-------|-------|-------|-------|--------------|--|--|----------------|---------|
| | | | | | 10 | 5.0 | 2.36 | 1.18 | 0.600 | 0.300 | 0.150 | Cncrete Sand | | | | |
| | | | | | 100.00 | 93.31 | 71.06 | 44.87 | 35.05 | 21.99 | 10.52 | | | | | |
| 61 | RUDP-CS-500 | 25-Sep-19 | T2L18G | Chisang Khola | 100.00 | 93.31 | 71.06 | 44.87 | 35.05 | 21.99 | 10.52 | 1.62 | | | | |
| 62 | RUDP-CS-501 | 25-Sep-19 | T2L10A | Chisang Khola | 100.00 | 92.97 | 81.32 | 54.79 | 37.28 | 22.40 | 12.41 | 1.50 | | | | |
| 63 | RUDP-CS-502 | 26-Sep-19 | T2L19G | Chisang Khola | 100.00 | 95.63 | 79.92 | 63.13 | 36.17 | 21.80 | 9.77 | 1.42 | | | | |
| 64 | RUDP-CS-503 | 27-Sep-19 | T3L10F | Chisang Khola | 100.00 | 96.49 | 77.32 | 57.42 | 34.58 | 19.09 | 10.93 | 1.84 | | | | |
| 65 | RUDP-CS-504 | 28-Sep-19 | T2L19H | Chisang Khola | 100.00 | 91.54 | 63.74 | 47.22 | 25.79 | 14.10 | 6.45 | 1.77 | | | | |
| 66 | RUDP-CS-505 | 29-Sep-19 | T3L7B | Chisang Khola | 100.00 | 92.85 | 68.37 | 44.13 | 24.10 | 13.18 | 5.72 | 1.50 | | | | |
| 67 | RUDP-CS-506 | 29-Sep-19 | Judi Yard | Chisang Khola | 100.00 | 93.47 | 65.89 | 55.11 | 36.58 | 8.95 | 3.68 | 1.27 | | | | |
| | | | | | Spec. Limit : 100 | | | | | | | | | | 0-15 | <3% |

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| <p>Contractor</p> <p>ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO. LTD</p>  <p>Checked By Engineer Benu Shrestha</p> | <p>Consultant</p> <p>BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL</p>  <p>Verified By Expert Qty Surveyor/CSE H.K. Mandal/Rajan Shrestha</p> <p>Submitted By Contract Manager Rabindra K. Thakur</p> <p>Approved By Team Leader Giresh Chand</p> |
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REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City
 Contract No:- RUDP/ICB/BRT-02
 Summary Sheet Of Monthly Test Report

