In association with

Brisbane City Enterprise Pty Ltd, Australia
AQUA Consultant and Associates Ltd, Bangladesh
Building Design Authority, Nepal
CEMAT Consultants, Nepal

Monthly Progress Report (May, 2017)

Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), Biratnagar, Nepal

13 June, 2017

Biratnagar Sub - Metropolitan City, Nepal

AUSTRALIA | ASIA | MIDDLE EAST | AFRICA | PACIFIC

Project Name:	Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP)
Project Number:	56064023
Report for:	Biratnagar Sub Metropolitan City, Nepal

PREPARATION, REVIEW and AUTHORISATION

Revision	Date	Prepared by	Reviewed by	Approved for Issue by
	13 June, 2017	DSC		

ISSUE REGISTER

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SMEC COMPANY DETAILS

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1. SALIENT FEATURE of Contract Package: STIUEIP/W/BRT/ICB-01

General Features	
Name of Project	Secondary Towns Integrated Urban Environmental Improvement Project(STIUEIP)
Executing Agency	Government of Nepal, Ministry of Urban Development Department of Urban Development and Building Construction (DUDBC)
Implementing Agency	Biratnagar Sub-Metropolitan City, Biratnagar
Funded By	Asian Development Bank &Government of Nepal
Package	Sewerage and Drainage Network, Wastewater Treatment Plant and Road and Lanes Improvement Sub Project
Contract No.	STIUEIP/W/BRT/ICB-01
Location	Biratnagar Sub-Metropolitan City, Biratnagar
Consultant	SMEC in association with Brisbane/AQUA/BDA/CEMAT
Contractor	CTCE-KALIKA Joint Venture
Date of Commencement	08 December, 2013
Original Completion Date	26 May, 2016
Revised date of Completion	09 March, 2017
Revised date of completion Proposed in EOT - 02	**02 July, 2017**
Revised Contract Amount including PS and VAT w.r.t VO-03	**NRs. 2,956,290,542.71**
Recommendation Amount up to IPC 25 (End of May 2017)	**NRs. 2,373,862,560.48 (Including PS & VAT)**
Physical Progress till May, 2017	**84.16% (wrt to vo-03)**
Financial Progress	**80.30% (wrt to vo-03)**

2 INTRODUCTION/BACKGROUND

a) SMEC International Pty (Australia)in association with Brisbane City Enterprise Pty Ltd (Australia), AQUA Consultant and Associates Ltd (Bangladesh), Building Design Authority (Nepal) and CEMAT Consultants(Nepal) have entered for a Contract of Consulting Services with Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), Project Implementation Unit(PIU), Biratnagar Sub Metropolitan City on 7th December 2011. This monthly Progress Report of February, 2017 has been submitted to the PIU as per the Work Program proposed in the consultant's technical proposal as well as TOR of the consultant.

b) Secondary Towns Integrated Urban Environmental Improvement Project(STIUEIP), 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 2650-NEP. As per PAM contribution from GoN is 3.99 million USD, Asian Development Bank (ADB) 18.86 million USD and Biratnagar Sub-Metropolitan City (BSMC) 1.99 million USD while contingency is 2.88 million USD for Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), Biratnagar. The cost sharing has been revised in April, 2013as: Government of Nepal (GoN) is 5.960 Million USD, Asian Development Bank(ADB)24.214 Million USD, TDF loan 4.098 Million USD and Biratnagar Sub-Metropolitan City(BSMC)2.980 Million USD and in total 37.252 Million USD.

c) 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 proposed project Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP) is another step forward to promote healthy cities by creating healthier urban environments and was formulated under the PPTA 2010.

- Contract of consulting services signed on 07 December 2011.
- Design works commenced on 01 January 2012.
- Final design works submitted to the Client on March 2013
- Contract of construction works signed on 02 December 2013
- Construction works commenced on 08 December 2013
- The revised work programme with S-curve and Resource plan is submitted by the contractor along with EOT – 02 for approval (work progressing as per daily work programme).

3. SUB-PROJECT COMPONENTS

3.1 SEWER LINES

d) The prioritized sewer lines for Final Detailed Engineering Report of BSMC are as follows:

Table1: Proposed Sewer Lines in BSMC

S N.	Description	Unit	Quantity
1	**Sewerage Pipe Supply and Installation**	m	**63,964.00**
	Reinforced Concrete Pipe laying and jointing		**16,612.00**
	Line T1 (Secondary	m	3,788.00
	Line T2 (Trunk)	m	8,370.00
	Line T3 (Trunk)	m	4,136.00
	Line T4 (Secondary)	m	318.00
	HDPE laying and jointing	m	**47,352.00**
	Line T1 (Secondary	m	7,124.00
	Line T2 (Trunk)	m	19,410.00
	Line T3 (Trunk)	m	18,606.00
	Line T4 (Secondary)	m	22,12.00
2	**Manhole (Brick / RCC)**	**no.**	**2,036.00**
3	**Sewer Inlet**	**no.**	**3,766.00**
4	**House Connection**	**no.**	**5,930.00**
5	**Reinstatement of Roads**	**km**	**66.06**

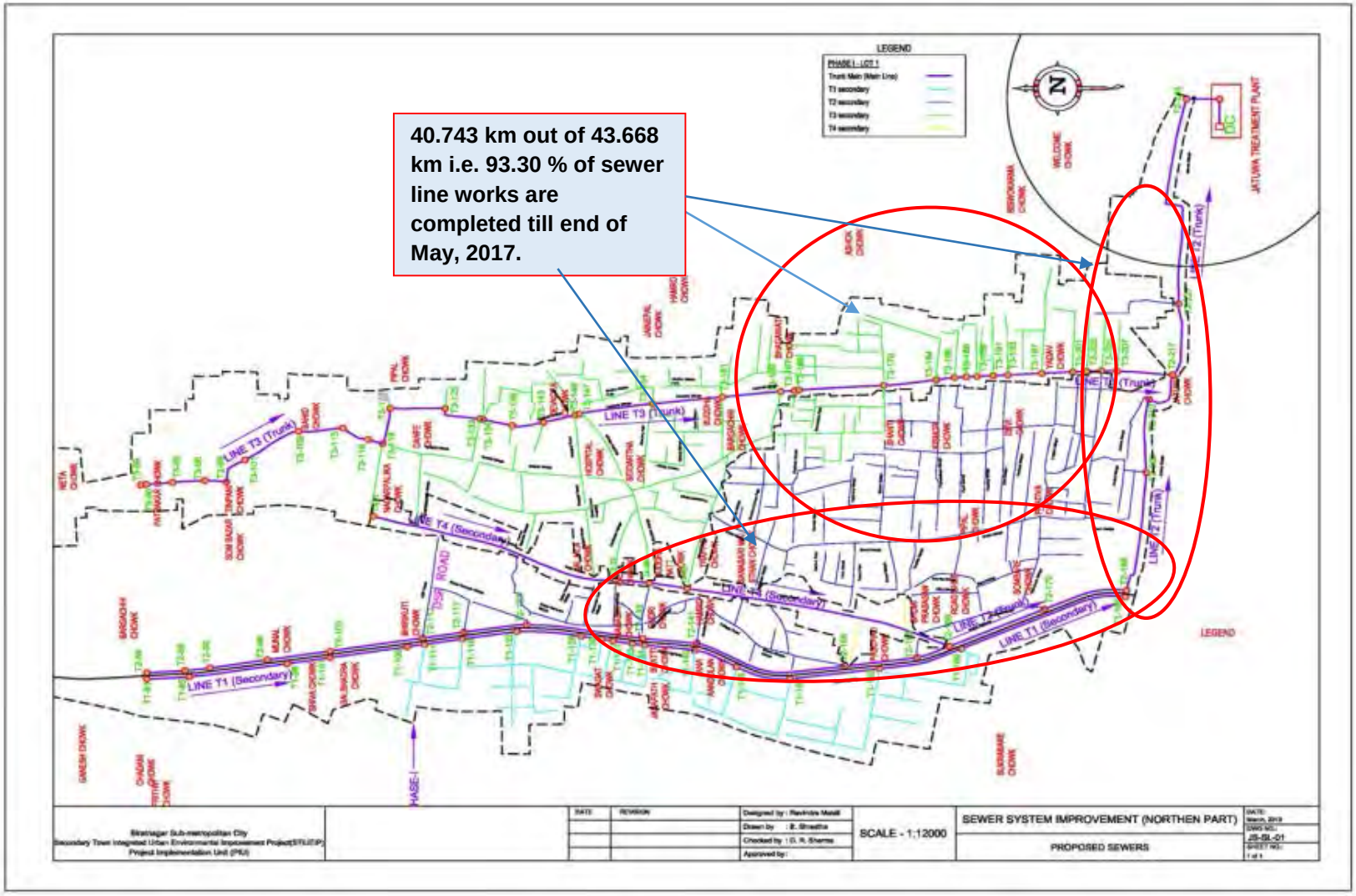


FIGURE. 1PROPOSED SEWER LINES IN BSMC

3.2 STORM WATER DRAINS

e) Most of the storm drains (S13, S11, S9, S5, B1, B2, B3, CN2, CN3 and southern parts) have been provisioned as Phase I priority works. The major storm drain outlets as planned are14 numbers and catchment areas and discharges are respectively1, 324.2Ha and 73.21 cum/sec.

Table2: Proposed Storm Water Drains in BSMC

S.No.	Description	Unit	Quantity
A	**Storm Drain for Northern Parts**		**28,491.00**
I	Storm Drain Lines	m	28,491.00
II	Culvert	no	41.00
III	Outfall	no	15.00
IV	Rain Inlet	no	30.00
V	Manhole	no	30.00
VI	Canal Crossing	no	11.00
B	**Storm Drain for Southern Part**		
I	Brick Masonry Drain	m	8,483.00
II	Cleaning and Maintenance of Existing Drain	m	7,273.00
III	Culverts	no	38.00
C	**Rehabilitation of Existing Drain**		
I	Drain Cover	M	30,467.00
II	Cleaning and Maintenance of Existing Drain	M	33,601.00

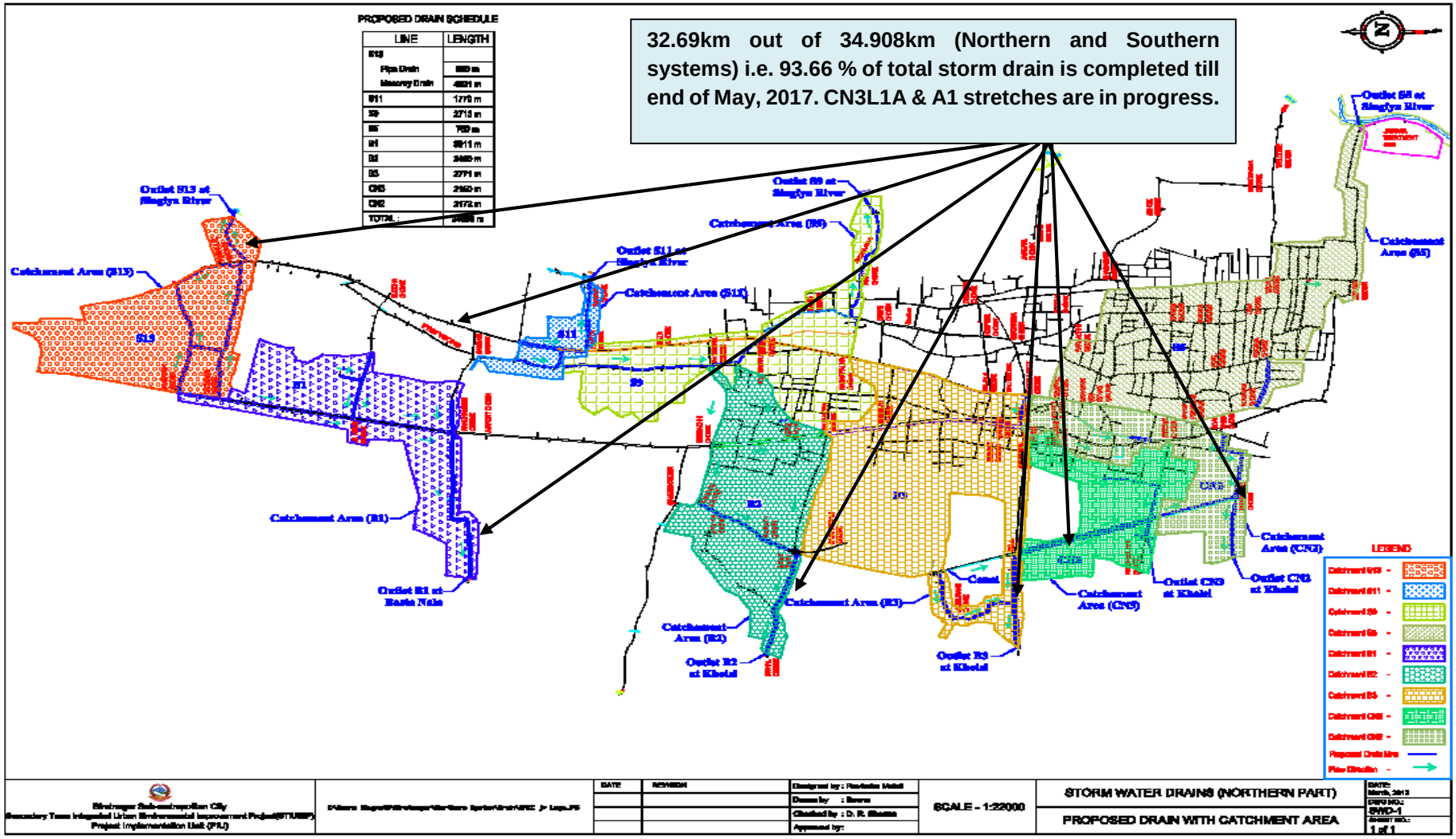


Figure 2: Proposed Storm Water Drains in BSMC (Northern Drainage System)

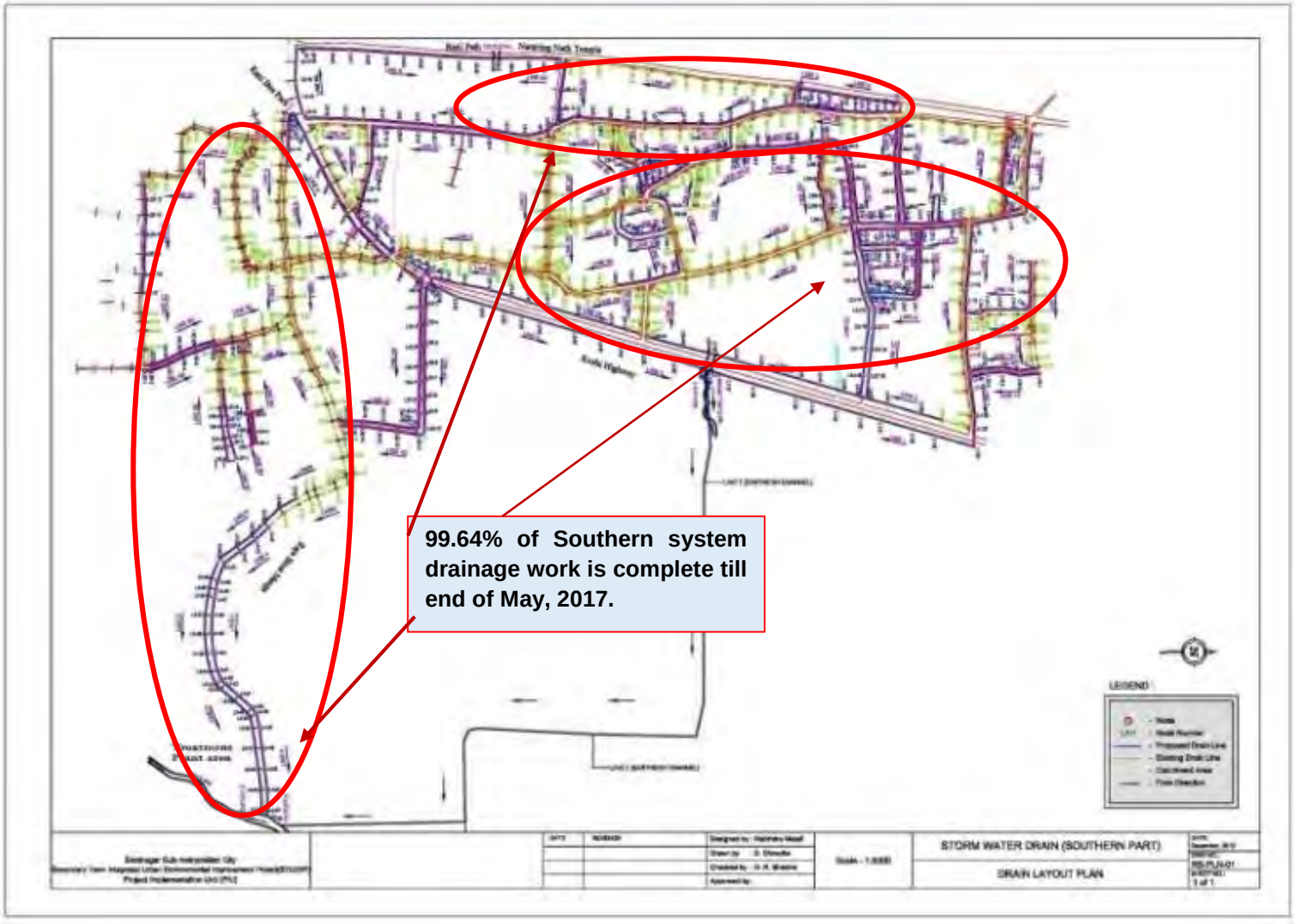


Figure 3: Proposed Storm Water Drains in BSMC (Southern Drainage System)

3.3 WASTE WATER TREATMENT PLANTS

f) The quantity of domestic waste water is calculated using water supply rate at 90 liters per person per day in the design year 2035, out of which 80% is converted into waste water. Maximum quantity of waste water is calculated taking peak factor of 1.99 to 2.5. Minimum quantity of sewage is taken as 30% of the average quantity. Commercial / Institutional / Industrial waste water quantity is calculated as 0.10 LPS/ha. While infiltration quantity is calculated as 0.14 LPS/ha in the design year 2035.The total quantity of commercial / institutional / industrial and infiltration waste water estimated as 237.79 LPS in the design year 2035 which is very large in comparison with domestic waste water quantity of 207.18 LPS. The maximum quantity (peak flow) of waste water in the design year 2035 for both Phase I and Phase II are as is estimated at 650.08 LPS. The maximum quantity of the waste water for Phase I are as only is estimated at 213.97 LPS. The capacity of the Phase I WWTP has been adopted as 214 LPS. The capacity of the Phase II WWTP will be thus 436 LPS. Features of WWTP at Jatuwa are as follows:

Table 3: Proposed Waste Water Components in BSMC

S.N.	Description	Unit	No
	Waste Water Treatment Plant Component		
1	By Pass Chamber	No	1
2	Distribution Chamber	No	1
3	Bar Screen Chamber	No	2
4	Sump well with Pumping Station	No	2
5	Collection Chamber1	No	1
6	Oil &Grease Chamber	No	2
7	CollectionChamber2	No	1
8	Grit Chamber	No	2
9	CollectionChamber3	No	1
10	Anaerobic Pond	No	3
11	Facultative Pond	No	3
12	Collection Chamber4	No	1
13	Outfall Structure	No	1
14	Sludge Drying Bed	No	10
15	Enclosure Chamber Shed	No	1
16	Guard House	No	1
17	Office Cum Lab Building	No	1
18	Workshop Building	No	1
19	Generator/Changing House	No	1
20	Entrance Gate	No	1
21	Boundary wall	m	1,340
22	Shallow Tube Well with water Tank	set	1
23	Landscaping and Plantation works	sqm	99,915
24	Site clearance, grubbing, surface dressing	sqm	99,915
25	Road and Drain Improvement	m	1,440

Table 3: Proposed Waste Water Components in BSMC, Cont……..

S.N.	Description	Unit	No
26	River training works	m	600
27	Electromechanical works	Set	1
28	Lab Equipment and installation	Set	1

61.70% of the WWTP works is completed till end of May, 2017

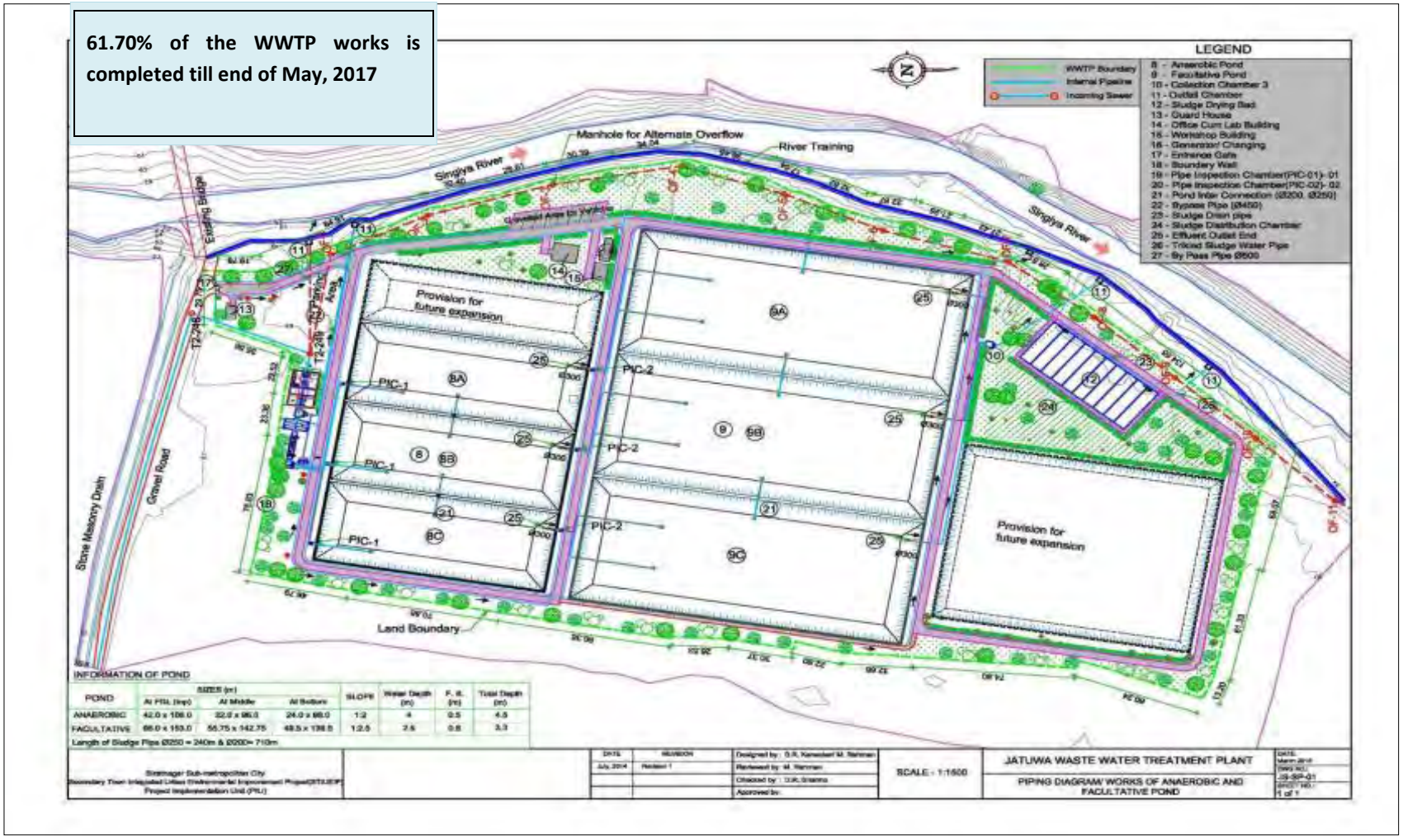


Figure 4: Proposed Waste Water Treatment Plant at Jatuwa in BSMC

3.4 ROADS AND LANES

g) 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 3.224 Km road improvement with Asphalt from Pushpalal Chowk to Pani Tanki Chowk is completed where as in other roads, 21.787 Km Sub-grade and Sub-base is completed till this month and hence the Project has considered on design based on reinstatement, rehabilitation and upgrading of existing roads and lanes.

Table 4: Proposed Roads in BSMC

Description of Item	Quantity
Main Road Improvements(Road from Pushpalal Chowk to Panitanki)	3.224 Km
Reinstatement and Road Improvements (under sewer line installation) and WWTP	41.358 Km

3.5 ENVIRONMENTAL ASPECT

h) The project is environmental improvement project and mainly constitutes works on sewerage and drainage improvement works in BSMC besides others. As per ADB guide lines on Environmental Assessment requirements, this project is classified as Environment Category B. According to Environmental Protection Guidelines, 2054BS, First Revised (2055 BS) schedule-3, IEE is required for Operations of Sewerage Schemes under Schedule1.h.2.e (pertaining to Rule3). The final report on IEE was submitted and MoUD had approved the IEE on May14, 2013.

i) Installation of functioning sewers and functioning drainage system including roads/lanes improvement in BSMC 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.

j) DSC has prepared and submitted Environmental Progress Reports (Semi-Annual) October 2014 – March 2015 and Quarterly Updated Environmental Report, January – March on 27 May 2015.Recently, the DSC has received comments from PCO to revise semi-annual environmental report. The next Quarterly Updated Environmental Report for the months of April, May and June 2016 and semi –annual report has been submitted in July, 2016. The Quarterly Updated Environmental Report for the months of June 2016- December 2016 semi – annual report has been submitted in Jan 2017.

3.6 SOCIAL ASPECT

k) Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP) in Biratnagar has commenced from 2010 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 STIUEIP in Biratnagar Sub-Metropolitan City (BSMC). Besides this, community development and institutional strengthening components, the two other objective focused components of STIUEIP Biratnagar are running various social development programs and activities.

Social development component is one of the major components of STIUEIP Biratnagar that comprises of various social development programs and activities like community development program (CDP), awareness raising, skill development, health and sanitation. Social Development Specialist (SDS) in Design and Supervision Consultant (DSC) is deputed to assist the Project

Implementation Unit (PIU) in implementing effectively the social activities to achieve the project goal as envisaged by the project. Monitoring of ongoing social development activities and consultation meetings with community people are the general tasks to be accomplished as regular basis.

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.

Based on the poverty indicators, all details have been documented and shown in the social map. The program area for community development programs has been extended to most poverty stricken area scattered across several wards of the BSMC. The Community Development Program includes meetings, orientation, awareness activities, skill development trainings and health, hygiene and sanitation activities which are conducted and organized by the NGO (Fri PAD).

l) The Quarterly Report for the months of June 2016- December 2016 semi –annual report has been submitted in Jan 2017.

3.7 FINANCIAL PLAN

m) The Sub-project cost will be disbursed in three years starting from FY2013/14 to 2015/16. It has estimated that 20 percent of the Sub-project cost will be disbursed in first year. Similarly, in second year, 50 percent will be disbursed. Finally, remaining 30 percent of Sub-project cost will be disbursed in third year. Actual disbursement in the first fiscal year was 4.3 % (up to July 2014); 34.3% (up to July 2015 inclusive VO1) in second fiscal year was 56.72% so total was 63.78% (up to January, 2017). Hence the remaining disbursement 36.22 % will be done in third year.

3.8 DISBURSEMENT RECORDS IN CONSTRUCTION

Table 5: Disbursement Record in Construction to Date

S.No.	Description of Payment	Total Bill Amount with VAT & PS	Remark
1	IPC 01		
2	IPC 02	29,553,479.92	
3	IPC 03	50,406,775.75	
4	IPC 04	44,819,505.68	
5	IPC 05	23,380,168.96	
6	IPC 06	90,796,339.68	
7	IPC 07	80,854,600.52	
8	IPC-08	122,334,488.86	
9	IPC-09	116,092,187.14	
10	IPC-10	132,327,417.89	
11	IPC-11	169,853,829.07	
12	IPC-12	23,121,515.46	
13	IPC-13	85,563,926.44	
14	IPC-14	163,562,505.71	
15	IPC-15	139,008,112.96	

S.No.	Description of Payment	Total Bill Amount with VAT & PS	Remark
16	IPC- 16	137,640,413.95	
17	IPC-17	135,118,714.02	
18	IPC-18	39,288,088.98	
19	IPC-19	76,081,596.87	
20	IPC-20	74,522,638.96	
21	IPC-21	152,577,081.94	
22	IPC-22	140,477,295.40	
23	IPC-23	66,139,814.38	
24	IPC-24	110,913,194.49	
25	IPC - 25	169,428,867.45	Till the end of May,2017
	Grand Total	**2,373,862,560.48**	
	Total payment to date including PS & VAT and Excluding mobilization	**2,373,862,560.48**	

4. OBJECTIVES AND SCOPE OF WORKS

4.1. OBJECTIVES

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

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

o) 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

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

A. Detailed Design and Procurement Assistance Phase
   1. Surveys verification of Feasibility Studies and GIS Base Maps
   2. Finalization of Design Criteria, Preparation of Manuals, Guidelines and Systems.
   3. Specific design requirements for the sub-projects

- Improvement and development of drainage and sewerage systems
- Improvement of urban roads and lanes

4. Project Planning and Management Support to PIU
5. Detailed Engineering Design

B. Construction and Post Construction Management Phase
   1. Construction Management and Contract Administration
   2. Environmental and Social Compliance Monitoring
   3. Implementation of Community Development Program, Community Mobilization and GESI Action Plan

   4. Capacity Building of the Municipality and Service Providers for Operational Sustainability

C. Communications, Reporting and Deliverables (Inception Report, Monthly Progress Reports, Interim Report for each of the outputs, Annual Progress Report, Draft Final Report for each of the outputs and Final Report).

5. PROGRESS OF SUB-PROJECT COMPONENTS

5.1. STORM WATER DRAINS

q) The Contractor has resumed the works from mid December 2015 in difficult situation due to Madesh Strikes and partial fuel supply. But, again they have started the works of Storm drains at S9, CN3L1A and A1, which are in progress.

The contractor has completed storm water drain about 32.69 km out of 34.908 km, 93.66% till May, 2017.

5.2. SEWER LINES

r) The Contractor has resumed the sewer works from mid December 2015 in difficult situation due to Madesh Strikes and partial fuel supply. Sewer lines with HDPE pipes as well as RCC pipes have been resumed in this month.

The Contractor has completed sewer lines with HDPE and RCC pipes about 40.743 km out of 43.668 km which is 93.30%, till May, 2017.

The proposal of the precast concrete manholes, sewer inlets and house connection chambers had been submitted for review and approval. Approval in consultation with the Employer has been given to the Contractor to execute at site because the proposal comes out to be economical, time effective and environmental friendly and structurally strong enough to carry out the function of their respective items.

The precast concrete house connection chambers, sewer inlets and manholes were installed at sites and found to be effective and we were able to open traffic at the shortest possible time. Especially where the business center with crowds (in R5 and R65 Roads) were very efficient and effective. This has reduced disturbances to the local people and road users, dumping of construction materials, workers and working for long period. This is found to be environment friendly too. Hence, the adaptation of precast units for sewer lines found to be effective and efficient.

During the site visit of delegate at different time in the construction period from BSMC, PMSC, ADB, PCO, local political representatives, TLO Executive Director of TDF and the Secretary of Ministry of Urban Development have commended.

The payment for the respective item of works as appropriate is being paid under each IPCs for the cash flow and to account disbursement in ADB's disbursement book.

5.3. WASTE WATER TREATMENT PLANT

s) Office cum laboratory building, workshop building and generator / changing house at WWTP, Jatuwa are completed. The Contractor has been continued all activities except Bio-engineering of WWTP.

Now the Contractor is carrying out Sump well, remaining boundary wall at WWTP from mid December 2016. Structure work in Sump well has been revised as per site condition and work started as per revised drawing. Rip Rap stone masonry works are in progress for Anaerobic & Facultative Pond. Pipe system, sand & gravel packing are in progress as sludge drying bed.

5.4. ROAD AND LANES IMPROVEMENT WORKS

t) The Contractor has completed the rehabilitation / repair of existing drain of about 6.6 km in R2 road. The Contractor has completed the shifting/ relocating electric poles up to Pani Tanki both sides.

The Contractor has been completed sub-grade preparation, sub-base, base course, prime and Tack coat and asphalt concrete in R2 road up to Pani Tanki Chowk. Recently contractor has completed 18.563 Km sub-base in other roads. Road works have been frequently disturbed due to the existing water supply network and house connection pipes. The Contractor has completed 100% of road side drain of R2 road up to Pani Tanki and along the sewer lines about 26.994 km out of 44.582 km, 60.55% till May, 2017.

5.5. CONSTRUCTION MATERIALS

u) The fabrication of steel moulds for precast units- manholes, sewer inlets and house connection chamber are continuing in this month also. Similarly, other item of works inside the Contractor's yard is also going on smoothly.

The Contractor has resumed to produce the precast items (manholes, sewer inlets, house connection chambers, kerb stones and drain cover slabs etc.) at the Contractor's Camp, Katahari from mid December 2015.

5.6. CONSTRUCTION MATERIAL TESTING LAB

v) Construction material testing laboratory has been set up at the Contractor's camp at Katahari. Cube Test, Brick Compressive Strength, Cement Test is conducted in the Laboratory. Besides these tests, Aggregate Crushing Value (ACV), Flakiness Index (FI), Los Angeles Abrasion (LAA), CBR tests are also conducted.

