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 (September, 2015)

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

07 October 2015

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
	07 October 2015	DSC		

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List of Tables:

List of Figures:

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
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
Consultant	SMEC in association with Brisbane/AQUA/BDA/CEMAT
Contractor	CTCE-KALIKA Joint Venture
Date of Commencement	8th December, 2013
Date of Completion	25th May, 2016
Contract Period	900 days from date of commencement
Time elapsed till September 2015	662 days from date of commencement (**73.6%)**
Contract amount with Provisional Sum	NRs. 2,119,054,525.90
Add 13%VAT	NRs. 272,278,000.00
Variation Order No 1 with 13% VAT	NRs 99,753,075.60
Total Contract Amount with VAT & PS	NRs. 2,491,085,601.50
Paid Amount of IPC 01	NRs. 209,400,000.00 (Mobilization Advance Payment)
Paid Amount of IPC 11	**NRs. 160,083,476.07**
Total Paid Amount from IPC 01 to IPC 11	**NRs. 1,006,572,160.01**
Variation Order No 2 with 13% VAT (submitted on 2 August 2015 and is under review)	**NRs. 258,111,937.92**
Total Contract Amount including **VO No 02** plus VAT & PS	**NRs 2,749,197,150.40 (UNDER REVIEW),** COMMENTS RECEIVED FROM PMSC/PCO/PIU BIRATNAGAR ON SECOND OCTOBER,2015.

2 INTRODUCTION / BACKGROUND

1. 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 **September, 2015** 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.

2. 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 Town Integrated Urban Environmental Improvement Project (STIUEIP), Biratnagar. The cost sharing has been revised in April, 2013 as: 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.

3. 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
   - Contractor's Work Program (Revision 02) 05 December 2014, this has to be revised as the work progress is not consistent. The Contractor is advised to revise the work program and it is expected to receive by the end of August 2015. The Contractor has officially submitted the third (3rd) revised work program through the Contractor's letter in **15th September 2015 (received on 23rd September 2015**). The third revised work program is under review.

3. SUB-PROJECT COMPONENTS

3.1 SEWER LINES

4. The prioritized sewer lines for Final Detailed Engineering Report of BSMC are as follows:

Table 1: Proposed Sewer Lines in BSMC

S N.	Description	Unit	Quantity
1	**Sewerage Pipe Supply and Installation**		**62,835.0**
	Reinforced Concrete Pipe laying and jointing		**15,748.0**
	Line T1 (Secondary Line T2 (Trunk)	m m	3,788.0 7,506.0
	Line T3 (Trunk)	m	4,136.0
	Line T4 (Secondary)	m	318.0
	HDPE laying and jointing		**47,087.0**
	Line T1 (Secondary	m	7,124.0
	Line T2 (Trunk)	m	19,410.0
	Line T3 (Trunk)	m	18,341.0
	Line T4 (Secondary)	m	22,12.0
2	**Manhole (Brick / RCC)**	**no.**	**2,019**
3	**Sewer Inlet**	**no.**	**3,766.00**
4	House connection	no.	5,930.00
5	Reinstatement of Roads	km	64.50

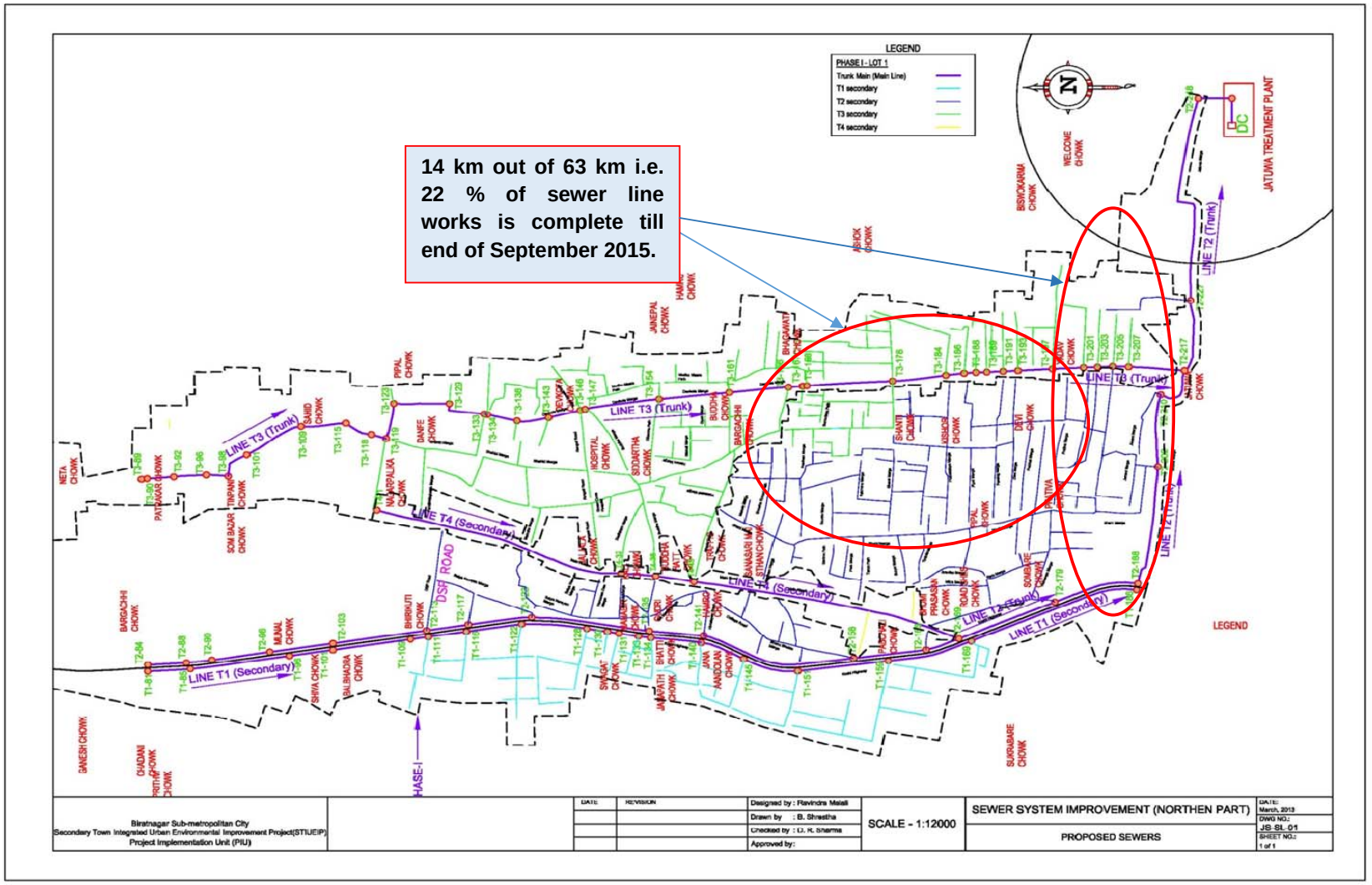


FIGURE. 1 PROPOSED SEWER LINES IN BSMC

3.2 Storm Water Drains

5. 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 are 14 numbers and catchment areas and discharges are respectively 1,324.2 Ha and 73.21 cum/sec.

Table 2: Proposed Storm Water Drains in BSMC

S. No.	Description	Unit	Quantity
A	**Storm Drain for Northern Parts**		**39,379.00**
I	Storm Drain Lines	m	**25,388**
II	Culvert	no	41
III	Outfall	no	15
IV	Rain Inlet	no	30
V	Manhole	no	30
VI	Canal Crossing	no	11
B	**Storm Drain for Southern Part**		
I	Brick Masonry Drain	m	**13,991**
II	Cleaning and Maintenance of Existing Drain	m	7,273
III	Culverts	no	38
C	**Rehabilitation of Existing Drain**		
I	Drain Cover	m	30,467
II	Cleaning and Maintenance of Existing Drain	m	33,601

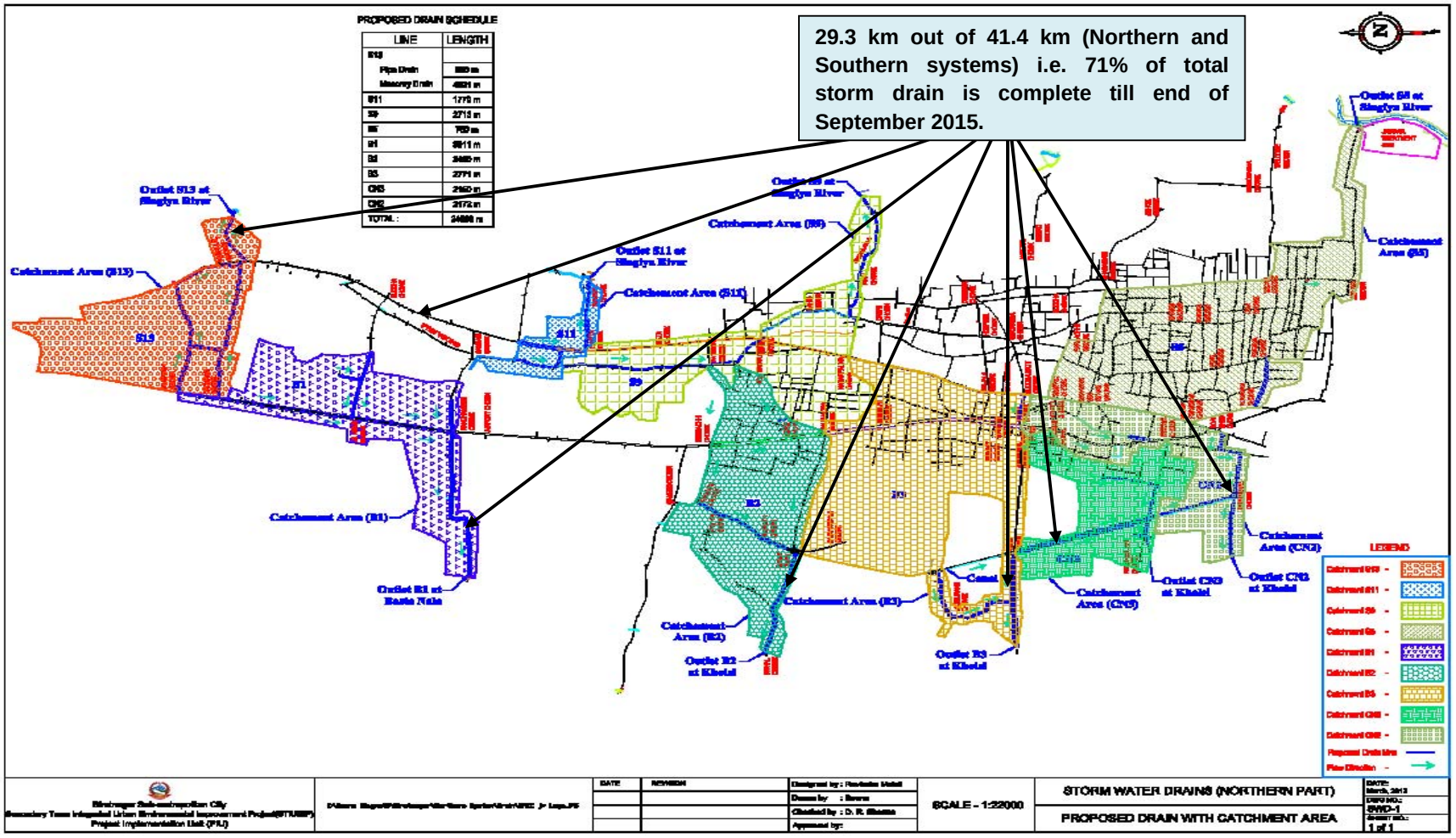


Figure 2: Proposed Storm Water Drains in BSMC (Northern Drainage System)