| S.N. | Lab Ref.No. | Testing Date | Location of Sample | Source of Brick | Name of Brick | Water Absorption of Brick(%) | Strength of Brick(N/mm ²) | Month | September |
|-----------|-------------|--------------|--------------------|-----------------|---------------|------------------------------|---------------------------------------|------------------|-----------|
| | | | | | | | | Year | 2019 |
| | | | | | | | | Type of Material | Brick |
| 1 | 751 | 2-Sep-19 | T2L19H | Dadarbairya | ACC | 14.78 | 14.15 | | |
| 2 | 752 | 2-Sep-19 | R-3(T3L5) | Dadarbairya | ACC | 15.04 | 14.23 | | |
| 3 | 753 | 2-Sep-19 | T2L19X | Dadarbairya | ACC | 14.85 | 14.59 | | |
| 4 | 754 | 2-Sep-19 | T2L19X | Dadarbairya | ANAND | 14.29 | 16.50 | | |
| 5 | 755 | 2-Sep-19 | T2L10F | Dadarbairya | ANAND | 14.41 | 13.48 | | |
| 6 | 756 | 3-Sep-19 | R-3(Telecom) | Dadarbairya | ANAND | 13.19 | 13.71 | | |
| 7 | 757 | 3-Sep-19 | R-46 | Dadarbairya | ANAND | 16.23 | 15.20 | | |
| 8 | 758 | 3-Sep-19 | T2L19G | Dadarbairya | ANAND | 17.08 | 14.77 | | |
| 9 | 759 | 3-Sep-19 | T3L10F | Dadarbairya | ACC | 12.52 | 14.73 | | |
| 10 | 760 | 4-Sep-19 | R-181A | Dadarbairya | ACC | 15.36 | 14.80 | | |
| 11 | 761 | 4-Sep-19 | T3L13C | Dadarbairya | ACC | 14.65 | 15.46 | | |
| 12 | 762 | 4-Sep-19 | T3L7C | Dadarbairya | ACC | 13.99 | 14.55 | | |
| 13 | 763 | 5-Sep-19 | T2L10F | Dadarbairya | ACC | 16.79 | 13.73 | | |
| 14 | 764 | 5-Sep-19 | T2L19H | Dadarbairya | ACC | 14.15 | 15.41 | | |
| 15 | 765 | 5-Sep-19 | T2L19X | Dadarbairya | ACC | 13.78 | 13.61 | | |
| 16 | 766 | 5-Sep-19 | R-3(T3L5) | Dadarbairya | ACC | 14.13 | 14.91 | | |
| 17 | 767 | 6-Sep-19 | T2L19G | Dadarbairya | ACC | 13.48 | 13.45 | | |
| 18 | 768 | 6-Sep-19 | R-3(Telecom) | Dadarbairya | ANAND | 12.54 | 13.71 | | |
| 19 | 769 | 6-Sep-19 | T2L19A | Dadarbairya | ANAND | 12.59 | 14.19 | | |
| 20 | 770 | 6-Sep-19 | R-46 | Dadarbairya | ANAND | 13.25 | 13.32 | | |
| 21 | 771 | 7-Sep-19 | T3L7C | Dadarbairya | ANAND | 14.16 | 13.37 | | |
| 22 | 772 | 7-Sep-19 | T2L10F | Dadarbairya | ANAND | 14.39 | 13.62 | | |
| 23 | 773 | 7-Sep-19 | T3L13C | Dadarbairya | ANAND | 13.26 | 13.84 | | |
| 24 | 774 | 7-Sep-19 | R-181A | Dadarbairya | ANAND | 15.82 | 13.36 | | |
| 25 | 775 | 8-Sep-19 | T2L19H | Dadarbairya | ACC | 13.38 | 14.45 | | |
| 26 | 776 | 8-Sep-19 | T2L19X | Dadarbairya | ACC | 14.84 | 13.86 | | |
| 27 | 777 | 8-Sep-19 | R-3(Telecom) | Dadarbairya | ACC | 13.86 | 12.72 | | |
| 28 | 778 | 8-Sep-19 | T3L10F | Dadarbairya | ACC | 14.55 | 14.27 | | |
| 29 | 779 | 9-Sep-19 | R-46 | Dadarbairya | ACC | 14.50 | 14.54 | | |
| 30 | 780 | 9-Sep-19 | R-3 | Dadarbairya | ACC | 14.87 | 15.40 | | |
| 31 | 781 | 9-Sep-19 | T2L10A | Dadarbairya | ACC | 13.14 | 16.12 | | |
| 32 | 782 | 9-Sep-19 | T2L19G | Dadarbairya | ACC | 13.47 | 15.20 | | |
| 33 | 783 | 10-Sep-19 | T3L10F | Dadarbairya | ACC | 14.19 | 15.72 | | |
| Sp. Limit | | | | | | <20% | >8 to 10 N/mm ² | | |

Comments:-

Contractor
 ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO.
 LTD.
 Biratnagar

Consultant
 BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL
 RUDP
 Biratnagar

Checked By
 Engineer
 Benu shrestha

Submitted By
 Contract Manager
 Rabindra Kr. Thakur

Verified By
 Expert Qty Surveyor/CSE
 H.K.Mandal/Rajan Shrestha

Approved By
 Team Leader
 Giresh Chand



REGIONAL URBAN DEVELOPMENT PROJECT

Biratnagar Metropolitan City
 Contract No:- RUDP/ICB/BRT-02
 Summary Sheet Of Monthly Test Report