As regular, Three Edge Bearing Test for RCC pipes of different diameter has been conducted on 20 January 2016 at Itahari in presence of Consultant (TL, CSE) and PM/PIU. And results were found satisfactory.

Now, construction material testing lab is working in full swing for testing of sub grade material, sub base material, base material, Bituminous items, concrete, brick, sand and aggregates.

5.7. PHYSICAL PROGRESS TILL MAY, 2017.

w) Total physical progress till May, 2017 is about 84.16% w.r.t vo-3.

Table 6: Plan vs. Actual Progress till May, 2017

Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), Biratnagar Plan Vs. Progress																
Month	**Sep-14**	**Oct-14**	**Nov-14**	**Dec-14**	**Jan-15**	**Feb-15**	**Mar-15**	**Apr-15**	**May-15**	**Jun-15**	**Jul-15**	**Aug-15**	**Sep-15**	**Oct-15**	**Nov-15**	**Dec-15**
Cumulative Planned work Rev 01 (%)	17.098	18.514	26.588	36.398	46.281	56.947	67.003	76.728	86.593	94.037	95.75	95.99	96.16	96.3	96.45	96.59
Cumulative Planned work Rev 02 (%)				14.04	20.11	28.74	37.22	44.94	51.60	57.295	59.33	60.92	60.99	61.07	64.65	71.29
Cumulative Planned work Rev 03 (%)													41.847	45.447	47.767	58.037
Cumulative Actual Achievements (%)	5.81	5.98	9.29	10.77	12.57	17.57	21.82	25.25	27.85	34.317	34.317	34.317	34.317	34.317	34.317	34.94
Progress lagging to date wrt the revised work plan rev 03 (%)		(12.53)	(17.30)	(3.27)	(7.54)	(11.17)	(15.40)	(19.69)	(23.75)	(22.98)	(22.98)	(22.98)	(7.53)	(11.13)	(13.45)	(23.09)

Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), Biratnagar

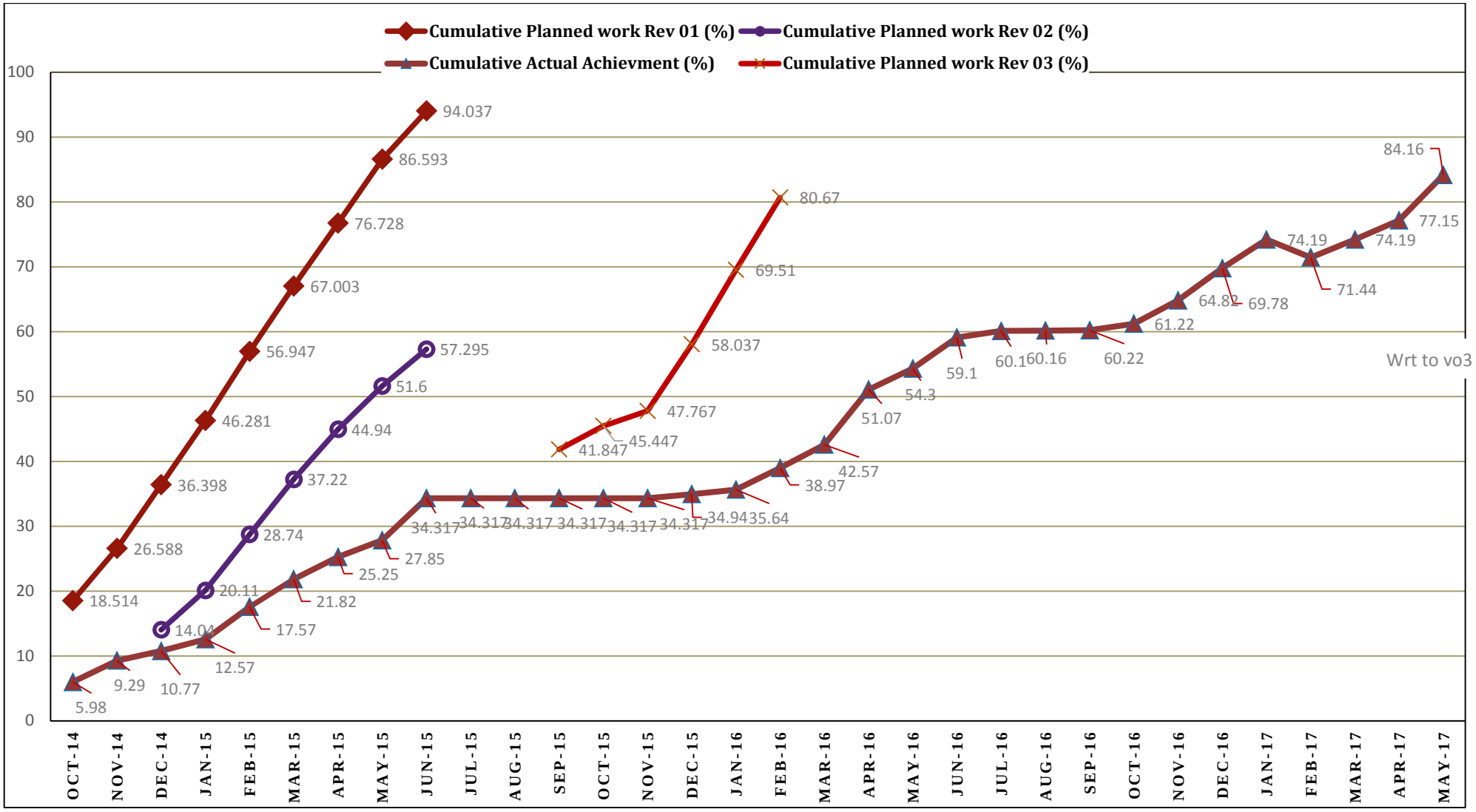
Plan Vs. Progress

Month		Jan-16	Feb-16	Mar-16	Apr-16	May-16	June-16	July-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17
Cumulative Planned work Rev 01 (%)		96.74	97.38	97.18												
Cumulative Planned work Rev 02 (%)		79.29	88.71	96.41												
Cumulative Planned work Rev 03 (%)		69.51	80.67	91.46	97.82	100.00										
Cumulative Actual Achievements (%)		35.64	38.97	42.57	51.07	54.30	59.10	60.10	60.16	60.22	61.22	64.82	69.78/63.12	74.19/67.53	71.44 (wrt Vo-03)	74.19
Progress lagging to date wrt the revised work plan rev 03 (%)		(33.87)	(41.70)	48.89	46.75	45.70										

Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), Biratnagar

Plan Vs. Progress

Month		Apr-17	May-17	June-17	July-17											Remarks
Cumulative Planned work Rev 01 (%)																
Cumulative Planned work Rev 02 (%)																
Cumulative Planned work Rev 03 (%)																
Cumulative Actual Achievements (%)		**77.15%**	**84.16%**													Work progresses are according to the recommendation on EOT-02 by DSC till 02 July, 2017
Progress lagging to date wrt the revised work plan rev 03 (%)																


Cumulative Planned work Rev 01 (%)
Cumulative Planned work Rev 02 (%)
Cumulative Actual Achievment (%)
Cumulative Planned work Rev 03 (%)
100
90
80
70
60
50
40
30
20
10
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67.003
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MAR-15
APR-15
MAY-15
JUN-15
JUL-15
AUG-15
SEP-15
OCT-15
NOV-15
DEC-15
JAN-16
FEB-16
MAR-16
APR-16
MAY-16
JUN-16
JUL-16
AUG-16
SEP-16
OCT-16
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MAR-17
APR-17
MAY-17

6. SUMMARY OF ACTIVITIES CARRIED OUT UP TO PREVIOUS MONTHS

6.1. ORGANIZATION AND STAFFING

The Project has involvement of different organization and the staffing as shown below.

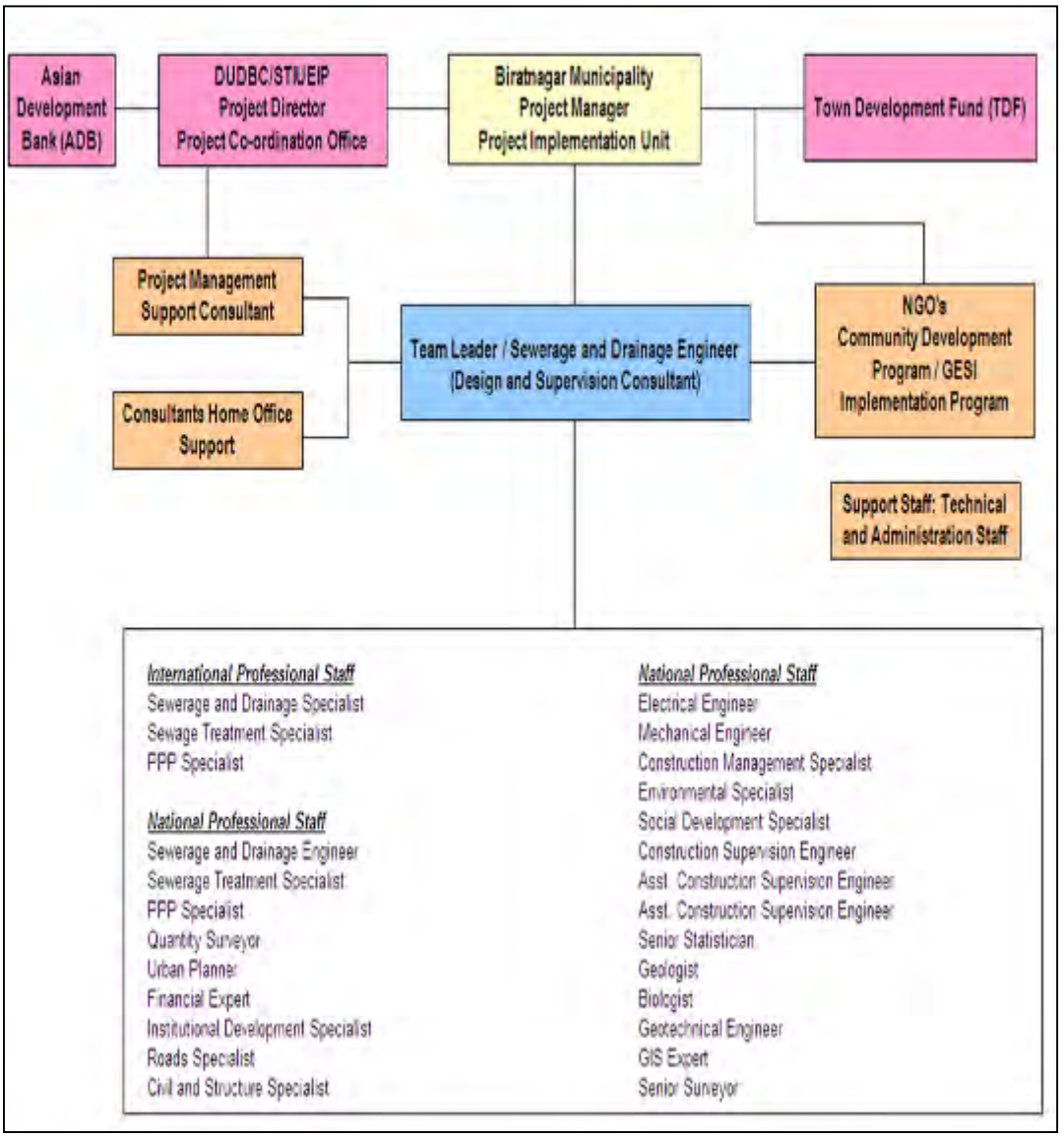

Figure 6: Organization and Staffing of STIUEIP, Biratnagar

6.2 Inception Report

x) The Inception Report was prepared and submitted on 29 February, 2012.

6.3 Conceptual Catchment Plan and Design Criteria

y) The Conceptual Catchment Plan and Design Criteria was prepared and presented in PCO on 30March, 2012.

6.4 Survey

z) The survey was completed in August, 2012

6.5 Design

aa) The design of sewer lines, storm drains, WWTPs and appurtenances and final detailed design and estimates were submitted in March 2013.

bb) During construction B2, B3 and S5 alternate design was also submitted. Similarly, CN2 and CN3 were submitted as the community request to reduce the size. The size was reviewed with 1 year return period as per the suggestion made by PMSC during field visit. Minor modifications in drawings are being carried out for considering the site condition and progress.

6.6 Pre-construction Activity

cc) After successful completion of one stage two envelope bidding procedure the construction contract for STIUEIP/W/BRT/ICB-01 was signed on December 2, 2013 with M/S CTCE-Kalika JV, Baluwatar, Kathmandu.

6.7 Draft Report

dd) The construction/contract timing schedule was needed to incorporate some additional time of about 4-5 months to account for decision re-making process, tender award procedures.

ee) The total cost as per PPTA and earlier designs increased drastically and came to be NRs.7, 274,465,206.69 and therefore needs curtailments and revisions had to be made as per suggestions by PIU in final report.

ff) The overall works proposed in the PPTA and the area coverage with connection was thus needed to be phased out.

6.8 Final Report

gg) The DSC submitted the Final Reports adopting cost reduction exercise by phasing out of the works. The estimated cost of the Project was reduced and kept as NRs. 3,278,140,000.00 with a lot of exercises in March 2013.

hh) The sharing of cost by concerned institutions is as follows

Table7: Agency-wise Financial Contribution to BSMC

Contributors	Amount(US$)	Amount (NRs.)	%
Government of Nepal (GoN)	5,960,256.00	524,502,513.00	**16.0%**
Asian Development Bank (ADB)	24,213,539.00	2,130,791,460.00	**65.0%**
Biratnagar Sub-Metropolitan City (BSMC)	2,980,128.00	262,251,257.00	**8.0%**
Town Development Fund (TDF)	4,097,676.00	360,595,478.00	**11.0%**

6.9 CONSULTANT'S ACTIVITIES IN CONSTRUCTION PHASE

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

Table 8: Consultant's Staff at Project Site, Biratnagar

S. No	Name	Position
1	Ram Lakhan Mandal	Team Leader
2	Giresh Chand	CSE
2	Daniel Morgulis	Sewerage and drainage Expert
3	Ganesh Gautam	Construction Management Specialist
4	Bhupal Khadka	Road Specialist
5	Jaya Prakash Yadav	Asst. Construction Supervision Engineer-1
6	Dikendra Katwal	Asst. Construction Supervision Engineer-2
7	Amit Kumar Gupta	Asst. Construction Supervision Engineer-3
8	Rajesh Kumar Yadav	Junior Engineer-1
9	Deepak Majhee	Junior Engineer-2
10	Arun Kumar Yadav	Junior Engineer-3
11	Jay Prakash Yadav	Junior Engineer-4
12	Dipendra Shah	Junior Engineer-5
13	Santosh Kumar Yadav	Office Manager/Computer Operator
14	Ramji Ghimire	Driver-1
15	Suman Ghimire	Driver-2
16	Ramila Ghimire	Office Assistant

Note: Mr. Ram Lakhan Mandal, Team Leader has joined this office at Biratnagar on dated 8th of May, 2017.

jj) 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

ii. Quality control, cost control and time control

iii. Measurement and Certification of Interim Payment Certificates (IPC)

iv. Modification and design of storm drainage and sewer lines, manholes etc. as per site condition and approve working drawings

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. Meet obligation of reporting requirement – Updated Environmental Progress Report, Updated Resettlement Progress Report, Monthly Progress Report, Semi-Annual Updated Resettlement Progress Report

ix. Prepare Due Diligence Report of the Project

x. Maintain correspondences with the Employer and the Contractor

xi. Assist to PIU

6.10 KEY DATES

The consultant has noted the following key dates for the month of May, 2017

Table 9: Key dates of events /activities:

S. No	Date	Activities/Events	Remarks
1	18/05/2017	Mr. Ganesh Gautam, Construction Management Specialist	
2	21/05/2017	Dr Subodh Raj Sharma, Environmental Specialist	
3	22/05/2017-23/05/2017	ADB Mission Visit	
4	28/05/2017	Mr. Bal Ram Mayalu, Social Development Specialist	
5		Frequent site visit by the client	

7 DETAILS OF ACTIVITIES CARRIED OUT IN THIS MONTH

7.1 PHYSICAL PROGRESS IN THIS MONTH

The Employer has discussed/agreed/decided to curtail (base and Asphalt) from the scope of the work except R2 stretch to meet other items which are essential for the projects. Those are as below:

some works were missed in original contract itself, some works were not foreseen in original contract, some works due to local demand etc.

Therefore, following are the physical progress with respect to variation order No-03 which has been already approved:

Table 10: Physical Progress in Storm Water Drains

Physical Progress till May 2017						
S.N.	Location	Proposed Length in (m)	Progress		Total to Date in (m)	Progress (%)
			Up to April 2017 in (m)	This Month in (m)		
1	B1	4003.55	3758.00	0.00	3758.00	93.86
2	B2	3539.68	3539.68	0.00	3539.68	100.00
3	B3	3505.02	3463.00	0.00	3463.00	98.80
4	S5	1178.00	1178.00	0.00	1178.00	100.00
5	S9	3558.22	2551.00	36.00	2587.00	72.70
6	S11	1350.60	1350.60	0.00	1350.60	100.00
7	S13	5000.21	5000.21	0.00	5000.21	100.00
8	CN2	2197.30	2197.30	0.00	2197.30	100.00
9	CN3	2563.77	2551.00	0.00	2551.00	99.50
10	CN3L1A	325.00	30.00	140.00	170.00	52.30
11	A1LINE1	600.00	0.00	400.00	400.00	66.66
12	A1LINE2	600.00	0.00	40.00	40.00	6.67
13	Rani	6486.70	6463.28	0.00	6463.28	99.63
	Total	**34,908.05**	**32,082.07**	**616.00**	**32,698.07**	**93.66%**

Table 11: Physical Progress in Road Side Drains (Till May, 2017):

S. No.	Location	Length (m)	Total Length (m)	Progress (length in meter)		Total Till Date	% age	Remarks
				Up to April 2017	This Month			
1	R2	3,420.00	6,840.00	6,565.00	115.70	6,680.70	97.67	
2	R3	2,233.00	2,993.00	2,925.00	-	2,925.00	97.73	
3	R4	1,246.00	2,212.00	660.00	-	660.00	29.84	
4	R5	1,068.00	2,136.00	1,993.00	-	1,993.00	93.31	Satya Narayan Marga and College Road
5	R6	1,280.00	2,560.00	-	-	-	-	
6	R7	485.00	615.00	599.70	-	599.70	97.51	
7	R8	370.00	740.00	740.00	-	740.00	100.00	As per VO 3
	R8	260.00	520.00	290.00	240.00	530.00	101.92	Additional work is from Ch. 0+300 to Ch. 0+560 and Plus
8	R9D	116.00	232.00	206.50	18.00	224.50	96.77	
9	R13	220.00	440.00	400.00	-	400.00	90.91	
10	R16	580.00	1,160.00	1,150.00	-	1,150.00	99.14	
11	R21	2,420.00	2,420.00	1,985.20	-	1,985.20	82.03	
12	R22	359.00	718.00	676.00	-	676.00	94.15	
13	R24	390.00	780.00	768.00	-	768.00	98.46	
14	R25	594.00	1,188.00	1,131.10	-	1,131.10	95.21	
15	R26	620.00	1,240.00	1,240.00	18.00	1,258.00	101.45	
16	R27	977.00	1,954.00	1,246.05	33.80	1,279.85	65.50	
17	R28	620.00	1,240.00	775.00	135.00	910.00	73.39	
18	R29	620.00	1,240.00	585.80	17.00	602.80	48.61	
19	R30	328.00	656.00	357.00	-	357.00	54.42	

S. No.	Location	Length (m)	Total Length (m)	Progress (length in meter)		Total Till Date	% age	Remarks
				Up to April 2017	This Month			
20	R31	187.00	374.00	350.00	-	350.00	93.58	
21	R32	189.00	378.00	-	-	-	-	
22	R37	785.00	1,570.00	820.00	72.80	892.80	56.87	Progress is as per site condition (Ch. 0+000 to Ch. 0+420)
23	R64	120.00	120.00	121.00	-	121.00	100.83	As per measurement
24	R78	92.00	184.00	82.00	-	82.00	44.57	
25	T2L19 R	177.00	354.00	-	-	-	-	
26	T2L19 P	103.00	206.00	-	20.00	20.00	9.71	
27	T2 19 U	81.00	162.00	-	-	-	-	
28	R107	157.00	314.00	288.00	-	288.00	91.72	
29	R108	96.00	192.00	192.00	-	192.00	100.00	
30	R109	90.00	360.00	355.00	-	355.00	98.61	
31	T3L26E	93.00	186.00	111.00	66.80	177.80	95.59	
32	T2L18O	143.00	286.00	268.00	-	268.00	93.71	
33	R42	140.00	280.00	-	150.00	150.00	53.57	Brick
34	R104	274.00	548.00	-	130.00	130.00	23.72	Brick
35	T2L26F	60.00	120.00	-	50.00	50.00	41.67	Brick
36	R73	205.00	410.00	-	-	-	-	
37	R7	58.00	116.00	-	113.00	113.00	97.41	Ch. 3+120 to Ch. 3+180
38	T3L29	80.50	80.50	-	21.70	21.70	26.96	RCC
39	S5	300.00	300.00	-	60.00	60.00	20.00	
Total =		**21,636.50**	**38,424.50**	**26,880.35**	**1,261.80**	**28,142.15**	**73.24**	

Table 12: Physical Progress in Sewer Lines: (till May, 2017)

S.N.	Location	As per VO-3		Up to Previous Month		This month		Total to date		Progress % age		Remarks
		Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	
1	HDPE (T1)	3817.100	127	3801.50	125	18.000	0.00	3819.500	125			
2	HDPE (T2)	13595.400	485	13040.65	452	42.000	2.00	13082.650	454			
3	HDPE (T3)	6947.100	258	6571.10	238	28.000	1.00	6599.100	239			
4	HDPE (T4)	117.300	3	112.00	3	0.000	0.00	112.000	3			
5	**Sub Total (HDPE)**	**24476.900**	**873**	**23525.250**	**818**	**88.000**	**3**	**23613.250**	**821**	**96.47**	**94.04**	
6	Hume pipe(T1)	5026.800	144	4421.20	107	340.000	18.00	4761.200	125			
7	Hume pipe(T2)	9488.000	276	8524.40	222	0.000	0.00	8524.400	222			
8	Hume pipe(T3)	4493.300	136	3341.50	76	318.000	11.00	3659.500	87			
9	Hume pipe(T4)	183.500	5	185.00	5	0.000	0.00	185.000	5			
10	**Sub Total (Hume pipe) =**	**19191.600**	**561**	**16472.100**	**410**	**658.000**	**29**	**17130.100**	**439**	**89.26**	**78.25**	
11	**Total (HDPE + Hum pipe) =**	**43668.500**	**1434**	**39997.350**	**1228**	**746.000**	**32**	**40743.350**	**1260**	**93.30**	**87.87**	

Table 13: Physical Progress in Manhole, sewer inlet and House connection chamber (till May, 2017)

S.N.	Description	Proposed Quantity (no.)	Up to Previous Month	This Month	Total to Date	Progress (%)
1	Manhole	1434.00	1228.00	32.00	1260.00	87.86
2	Sewer inlet	2924.00	1511.00	100.00	1611.00	55.09
3	House connection chamber	4500.00	636.00	60.00	696.00	15.46

Table 14: Physical Progress in Roads and Lanes: Till May, 2017

S.No.	Location	Proposed length (m)	Progress		Total to date	Progress % age
			Previous Month	This Month		
1	R2	3,050.00	-	-	3,224.00	105.70
2	R3	2,233.00	710.00	-	1,915.00	85.76
3	R4	2,163.00	350.00	260.00	1,218.00	56.31
4	R13	220.00	-	-	220.00	100.00
5	R14	485.00	-	-	525.00	108.25
6	R16 (east)	215.00	-	-	221.00	102.79
7	R16(west)	540.00	-	-	200.00	37.04
8	R17(east)	222.00	-	-	225.00	101.35
9	R17(west)	375.00	-	-	375.00	100.00
10	R18	464.00	-	-	464.00	100.00
11	R19	236.00	-	-	232.00	98.31
12	R22	358.00	-	-	376.00	105.03
13	R24	384.00	-	-	384.00	100.00
14	R25	599.00	186.00	-	594.00	99.17
15	R26(east)	244.00	-	-	244.00	100.00
16	R26(west)	617.00	306.00	-	506.00	82.01
17	R27	810.00	-	-	183.00	22.59
18	T3L32	235.00	-	-	231.00	98.30
19	T3L33 A	134.00	-	-	134.00	100.00
20	T3L33 B	170.00	-	-	164.00	96.47
21	R122	280.00	-	-	254.00	90.71
22	T3L30	205.00	-	-	205.00	100.00
23	T3L31 A	177.00	-	-	164.00	92.66
24	R20(R6tot2l19o)	108.00	-	-	108.00	100.00
25	T2L19 O	71.00	-	-	71.00	100.00
26	R15	210.00	-	-	235.70	112.24
27	R16 to R15	100.00	-	-	126.20	126.20
28	R15 to R4	74.40	-	-	74.40	100.00
29	R8	427.00	-	149.00	377.50	88.41
30	R29	620.00	-	-	257.00	41.45
31	R23	143.00	-	-	140.00	97.90
32	R21	1,320.00	1,070.00	-	1,270.00	96.21
33	R28	635.00	-	-	340.00	53.54
34	T3L26(R29 toR109)	128.00	-	-	126.00	98.44
35	T3L26A	65.00	-	-	65.00	100.00
36	T3L26B	96.00	-	-	85.00	88.54
37	T3L26C	191.00	-	-	179.40	93.93
38	T3L26E	216.00	-	-	250.00	115.74
39	R90	320.00	-	-	316.50	98.91
40	R8 (Madhumara)	600.00	330.00	-	330.00	55.00
41	R37	420.00	226.40	-	226.40	53.90

S.No.	Location	Proposed length (m)	Progress		Total to date	Progress % age
			Previous Month	This Month		
42	R5	600.00	604.50	-	604.50	100.75
43	R31(R6toR10)	187.00	187.00	-	187.00	100.00
44	T2L19 S	100.00	66.00	-	66.00	66.00
45	T3L26D	64.00	64.00	-	64.00	100.00
46	R121	121.00	121.00	-	121.00	100.00
47	T3L25B	194.00	187.90	-	187.90	96.86
48	T3L25C	148.00	140.00	-	140.00	94.59
49	T3L27	66.00	158.00	-	158.00	239.39
50	T3L25A	133.00	123.00	-	123.00	92.48
51	R114	320.00	326.00	-	326.00	101.88
52	T1L16A	140.00	140.00	-	140.00	100.00
53	T1L16B	205.00	204.00	-	204.00	99.51
54	T1L16C	200.00	200.00	-	200.00	100.00
55	R10	220.00	220.00	-	220.00	100.00
56	R78(R21to Highway)	92.00	93.00	-	93.00	101.09
57	R76	272.00	273.00	-	273.00	100.37
58	R9	123.00	117.00	-	117.00	95.12
59	T1L17(westofR90)	82.00	82.00	-	82.00	100.00
60	T1L17,A	182.00	182.00	-	182.00	100.00
61	R75	136.00	120.00	-	120.00	88.24
62	R11	205.00	190.00	-	190.00	92.68
63	T1L15	224.00	240.00	-	240.00	107.14
64	R12	280.00	282.00	-	282.00	100.71
65	R86	200.00	180.00	-	180.00	90.00
66	R12	340.00	-	319.40	319.40	93.94
67	R76	272.00	-	273.25	273.25	100.46
68	R36	218.00	-	220.00	220.00	100.92
69	R9(R37toR30)	210.00	-	210.00	210.00	100.00
70	R40	332.00	-	200.00	200.00	60.24
71	T2L19 V	231.00	-	220.00	220.00	95.24
72	T2L19 W	56.00	-	56.00	56.00	100.00
73	T2L19 X	56.00	-	57.00	57.00	101.79
74	T2L19 Y	106.00	-	109.00	109.00	102.83
75	T2L19 Z	48.00	-	61.00	61.00	127.08
76	R107	167.00	-	165.00	165.00	98.80
77	R10(R33toR32)	180.00	-	185.00	185.00	102.78
78	R10(R32toR77)	320.00	-	320.00	320.00	100.00
79	R7	414.00	-	140.00	140.00	33.82
80	R2	177.00	-	160.00	160.00	90.40
81	R10(R21to south)	182.00	-	172.00	172.00	94.51
82	T2L19(R25toR27	153.00	-	150.00	150.00	98.04

S.No.	Location	Proposed length (m)	Progress		Total to date	Progress % age
			Previous Month	This Month		
83	T2L19 F(R38)	120.00	-	116.00	116.00	96.67
84	R7(R29toR28	190.00	-	187.00	187.00	98.42
85	R7(R28toR27)	95.00	-	95.00	95.00	100.00
86	T1L13	165.00	-	173.00	173.00	104.85
87	R11(MmtoR86)	160.00	-	140.00	140.00	87.50
88	R10(R35toR33)	120.00	-	120.00	120.00	100.00
89	T2L19 H	90.00	-	70.00	70.00	77.78
90	R27(R3toEast)	177.00	-	180.00	180.00	101.69
91	R6	460.00	-	188.00	188.00	40.87
92	T3L24(R3toR8)	33.00	-	33.00	33.00	100.00
93	R12(T1L13)	78.00	-	78.00	78.00	100.00
94	WWTP Road outside	750.00	640.00	-	640.00	85.33
95	WWTP Road Inside	1,440.00	220.00	400.00	620.00	43.06
96	Remaining Proposed Length	12,587.60				-
Grand Total		**44,582.00**	**8,538.80**	**5,206.65**	**26,994.15**	**60.55**

Table 15: Physical Progress in Waste Water Treatment Plant (WWTP), Jatuwa

Physical Progress till May 2017							
S.N.	Description	Proposed Quantity as per VO-03	Progress		Total to Date	Progress in %age	Remarks
			Up to April,2017	This Month			
1	Anaerobic Pond	3 nos.	3.00	0.00	3.00	100.00	Rip Rap stone masonry work under progress
2	Facultative Pond	3 nos.	2.52	0.1	2.62	87.33	Rip Rap stone masonry work under progress
3	River Training Work	600 m	600.00	0.00	600.00	100.00	
4	Boundary Wall	1330 m	1283.00	0.00	1283.00	96.47	
5	Office cum Lab Building	1 no.	1.00	0.00	1.00	100.00	
6	Workshop Building	1 no.	1.00	0.00	1.00	100.00	
7	Generator / Changing House	1 no.	1.00	0.00	1.00	100.00	
8	Sump Well	1 no.	0.60	0.05	0.65	65.00	Up to 8.00 m height R.C.C work completed, remaining work under progress
9	Sludge Drying Bed	1no.	0.85	0.05	0.9	90.00	Brick Masonry work completed pipe, sand and gravel packing work under progress
10	Road Side Drain	2880 m	1406.10	35.00	1441.	50.04	
11	Guard House	1 nos.	0.7	0.1	0.8	80.00	

Table 16: Physical Progress in Production of Precast Items at Katahari:

Physical Progress till May 2017						
S.N.	Description	Unit	Progress		Total to Date (nos.)	Remarks
			Up to April 2017 (nos.)	This Month (nos.)		
1	Precast Slab	No	116263.00	4500.00	120763.00	
2	Precuts	No	11209.00		11209.00	
3	Kerb Stone	No	23135.00		23135.00	
4	Manhole	No	2200.00		2200.00	
5	Sewer Inlet	No	1611.00	80.00	1691.00	
6	House Connection Chamber	No	756.00	100.00	856.00	

Table 17: Physical Progress in Production of RCC Pipes at Itahari

Physical Progress till May 2017						
S.N.	Description	Diameter (mm)	Progress		Total to Date (nos.)	Remarks
			Up to April 2017 (nos.)	This Month (nos.)		
1	RCC Pipe	200	2,123	0	2,123	
2	RCC Pipe	300	328	0	328	
3	RCC Pipe	350	216	0	216	
4	RCC Pipe	400	370	60	430	
5	RCC Pipe	450	84	0	84	
6	RCC Pipe	500	551	0	551	
7	RCC Pipe	600	963	0	963	
8	RCC Pipe	700	1,296	0	1,296	
9	RCC Pipe	900	278	0	278	
10	RCC Pipe	1000	1011	0	1011	
11	RCC Pipe	1600	373	0	373	
	Total		**7,593**	**0**	**7,653**	

Contractor's Manpower

Table 18: Contractor's key staffs in May, 2017:

Designation	No	Remarks
Project / Contract Manager	1	
Planning Engineer/Construction Engineer	1	
Construction Engineer	2	
Site Engineers	8	
Quality Control Manager	1	
Office/Bill Engineer	0	
Junior Engineer	5	
Sub Overseers	2	
Safety Manager / Senior Site Supervisor	1	
Accountant / Office Manager	1	
Lab Assistant	3	
Store Keeper	7	
Light Drivers	4	
Machine Operator	32	
Site Supervisor	4	
Other Supporting Staff	41	
Skilled Labor at Site	>330	
Unskilled Labor at Site	>480	

Contractor's Equipment:

Table 19: Contractor's Equipment: At Judi camp

Equipment	No	Remarks
Excavator	6	
Back Hoe JCB	13	
Grader	2	
Crane / Teller	1	
Water Tanker	5	
Tractor	16	
Tipper	4	
Light Vehicle	4	
Motorbike	10	
Kerb Stone Machine Set	1	
Generator	4	
Welding Machine	3	
Diesel Tank with Pump	1	
Stand Drill Machine	1	
Gas Cutter Set	1	
Pipe Cutter	1	
Hand Grinder	1	
Plate Compactor	2	
Monkey Jumper	1	
Concrete Batching Plant	1	
Electric Vibrator	3	
Bar Bending Machine	3	
Bar Cutter Machine	3	
Transit Mixer	0	
Concrete Mixer (Hydraulic)	2	
Concrete Mixer (Manual)	2	
Asphalt Concrete Plant	1	
Asphalt Paver Machine	1	

8. DETAILS OF SAFEGUARD ACTIVITIES (SOCIAL, ENVIRONMENTALANDRESETTLEMENT ACTIVITIESANDISSUES)

8.1 SOCIAL ISSUES

8.1.1 OPERATIONAL GUIDE LINES FOR COMMUNITY MOBILIZATION AND IMPLEMENTATION OF CDP

- **VISIT, INTERACTION AND CONSULTATION WITH COMMUNITY PEOPLE**

kk) Social Development Specialist (SDS) of the DSC is closely monitoring the social issues resulted due to the project activities. Visiting and interacting with people, Tole Lane Organizations (TLOs) and formal and informal consultation meetings are going on in this regard.