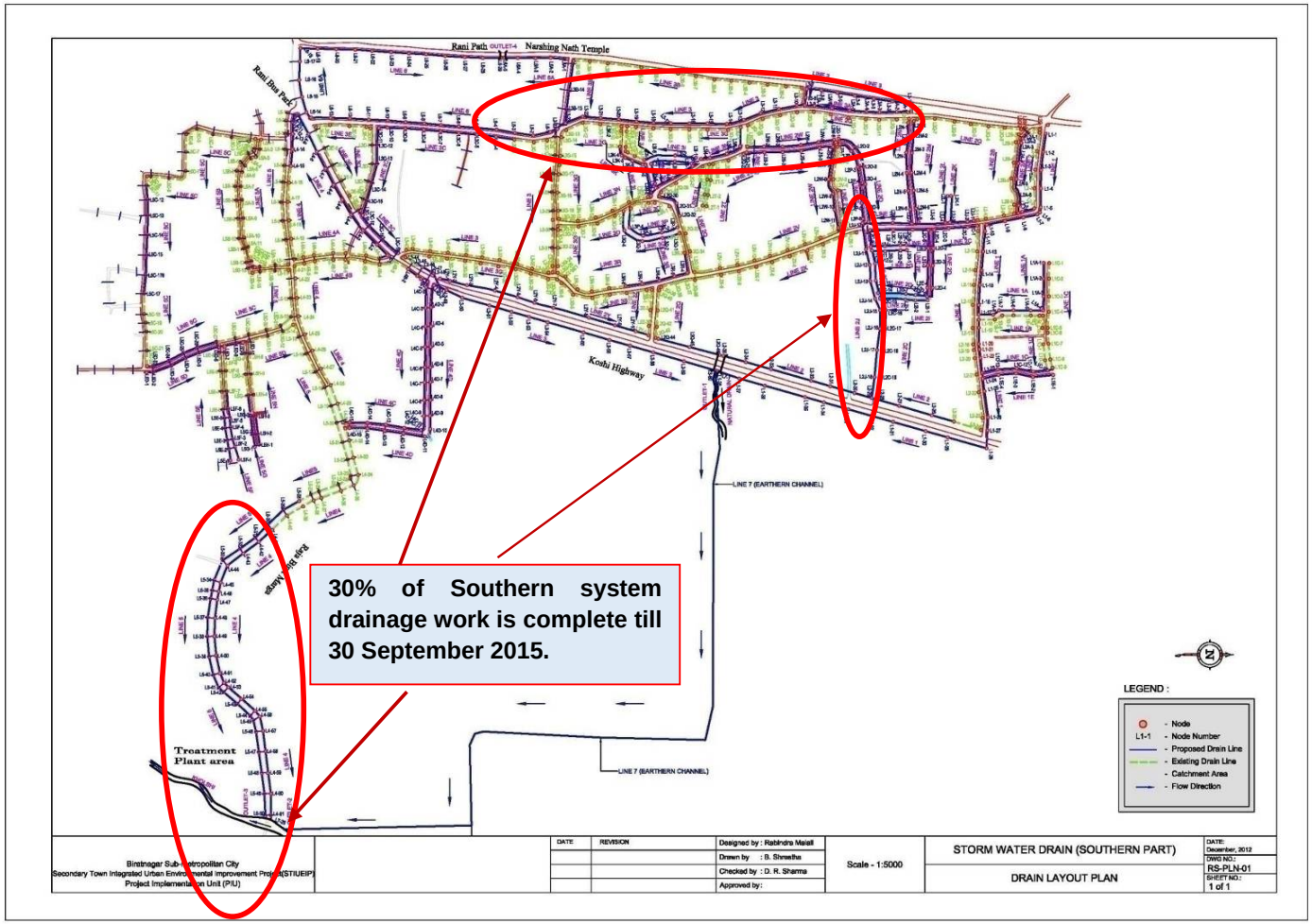


Figure 3: Proposed Storm Water Drains in BSMC (Southern Drainage System)

3.3 WASTE WATER TREATMENT PLANTS

6. 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 in filtration 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 areas is estimated at 650.08LPS. The maximum quantity of the waste water for Phase I areas only is estimated at 213.97 LPS. The capacity of the Phase I WWTP has been adopted as 214LPS. 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
26	River training works	m	600
27	Electro mechanical works	Set	1
28	Lab Equipment and installation	Set	1

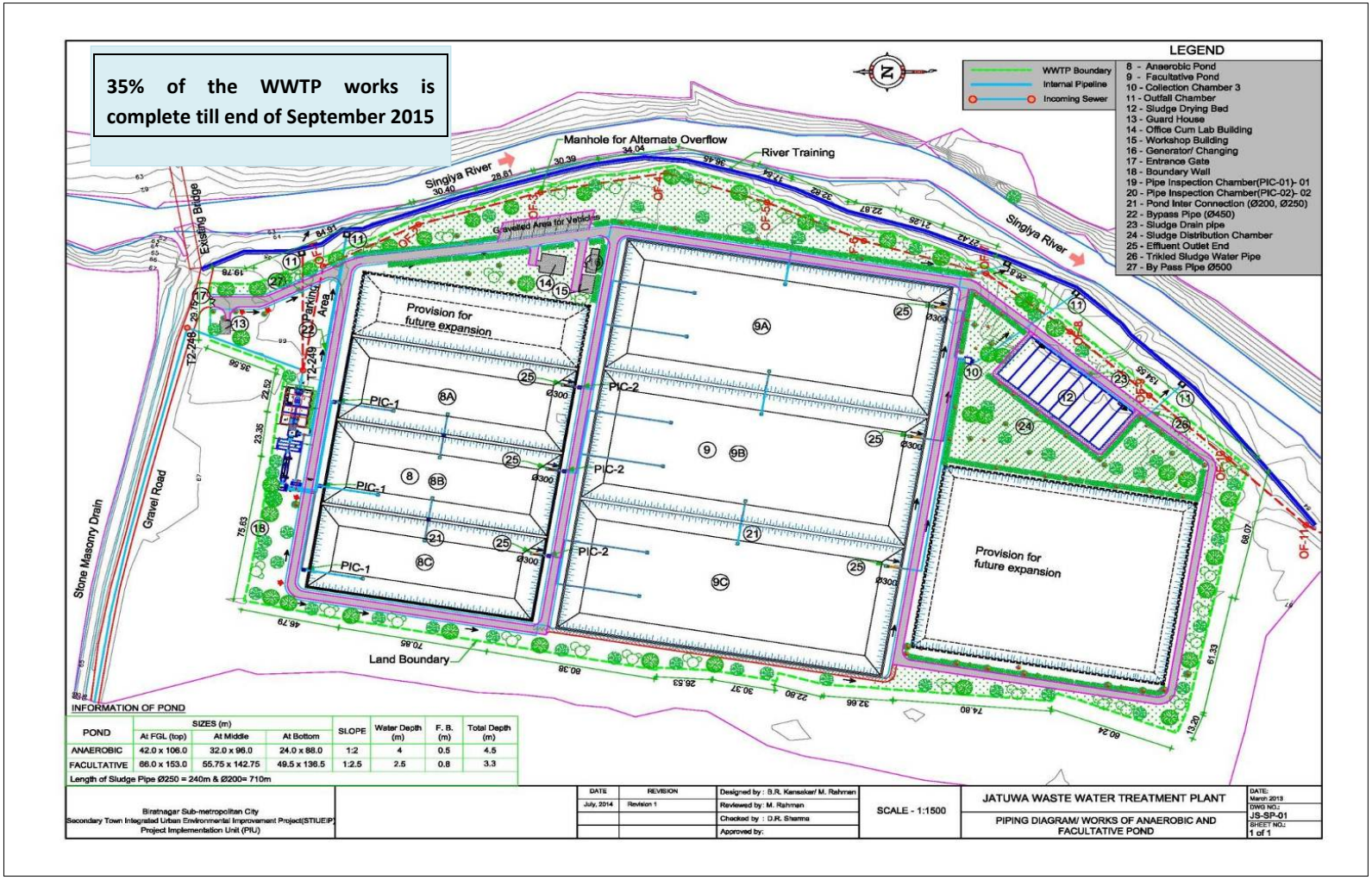


Figure 4: Proposed Waste Water Treatment Plant at Jatuwa in BSMC

3.4 Roads and Lanes

7. Most of the roads / lanes in Biratnagar are in a poor state due to lack of periodic maintenance, and need improvement, whereas 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. Almost necessary streets are already constructed 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 Puspalal Chowk to Bhatta Chowk)	2.5 Km
Reinstatement and Road Improvements (under sewer line installation)	62.0 Km

3.5 Environmental Aspect

8. The project is environmental improvement project and mainly constitutes works on sewerage and drainage improvement works in BSMC besides others. As per ADB guidelines on Environmental Assessment requirements, this project is classified as Environment Category B. According to Environmental Protection Guidelines, 2054 BS, First Revised (2055 BS) schedule-3, IEE is required for Operations of Sewerage Schemes under Schedule 1.h.2.e (pertaining to Rule 3). The final report on IEE was submitted and MoUD had approved the IEE on May14, 2013.

9. 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 inhabitants 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.

10. 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 2015 and semi – annual report will be submitted soon.

3.6 Social Aspect

11. 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 (FriPAD).

12. As there is the slack period of the construction due to monsoon and no work activities due to Madhesh strike (bandh) so there is no change in the status of the social matters from the previous month.

3.7 Financial Plan

13. 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 VO2) in second fiscal year. Hence the remaining disbursement 65.7 % is planned within 25 May 2016.