| S.N. | Lab Ref.No. | Testing Date | Location of Sample | Source of Brick | Name of Brick | Water Absorption of Brick(%) | Strength of Brick(N/mm ²) | Month | September |
|------|-------------|--------------|--------------------|-----------------|---------------|------------------------------|---------------------------------------|------------------|-----------|
| | | | | | | | | Year | 2019 |
| | | | | | | | | Type of Material | Brick |
| 34 | 784 | 10-Sep-19 | T3L7B | Dadarbairya | ACC | 10.83 | 15.25 | | |
| 35 | 785 | 10-Sep-19 | T3L13C | Dadarbairya | ACC | 13.13 | 14.53 | | |
| 36 | 786 | 10-Sep-19 | R-181A | Dadarbairya | ACC | 13.23 | 15.88 | | |
| 37 | 787 | 11-Sep-19 | R-3(Telecom) | Dadarbairya | ACC | 14.61 | 15.55 | | |
| 38 | 788 | 11-Sep-19 | R-46 | Dadarbairya | ACC | 12.72 | 15.45 | | |
| 39 | 789 | 11-Sep-19 | T2L10F | Dadarbairya | ACC | 13.38 | 14.16 | | |
| 40 | 790 | 11-Sep-19 | T2L19G | Dadarbairya | ACC | 12.92 | 13.98 | | |
| 41 | 791 | 12-Sep-19 | T3L10F | Dadarbairya | ACC | 12.96 | 13.83 | | |
| 42 | 792 | 13-Sep-19 | R-181A | Dadarbairya | ACC | 12.98 | 13.64 | | |
| 43 | 793 | 13-Sep-19 | T3L13C | Dadarbairya | ACC | 13.20 | 13.91 | | |
| 44 | 794 | 13-Sep-19 | T3L7B | Dadarbairya | ACC | 15.48 | 13.91 | | |
| 45 | 795 | 13-Sep-19 | T2L19H | Dadarbairya | ACC | 17.88 | 12.49 | | |
| 46 | 796 | 13-Sep-19 | R-3(T3L5) | Dadarbairya | ANAND | 12.46 | 14.46 | | |
| 47 | 797 | 13-Sep-19 | T2L19X | Dadarbairya | ANAND | 14.82 | 14.27 | | |
| 48 | 798 | 13-Sep-19 | T3L10F | Dadarbairya | ANAND | 12.61 | 14.31 | | |
| 49 | 799 | 13-Sep-19 | R-46 | Dadarbairya | ANAND | 13.42 | 15.09 | | |
| 50 | 800 | 14-Sep-19 | T2L10A | Dadarbairya | ANAND | 15.29 | 14.85 | | |
| 51 | 801 | 14-Sep-19 | T3L7B | Dadarbairya | ANAND | 13.71 | 13.89 | | |
| 52 | 802 | 15-Sep-19 | T2L19H | Dadarbairya | ANAND | 14.39 | 13.81 | | |
| 53 | 803 | 15-Sep-19 | R-3(T3L5) | Dadarbairya | ANAND | 15.12 | 13.58 | | |
| 54 | 804 | 15-Sep-19 | T2L19X | Dadarbairya | ANAND | 17.21 | 13.82 | | |
| 55 | 805 | 15-Sep-19 | T3L10F | Dadarbairya | ANAND | 14.12 | 15.35 | | |
| 56 | 806 | 15-Sep-19 | R-3(Telecom) | Dadarbairya | ANAND | 15.18 | 14.49 | | |
| 57 | 807 | 16-Sep-19 | R-46 | Dadarbairya | ANAND | 15.27 | 13.40 | | |
| 58 | 808 | 16-Sep-19 | T2L19G | Dadarbairya | ANAND | 14.77 | 14.08 | | |
| 59 | 809 | 16-Sep-19 | T3L10F | Dadarbairya | ANAND | 13.15 | 14.48 | | |
| 60 | 810 | 16-Sep-19 | R-181A | Dadarbairya | ANAND | 14.78 | 12.52 | | |
| 61 | 811 | 17-Sep-19 | T3L13C | Dadarbairya | ACC | 12.51 | 12.11 | | |
| 62 | 812 | 17-Sep-19 | T3L7B | Dadarbairya | ACC | 14.92 | 12.13 | | |
| 63 | 813 | 18-Sep-19 | R-3(Telecom) | Dadarbairya | ACC | 16.36 | 13.29 | | |
| 64 | 814 | 18-Sep-19 | R-46 | Dadarbairya | ACC | 15.73 | 12.73 | | |
| 65 | 815 | 18-Sep-19 | T2L10A | Dadarbairya | ACC | 15.26 | 11.80 | | |
| 66 | 816 | 19-Sep-19 | T2L19H | Dadarbairya | ACC | 15.63 | 13.07 | | |

Sp. Limit

<20%

>8 to 10 N/mm²

Comments:-

Contractor
 ZHONGHENG CONSTRUCTION GROUP INTERNATIONAL ENGINEERING CO.

Consultant
 BUILDING DESIGN AUTHORITY (P) LTD IN JOINT VENTURE WITH B.N. CONSULTANCY PVT. LTD AND PLUS ENGINEERS & ARCHITECTS (P) LTD, KATHMANDU, NEPAL