The project is regularly disseminating the information and message to community people about the project features, its purpose, methods of use and functionality of infrastructure under construction by the project through such consultation meetings. These meetings are fruitful to provide prior information regarding the project construction activities before execution at the community level. It is an appropriate platform to interact and make dialogue between 4 Cs (The Client, Consultant, Contractor and Community) about the project features, prime objectives, purpose, work methodology and potential threats/ cautions to be adopted during the project implementation.

The visits, meetings and consultations with community people at TLOs have provided many opportunities to obtain people's views and perception towards the project. Community people of those particular localities used to discuss extensively in the project features and have been provided some suggestions for efficient carryover of the project components and assured cooperation and coordination in the project execution in their localities.

Social Development Specialist (SDS) / DSC along with of PIU, NGO staffs have been actively participated in the meetings. SDS/DSC as usual facilitate the consultation meetings, support to prepare meeting minutes and obtain decisions.

Apart from of this, many field visits and observations with community are also important to disseminate project message and monitor project features in the community. Monitoring visits along with Project Manager (PM), TL/DSC and TL/CDP to the core project area, community development program area and construction sites have been beneficial to make insight to the project progress, its effectiveness and challenges.

- **SAFEGUARD DESK**

ll) A Safeguard Desk established in the project has been effective in planning, monitoring and follow up of all social development/ safeguard issues including the resettlement plan. It has been started as a functional mechanism consisting of PIU, NGO and DSC for this purpose. The desk consists of the Social Development Chief of PIU, Team Leader of CDP/ NGO and SDS of DSC with close consultation and guidance of PM/ PIU. It is in compliance with the Aide Memoire of last ADB Mission (21 April-12 May 2014). It is decided that the desk will review, update and discuss the progress, issues, constraints and challenges of social aspects, Community Development Program and implementation of resettlement plan as well as monitoring of social development activities.

- **ToT on Gender and Social Inclusion (GESI) Mainstreaming**

mm) The project has been envisaged a 'Training of Trainers (ToT) on GESI Mainstreaming' for Biratnagar Sub Metropolitan City (BSMC) Office and STIUEIP project staff. The Aide Memoir Report of the ADB Review Mission has also noted about the training to be conducted in Biratnagar for the staff of municipality and related agencies. The Mission has recommended for conducting GESI training relating to urban infrastructure development to staff of municipality, municipal steering committee, PIU, local stakeholder agency and make them accountable for the better results. In line with this, the project is going to conduct Gender and Social Inclusion (GESI) Sensitization Training when it is approved. The revised ToT has been submitted to PIU, STIUEIP, Biratnagar incorporating the comments from PMSC and PCO.

Safeguard desk members discussed and reviewed the proposed 'ToT on GESI Mainstreaming' proposal. Social Development Specialist (SDS) of DSC has reviewed the detail proposal and adjusted budget accordingly for the 'Training of Trainers (ToT)' model. The training arrangement will be decided after the approval of this proposal by the project authority. Primarily it will be a 5 days training focusing mainly on Gender and Social Inclusion Action Plan (GESIAP) comprising other project elements. About 35 participants from Biratnagar Sub Metropolitan City (BSMC) office and project staffs will participate in the training.

- **Update of Small Facilities Construction and other Activities in CDP/STIUEIP**

nn) The latest safeguard desk meeting has reviewed all ongoing and completed small facilities infrastructure and other activities implemented under the Community Development Program (CDP), a component of STIUEIP. It provided a common understanding and status information of infrastructures and activities under the CDP program to all safeguard desk members.

A glimpse of community development program has been obtained by the presentation in the appraisal and interaction meeting. Total 7,417.36 m. roads and 13,246.32 m drains are under construction through small facilities infrastructure by CDP/STIUEIP. Regarding on the household toilet, total 458 nos. such toilets has been built by May 2015. Similarly, 10 hand pumps have been installed, 45 hands pump platforms built and 5 public toilets are complete.

- **Employment in Project**

oo) The core activities of the project i.e. sewerage pipe laying, drain construction and road/ lane improvement provided employment to about 270 in a day this month. The employed human resources varied from skilled engineer/ project manager to general labor, supervisor, (sub) overseers and mechanics. However, a very few women (16%) are working in the construction activities as skilled and unskilled labor but they are paid equal to men for similar type of work. Three women Assistant Sub-Engineers are also working at construction sites after completing OJT (on the job training) successfully at the same sites from different CTEVT affiliated institutes of nearby districts. The contractor has been suggested to increase the work opportunity to women in different types of works.

- **General**

pp) Sewer/ Drainage lines are being laid in the public rights of way (RoW). During construction, if any trees or crops or structures demolished, it shall be properly addressed with compensation. Private individuals or shopkeepers will also be looked into if their livelihood is affected by the disturbance during constructions/ pipe laying works.

Apart from this, the project did not encounter any resettlement or re-location and any compensation issue.

9. KEY ISSUES AND REMARKS / REASON FOR DEVIATION (IF ANY) AFFECTING PROGRESS

qq) Following are the key issues affected in progress:

- Disturbance due to underneath existing water supply pipe lines network, under-ground cables, electric poles etc.
- Some of the stretches still RoW are not clear to construct the drain and to put inlet and house connection.
- Early monsoon.
- Insufficient manpower's and materials at site.
- Disbursement of IPC's amount on time.

10. WORK PLAN FOR THE NEXT MONTH

rr) Following are the Contractor's works in the next month **(Please refer to the contractor's progress report for quantitative plan works for next month)** the revised work program shall be submitted after the approval of Variation order no-03 as discussed/agreed between three parties - 3C.

- Road side drain construction
- Road Works
- Sewer line construction
- Storm water drain construction
- Relocation of water supply pipe and laying of new pipe lines.
- WWTP
- Maintenance work as per instruction/required.
- Precast production at contractor's yard, etc.

ANNEX2: PHOTOGRAPHS – May2017

A1 – Storm water drain

CN3L1A – Storm water drain

Field Density Test – WWTP's inside road sub base

R6 – Water supply works

Rip Rap work at WWTP for Facultative pond

S9 – Storm water drain near Tinpaini Chowk

Rip Rap work at WWTP for Facultative pond

Rip Rap work at WWTP for Facultative pond

Annex-7

: Laboratory Test Results of May, 2017

Secondary Town Integrated Urban Environmental Improvement Project

Biratnagar Sub-Metropolitan city

Contract Package: STIUEIP/W/BRT/ICB-01

DAILY WEATHER RECORD

FOR THE MONTH OF MAY 2017

Date	WEATHER Record						Temp.c		
	Sunny	Foggy	Cloudy	Morning Rain HRS	Night Rain Hrs.	Day Rain Hrs.	9:00 AM	5:00 PM	Rain Fall MM
1	Sunny				Night Rain Hrs.		27.8	25.6	60
2	Sunny						28	24.8	
3	Sunny						27.6	24.6	
4	Sunny						27.4	25.2	
5			Cloudy	Morning Rain HRS	Night Rain Hrs.		28.0	25.7	130
6	Sunny						29	26	
7	Sunny						29.5	26.2	
8	Sunny						29.8	26	
9	Sunny				Night Rain Hrs.		28	26	52
10	Sunny				Night Rain Hrs.		29	27.2	40
11	Sunny						29.6	26.2	
12	Sunny						29.5	26.6	
13			Cloudy	Morning Rain HRS			28.5	26.2	30
14	Sunny						29.5	26	
15			Cloudy	Morning Rain HRS			28.2	25.8	120
16	Sunny						29.8	26.4	
17	Sunny						30.2	26.5	
18	Sunny						29.5	27.1	
19	Sunny						29.1	27	
20	Sunny						30.1	26.2	
21			Cloudy	Morning Rain HRS			29.2	25.2	42
22	Sunny						29.8	26.2	
23	Sunny						28.6	26	
24			Cloudy	Morning Rain HRS			27.4	25.2	29.5
25			Cloudy	Morning Rain HRS			26.2	26.2	32
26	Sunny						28.2	27.4	
27	Sunny				Night Rain Hrs.		28	27.2	89.5
28	Sunny						29.2	27	
29			Cloudy	Morning Rain HRS			28.6	28	110
30			Cloudy	Morning Rain HRS			25	24	102
31	Sunny						26	22	
							Total Rain Fall		837

SMEC-Brisbane-AQUA-CEMAT-BDA	CTCE-KALIKA J/V
Approved By C.S.E	Submitted By Project Manager
Record Checked By A.C.S.E	Record Reported By Q.C Manager
Consultant Reps	Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

Biratnagar-Sub-Metropolitant City

SUMMARY OF MORTAR COMPRESSIVE STRENGTH TEST WORK MIX CUBE

FOR THE MONTH OF MAY 2017

P.G-1

S.N.	LAB REF No.	Name of CEMENT	Location/Structure	Details of MIX	Casting	Consistency & Setting Time			7 day's cube Crushing		28 day's cube crushing		Remarks
						Norm. Const.	Intial(min.)	Final(min.)	Date	Str. N/mm2	Date	Str. N/mm2	
1	759	KOSHI	High way Man Hole	1:4 by volume	3/4/2017	35.80	200	295	10/4/2017	6.00	1/5/2017	7.90	
2	760	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	3/4/2017	35.80	200	295	10/4/2017	6.90	1/5/2017	8.70	
3	761	KOSHI	WWTP RIP RAP 9-C	1:4 by volume	4/4/2017	36.20	190	305	11/4/2017	7.60	2/5/2017	9.10	
4	762	KOSHI	R-8 Line	1:4 by volume	9/4/2017	35.20	185	295	16/4/2017	5.90	7/5/2017	7.80	
5	763	KOSHI	High way Man Hole	1:4 by volume	9/4/2017	35.20	185	195	16/4/2017	6.50	7/5/2017	7.90	
6	764	KOSHI	WWTP RIP RAP 9-B	1:4 by volume	12/4/2017	35.80	205	285	19/4/2017	6.40	10/5/2017	8.40	
7	765	KOSHI	WWTP RIP RAP 9-B	1:4 by volume	19/4/2017	35.90	180	305	26/4/2017	7.60	18/5/2017	8.60	
8	766	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	20/4/2017	36.40	210	285	274/2017	8.00	19/5/2017	9.50	
9	767	KOSHI	WWTP RIP RAP 8-C	1:3 by volume	24/4/2017	35.70	195	295	1/5/2017	7.90	23/5/2017	9.70	
10	768	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	26/4/2017	35.90	205	310	3/5/2017	7.60	25/5/2017	9.40	
							MIN 45m	Max 600m	Required strength on 28 days not less than 7.5 N/MM2				
							MIN 45m	Max 600m	Required strength on 28 days More than 7.5 N/MM2 at 1:3				

SMEC-Brisbane-AQUA-CEMAT-BDA
Approved by Construction Supervision Engineer/CSE
Test Checked by A.C.S.E
Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractore Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City P.G-1

Summery of Concrete Crushed Aggregate 20mm down For The Month of MAY 2017

S.N.	DESCRIPTION / SOURCE	LAB REF. NO.	Grain Size Distribution				FI %	LAA %	ACV %	REMARKS
			25	20	10	4.75				
1	WWTP SLUMP WELL Bottom Plug	MR 368	100	97.04	35.20	4.15	13.08	33.16	21.1	Aggregates
2	WWTP SLUMP WELL Bottom Plug	MR 369	100	97.56	36.89	3.23	13.60	33.20	20.2	Source
3	WWTP SLUMP WELL Bottom Plug	MR 370	100	97.50	38.51	3.46	13.78	33.40	20.8	Om shree
4	WWTP SLUMP WELL Bottom Plug	MR 371	100	97.73	38.71	3.48	13.80	33.44	21.6	CRUSHER
5	WWTP SLUMP WELL Bottom Plug	MR 372	100	97.66	37.65	3.31	13.66	33.50	20.8	
6	From Contractor Yard	MR 373	100	97.58	41.45	3.18	13.46	33.48	21.4	PLANT
7	From Contractor Yard	MR 374	100	97.18	40.14	2.80	13.50	33.66	21.8	
8	From Contractor Yard	MR 375	100	96.52	40.74	3.30	13.56	33.74	21.6	
9	From Contractor Yard	MR 376	100	96.04	41.66	3.24	13.60	33.74	21.8	
10	From Contractor Yard	MR 377	100	95.92	42.72	4.73	13.50	33.66	21.6	
11	From A-1 Works	MR 378	100	96.16	40.81	3.41	13.23	33.56	20.8	
12	From A-1 Works	MR 379	100	96.33	38.40	2.97	13.40	34.10	21.8	
Section 900:IS 383-1970 Required			100	95-100	25-55	0-10	Less 15%	Less 35%	Less 30%	

SMEC-Brisbane-AQUA-CEMAT-BDA
Approved by CSE
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 SLAB CASTING WORK MIX

FOR THE MONTH OF MAY 2017

P.G-1

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location	Ratio by VOLUME				Materials		Cube Crushing ,N/mm2		Remarks
				Structure	Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	293	4/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.4	22.2	
2	294	5/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.5	22.1	
3	295	6/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.0	21.7	
4	296	7/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.1	22.1	
5	297	8/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.5	22.3	
6	298	9/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.8	22.3	
7	299	10/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.6	22.2	
8	300	11/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.2	22.4	
9	301	12/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.4	22.5	
10	302	13/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.6	21.5	
11	303	14/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	21.6	
12	304	15/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	22.0	
13	305	16/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	22.5	
14	306	17/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.5	21.6	
15	307	18/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.9	21.4	
16	308	19/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.2	22.1	
17	309	20/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.9	22.3	
18	310	21/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.6	22.4	
19	311	22/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.4	22.2	
20	312	23/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.3	21.8	
21	313	24/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.9	22.0	
22	314	25/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.3	22.0	
Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength										Min Required	13.4	20	

SMEC-Brisbane-AQUA-BDA
Approved by Construction Supervision Engineer/CSE
Test checked by A.C.S.E
Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M30/20 MAN HOLE CASTING WORK MIX

FOR THE MONTH OF MAY 2017

P.G-1

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location	Ratio by Volume				Materials		Cube Crushing ,N/mm2		Remarks
				Structure	Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	336	4/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	31.4	
2	337	5/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.6	
3	338	6/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.6	
4	339	7/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	31.4	
5	340	8/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.4	
6	341	9/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.0	32.1	
7	342	10/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.0	32.1	
8	343	10/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.0	32.1	
9	344	11/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	32.1	
10	345	11/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	32.4	
11	346	12/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	32.2	
12	347	12/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.1	
13	348	13/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	32.3	
14	349	13/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	32.1	
15	350	14/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.3	
16	351	14/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.2	
17	352	15/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	32.2	
Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength										Min Required	20.1	30	

SMEC-Brisbane-AQUA-BDA
Approved by Construction Supervision Engineer/CSE
Test checked by A.C.S.E
Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BiratnagarSub-Metropolitant City

CEMENT TEST SUMMERY

For the Month of MAY 2017

S.N.	Lab. Ref. NO.	Description of cement	Testing Date	Consistency & Setting Time			Remarks
				Norm. Const.	Intial(min.)	Final(min.)	
1	MR 321	SHIVAM OPC	1/5/2017	35.3	210	325	All Cement Are Nepali BRAND OPC
2	MR 322	SHIVAM OPC	1/5/2017	35.0	225	310	
3	MR 323	SHIVAM OPC	2/5/2017	34.3	215	325	
4	MR 324	SHIVAM OPC	3/5/2017	35.9	205	315	
5	MR 325	SHIVAM OPC	4/5/2017	36.6	200	305	
6	MR 326	SHIVAM OPC	5/5/2017	36.0	225	300	
7	MR 327	SHIVAM OPC	6/5/2017	36.1	240	305	
8	MR 328	KOSHI OPC	7/5/2017	36.3	210	305	
9	MR 329	SHIVAM OPC	8/5/2017	33.7	225	315	
10	MR 330	KOSHI OPC	9/5/2017	36.4	215	310	
11	MR 331	KOSHI OPC	10/5/2017	36.7	200	310	
12	MR 332	KOSHI OPC	11/5/2017	36.6	205	320	
13	MR 333	SHIVAM OPC	12/5/2017	37.0	235	340	
14	MR 334	SHIVAM OPC	13/5/2017	36.5	240	335	
15	MR 335	SHIVAM OPC	14/5/2017	34.3	240	340	
Requirements in accordance with BS 12					> 45 Min.	10 Hrs	

SMCE-Brisbane-AQUA-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractores Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

MONTHLY Test Result Summary Sheet For The Month of MAY 2017

STIUEIP

SUB BASE (Process Control)

According to Part 2.Section 6A-Technical Specifacations&DOR Specifacation Section 1201(3)C Physical Requirement P.G-1

SN No	LAB Ref NO	Date Tested	Location/ Chainage/Station	Grading sieve size (mm) (% passing by weight)								Lab. MDD (g/cc)	Soaked CBR (%)	Lab. OMC (%)	Remarks
				63	37.5	20	10	5	2.360	1.18	0.075				
16	226	1/5/2017	OM SHREE CRUSHER PLANT	100	85.76	59.11	46.58	40.24	34.13	27.20	4.83	2.230	38.00	6.60	
17	227	1/5/2017	OM SHREE CRUSHER PLANT	100	87.06	61.28	49.43	36.78	30.82	23.68	4.67				
18	228	2/5/2017	R-27 Line CH:0+350 to 0+455	100	87.74	63.69	50.17	37.51	29.68	22.60	4.98	2.230	40.00	6.60	
19	229	2/5/2017	R-27 Line CH:0+350 to 0+455	100	87.40	62.59	50.11	36.48	27.62	21.32	4.68				
20	230	2/5/2017	R-27 Line CH:0+350 to 0+455	100	90.50	64.36	51.33	36.55	27.80	20.53	4.56				
21	231	5/5/2017	R-107 Line CH:0+180 to 0+345	100	90.63	64.96	51.67	35.17	25.10	17.40	4.61	2.230	42.00	6.60	
22	232	5/5/2017	R-107 Line CH:0+180 to 0+345	100	88.36	64.24	51.30	37.97	27.04	18.48	5.02				
23	233	5/5/2017	R-107 Line CH:0+180 to 0+345	100	89.72	64.56	51.11	37.04	25.50	16.66	4.98				
24	234	6/5/2017	T2L-19(V.X,W,Z)	100	91.37	72.50	57.79	45.23	32.29	22.50	6.76	2.230	38.50	6.60	
25	235	6/5/2017	T2L-19(V.X,W,Z)	100	91.17	72.99	57.20	43.90	32.17	21.57	6.84				
26	236	6/5/2017	T2L-19(V.X,W,Z)	100	91.68	72.95	54.61	40.75	29.26	19.84	5.01				
27	237	10/5/2017	R-14 Line CH:0+000 to 0+200	100	89.77	73.11	59.85	41.72	32.03	24.64	5.84				
28	238	10/5/2017	R-14 Line CH:0+000 to 0+200	100	91.00	75.40	53.05	36.43	27.05	19.71	5.20	2.230	40.00	6.60	
29	239	10/5/2017	R-14 Line CH:0+000 to 0+200	100	91.20	76.08	54.11	37.79	28.71	19.65	5.58				
30	240	12/5/2017	R-36 Line CH:0+000 to 0+220	100	91.29	75.34	53.72	36.67	26.10	17.22	5.26	2.230	38.50	6.60	
				100	65-95	50-85	40-75	30-60	20-45	15-37	4 to 15		≥ 30		

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

CTCE-KALIKA J/V

Submit by Project Manager

Test Conducted by Q.C Manager

Consultant Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 , M25/20 & M30/20 Work Mix

FOR THE MONTH OF MAY 2017

P.G-1

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by Volume				Type of Material		Cube Crushing ,N/mm2		Remarks
					water	Cement	Sand	Aggregates	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	733	7/4/2017	M30 Work Mix	Slum Well 7th Lift WWTP	0.36	1	1.3	2	Shivam	Om shree C/plant	23.10	30.81	Add mix=0.5%
2	734	8/4/2017	M20 Work Mix	WWTP Side Drain Pcc Bed	0.50	1	2	3.5	Shivam	Om shree C/plant	17.19	21.63	
3	735	9/4/2017	M25 Work Mix	R-21 Slab Crossing RCC Deck Slab	0.46	1	1.5	3	Shivam	Om shree C/plant	17.48	25.93	
4	736	10/4/2017	M20 Work Mix	R-21 PCC Bed Level	0.50	1	2	3.5	Shivam	Om shree C/plant	16.00	20.59	
5	737	20/4/2017	M20 Work Mix	Sludge Bed Level WWTP	0.50	1	2	3.5	Shivam	Om shree C/plant	16.00	20.59	
6	738	24/4/2017	M25 Work Mix	R-21 Slab Crossing RCC Deck Slab	0.46	1	1.5	3	Shivam	Om shree C/plant	17.19	26.22	
7	739	25/4/2017	M20 Work Mix	Sludge Bed Level WWTP	0.50	1	2	3.5	Shivam	Om shree C/plant	16.30	21.19	
8	740	1/5/2017	M25 Work mix	WWTP Bottom plug(with fiber hook)	0.46	1	1.5	3	Shivam	Om shree C/plant	16.96	38.89	Slump-170mm
9	741	1/5/2017	M25Work mix	WWTP Bottom plug(only with ad-Mixture)	0.46	1	1.5	3	Shivam	Om shree C/plant	20.74	28.52	Slump-170mm
10	742	1/5/2017	M25 Work mix	WWTP Bottom plug(only with ad-Mixture)	0.46	1	1.5	3	Shivam	Om shree C/plant	21.04	28.15	Slump-165mm
11	743	1/5/2017	M25 Work mix	WWTP Bottom plug(only with ad-Mixture)	0.46	1	1.5	3	Shivam	Om shree C/plant	21.19	28.89	Slump-160mm
12	744	2/5/2017	M20 Work Mix	S-5 Line PCC Bed	0.50	1	2	3.5	Shivam	Om shree C/plant	15.23	20.96	
13	745	3/5/2017	M20 Work Mix	R-8 Line PCC BED	0.50	1	2	3.5	Shivam	Om shree C/plant	15.41	21.33	
14	746	3/5/2017	M20 Work Mix	S-5 Line PCC Bed	0.50	1	2	3.5	Shivam	Om shree C/plant	15.41	21.33	

Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength	Min Required	13.4	20
Specifacation Limit Table For M25/20 on 7 days Age Min 67% of Total Compressive Strength	Min Required	16.75	25
Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength	Min Required	20.1	30

SMEC-Brisbane-AQUA-BDA
Approved by Construction Supervision Engineer/CSE
Test checked by A.C.S.E
Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractors Reps

Secondary Towns Integrated Uraban Environmental Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of MAY 2017

COMPRESSIVE STRENGTH OF BRICKS (Process Control Test) P.G-1

SN No	Ref. STIUEIP LAB/	Date of Testing	Location	Chanage	BRAND NAME 1 st class brick	Compressive Strength N/mm2	SCALE OF Sample From
1	577	4/5/2017	R-8 Line	R-8 Line	ANAND	10.4	
2	578	4/5/2017	R-8 Line	R-8 Line	ANAND	10.8	
3	579	4/5/2017	R-8 Line	R-8 Line	ANAND	10.1	
4	580	4/5/2017	R-8 Line	R-8 Line	ANAND	10.2	
5	581	6/5/2017	R-40 Line	R-40 Line	N&B	10.5	
6	582	6/5/2017	R-40 Line	R-40 Line	N&B	10.7	
7	583	10/5/2017	R-28 Line	R-28 Line	AMBEY	10.4	
8	584	10/5/2017	R-28 Line	R-28 Line	AMBEY	10.2	
9	585	14/5/2017	High way	MAN HOLE	AMBEY	10.5	
10	586	14/5/2017	High way	MAN HOLE	AMBEY	10.4	
11	587	16/5/217	R-21 Line	R-21 Line	AMBEY	10.1	
12	588	16/5/217	R-21 Line	R-21 Line	AMBEY	10.0	
13	589	18/5/2017	S-5 Line	S-5 Line	AMBEY	10.4	
14	590	18/5/2017	S-5 Line	S-5 Line	AMBEY	10.4	
15	591	20/5/2017	R-7 Line	R-7 Line	AMBEY	10.6	
16	592	20/5/2017	R-7 Line	R-7 Line	AMBEY	10.6	
17	593	20/5/2017	T2L26 F Line	T2L26 F Line	AMBEY	10.4	
18	594	20/5/2017	T2L26 F Line	T2L26 F Line	AMBEY	10.2	
19	595	20/5/2017	T2L26 F Line	T2L26 F Line	AMBEY	10.2	
Specification					IS1077,IS2180or NS1/2035	> 10N/MM2	

SMEC-Brisbane-AQUA-BDA-CEMAT

Approved by Construction Supervision Engineer

Test Checked by A.C.S.E

Consultantr Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMERY OF LAB TEST RESULT OF SUB GRADE

(For the Month of MAY 2017)

P.G-1

S.N.	LAB REF. NO.	DESCRIPTION OF MATERIAL	Line	Chanage/Location	Modified ProctorGm/CC		CBR	REMARKS
					MDD	OMC %	%	
1	MR 93	Sub Grade	R-27 Line	0+680 to 0+805	1.980	9.00	6.00	
2	MR 94	Sub Grade	T2L19(W,X,V,)	0+00 to 0+057	1.980	9.00	5.50	
3	MR95	Sub Grade	R-10 Line	0+000 to 0+287	1.980	9.00	6.00	
4	MR 96	Sub Grade	R-40 Line	0+000 to 0+200	1.980	9.00	6.00	
5	MR 97	Sub Grade	R-36 Line	0+000 to 0+220	1.980	9.00	6.0	
6	MR 98	Sub Grade	R-9 Line	0+000 to 0+230	1.980	9.00	5.5	
7	MR 99	Sub Grade	T2L19(Y,Z)	0+000 to 0+056	1.980	9.00	6.0	
8	MR100	Sub Grade	WWTP inner Road	0+000 to 0+400	1.980	9.00	6.5	
9	MR 101	Sub Grade	T3L27	0+000 to 0+060	1.980	9.00	5.5	
10	MR 102	Sub Grade	R-7 Line	3+240 to 3+380	1.980	9.00	7.0	
11	MR 103	Sub Grade	R-2 Line	7+120 to 7+319	1.980	9.00	7.0	
12	MR 104	Sub Grade	T2L19	0+000 to 0+070	1.980	9.00	6.5	
13	MR 105	Sub Grade	T2L19(F)	0+000 to 0+116	1.980	9.00	6.0	
14	MR 106	Sub Grade	T2L18/R6 Line	3+039 to 2+851	1.980	9.00	5.75	
15	MR 107	Sub Grade	T1L13 Line	0+080 to 0+165	1.980	9.00	5.50	
16	MR 108	Sub Grade	R-7 Line	2+670 to 2+957	1.980	9.00	6.25	
17	MR109	Sub Grade	R-8 Line	1+660 to 1+840	1.980	9.00	6.40	
18	MR 110	Sub Grade	R-27 East	0+820 to 1+000	1.980	9.00	6.30	
AS PER Standard Specification For Roade and Bridge worksSection 1003(1)/AASHTO T 193-81							Min 5%	

SMEC-Brisbane-AQUA-CEMAT-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -60:R-27 Line 0+350 to 0+455

FDT-61: R-107 Line 0+180 to 0+345

FDT-62:T2L19(V) Line 0+000 to 0+198

FDT-63:T2L18(X) & T2L19(Z) Line 0+000 to 0+058 & 0+000 to 0+056

SUB BASE P.G-1

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-60	3/5/2017	0+455 RHS	2.17	97.75	6.0	14.5
2			0+400 LHS	2.13	95.95	5.0	15.0
3			0+380 CL	2.17	97.75	6.0	15.5
1	FDT-61	15/5/2017	00+280 LHS	2.20	98.66	4.0	14.5
2			0+330 RHS	2.17	97.18	4.0	15.0
3			0+245 CL	2.16	96.96	4.0	14.5
4			0+190 LHS	2.16	96.96	5.0	15.0
1	FDT-62	15/5/2017	0+020 LHS	2.18	97.92	4.00	14.5
2			0+080 RHS	2.18	97.92	5.00	15.0
3			0+140 LHS	2.21	98.99	5.00	15.0
4			0+190 CL	2.14	95.93	4.00	15.0
1	FDT-63	15/5/2017	0+020 LHS	2.13	95.51	4.00	15.0
2			0+050 RHS	2.13	95.51	3.00	15.0
3			0+010 LHS	2.21	99.10	5.00	15.0
4			0+050 RHS	2.20	98.54	5.00	15.0
Required				2.230	95%	OMC <6.5	

SMEC-Brisbane -AQUA-CEMAT-BDA	CTCE-KALIKA J/V
Approved by C.S.E	Submitted by Project Manager
Test Checked by A.C.S.E	Test Conducted by Q.C Manager
Consultant Reps	Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -93:R-27 Line 0+680 to 0+805

FDT-94:T2L19(W) Line 0+730 to 0+790

FDT-95:T2IL19(X) Line 0+0000+058

FDT-96:T2L19(V) Line0+000 to 0+198

FDT-97:R-10 Line 0+000 to 0+287

FDT-98:R-40 Line 0+000 to 0+200

SUB GRADE P.G-1

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT -93	3/5/2017	0+790 LHS	1.94	98.23	4.0	14.0
2			0+730 RHS	1.97	99.27	5.0	15.0
3			0+690 CL	1.88	95.04	4.0	15.0
1	FDT-94	4/5/2017	0+790 LHS	1.95	98.52	5.0	15.0
2			0+730 RHS	1.90	95.91	4.0	15.0
1	FDT-95	4/5/2017	0+010 LHS	1.95	98.70	5.00	15.0
2			0+050 RHS	1.88	95.02	7.00	15.0
1	FDT-96	4/5/2017	0+100 LHS	1.95	98.45	4.00	15.0
2			0+150 RHS	1.89	95.30	4.00	15.0
1	FDT-97	4/5/2017	0+265 LHS	1.92	96.93	4.00	15.0
2			0+205 RHS	1.93	97.55	5.00	15.0
3			0+155 CL	1.92	96.93	5.00	14.5
4			0+100 LHS	1.90	95.96	4.00	15.0
5			0+050 RHS	1.95	98.74	5.00	15.0
6			0+010 LHS	1.93	97.55	5.00	15.0
1	FDT-98	6/5/2017	0+020 LHS	1.95	98.51	5.00	14.0
2			0+070 RHS	1.91	96.57	5.00	15.0
3			0+130 CL	1.93	97.63	5.00	14.5
4			0+190 CL	1.91	96.57	5.00	15.0
Required				1.980	95%	OMC <9.00	

SMEC-Brisbane -AQUA-CEMAT-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractors Reps

Annex-8

: Contractor's progress report-May, 2017

Government of Nepal

Biratnagar Sub-Metropolitan City, Biratnagar, Nepal

Secondary Towns Integrated Urban Environment Improvement Project (STIUEIP)

Project Implementation Unit(PIU)

Biratnagar, Nepal

Project Directorate (ADB)

Sewerage and Drainage Network, Wastewater Treatment Plant, and Road and Lanes Improvement Subproject

STIUEIP/W/BRT/ICB-01

Monthly Progress Report – 42

May 2017

Consultants:

SMEC

in association with

Brisbane City Enterprise Pty Ltd – Australia
AQUA Consultant and Associates Ltd – Bangladesh
Building Design Authority – Nepal
CEMAT Consultants – Nepal

Submitted by:

CTCE/KALIKA JOINT VENTURE

Address: Kalika tower-6thfloor, Baluwatar, Kathmandu, Nepal. Tel: 01-4439152, 4439153, 4439154, Fax: 01-4439155.
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TABLE OF CONTENTS

INTRODUCTION

Secondary Towns Integrated Urban Environmental Improvement Project (STIUEIP), 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 2650-NEP. STIUEIP includes construction of Sewerage and Drainage Network, Wastewater Treatment Plant, Road and Lanes Improvement and additional of road side drain & water supply work. The main purpose of this project is to fascinate with better improvement of greenery urban city.