3.8 DISBURSEMENT RECORDS IN CONSTRUCTION

Table 5: Disbursement Record in Construction to Date

S.N.	Description of Payment	Payment Items	Amount in NRs.
1	M/S CTCE-Kalika JV	IPC 01	209,400,000.00
2	M/S CTCE-Kalika JV	IPC 02	27,853,500.98
3	M/S CTCE-Kalika JV	IPC 03	47,507,270.95
4	M/S CTCE-Kalika JV	IPC 04	42,241,392.52
5	M/S CTCE-Kalika JV	IPC 05	22,035,291.99
6	M/S CTCE-Kalika JV	IPC 06	85,573,541.38
7	M/S CTCE-Kalika JV	IPC 07	76,203,672.17
8	M/S CTCE-Kalika JV	IPC-08	115,297549.23
9	M/S CTCE-Kalika JV	IPC-09	109,414,317.97
10	M/S CTCE-Kalika JV	IPC-10	110,962,146.75
11	M/S CTCE-Kalika JV	IPC-11	160,083,476.07
		Total in NRs.	**1,006,572,160.01**

4. OBJECTIVES AND SCOPE OF WORKS

4.1 OBJECTIVES

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

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

15. 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

16. 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

17. The Contractor has not met the target set for storm water drain construction before monsoon. There is no change in the progress of the storm drain from July 2015. The contractor has completed about 29.3 km out of 41.4km, 71% till September 2015. The Contractor has planned to start the work from 1 September 2015.

5.2 SEWER LINES

18. The Contractor has completed about 14 km out of 63 km (22%) sewer line with HDPE pipes

and RCC pipes before monsoon. There is no change in the progress of the storm drain from July 2015. The Contractor had planned to start the work from 1 September 2015 but this has been affected by the Madesh Strikes.

The proposal of the precast concrete manholes, sewer inlets and house connection chambers has been submitted for review and approval. A conditional approval in consultation with the Employer has been given to the Contractor to prepare few numbers and to demonstrate at site. If 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, then the Consultant will release for unconditional approval.

Recently, the precast concrete house connection chambers, sewer inlets and manholes are being installed at sites and found to be effective and we are able to open traffic at the shortest possible time and especially where the business center with crowds (in R5 and R65 Roads) are 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 WASTEWATER TREATMENT PLANT

19. Office cum laboratory building, workshop building and generator / changing house at WWTP, Jatuwa are complete. The Contractor has stopped all activities at WWTP site. There is no change in the progress of the storm drain from July 2015.

5.4 ROAD AND LANES IMPROVEMENT WORKS

20. The Contractor has completed the rehabilitation / repair of existing drain of about 6 km in R2 road. The Contractor has completed the shifting/ relocating electric poles up to Bhatta Chowk on both sides. During the monsoon, the Contractor has continued to excavate the trenches for electric poles but the rate of the progress is in a very slow pace. The Contractor has assured that the road works on R2 road will not be affected due to delay in shifting of the electric poles. Currently, this activity has been stopped due to the strikes at Madesh/ Terai.

The Contractor had started to prepare subgrade and sub-base after discussion held at ADB Office Kathmandu on 25th May 2015. The Contractor had tried to continue with the success if 100m sub-base laying but unfortunately the Contractor has to stop the work due to unfavorable weather condition during those days.

5.5 CONSTRUCTION MATERIALS

21. The contractor has stocked construction materials like coarse aggregates, fine aggregates, cement, reinforcement etc at his yard, Katahari. The fabrication of steel moulds for precast units- manholes, sewer inlets and house connection chamber are in progress.

5.6 CONSTRUCTION MATERIAL TESTING LAB

22. Construction material testing laboratory has been set up at the Contractor's camp at Katahari.

There is no activity of lab tests due to no works at site.

5.7 PHYSICAL PROGRESS TILL END OF SEPTEMBER 2015

23. There is no work progress during this month. Hence the progress till end of this month is the same as of end of June 2015 .The total physical progress achieved till 30 June 2015 is about 34.3 % whereas the cumulative planned progress till September 2015 is 41.8%, wrt work program rev no 03. The progress of the work is lagging behind by 7.5% compared to the planned works till end of September 2015 (**based on work scheduled Rev 03, which is under review**).

Table 6: Plan Vs Actual Progress till September 2015

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**			
Progress to date wrt the revised work plan (%)		(12.53)	(17.30)	(3.27)	(7.54)	(11.17)	(15.40)	(19.69)	(23.75)	**(22.98)**	**(22.98)**	**(22.98)**	**(7.53)**			

The whole project activities have been stopped due to Madhesh strike, hence there is no work progress of this month September. The actual achievement till to date remains same from June 2015 i.e **34.3%. 73.6%** time has already been elapsed. The contractor is lagging behind by **7.53 %** with respect to **revised work program**, Rev No. 03 (which is under review) in his own program.

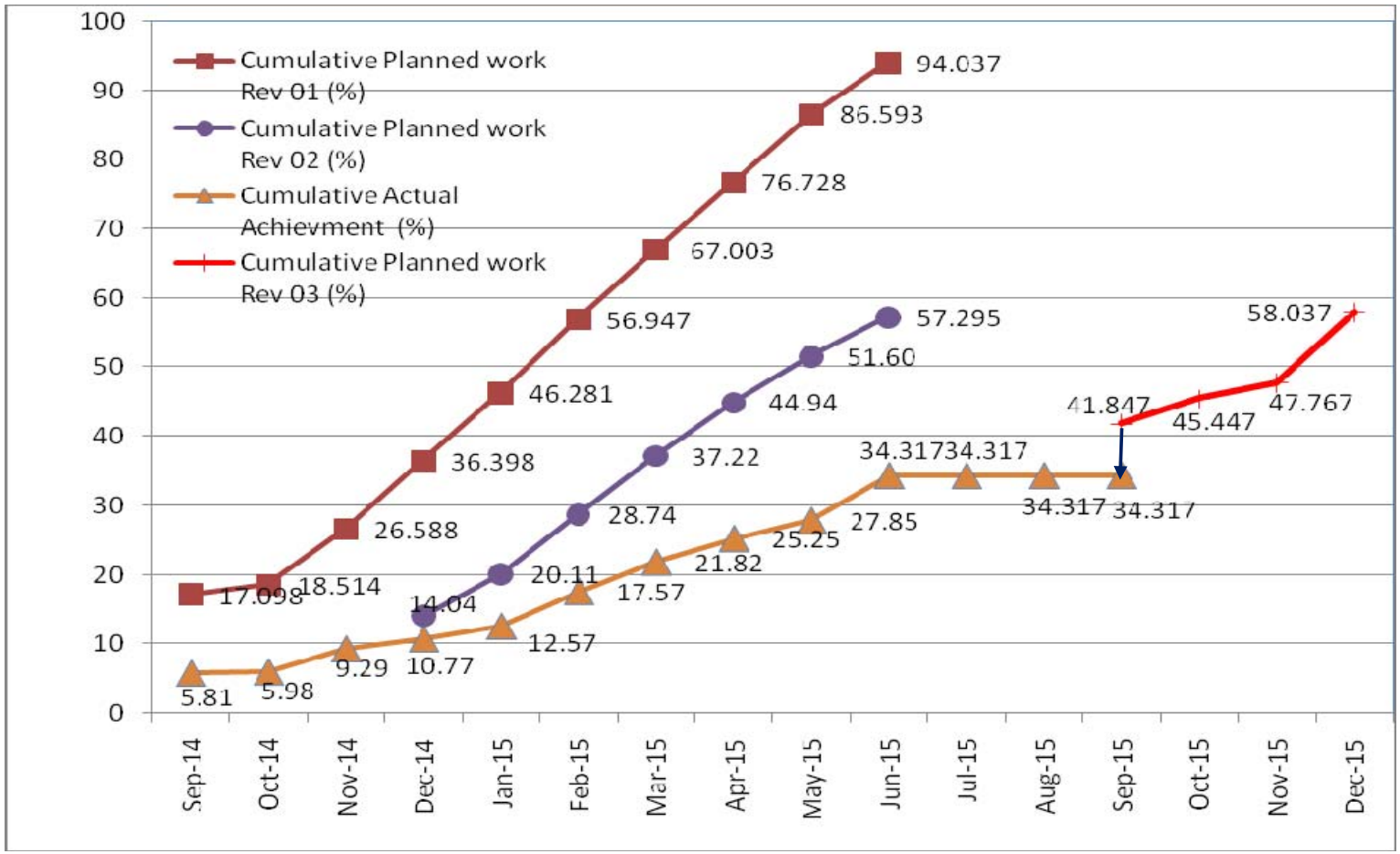


Figure 5: Plan Vs Actual Progress till end of September 2015

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.