Checked By
 Engineer
 Benu shrestha

Submitted By
 Contract Manager
 Rabindra Kr. Thakur

Verified By
 Expert Qty Surveyor/CSE
 H.K.Mandal/Rajan Shrestha

Approved By
 Team Leader
 Giresh Chand

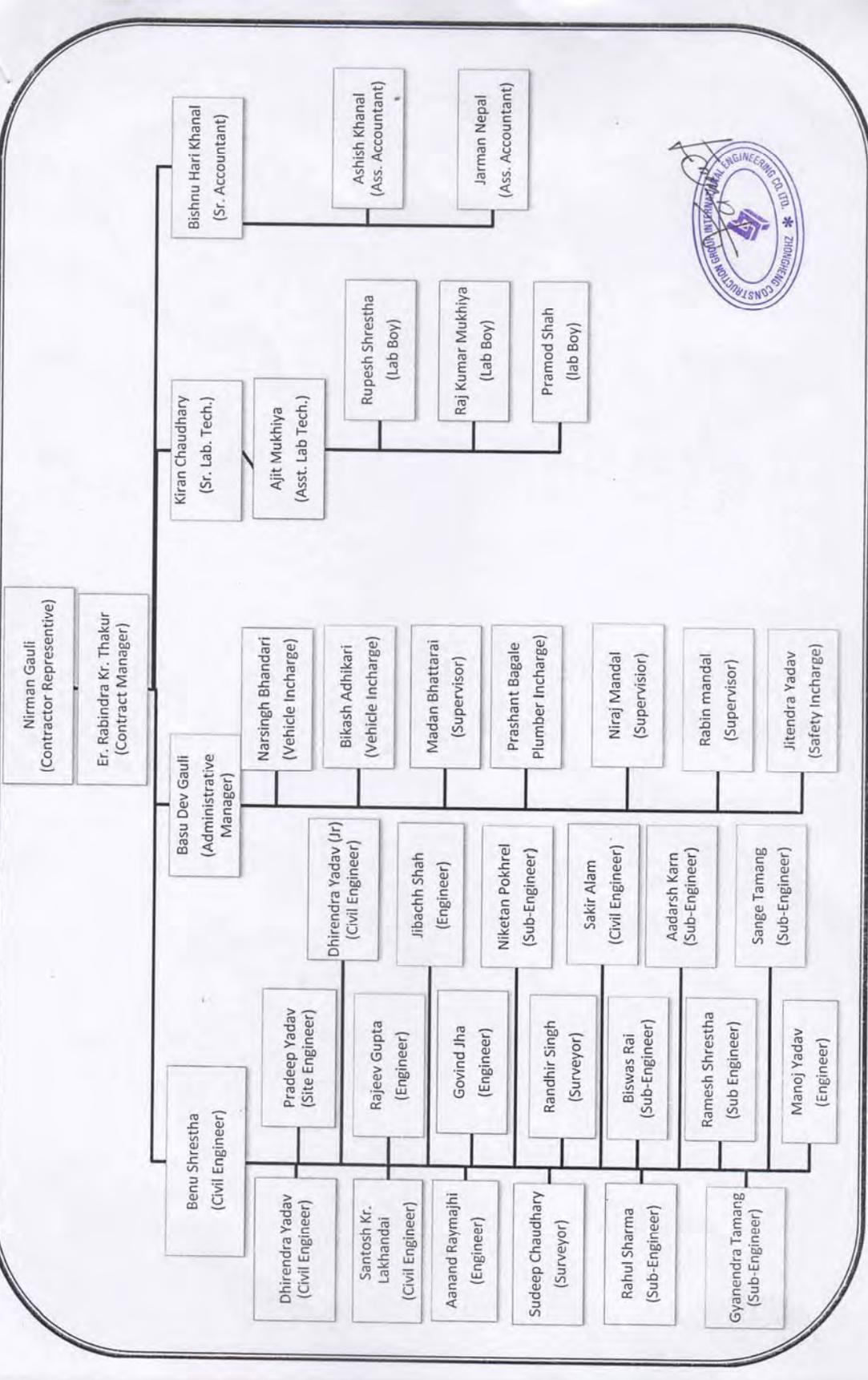


ANNEX-4: SOCIAL & ENVIRONMENT SAFEGUARD

Monitoring Formats Attached – September 2019



Details of Contractor's Site Personnel's



**Regional Urban Development Project (RUDP)
Social Safeguard Monitoring
Status of Key Social Issues Compliance**

Subproject Road : -RUDP/ICB/BRT/2



Month/Year: September 2019

Name of Contractor :-ZHONGGHENG Construction
GroupInternational Engineering Co pvt Beijing China.

Contract Package: RUDP/ICB/BRT/2

| S.N | Key Social Issue | Compliance Status | | | Implementing Agency | Note of Remarks | Deadline |
|-----|--|-------------------|---------|------|---------------------|-----------------|----------|
| | | Full | Partial | None | | | |
| 1 | Availability of drinking water services | √ | | | | | |
| 2 | Availability of toilet facility in campsite | √ | | | | | |
| 3 | Legal source of fuel wood use | | | √ | | | |
| 4 | Legal document of fuel wood source | | | √ | | | |
| 5 | Use of safety accessories | √ | | | | | |
| 6 | Availability of first aid facility | √ | | | | | |
| 7 | Basic wage rate to construction workers | √ | | | | | |
| 8 | Equal wage rate to male and female workers | | √ | | | | |
| 9 | Compensation of temporarily occupied land | √ | | | | | |
| 10 | Compensation of temporarily occupied buildings | √ | | | | | |
| 11 | Legal document of temporarily occupied assets | √ | | | | | |
| 12 | Non use of child labour in construction activities | √ | | | | | |

Prepared by:

Verified by:

Monitored by:



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

Name of Sub Project: RUDP/ Biratnagar
 Contract Package: RUDP/ICB/BRT/02
 Sub-project Component: - Road Lanes Improvement / Sewerage Drainage
 Month: September 2019