PROJECT COMPONENTS

The Town Integrated Urban Environmental Improvement Project (STIUEIP) consists of following Sub-Project Components:

- **Drainage Network**
  The main aim of drainage network is to drain out storm water to the river side during the monsoon season and minimized the water pounding in the city
- **Sewerage Network**
  Management of household sewerage project to the treatment plant in connection with chambers, manhole and pipes
- **Wastewater Treatment Plant Subproject**
  Treatment of sewer product in plant located at Jatuwa. The treated water is drain out to singhiya river and solid waste project used as fertilizer in farming.
- **Road and Lanes Improvement Subproject**
  Existing road sections at different part of Biratnagar will be upgraded by extending road width and providing footpath.
- **Road Side Drain and Water Supply Network (Additional)**
  Road side drain and water supply network is addition of scope of work in this project. Road side drain is proposed to discharge the rain water. Whereas water supply work is for relocation of existing water pipe lines to appropriate location as well as repair of damaged pipe lines during construction

SALIENT FEATURE

A. General Features	
Employer	Government of Nepal(GoN), Ministry of Urban Development Department of Urban Development and Building Construction
Funded By	Asian Development Bank & Government of Nepal
Project	Biratnagar Sub-Metropolitan City Secondary Towns Integrated Urban Environmental Improvement Project(STIUEIP)
Contract No.	STIUEIP/W/BRT/ICB-01
Location	Biratnagar Sub-Metropolitan City
Consultant	SMEC-Brisbane-AQUA-BDA-CEMAT
Contractor	CTCE-KALIKA JV.
Commencement Date	December 8th, 2013
Original Completion Date	25 May 2016
Revised Completion Date after EOT-01	9 March 2017
Revised Completion Date	EOT-2 under process
Original Contract Period	900 Days
Original Contract amount with PS & VAT	NRs 2,391,332,117.06
Revised Contract amount after VO # 03. with PS & VAT	NRs 2,956,290,542.71

SCOPE OF WORKS

The activities to be undertaken according to the Contract Agreement are as follows:

a. To carry out all necessary topographic surveys, soils investigations, laboratory analysis or related investigations where necessary to supplement the data provided bythe Employer.
b. To prepare working drawings for all elements of the Works.
c. To undertake all steps necessary for upgrading of roads and bridges, all related to access to the Site, or other related matters, where his opinion differ significantly from
d. Preparation of stockyards for pipes, fittings and other materials and equipment.
e. To take all steps necessary for the temporary or permanent diversion of services and the maintenance of services during the execution of the Works, including diversion of overhead with underground power lines, telephone ducts, water supply mains and distribution lines (pipes), sewers and other underground services as required along the route of the pipelines.
f. To supply all pipes, valves, fittings and other materials and equipment required for construction of the Works. The Contractor's supply items may include manufacture, collection, transportation and delivery to Site. The Contractor will be responsible for ensuring that all procedures are adequately covered and that the materials fully confirm to the Contract requirements. These responsibilities will include all necessary charges or dues related to insurance, freight, taxes (including customs and excise duties, surcharges etc.) and all testing and inspections for quality control.
g. To provide all necessary staff (including civil engineers, specialists, administrators, site supervision personnel) and workmen (including all necessary specialists, operators, tradesmen, artisans etc. in addition to semi-skilled and unskilled workers) necessary for execution of the Works through to completion. Where appropriate, the contractor shall provide all suitable facilities and accommodation for the staff and workmen and he shall make provision for all costs related to such provisions and for medical, re-location, taxes or other expenses.
h. To provide all equipment, machinery, tools etc. and related spares maintenance and consumables necessary for implementation of the Works.
i. To provide all site offices, stores, workshops and facilities necessary for use by the Employer, Engineer and support staff and for the Contractor himself and his supporting staff.
j. To undertake all operations necessary to complete the Works. These operations shall include: excavation, provision, haulage and installation of suitable bedding and backfill material and disposal of surplus excavated material; distribution, laying adjoining of pipes; installation of all special pipe work, valves etc. and construction of all related concrete or other activities together with all testing and disinfection of completed Works. The Contractor's attention is drawn to the restricted working space between Rajbanshi Chowk to Rani, Biratnagar where the sewer pipes, drains and road/lane is to be laid in a narrow road. In this section work in addition to that associated with the trunk main, will include

but not be limited to, removal and replacement of a sewer laid in the road and reinstatement of road surface.

k. To liaise with other contractors on the site and to ensure harmonious co-operation with them so that conflicts are avoided and areas of common interest, constructional interface or potential overlaps are addressed without cost to the Employer or delays in completion.

l. To prepare documentary records of the Works in the form of "as-built" drawings and GIS data, schedules etc., and to train staff of the Employer in the procedures for laying pipes, valves and fittings.

m. All the above activities shall be performed in a professional way and with good engineering and/or constructional practice. Upon completion of the Works the scheme shall be fully operational with minimum disruption or inconvenience to interested parties, including land owners, and there shall be no outstanding matters requiring attention.

5. PHYSICAL PROGRESS (ACHIEVEMENT TILL THE MONTH)

A. STORM WATER DRAIN AND ROAD SIDE DRAIN SUB-PROJECT (WORK PROGRESS TILL THE DATE)

Physical Progress till May 2017						
S.N.	Location	Proposed Length (m)	Progress		Total to Date (m)	Progress (%)
			Up to April 2017 (m)	This Month (m)		
1	B1	4,003.55	3848		3848	96.11
2	B2	3,724	3724		3724	100.00
3	B3	3505.02	3463.00		3463.00	98.80
4	S5	1201	1201.00		1201.00	100.00
5	S9	2933.22	2643.00	180	2823	96.24
6	S11	1350.60	1350.60		1350.60	100.00
7	S13	5000.21	4864.00		4864.00	97.28
8	CN2	2197.30	2197.30		2197.3	100.00
9	CN3	2563.77	1769.15	318	2087.15	81.40
10	Rani	6486.70	6463.28		6463.28	99.64
11	A1	625.00		400	400	64.00
	Total	**33,383.05**	**31,523.23**	**742.00**	**32265.23**	**96.65**

Physical Progress in Road Side Drains:

Physical Progress till May 2017							
				Progress			
S.N.	Location	Length (m)	Total Length (m)	Up to April. 2017 (m)	This Month (m)	Total to Date (m)	Progress (%)
1	R2	3420	6840	6640	200	6840	100.00
2	R3	2233	2993	2964		2964	99.03
3	R4	1246	2212	660	113.3	773.3	24.95
4	R5	1068	2136	2136		2136	100
5	R6	1280	2560	0		0	0
6	R7	485	615	745		745	100
7	R8	370	740	764	420.9	1184.9	160.12
8	R9D	116	232	200		200	86.20
9	R13	220	440	430		430	97.72
10	R16	580.0	1160	1160		1160	100
11	R21	2420	2420	2420		2420	100
12	R22	359	718	718		718	100
13	R24	390	780	780		780	100
14	R25	594	1188	1180		1180	99.32
15	R26	620	1240	1240		1240	100
16	R27	977	1954	1950		1950	99.79
17	R28	620	1240	700	173.35	873.35	70.43
18	R29	620	1240	906	334	1240.00	100.00
19	R30	328	656	600		600	91.46
20	R31	187	374	374		374	100
21	R32	189	378	0		0	0.00
22	R37	785	1570	1570		1570	100
23	R64	120	120	120		120	100
24	R78	92	184	82		82	44.56
25	R107	157	314	315		315	100
26	R108	96	192	190		190	98.95
27	R109	90	360	355		355	98.61

28	T2L18O	143	286	268		268	93.71
29	T3L26E	93	186	48		48	25.81
30	T2L19R	177	354	0		0	0.00
31	T2L19P	103	206	0		0	0.00
32	T2L19U	81	162	0		0	0.00
33	T3L28	74.0	148.0	145		145	97.97
34	R42			198.6		198.6	
	Road Side Drain		36050	29346	1212	31100.15	86.26

B. SEWERAGE SUB-PROJECT (WORK PROGRESS TILL THE DATE)

S.N.	Location	As per VO-3		Upto Previous Month		This month		Update work		% work		Remarks
		Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	Distance	Manhole No	
1	HDPE (T1)	3817.100	127	3801.5	125	15.5	1	3817.0	126	99.99	99.21	
2	HDPE (T2)	13595.400	485	13040.650	452	78.5	3	13119.15	455	96.50	93.81	
3	HDPE (T3)	6571.100	246	6571.100	246			6571.1	246	100.00	100.00	
4	HDPE (T4)	117.300	3	112.000	3	5		117	3	100.00	100.00	
5	**Sub Total (HDPE)**	**24100.900**	**861**	**23525.250**	**826**	**99**	**4**	**23624.25**	**830**	**98.02**	**96.40**	
6	Hume pipe(T1)	5026.800	144	4421.200	107	383.6	28	4804.6	135	95.58	93.75	
7	Hume pipe(T2)	9488.000	276	8524.40	239			8524.4	239	87.87	86.59	
8	Hume pipe(T3)	4869.300	148	3341.50	76	1027.3	53	4368.8	129	89.72	87.16	
9	Hume pipe(T4)	183.500	5	183.500	5			183.5	5	100.00	100.00	
10	**Sub Total (Hume pipe)**	**19567.600**	**573**	**16470.600**	**410**	**1410.90**	**98**	**17881.3**	**508**	**91.38**	**88.65**	
11	**Total (HDPE + Hum pipe)**	**43668.500**	**1434**	**39995.85**	**1228**	**1509.9**	**102**	**41505.55**	**1338**	**95.04**	**93.30**	

SN	Description	Unit	Total Upto Previous Month	This Month	Total Up to this Month	Remarks
1	Sewer Inlet	Nos.	**1656.00**	100	**1756.00**	
2	House Connection	Nos.	**786.00**	100	**886.00**	

C. ROAD IMPROVEMENT WORKS (WORK PROGRESS TILL THE DATE)

SN	Description	Unit	Total Up to Previous Month	This Month	Total Up to this Month	Remarks
1	Asphalt pavement in R2 Road with access road	Rm	**3201.00**	0	**3201.00**	
2	Gravel road	Rm	**17225.7**	9854.2	**27079.90**	

D. Wastewater Treatment Plant Sub-Project (Work Progress till the date)

Physical progress till May 2017

S.N.	Description	As per VO-3 Quantity (Nos,m.)	Progress		Update work	% work	Remarks
			Upto Previous Month	This month			
1	Anaerobic Pond	3	3	0	3	100	Rip-rap stone masonry work under progress
2	Facultative Pond	3	2.52	0.01	2.53	84	Rip-rap stone masonry work under progress
3	River Training Work	600	600	0	600	100	
4	Boundary Wall	1330	1283	0	1283	96.47	
5	Office cum Lab Building	1	1	0	1	100	
6	Workshop Building	1	1	0	1	100	
7	Generator/Changing House	1	1	0	1	100	
8	Sump well	1	0.6	0.1	0.7	70	Upto 8.25 m. height R.C.C. work and bottom plug complete,Remainingwork

							progress
9	Sludge Drying Bed	1	0.85	0.05	0.90	90	Brick masonry work complete, pipe,sand and Gravel packing work under progress
10	Road Side Drain	2880	1406.1	60	1466.1	50.09	
11	Guard House	1	0.7	0.2	0.9	90.00	
12	Collection Chamber-3	1		.4	.4	40	

E. PRODUCTION OF PRECAST ITEMS FROM SLAB CASTING CONTRACTOR'S YARD, KATAHARI

SN	Description	Unit	Total Up to Previous Month	This Month	Total Up to this Month	Remarks
1	Slab	Rm	**116263**	4500	**116263**	
2	Precuts	Rm	**11209**	0	**11209**	
3	Kerbstone	Rm	**23135**		**23135**	
4	Manhole	Nos	**2200**	0	**2200**	
5	Sewer inlet	Nos	**2524**	0	**2524**	
6	House chamber	Nos	**1996**	291	**2287**	

F. HUME PIPE PRODUCTION FROM HUME PIPE PRODUCTION FACTORY, ITAHARI

SN	1	2	3	4	5	6	7	8	9	10	11
Diameter	200mm nos	300mm nos	350mm nos	400mm nos	450mm nos	500mm nos	600mm nos	700mm nos	900mm nos	1000mm nos	1600mm nos
No of Moulds	38	3	2	2	2	3	8	8	2	4	2
Production Till Previous Month	2123	328	216	370	84	551	963	1296	278	1011	373
This Month Production	0	0	0	60	0	0	0	0	0	0	0
Total Production	2123	328	216	430	84	551	963	1296	278	1011	373

H. Next month program

1. Road side drain.

2. Laying of sub base with proper compaction in roads

3.Precast production at contractor's yard.

4. Laying of sewerage pipe and installation of manhole, sewer inlet, house chamber

5. Relocation of water supply pipe and laying of newly water supply pipe line

6. Construction work of components of waste water treatment plant

7. Construction of Storm drain at A1 and CN-3

6. FINANCIAL PROGRESS AND CASH FLOW

Financial Progress

Installment Number	Total Bill Amount With Vat and PS(NRs)	Net Payable Amount (NRs.)	%	Remarks
IPC 01		200,940,000.00		Advance Payment 01
IPC 02	29,553,479.92	27,853,500.98		IPC 2
IPC 03	50,406,775.75	47,507,270.95		IPC 3
IPC 04	44,819,505.68	42,241,392.52		IPC 04
IPC 05	23,380,168.96	22,035,291.99		IPC 05
IPC 06	90,796,339.68	85,573,541.38		IPC 06
IPC 07	80,854,600.52	76,203,672.17		IPC 07
IPC 08	122,334,488.86	115,297,549.23		IPC 08
IPC 09	116,092,187.14	109,414,317.97		IPC 09
IPC 10	132,327,417.89	124,715,663.77		IPC 10
IPC 11	169,853,829.07	160,083,476.07		IPC 11
IPC 12	23,121,515.46	16,931,906.24		IPC 12
IPC 13	85,563,926.44	62,658,539.06		IPC 13
IPC 14	163,562,505.71	119,776,967.67		IPC 14
IPC 15	139,008,112.96	101,795,764.14		IPC 15
IPC 16	137,640,413.95	100,794,196.94		IPC 16
IPC 17	135,118,714.02	98,947,553.85		IPC 17
IPC 18	39,288,088.98	28,770,702.32		IPC 18
IPC 19	76081596.87	55,714,620.72		IPC 19
IPC 20	74,522,638.96	54,572,994.46		IPC 20
IPC 21	152,577,081.94	118,075,775.83		IPC 21
IPC 22	140,477,295.40	132,396,742.98		IPC 22
IPC 23	66,139,814.38	62,335,311.79		IPC 23
IPC 24	110,913,194.49	104,533,231.98		IPC 24
IPC 25	161,619,500.94	152,322,803.99		Submitted to DSC
Total amount of Ipc=	**2,366,041,890.50**	2,020,542,135.77	**80.03%**	Progress Percentage WRT Contract amount after VO .03 With Vat and PS

Physical Progress

Installment Number	Total Bill Amount With Vat and PS(NRs)	Net Payable Amount (NRs.)	%	Remarks
IPC 01		200,940,000.00		Advance Payment 01
IPC 02	29,553,479.92	27,853,500.98		IPC 2
IPC 03	50,406,775.75	47,507,270.95		IPC 3
IPC 04	44,819,505.68	42,241,392.52		IPC 04
IPC 05	23,380,168.96	22,035,291.99		IPC 05
IPC 06	90,796,339.68	85,573,541.38		IPC 06
IPC 07	80,854,600.52	76,203,672.17		IPC 07
IPC 08	122,334,488.86	115,297,549.23		IPC 08
IPC 09	116,092,187.14	109,414,317.97		IPC 09
IPC 10	132,327,417.89	124,715,663.77		IPC 10
IPC 11	169,853,829.07	160,083,476.07		IPC 11
IPC 12	23,121,515.46	16,931,906.24		IPC 12
IPC 13	85,563,926.44	62,658,539.06		IPC 13
IPC 14	163,562,505.71	119,776,967.67		IPC 14
IPC 15	139,008,112.96	101,795,764.14		IPC 15
IPC 16	137,640,413.95	100,794,196.94		IPC 16
IPC 17	135,118,714.02	98,947,553.85		IPC 17
IPC 18	39,288,088.98	28,770,702.32		IPC 18
IPC 19	76081596.87	55,714,620.72		IPC 19
IPC 20	74,522,638.96	54,572,994.46		IPC 20
IPC 21	152,577,081.94	118,075,775.83		IPC 21
IPC 22	140,477,295.40	132,396,742.98		IPC 22
IPC 23	66,139,814.38	62,335,311.79		IPC 23
IPC 24	110,913,194.49	104,533,231.98		IPC 24
IPC 25	161,619,500.94	152,322,803.99		Submitted to DSC
May 2017	150000000			Un going work and precast
Total amount of Ipc=	**2,516,041,890.50**	2,020,542,135.77	**85.11%**	Progress Percentage WRT Contract amount after VO .03 With Vat and PS

7. DETAILS OF SAFEGUARD ACTIVITIES

Contractor's is fascinating to apply safety measure at site during construction phase. Safety board, Diversion board, safety barriers, personnel's protection equipment to worker, spraying of water to minimize dust pollution

8. KEY ISSUES AND REMARKS

Following issues were raised in this month

- Unseasonal Rainfall hampered daily work site activities.
- Submitted Claim No.01 to 07 has not addressed up to this month.
- Local level election at Pardesh no-3,4 and 6 hampered daily site activities on 12-16 May 2017.

9. Mobilized Resource

A. Details of Contractor's Personnel at Site

SN	Contractor's Personnel's	Position
1	Ujjwal Prasai	Project Manager
2	Mahesh Subedi	Engineer
3	Bishesh Prasai	Engineer
4	Santosh Yadav	Engineer
5	Sanjay Bhattarai	Engineer
6	Gaurav Bikram Shah	Engineer
7	Ankit Dahal	Engineer
8	Bhupendra Yadav	Engineer
9	Bhupendra Misra	Engineer
10	Rabin Mandal	Engineer
11	Randhir Kumar Singh	Engineer
12	Narayan Rijal	Sr. Supervisor
13	Uttar Karki	Supervisor
14	Ajaya Rai	Supervisor
15	Yog Raj Kafle	Supervisor
16	Prasasan Rajbansi	Supervisor
17	Hari Shrestha	Supervisor
18	Saroj Adhikari	Overseer
19	Suraj Chaudahary	Overseer
22	Sanjay Shrestha	Overseer
23	Mukesh Kumar Gachhadar	Overseer
24	Bibekananda Yadav[Nikhil]	Overseer
25	Prakash Bhattarai	Sub Overseer
26	Sandesh Sunam	Sub Overseer
27	Rohit Kumar Yadav	Computer operator

28	Pritam Sunrait	Sub Overseer
29	Tirtha Tamang	Sub Overseer
30	Deepak Rai	Sub Overseer
31	Sudeep Gurung	Sub Overseer
32	Vishwa Bandhu Mainali	Finance Officer
33	Yagya Kafle	Junior Accountant
34	Indramani Bhattarai	Sr. Marketing
35	Anil Pokharel	Safety In Charge / PRO
36	Sunil Chaudhary	Quality Control Manager
37	Shanker Chaudhary	Lab Technician
38	Dipesh Dahal	Lab Assistant
39	Rabin Pandit	Lab Assistant
40	Mahesh Pandit	Store Keeper
41	Saroj Bhattarai	Store Keeper
42	Sailesh Paudel	Store Keeper
43	Dipendra Karki	Store Assistant
44	Rabin Bdr Gurung	Store Keeper
45	Dhurba Raj Bhattarai	Store Keeper
46	Nil Prasad Neupane	Store Keeper
47	Ananda Rajbansi	Electrician
48	Ajay Chaudhary	Welder
49	Mechanics	4
50	Plumber	6
51	Light Vehicle Driver	4
52	Tipper Driver	16
53	Water Tanker Driver	5
54	Tractor Driver	15
55	Heavy Equipment operator	32
56	Helper	54
57	Cook (Casting yard and Jatuwa)	8
58	Security Guard (casting yard and Jatuwa)	4
59	Skilled Labor	91
60	Unskilled Labor	233

B. Details of Equipment at Site / Contractor's yard

	Equipment	Capacity	Nos
A.1	**Excavators**		
	Komatsu PC200 "A"	148HP /0.97m3	1
	Komatsu PC 200 "B" (longboom)	148HP /0.97m3	1
	Hundai PC 200 "C"	148HP /0.97m3	1
	Cat Excavator 320DL "A"	148HP /0.97m3	1
	JCB Excavator-140	148HP /0.97m4	3
	Komatsu PC 120		1
	JCB Excavator-220LC		1
A.3	**Back Hoe Loader**	92HP/0.30m3	9
A.4	**Grader**		
	Komatsu GD405A-2	115HP	1
	Komatsu GD405A-3	115HP	1
	Grader (small)		1
A.5	**Jeep/Pickup**		
	Pajero-Na2Cha 1086	5 door	1
	Tata Sumo Gold	5 door	2
	Pickup - Ko1Cha 2544	4 door	1
	Land Curser –Na 2 Cha 7621	5 door	1
A.6	**Water Browser**		
	Water Tanker Na1Kha 8549	Up to 12KL	1
	Water Tanker Ko1Kha 3465	Up to 12KL	1
	Water Tanker Na1Kha 2595	Up to 12KL	1
	Water Tanker Me1Kha 275	Up to 12KL	1
	Water Tank (Joined with Tractor)	10Kl	1
A.7	**Motorbikes**		
	Shine Bike Ko 17 Pa-3394	125cc	1
	Shine Bike Ko 17 Pa-3395	125cc	1
	Shine Bike Ko 20 Pa-215	125cc	1
	Shine Bike Ko 20 Pa-230	125cc	1
	Shine Bike Ko 20 Pa-1155	125cc	1
	Shine Bike Ko 20 Pa-1167	125cc	1

	Shine Bike Ko 11 Pa-8157	125cc	1
	Honda Shine Ve 1 Pa 8845	125cc	1
	Glamor (Ko 24 3802	100 cc	1
	Glamor (Ko 24 3804)	100 cc	1
A.8	**Tractors**		
	Tractor Ko 1Ta 5868	85HP/ Hydraulic	1
	Tractor Na 3 7936	85HP/ Hydraulic	1
	Tractor Ko1Ta 1127	85HP/ Hydraulic	1
	Tractor Ko 2 Ta 1755	85HP/ Hydraulic	1
	Tractor Ko1Ta 4579	85HP/ Hydraulic	1
	Tractor Ko1Ta 4546	85HP/ Hydraulic	1
	Tractor Na1Ta 1119	85HP/ Hydraulic	1
	Tractor Ko1Ta 4145	85HP/ Hydraulic	1
	Tractor Ko1Ta 6204	85HP/ Hydraulic	1
	Tractor Ko1Ta 1730	85HP/ Hydraulic	1
	Tractor Ko1Ta 3430	85HP/ Hydraulic	1
	Tractor Ko1Ta 4045	85HP/ Hydraulic	1
	Tractor Ko1Ta 2244	85HP/Hydraulic	1
	Tractor Ko1Ta 1856	85HP/ Hydraulic	1
	Tractor Ko1Ta 8882	85HP/ Hydraulic	1
	Tractor sa 1Ta 2073	85HP/Hydraulic	1
A.9	**Roller & Compactor**		
	JCB Vibromax	Upto 16Ton	1
	Case Compactor 450 DX	Upto 5Ton	1
	Single Drum Hand Roller [Honda GX160]	4Kw	1
	Monkey Jumpur[Honda GX 160]	6.5Ps/10000N	3
	Plate Compactor		3
	Hydraulic Compactor		1
A.10	**Tipper Truck**		
	AMW Tipper-Na1Ka 3489	150HP/10m3	1
	AMW Tipper-Na1Ka 3494	150HP/10m3	1

	AMW Tipper-Na1Ka 3491	150HP/10m3	1
	AMW Tipper-Na1Ka 3493	150HP/10m3	1
B	**Bitumunious Plant/Crane & Others**		
	Asphalt Hot Mix Plant Set -Keshar DM45	40 to 60 Ton/Hr	1
	Asphalt Paver Machine-Na1Ka 3135	105HP	1
	Bitumen Distributor-Ba1Ka 3443		1
	Decanter		1
	Teller Lobed -Na3Kha 7382		1
	Mobile Unique Crane with Teller Ba1Ka 4423	10Ton	1
	Compressor		1
	JCB Hydra Lift all	15Ton	1
C	**Concreting Unit**		
	Manual Mixture Machine[Everest]		2
	Manual Mixture Machine [Ashoka]		2
	Hydraulic Mixture Machine[Universal]		4
	Hydraulic Mixture Machine[Kirloskar]		6
	Bar Bending Machine Set	4Ton/Hrs	3
	Bar Cutter Machine Set	4Ton/Hrs	3
	Concrete Vibrator with Needle	Diesel/3PHs/Pneumatic	14
D	**Work Shop Equipment and Tools**		
	Generator-Kirloskar/Jackson	20Kva	2
	Generator [Kirloskar]	125Kva	1
	Generator	62.5Kva	1
	Generator[Honda]	2.5Kva	2
	Generator[Super]	5KVA	3
	Generator[Lutian] [LT3600]	2.5KVA	1
	Welding Machine Set	4Ton/Hrs	8
	Concrete Cutter		1
	Kerb Stone Machine Set	41+00	
	Mechanical Jack		10
	Submersible Pump		15

	Pump Set		5	
E	**Survey Equipment**	-		**C.**
	Total Station		2	**D.**
	Level Machine		15	**E.**
F	**Lab Equipment**		1 Set	**F.**
		-		**G.** **H.** **I.** **J.**

10. CONCLUSION

Due to delay in payment of IPC amount and unseasonal heavy rainfall and Local level election, the work progress is quite slow in this month. This lagging progress will be in progress in next month by increasing resources.

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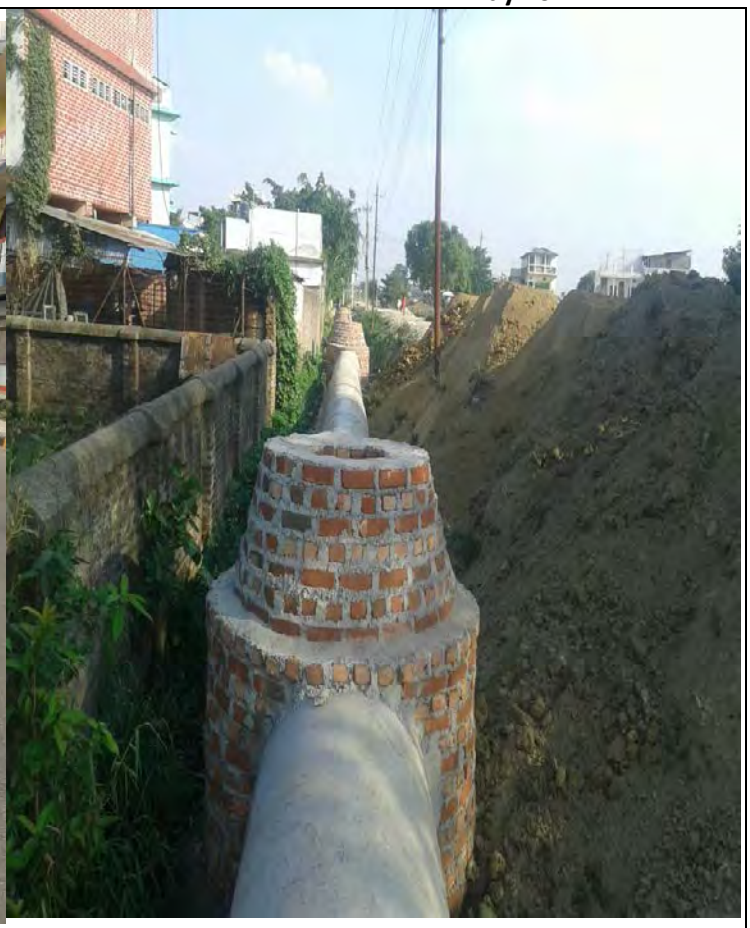
ANNEX

R2 Road is Ready for Taking Over



1000mm dia hume pipe laying at CN3L1A

RIP-RAP Work at WWTP

Sludge Drying BED

Contractor: CTCE-KALIKA J.V.
Site Office: Katahari, Judi

RCC Storm Drain at Line A1L2

Using Breaker to Dismantle Box Culvert at T1 Trunc

Construction of Road side Drain

Maintainence of Drinking Water Pipe in T1 Trunc

LAB REPORT SUMMARY

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City

STIUEIP

Monthly Laboratory Testing Report

(For The Month OF-MAY - 2017)

Consultants:SMEC-Brisbane-AQUA-CEMAT-BDA **Contractors: CTCE- KALIKA J/V**

S. No.	Description of Material	Type of test	Total No. of Test upto previous month	Test Performed for this month				Total No. of Test upto This month	Remarks
				No. of Tests	Passed	Failed	Retest Recommended		
1	Granular Material/Gravel material	Sieve analysis	90	0	0	0		90	
2	SUB GRADE Preparation	MDD & OMC	73	18	18	0		91	
	asPere Specifacation	Field density	623	104	104	0		727	
		C.B.R	73	18	18	0		91	
3	BRICK WORK	Water Absorption	195	0	0	0		195	
	Required Test	Compressive Strength	2901	95	95	0		2996	
4	Masonry Mortar (CM 7.05)	Compressive strength	4421	60	60	0		4481	
5	CONCRETE AGGREGATE								
	Coarse aggregate (20 mm)	Sieve analysis (20 mm)	356	25	25	0		381	
		LAA	269	25	25	0		294	
		Specific Gravity	16	0	0	0		16	
		FI	258	25	25	0		283	
		ACV	306	25	25	0		331	
	Fine aggregate (Sand)	Sieve analysis	365	40	40	0		405	
6	CONCRETE MIX DESIGN	Concrete mix Design	77	0	0	0		77	
	ConcreteM15/20,M20/20	Compressive strength	462	0	0	0		462	
	M25/20,&M30/20	Slump test	75	0	0	0		75	

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City

STIUEIP

Monthly Laboratory Testing Report

(For The Month OF-MAY - 2017)

Consultants:SMEC-Brisbane-AQUA-CEMAT-BDA **Contractors: CTCE- KALIKA J/V**

S. No.	Description of Material	Type of test	Total No. of Test upto previous month	Test Performed for this month				Total No. of Test upto This month	Remarks
				No. of Tests	Passed	Failed	Retest Recommended		
7	CEMENT Required Test								
	OPC Cement	Setting time	319	30	30	0		349	
		Normal Consistency	319	30	30	0		349	
8	CONCRETE								
	Work Mix Test M15,M20,M25,M30	Compressive strength	12597	744	744	0		13341	
9	REINFORCEMENT	Required Test							
	Reinforcement tore steel	As per Specifacation	80	0	0	0		80	
10	PAVEMENT MATERIALS								
	Sub Base Materials	Sieve analysis	206	60	60	0		266	
		MDD & OMC	41	16	16	0		57	
		CBR	37	16	16	0		53	
		Field density	392	60	60	0		452	
11	CS Base	Sieve analysis	110	0	0	0		110	
	Crushed Stone Base	MDD & OMC	20	0	0	0		20	
	Material Laying	C.B.R	18	0	0	0		18	
		FI & C.Ratio	110	0	0	0		110	
		LAA	111	0	0	0		111	
		SSS	53	0	0	0		53	
		AIV	110	0	0	0		110	
		Field Density & OMC	179	0	0	0		179	

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City **STIUEIP**

Monthly Laboratory Testing Report

(For The Month OF-MAY - 2017)

Consultants:SMEC-Brisbane-AQUA-CEMAT-BDA **Contractors: CTCE- KALIKA J/V**

S. No.	Description of Material	Type of test	Total No. of Test upto previous month	Test Performed for this month				Total No. of Test upto This month	Remarks
				No. of Tests	Passed	Failed	Retest Recommended		
12	ASHPHALT CONCRETE	Sieve analysis	39	0	0	0		39	
	Combine Mixed	FI	24	0	0	0		24	
		ACV	24	0	0	0		24	
	Individual Ca&FA Test Mix Design	LAA	24	0	0	0		24	
		Sp gravity	4	0	0	0		4	
13	BITUMEN TEST	Penetration at25.c	2	0	0	0		2	
	80/100 Bitumen	Softeing point(ring ball)	2	0	0	0		2	
	As per DORbook section	Flash point/Fire Point	2	0	0	0		2	
	600 Table 6.14/is 73	Ductility at25.c	2	0	0	0		2	
		Specific at 25.c	2	0	0	0		2	
		Water Content	2	0	0	0		2	
		Loss on Heating for 5 hrs	2	0	0	0		2	
		Pen-of residue afte loss on Heating	2	0	0	0		2	
		Solubility in tricloroethylene	2	0	0	0		2	
14	Humpipe Test	Three Edge Bearing Load Test	7	0	0	0		7	200mm to 1600mm 1 each
15	MARSHALL MIX DESIGN	WEARING COURSE	1	0	0	0		1	
16	Marshall Stability Test	Bulk density	102	0	0	0		102	
		Stability	102	0	0	0		102	
		Flow	102	0	0	0		102	
		Air voides	102	0	0	0		102	