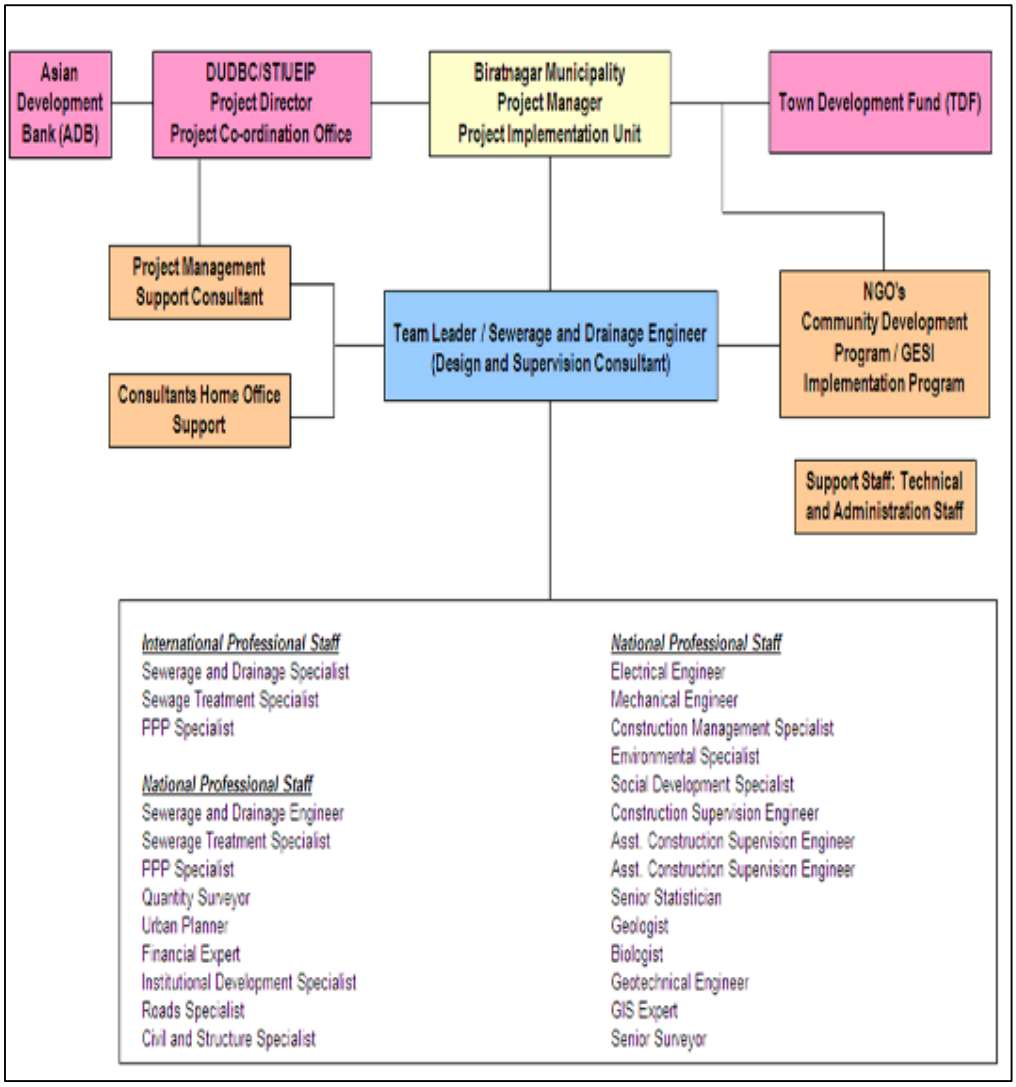


Figure 6: Organization and Staffing of STIUEIP, Biratnagar

6.2 Inception Report

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

6.3 Conceptual Catchment Plan and Design Criteria

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

6.4 Survey

26. The survey was completed in August, 2012

6.5 Design

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

28. 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

29. 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

30. 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.

31. 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.

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

6.8 Final Report

33. 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.**

34. The sharing of cost by concerned institutions is as follows

Table 7: Agency-wise Financial Contribution to BSMC

Contributors	Amount (US$)	Amount (NRs.)	%
Government of Nepal (GoN)	5,960,256	524,502,513	**16.0%**
Asian Development Bank (ADB)	24,213,539	2,130,791,460	**65.0%**
Biratnagar Sub-Metropolitan City (BSMC)	2,980,128	262,251,257	**8.0%**
Town Development Fund (TDF)	4,097,676	360,595,478	**11.0%**

6.9 CONSULTANT'S ACTIVITIES IN CONSTRUCTION PHASE

35. 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	Mohan Kumar Tuladhar	Team Leader
2	Dil Bahadur Rana	Construction Supervision Engineer
3	Raj Bahadur Khadka	Construction Management Specialist
4	Bhupal Khadka (Resigned from the project from 5th September 2015)	Roads Specialist
5	Bala Ram Mayalu	Social Development Specialist
6	Jay Prakash Yadav	Asst. Construction Supervision Engineer-1
7		Asst. Construction Supervision Engineer-2
	Ajit Thapa **(Proposed)**	Asst. Construction Supervision Engineer-3
8	Rajesh Yadav	Junior Engineeer-1
9	Sujan Shrestha	Junior Engineeer-2
10	Ashok Kafle	Junior Engineeer-3
11	Santosh Dahal	Junior Engineeer-4
12	Saroj Bhattrai	Junior Engineeer-5
13	Santosh Yadav	Office Manager
14	Ramji Gimire	Driver-1
15	Suman Ghimire	Driver-2
16	Ramila Ghimire	Office Assistant

36. 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. Received comments on VO No 02 and working on it; and started preparation of VO No 03 in this month

xi. Maintain correspondences with the Employer and the Contractor

xii. Assist to PIU

xiii. Started design review and cost estimation for additional financing based on the previous design reports and details

xiv. DSC has been working on design review, cost estimate and bid documents preparation for Additional Financing for Phase –II.

6.10 KEY DATES

The consultant has noted the following key dates for the month of September 2015

Table 9: Key dates of events /activities:

S. No	Date	Activities/Events	Remarks
1		Madhesh Strike/ Bandh	The whole construction activities have been stopped, the target progress of 7.53 % has directly impacted on completion period, and this has obviously caused delay in project completion date.

7 DETAILS OF ACTIVITIES CARRIED OUT IN THIS MONTH

7.1 PHYSICAL PROGRESS IN THIS MONTH

Table 10: Physical Progress in Storm Water Drains:

Physical Progress till 30 September 2015						
S.N.	Location	Proposed Length (m)	Progress		Total to date (m)	Progress (%)
			Up to August 2015 (m)	This Month (m)		
1	B1	3,580.00	3,540.00	0	3,540.00	99%
2	B2	3,742.00	3,342.00	0	3,342.00	89%
3	B3	3,514.00	3,326.00	0	3,326.00	95%
4	S5	740.00	-		-	0%
5	S9	3,178.00	810.00	0	810.00	25%
6	S11	2,092.00	1,434.00	0	1,434.00	69%
7	S13	5,640.00	4,294.00	0	4,294.00	76%
8	CN2	2,273.00	2,216.00	0	2,216.00	97%
9	CN3	2,170.00	1,493.00	0	1,493.00	69%
10	Rani Area	8,483.00	2,521.00	0	2,521.00	30%
11	R2 (Rehab)	6,000.00	6,325.00	0	6,325.00	105%
	Total	**41,412.00**	**29,301.00**		**29,301.00**	71%

Table 11: Physical Progress in Sewer Lines: Till 31 September 2015

Physical Progress till 30 September 2015						
S.N.	Location	Proposed Length (m)	Progress		Total to date (m)	Progress (%)
			Up to August 2015 (m)	This Month (m)		
1	T1	10,912		0		0%
2	T2	27,128	8,342.00	0	**8,342.00**	31%
3	T3	23,070	5,759.00	0	**5,759.00**	25%
4	T4	2,530		0		0%
	Total	**63,640**	**14,101.00**		**14,101.00**	**22%**

Table 12: Physical Progress in Manholes: Till 30 September 2015

S.N.	Description	Progress		Total to date (m)
		Up to August 2015 (m)	This Month (m)	
1	House Connection Chambers	**1,108.00**	0	**1,108.00**
2	Sewer Inlet	**947.00**	0	**947.00**
3	Manholes	**810.00**	0	**810.00**

Table 13: Physical Progress in Roads and Lanes: Till 30 September 2015

S.N.	Location	Proposed Length (km)	Progress		Total to date (m)	Progress (%)
			Up to August Month (m)	This Month (m)		
1	T1, T2,T3,T4 and R2	65.0	-	0		The shifting of electric poles in progress
	Total	**65.0**				

Table 14: Physical Progress in Waste Water Component at WWTP, Jatuwa:

S.N.	Location	Description	Completed Items to Date	Progress in %
1	Jatuwa	Excavation of Anaerobic Pond	3 nos	**No Activities at WWTP Site in this month**
2	Jatuwa	Excavation of Facultative Pond	2 nos	
3	Jatuwa	River Training Work	600 m	
4	Jatuwa	Boundary Wall	580 m	
5	Jatuwa	Office Cum Lab Building		
6	Jatuwa	Workshop Building		
7	Jatuwa	Generator / Changing House		

Table 15: Physical Progress of Precast Concrete Works: Till 30 September 2015

S.N.	Location	Description	Up to August 2015	This Month	Total to date	Remarks
1	Katahari	Precast Slab	53,500	1,800	55,300	
2	Katahari	Precuts	4,475	672	5,147	
3	Katahari	Kerb Stone	5,812	0	5,812	

Table 16: Physical Progress of Hume Pipe (NP3): Production Detail till 30 September 2015 in Numbers

S.N.	Diameter (mm) (No)	Pipes Required	Up to August (No)	This Month (No)	Total to date , September 2015 (No)	Pipes to produce (Balance)	Remarks
1	200		1,562	0	1,562		
2	300		389	0	389		
3	350		294	0	294		
4	400		373	0	373		
5	450		301	0	301		
6	500		465	0	465		
7	600		1,130	0	1,130		
8	700		1,416	0	1,416		
9	900		263	0	263		
10	1000		649	0	649		
11	1600		271	0	271		
	Total		**7,113**	**0**	**7,113**		

Contractor's Manpower:

Table 17: Contractor's key staffs:

Designation	No	Remarks
Project / Contract Manager	1	
Planning Engineer/Construction Engineer	1	
Construction Engineer	1	
Site Engineers	5	
Quality Control Manager	1	
Office/Bill Engineer	1	
Junior Engineer	10	
Sub Overseers	6	
Safety Manager / Senior Site Supervisor	1	
Accountant / Office Manager	1	
Lab Assistant	3	
Store Keeper	1	
Light Drivers	5	
Machine Operator	14	
Site Supervisor	5	
Other Supporting Staff	10	
Skilled Labor at Site	8	M:6; F:2
Unskilled Labor at Site	32	M:26; F:6
Total Labor	106	M:32 , F : 8

Contractor's Equipment:
Table 18: Contractor's Equipment:

Equipment	No	Remarks
Back Hoe JCB	8	
Loader	1	
Excavator	5	
Excavator with Long Boom	1	
Plate Compactor	2	
Concrete Mixer	6	
Concrete Batching Plant	1	
Kerb Stone Machine	1	
Trailer	2	
Transit Mixer	2	
Water Bowser	1	
Steel Cutter	4	
Dumping Tractor	8	
Monkey Jumper	1	
Needle Vibrator	8	
Tipper	17	
Total Station	1	
Level Machine	6	
Jeep	6	
Motor Bike	10	
Asphalt Plant	1	
Asphalt Paver	1	
Crane	1	
Trailer	2	
Motor Grader	1	
Tractor	9	
Concrete Transit Mixture	3	

7.2 Cumulative Progress (S Curve)

Contractor's Revised Cumulative Progress S-Curve (Based on Work Program Rev. No 03)