Checklist

| SN | Activity | Description/Present Status (Compliance/Partially Compliance/Non Compliance) | Remarks/ Corrective actions for Non-Compliance |
|----------|---|--|--|
| 1 | Training | | |
| 1.1 | Health, Safety and EMP trainings and awareness | Yes | |
| 1.2 | Others awareness and skill trainings | No | |
| 2 | Occupational health and safety | | |
| 2.1 | Insurance for workers | Yes | |
| 2.2 | Personal Protective Equipment (PPE) provided to labors and is using (helmet, facemasks, muffles, gloves, boots, jacket, goggles etc.) | Daily Provided | |
| 2.3 | Public notification Safety and warning signs and informative signboards in working sites for work safety | Yes Provided | |
| 2.4 | Use of barricades, caution tape and flag | Daily Used | |
| 3 | Campsite management | | |
| 3.1 | Location | Pichra, Judi, Shanti Chowk, Rani | |
| 3.2 | First aid facilities available at camp and worksites | Yes | |
| 3.3 | Drinking water supply and sanitation facilities/ pit latrines | Tap water/ Hand Pump | |
| 3.4 | Waste Disposal and Management facilities | Yes | |
| 3.5 | Type of fuel used for cooking | L.P.G | |
| 4 | Spoil and Construction material Management | | |
| 4.1 | Cut and fill balance maintained or not, Reuse of spoil materials | Cut & Fill balance maintained | |
| 4.2 | Use of safe spoil disposal locations | Not Applicable | |
| 4.3 | Disturbance to Pedestrian and traffic movement | No any disturbance to pedestrians & traffic | |



| | | | |
|-----------|--|--|--|
| 4.4 | Use of private land and agreement with land owners | movement Yes | |
| 5 | Air, Noise and Water Pollution | | |
| 5.1 | Dust emission and Noise pollution sites | Water sprinkled by tanker on such sites. | |
| 5.2 | Water quality monitoring result and locations | ok | |
| 5.3 | Block age of natural drainages ,water logging, drain water discharge into farmland/risky areas | Not Applicable | |
| 6 | Quarrying of construction materials and Plants Installment | | |
| 6.1 | Quarry/borrow operation sites | Not Applicable | |
| 6.2 | Crusher plant and Asphalt plant operation restoration | Asphalt Plant | |
| 7 | Impact/Disruption of Private properties | | |
| 7.1 | Building structures | Not Applicable | |
| 7.2 | Other utilities | Not Applicable | |
| 8 | Impact/disruption of public infrastructures | | |
| 8.1 | Irrigation canal | Not Applicable | |
| 8.2 | Water supply pipe | Not Applicable | |
| 8.3 | Access road | Not Applicable | |
| 8.4 | Electric/Telephone pole | Not Applicable | |
| 8.5 | Others | Not Applicable | |
| 9 | Sites for cultural and religious values | | |
| 9.1 | Cultural and religious sensitive spots (if any) | Not Applicable | |
| 10 | Forest and vegetation | | |
| 10.1 | Number of trees removal | 00 | |
| 10.2 | No of tree plantation (Roadside) | Not Applicable | |
| 11 | Accident cases and records | No any records | |
| 12 | Employment to local people | | |
| 12.1 | Men and women | Yes, both men and women | |
| 12.2 | Child labor (if any) | No | |
| 13 | Establishment of Safeguard desk and meeting | Yes | |
| 14 | Grievances from local people and addressed | Yes | |

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Regional Urban Development Project (RUDP)
 Project Implementation Unit (PIU)
 Biratnagar, Nepal

LABOUR DATA SUMMERY

| LABOUR CLASS | LABOUR | | COMPOSITION | | | ETHNIC COMPOSITION | | | | |
|--------------|---------|-----------|-------------|--------|---------|--------------------|--------|---------|-----------------|--|
| | SKILLED | UNSKILLED | MALE | FEMALE | JANJATI | DALIT | MUSLIM | MADHESI | BRAHMIN/CHHETRI | |
| LOCAL | 49 | 146 | 179 | 16 | 2 | 18 | 41 | 134 | 0 | |
| NON LOCAL | 73 | 294 | 337 | 30 | 40 | 52 | 35 | 240 | 0 | |
| INDIAN | 2 | 12 | 14 | 0 | 0 | 0 | 10 | 4 | 0 | |
| TOTAL | 124 | 452 | 530 | 46 | 42 | 70 | 86 | 378 | 0 | |



Regional Urban Development Project (RUDP)
Project Implementation Unit (PIU)
Biratnagar, Nepal
LABOUR DATA