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City

STIUEIP

Monthly Laboratory Testing Report

(For The Month OF-MAY - 2017)

Consultants:SMEC-Brisbane-AQUA-CEMAT-BDA **Contractors: CTCE- KALIKA J/V**

S. No.	Description of Material	Type of test	Total No. of Test upto previous month	Test Performed for this month				Total No. of Test upto This month	Remarks
				No. of Tests	Passed	Failed	Retest Recommended		
		Bitumen extraction	36	0	0	0		36	
		Voids in Mineral Agg	102	0	0	0		102	
		Job mix in AC Plant	64	0	0	0		64	
17	BITUMEN SPREAD TEST								
	Prime coat	Application rate	20	28	28	0		48	
	Tack coat	Application rate	10	28	28	0		38	
18	Machines/Equipment								
	Caliberation of compressive	1000KN Manuall	3	0	0	0		2	
	Testing machine	500 KN Manuall	3	0	0	0		2	
	C.B.R Machine	50KN/30KN	2	0	0	0		2	
	Marshall Stability Machine	50KN/25KN	2	0	0	0		2	
19	MISCELLANEOUS								
	G.I Wire(Gabion Boxes)		5	0	0	0		5	
	Factory Test Report of Cement		8	0	0	0		8	
	Factory Test Report of Iron Steel		25	0	0	0		25	
	Factory Test Report of 80/100 Bitumen		2	0	0	0		2	
	Factory Test Report of UPVC/HDP Pipe		2	0	0	0		2	
	UPVC/HDP Pipe Test Result		2	0	0	0		2	

MDD/OMC = Max Dry Dennsity
Optimum Moisture Content
SSS = Sodium Sulphate Soundness
ACV = Aggregtae Crushing Value
CBR=California Bearing Ratio

LAA = Los Angeles Abrasion
SE=Sand Equivqlent
AIV=Aggregate Impact Value
JMC=Job Mix Formula
C.R=Crushing Ratio

SMEC-Brisbane-AQUA-BDA-CEMAT
Approved by C.S.E
Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Prepaid by Q.C Manager
Contractors Reps

Secondary Town Integrated Urban Environmental Improvement Project

Biratnagar Sub-Metropolitan city

Contract Package: STIUEIP/W/BRT/ICB-01

DAILY WEATHER RECORD

FOR THE MONTH OF MAY 2017

Date	WEATHER Record						Temp.c		
	Sunny	Foggy	Cloudy	Morning Rain HRS	Night Rain Hrs.	Day Rain Hrs.	9:00 AM	5:00 PM	Rain Fall MM
1	Sunny				Night Rain Hrs.		27.8	25.6	60
2	Sunny						28	24.8	
3	Sunny						27.6	24.6	
4	Sunny						27.4	25.2	
5			Cloudy	Morning Rain HRS	Night Rain Hrs.		28.0	25.7	130
6	Sunny						29	26	
7	Sunny						29.5	26.2	
8	Sunny						29.8	26	
9	Sunny				Night Rain Hrs.		28	26	52
10	Sunny				Night Rain Hrs.		29	27.2	40
11	Sunny						29.6	26.2	
12	Sunny						29.5	26.6	
13			Cloudy	Morning Rain HRS			28.5	26.2	30
14	Sunny						29.5	26	
15			Cloudy	Morning Rain HRS			28.2	25.8	120
16	Sunny						29.8	26.4	
17	Sunny						30.2	26.5	
18	Sunny						29.5	27.1	
19	Sunny						29.1	27	
20	Sunny						30.1	26.2	
21			Cloudy	Morning Rain HRS			29.2	25.2	42
22	Sunny						29.8	26.2	
23	Sunny						28.6	26	
24			Cloudy	Morning Rain HRS			27.4	25.2	29.5
25			Cloudy	Morning Rain HRS			26.2	26.2	32
26	Sunny						28.2	27.4	
27	Sunny				Night Rain Hrs.		28	27.2	89.5
28	Sunny						29.2	27	
29			Cloudy	Morning Rain HRS			28.6	28	110
30			Cloudy	Morning Rain HRS			25	24	102
31	Sunny						26	22	
							Total Rain Fall		837

SMEC-Brisbane-AQUA-CEMAT-BDA	CTCE-KALIKA J/V
Approved By C.S.E	Submitted By Project Manager
Record Checked By A.C.S.E	Record Reported By Q.C Manager
Consultant Reps	Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

Biratnagar-Sub-Metropolitant City

SUMMARY OF MORTAR COMPRESSIVE STRENGTH TEST WORK MIX CUBE

FOR THE MONTH OF MAY 2017

P.G-1

S.N.	LAB REF No.	Name of CEMENT	Location/Structure	Details of MIX	Casting	Consistency & Setting Time			7 day's cube Crushing		28 day's cube crushing		Remarks
						Norm. Const.	Intial(min.)	Final(min.)	Date	Str. N/mm2	Date	Str. N/mm2	
1	759	KOSHI	High way Man Hole	1:4 by volume	3/4/2017	35.80	200	295	10/4/2017	6.00	1/5/2017	7.90	
2	760	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	3/4/2017	35.80	200	295	10/4/2017	6.90	1/5/2017	8.70	
3	761	KOSHI	WWTP RIP RAP 9-C	1:4 by volume	4/4/2017	36.20	190	305	11/4/2017	7.60	2/5/2017	9.10	
4	762	KOSHI	R-8 Line	1:4 by volume	9/4/2017	35.20	185	295	16/4/2017	5.90	7/5/2017	7.80	
5	763	KOSHI	High way Man Hole	1:4 by volume	9/4/2017	35.20	185	195	16/4/2017	6.50	7/5/2017	7.90	
6	764	KOSHI	WWTP RIP RAP 9-B	1:4 by volume	12/4/2017	35.80	205	285	19/4/2017	6.40	10/5/2017	8.40	
7	765	KOSHI	WWTP RIP RAP 9-B	1:4 by volume	19/4/2017	35.90	180	305	26/4/2017	7.60	18/5/2017	8.60	
8	766	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	20/4/2017	36.40	210	285	274/2017	8.00	19/5/2017	9.50	
9	767	KOSHI	WWTP RIP RAP 8-C	1:3 by volume	24/4/2017	35.70	195	295	1/5/2017	7.90	23/5/2017	9.70	
10	768	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	26/4/2017	35.90	205	310	3/5/2017	7.60	25/5/2017	9.40	
							MIN 45m	Max 600m	Required strength on 28 days not less than 7.5 N/MM2				
							MIN 45m	Max 600m	Required strength on 28 days More than 7.5 N/MM2 at 1:3				

SMEC-Brisbane-AQUA-CEMAT-BDA
Approved by Construction Supervision Engineer/CSE
Test Checked by A.C.S.E
Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractore Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summary of Fine Concrete Aggregates Sand FOR THE MONTH OF MAY 2017

S.N.	DESCRIPTION / LOCATION	LAB REF. NO:	Grain Size Distribution							REMARKS
			10	4.75	2.36	1.18	0.6	0.3	0.15	
1	WWTP SLUMP WELL	MR 408	100.00	94.00	84.00	65.20	47.20	21.20	5.20	source
2	WWTP SLUMP WELL	MR409	100.00	94.80	83.60	66.00	47.60	22.40	5.60	om shree
3	WWTP SLUMP WELL	MR 410	100.00	94.00	81.60	64.80	46.80	22.00	6.00	Crusher Plant
4	WWTP SLUMP WELL	MR 411	100.00	93.20	80.00	63.60	44.80	21.20	4.40	Chisang Morang
5	WWTP SLUMP WELL	MR 412	100.00	91.20	78.80	63.20	45.60	22.80	6.40	
6	From Contractor Yard	MR 413	100.00	92.00	78.80	62.40	44.40	22.00	4.40	
7	From Contractor Yard	MR 414	100.00	92.80	78.80	62.80	45.20	22.00	4.80	
8	From Contractor Yard	MR 415	100.00	93.60	78.40	62.00	44.00	21.20	5.20	
9	From Contractor Yard	MR 416	100.00	94.00	79.20	59.60	41.20	20.00	5.60	
10	From Contractor Yard	MR 417	100.00	94.80	78.40	58.40	40.80	18.80	5.20	
11	From A-1 Concrete Work	MR 418	100.00	95.20	79.20	58.80	40.80	19.60	5.60	
12	From A-1 Concrete Work	MR 419	100.00	95.60	80.40	59.60	41.20	19.60	5.20	
13	From A-1 Concrete Work	MR 420	100.00	94.80	77.20	56.80	39.20	18.00	4.40	
14	From A-1 Concrete Work	MR 421	100.00	96.00	78.80	57.20	38.80	18.80	5.20	
15	From A-1 Concrete Work	MR 422	100.00	94.00	77.20	56.00	37.20	17.60	5.20	
16	From WWTP	MR 423	100.00	92.52	77.60	60.72	44.80	20.27	6.40	
17	From WWTP	MR 424	100.00	94.46	81.54	61.23	43.69	21.85	6.60	
18	From WWTP	MR 425	100.00	93.84	75.60	57.60	44.50	18.95	6.30	
19	From WWTP	MR 426	100.00	95.76	76.40	56.46	42.76	18.02	5.61	
20	From WWTP	MR 427	100.00	94.39	77.54	58.96	42.82	17.82	5.46	
Specifacation Limit is 383-1970 Zone -2			100-100	90-100	75-100	55-90	35-59	8-30	0-10	

SMEC-BRISBANE-AQUA-CEMAT-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summary of Fine Concrete Aggregates Sand FOR THE MONTH OF MAY 2017

S.N.	DESCRIPTION / LOCATION	LAB REF. NO:	Grain Size Distribution							REMARKS
			10	4.75	2.36	1.18	0.6	0.3	0.15	
21	R-8 Line	MR428	100.00	91.10	80.00	62.60	38.40	22.50	6.10	source
22	R-8 Line	MR 429	100.00	92.00	81.00	63.00	38.42	22.60	6.42	om shree
23	R-8 Line	MR 430	100.00	92.40	80.00	64.20	41.62	21.82	5.62	Crusher Plant
24	R-8 Line	MR 431	100.00	93.00	79.00	60.00	43.22	21.62	6.10	Chisang Morang
25	R-8 Line	MR 432	100.00	92.80	78.00	57.60	35.62	23.42	4.82	
26	R-28 Line	MR 433	100.00	93.00	82.80	57.80	36.44	18.68	3.22	
27	R-28Line	MR 434	100.00	92.00	80.40	58.20	39.10	17.62	3.42	
28	R-28 Line	MR 435	100.00	92.40	79.80	57.40	38.20	19.20	4.42	
29	R-28 Line	MR 436	100.00	92.80	79.40	57.60	37.62	19.42	5.22	
30	R-28 Line	MR 437	100.00	93.40	79.00	56.80	41.20	20.42	3.42	
31	S-5 Line	MR 438	100.00	93.40	78.46	58.00	39.42	210.60	5.22	
32	S-5 Line	MR 439	100.00	95.80	78.40	59.62	41.22	20.62	5.26	
33	S-5 Line	MR 440	100.00	95.40	78.00	55.00	41.62	20.10	5.82	
34	S-5 Line	MR 441	100.00	92.20	80.60	56.80	40.66	19.80	5.44	
35	S-5 Line	MR 442	100.00	92.44	80.62	59.60	40.74	21.42	5.40	
36	R-29 Line	MR 443	100.00	92.60	80.42	63.60	38.46	22.62	5.66	
37	R-29 Line	MR 444	100.00	91.00	79.86	65.22	41.62	21.90	6.10	
38	CN3 Line	MR 445	100.00	93.46	78.00	64.10	43.20	23.46	4.94	
39	CN3 Line	MR 446	100.00	93.68	78.42	61.26	36.62	18.90	3.36	
40	CN3 Line	MR 447	100.00	94.10	80.68	58.60	36.48	17.64	4.46	
Specifacation Limit is 383-1970 Zone -2			100-100	90-100	75-100	35-59	35-59	8-30	0-10	

SMEC-BRISBANE-AQUA-CEMAT-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City P.G-1

Summery of Concrete Crushed Aggregate 20mm down For The Month of MAY 2017

S.N.	DESCRIPTION / SOURCE	LAB REF. NO.	Grain Size Distribution				FI %	LAA %	ACV %	REMARKS
			25	20	10	4.75				
1	WWTP SLUMP WELL Bottom Plug	MR 368	100	97.04	35.20	4.15	13.08	33.16	21.1	Aggregates
2	WWTP SLUMP WELL Bottom Plug	MR 369	100	97.56	36.89	3.23	13.60	33.20	20.2	Source
3	WWTP SLUMP WELL Bottom Plug	MR 370	100	97.50	38.51	3.46	13.78	33.40	20.8	Om shree
4	WWTP SLUMP WELL Bottom Plug	MR 371	100	97.73	38.71	3.48	13.80	33.44	21.6	CRUSHER
5	WWTP SLUMP WELL Bottom Plug	MR 372	100	97.66	37.65	3.31	13.66	33.50	20.8	
6	From Contractor Yard	MR 373	100	97.58	41.45	3.18	13.46	33.48	21.4	PLANT
7	From Contractor Yard	MR 374	100	97.18	40.14	2.80	13.50	33.66	21.8	
8	From Contractor Yard	MR 375	100	96.52	40.74	3.30	13.56	33.74	21.6	
9	From Contractor Yard	MR 376	100	96.04	41.66	3.24	13.60	33.74	21.8	
10	From Contractor Yard	MR 377	100	95.92	42.72	4.73	13.50	33.66	21.6	
11	From A-1 Works	MR 378	100	96.16	40.81	3.41	13.23	33.56	20.8	
12	From A-1 Works	MR 379	100	96.33	38.40	2.97	13.40	34.10	21.8	
Section 900:IS 383-1970 Required			100	95-100	25-55	0-10	Less 15%	Less 35%	Less 30%	

SMEC-Brisbane-AQUA-CEMAT-BDA
Approved by CSE
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

P.G-1

Summery of Concrete Crushed Aggregate 20mm down For The Month of MAY 2017

S.N.	DESCRIPTION / SOURCE	LAB REF. NO.	Grain Size Distribution				FI %	LAA %	ACV %	REMARKS
			25	20	10	4.75				
13	From A-1 Works	MR 380	100	96.09	40.70	3.25	13.40	33.46	21.0	Aggregates
14	From A-1 Works	MR 381	100	95.47	42.95	3.51	13.50	33.50	21.4	Source
15	From A-1 Works	MR 382	100	95.90	38.41	3.89	13.46	33.46	20.8	Om shree
16	From Contractor Yard	MR 383	100	96.17	39.43	3.84	13.42	33.80	21.6	CRUSHER
17	From Contractor Yard	MR 384	100	96.20	39.46	3.64	13.40	33.60	21.4	
18	From Contractor Yard	MR 385	100	96.48	42.88	3.24	13.50	33.40	21.2	PLANT
19	From Contractor Yard	MR 386	100	96.36	37.27	3.03	13.54	33.20	21.4	
20	From Contractor Yard	MR 387	100	97.61	37.71	3.52	13.44	33.10	21.8	
21	From A-1 Works	MR 388	100	97.61	35.23	2.67	13.42	33.16	21.3	
22	From A-1 Works	MR 389	100	96.92	39.81	3.11	13.40	33.10	21.4	
23	From A-1 Works	MR 390	100	96.16	35.60	3.34	13.64	33.44	22.6	
24	From A-1 Works	MR 391	100	96.29	35.47	2.99	13.74	34.10	20.8	
25	From A-1 Works	MR 392	100	96.65	35.49	3.05	13.68	33.68	21.0	
Section 900:IS 383-1970 Required			100	95-100	25-55	0-10	Less 15%	Less 35%	Less 30%	

SMEC-Brisbane-AQUA-CEMAT-BDA
Approved by CSE
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 SLAB CASTING WORK MIX

FOR THE MONTH OF MAY 2017

P.G-1

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location	Ratio by VOLUME				Materials		Cube Crushing ,N/mm2		Remarks
				Structure	Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	293	4/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.4	22.2	
2	294	5/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.5	22.1	
3	295	6/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.0	21.7	
4	296	7/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.1	22.1	
5	297	8/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.5	22.3	
6	298	9/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.8	22.3	
7	299	10/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.6	22.2	
8	300	11/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.2	22.4	
9	301	12/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.4	22.5	
10	302	13/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.6	21.5	
11	303	14/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	21.6	
12	304	15/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	22.0	
13	305	16/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	22.5	
14	306	17/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.5	21.6	
15	307	18/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.9	21.4	
16	308	19/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.2	22.1	
17	309	20/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.9	22.3	
18	310	21/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.6	22.4	
19	311	22/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.4	22.2	
20	312	23/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.3	21.8	
21	313	24/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.9	22.0	
22	314	25/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.3	22.0	
Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength										Min Required	13.4	20	

SMEC-Brisbane-AQUA-BDA
Approved by Construction Supervision Engineer/CSE
Test checked by A.C.S.E
Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 SLAB CASTING WORK MIX

FOR THE MONTH OF may 2017

P.G-2

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by VOLUME				Materials		Cube Crushing ,N/mm2		Remarks
					Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
23	315	26/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.1	21.6	
24	316	27/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.1	21.8	
25	317	28/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.6	22.1	
26	318	29/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.1	21.2	
27	319	30/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.3	21.1	
28	320	31/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	21.2	
29	321	1/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	21.8	
30	322	1/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.3	21.4	
31	323	1/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.2	21.2	
32	324	2/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.3	21.9	
33	325	2/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.5	22.0	
34	326	2/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.8	22.1	
35	327	3/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.1	21.9	
36	328	3/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	21.7	
37	329	3/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	22.1	

SMEC-Brisbane-AQUA-BDA
Approved by Construction Supervision Engineer/CSE
Test checked by A.C.S.E
Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M30/20 MAN HOLE CASTING WORK MIX

FOR THE MONTH OF MAY 2017

P.G-1

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location	Ratio by Volume				Materials		Cube Crushing ,N/mm2		Remarks
				Structure	Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	336	4/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	31.4	
2	337	5/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.6	
3	338	6/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.6	
4	339	7/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	31.4	
5	340	8/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.4	
6	341	9/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.0	32.1	
7	342	10/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.0	32.1	
8	343	10/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.0	32.1	
9	344	11/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	32.1	
10	345	11/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	32.4	
11	346	12/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	32.2	
12	347	12/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.1	
13	348	13/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	32.3	
14	349	13/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	32.1	
15	350	14/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.3	
16	351	14/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.2	
17	352	15/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	32.2	
Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength										Min Required	20.1	30	

SMEC-Brisbane-AQUA-BDA
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CTCE-KALIKA J/V
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Test conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M30/20 MAN HOLE CASTING WORK MIX

FOR THE MONTH OF MAY 2017

P.G-2

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location / Structure	Ratio by Volume				Materials		Cube Crushing ,N/mm2		Remarks
					Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
18	353	15/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.1	
19	354	15/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	32.5	
20	355	16/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	32.2	
21	356	16/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.4	
22	357	16/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	32.4	
23	358	17/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	32.5	
24	359	17/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.2	
25	360	17/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.3	
26	361	18/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	31.8	
27	362	18/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.8	31.8	
28	363	18/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	32.1	
29	364	19/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.1	
30	365	19/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.8	32.3	
31	366	19/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	32.1	
32	367	20/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	32.1	
33	368	20/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.7	31.7	
34	369	21/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.7	31.8	
Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength									Min Required		20.1	30	

SMEC-Brisbane-AQUA-BDA
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Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT
Biratnagar Sub-Metropolitant City
SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M30/20 MAN HOLE CASTING WORK MIX
FOR THE MONTH OF MAY 2017

P.G-3

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by Volume				Materials		Cube Crushing ,N/mm2		Remarks
					Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
35	370	21/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	31.6	
36	371	21/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.9	31.7	
37	372	21/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	32.5	
38	373	22/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	31.8	
39	374	22/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	32.0	
40	375	22/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.9	31.8	
41	376	23/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	32.2	
42	377	23/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.7	31.8	
43	378	23/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.9	32.2	
44	379	24/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.6	32.2	
45	380	24/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.0	
46	381	24/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	31.4	
47	382	25/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.6	31.8	
48	383	25/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.5	
49	384	25/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.5	32.2	
50	385	26/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.5	
51	386	26/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.9	32.0	
Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength									Min Required		20.1	30	

SMEC-Brisbane-AQUA-BDA
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Test checked by A.C.S.E
Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M30/20 MAN HOLE CASTING WORK MIX

FOR THE MONTH OF MAY 2017

P.G-4

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location	Ratio by Volume				Materials		Cube Crushing ,N/mm2		Remarks
				Structure	Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
52	387	28/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	32.2	
53	388	28/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	22.0	31.8	
54	389	28/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.1	
55	390	29/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	31.9	
56	391	29/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.4	
57	392	29/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	31.6	
58	393	30/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.5	31.4	
59	394	30/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	31.7	
60	395	30/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.7	
61	396	30/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.9	
62	397	1/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	31.5	
63	398	1/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	32.0	
64	399	1/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.4	
65	400	1/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	31.7	
66	401	2/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.7	
67	402	2/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.4	
68	403	3/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.6	
69	404	3/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.1	
70	405	3/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	32.2	
71	406	4/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	32.1	
72	407	4/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	32.0	
73	408	4/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.2	
Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength										Min Required	20.1	30	

SMEC-Brisbane-AQUA-BDA
Approved by Construction Supervision Engineer/CSE
Test checked by A.C.S.E
Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BiratnagarSub-Metropolitant City

CEMENT TEST SUMMERY

For the Month of MAY 2017

S.N.	Lab. Ref. NO.	Description of cement	Testing Date	Consistency & Setting Time			Remarks
				Norm. Const.	Intial(min.)	Final(min.)	
1	MR 321	SHIVAM OPC	1/5/2017	35.3	210	325	All Cement Are Nepali BRAND OPC
2	MR 322	SHIVAM OPC	1/5/2017	35.0	225	310	
3	MR 323	SHIVAM OPC	2/5/2017	34.3	215	325	
4	MR 324	SHIVAM OPC	3/5/2017	35.9	205	315	
5	MR 325	SHIVAM OPC	4/5/2017	36.6	200	305	
6	MR 326	SHIVAM OPC	5/5/2017	36.0	225	300	
7	MR 327	SHIVAM OPC	6/5/2017	36.1	240	305	
8	MR 328	KOSHI OPC	7/5/2017	36.3	210	305	
9	MR 329	SHIVAM OPC	8/5/2017	33.7	225	315	
10	MR 330	KOSHI OPC	9/5/2017	36.4	215	310	
11	MR 331	KOSHI OPC	10/5/2017	36.7	200	310	
12	MR 332	KOSHI OPC	11/5/2017	36.6	205	320	
13	MR 333	SHIVAM OPC	12/5/2017	37.0	235	340	
14	MR 334	SHIVAM OPC	13/5/2017	36.5	240	335	
15	MR 335	SHIVAM OPC	14/5/2017	34.3	240	340	
Requirements in accordance with BS 12					> 45 Min.	10 Hrs	

SMCE-Brisbane-AQUA-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractores Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BiratnagarSub-Metropolitant City

CEMENT TEST SUMMERY

For the Month of MAY 2017

S.N.	Lab. Ref. NO.	Description of cement	Testing Date	Consistency & Setting Time			Remarks
				Norm. Const.	Intial(min.)	Final(min.)	
16	MR 336	SHIVAM OPC	15/5/2017	36.3	210	315	All Cement Are Nepali BRAND OPC
17	MR 337	SHIVAM OPC	16/5/2017	36.6	200	340	
18	MR 338	SHIVAM OPC	17/5/2017	36.9	205	300	
19	MR 339	SHIVAM OPC	18/5/2017	37.0	230	315	
20	MR 340	SHIVAM OPC	19/5/2017	37.0	225	325	
21	MR 341	SHIVAM OPC	20/5/2017	37.0	220	320	
22	MR 342	SHIVAM OPC	21/5/2017	37.1	205	325	
23	MR 343	KOSHI OPC	22/5/2017	36.7	200	325	
24	MR 344	SHIVAM OPC	23/5/2017	37.6	205	310	
25	MR 345	SHIVAM OPC	24/5/2017	37.0	200	315	
26	MR 346	SHIVAM OPC	25/5/2017	36.7	200	300	
27	MR 347	SHIVAM OPC	26/5/2017	36.9	215	325	
28	MR 348	SHIVAM OPC	27/5/2017	36.4	225	330	
29	MR 349	KOSHI OPC	28/5/2017	39.6	235	335	
30	MR 350	KOSHI OPC	29/5/2017	39.0	255	350	
Requirements in accordance with BS 12					> 45 Min.	10 Hrs	

SMCE-Brisbane-AQUA-BDA
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CTCE-KALIKA J/V
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Contractores Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

MONTHLY Test Result Summary Sheet For The Month of MAY 2017

STIUEIP

SUB BASE (Process Control)

According to Part 2.Section 6A-Technical Specifacations&DOR Specifacation Section 1201(3)C Physical Requirement P.G-1

SN No	LAB Ref NO	Date Tested	Location/ Chainage/Station	Grading sieve size (mm) (% passing by weight)								Lab. MDD (g/cc)	Soaked CBR (%)	Lab. OMC (%)	Remarks
				63	37.5	20	10	5	2.360	1.18	0.075				
16	226	1/5/2017	OM SHREE CRUSHER PLANT	100	85.76	59.11	46.58	40.24	34.13	27.20	4.83	2.230	38.00	6.60	
17	227	1/5/2017	OM SHREE CRUSHER PLANT	100	87.06	61.28	49.43	36.78	30.82	23.68	4.67				
18	228	2/5/2017	R-27 Line CH:0+350 to 0+455	100	87.74	63.69	50.17	37.51	29.68	22.60	4.98	2.230	40.00	6.60	
19	229	2/5/2017	R-27 Line CH:0+350 to 0+455	100	87.40	62.59	50.11	36.48	27.62	21.32	4.68				
20	230	2/5/2017	R-27 Line CH:0+350 to 0+455	100	90.50	64.36	51.33	36.55	27.80	20.53	4.56				
21	231	5/5/2017	R-107 Line CH:0+180 to 0+345	100	90.63	64.96	51.67	35.17	25.10	17.40	4.61	2.230	42.00	6.60	
22	232	5/5/2017	R-107 Line CH:0+180 to 0+345	100	88.36	64.24	51.30	37.97	27.04	18.48	5.02				
23	233	5/5/2017	R-107 Line CH:0+180 to 0+345	100	89.72	64.56	51.11	37.04	25.50	16.66	4.98				
24	234	6/5/2017	T2L-19(V.X,W,Z)	100	91.37	72.50	57.79	45.23	32.29	22.50	6.76	2.230	38.50	6.60	
25	235	6/5/2017	T2L-19(V.X,W,Z)	100	91.17	72.99	57.20	43.90	32.17	21.57	6.84				
26	236	6/5/2017	T2L-19(V.X,W,Z)	100	91.68	72.95	54.61	40.75	29.26	19.84	5.01				
27	237	10/5/2017	R-14 Line CH:0+000 to 0+200	100	89.77	73.11	59.85	41.72	32.03	24.64	5.84				
28	238	10/5/2017	R-14 Line CH:0+000 to 0+200	100	91.00	75.40	53.05	36.43	27.05	19.71	5.20	2.230	40.00	6.60	
29	239	10/5/2017	R-14 Line CH:0+000 to 0+200	100	91.20	76.08	54.11	37.79	28.71	19.65	5.58				
30	240	12/5/2017	R-36 Line CH:0+000 to 0+220	100	91.29	75.34	53.72	36.67	26.10	17.22	5.26	2.230	38.50	6.60	
				100	65-95	50-85	40-75	30-60	20-45	15-37	4 to 15		≥ 30		

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

CTCE-KALIKA J/V

Submit by Project Manager

Test Conducted by Q.C Manager

Consultant Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

MONTHLY Test Result Summary Sheet For The Month of MAY 2017

STIUEIP

SUB BASE (Process Control)

According to Part 2.Section 6A-Technical Specifacations&DOR Specifacation Section 1201(3)C Physical Requirement P.G-2

SN No	LAB Ref NO	Date Tested	Location/ Chainage/Station	Grading sieve size (mm) (% passing by weight)								Lab. MDD (g/cc)	Soaked CBR (%)	Lab. OMC (%)	Remarks
				63	37.5	20	10	5	2.360	1.18	0.075				
31	241	12/5/2017	R-36 Line CH:0+000 to 0+220	100	91.23	75.50	52.21	34.89	25.53	16.56	5.46				
32	242	12/5/2017	R-36 Line CH:0+000 to 0+220	100	91.02	73.67	49.86	32.58	23.08	15.27	5.81				
33	243	14/5/2017	T3L25(A) CH:0+000 to 0+123	100	90.87	72.44	50.88	33.09	23.11	15.55	5.82	2.230	38.00	6.60	
34	244	14/5/2017	T3L25(A) CH:0+000 to 0+123	100	91.35	73.08	52.82	34.86	24.40	16.67	5.25				
35	245	14/5/2017	T3L25(A) CH:0+000 to 0+123	100	91.72	75.33	55.28	37.80	26.87	18.33	5.48				
36	246	15/5/2017	R-12 Line CH:0+000 to 0+319	100	92.16	76.68	86.12	37.08	25.46	16.35	5.30	2.230	38.00	6.60	
37	247	15/5/2017	R-12 Line CH:0+000 to 0+319	100	89.99	76.40	60.67	39.20	26.61	18.28	6.02				
38	248	15/5/2017	R-12 Line CH:0+000 to 0+319	100	91.06	80.15	61.60	41.70	25.87	17.30	4.99				
39	249	15/5/2017	R-75 Line CH:0+000 to 0+273	100	92.47	81.64	63.26	42.14	26.19	17.66	5.12	2.230	35.50	6.60	
40	250	15/5/2017	R-75 Line CH:0+000 to 0+273	100	93.19	80.91	62.58	41.34	25.21	16.70	4.92				
41	251	15/5/2017	R-75 Line CH:0+000 to 0+273	100	94.17	82.34	62.81	42.03	25.75	17.13	5.06				
42	252	16/5/2017	R-78 Line CH:0+000 to 0+093	100	94.21	80.51	61.87	41.66	26.10	17.48	5.87	2.230	42.00	6.60	
42	253	16/5/2017	R-78 Line CH:0+000 to 0+093	100	94.05	80.82	60.71	38.71	23.60	15.70	5.27				
44	254	17/5/2017	R-9(R-37 to R-30)LineCH:0+000 to +220	100	93.56	81.71	61.27	39.54	24.30	16.29	4.78	2.230	40.00	6.60	
45	255	17/5/2017	R-9(R-37 to R-30)LineCH:0+000 to +220	100	93.73	82.03	62.90	41.25	24.68	16.44	5.00				
				100	65-95	50-85	40-75	30-60	20-45	15-37	4 to 15		≥ 30		

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

CTCE-KALIKA J/V

Submit by Project Manager

Test Conducted by Q.C Manager

Consultant Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

MONTHLY Test Result Summary Sheet For The Month of MAY 2017

STIUEIP

SUB BASE (Process Control)

According to Part 2.Section 6A-Technical Specifacations&DOR Specifacation Section 1201(3)C Physical Requirement **P.G-3**

SN No	LAB Ref NO	Date Tested	Location/ Chainage/Station	Grading sieve size (mm) (% passing by weight)								Lab. MDD (g/cc)	Soaked CBR (%)	Lab. OMC (%)	Remarks
				63	37.5	20	10	5	2.360	1.18	0.075				
46	256	17/5/2017	R-9(R-37 to R-30)LineCH:0+000 to0 +220	100	94.76	82.52	63.86	42.01	27.18	18.57	5.90				
23	257	19/5/2017	R-40 Line CH:0+000 to 0+200	100	92.09	82.29	65.87	45.96	30.70	17.26	4.98	2.230	38.00	6.60	
48	258	19/5/2017	R-40 Line CH:0+000 to 0+200	100	93.08	83.16	66.94	46.94	31.36	16.59	5.33				
49	259	19/5/2017	R-40 Line CH:0+000 to 0+200	100	93.02	82.44	64.86	43.86	28.68	17.86	5.85				
50	260	19/5/2017	R-40 Line CH:0+000 to 0+200	100	94.03	82.91	64.72	42.32	27.89	16.74	5.38				
51	261	22/5/2017	R-7 Line CH:2+670 to 2+955	100	82.70	61.90	61.90	47.20	36.94	20.10	5.60	2.230	39.50	6.60	
52	262	22/5/2017	R-7 Line CH:2+670 to 2+955	100	80.20	60.60	60.80	45.60	36.00	18.68	6.40				
53	263	22/5/2017	R-7 Line CH:2+670 to 2+955	100	86.10	65.20	65.20	51.00	39.40	20.00	7.90				
54	264	23/5/2017	R-8 Line CH:1+660 to 1+840	100	86.70	70.60	70.60	58.30	49.00	23.05	5.30	2.230	40.00	6.60	
55	265	23/5/2017	R-8 Line CH:1+660 to 1+840	100	87.60	71.90	71.90	60.38	46.00	21.70	5.60				
56	266	23/5/2017	R-8 Line CH:1+660 to 1+840	100	89.75	67.90	97.90	55.93	49.52	21.40	6.47				
57	267	23/5/2017	T3L29 Line CH;0+000 to 0+090	100	91.70	72.30	72.30	60.26	47.46	24.90	6.73	2.230	40.00	6.60	
58	268	23/5/2017	T3L29 Line CH;0+000 to 0+090	100	91.10	71.10	71.20	58.62	48.00	22.85	6.90				
59	269	24/5/2017	T3L24 (R3 to R-8)Line CH:0+000 to 0+033	100	90.20	71.60	71.60	58.90	46.98	22.80	6.70	2.230	40.00	6.60	
60	270	24/5/2017	T3L24 (R3 to R-8)Line CH:0+000 to 0+033	100	90.95	71.26	71.30	57.20	46.60	21.50	6.60				
				100	65-95	50-85	40-75	30-60	20-45	15-37	4 to 15		≥ 30		