Contract Amt : 2,453,291,234.00

Item No.	Description	Amount (NRs)	Relative Weight in %	Year	2013	Year 2014												Year 2015												Year 2016				
				Month	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1	Preliminary and General Works	16,850,000.00	0.795	Program	0.000	0.326	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.048	0.013	0.013	0.119
				Achiev	0.000	0.326	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	Civil Works	1,972,492,008.90	93.08	Program	0.000	0.005	0.508	0.369	0.295	1.811	1.509	0.100	0.384	0.408	0.150	3.293	4.549	5.859	7.607	7.454	7.513	6.078	5.050	1.742	1.503	0.000	0.000	3.366	6.433	8.047	8.646	6.788	2.617	0.000
				Achiev	0.000	0.005	0.508	0.369	0.295	1.811	1.509	0.100	0.384	0.408	0.150	3.293	1.136	1.787	3.661	15.281	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	Electro-mechanical Works	18,884,000.00	0.89	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.365	0.438	0.088	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
				Achiev	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	Provisional Items and Provisional Sum	63,741,517.00	3.01	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.196	0.196	0.196	0.196	0.196	0.196	0.196	0.196	0.000	0.000	0.000	0.196	0.196	0.197	0.197	0.197	0.065
				Achiev	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.058	0.068	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	Operation & Maintenance Equipment and Machineries	34,450,000.00	1.63	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.813	0.813	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
				Achiev	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	Laboratory Equipment	6,000,000.00	0.28	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.174	0.109
				Achiev	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	Operation and Maintenance	6,000,000.00	0.28	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.283
				Achiev	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	Dayworks	637,000.00	0.03	Program	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
				Achiev	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Total	2,119,054,525.90	100.00																														
Original Program		% age			0.347	0.074	3.181	6.282	7.931	3.017	2.219	1.212	0.476	2.710	3.643	3.662	3.700	4.435	4.401	4.460	4.456	4.401	3.802	1.168	3.018	3.658	4.413	3.645	3.597	4.707	4.728	3.150	2.891	0.616
		Cumulative % age			0.347	0.421	3.602	9.884	17.815	20.832	23.051	24.263	24.739	27.449	31.092	34.754	38.454	42.889	47.290	51.750	56.206	60.607	64.409	65.577	68.595	72.253	76.666	80.311	83.908	88.615	93.343	96.493	99.384	100.00
Revised Program-1		% age			0.000	0.286	0.449	0.329	2.288	6.606	4.806	1.003	0.183	0.576	1.416	8.074	9.810	9.883	10.666	10.056	9.725	9.865	7.445	2.284	0.247	0.159	0.145	0.145	0.145	0.145	0.644	0.601	1.227	0.787
		Cumulative % age			0.000	0.286	0.735	1.064	3.352	9.958	14.764	15.767	15.950	16.526	17.942	26.016	35.826	45.709	56.375	66.431	76.156	86.021	93.466	95.750	95.997	96.156	96.301	96.446	96.591	96.736	97.380	97.981	99.208	100.00
Revised Program-2		% age			0.000	0.286	0.449	0.329	0.265	1.575	1.314	0.097	0.343	0.363	0.140	2.855	4.760	6.070	8.631	8.478	7.724	6.654	5.699	2.041	1.583	0.080	0.080	3.577	6.644	9.258	9.424	7.700	3.003	0.578
		Cumulative % age			0.000	0.286	0.735	1.064	1.329	2.904	4.218	4.315	4.658	5.021	5.161	8.016	12.776	18.846	27.477	35.955	43.679	50.333	56.032	58.073	59.656	59.736	59.816	63.393	70.037	79.295	88.719	96.419	99.422	100.000
Revise Program 3		% age			0.000	0.286	0.449	0.329	0.265	1.575	1.314	0.097	0.343	0.363	0.140	2.855	0.991	2.712	3.232	3.939	2.764	2.246	5.421	0.302	0.302	7.530	3.600	2.320	10.210	11.470	11.165	10.790	10.360	2.630
		Cumulative % age			0.000	0.286	0.735	1.064	1.329	2.904	4.218	4.315	4.658	5.021	5.161	8.016	9.007	11.719	14.951	18.890	21.654	23.900	29.321	29.623	29.925	37.455	41.055	43.375	53.585	65.055	76.220	87.010	97.370	100.000

Figure 7: S- Curve of Physical Progress (based on rev. no. 03, which is under review)

DETAILS OF SAFEGUARD ACTIVITIES (SOCIAL, ENVIRONMENTAL AND RESETTLEMENT ACTIVITIES AND ISSUES)

This report records the project implementation performance of social safeguard aspect for the duration of **August 2015** and highlights the key activities undertaken during the period. The activities on the social development during the period are summarized below:

8.1 SOCIAL ISSUES

8.1.1 OPERATIONAL GUIDELINES FOR COMMUNITY MOBILIZATION AND IMPLEMENTATION OF CDP

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

37. 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 usually been facilitating 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**

38. 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**

39. 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 be participated in the training.

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

40. 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 has been installed, 45 hand pump platforms built and 5 public toilets are complete now.

- **Employment in Project**

41 The core activities of the project i.e. sewerage pipe laying, drain construction and road/ lane improvement provided employment to about 250 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**

42. 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 in the month August 2015.

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

43. Following are the key issues affected in progress:

- The resumption of the construction activities should have been started from 1st September 2015 and planned to achieve 7.53% of monthly target. But the whole project activities of construction at site have been stopped completely due to Madhesh Strike.
- The production of NP3 RCC Hume pipe production at Itahari has also been affected and stopped due to unavailability of construction materials. The transportation of construction materials and labor movements is greatly affected.

10 WORK PLAN FOR THE NEXT MONTH

44. 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 no 03 is under review:**

- Resume the road works at R2 Pushpalal Road and planned to start at 14 km stretches where sewer lines are already completed.
- Production of precast RCC items (Hume pipe, Kerb stone, chamber, manhole, drain cover slab etc)
- Suitability tests and routine tests of construction materials at Lab and at site

ANNEX-1: Work Schedule (Rev.03) which is under review and Progress September 2015

Note: Please refer to the contractor's progress report for detail and complete work program.

Item No.	Description of Works	August 015	September 015	October 015	November 015	December 015	January 016	February 016	March 016	April 016
A	General									
B	Earthwork									
C	Structure									
D	Concrete Works									
E	Brickworks									
F	Door and Windows									
G	Plaster, floor finishes and paintings.									
H	Roofing and Truss works									
I	Road Works									
J	Sewerage and Drainage									
K	Bio-Engineering Works									
L	Electrical Works									
M	Sanitary and Water supply works									
N	Electromechanical Works									
O	Provisional Item									
P	Provisional Sum									
Q	Equipment and Machine									
R	Laboratory Equipment									
S	Operation and Maintenance									
T	Dayworks (Labor)									
U	Dayworks (Material)									
	Total									

Work Schedule Revise -3 (Completion date May 25, 2016)

ANNEX2: PHOTOGRAPHS – AUGUST 2015

Gravel Sub-base Surface at R2 road (100m) found in good grade and camber after rainy season

ANNEX-3: FINANCIAL STATUS (DETAILS OF SUBMITTED INVOICES AND RECEIPT OF PAYMENTS WITH KEY DATES)

Invoice #	For Month	Invoice Amount including VAT		Received Amount		Remarks
Invoice 01	Advance	NRs. 9,866,160.40	USD 104,621.20	NRs. 9,866,160.40	USD 104,621.20	Received
Invoice 02	Inception Report	NRs. 1,947, 420.08	USD 52,721.00	Rs. 1,947, 420.08	USD 52,721.00	Received
Invoice 03	Jan +Feb, 2012-months Invoice	NRs. 2,387,262.11	USD 4, 243.15	NRs.2,329,310.81	USD 4, 243.15	Received
Invoice 04	March, 2012	NRs. 537,546.65	USD 2,276.95	NRs. 351,430.00	USD 2,276.95	Received
Invoice 05	April, 2012	NRs. 396,065.00		NPR 267,810.00		Received
Invoice 06	Vehicle Invoice	NRs. 8,000,000.00		NRs. 8,000,000.00		Received
Invoice 07	May- month Invoice	NRs. 502,324.55		NRs 250,860.00		Received
Invoice 08	June-month Invoice	NRs. 464,430.00		NRs 262,160.00		Received
Invoice09	Interim Report		USD 70,295.04		USD 70,295.04	Received

Invoice #	For Month	Invoice Amount including VAT		Received Amount		Remarks
Invoice 10	Interim Report	NRs. 2,596,560.10		NRs 2,596,560.10		Received
Invoice 11	April-June,2012		USD 1,270.00		USD 1,270.00	Received
Invoice 12	July-month Invoice		USD 2,015.00		USD 2,015.00	Received
Invoice 13	Survey Invoice I	NRs. 2,166,775.00		NRs. 2,166,775.00		Received
Invoice 14	July-month Invoice	NRs. 669,751.00		NRs. 321,146.00		Received
Invoice 15	August month Invoice	NRs. 337,870.00	USD 000.00	NPR 314,140.00		Received
Invoice 16	September month Invoice	NRs. 328, 830.00	USD 3, 361.75	NRs. 314,140.00	USD 1,854.75	Received
Invoice 17	Survey Works Invoice II	NRs. 1,166,775.00		NRs. 1,166,775.00		Received
Invoice 18	Monthly Invoice Oct.12	NRs. 357,080.00	USD 2,895.00	NRs. 324,310.00	USD 2,895.00	Received
Invoice 19	Environmental Base line survey	NRs.144,634.35		NRs. 125,769.00		Received
Invoice 20	Monthly Invoice Nov.12	NRs. 331,090.00	US$. 4,407.00	NRs. 324,310.00	USD. 4,407.00	Received
Invoice 21	Monthly Invoice-Dec.2012	NRs. 449,175.00	US$ 1,909.70	Nrs. 350,865.00	USD 1,909.70	Received

Invoice 22	Draft Report Invoice	NRs. 5,193,120.21	US$140,590.08	NRs. 5,193,120.21	USD 91,587.31	Received
Invoice 23	Geotechnical Investigation Invoice	NRs. 191,741.23		NRs.166,731.00		Received
Invoice 24	Vehicle hard top Invoice	NRs. 707,125.70		NRs. 707,125.70		Received
Invoice 25	Monthly Invoice Jan13	NRs. 410,868.00	USD 4,327.90	NRs. 380,923.00	USD 3103.40	Received
Invoice 26	Monthly Invoice Feb13	NRs.324,310.00	USD 3,051.00	NRs.324,310.00	USD 2,203.50	Received
Invoice 27	Monthly Invoice Mar 13	NRs. 404,467.68	USD 4553.90	NRs. 361,600.00	USD 4553.90	Received
Invoice 28	Final Report Invoice	NRs. 3,245,700.13	USD 87,868.80	NRs. 3,245,700.13	USD 85,350.48	Received
Invoice 29	Monthly Invoice April 13	NRs. 340,695.00	USD 1,322.10	NRs. 324,310.00	USD 881.40	Received
Invoice 30	Monthly Invoice May 13	NRs. 671,951.00	USD 4,4435.25	NRs. 576,700.02	USD 4,4435.25	Received
Invoice 31	Monthly Invoice June 13	NRs. 1,107,583.06	USD 2,203.50	NRs.448,376.81	USD 2,203.50	Received
Invoice 32	Additional Survey	NRs. 1,050,052.00				Not received
Invoice 33	Monthly Invoice July 13	NRs. 589,490.49	USD 1,542.45	NRs 481,693.01	USD 1,101.75	Received