Month/Year: Sept 2019

| S.NO | LOCATION | TYPES OF WORK | TYPES OF WORKERS | LABOUR SKILLED | COMPOSITION | | ETHNIC COMPOSITION | | | | MADHESI | BRAHMIN/CHHETRI | |
|------|------------------|----------------|------------------|----------------|-------------|------|--------------------|---------|-------|--------|---------|-----------------|--|
| | | | | | UNSKILLED | MALE | FEMALE | JANJATI | DALIT | MUSLIM | | | |
| 1 | Kalika +DDC yard | Production | LOCAL | | | | | | | | | | |
| | | | NON LOCAL | 15 | 45 | | | 20 | 10 | | | | |
| | | | INDIAN | | | | | | | | | 30 | |
| | | | TOTAL | 60 | | | | | | | | | |
| 2 | Madhumara Yard | Production | LOCAL | | | | | | | | | | |
| | | | NON LOCAL | 10 | 45 | | | 10 | 15 | | | 30 | |
| | | | INDIAN | | | | | | | | | | |
| | | | TOTAL | 55 | | | | | | | | | |
| 3 | R7 | Weep Hole | LOCAL | 3 | 5 | | | | | | | | |
| | | | NON LOCAL | | | | | | | | | 8 | |
| | | | INDIAN | | | | | | | | | | |
| | | | TOTAL | 8 | | | | | | | | | |
| 4 | R3 | Site Clearance | LOCAL | | | | | | | | | | |
| | | | NON LOCAL | 5 | 33 | | | 10 | | | | | |
| | | | INDIAN | | | | | | | | | 28 | |
| | | | TOTAL | 38 | | | | | | | | | |
| 5 | B2 | Paint | LOCAL | | | | | | | | | | |
| | | | NON LOCAL | 2 | 10 | | | | | | | | |
| | | | INDIAN | | | | | | | | | 12 | |
| | | | TOTAL | 12 | | | | | | | | | |
| 6 | T3L5 | Drain | LOCAL | | | | | | | | | | |
| | | | NON LOCAL | 4 | 18 | | | | | | | | |
| | | | INDIAN | | | | | | | | | 10 | |
| | | | TOTAL | 22 | | | | | | | | | |



Regional Urban Development Project (RUDP)
Project Implementation Unit (PIU)
Biratnagar, Nepal
LABOUR DATA

Month/Year: Sept 2019

| S.NO | LOCATION | TYPES OF WORK | TYPES OF WORKERS | LABOUR | | | COMPOSITION | | | ETHNIC COMPOSITION | | | | | | | |
|------|----------|-------------------|------------------|---------|-----------|------|-------------|------|--------|--------------------|-------|--------|---------|-----------------|--|--|--|
| | | | | SKILLED | UNSKILLED | MALE | UNSKILLED | MALE | FEMALE | JANJATI | DALIT | MUSLIM | MADHESI | BRAHMIN/CHHETRI | | | |
| 7 | T3L10F | Drain | LOCAL | 5 | 18 | 23 | | | | | | | | | | | |
| | | | NON LOCAL | | | | | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | | | | |
| | | | TOTAL | 23 | | | | | | | | | | | | | |
| 8 | T3L7C | Drain | LOCAL | 4 | 17 | 21 | | | | | | | | | | | |
| | | | NON LOCAL | | | | | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | | | | |
| | | | TOTAL | 21 | | | | | | | | | | | | | |
| 9 | R66 | Drain maintenance | LOCAL | 3 | 8 | 11 | | | | | | | | | | | |
| | | | NON LOCAL | | | | | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | | | | |
| | | | TOTAL | 11 | | | | | | | | | | | | | |
| 10 | R37 | Drain maintenance | LOCAL | 2 | 7 | 9 | | | | | | | | | | | |
| | | | NON LOCAL | | | | | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | | | | |
| | | | TOTAL | 9 | | | | | | | | | | | | | |
| 11 | R7 | Road | LOCAL | 2 | 5 | 7 | | | | | | | | | | | |
| | | | NON LOCAL | | | | | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | | | | |
| | | | TOTAL | 7 | | | | | | | | | | | | | |
| 12 | T3 Trunk | Road | LOCAL | 3 | 5 | 8 | | | | | | | | | | | |
| | | | NON LOCAL | | | | | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | | | | |
| | | | TOTAL | 8 | | | | | | | | | | | | | |
| 13 | R43 | Sewer inlet | LOCAL | 4 | 12 | 16 | | | | | | | | | | | |
| | | | NON LOCAL | | | | | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | | | | |
| | | | TOTAL | 16 | | | | | | | | | | | | | |
| 14 | T3L23C | Road | LOCAL | 2 | 6 | 8 | | | | | | | | | | | |
| | | | NON LOCAL | | | | | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | | | | |
| | | | TOTAL | 8 | | | | | | | | | | | | | |



Regional Urban Development Project (RUDP)
Project Implementation Unit (PIU)
Biratnagar, Nepal
LABOUR DATA