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

CTCE-KALIKA J/V

Submit by Project Manager

Test Conducted by Q.C Manager

Consultant Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 , M25/20 & M30/20 Work Mix

FOR THE MONTH OF MAY 2017

P.G-1

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by Volume				Type of Material		Cube Crushing ,N/mm2		Remarks
					water	Cement	Sand	Aggregates	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	733	7/4/2017	M30 Work Mix	Slum Well 7th Lift WWTP	0.36	1	1.3	2	Shivam	Om shree C/plant	23.10	30.81	Add mix=0.5%
2	734	8/4/2017	M20 Work Mix	WWTP Side Drain Pcc Bed	0.50	1	2	3.5	Shivam	Om shree C/plant	17.19	21.63	
3	735	9/4/2017	M25 Work Mix	R-21 Slab Crossing RCC Deck Slab	0.46	1	1.5	3	Shivam	Om shree C/plant	17.48	25.93	
4	736	10/4/2017	M20 Work Mix	R-21 PCC Bed Level	0.50	1	2	3.5	Shivam	Om shree C/plant	16.00	20.59	
5	737	20/4/2017	M20 Work Mix	Sludge Bed Level WWTP	0.50	1	2	3.5	Shivam	Om shree C/plant	16.00	20.59	
6	738	24/4/2017	M25 Work Mix	R-21 Slab Crossing RCC Deck Slab	0.46	1	1.5	3	Shivam	Om shree C/plant	17.19	26.22	
7	739	25/4/2017	M20 Work Mix	Sludge Bed Level WWTP	0.50	1	2	3.5	Shivam	Om shree C/plant	16.30	21.19	
8	740	1/5/2017	M25 Work mix	WWTP Bottom plug(with fiber hook)	0.46	1	1.5	3	Shivam	Om shree C/plant	16.96	38.89	Slump-170mm
9	741	1/5/2017	M25Work mix	WWTP Bottom plug(only with ad-Mixture)	0.46	1	1.5	3	Shivam	Om shree C/plant	20.74	28.52	Slump-170mm
10	742	1/5/2017	M25 Work mix	WWTP Bottom plug(only with ad-Mixture)	0.46	1	1.5	3	Shivam	Om shree C/plant	21.04	28.15	Slump-165mm
11	743	1/5/2017	M25 Work mix	WWTP Bottom plug(only with ad-Mixture)	0.46	1	1.5	3	Shivam	Om shree C/plant	21.19	28.89	Slump-160mm
12	744	2/5/2017	M20 Work Mix	S-5 Line PCC Bed	0.50	1	2	3.5	Shivam	Om shree C/plant	15.23	20.96	
13	745	3/5/2017	M20 Work Mix	R-8 Line PCC BED	0.50	1	2	3.5	Shivam	Om shree C/plant	15.41	21.33	
14	746	3/5/2017	M20 Work Mix	S-5 Line PCC Bed	0.50	1	2	3.5	Shivam	Om shree C/plant	15.41	21.33	

Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength	Min Required	13.4	20
Specifacation Limit Table For M25/20 on 7 days Age Min 67% of Total Compressive Strength	Min Required	16.75	25
Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength	Min Required	20.1	30

SMEC-Brisbane-AQUA-BDA
Approved by Construction Supervision Engineer/CSE
Test checked by A.C.S.E
Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractors Reps

Secondary Towns Integrated Uraban Environmental Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of MAY 2017

COMPRESSIVE STRENGTH OF BRICKS (Process Control Test) P.G-1

SN No	Ref. STIUEIP LAB/	Date of Testing	Location	Chanage	BRAND NAME 1 st class brick	Compressive Strength N/mm2	SCALE OF Sample From
1	577	4/5/2017	R-8 Line	R-8 Line	ANAND	10.4	
2	578	4/5/2017	R-8 Line	R-8 Line	ANAND	10.8	
3	579	4/5/2017	R-8 Line	R-8 Line	ANAND	10.1	
4	580	4/5/2017	R-8 Line	R-8 Line	ANAND	10.2	
5	581	6/5/2017	R-40 Line	R-40 Line	N&B	10.5	
6	582	6/5/2017	R-40 Line	R-40 Line	N&B	10.7	
7	583	10/5/2017	R-28 Line	R-28 Line	AMBEY	10.4	
8	584	10/5/2017	R-28 Line	R-28 Line	AMBEY	10.2	
9	585	14/5/2017	High way	MAN HOLE	AMBEY	10.5	
10	586	14/5/2017	High way	MAN HOLE	AMBEY	10.4	
11	587	16/5/217	R-21 Line	R-21 Line	AMBEY	10.1	
12	588	16/5/217	R-21 Line	R-21 Line	AMBEY	10.0	
13	589	18/5/2017	S-5 Line	S-5 Line	AMBEY	10.4	
14	590	18/5/2017	S-5 Line	S-5 Line	AMBEY	10.4	
15	591	20/5/2017	R-7 Line	R-7 Line	AMBEY	10.6	
16	592	20/5/2017	R-7 Line	R-7 Line	AMBEY	10.6	
17	593	20/5/2017	T2L26 F Line	T2L26 F Line	AMBEY	10.4	
18	594	20/5/2017	T2L26 F Line	T2L26 F Line	AMBEY	10.2	
19	595	20/5/2017	T2L26 F Line	T2L26 F Line	AMBEY	10.2	
Specification					IS1077,IS2180or NS1/2035	> 10N/MM2	

SMEC-Brisbane-AQUA-BDA-CEMAT

Approved by Construction Supervision Engineer

Test Checked by A.C.S.E

Consultantr Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMERY OF LAB TEST RESULT OF SUB GRADE

(For the Month of MAY 2017)

P.G-1

S.N.	LAB REF. NO.	DESCRIPTION OF MATERIAL	Line	Chanage/Location	Modified ProctorGm/CC		CBR	REMARKS
					MDD	OMC %	%	
1	MR 93	Sub Grade	R-27 Line	0+680 to 0+805	1.980	9.00	6.00	
2	MR 94	Sub Grade	T2L19(W,X,V,)	0+00 to 0+057	1.980	9.00	5.50	
3	MR95	Sub Grade	R-10 Line	0+000 to 0+287	1.980	9.00	6.00	
4	MR 96	Sub Grade	R-40 Line	0+000 to 0+200	1.980	9.00	6.00	
5	MR 97	Sub Grade	R-36 Line	0+000 to 0+220	1.980	9.00	6.0	
6	MR 98	Sub Grade	R-9 Line	0+000 to 0+230	1.980	9.00	5.5	
7	MR 99	Sub Grade	T2L19(Y,Z)	0+000 to 0+056	1.980	9.00	6.0	
8	MR100	Sub Grade	WWTP inner Road	0+000 to 0+400	1.980	9.00	6.5	
9	MR 101	Sub Grade	T3L27	0+000 to 0+060	1.980	9.00	5.5	
10	MR 102	Sub Grade	R-7 Line	3+240 to 3+380	1.980	9.00	7.0	
11	MR 103	Sub Grade	R-2 Line	7+120 to 7+319	1.980	9.00	7.0	
12	MR 104	Sub Grade	T2L19	0+000 to 0+070	1.980	9.00	6.5	
13	MR 105	Sub Grade	T2L19(F)	0+000 to 0+116	1.980	9.00	6.0	
14	MR 106	Sub Grade	T2L18/R6 Line	3+039 to 2+851	1.980	9.00	5.75	
15	MR 107	Sub Grade	T1L13 Line	0+080 to 0+165	1.980	9.00	5.50	
16	MR 108	Sub Grade	R-7 Line	2+670 to 2+957	1.980	9.00	6.25	
17	MR109	Sub Grade	R-8 Line	1+660 to 1+840	1.980	9.00	6.40	
18	MR 110	Sub Grade	R-27 East	0+820 to 1+000	1.980	9.00	6.30	
AS PER Standard Specification For Roade and Bridge worksSection 1003(1)/AASHTO T 193-81							Min 5%	

SMEC-Brisbane-AQUA-CEMAT-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -60:R-27 Line 0+350 to 0+455

FDT-61: R-107 Line 0+180 to 0+345

FDT-62:T2L19(V) Line 0+000 to 0+198

FDT-63:T2L18(X) & T2L19(Z) Line 0+000 to 0+058 & 0+000 to 0+056

SUB BASE P.G-1

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-60	3/5/2017	0+455 RHS	2.17	97.75	6.0	14.5
2			0+400 LHS	2.13	95.95	5.0	15.0
3			0+380 CL	2.17	97.75	6.0	15.5
1	FDT-61	15/5/2017	00+280 LHS	2.20	98.66	4.0	14.5
2			0+330 RHS	2.17	97.18	4.0	15.0
3			0+245 CL	2.16	96.96	4.0	14.5
4			0+190 LHS	2.16	96.96	5.0	15.0
1	FDT-62	15/5/2017	0+020 LHS	2.18	97.92	4.00	14.5
2			0+080 RHS	2.18	97.92	5.00	15.0
3			0+140 LHS	2.21	98.99	5.00	15.0
4			0+190 CL	2.14	95.93	4.00	15.0
1	FDT-63	15/5/2017	0+020 LHS	2.13	95.51	4.00	15.0
2			0+050 RHS	2.13	95.51	3.00	15.0
3			0+010 LHS	2.21	99.10	5.00	15.0
4			0+050 RHS	2.20	98.54	5.00	15.0
Required				2.230	95%	OMC <6.5	

SMEC-Brisbane -AQUA-CEMAT-BDA	CTCE-KALIKA J/V
Approved by C.S.E	Submitted by Project Manager
Test Checked by A.C.S.E	Test Conducted by Q.C Manager
Consultant Reps	Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -64:T2L19(Y) & T2L19(W) 0+000to 0+108 & 0+000to 0+057

FDT-65:R-14 Line 0+000to 0+200

FDT-66:R36 Line 0+000 to 0+220

FDT-67:T3L25(A) 0+000 to 0+123

SUB BASE P.G-2

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-64	15/5/2017	0+020 RHS	2.15	96.56	4.0	15.0
2			0+060 LHS	2.17	97.26	4.0	15.0
3			0+100 RHS	2.12	95.06	3.0	15.0
4			0+020 LHS	2.12	95.06	5.0	15.0
5			0+050 RHS	2.14	95.96	4.0	15.0
1	FDT-65	17/5/2017	0+020 LHS	2.19	98.27	5.0	15.0
2			0+060 RHS	2.21	98.89	5.0	14.5
3			0+110 LHS	2.16	96.74	4.0	15.0
4			0+160 RHS	2.20	98.70	6.0	14.5
5			0+195 LHS	2.20	98.70	5.0	15.0
1	FDT-66	17/5/2017	0+210 RHS	2.22	99.50	6.00	15.0
2			0+150 LHS	2.19	98.38	5.00	14.5
3			0+100 RHS	2.16	96.90	5.00	15.0
4			0+050 LHS	2.19	98.27	5.00	14.5
5			0+010 RHS	2.20	98.65	5.00	15.5
1	FDT-67	17/5/2017	0+020 RHS	2.18	97.70	4.00	15.0
2			0+070 CL	2.16	98.62	5.00	15.0
3			0+110 LHS	2.20	98.61	5.00	14.5
Required				2.230	95%	OMC <6.5	

SMEC-Brisbane -AQUA-CEMAT-BDA	CTCE-KALIKA J/V
Approved by C.S.E	Submitted by Project Manager
Test Checked by A.C.S.E	Test Conducted by Q.C Manager
Consultant Reps	Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -68:R-12 Line 0+000 to 0+319

FDT-69:R75 Line 0+000 to 0+273

FDT-70 :R-78 Line 0+000 to 0+093

FDT-71:R-9(R-37 to R-30)Line 0+000 to 0+220

SUB BASE P.G-3

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-68	17/5/2017	0+020 LHS	2.17	97.27	4.0	15.0
2			0+080 CL	2.16	97.07	5.0	15.0
3			0+140 RHS	2.15	96.24	5.0	14.5
4			0+200 LHS	2.2	98.43	5.0	15.0
5			0+250 CL	2.19	98.1	5.0	15.0
6			0+300 RHS	2.16	97.07	4.0	15.0
1	FDT-69	17/5/2017	0+010 LHS	2.16	96.76	4.0	15.0
2			0+060 CL	2.17	97.20	5.0	15.0
3			0+100 RHS	2.18	97.63	5.0	14.5
4			0+150 LHS	2.19	98.18	5.0	15.0
5			0+200 CL	2.19	98.18	5.0	15.0
6			0+250 RHS	2.14	95.96	4.0	15.0
1	FDT-70	17/5/2017	0+020 LHS	2.15	96.48	4.00	15.0
2			0+080 CL	2.18	97.89	5.00	15.0
1	FDT-71	18/5/2017	0+020 LHS	2.17	97.13	4.00	15.0
2			0+060 RHS	2.19	98.34	5.00	15.0
3			0+120 CL	2.18	97.69	4.00	15.0
4			0+180 LHS	2.17	97.13	5.00	15.0
5			0+210 CL	2.17	97.13	5.00	15.0
Required				2.230	95%	OMC <6.5	

SMEC-Brisbane -AQUA-CEMAT-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -72:R-40 Line 0+000 to 0+200

FDT-73:T2L19 Line 0+000 to 0+150

FDT-74:R-7 Line 2+670 to 2+857

FDT-75:R-8 Line 1+660 to 1+840

FDT-76:R27 East Line 0+820 to 1+000

SUB BASE P.G-4

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-72	18/5/2017	0+030 LHS	2.16	96.84	5.0	15.0
2			0+080 CL	2.18	97.79	6.0	15.0
3			0+140 RHS	2.2	98.5	4.0	15.0
4			0+190 LHS	2.19	98.07	6.0	15.0
1	FDT-73	24/5/2017	0+140 LHS	2.22	99.72	5.0	13.0
2			0+060 CL	2.21	99.10	6.0	14.5
3			0+010 RHS	2.21	99.10	6.0	16.0
1	FDT-74	24/5/2017	2+680 LHS	2.16	96.81	5.00	15.0
2			2+740 RHS	2.21	99.26	6.00	12.0 Less thickness
3			2+790 CL	2.16	96.81	5.00	15.0
4			2+850 RHS	2.20	98.80	5.00	16.0
5			2+890 LHS	2.21	99.26	5.00	16.0
6			2+950 LHS	2.13	95.44	4.00	15.0
1	FDT-75	31/5/2017	1+670 LHS	2.14	96.10	5.00	14.5
2			1+730 RHS	2.17	97.40	6.00	15.0
3			1+790 CL	2.20	98.80	6.00	14.5
4			1+830 LHS	2.13	95.60	5.00	15.0
1	FDT-76	31/5/2017	0+830 CL	2.16	97.20	6.00	15.0
2			0+890 LHS	2.15	96.50	5.00	15.0
3			0+940 RHS	2.18	98.20	6.00	15.5
4			0+990 CL	2.13	95.40	5.00	15.0
Required				2.230	95%	OMC <6.5	15

SMEC-Brisbane -AQUA-CEMAT-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -93:R-27 Line 0+680 to 0+805

FDT-94:T2L19(W) Line 0+730 to 0+790

FDT-95:T2IL19(X) Line 0+0000+058

FDT-96:T2L19(V) Line0+000 to 0+198

FDT-97:R-10 Line 0+000 to 0+287

FDT-98:R-40 Line 0+000 to 0+200

SUB GRADE P.G-1

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT -93	3/5/2017	0+790 LHS	1.94	98.23	4.0	14.0
2			0+730 RHS	1.97	99.27	5.0	15.0
3			0+690 CL	1.88	95.04	4.0	15.0
1	FDT-94	4/5/2017	0+790 LHS	1.95	98.52	5.0	15.0
2			0+730 RHS	1.90	95.91	4.0	15.0
1	FDT-95	4/5/2017	0+010 LHS	1.95	98.70	5.00	15.0
2			0+050 RHS	1.88	95.02	7.00	15.0
1	FDT-96	4/5/2017	0+100 LHS	1.95	98.45	4.00	15.0
2			0+150 RHS	1.89	95.30	4.00	15.0
1	FDT-97	4/5/2017	0+265 LHS	1.92	96.93	4.00	15.0
2			0+205 RHS	1.93	97.55	5.00	15.0
3			0+155 CL	1.92	96.93	5.00	14.5
4			0+100 LHS	1.90	95.96	4.00	15.0
5			0+050 RHS	1.95	98.74	5.00	15.0
6			0+010 LHS	1.93	97.55	5.00	15.0
1	FDT-98	6/5/2017	0+020 LHS	1.95	98.51	5.00	14.0
2			0+070 RHS	1.91	96.57	5.00	15.0
3			0+130 CL	1.93	97.63	5.00	14.5
4			0+190 CL	1.91	96.57	5.00	15.0
Required				1.980	95%	OMC <9.00	

SMEC-Brisbane -AQUA-CEMAT-BDA
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SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -99:R-36 Line 0+000 to 0+220

FDT-100:R9 Line 0+000 to 0+230

FDT-101: T2L19(Y) 0+000 to 0+108

FDT-102:T2L19(Z) 0+000 to 0+056

FDT-103:WWTP INNER ROAD Sourth To East 0+000 to 0+400

FDT-104:T3L27 Line 0+000 to 0+060

SUB GRADE P.G-2

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-99	6/5/2017	0+010 LHS	1.96	99.08	6.0	14.0
2			0+060 RHS	1.91	96.35	6.0	15.0
3			0+110 LHS	1.9	95.92	6.0	14.5
4			0+160 RHS	1.91	96.35	5.0	15.0
5			0+210 LHS	1.91	96.35	5.0	15.0
1	FDT-100	6/5/2017	0+020 LHS	1.91	96.42	5.0	14.0
2			0+070 RHS	1.91	96.42	5.0	15.0
3			0+120 CL	1.94	97.83	5.0	14.5
4			0+180 LHS	1.97	99.54	6.0	15.0
5			0+220 RHS	1.89	95.24	6.0	15.0
1	FDT-101	8/5/2017	0+010 LHS	1.93	97.43	6.00	14.5
2			0+060 RHS	1.90	95.80	4.00	15.0
3			0+100 LHS	1.95	98.31	5.00	15.0
1	FDT-102	8/5/2017	0+010 LHS	1.98	99.83	7.00	15.0
2			0+060 RHS	1.93	97.68	7.00	15.0
1	FDT-103	13/5/2017	0+020 LHS	1.91	96.46	7.00	15.0
2			0+060 RHS	1.95	98.48	7.00	15.0
3			0+120 CL	1.90	95.96	4.00	15.0
4			0+180 RHS	1.90	95.96	5.00	15.0
5			0+240 LHS	1.91	96.46	5.00	15.0
6			0+300 RHS	1.90	95.96	6.00	14.5
7			0+350 LHS	1.90	95.96	5.00	15.0
8			0+395 RHS	1.92	96.75	4.00	15.0
1	FDT-104	13/5/2017	0+010 LHS	1.94	97.82	5.00	14.5
2			0+050 RHS	1.97	99.66	6.00	15.0
Required				1.980	95%	OMC <9.00	

SMEC-Brisbane -AQUA-CEMAT-BDA
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Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -105:R-7 Line 3+240 to 3+380

FDT -106:R-2 Line 7+120 to 7+319

FDT-107: T2L19 Line 0+000 to 0+070

FDT:108:R-10 to R21 End line 0+910 to 1+082

FDT:109:T2L19 Line 0+070 to 0+150

FDT-110:T2L19(F) Line 0+000 to 0+116

FDT-110.1: T2 L18/R-6 Line 3+039 to 2+851

FDT-111:T1 L13 Line 0+080to 0+165

SUB GRADE P.G-3

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-105	18/5/2017	3+250 LHS	1.94	97.83	5.0	14.0
2			3+310 CL	1.89	95.52	6.0	15.0
3			3+370 RHS	1.91	96.26	4.0	15.0
1	FDT-106	18/5/2017	7+125 RHS	1.96	98.81	5.0	14.5
2			7+175 LHS	1.97	99.36	5.0	15.0
3			7+250 RHS	1.94	98.02	4.0	14.5
4			7+290 LHS	1.91	96.30	4.0	15.0
5			7+300 RHS	1.91	96.30	5.0	15.0
1	FDT-107	18/5/2017	0+010 LHS	1.93	97.25	4.00	14.0
2			0+040 CL	1.90	96.18	5.00	15.0
3			0+060 RHS	1.94	97.74	5.00	15.0
1	FDT-108	18/5/2017	0+915 RHS	1.94	98.06	4.00	14.0
2			0+965 LHS	1.92	96.74	4.00	15.0
3			1+025 RHS	1.90	95.72	4.00	15.0
4			1+075 LHS	1.92	96.74	5.00	15.0
1	FDT-109	19/5/2017	0+080 LHS	1.91	96.29	4.00	15.0
2			0+100 CL	1.92	97.15	4.00	15.0
3			0+140 RHS	1.93	97.31	4.00	15.0
1	FDT-110	19/5/2017	0+010 LHS	1.92	96.99	4.00	15.0
2			0+060 CL	1.91	96.47	5.00	15.0
3			0+110 RHS	1.92	96.99	4.00	15.0
1	FDT-110-1	19/5/2017	2+870 RHS	1.94	97.81	6.00	15.0
2			2+920 CL	1.93	97.66	5.00	15.0
3			0+970 LHS	1.95	98.56	6.00	15.0
4			3+010 RHS	1.91	96.26	5.00	15.0
1	FDT-111	20/5/2017	0+100 LHS	1.89	95.64	5.00	15.0
2			0+165 RHS	1.91	96.26	5.00	15.0
Required				1.980	95%	OMC <9.00	

SMEC-Brisbane -AQUA-CEMAT-BDA
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Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -112:R-27 Line 0+680 to 0+480

FDT-113:R-7 Line 2+670 to 2+857

FDT-114-R-7 Line 2+857 to 2+957

FDT-115-T1L13 Line 0+020 to 0+080

FDT-116-T1L14(A) Line 0+160 to 0+300

FDT-117-R-8 Line 1+660 to 1+840

SUB GRADE P.G-4

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-112	20/5/2017	0+670 LHS	1.91	96.69	4.0	15.0
2			0+610 RHS	1.91	96.69	4.0	15.0
3			0+550 LHS	1.91	96.69	5.0	15.0
4			0+500 RHS	1.90	95.86	3.0	14.5
5			0+480 CL	1.90	95.86	5.0	15.0
1	FDT-113	20/5/2017	2+680 LHS	1.91	96.71	5.0	15.0
2			2+740 RHS	1.90	96.07	5.0	14.0
3			2+800 LHS	1.90	96.07	4.0	15.0
4			2+850 CL	1.89	95.65	5.0	15.0
1	FDT-114	20/5/2017	2+860 LHS	1.93	97.71	5.00	14.5
2			2+900 RHS	1.91	96.61	5.00	15.0
3			2+950 CL	1.94	98.18	6.00	15.0
1	FDT-115	21/5/2017	0+030 LHS	1.91	96.22	4.00	15.0
2			0+050 RHS	1.91	96.22	5.00	14.5
3			0+070 CL	1.94	98.19	6.00	15.0
1	FDT-116	21/5/2017	0+170 LHS	1.93	97.70	6.00	15.0
2			0+220 RHS	1.97	99.53	6.00	15.0
3			0+280 CL	1.94	98.03	6.00	15.0
1	FDT-117	24/5/2017	1+680 LHS	1.90	96.14	5.00	15.0
2			1+730 CL	1.90	96.14	5.00	15.0
3			1+780 RHS	1.96	98.81	5.00	15.0
4			1+820 LHS	1.90	96.14	6.00	15.0
Required				1.980	95%	OMC <9.00	

SMEC-Brisbane -AQUA-CEMAT-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -118:R27 Line 0+820 to 1+000

FDT -119:R-12/T1 L13 Line 0+000 to 0+78

FDT-120:T3L29 0+000 to 0+090

FDT-121:T3L24(R3 to R-8) Line 0+000 to 0+033

SUB GRADE P.G-5

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-118	24/5/2017	0+830 CL	1.9	95.71	6.0	15.0
2			0+880 LHS	1.95	98.51	6.0	15.0
3			0+930 RHS	1.89	95.3	6.0	15.0
4			0+990 LHS	1.90	95.71	5.0	15.0
1	FDT-119	21/5/2017	0+015 LHS	1.91	96.30	6.0	15.0
2			0+070 RHS	1.88	95.16	6.0	15.0
1	FDT-120	29/5/2017	0+020 CL	1.89	95.31	6.00	15.0
2			0+080 LHS	1.93	97.67	6.00	15.0
1	FDT-121	29/5/2017	0+010 CL	1.90	96.09	5.00	15.0
2			0+028 LHS	1.88	95.15	6.00	15.0
Required				1.980	95%	OMC <9.00	

SMEC-Brisbane -AQUA-CEMAT-BDA	CTCE-KALIKA J/V
Approved by C.S.E	Submitted by Project Manager
Test Checked by A.C.S.E	Test Conducted by Q.C Manager
Consultant Reps	Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M15/20 , M20/20 & M25/20 Work Mix

P.G-3

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location	Ratio by Volume				Type of Material		Cube Crushing ,N/mm2		Remarks
				Structure	water	Cement	Sand	Aggregates	Cement Brand	Aggregate/Sand	7 days	28-Days	
31	763	15/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	20.20		
32	764	15/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	20.20		
33	765	15/5/2017	M20 Work Mix	WWTP Guard House PCC	0.50	1	2	3.5	Shivam	Om shree C/plant	16.15		
34	766	16/5/2017	M15 Work Mix	A-1 Lean Concrete PCC BED	0.55	1	2	4	Shivam	Om shree C/plant	13.19		
35	767	16/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	19.20		
36	768	17/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	18.30		
37	769	17/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	21.70		
38	770	18/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	17.10		
39	771	18/5/2017	M20 Work Mix	A-1 RCC SHEAR WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	17.70		
40	772	19/5/2017	M20 Work Mix	A-1 RCC SHEAR WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	16.80		
41	773	19/5/2017	M20 Work Mix	A-1 RCC SHEAR WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	16.60		
42	774	19/5/2017	M20 Work Mix	A-1 RCC SHEAR WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	16.96		
43	775	20/5/2017	M20 Work Mix	A-1 RCC SHEAR WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	16.80		
44	776	20/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	17.26		
45	777	21/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	17.90		
46	778	21/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	17.90		
				Specifacation Limit Table For M15/20 on 7 days Age Min 67% of Total Compressive Strength						Min Required	10.05	15	
				Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength						Min Required	13.4	20	
				Specifacation Limit Table For M25/20 on 7 days Age Min 67% of Total Compressive Strength						Min Required	16.75	25	

SMEC-Brisbane-AQUA-BDA
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Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -77:WWTP OUTER ROADCH :0+000 0+640

FDT:78:T1L13 & T1L13(A)CH:0+020 to 0+165 & 0+000 to 0+060

FDT:79:T1-L-14(A)/R-11 Line CH:0+160 to 0+280

FDT:80:R-4 Line CH:0+000 to 0+260 National Trading

FDT:81 WWTP INNER ROAD:0+230 to 0+320 EAST & 0+000 to 0+100 South

SUB BASE P.G-5

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-77	31/5/2017	0+020 LHS	2.12	95.06	4.0	15.0
2			0+070 RHS	2.15	96.41	5.0	14.5
3			0+130 CL	2.13	95.39	4.0	15.0
4			0+190 LHS	2.12	95.16	4.0	15.5
5			0+250 RHS	2.21	99.06	6.0	15.0
6			0+310 CL	2.17	97.33	5.0	15.5
7			0+370 CL	2.19	98.06	6.0	15.0
8			0+430 RHS	2.18	97.96	6.0	15.5
9			0+490 LHS	2.16	96.87	5.0	14.5
10			0+550 RHS	2.16	96.87	5.0	14.5
11			0+600 CL	2.2	98.77	6.0	15.0
12			0+630 LHS	2.16	96.87	5.0	14.5
1	FDT-78	31/5/2017	0+060 LHS	2.15	96.27	6.0	16.0
2			0+110 RHS	2.17	97.29	4.0	16.0
3			0+150 CL	2.16	96.69	5.0	14.5
4			0+010 RHS	2.16	96.93	3.0	16.0
5			0+055 LHS	2.16	96.73	4.0	14.5
1	FDT-79	31/5/2017	0+170 LHS	2.20	98.55	6.00	15.0
2			0+220 CL	2.14	96.02	3.00	15.5
3			0+270 RHS	2.16	96.80	5.00	15.0
1	FDT-80	31/5/2017	0+050 CL	2.16	97.04	5.00	14.5
2			0+105 LHS	2.15	96.45	6.00	16.0
3			0+210 RHS	2.13	95.55	5.00	17.0
4			0+250 LHS	2.13	95.40	4.00	15.0
1	FDT-81	31/5/2017	0+310 LHS	2.22	99.64	6.00	16.0
2			0+220 RHS	2.19	98.00	5.00	18.0
3			0+020 LHS	2.18	97.67	5.00	17.0
4			0+080 RHS	2.17	97.50	4.00	15.0
Required				2.230	95%	OMC <6.5	15

SMEC-Brisbane -AQUA-CEMAT-BDA
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SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City

STIUEIP

Monthly Laboratory Testing Report

(For The Month OF-MAY - 2017)

Consultants:SMEC-Brisbane-AQUA-CEMAT-BDA **Contractors: CTCE- KALIKA J/V**

S. No.	Description of Material	Type of test	Total No. of Test upto previous month	Test Performed for this month				Total No. of Test upto This month	Remarks
				No. of Tests	Passed	Failed	Retest Recommended		
1	Granular Material/Gravel material	Sieve analysis	90	0	0	0		90	
2	SUB GRADE Preparation	MDD & OMC	73	18	18	0		91	
	asPere Specifacation	Field density	623	104	104	0		727	
		C.B.R	73	18	18	0		91	
3	BRICK WORK	Water Absorption	195	0	0	0		195	
	Required Test	Compressive Strength	2901	95	95	0		2996	
4	Masonry Mortar (CM 7.05)	Compressive strength	4421	60	60	0		4481	
5	CONCRETE AGGREGATE								
	Coarse aggregate (20 mm)	Sieve analysis (20 mm)	356	25	25	0		381	
		LAA	269	25	25	0		294	
		Specific Gravity	16	0	0	0		16	
		FI	258	25	25	0		283	
		ACV	306	25	25	0		331	
	Fine aggregate (Sand)	Sieve analysis	365	40	40	0		405	
6	CONCRETE MIX DESIGN	Concrete mix Design	77	0	0	0		77	
	ConcreteM15/20,M20/20	Compressive strength	462	0	0	0		462	
	M25/20,&M30/20	Slump test	75	0	0	0		75	

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City

STIUEIP

Monthly Laboratory Testing Report

(For The Month OF-MAY - 2017)

Consultants:SMEC-Brisbane-AQUA-CEMAT-BDA **Contractors: CTCE- KALIKA J/V**

S. No.	Description of Material	Type of test	Total No. of Test upto previous month	Test Performed for this month				Total No. of Test upto This month	Remarks
				No. of Tests	Passed	Failed	Retest Recommended		
7	CEMENT Required Test								
	OPC Cement	Setting time	319	30	30	0		349	
		Normal Consistency	319	30	30	0		349	
8	CONCRETE								
	Work Mix Test M15,M20,M25,M30	Compressive strength	12597	744	744	0		13341	
9	REINFORCEMENT	Required Test							
	Reinforcement tore steel	As per Specifacation	80	0	0	0		80	
10	PAVEMENT MATERIALS								
	Sub Base Materials	Sieve analysis	206	60	60	0		266	
		MDD & OMC	41	16	16	0		57	
		CBR	37	16	16	0		53	
		Field density	392	60	60	0		452	
11	CS Base	Sieve analysis	110	0	0	0		110	
	Crushed Stone Base	MDD & OMC	20	0	0	0		20	
	Material Laying	C.B.R	18	0	0	0		18	
		FI & C.Ratio	110	0	0	0		110	
		LAA	111	0	0	0		111	
		SSS	53	0	0	0		53	
		AIV	110	0	0	0		110	
		Field Density & OMC	179	0	0	0		179	

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City **STIUEIP**

Monthly Laboratory Testing Report

(For The Month OF-MAY - 2017)