Invoice 34	Monthly Invoice August 13	NRs. 701,094.94	USD 00.00	NRs 629,499.89	USD 0.00	Received
Invoice 35	Monthly Invoice Sept. 13	NRs. 424,773.78	USD 00.00	NRs 424,772.45	USD 0.00	Received
Invoice 36	Monthly Invoice Oct. 13	NRs. 458,661.35	USD 00.00	NRs 408,710.78	USD 0.00	Received
Invoice 37	Monthly Invoice Nov. 13	NRs. 450,085.78	USD 0.00	NRs 431,600.15	USD 0.00	Received
Invoice 38	Monthly Invoice Dec. 13	NRs. 501,084.94	USD 00.00	NRs 481,693.01	USD 0.00	Received
Invoice 39	Monthly Invoice Jan. 2014	NRs. 695,501.44	USD 00.00	NRs. 609,960.44	USD 0.00	Received
Invoice 40	Monthly Invoice Feb. 2014	NRs. 613,180.94	USD 00.00	NRs. 613,180.94	USD 0.00	Received
Invoice 41	Monthly Invoice Mar. 2014	NRs.1,308,022.46	USD 00.00	NRs. 961,794.30	USD 0.00	Received
Invoice 42	Monthly Invoice Apr. 2014	NRs. 861,039.32	USD 00.00	NRs. 812,918.13	USD 0.00	Received
Invoice 42	Geotechnical Inv. II	NRs. 549,989.85	USD 00.00	NRs. 546,232.96	USD 0.00	Received
Invoice 43	Monthly Invoice May 2014	NRs. 1,170,291.64	USD 00.00	NRs. 1,119,306.04	USD 0.00	Received
Invoice 44	Monthly Invoice June 2014	NRs.1,163,214.09	USD19,313.42	NRs. 1,098,669.08	USD 15,636.94	Received

Invoice 45	Monthly Invoice July 2014	NRs. 854,199.00	USD18,465.92	NRs. 812,253.40	USD 15,636.94	Received
Invoice 46	Monthly Invoice August 2014	NRs 865,951.00	USD 0.00	NRs. 819,485.40	USD 0.00	Received
Invoice 47	Monthly Invoice September 2014	NRs 777,343.07	USD 0.00	NRs. 647,031.02	USD 0.00	Received
Invoice 48	Monthly Invoice October 2014	NRs 841,778.13	USD 0.00	NRs. 736,326.53	USD 0.00	Received
Invoice 49	Monthly Invoice November 2014	NRs 1,306,536.89	USD 0.00	NRs. 1,020,026.24	USD 0.00	Received
Invoice 50	Monthly Invoice December 2014	NRs 1,348,791.74	USD 0.00	NRs. 1,192,968.59	USD 0.00	Received
Invoice 51	Monthly Invoice Jan 2015	NRs 1,255,351.08	USD 0.00	NRs. 1,184,301.04	USD 0.00	Received
Invoice 52	Monthly Invoice Feb 2015	NRs 1,319,642.66	USD 0.00	NRs. 1,033,834.74	USD 0.00	Received
Invoice 53	Monthly Invoice Mar 2015	NRs 2,414,019.91	USD 0.00	1,869,619.63	USD 0.00	Received
Invoice 54	Monthly Invoice Apr 2015	NRS 1,483,793.91	USD 0.00	1,176,545.27	USD 0.00	Received
Invoice 55	Monthly Invoice May 2015	1,563,243.36	USD 0.00	1,227,869.30	USD 0.00	Received
Invoice 56	Monthly Invoice Jun 2015	1,343,598.66	USD 0.00	1,058,694.74	USD 0.00	Received

Invoice 57	Monthly Invoice Jul 2015	1,583,240.42	USD 0.00	1,240,241.11	USD 0.00	Received
Invoice 58	Monthly Invoice Aug 2015	1,414,877.99	USD 0.00	1,117,077.09	USD 0.00	Received
Invoice 59	Monthly Invoice Sept 2015	1,263,576.91	USD 0.00	995,715.95	USD 0.00	Received

ANNEX-4: STATUS OF ACTIONS AGREED WITH PREVIOUS ADB LOAN REVIEW MISSION

S. No.	Agreed Items in ADB Review Mission with DSC on 2-4 December 2014	Status	Responsibility
1	Updated Semi-Annual Resettlement and Social Aspect Report	Report Submitted on 14 January 2015	DSC/PMSC
2	DSC will review its construction supervision plan (including international experts inputs) against the contractors approved scheduled and submit it to PIU.	Draft Plan submitted	DSC
3	Submission of implementation status of EMP to ADB in quarterly basis	Report Submitted till March 2015 and additional Semi-Annual Oct 2014 -March 2015. Updated Quarterly Report of Apr- June 2015 is due and will be submitted soon.	DSC/PMSC

ANNEX-5: PROFESSIONAL INPUT AS PER CONTRACT VS INPUT USED TILL THIS REPORTING PERIOD

S.No.	Expert / Position	Total man months Input (as per agreement)			Man months Used in 2012/013/014/2015			Balance
A	Professional Staff	Design	Construction	Total	Up to Aug 2015	Sept 2015	Total	
A1	**International Professional Staff**							
1	Sewerage and Drainage Engineer	8	4	12	7.37	0.00	7.37	4.63
2	Sewage Treatment Specialist (1 day at May, 2014)	5	4	9	6.01	0.00	6.01	2.99
3	PPP Specialist	2		2	2.00	0.00	2.0	0.00
A2	**Domestic Professional Staff**				Up to Aug 2015	Sep 2015	Total	Balance
4	Team Leader/ S-D Engineer	12	24	36	33.23	1.00	34.23	2.77
5	Sewage Treatment Specialist	8	18	26	11.0	0.00	11.0	15.00
6	Procurement Specialist	5	2	7	8.75	0.00	8.75	(1.75)
7	DTL/ Quantity Surveyor	9		9	10.0	0.00	10.0	(1.00)
8	Urban Planner	4	2	6	5.0	0.00	5.0	1.00

S.No.	Expert / Position	Total man months Input (as per agreement)			Man months Used in 2012/013/014/2015			Balance
9	Financial Expert	5		5	6.0	0.00	6.0	(1.00)
10	Institutional Development Specialist	2	3	5	2.0	0.00	2.0	3.00
11	PPP Specialist	3		3	3,0	0.00	3,0	0.00
12	Roads Specialist	4	8	12	7.90	0..13	8.03	3.97
13	Civil and Structural Specialist	6	2	8	7.95	0.00	7.95	0.05
14	Electrical Engineer	3	1	4	3.50	0.00	3.50	0.50
15	Mechanical Engineer	3	1	4	3.90	0.00	3.90	0.10
16	Construction Management Specialist		10	10	1.83	1.00	2.83	7.17
17	Environmental Specialist	8	12	20	15.59	0.0	15.09	4.91
18	Social Development Specialist	8	15	23	21.00	0.00	21.00	2.00
19	Construction Supervision Engineer		30	30	20.00	1.00	21.00	9.00
20	Asst. Construction S Engineer- 1		30	30	14.50	1.00	15.50	14.50
	Asst. Construction S Engineer- 2		30	30	15.70	0.00	15.77	14.28
21	Senior Statistician	4		4	4.00	0.00	4.00	0.00

S.No.	Expert / Position	Total man months Input (as per agreement)			Man months Used in 2012/013/014/2015			Balance
22	Geologist	1		1	1.00	0.00	1.00	0.00
23	Biologist	1		1	1.00	0.00	1.00	0.00
24	Geo-technical Engineer	1		1	2.40	0.00	2.40	(1.40)
25	GIS Expert	2		2	4.00	0.00	4.00	(2.00)
26	Senior Surveyor	2		2	2.00	0.00	2.00	0.00
	Network Modular				8.00	0.00	8.00	(8.00)
	Hydrologist				4.00	0.00	4.00	(4.00)
A-3	Support Staff							
27	Junior Engineer-1			49	44.00	1.00	45.00	4.00
	Junior Engineer-2			49	44.00	1.00	45.00	4.00
	Junior Engineer-3			24	11.00	1.00	12.00	12.00
	Junior Engineer-4			49	7.33	1.00	8.33	42.67
	Junior Engineer-5			49	4.70	1.00	5.70	43.30
	CAD Operators			20	0.00	0.00	0.00	20.00

S.No.	Expert / Position	Total man months Input (as per agreement)			Man months Used in 2012/013/014/2015			Balance
28	Accountant / Office Manager			49	44.00	1.00	45.00	4.00
29	Secretary / Computer Operator			49	42.25	1.00	43.25	5.25
30	Driver-1			49	36.27	1.00	37.27	11.73
	Driver-2			49	35.10	1.00	36.10	12.90
30	Office Assistant			49	42.50	1.00	43.50	5.50

ANNEX-6: MINUTES OF MEETING – AUGUST 2015

List of Minute of Meeting

ANNEX-7: LABORATORY TEST RESULTS OF SEPTEMBER 2015

Note: No tests were carried out due to any activities at site.

ANNEX-8: CONTRACTOR'S PROGRESS REPORT- SEPTEMBER 2015

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 – 22

September, 2015

Consultants:

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.
E-mail: info@kalikagroup.com, Site Office: Katahari Tel. 9852024596 E-mail: kalikabrt@gmail.com

Table of Contents

1 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
Completion Date	25th of May 2016
Contract Period	30 month
Contract amount with Provisional Sum	NRs 2,119,054,525.90
Add 13% VAT	NRs 272,278,000.00
Grand Total Contract amount with VAT&PS	NRs 2,391,332,525.90

2 Introduction

This Secondary Town Integrated Urban Environmental Improvement Project (STIUEIP), Sewerage and Drainage Network, Wastewater Treatment Plant and Lanes Improvement Subproject Biratnagar is funded by Asian Development Bank and Government of Nepal. The project area is in the Morang district, Biratnagar Sub-metropolitan City which lies in the Eastern Part of Nepal.

3 Sub-Project Components

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

- Sewerage and Drainage Network Subproject
  A separate system of storm water drainage and sewer line will be constructed at Biratnagar under this project.
- Wastewater Treatment Plant Subproject
  A Waste Water Treatment Plant (WWTP) will be constructed at Jatuwa, draining the wastewater finally to Singhiya River.
- Road and Lanes Improvement Subproject
  Existing road sections at different part of Biratnagar will be upgraded providing proper drainage facility.

4 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 by the 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 those produced by the Employer.
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 Brief on procurement packages

The procurement procedures for construction material have already been started. Agreements have been made with the factories for the procurement of Brick, Cement, Steel, uPVC, HDPE pipe, machinery and equipment, electrical components, manhole covers, rubber rings etc.