Month/Year: Sept. 2019

| S.NO | LOCATION | TYPES OF WORK | TYPES OF WORKERS | LABOUR SKILLED | COMPOSITION | | | ETHNIC COMPOSITION | | | MUSLIM | MADHESI | BRAHMIN/CHHETRI | |
|------|----------|------------------|------------------|----------------|-------------|------|--------|--------------------|-------|--|--------|---------|-----------------|--|
| | | | | | UNSKILLED | MALE | FEMALE | JANJATI | DALIT | | | | | |
| 15 | R9 | Road | LOCAL | 2 | 7 | 9 | | | | | 5 | 4 | | |
| | | | NON LOCAL | | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | |
| | | | TOTAL | 9 | | | | | | | | | | |
| 16 | T3 Trunk | Kerbstone | LOCAL | | | | | | | | | | | |
| | | | NON LOCAL | 5 | 20 | 25 | | | | | 5 | 15 | | |
| | | | INDIAN | | | | | | | | | | | |
| | | | TOTAL | 25 | | | | | | | | | | |
| 17 | R46 | Tiles | LOCAL | | | | | | | | | | | |
| | | | NON LOCAL | 4 | 15 | 19 | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | |
| | | | TOTAL | 19 | | | | | | | | | | |
| 18 | T3L19X | Drain | LOCAL | | | | | | | | | | | |
| | | | NON LOCAL | 4 | 18 | 22 | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | |
| | | | TOTAL | 22 | | | | | | | | | | |
| 19 | R8 | Drain | LOCAL | 5 | 18 | 23 | | | | | | | | |
| | | | NON LOCAL | | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | |
| | | | TOTAL | 23 | | | | | | | | | | |
| 20 | R2 | House Connection | LOCAL | 2 | 7 | 9 | | | | | | | | |
| | | | NON LOCAL | | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | |
| | | | TOTAL | 9 | | | | | | | | | | |
| 21 | R26 | Interlock | LOCAL | | | | | | | | | | | |
| | | | NON LOCAL | 5 | 22 | 27 | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | |
| | | | TOTAL | 27 | | | | | | | | | | |
| 22 | T3 Trunk | Drain | LOCAL | 4 | 12 | 12 | | | | | | | | |
| | | | NON LOCAL | | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | | |
| | | | TOTAL | 4 | 12 | 12 | | | | | | | | |



Regional Urban Development Project (RUDP)
Project Implementation Unit (PIU)
Biratnagar, Nepal
LABOUR DATA

| S.NO | LOCATION | TYPES OF WORK | TYPES OF WORKERS | LABOUR | COMPOSITION | | | ETHNIC COMPOSITION | | | Month/Year: Sept 2019 | | |
|------|----------|------------------|------------------|--------|-------------|-----------|------|--------------------|---------|-------|-----------------------|---------|-----------------|
| | | | | | SKILLED | UNSKILLED | MALE | FEMALE | JANJATI | DALIT | MUSLIM | MADHESI | BRAHMIN/CHHETRI |
| | | | TOTAL | 16 | | | | | | | | | |
| 23 | T3L10C | Drain | LOCAL | 4 | 12 | 16 | | | | | | | 16 |
| | | | NON LOCAL | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | |
| | | | TOTAL | 16 | | | | | | | | | |
| 24 | TL19H | Drain | LOCAL | 3 | 12 | 15 | | | | | | | 15 |
| | | | NON LOCAL | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | |
| | | | TOTAL | 15 | | | | | | | | | |
| 25 | T2L19X | Kerbstone | LOCAL | 4 | 12 | 16 | | | | 6 | | | 10 |
| | | | NON LOCAL | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | |
| | | | TOTAL | 16 | | | | | | | | | |
| 26 | S13 | Asphalt | LOCAL | | | | | | | | | | |
| | | | NON LOCAL | 2 | 12 | 14 | | | | | | | |
| | | | INDIAN | 14 | | | | | | 10 | | | 4 |
| | | | TOTAL | 18 | | | | | | | | | |
| 27 | R102 | Brooming | LOCAL | 4 | 14 | 6 | 12 | | | | | | 8 |
| | | | NON LOCAL | | | | | | | | | | |
| | | | INDIAN | | | | | | | 10 | | | |
| | | | TOTAL | 18 | | | | | | | | | |
| 28 | R3 | Interlock | LOCAL | | | | | | | | | | |
| | | | NON LOCAL | 5 | 20 | 25 | | | | | | | |
| | | | INDIAN | | | | | | | 10 | | | 15 |
| | | | TOTAL | 25 | | | | | | | | | |
| 29 | T3L17 | House Connection | LOCAL | 4 | 9 | 13 | | | | | | | 13 |
| | | | NON LOCAL | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | |
| | | | TOTAL | 13 | | | | | | | | | |
| 30 | TL19F | House Connection | LOCAL | 3 | 8 | 11 | | | | | | | 11 |
| | | | NON LOCAL | | | | | | | | | | |
| | | | INDIAN | | | | | | | | | | |
| | | | TOTAL | 11 | | | | | | | | | |