Consultants:SMEC-Brisbane-AQUA-CEMAT-BDA **Contractors: CTCE- KALIKA J/V**

S. No.	Description of Material	Type of test	Total No. of Test upto previous month	Test Performed for this month				Total No. of Test upto This month	Remarks
				No. of Tests	Passed	Failed	Retest Recommended		
12	ASHPHALT CONCRETE	Sieve analysis	39	0	0	0		39	
	Combine Mixed	FI	24	0	0	0		24	
		ACV	24	0	0	0		24	
	Individual Ca&FA Test Mix Design	LAA	24	0	0	0		24	
		Sp gravity	4	0	0	0		4	
13	BITUMEN TEST	Penetration at25.c	2	0	0	0		2	
	80/100 Bitumen	Softeing point(ring ball)	2	0	0	0		2	
	As per DORbook section	Flash point/Fire Point	2	0	0	0		2	
	600 Table 6.14/is 73	Ductility at25.c	2	0	0	0		2	
		Specific at 25.c	2	0	0	0		2	
		Water Content	2	0	0	0		2	
		Loss on Heating for 5 hrs	2	0	0	0		2	
		Pen-of residue afte loss on Heating	2	0	0	0		2	
		Solubility in tricloroethylene	2	0	0	0		2	
14	Humpipe Test	Three Edge Bearing Load Test	7	0	0	0		7	200mm to 1600mm 1 each
15	MARSHALL MIX DESIGN	WEARING COURSE	1	0	0	0		1	
16	Marshall Stability Test	Bulk density	102	0	0	0		102	
		Stability	102	0	0	0		102	
		Flow	102	0	0	0		102	
		Air voides	102	0	0	0		102	

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BIRATNAGAR Sub-Metropolitant City

STIUEIP

Monthly Laboratory Testing Report

(For The Month OF-MAY - 2017)

Consultants:SMEC-Brisbane-AQUA-CEMAT-BDA **Contractors: CTCE- KALIKA J/V**

S. No.	Description of Material	Type of test	Total No. of Test upto previous month	Test Performed for this month				Total No. of Test upto This month	Remarks
				No. of Tests	Passed	Failed	Retest Recommended		
		Bitumen extraction	36	0	0	0		36	
		Voids in Mineral Agg	102	0	0	0		102	
		Job mix in AC Plant	64	0	0	0		64	
17	BITUMEN SPREAD TEST								
	Prime coat	Application rate	20	28	28	0		48	
	Tack coat	Application rate	10	28	28	0		38	
18	Machines/Equipment								
	Caliberation of compressive	1000KN Manuall	3	0	0	0		2	
	Testing machine	500 KN Manuall	3	0	0	0		2	
	C.B.R Machine	50KN/30KN	2	0	0	0		2	
	Marshall Stability Machine	50KN/25KN	2	0	0	0		2	
19	MISCELLANEOUS								
	G.I Wire(Gabion Boxes)		5	0	0	0		5	
	Factory Test Report of Cement		8	0	0	0		8	
	Factory Test Report of Iron Steel		25	0	0	0		25	
	Factory Test Report of 80/100 Bitumen		2	0	0	0		2	
	Factory Test Report of UPVC/HDP Pipe		2	0	0	0		2	
	UPVC/HDP Pipe Test Result		2	0	0	0		2	

MDD/OMC = Max Dry Dennsity
Optimum Moisture Content
SSS = Sodium Sulphate Soundness
ACV = Aggregtae Crushing Value
CBR=California Bearing Ratio

LAA = Los Angeles Abrasion
SE=Sand Equivqlent
AIV=Aggregate Impact Value
JMC=Job Mix Formula
C.R=Crushing Ratio

SMEC-Brisbane-AQUA-BDA-CEMAT
Approved by C.S.E
Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Prepaid by Q.C Manager
Contractors Reps

Secondary Town Integrated Urban Environmental Improvement Project

Biratnagar Sub-Metropolitan city

Contract Package: STIUEIP/W/BRT/ICB-01

DAILY WEATHER RECORD

FOR THE MONTH OF MAY 2017

Date	WEATHER Record						Temp.c		
	Sunny	Foggy	Cloudy	Morning Rain HRS	Night Rain Hrs.	Day Rain Hrs.	9:00 AM	5:00 PM	Rain Fall MM
1	Sunny				Night Rain Hrs.		27.8	25.6	60
2	Sunny						28	24.8	
3	Sunny						27.6	24.6	
4	Sunny						27.4	25.2	
5			Cloudy	Morning Rain HRS	Night Rain Hrs.		28.0	25.7	130
6	Sunny						29	26	
7	Sunny						29.5	26.2	
8	Sunny						29.8	26	
9	Sunny				Night Rain Hrs.		28	26	52
10	Sunny				Night Rain Hrs.		29	27.2	40
11	Sunny						29.6	26.2	
12	Sunny						29.5	26.6	
13			Cloudy	Morning Rain HRS			28.5	26.2	30
14	Sunny						29.5	26	
15			Cloudy	Morning Rain HRS			28.2	25.8	120
16	Sunny						29.8	26.4	
17	Sunny						30.2	26.5	
18	Sunny						29.5	27.1	
19	Sunny						29.1	27	
20	Sunny						30.1	26.2	
21			Cloudy	Morning Rain HRS			29.2	25.2	42
22	Sunny						29.8	26.2	
23	Sunny						28.6	26	
24			Cloudy	Morning Rain HRS			27.4	25.2	29.5
25			Cloudy	Morning Rain HRS			26.2	26.2	32
26	Sunny						28.2	27.4	
27	Sunny				Night Rain Hrs.		28	27.2	89.5
28	Sunny						29.2	27	
29			Cloudy	Morning Rain HRS			28.6	28	110
30			Cloudy	Morning Rain HRS			25	24	102
31	Sunny						26	22	
							Total Rain Fall		837

SMEC-Brisbane-AQUA-CEMAT-BDA	CTCE-KALIKA J/V
Approved By C.S.E	Submitted By Project Manager
Record Checked By A.C.S.E	Record Reported By Q.C Manager
Consultant Reps	Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENT IMPROVEMENT PROJECT

Biratnagar-Sub-Metropolitant City

SUMMARY OF MORTAR COMPRESSIVE STRENGTH TEST WORK MIX CUBE

FOR THE MONTH OF MAY 2017

P.G-1

S.N.	LAB REF No.	Name of CEMENT	Location/Structure	Details of MIX	Casting	Consistency & Setting Time			7 day's cube Crushing		28 day's cube crushing		Remarks
						Norm. Const.	Intial(min.)	Final(min.)	Date	Str. N/mm2	Date	Str. N/mm2	
1	759	KOSHI	High way Man Hole	1:4 by volume	3/4/2017	35.80	200	295	10/4/2017	6.00	1/5/2017	7.90	
2	760	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	3/4/2017	35.80	200	295	10/4/2017	6.90	1/5/2017	8.70	
3	761	KOSHI	WWTP RIP RAP 9-C	1:4 by volume	4/4/2017	36.20	190	305	11/4/2017	7.60	2/5/2017	9.10	
4	762	KOSHI	R-8 Line	1:4 by volume	9/4/2017	35.20	185	295	16/4/2017	5.90	7/5/2017	7.80	
5	763	KOSHI	High way Man Hole	1:4 by volume	9/4/2017	35.20	185	195	16/4/2017	6.50	7/5/2017	7.90	
6	764	KOSHI	WWTP RIP RAP 9-B	1:4 by volume	12/4/2017	35.80	205	285	19/4/2017	6.40	10/5/2017	8.40	
7	765	KOSHI	WWTP RIP RAP 9-B	1:4 by volume	19/4/2017	35.90	180	305	26/4/2017	7.60	18/5/2017	8.60	
8	766	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	20/4/2017	36.40	210	285	274/2017	8.00	19/5/2017	9.50	
9	767	KOSHI	WWTP RIP RAP 8-C	1:3 by volume	24/4/2017	35.70	195	295	1/5/2017	7.90	23/5/2017	9.70	
10	768	KOSHI	WWTP RIP RAP 9-B	1:3 by volume	26/4/2017	35.90	205	310	3/5/2017	7.60	25/5/2017	9.40	
							MIN 45m	Max 600m	Required strength on 28 days not less than 7.5 N/MM2				
							MIN 45m	Max 600m	Required strength on 28 days More than 7.5 N/MM2 at 1:3				

SMEC-Brisbane-AQUA-CEMAT-BDA
Approved by Construction Supervision Engineer/CSE
Test Checked by A.C.S.E
Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractore Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summary of Fine Concrete Aggregates Sand FOR THE MONTH OF MAY 2017

S.N.	DESCRIPTION / LOCATION	LAB REF. NO:	Grain Size Distribution							REMARKS
			10	4.75	2.36	1.18	0.6	0.3	0.15	
1	WWTP SLUMP WELL	MR 408	100.00	94.00	84.00	65.20	47.20	21.20	5.20	source
2	WWTP SLUMP WELL	MR409	100.00	94.80	83.60	66.00	47.60	22.40	5.60	om shree
3	WWTP SLUMP WELL	MR 410	100.00	94.00	81.60	64.80	46.80	22.00	6.00	Crusher Plant
4	WWTP SLUMP WELL	MR 411	100.00	93.20	80.00	63.60	44.80	21.20	4.40	Chisang Morang
5	WWTP SLUMP WELL	MR 412	100.00	91.20	78.80	63.20	45.60	22.80	6.40	
6	From Contractor Yard	MR 413	100.00	92.00	78.80	62.40	44.40	22.00	4.40	
7	From Contractor Yard	MR 414	100.00	92.80	78.80	62.80	45.20	22.00	4.80	
8	From Contractor Yard	MR 415	100.00	93.60	78.40	62.00	44.00	21.20	5.20	
9	From Contractor Yard	MR 416	100.00	94.00	79.20	59.60	41.20	20.00	5.60	
10	From Contractor Yard	MR 417	100.00	94.80	78.40	58.40	40.80	18.80	5.20	
11	From A-1 Concrete Work	MR 418	100.00	95.20	79.20	58.80	40.80	19.60	5.60	
12	From A-1 Concrete Work	MR 419	100.00	95.60	80.40	59.60	41.20	19.60	5.20	
13	From A-1 Concrete Work	MR 420	100.00	94.80	77.20	56.80	39.20	18.00	4.40	
14	From A-1 Concrete Work	MR 421	100.00	96.00	78.80	57.20	38.80	18.80	5.20	
15	From A-1 Concrete Work	MR 422	100.00	94.00	77.20	56.00	37.20	17.60	5.20	
16	From WWTP	MR 423	100.00	92.52	77.60	60.72	44.80	20.27	6.40	
17	From WWTP	MR 424	100.00	94.46	81.54	61.23	43.69	21.85	6.60	
18	From WWTP	MR 425	100.00	93.84	75.60	57.60	44.50	18.95	6.30	
19	From WWTP	MR 426	100.00	95.76	76.40	56.46	42.76	18.02	5.61	
20	From WWTP	MR 427	100.00	94.39	77.54	58.96	42.82	17.82	5.46	
Specifacation Limit is 383-1970 Zone -2			100-100	90-100	75-100	55-90	35-59	8-30	0-10	

SMEC-BRISBANE-AQUA-CEMAT-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

Summary of Fine Concrete Aggregates Sand FOR THE MONTH OF MAY 2017

S.N.	DESCRIPTION / LOCATION	LAB REF. NO:	Grain Size Distribution							REMARKS
			10	4.75	2.36	1.18	0.6	0.3	0.15	
21	R-8 Line	MR428	100.00	91.10	80.00	62.60	38.40	22.50	6.10	source
22	R-8 Line	MR 429	100.00	92.00	81.00	63.00	38.42	22.60	6.42	om shree
23	R-8 Line	MR 430	100.00	92.40	80.00	64.20	41.62	21.82	5.62	Crusher Plant
24	R-8 Line	MR 431	100.00	93.00	79.00	60.00	43.22	21.62	6.10	Chisang Morang
25	R-8 Line	MR 432	100.00	92.80	78.00	57.60	35.62	23.42	4.82	
26	R-28 Line	MR 433	100.00	93.00	82.80	57.80	36.44	18.68	3.22	
27	R-28Line	MR 434	100.00	92.00	80.40	58.20	39.10	17.62	3.42	
28	R-28 Line	MR 435	100.00	92.40	79.80	57.40	38.20	19.20	4.42	
29	R-28 Line	MR 436	100.00	92.80	79.40	57.60	37.62	19.42	5.22	
30	R-28 Line	MR 437	100.00	93.40	79.00	56.80	41.20	20.42	3.42	
31	S-5 Line	MR 438	100.00	93.40	78.46	58.00	39.42	210.60	5.22	
32	S-5 Line	MR 439	100.00	95.80	78.40	59.62	41.22	20.62	5.26	
33	S-5 Line	MR 440	100.00	95.40	78.00	55.00	41.62	20.10	5.82	
34	S-5 Line	MR 441	100.00	92.20	80.60	56.80	40.66	19.80	5.44	
35	S-5 Line	MR 442	100.00	92.44	80.62	59.60	40.74	21.42	5.40	
36	R-29 Line	MR 443	100.00	92.60	80.42	63.60	38.46	22.62	5.66	
37	R-29 Line	MR 444	100.00	91.00	79.86	65.22	41.62	21.90	6.10	
38	CN3 Line	MR 445	100.00	93.46	78.00	64.10	43.20	23.46	4.94	
39	CN3 Line	MR 446	100.00	93.68	78.42	61.26	36.62	18.90	3.36	
40	CN3 Line	MR 447	100.00	94.10	80.68	58.60	36.48	17.64	4.46	
Specifacation Limit is 383-1970 Zone -2			100-100	90-100	75-100	35-59	35-59	8-30	0-10	

SMEC-BRISBANE-AQUA-CEMAT-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City P.G-1

Summery of Concrete Crushed Aggregate 20mm down For The Month of MAY 2017

S.N.	DESCRIPTION / SOURCE	LAB REF. NO.	Grain Size Distribution				FI %	LAA %	ACV %	REMARKS
			25	20	10	4.75				
1	WWTP SLUMP WELL Bottom Plug	MR 368	100	97.04	35.20	4.15	13.08	33.16	21.1	Aggregates
2	WWTP SLUMP WELL Bottom Plug	MR 369	100	97.56	36.89	3.23	13.60	33.20	20.2	Source
3	WWTP SLUMP WELL Bottom Plug	MR 370	100	97.50	38.51	3.46	13.78	33.40	20.8	Om shree
4	WWTP SLUMP WELL Bottom Plug	MR 371	100	97.73	38.71	3.48	13.80	33.44	21.6	CRUSHER
5	WWTP SLUMP WELL Bottom Plug	MR 372	100	97.66	37.65	3.31	13.66	33.50	20.8	
6	From Contractor Yard	MR 373	100	97.58	41.45	3.18	13.46	33.48	21.4	PLANT
7	From Contractor Yard	MR 374	100	97.18	40.14	2.80	13.50	33.66	21.8	
8	From Contractor Yard	MR 375	100	96.52	40.74	3.30	13.56	33.74	21.6	
9	From Contractor Yard	MR 376	100	96.04	41.66	3.24	13.60	33.74	21.8	
10	From Contractor Yard	MR 377	100	95.92	42.72	4.73	13.50	33.66	21.6	
11	From A-1 Works	MR 378	100	96.16	40.81	3.41	13.23	33.56	20.8	
12	From A-1 Works	MR 379	100	96.33	38.40	2.97	13.40	34.10	21.8	
Section 900:IS 383-1970 Required			100	95-100	25-55	0-10	Less 15%	Less 35%	Less 30%	

SMEC-Brisbane-AQUA-CEMAT-BDA
Approved by CSE
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

P.G-1

Summery of Concrete Crushed Aggregate 20mm down For The Month of MAY 2017

S.N.	DESCRIPTION / SOURCE	LAB REF. NO.	Grain Size Distribution				FI %	LAA %	ACV %	REMARKS
			25	20	10	4.75				
13	From A-1 Works	MR 380	100	96.09	40.70	3.25	13.40	33.46	21.0	Aggregates
14	From A-1 Works	MR 381	100	95.47	42.95	3.51	13.50	33.50	21.4	Source
15	From A-1 Works	MR 382	100	95.90	38.41	3.89	13.46	33.46	20.8	Om shree
16	From Contractor Yard	MR 383	100	96.17	39.43	3.84	13.42	33.80	21.6	CRUSHER
17	From Contractor Yard	MR 384	100	96.20	39.46	3.64	13.40	33.60	21.4	
18	From Contractor Yard	MR 385	100	96.48	42.88	3.24	13.50	33.40	21.2	PLANT
19	From Contractor Yard	MR 386	100	96.36	37.27	3.03	13.54	33.20	21.4	
20	From Contractor Yard	MR 387	100	97.61	37.71	3.52	13.44	33.10	21.8	
21	From A-1 Works	MR 388	100	97.61	35.23	2.67	13.42	33.16	21.3	
22	From A-1 Works	MR 389	100	96.92	39.81	3.11	13.40	33.10	21.4	
23	From A-1 Works	MR 390	100	96.16	35.60	3.34	13.64	33.44	22.6	
24	From A-1 Works	MR 391	100	96.29	35.47	2.99	13.74	34.10	20.8	
25	From A-1 Works	MR 392	100	96.65	35.49	3.05	13.68	33.68	21.0	
Section 900:IS 383-1970 Required			100	95-100	25-55	0-10	Less 15%	Less 35%	Less 30%	

SMEC-Brisbane-AQUA-CEMAT-BDA
Approved by CSE
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 SLAB CASTING WORK MIX

FOR THE MONTH OF MAY 2017

P.G-1

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location	Ratio by VOLUME				Materials		Cube Crushing ,N/mm2		Remarks
				Structure	Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	293	4/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.4	22.2	
2	294	5/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.5	22.1	
3	295	6/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.0	21.7	
4	296	7/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.1	22.1	
5	297	8/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.5	22.3	
6	298	9/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.8	22.3	
7	299	10/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.6	22.2	
8	300	11/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.2	22.4	
9	301	12/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.4	22.5	
10	302	13/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.6	21.5	
11	303	14/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	21.6	
12	304	15/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	22.0	
13	305	16/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	22.5	
14	306	17/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.5	21.6	
15	307	18/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.9	21.4	
16	308	19/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.2	22.1	
17	309	20/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.9	22.3	
18	310	21/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.6	22.4	
19	311	22/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.4	22.2	
20	312	23/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.3	21.8	
21	313	24/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.9	22.0	
22	314	25/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.3	22.0	
Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength										Min Required	13.4	20	

SMEC-Brisbane-AQUA-BDA
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Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 SLAB CASTING WORK MIX

FOR THE MONTH OF may 2017

P.G-2

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by VOLUME				Materials		Cube Crushing ,N/mm2		Remarks
					Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
23	315	26/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.1	21.6	
24	316	27/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.1	21.8	
25	317	28/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	15.6	22.1	
26	318	29/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.1	21.2	
27	319	30/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.3	21.1	
28	320	31/4/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	21.2	
29	321	1/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	21.8	
30	322	1/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.3	21.4	
31	323	1/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.2	21.2	
32	324	2/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.3	21.9	
33	325	2/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.5	22.0	
34	326	2/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.8	22.1	
35	327	3/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	17.1	21.9	
36	328	3/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	21.7	
37	329	3/5/2017	M20 Work mix	SLAB YARD	0.50	1	2	3.5	SHIVAM	Om shree C/plant	16.7	22.1	

SMEC-Brisbane-AQUA-BDA
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CTCE-KALIKA J/V
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Test conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M30/20 MAN HOLE CASTING WORK MIX

FOR THE MONTH OF MAY 2017

P.G-1

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location	Ratio by Volume				Materials		Cube Crushing ,N/mm2		Remarks
				Structure	Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	336	4/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	31.4	
2	337	5/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.6	
3	338	6/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	31.6	
4	339	7/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	31.4	
5	340	8/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.4	
6	341	9/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.0	32.1	
7	342	10/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.0	32.1	
8	343	10/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.0	32.1	
9	344	11/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	32.1	
10	345	11/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	32.4	
11	346	12/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	32.2	
12	347	12/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.1	
13	348	13/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	32.3	
14	349	13/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.7	32.1	
15	350	14/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.3	
16	351	14/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.2	
17	352	15/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	32.2	
Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength										Min Required	20.1	30	

SMEC-Brisbane-AQUA-BDA
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CTCE-KALIKA J/V
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Test conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M30/20 MAN HOLE CASTING WORK MIX

FOR THE MONTH OF MAY 2017

P.G-2

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location / Structure	Ratio by Volume				Materials		Cube Crushing ,N/mm2		Remarks
					Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
18	353	15/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.1	
19	354	15/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	32.5	
20	355	16/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	32.2	
21	356	16/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.4	
22	357	16/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	32.4	
23	358	17/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	32.5	
24	359	17/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.2	
25	360	17/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.3	
26	361	18/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	31.8	
27	362	18/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.8	31.8	
28	363	18/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	32.1	
29	364	19/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.1	
30	365	19/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.8	32.3	
31	366	19/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	32.1	
32	367	20/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	32.1	
33	368	20/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.7	31.7	
34	369	21/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.7	31.8	
Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength									Min Required		20.1	30	

SMEC-Brisbane-AQUA-BDA
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Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT
Biratnagar Sub-Metropolitant City
SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M30/20 MAN HOLE CASTING WORK MIX
FOR THE MONTH OF MAY 2017

P.G-3

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by Volume				Materials		Cube Crushing ,N/mm2		Remarks
					Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
35	370	21/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	31.6	
36	371	21/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.9	31.7	
37	372	21/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	32.5	
38	373	22/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	31.8	
39	374	22/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	32.0	
40	375	22/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.9	31.8	
41	376	23/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	20.9	32.2	
42	377	23/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.7	31.8	
43	378	23/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.9	32.2	
44	379	24/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.6	32.2	
45	380	24/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.0	
46	381	24/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	31.4	
47	382	25/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.6	31.8	
48	383	25/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.5	
49	384	25/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.5	32.2	
50	385	26/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.5	
51	386	26/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.9	32.0	
Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength									Min Required		20.1	30	

SMEC-Brisbane-AQUA-BDA
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Test conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M30/20 MAN HOLE CASTING WORK MIX

FOR THE MONTH OF MAY 2017

P.G-4

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location	Ratio by Volume				Materials		Cube Crushing ,N/mm2		Remarks
				Structure	Water	Cement	Sand	Aggregate	Cement Brand	Aggregate/Sand	7 days	28-Days	
52	387	28/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	32.2	
53	388	28/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	22.0	31.8	
54	389	28/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.1	
55	390	29/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	31.9	
56	391	29/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.4	
57	392	29/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	31.6	
58	393	30/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.5	31.4	
59	394	30/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	31.7	
60	395	30/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.7	
61	396	30/4/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.9	
62	397	1/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	31.5	
63	398	1/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	32.0	
64	399	1/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.4	
65	400	1/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	31.7	
66	401	2/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.7	
67	402	2/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.4	
68	403	3/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	31.6	
69	404	3/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.1	
70	405	3/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.4	32.2	
71	406	4/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.3	32.1	
72	407	4/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.1	32.0	
73	408	4/5/2017	M30 Work mix	MANHOLE YARD	0.36	1	1	2	SHIVAM	Om shree C/plant	21.2	32.2	
Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength										Min Required	20.1	30	

SMEC-Brisbane-AQUA-BDA
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CTCE-KALIKA J/V
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Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BiratnagarSub-Metropolitant City

CEMENT TEST SUMMERY

For the Month of MAY 2017

S.N.	Lab. Ref. NO.	Description of cement	Testing Date	Consistency & Setting Time			Remarks
				Norm. Const.	Intial(min.)	Final(min.)	
1	MR 321	SHIVAM OPC	1/5/2017	35.3	210	325	All Cement Are Nepali BRAND OPC
2	MR 322	SHIVAM OPC	1/5/2017	35.0	225	310	
3	MR 323	SHIVAM OPC	2/5/2017	34.3	215	325	
4	MR 324	SHIVAM OPC	3/5/2017	35.9	205	315	
5	MR 325	SHIVAM OPC	4/5/2017	36.6	200	305	
6	MR 326	SHIVAM OPC	5/5/2017	36.0	225	300	
7	MR 327	SHIVAM OPC	6/5/2017	36.1	240	305	
8	MR 328	KOSHI OPC	7/5/2017	36.3	210	305	
9	MR 329	SHIVAM OPC	8/5/2017	33.7	225	315	
10	MR 330	KOSHI OPC	9/5/2017	36.4	215	310	
11	MR 331	KOSHI OPC	10/5/2017	36.7	200	310	
12	MR 332	KOSHI OPC	11/5/2017	36.6	205	320	
13	MR 333	SHIVAM OPC	12/5/2017	37.0	235	340	
14	MR 334	SHIVAM OPC	13/5/2017	36.5	240	335	
15	MR 335	SHIVAM OPC	14/5/2017	34.3	240	340	
Requirements in accordance with BS 12					> 45 Min.	10 Hrs	

SMCE-Brisbane-AQUA-BDA
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Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
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Contractores Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

BiratnagarSub-Metropolitant City

CEMENT TEST SUMMERY

For the Month of MAY 2017

S.N.	Lab. Ref. NO.	Description of cement	Testing Date	Consistency & Setting Time			Remarks
				Norm. Const.	Intial(min.)	Final(min.)	
16	MR 336	SHIVAM OPC	15/5/2017	36.3	210	315	All Cement Are Nepali BRAND OPC
17	MR 337	SHIVAM OPC	16/5/2017	36.6	200	340	
18	MR 338	SHIVAM OPC	17/5/2017	36.9	205	300	
19	MR 339	SHIVAM OPC	18/5/2017	37.0	230	315	
20	MR 340	SHIVAM OPC	19/5/2017	37.0	225	325	
21	MR 341	SHIVAM OPC	20/5/2017	37.0	220	320	
22	MR 342	SHIVAM OPC	21/5/2017	37.1	205	325	
23	MR 343	KOSHI OPC	22/5/2017	36.7	200	325	
24	MR 344	SHIVAM OPC	23/5/2017	37.6	205	310	
25	MR 345	SHIVAM OPC	24/5/2017	37.0	200	315	
26	MR 346	SHIVAM OPC	25/5/2017	36.7	200	300	
27	MR 347	SHIVAM OPC	26/5/2017	36.9	215	325	
28	MR 348	SHIVAM OPC	27/5/2017	36.4	225	330	
29	MR 349	KOSHI OPC	28/5/2017	39.6	235	335	
30	MR 350	KOSHI OPC	29/5/2017	39.0	255	350	
Requirements in accordance with BS 12					> 45 Min.	10 Hrs	

SMCE-Brisbane-AQUA-BDA
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SECONDARY TOWNS INTEGRATED URABAN ENVIRONENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

MONTHLY Test Result Summary Sheet For The Month of MAY 2017

STIUEIP

SUB BASE (Process Control)

According to Part 2.Section 6A-Technical Specifacations&DOR Specifacation Section 1201(3)C Physical Requirement P.G-1

SN No	LAB Ref NO	Date Tested	Location/ Chainage/Station	Grading sieve size (mm) (% passing by weight)								Lab. MDD (g/cc)	Soaked CBR (%)	Lab. OMC (%)	Remarks
				63	37.5	20	10	5	2.360	1.18	0.075				
16	226	1/5/2017	OM SHREE CRUSHER PLANT	100	85.76	59.11	46.58	40.24	34.13	27.20	4.83	2.230	38.00	6.60	
17	227	1/5/2017	OM SHREE CRUSHER PLANT	100	87.06	61.28	49.43	36.78	30.82	23.68	4.67				
18	228	2/5/2017	R-27 Line CH:0+350 to 0+455	100	87.74	63.69	50.17	37.51	29.68	22.60	4.98	2.230	40.00	6.60	
19	229	2/5/2017	R-27 Line CH:0+350 to 0+455	100	87.40	62.59	50.11	36.48	27.62	21.32	4.68				
20	230	2/5/2017	R-27 Line CH:0+350 to 0+455	100	90.50	64.36	51.33	36.55	27.80	20.53	4.56				
21	231	5/5/2017	R-107 Line CH:0+180 to 0+345	100	90.63	64.96	51.67	35.17	25.10	17.40	4.61	2.230	42.00	6.60	
22	232	5/5/2017	R-107 Line CH:0+180 to 0+345	100	88.36	64.24	51.30	37.97	27.04	18.48	5.02				
23	233	5/5/2017	R-107 Line CH:0+180 to 0+345	100	89.72	64.56	51.11	37.04	25.50	16.66	4.98				
24	234	6/5/2017	T2L-19(V.X,W,Z)	100	91.37	72.50	57.79	45.23	32.29	22.50	6.76	2.230	38.50	6.60	
25	235	6/5/2017	T2L-19(V.X,W,Z)	100	91.17	72.99	57.20	43.90	32.17	21.57	6.84				
26	236	6/5/2017	T2L-19(V.X,W,Z)	100	91.68	72.95	54.61	40.75	29.26	19.84	5.01				
27	237	10/5/2017	R-14 Line CH:0+000 to 0+200	100	89.77	73.11	59.85	41.72	32.03	24.64	5.84				
28	238	10/5/2017	R-14 Line CH:0+000 to 0+200	100	91.00	75.40	53.05	36.43	27.05	19.71	5.20	2.230	40.00	6.60	
29	239	10/5/2017	R-14 Line CH:0+000 to 0+200	100	91.20	76.08	54.11	37.79	28.71	19.65	5.58				
30	240	12/5/2017	R-36 Line CH:0+000 to 0+220	100	91.29	75.34	53.72	36.67	26.10	17.22	5.26	2.230	38.50	6.60	
				100	65-95	50-85	40-75	30-60	20-45	15-37	4 to 15		≥ 30		

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

CTCE-KALIKA J/V

Submit by Project Manager

Test Conducted by Q.C Manager

Consultant Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

MONTHLY Test Result Summary Sheet For The Month of MAY 2017

STIUEIP

SUB BASE (Process Control)

According to Part 2.Section 6A-Technical Specifacations&DOR Specifacation Section 1201(3)C Physical Requirement P.G-2

SN No	LAB Ref NO	Date Tested	Location/ Chainage/Station	Grading sieve size (mm) (% passing by weight)								Lab. MDD (g/cc)	Soaked CBR (%)	Lab. OMC (%)	Remarks
				63	37.5	20	10	5	2.360	1.18	0.075				
31	241	12/5/2017	R-36 Line CH:0+000 to 0+220	100	91.23	75.50	52.21	34.89	25.53	16.56	5.46				
32	242	12/5/2017	R-36 Line CH:0+000 to 0+220	100	91.02	73.67	49.86	32.58	23.08	15.27	5.81				
33	243	14/5/2017	T3L25(A) CH:0+000 to 0+123	100	90.87	72.44	50.88	33.09	23.11	15.55	5.82	2.230	38.00	6.60	
34	244	14/5/2017	T3L25(A) CH:0+000 to 0+123	100	91.35	73.08	52.82	34.86	24.40	16.67	5.25				
35	245	14/5/2017	T3L25(A) CH:0+000 to 0+123	100	91.72	75.33	55.28	37.80	26.87	18.33	5.48				
36	246	15/5/2017	R-12 Line CH:0+000 to 0+319	100	92.16	76.68	86.12	37.08	25.46	16.35	5.30	2.230	38.00	6.60	
37	247	15/5/2017	R-12 Line CH:0+000 to 0+319	100	89.99	76.40	60.67	39.20	26.61	18.28	6.02				
38	248	15/5/2017	R-12 Line CH:0+000 to 0+319	100	91.06	80.15	61.60	41.70	25.87	17.30	4.99				
39	249	15/5/2017	R-75 Line CH:0+000 to 0+273	100	92.47	81.64	63.26	42.14	26.19	17.66	5.12	2.230	35.50	6.60	
40	250	15/5/2017	R-75 Line CH:0+000 to 0+273	100	93.19	80.91	62.58	41.34	25.21	16.70	4.92				
41	251	15/5/2017	R-75 Line CH:0+000 to 0+273	100	94.17	82.34	62.81	42.03	25.75	17.13	5.06				
42	252	16/5/2017	R-78 Line CH:0+000 to 0+093	100	94.21	80.51	61.87	41.66	26.10	17.48	5.87	2.230	42.00	6.60	
42	253	16/5/2017	R-78 Line CH:0+000 to 0+093	100	94.05	80.82	60.71	38.71	23.60	15.70	5.27				
44	254	17/5/2017	R-9(R-37 to R-30)LineCH:0+000 to +220	100	93.56	81.71	61.27	39.54	24.30	16.29	4.78	2.230	40.00	6.60	
45	255	17/5/2017	R-9(R-37 to R-30)LineCH:0+000 to +220	100	93.73	82.03	62.90	41.25	24.68	16.44	5.00				
				100	65-95	50-85	40-75	30-60	20-45	15-37	4 to 15		≥ 30		

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

CTCE-KALIKA J/V

Submit by Project Manager

Test Conducted by Q.C Manager

Consultant Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

MONTHLY Test Result Summary Sheet For The Month of MAY 2017

STIUEIP

SUB BASE (Process Control)

According to Part 2.Section 6A-Technical Specifacations&DOR Specifacation Section 1201(3)C Physical Requirement **P.G-3**