6 Details of the project execution

6.1 Physical Progress (Achievement till the month)

a) Storm Water Drain Sub-Project (Work Progress till the date)

Drain	Lines	Length	Total Length (m)	Drain Construction (m)				Remarks
				Till Previous Month	Till This Month	This Month Work	Plan for Next Month	
B1	B1L1	1198.98	3950	1,198.98	1,198.98	-		
	B1L2	1148.98		720.00	720.00	-		
	B1L2A	465.77		490.00	490.00	-		
	B1L2B	137.09		137.00	137.00	-		
	B1L2C	137.09				-		
	B1L2D	490.97		500.00	500.00	-		
	B1L2F	371.22		370.00	370.00	-		
						-		
B2	B2L1	1425	3742	1,063.00	1,063.00	-		
	B2L2	828.03		828.00	828.00	-		
	B2L2C	639.22		631.00	631.00	-		
	B2L1B	849.47		850.00	850.00	-		
						-		
B3	B3L1A	422.96	3514	420.96	420.96	-		
	B3L1B	421.1		421.10	421.10	-		
	B3L1	669.7		603.00	603.00	-		
	B3L2	691.56		498.80	498.80	-		
	B3L2E	220.42		200.00	200.00	-		
	B3L3	578.74		578.00	578.00	-		
	B3L4	509.5		509.50	509.50	-		
						-		
S9	S9L1	2981.85	3178	660.00	660.00	-		
	S9L1D	195.65				-		
						-		
S11	S11L1	794	1817	794.00	794.00	-		
	S11L1A	265.75		265.75	265.75	-		
	S11L1B	107.5		107.50	107.50	-		
	S11L2	650		650.00	650.00	-		
						-		
S13	S13L2	1001	4555	951.00	951.00	-		
	S131A	718.33		768.00	768.00	-		
	S13L1B	276		276.00	276.00	-		
	S13L1C	284		284.00	284.00	-		
	S13L1D	535.04		535.04	535.04	-		
	S13L1E	572.02		342.02	342.02	-		
	S13L1F	524		723.00	723.00	-		
	Hume Pip	645		545.00	545.00	-		
						-		
CN2	CN2L2	949.23	2273	915.00	915.00	-		
	CN2L1	994.5		325.00	325.00	-		
	CN2L1A	134.02				-		
	CN2L1B	195.27				-		
						-		
CN3	CN3L1	715.91	2170	715.91	715.91	-		
	CN3L2	997.5		475.00	475.00	-		
						-		
S5	S5L1A	364.07	740			-		
	S5L1B	376				-		
						-		
Rani	L5	630	7617	630.00	630.00	-		
	L2M	166		141.00	141.00	-		
	L2J	426		290.00	290.00	-		
	L3	316		266.00	266.00	-		
	L4	2111		174.00	174.00	-		
	L4C	381		381.00	381.00	-		
	L4D	381		345.00	345.00	-		
	L6	970		349.00	349.00	-		
Road Side Drains	R2	4700	4700	3,630.00	3,630.00	-		
	R5	740	740	700.00	700.00	-		
	R64	121	121	121.00	121.00	-		
Total Length					**25,557.56**	-		

b) Sewerage Sub-Project (Work Progress till the date)

Sewer Line	Lines	Length	Total Length (m)	Sewer Construction (m)								Remarks
				Till Previous Month	Till This Month	This Month Work	Plan for Next Month	Total Manholes	Sewer Inlet	House Connections	uPVC Pipe	
T2 Trunk 1000 dia hume pipe			1729	1,815.00	1,815.00	-	600.00	22				
T2 Trunk 900 dia hume pipe			518	518.00	518.00	-		15				
T3 Trunk 700 dia hume Pipe			1472	1,290.00	1,290.00	-	400.00	30				
T3 Trunk 600 dia hume Pipe			1141	187.00	187.00	-	600.00					
Line T2L19 400 dia Hume Pip			487	300.00	300.00	-	100.00	10				
Line T2L19 500 dia Hume Pip			45	45.00	45.00	-		1				
Total length of Hume Pipe					**4,155.00**	**-**						
T2 Sec												
	18L			74.70	74.70	-		2				
	18P			139.60	139.60	-		5				
	18Q			195.40	195.40	-		7				
	18R			357.30	357.30	-		12				
	18V			54.80	54.80	-		2				
	18Y			170.80	170.80	-		6				
	18Z			46.60	46.60	-		2				
	19b			272.30	272.30	-		9				
	19c			276.30	276.30	-		9				
	19e			160.50	160.50	-		5				
	19f			204.10	204.10	-		7	14.00			
	19g			67.80	67.80	-		2	4.00			
	19h			181.40	181.40	-		6	12.00			
	19j			355.00	355.00	-		12	24.00	12.00		
	19k			172.50	172.50	-		6				
	19l			210.30	210.30	-		7				
	19ma			179.40	179.40	-		6				
	19mb			232.35	232.35	-		8				
	19n		17167	162.50	162.50	-		5				
	19o			114.70	114.70	-		4				
	19p			140.90	140.90	-		5				
	19q			234.20	234.20	-		8				
	19r			264.20	264.20	-		9				
	19s			271.00	271.00	-		9				
	19t			179.50	179.50	-		6		18.00	145.00	
	19u			61.80	61.80	-		2				
	19R			110.70	110.70	-		4				
	19T			137.60	137.60	-		5				
	19U			61.80	61.80	-		2				
	19V			208.30	208.30	-		7				
	19W			50.80	50.80	-		2				
	19X			49.80	49.80	-		2				
	19Y			86.70	86.70	-		3				
	19Z			66.80	66.80	-		2				
	22			260.10	260.10	-		9	10.00			
	23			217.00	217.00	-		7	6.00			
	24A			260.70	260.70	-		13	20.00	4.00		
						-		-				

Sewer Line	Lines	Length	Total Length (m)	Sewer Construction (m)								Remarks
				Till Previous Month	Till This Month	This Month Work	Plan for Next Month	Total Manholes	Sewer Inlet	House Connections	uPVC Pipe	
T3 Sec						-		-				
	13F			123.60	123.60	-		4				
	25B			201.40	201.40	-		7				
	25C			139.60	139.60	-		5	9.00			
	26			126.50	126.50	-		4				
	26A			65.80	65.80	-		2				
	26B			71.80	71.80	-		2				
	26C			334.10	334.10	-		11				
	26D			50.80	50.80	-		2				
	26E			358.80	358.80	-		12				
	26F			108.60	108.60	-		4				
	26G			70.80	70.80	-		2				
	26H			55.60	55.60	-		2				
	27		22664	281.00	281.00	-		9				
	28			247.10	247.10	-		8				
	29			73.80	73.80	-		2				
	30			245.10	245.10	-		8				
	31			174.40	174.40	-		6				
	31A			171.50	171.50	-		6				
	32			219.20	219.20	-		7				
	33			391.80	391.80	-		13	25.00	35.00		
	33A			121.20	121.20	-		4				
	33B			161.00	161.00	-		5				
	34			312.70	312.70	-		10	14.00	12.00		
	35			223.30	223.30	-		7	14.00	15.00		
	36			160.50	160.50	-		5				
	37			204.30	204.30	-		7				
						-						
Total Length of HDPE Pipe					**10,985**	**-**		**371**	**152**	**96**	**145**	

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

S.N.	Description of Work	This month	Total Length/Nos	Program for Next Month	Remarks
1	Excavation of Ponds-Anaerobic	0	3 nos		
2	Excavation of Ponds-Facultative	0	2 nos		
3	River Training Works	0	515m		
4	Boundary wall construction	0	580 m		
5	Office cum lab building, WWTP, Jatuwa	All complete except finishing works			
5	Workshop Building & Generator/Changing Building, WWTP, Jatuwa	All complete except finishing works			
6	Sump Well	Partially excavated			

d) Production of Precast Items from Slab Casting Yard, Katahari

S.N.	Description	Unit	Quantity			Remarks
			Till Previous Month	Till This Month	This Month Work	
1	Slabs	Nos	55300	55300	0	
2	Precuts	Nos.	5147	5147	0	
3	Kerb Stone	Nos.	17370	17370	0	

e) Production of Precast Chambers at Yard Katahari

S.N.	Description	Unit	Quantity			Remarks
			Till Previous Month	Till This Month	This Month Work	
1	Manhole	Set	423	423	0	
2	Sewer Inlet	Set	753	753	0	
3	House Connection	Set	633	633	0	

f) Hume Pipe Production from Hume Pipe Production Factory, Itahari

S.N.	1	2	3	4	5	6	7	8	9	10	11
Diameter	200mm Ø	300mm Ø	350mm Ø	400mm Ø	450mm Ø	500mm Ø	600mm Ø	700mm Ø	900mm Ø	1000mm Ø	1600mm Ø
No of Moulds	38	3	2	2	2	3	8	8	2	4	2
Previous Month Production	1562	389	294	373	301	465	1130	1416	263	649	271
This Month Production	0	0	0	0	0	0	0	0	0	0	0
Total Production	1562	389	294	373	301	465	1130	1416	263	649	271

6.2 Financial Progress and Cash Flow

Detail of payment:

Installment Number	Net Payble Amount (NRs.)	Remarks
IPC 01	209,400,000.00	Advance Payment 01
IPC 02	27,853,500.98	IPC 2
IPC 03	47,507,270.95	IPC 3
IPC 04	42,241,392.52	IPC 04
IPC 05	22,035,291.99	IPC 05
IPC 06	85,573,541.38	IPC 06
IPC 07	76,203,672.17	IPC 07
IPC 08	115,297,549.23	IPC 08
IPC 09	109,414,317.97	IPC 09
IPC 10	124,715,663.77	IPC 10
IPC 11	160,430,981.96	IPC 11
Total=	**811,273,182.92**	