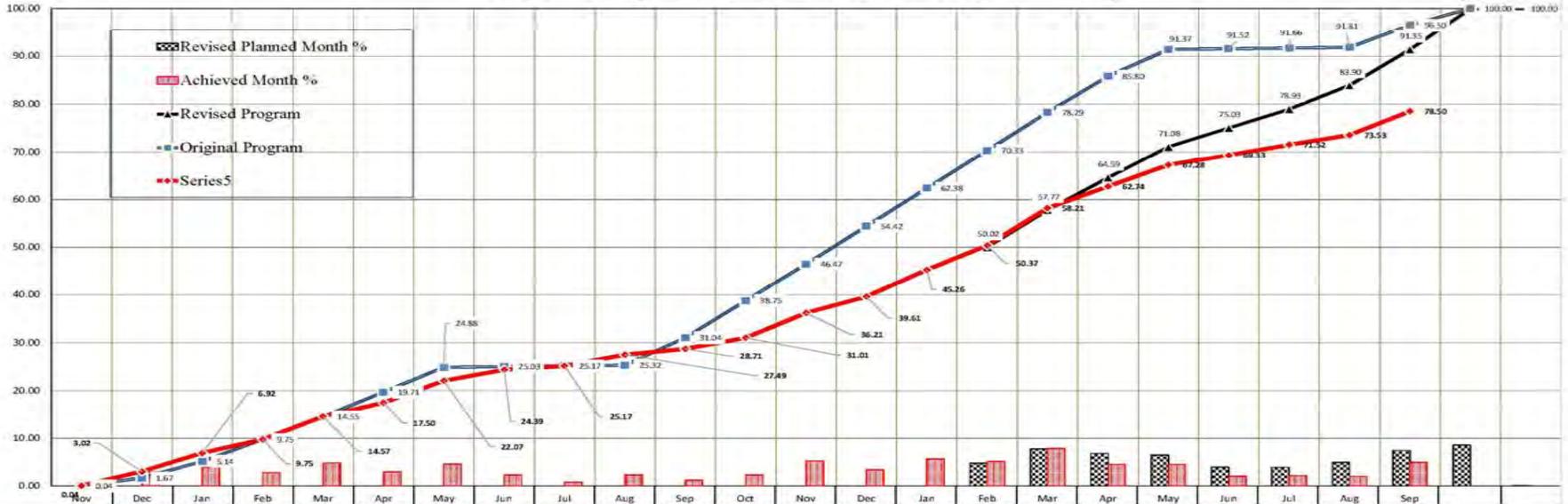


ANNEX-5: S-Curve

ATTACHED – September 2019



BIRATNAGAR METROPOLITAN CITY
REGIONAL URBAN DEVELOPMENT PROJECT (RUDP)
S-CURVE (REVISED WORK PROGRAM-01)



| Year/Month | 2017 | | 2018 | | | | | | | | | | | | 2019 | | | | | | | | | | | |
|--|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|
| | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | |
| Original Planned Month % | 0.04 | 1.63 | 3.48 | 4.60 | 4.80 | 5.17 | 5.17 | 0.15 | 0.15 | 0.15 | 5.71 | 7.72 | 7.72 | 7.95 | 7.98 | 7.96 | 7.96 | 7.51 | 5.57 | 0.15 | 0.15 | 0.15 | 4.69 | 3.51 | 0.00 | |
| Original Planned Cum % | 0.04 | 1.67 | 5.14 | 9.75 | 14.55 | 19.71 | 24.88 | 25.03 | 25.17 | 25.32 | 31.04 | 38.75 | 46.47 | 54.42 | 62.38 | 70.33 | 78.29 | 85.80 | 91.37 | 91.52 | 91.66 | 91.81 | 96.50 | 100.00 | 100.00 | |
| Achieved month % | 0.04 | 2.98 | 3.90 | 2.83 | 4.82 | 2.93 | 4.57 | 2.32 | 0.78 | 2.32 | 1.22 | 2.36 | 5.20 | 3.40 | 5.65 | 5.11 | 7.84 | 4.53 | 4.54 | 2.05 | 2.19 | 2.01 | 4.97 | | | |
| Achieved Progress Cum% | 0.04 | 3.02 | 6.92 | 9.75 | 14.57 | 17.50 | 22.07 | 24.39 | 25.17 | 27.49 | 28.71 | 31.01 | 36.21 | 39.61 | 45.26 | 50.37 | 58.21 | 62.74 | 67.28 | 69.33 | 71.52 | 73.53 | 78.50 | | | |
| Revised Planned Month % | | | | | | | | | | | | | | | | 4.76 | 7.75 | 6.82 | 6.49 | 3.95 | 3.90 | 4.97 | 7.45 | 8.56 | 0.090 | |
| Revised Planned Cum % | | | | | | | | | | | | | | | | 50.02 | 57.77 | 64.59 | 71.08 | 75.03 | 78.93 | 83.90 | 91.35 | 99.91 | 100.00 | |
| Revised planned month Amount in 100000 | | | | | | | | | | | | | | | | 1099.89 | 1790.79 | 1575.90 | 1499.65 | 912.73 | 901.17 | 1148.42 | 1721.47 | 1977.96 | 20.80 | |
| Achieved Month Amount in 100000 | | | | | | | | | | | | | | | | 1180.77 | 1811.59 | 1046.75 | 1049.06 | 473.69 | 506.04 | 464.45 | 1148.42 | | | |
| Revised planned Cum Amount in 100000 | | | | | | | | | | | | | | | | 11558.80 | 13349.59 | 14925.49 | 16425.14 | 17337.86 | 18239.04 | 19387.45 | 21108.93 | 23086.89 | 23107.68 | |
| Achieved Cum Amount in 100000 | | | | | | | | | | | | | | | | 11659.67 | 13451.26 | 14499.01 | 15547.07 | 16020.76 | 16526.81 | 16991.26 | 18139.68 | | | |

Note: Our Claim for Extension of Time remain valid as per contract.



Annex-6: Master Plan of RUDP Project