SN No	LAB Ref NO	Date Tested	Location/ Chainage/Station	Grading sieve size (mm) (% passing by weight)								Lab. MDD (g/cc)	Soaked CBR (%)	Lab. OMC (%)	Remarks
				63	37.5	20	10	5	2.360	1.18	0.075				
46	256	17/5/2017	R-9(R-37 to R-30)LineCH:0+000 to0 +220	100	94.76	82.52	63.86	42.01	27.18	18.57	5.90				
23	257	19/5/2017	R-40 Line CH:0+000 to 0+200	100	92.09	82.29	65.87	45.96	30.70	17.26	4.98	2.230	38.00	6.60	
48	258	19/5/2017	R-40 Line CH:0+000 to 0+200	100	93.08	83.16	66.94	46.94	31.36	16.59	5.33				
49	259	19/5/2017	R-40 Line CH:0+000 to 0+200	100	93.02	82.44	64.86	43.86	28.68	17.86	5.85				
50	260	19/5/2017	R-40 Line CH:0+000 to 0+200	100	94.03	82.91	64.72	42.32	27.89	16.74	5.38				
51	261	22/5/2017	R-7 Line CH:2+670 to 2+955	100	82.70	61.90	61.90	47.20	36.94	20.10	5.60	2.230	39.50	6.60	
52	262	22/5/2017	R-7 Line CH:2+670 to 2+955	100	80.20	60.60	60.80	45.60	36.00	18.68	6.40				
53	263	22/5/2017	R-7 Line CH:2+670 to 2+955	100	86.10	65.20	65.20	51.00	39.40	20.00	7.90				
54	264	23/5/2017	R-8 Line CH:1+660 to 1+840	100	86.70	70.60	70.60	58.30	49.00	23.05	5.30	2.230	40.00	6.60	
55	265	23/5/2017	R-8 Line CH:1+660 to 1+840	100	87.60	71.90	71.90	60.38	46.00	21.70	5.60				
56	266	23/5/2017	R-8 Line CH:1+660 to 1+840	100	89.75	67.90	97.90	55.93	49.52	21.40	6.47				
57	267	23/5/2017	T3L29 Line CH;0+000 to 0+090	100	91.70	72.30	72.30	60.26	47.46	24.90	6.73	2.230	40.00	6.60	
58	268	23/5/2017	T3L29 Line CH;0+000 to 0+090	100	91.10	71.10	71.20	58.62	48.00	22.85	6.90				
59	269	24/5/2017	T3L24 (R3 to R-8)Line CH:0+000 to 0+033	100	90.20	71.60	71.60	58.90	46.98	22.80	6.70	2.230	40.00	6.60	
60	270	24/5/2017	T3L24 (R3 to R-8)Line CH:0+000 to 0+033	100	90.95	71.26	71.30	57.20	46.60	21.50	6.60				
				100	65-95	50-85	40-75	30-60	20-45	15-37	4 to 15		≥ 30		

SMEC-Brisbane-AQUA-CEMAT-BDA

Approved by C.S.E

Test Checked by A.C.S.E

Consultant Reps

CTCE-KALIKA J/V

Submit by Project Manager

Test Conducted by Q.C Manager

Consultant Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M20/20 , M25/20 & M30/20 Work Mix

FOR THE MONTH OF MAY 2017

P.G-1

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location Structure	Ratio by Volume				Type of Material		Cube Crushing ,N/mm2		Remarks
					water	Cement	Sand	Aggregates	Cement Brand	Aggregate/Sand	7 days	28-Days	
1	733	7/4/2017	M30 Work Mix	Slum Well 7th Lift WWTP	0.36	1	1.3	2	Shivam	Om shree C/plant	23.10	30.81	Add mix=0.5%
2	734	8/4/2017	M20 Work Mix	WWTP Side Drain Pcc Bed	0.50	1	2	3.5	Shivam	Om shree C/plant	17.19	21.63	
3	735	9/4/2017	M25 Work Mix	R-21 Slab Crossing RCC Deck Slab	0.46	1	1.5	3	Shivam	Om shree C/plant	17.48	25.93	
4	736	10/4/2017	M20 Work Mix	R-21 PCC Bed Level	0.50	1	2	3.5	Shivam	Om shree C/plant	16.00	20.59	
5	737	20/4/2017	M20 Work Mix	Sludge Bed Level WWTP	0.50	1	2	3.5	Shivam	Om shree C/plant	16.00	20.59	
6	738	24/4/2017	M25 Work Mix	R-21 Slab Crossing RCC Deck Slab	0.46	1	1.5	3	Shivam	Om shree C/plant	17.19	26.22	
7	739	25/4/2017	M20 Work Mix	Sludge Bed Level WWTP	0.50	1	2	3.5	Shivam	Om shree C/plant	16.30	21.19	
8	740	1/5/2017	M25 Work mix	WWTP Bottom plug(with fiber hook)	0.46	1	1.5	3	Shivam	Om shree C/plant	16.96	38.89	Slump-170mm
9	741	1/5/2017	M25Work mix	WWTP Bottom plug(only with ad-Mixture)	0.46	1	1.5	3	Shivam	Om shree C/plant	20.74	28.52	Slump-170mm
10	742	1/5/2017	M25 Work mix	WWTP Bottom plug(only with ad-Mixture)	0.46	1	1.5	3	Shivam	Om shree C/plant	21.04	28.15	Slump-165mm
11	743	1/5/2017	M25 Work mix	WWTP Bottom plug(only with ad-Mixture)	0.46	1	1.5	3	Shivam	Om shree C/plant	21.19	28.89	Slump-160mm
12	744	2/5/2017	M20 Work Mix	S-5 Line PCC Bed	0.50	1	2	3.5	Shivam	Om shree C/plant	15.23	20.96	
13	745	3/5/2017	M20 Work Mix	R-8 Line PCC BED	0.50	1	2	3.5	Shivam	Om shree C/plant	15.41	21.33	
14	746	3/5/2017	M20 Work Mix	S-5 Line PCC Bed	0.50	1	2	3.5	Shivam	Om shree C/plant	15.41	21.33	

Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength	Min Required	13.4	20
Specifacation Limit Table For M25/20 on 7 days Age Min 67% of Total Compressive Strength	Min Required	16.75	25
Specifacation Limit Table For M30/20 on 7 days Age Min 67% of Total Compressive Strength	Min Required	20.1	30

SMEC-Brisbane-AQUA-BDA
Approved by Construction Supervision Engineer/CSE
Test checked by A.C.S.E
Consultants Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test conducted by Q.C Manager
Contractors Reps

Secondary Towns Integrated Uraban Environmental Improvement Project

Biratnagar Sub-Metropolitant City

TEST RESULT SUMMARY SHEET For the Month of MAY 2017

COMPRESSIVE STRENGTH OF BRICKS (Process Control Test) P.G-1

SN No	Ref. STIUEIP LAB/	Date of Testing	Location	Chanage	BRAND NAME 1 st class brick	Compressive Strength N/mm2	SCALE OF Sample From
1	577	4/5/2017	R-8 Line	R-8 Line	ANAND	10.4	
2	578	4/5/2017	R-8 Line	R-8 Line	ANAND	10.8	
3	579	4/5/2017	R-8 Line	R-8 Line	ANAND	10.1	
4	580	4/5/2017	R-8 Line	R-8 Line	ANAND	10.2	
5	581	6/5/2017	R-40 Line	R-40 Line	N&B	10.5	
6	582	6/5/2017	R-40 Line	R-40 Line	N&B	10.7	
7	583	10/5/2017	R-28 Line	R-28 Line	AMBEY	10.4	
8	584	10/5/2017	R-28 Line	R-28 Line	AMBEY	10.2	
9	585	14/5/2017	High way	MAN HOLE	AMBEY	10.5	
10	586	14/5/2017	High way	MAN HOLE	AMBEY	10.4	
11	587	16/5/217	R-21 Line	R-21 Line	AMBEY	10.1	
12	588	16/5/217	R-21 Line	R-21 Line	AMBEY	10.0	
13	589	18/5/2017	S-5 Line	S-5 Line	AMBEY	10.4	
14	590	18/5/2017	S-5 Line	S-5 Line	AMBEY	10.4	
15	591	20/5/2017	R-7 Line	R-7 Line	AMBEY	10.6	
16	592	20/5/2017	R-7 Line	R-7 Line	AMBEY	10.6	
17	593	20/5/2017	T2L26 F Line	T2L26 F Line	AMBEY	10.4	
18	594	20/5/2017	T2L26 F Line	T2L26 F Line	AMBEY	10.2	
19	595	20/5/2017	T2L26 F Line	T2L26 F Line	AMBEY	10.2	
Specification					IS1077,IS2180or NS1/2035	> 10N/MM2	

SMEC-Brisbane-AQUA-BDA-CEMAT

Approved by Construction Supervision Engineer

Test Checked by A.C.S.E

Consultantr Reps

CTCE-KALIKA J/V

Submitted by Project Manager

Test conducted by Q.C Manager

Contractor Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMERY OF LAB TEST RESULT OF SUB GRADE

(For the Month of MAY 2017)

P.G-1

S.N.	LAB REF. NO.	DESCRIPTION OF MATERIAL	Line	Chanage/Location	Modified ProctorGm/CC		CBR	REMARKS
					MDD	OMC %	%	
1	MR 93	Sub Grade	R-27 Line	0+680 to 0+805	1.980	9.00	6.00	
2	MR 94	Sub Grade	T2L19(W,X,V,)	0+00 to 0+057	1.980	9.00	5.50	
3	MR95	Sub Grade	R-10 Line	0+000 to 0+287	1.980	9.00	6.00	
4	MR 96	Sub Grade	R-40 Line	0+000 to 0+200	1.980	9.00	6.00	
5	MR 97	Sub Grade	R-36 Line	0+000 to 0+220	1.980	9.00	6.0	
6	MR 98	Sub Grade	R-9 Line	0+000 to 0+230	1.980	9.00	5.5	
7	MR 99	Sub Grade	T2L19(Y,Z)	0+000 to 0+056	1.980	9.00	6.0	
8	MR100	Sub Grade	WWTP inner Road	0+000 to 0+400	1.980	9.00	6.5	
9	MR 101	Sub Grade	T3L27	0+000 to 0+060	1.980	9.00	5.5	
10	MR 102	Sub Grade	R-7 Line	3+240 to 3+380	1.980	9.00	7.0	
11	MR 103	Sub Grade	R-2 Line	7+120 to 7+319	1.980	9.00	7.0	
12	MR 104	Sub Grade	T2L19	0+000 to 0+070	1.980	9.00	6.5	
13	MR 105	Sub Grade	T2L19(F)	0+000 to 0+116	1.980	9.00	6.0	
14	MR 106	Sub Grade	T2L18/R6 Line	3+039 to 2+851	1.980	9.00	5.75	
15	MR 107	Sub Grade	T1L13 Line	0+080 to 0+165	1.980	9.00	5.50	
16	MR 108	Sub Grade	R-7 Line	2+670 to 2+957	1.980	9.00	6.25	
17	MR109	Sub Grade	R-8 Line	1+660 to 1+840	1.980	9.00	6.40	
18	MR 110	Sub Grade	R-27 East	0+820 to 1+000	1.980	9.00	6.30	
AS PER Standard Specification For Roade and Bridge worksSection 1003(1)/AASHTO T 193-81							Min 5%	

SMEC-Brisbane-AQUA-CEMAT-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -60:R-27 Line 0+350 to 0+455

FDT-61: R-107 Line 0+180 to 0+345

FDT-62:T2L19(V) Line 0+000 to 0+198

FDT-63:T2L18(X) & T2L19(Z) Line 0+000 to 0+058 & 0+000 to 0+056

SUB BASE P.G-1

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-60	3/5/2017	0+455 RHS	2.17	97.75	6.0	14.5
2			0+400 LHS	2.13	95.95	5.0	15.0
3			0+380 CL	2.17	97.75	6.0	15.5
1	FDT-61	15/5/2017	00+280 LHS	2.20	98.66	4.0	14.5
2			0+330 RHS	2.17	97.18	4.0	15.0
3			0+245 CL	2.16	96.96	4.0	14.5
4			0+190 LHS	2.16	96.96	5.0	15.0
1	FDT-62	15/5/2017	0+020 LHS	2.18	97.92	4.00	14.5
2			0+080 RHS	2.18	97.92	5.00	15.0
3			0+140 LHS	2.21	98.99	5.00	15.0
4			0+190 CL	2.14	95.93	4.00	15.0
1	FDT-63	15/5/2017	0+020 LHS	2.13	95.51	4.00	15.0
2			0+050 RHS	2.13	95.51	3.00	15.0
3			0+010 LHS	2.21	99.10	5.00	15.0
4			0+050 RHS	2.20	98.54	5.00	15.0
Required				2.230	95%	OMC <6.5	

SMEC-Brisbane -AQUA-CEMAT-BDA	CTCE-KALIKA J/V
Approved by C.S.E	Submitted by Project Manager
Test Checked by A.C.S.E	Test Conducted by Q.C Manager
Consultant Reps	Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -64:T2L19(Y) & T2L19(W) 0+000to 0+108 & 0+000to 0+057

FDT-65:R-14 Line 0+000to 0+200

FDT-66:R36 Line 0+000 to 0+220

FDT-67:T3L25(A) 0+000 to 0+123

SUB BASE P.G-2

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-64	15/5/2017	0+020 RHS	2.15	96.56	4.0	15.0
2			0+060 LHS	2.17	97.26	4.0	15.0
3			0+100 RHS	2.12	95.06	3.0	15.0
4			0+020 LHS	2.12	95.06	5.0	15.0
5			0+050 RHS	2.14	95.96	4.0	15.0
1	FDT-65	17/5/2017	0+020 LHS	2.19	98.27	5.0	15.0
2			0+060 RHS	2.21	98.89	5.0	14.5
3			0+110 LHS	2.16	96.74	4.0	15.0
4			0+160 RHS	2.20	98.70	6.0	14.5
5			0+195 LHS	2.20	98.70	5.0	15.0
1	FDT-66	17/5/2017	0+210 RHS	2.22	99.50	6.00	15.0
2			0+150 LHS	2.19	98.38	5.00	14.5
3			0+100 RHS	2.16	96.90	5.00	15.0
4			0+050 LHS	2.19	98.27	5.00	14.5
5			0+010 RHS	2.20	98.65	5.00	15.5
1	FDT-67	17/5/2017	0+020 RHS	2.18	97.70	4.00	15.0
2			0+070 CL	2.16	98.62	5.00	15.0
3			0+110 LHS	2.20	98.61	5.00	14.5
Required				2.230	95%	OMC <6.5	

SMEC-Brisbane -AQUA-CEMAT-BDA	CTCE-KALIKA J/V
Approved by C.S.E	Submitted by Project Manager
Test Checked by A.C.S.E	Test Conducted by Q.C Manager
Consultant Reps	Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -68:R-12 Line 0+000 to 0+319

FDT-69:R75 Line 0+000 to 0+273

FDT-70 :R-78 Line 0+000 to 0+093

FDT-71:R-9(R-37 to R-30)Line 0+000 to 0+220

SUB BASE P.G-3

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-68	17/5/2017	0+020 LHS	2.17	97.27	4.0	15.0
2			0+080 CL	2.16	97.07	5.0	15.0
3			0+140 RHS	2.15	96.24	5.0	14.5
4			0+200 LHS	2.2	98.43	5.0	15.0
5			0+250 CL	2.19	98.1	5.0	15.0
6			0+300 RHS	2.16	97.07	4.0	15.0
1	FDT-69	17/5/2017	0+010 LHS	2.16	96.76	4.0	15.0
2			0+060 CL	2.17	97.20	5.0	15.0
3			0+100 RHS	2.18	97.63	5.0	14.5
4			0+150 LHS	2.19	98.18	5.0	15.0
5			0+200 CL	2.19	98.18	5.0	15.0
6			0+250 RHS	2.14	95.96	4.0	15.0
1	FDT-70	17/5/2017	0+020 LHS	2.15	96.48	4.00	15.0
2			0+080 CL	2.18	97.89	5.00	15.0
1	FDT-71	18/5/2017	0+020 LHS	2.17	97.13	4.00	15.0
2			0+060 RHS	2.19	98.34	5.00	15.0
3			0+120 CL	2.18	97.69	4.00	15.0
4			0+180 LHS	2.17	97.13	5.00	15.0
5			0+210 CL	2.17	97.13	5.00	15.0
Required				2.230	95%	OMC <6.5	

SMEC-Brisbane -AQUA-CEMAT-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -72:R-40 Line 0+000 to 0+200

FDT-73:T2L19 Line 0+000 to 0+150

FDT-74:R-7 Line 2+670 to 2+857

FDT-75:R-8 Line 1+660 to 1+840

FDT-76:R27 East Line 0+820 to 1+000

SUB BASE P.G-4

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-72	18/5/2017	0+030 LHS	2.16	96.84	5.0	15.0
2			0+080 CL	2.18	97.79	6.0	15.0
3			0+140 RHS	2.2	98.5	4.0	15.0
4			0+190 LHS	2.19	98.07	6.0	15.0
1	FDT-73	24/5/2017	0+140 LHS	2.22	99.72	5.0	13.0
2			0+060 CL	2.21	99.10	6.0	14.5
3			0+010 RHS	2.21	99.10	6.0	16.0
1	FDT-74	24/5/2017	2+680 LHS	2.16	96.81	5.00	15.0
2			2+740 RHS	2.21	99.26	6.00	12.0 Less thickness
3			2+790 CL	2.16	96.81	5.00	15.0
4			2+850 RHS	2.20	98.80	5.00	16.0
5			2+890 LHS	2.21	99.26	5.00	16.0
6			2+950 LHS	2.13	95.44	4.00	15.0
1	FDT-75	31/5/2017	1+670 LHS	2.14	96.10	5.00	14.5
2			1+730 RHS	2.17	97.40	6.00	15.0
3			1+790 CL	2.20	98.80	6.00	14.5
4			1+830 LHS	2.13	95.60	5.00	15.0
1	FDT-76	31/5/2017	0+830 CL	2.16	97.20	6.00	15.0
2			0+890 LHS	2.15	96.50	5.00	15.0
3			0+940 RHS	2.18	98.20	6.00	15.5
4			0+990 CL	2.13	95.40	5.00	15.0
Required				2.230	95%	OMC <6.5	15

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Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -93:R-27 Line 0+680 to 0+805

FDT-94:T2L19(W) Line 0+730 to 0+790

FDT-95:T2IL19(X) Line 0+0000+058

FDT-96:T2L19(V) Line0+000 to 0+198

FDT-97:R-10 Line 0+000 to 0+287

FDT-98:R-40 Line 0+000 to 0+200

SUB GRADE P.G-1

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT -93	3/5/2017	0+790 LHS	1.94	98.23	4.0	14.0
2			0+730 RHS	1.97	99.27	5.0	15.0
3			0+690 CL	1.88	95.04	4.0	15.0
1	FDT-94	4/5/2017	0+790 LHS	1.95	98.52	5.0	15.0
2			0+730 RHS	1.90	95.91	4.0	15.0
1	FDT-95	4/5/2017	0+010 LHS	1.95	98.70	5.00	15.0
2			0+050 RHS	1.88	95.02	7.00	15.0
1	FDT-96	4/5/2017	0+100 LHS	1.95	98.45	4.00	15.0
2			0+150 RHS	1.89	95.30	4.00	15.0
1	FDT-97	4/5/2017	0+265 LHS	1.92	96.93	4.00	15.0
2			0+205 RHS	1.93	97.55	5.00	15.0
3			0+155 CL	1.92	96.93	5.00	14.5
4			0+100 LHS	1.90	95.96	4.00	15.0
5			0+050 RHS	1.95	98.74	5.00	15.0
6			0+010 LHS	1.93	97.55	5.00	15.0
1	FDT-98	6/5/2017	0+020 LHS	1.95	98.51	5.00	14.0
2			0+070 RHS	1.91	96.57	5.00	15.0
3			0+130 CL	1.93	97.63	5.00	14.5
4			0+190 CL	1.91	96.57	5.00	15.0
Required				1.980	95%	OMC <9.00	

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SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -99:R-36 Line 0+000 to 0+220

FDT-100:R9 Line 0+000 to 0+230

FDT-101: T2L19(Y) 0+000 to 0+108

FDT-102:T2L19(Z) 0+000 to 0+056

FDT-103:WWTP INNER ROAD Sourth To East 0+000 to 0+400

FDT-104:T3L27 Line 0+000 to 0+060

SUB GRADE P.G-2

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-99	6/5/2017	0+010 LHS	1.96	99.08	6.0	14.0
2			0+060 RHS	1.91	96.35	6.0	15.0
3			0+110 LHS	1.9	95.92	6.0	14.5
4			0+160 RHS	1.91	96.35	5.0	15.0
5			0+210 LHS	1.91	96.35	5.0	15.0
1	FDT-100	6/5/2017	0+020 LHS	1.91	96.42	5.0	14.0
2			0+070 RHS	1.91	96.42	5.0	15.0
3			0+120 CL	1.94	97.83	5.0	14.5
4			0+180 LHS	1.97	99.54	6.0	15.0
5			0+220 RHS	1.89	95.24	6.0	15.0
1	FDT-101	8/5/2017	0+010 LHS	1.93	97.43	6.00	14.5
2			0+060 RHS	1.90	95.80	4.00	15.0
3			0+100 LHS	1.95	98.31	5.00	15.0
1	FDT-102	8/5/2017	0+010 LHS	1.98	99.83	7.00	15.0
2			0+060 RHS	1.93	97.68	7.00	15.0
1	FDT-103	13/5/2017	0+020 LHS	1.91	96.46	7.00	15.0
2			0+060 RHS	1.95	98.48	7.00	15.0
3			0+120 CL	1.90	95.96	4.00	15.0
4			0+180 RHS	1.90	95.96	5.00	15.0
5			0+240 LHS	1.91	96.46	5.00	15.0
6			0+300 RHS	1.90	95.96	6.00	14.5
7			0+350 LHS	1.90	95.96	5.00	15.0
8			0+395 RHS	1.92	96.75	4.00	15.0
1	FDT-104	13/5/2017	0+010 LHS	1.94	97.82	5.00	14.5
2			0+050 RHS	1.97	99.66	6.00	15.0
Required				1.980	95%	OMC <9.00	

SMEC-Brisbane -AQUA-CEMAT-BDA
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Consultant Reps

CTCE-KALIKA J/V
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Test Conducted by Q.C Manager
Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -105:R-7 Line 3+240 to 3+380

FDT -106:R-2 Line 7+120 to 7+319

FDT-107: T2L19 Line 0+000 to 0+070

FDT:108:R-10 to R21 End line 0+910 to 1+082

FDT:109:T2L19 Line 0+070 to 0+150

FDT-110:T2L19(F) Line 0+000 to 0+116

FDT-110.1: T2 L18/R-6 Line 3+039 to 2+851

FDT-111:T1 L13 Line 0+080to 0+165

SUB GRADE P.G-3

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-105	18/5/2017	3+250 LHS	1.94	97.83	5.0	14.0
2			3+310 CL	1.89	95.52	6.0	15.0
3			3+370 RHS	1.91	96.26	4.0	15.0
1	FDT-106	18/5/2017	7+125 RHS	1.96	98.81	5.0	14.5
2			7+175 LHS	1.97	99.36	5.0	15.0
3			7+250 RHS	1.94	98.02	4.0	14.5
4			7+290 LHS	1.91	96.30	4.0	15.0
5			7+300 RHS	1.91	96.30	5.0	15.0
1	FDT-107	18/5/2017	0+010 LHS	1.93	97.25	4.00	14.0
2			0+040 CL	1.90	96.18	5.00	15.0
3			0+060 RHS	1.94	97.74	5.00	15.0
1	FDT-108	18/5/2017	0+915 RHS	1.94	98.06	4.00	14.0
2			0+965 LHS	1.92	96.74	4.00	15.0
3			1+025 RHS	1.90	95.72	4.00	15.0
4			1+075 LHS	1.92	96.74	5.00	15.0
1	FDT-109	19/5/2017	0+080 LHS	1.91	96.29	4.00	15.0
2			0+100 CL	1.92	97.15	4.00	15.0
3			0+140 RHS	1.93	97.31	4.00	15.0
1	FDT-110	19/5/2017	0+010 LHS	1.92	96.99	4.00	15.0
2			0+060 CL	1.91	96.47	5.00	15.0
3			0+110 RHS	1.92	96.99	4.00	15.0
1	FDT-110-1	19/5/2017	2+870 RHS	1.94	97.81	6.00	15.0
2			2+920 CL	1.93	97.66	5.00	15.0
3			0+970 LHS	1.95	98.56	6.00	15.0
4			3+010 RHS	1.91	96.26	5.00	15.0
1	FDT-111	20/5/2017	0+100 LHS	1.89	95.64	5.00	15.0
2			0+165 RHS	1.91	96.26	5.00	15.0
Required				1.980	95%	OMC <9.00	

SMEC-Brisbane -AQUA-CEMAT-BDA
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Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -112:R-27 Line 0+680 to 0+480

FDT-113:R-7 Line 2+670 to 2+857

FDT-114-R-7 Line 2+857 to 2+957

FDT-115-T1L13 Line 0+020 to 0+080

FDT-116-T1L14(A) Line 0+160 to 0+300

FDT-117-R-8 Line 1+660 to 1+840

SUB GRADE P.G-4

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-112	20/5/2017	0+670 LHS	1.91	96.69	4.0	15.0
2			0+610 RHS	1.91	96.69	4.0	15.0
3			0+550 LHS	1.91	96.69	5.0	15.0
4			0+500 RHS	1.90	95.86	3.0	14.5
5			0+480 CL	1.90	95.86	5.0	15.0
1	FDT-113	20/5/2017	2+680 LHS	1.91	96.71	5.0	15.0
2			2+740 RHS	1.90	96.07	5.0	14.0
3			2+800 LHS	1.90	96.07	4.0	15.0
4			2+850 CL	1.89	95.65	5.0	15.0
1	FDT-114	20/5/2017	2+860 LHS	1.93	97.71	5.00	14.5
2			2+900 RHS	1.91	96.61	5.00	15.0
3			2+950 CL	1.94	98.18	6.00	15.0
1	FDT-115	21/5/2017	0+030 LHS	1.91	96.22	4.00	15.0
2			0+050 RHS	1.91	96.22	5.00	14.5
3			0+070 CL	1.94	98.19	6.00	15.0
1	FDT-116	21/5/2017	0+170 LHS	1.93	97.70	6.00	15.0
2			0+220 RHS	1.97	99.53	6.00	15.0
3			0+280 CL	1.94	98.03	6.00	15.0
1	FDT-117	24/5/2017	1+680 LHS	1.90	96.14	5.00	15.0
2			1+730 CL	1.90	96.14	5.00	15.0
3			1+780 RHS	1.96	98.81	5.00	15.0
4			1+820 LHS	1.90	96.14	6.00	15.0
Required				1.980	95%	OMC <9.00	

SMEC-Brisbane -AQUA-CEMAT-BDA
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Consultant Reps

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Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -118:R27 Line 0+820 to 1+000

FDT -119:R-12/T1 L13 Line 0+000 to 0+78

FDT-120:T3L29 0+000 to 0+090

FDT-121:T3L24(R3 to R-8) Line 0+000 to 0+033

SUB GRADE P.G-5

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-118	24/5/2017	0+830 CL	1.9	95.71	6.0	15.0
2			0+880 LHS	1.95	98.51	6.0	15.0
3			0+930 RHS	1.89	95.3	6.0	15.0
4			0+990 LHS	1.90	95.71	5.0	15.0
1	FDT-119	21/5/2017	0+015 LHS	1.91	96.30	6.0	15.0
2			0+070 RHS	1.88	95.16	6.0	15.0
1	FDT-120	29/5/2017	0+020 CL	1.89	95.31	6.00	15.0
2			0+080 LHS	1.93	97.67	6.00	15.0
1	FDT-121	29/5/2017	0+010 CL	1.90	96.09	5.00	15.0
2			0+028 LHS	1.88	95.15	6.00	15.0
Required				1.980	95%	OMC <9.00	

SMEC-Brisbane -AQUA-CEMAT-BDA	CTCE-KALIKA J/V
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Consultant Reps	Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF CUBE COMPRESSIVE STRENGTH TEST M15/20 , M20/20 & M25/20 Work Mix

P.G-3

S.N.	Lab Ref No.	Date of Casting	Deatails of Mix	Location	Ratio by Volume				Type of Material		Cube Crushing ,N/mm2		Remarks
				Structure	water	Cement	Sand	Aggregates	Cement Brand	Aggregate/Sand	7 days	28-Days	
31	763	15/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	20.20		
32	764	15/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	20.20		
33	765	15/5/2017	M20 Work Mix	WWTP Guard House PCC	0.50	1	2	3.5	Shivam	Om shree C/plant	16.15		
34	766	16/5/2017	M15 Work Mix	A-1 Lean Concrete PCC BED	0.55	1	2	4	Shivam	Om shree C/plant	13.19		
35	767	16/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	19.20		
36	768	17/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	18.30		
37	769	17/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	21.70		
38	770	18/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	17.10		
39	771	18/5/2017	M20 Work Mix	A-1 RCC SHEAR WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	17.70		
40	772	19/5/2017	M20 Work Mix	A-1 RCC SHEAR WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	16.80		
41	773	19/5/2017	M20 Work Mix	A-1 RCC SHEAR WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	16.60		
42	774	19/5/2017	M20 Work Mix	A-1 RCC SHEAR WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	16.96		
43	775	20/5/2017	M20 Work Mix	A-1 RCC SHEAR WALL	0.50	1	2	3.5	Shivam	Om shree C/plant	16.80		
44	776	20/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	17.26		
45	777	21/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	17.90		
46	778	21/5/2017	M25 Work Mix	A-1 RCC RAFT Concrete	0.46	1	1.5	3	Shivam	Om shree C/plant	17.90		
				Specifacation Limit Table For M15/20 on 7 days Age Min 67% of Total Compressive Strength						Min Required	10.05	15	
				Specifacation Limit Table For M20/20 on 7 days Age Min 67% of Total Compressive Strength						Min Required	13.4	20	
				Specifacation Limit Table For M25/20 on 7 days Age Min 67% of Total Compressive Strength						Min Required	16.75	25	

SMEC-Brisbane-AQUA-BDA
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Contractors Reps

SECONDARY TOWNS INTEGRATED URABAN ENVIRONMENTAL IMPROVEMENT PROJECT

Biratnagar Sub-Metropolitant City

SUMMARY OF FIELD DENSITY TES (IS:2720:-PART-28) FOR THE MONTH OF MAY 2017

Description : Field Density Tests on

FDT -77:WWTP OUTER ROADCH :0+000 0+640

FDT:78:T1L13 & T1L13(A)CH:0+020 to 0+165 & 0+000 to 0+060

FDT:79:T1-L-14(A)/R-11 Line CH:0+160 to 0+280

FDT:80:R-4 Line CH:0+000 to 0+260 National Trading

FDT:81 WWTP INNER ROAD:0+230 to 0+320 EAST & 0+000 to 0+100 South

SUB BASE P.G-5

S.N.	L/Ref. No.	Date	Location/ Area -	MDD Gm/CC	Degree of Compaction, %		THICKNESS (CM)
1	FDT-77	31/5/2017	0+020 LHS	2.12	95.06	4.0	15.0
2			0+070 RHS	2.15	96.41	5.0	14.5
3			0+130 CL	2.13	95.39	4.0	15.0
4			0+190 LHS	2.12	95.16	4.0	15.5
5			0+250 RHS	2.21	99.06	6.0	15.0
6			0+310 CL	2.17	97.33	5.0	15.5
7			0+370 CL	2.19	98.06	6.0	15.0
8			0+430 RHS	2.18	97.96	6.0	15.5
9			0+490 LHS	2.16	96.87	5.0	14.5
10			0+550 RHS	2.16	96.87	5.0	14.5
11			0+600 CL	2.2	98.77	6.0	15.0
12			0+630 LHS	2.16	96.87	5.0	14.5
1	FDT-78	31/5/2017	0+060 LHS	2.15	96.27	6.0	16.0
2			0+110 RHS	2.17	97.29	4.0	16.0
3			0+150 CL	2.16	96.69	5.0	14.5
4			0+010 RHS	2.16	96.93	3.0	16.0
5			0+055 LHS	2.16	96.73	4.0	14.5
1	FDT-79	31/5/2017	0+170 LHS	2.20	98.55	6.00	15.0
2			0+220 CL	2.14	96.02	3.00	15.5
3			0+270 RHS	2.16	96.80	5.00	15.0
1	FDT-80	31/5/2017	0+050 CL	2.16	97.04	5.00	14.5
2			0+105 LHS	2.15	96.45	6.00	16.0
3			0+210 RHS	2.13	95.55	5.00	17.0
4			0+250 LHS	2.13	95.40	4.00	15.0
1	FDT-81	31/5/2017	0+310 LHS	2.22	99.64	6.00	16.0
2			0+220 RHS	2.19	98.00	5.00	18.0
3			0+020 LHS	2.18	97.67	5.00	17.0
4			0+080 RHS	2.17	97.50	4.00	15.0
Required				2.230	95%	OMC <6.5	15

SMEC-Brisbane -AQUA-CEMAT-BDA
Approved by C.S.E
Test Checked by A.C.S.E
Consultant Reps

CTCE-KALIKA J/V
Submitted by Project Manager
Test Conducted by Q.C Manager
Contractors Reps