7 Details of Safeguard activities

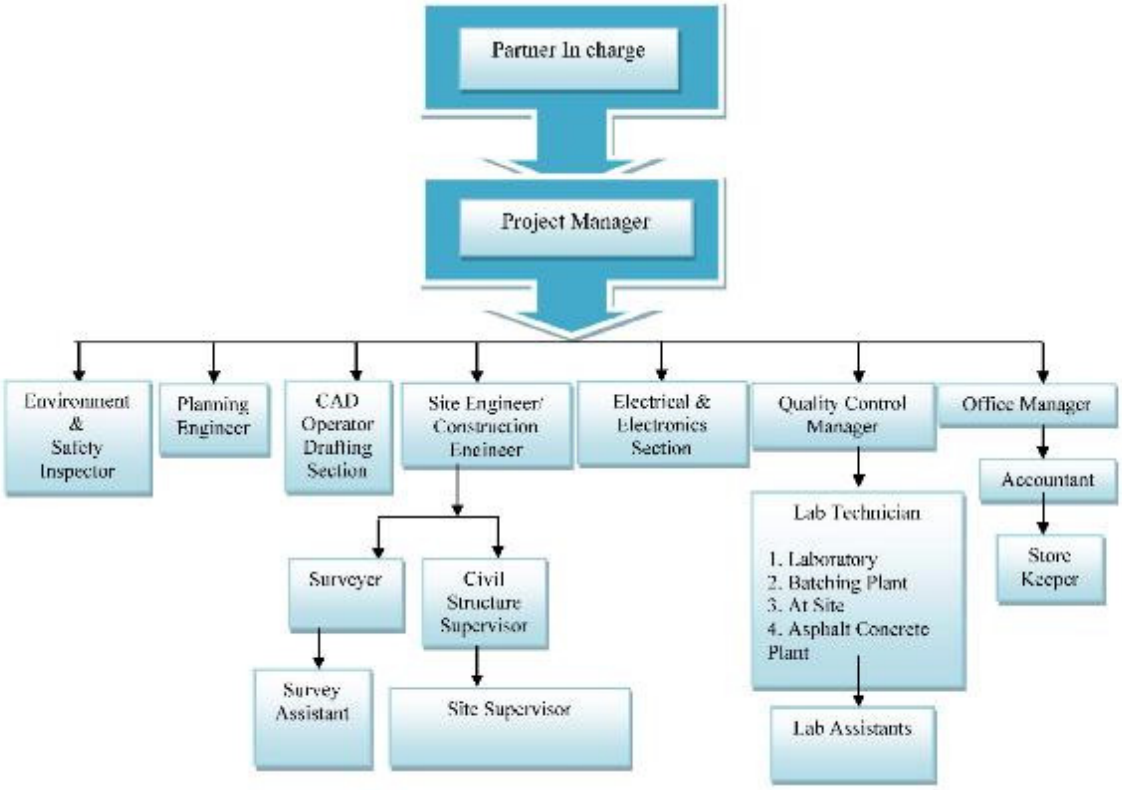
Till the date no such issues have been faced relating to the Social, Environmental and Resettlement matter.

8 Key Issues and Remarks

Following issues were raised and solved as per instruction of Engineer:

- The strike started from August 08, 2015 is still underway so every project activities has been halted.
- Precast units casting (slabs, precast chambers and precuts) at yard could not be carried out this month due to material unavailability and security.
- Hume pipe production at Itahari was undertaking till August 24, 2015 but has been stopped due to unavailability of construction material due to strike.

9 Work Plan Professional input



S.N.	Designation	No.	Remarks
1	Project/ Contract Manager	1	
2	Planning/ Construction Engineer	1	
3	Construction Engineer	1	
4	Site Engineers	5	
5	Quality Control Manager	1	
6	Office/ Bill Engineer	1	
7	Junior Engineer	10	
8	Sub-Overseer	6	
9	Senior Site Supervisor/Safety Manager	1	
10	Accountant/ Office Manager	1	
11	Lab Assistant	3	
12	Site Supervisor	5	
13	Store Keeper	4	

14	Light Drivers	6	
15	Machine Operator	14	
16	Other Supporting Staffs	18	
17	Skilled Labors	8	7m/ 2f
18	Unskilled Labors	32	25m/ 6f

Laborers at site work

The detail of laborers is listed in table below.

Details of Labor

S.N.	Labour Type	Numbers		Remarks
Skilled Labor				
1.	Mason/carpenter	2		
2.	Plumber	2		
3.	Electrician	1		
4.	Bar Bender	2		
5.	Wielder	2		
6.	Scaffold	1		
7.	Drivers	10		
Unskilled Labor				
	Labor	**Male**	**Female**	
1.	Labors (Skilled)	6	2	8
2.	Labors (Unskilled)	26	6	32
Total		32	8	

S.N.	Name	Designation	Attendance Days
1	Ujjwal Prasai	Project Manager	24
2	Santosh Pudasaini	Planning/ Construction Engineer	18
3	Mahesh Subedi	Construction Engineer	18
4	Umesh Kumar Dangol	Site Engineer	12
5	Uddhav Bhatta	Site Engineer	A
6	Roshan Prasad Gupta	Site Engineer	25
7	Surya Kadel	Office Engineer	A
8	Niraj Raut	Site Engineer	20
9	Sujeet Dahal	Office/ Bill Engineer	16
10	Sunil Chaudhary	Quality Control Manager	20
11	Vishwo Bandhu Mainali	Accountant/ Office Manager	20
12	Krishna Adhikari	Jr. Accountant	22
13	Narayan Rijal	Senior Site Supervisor/Safety Manager	20
14	Sagar Shrestha	Junior Engineer	22
15	Dipesh Kumar Chaudhary	Junior Engineer	10
16	Suraj Chaudhary	Junior Engineer	A
17	Suman Tamang	Junior Engineer	10
18	Sujan Singh Thakuri	Junior Engineer	10
19	Bipin Rai	Junior Engineer	10
20	Saroj Shrestha	Junior Engineer	12
21	Suman Shrestha	Junior Engineer	10
22	Bishal Shrestha	Junior Engineer	15
23	Sanjay Shrestha	Junior Engineer	20
24	Sabita Thapa	Sub-Overseer	A
25	Angira Rai	Sub-Overseer	A
26	Rojina LG	Sub-Overseer	A
27	Gaurab Subba	Sub-Overseer	12
28	Prakash Bhattrai	Sub-Overseer	12
29	Pradip Rai	Sub-Overseer	20
30	Ajaya Rai	Site Supervisor	6
31	Uttar Karki	Site Supervisor	15
32	Ishowr Adhikari	Site Supervisor	25

33	Santosh Mukhiya	Site Supervisor	12
34	Anil Pokhrel	Site Supervisor	25
35	Prasasan Rajbansi	Site Supervisor	25
36	Tanka Pokhrel	Store Manager	25
37	Manoj Pandit	Store Assistant	25
38	Nirnaya Upreti	Store Assistant	25
39	Gopi Yadav	Store Assistant	25
40	Dipesh Dahal	Lab Assistant	25
41	Ramesh Koirala	Lab Assistant	25
42	Mahakanta Risidev	Lab Assistant	25
43	Sandeep Pyakurel	Light Driver (7621)	24
44	Gurucharan Yadhav	Light Driver (1082)	14
45	Kiran Manandhar	Light Driver (1086)	25
46	Satya Dhimal	Light Driver	25
47	Dip Budathoki	Light Driver	25
48	Mangal Kisku	JCB Operator	25
49	Surya Bdr. Malla	Loader Operator	17
50	Rupana Chaudhary	TM Driver	25
51	Bhabesh Rai	Batching Operator	20
52	Chandan Roy	Pc-200 Operator	25
53	Jeet Bdr Gurung	Teller (4423) Driver	25
54	Ananda Rajbansi	Electrician	25
55	Kamal Yadhav	Electrician	25
56	Pappu Yadav	Mechanic	25
57	Mukesh Mandal	Mechanic	25
58	Bhanu Bhakta Kafle	Plumber	22
59	Ganga Ram Dhital	Plumber	25
60	Niroj K. Puri	TM Driver(7561)	20
61	Dhan Kaji Gurung	TM Helper	25
62	Indra RajBansi	Tractor Driver (6204)	25
63	Kartik Thrau	Tractor Driver (8304)	25
64	Tilak Ghalan	Transit mixer Driver	25
65	Nakkul Paddhar	Tanker Driver	25

66	Udit Narayan	Tanker Driver	25
67	Basudev Yadav	Tractor Driver	25
68	Sudeep Rajbansi	JCB Helper	25
69	Manita Shrestha	Kitchen Helper	25
70	Kalpana Tamang	Kitchen Helper	25
71	Sita Thapa	Kitchen Helper	25
72	Pabitra Rai	Kitchen Helper	25

Details of Equipment

S.N.	Particular	Model/Type	Capacity	Working Status		
				No of used Equipment	Status	Remarks
A	**Vehicle and Equipment**					
A.1	**Excavators**					
	CAT Excavator with vibrating compactor PC320	PC320		1	Good	
	Komatsu Long Boom PC200	PC200		1	Good	
	Komatsu Excavator PC200	PC200		2	Good	Under maintenance
	Komatsu Excavator PC120	PC 120		1	Good	
	Kobelko Excavator 75	Kobelko 75		1	Good	Under maintenance
	Cat Excavator 320	Caterpillar		1	Good	
A.2	**JCB**					
	JCB Hydra	JCB		1	Good	
	JCB Loader	JCB		1	Good	
	JCB Backhoe	JCB		6	Good	
A.3	**Grader**					
	Komatsu Grader GD405	Komatsu		1	Good	
A.4	**Crane/Teller**					
	Crane with Teller			1	Good	
	Teller			2	Good	
A.5	**Water Tanker**					
	Water Tanker		12000 Lt.	1	Good	
A.6	**Tractors/Tipper**					
	Tractors	Indian	3 m^3	9	Good	
	Tipper		15 m^3	17	Good	
A.7	**Service Vehicle**				Good	
	Jeep	Pajero	5 door	2	Good	
	Jeep	Landcrusher	5 door	1	Good	
	Jeep	Indian/Tata Sumo	5 door	1	Good	
	Jeep	Indian/Bolero	5 door	1	Good	
	Pickup	Indian/Mahindra	4 door	1	Good	
	Motorbike	125CC		10	Good	
A.8	**Other Equipment and Tools**					
	Kerb Stone Machine Set			1	Not Used	
	Generator	Jackson	125KVA	1	Good	
	Generator	Kirloskar	25KVA	1	Good	
	Generator	Kirloskar	15KVA	1	Good	

S.N.	Particular	Model/Type	Capacity	Working Status		
				No of used Equipment	Status	Remarks
	Generator	Honda	5KVA	1	Good	
	Welding Machine	Oswal,India	650amp	1	Good	
	Welding Machine		350amp	1	Good	
	Welding Machine		250amp	1	Good	
	Diesel tank with Pump		60000 Ltr.	1	Good	
	Stand Drill Machine	India	1 HP	1	Good	
	Gas Cutter Set			1	Good	
	Pipe Cutter			1	Good	
	Hand Grinder			1	Good	
	Plate Compactor			2	Good	
	Monkey Jumper			1	Good	
B	**Concreting Unit**					
	Batching Plant CONMAT all Set	CONMAT, India	45 m3/ hr	1	Good	
	Electric Vibrator with Needle			10	Good	
	Bar Bending Machine		4 ton/hr	3	Good	
	Bar Cutter Machine		4 ton/hr	3	Good	
	Isuzu Transit Mixture		5 m^3	1	Good	
	Concrete Mixture Hydraulic			2	Good	
	Manual Mixture Machine			6	Good	
C	**Asphalt Concrete Production**					
	Asphalt Concrete Plant		50 ton/ hr	1	Not Used	
	Asphalt Paver Machine			1	Not Used	

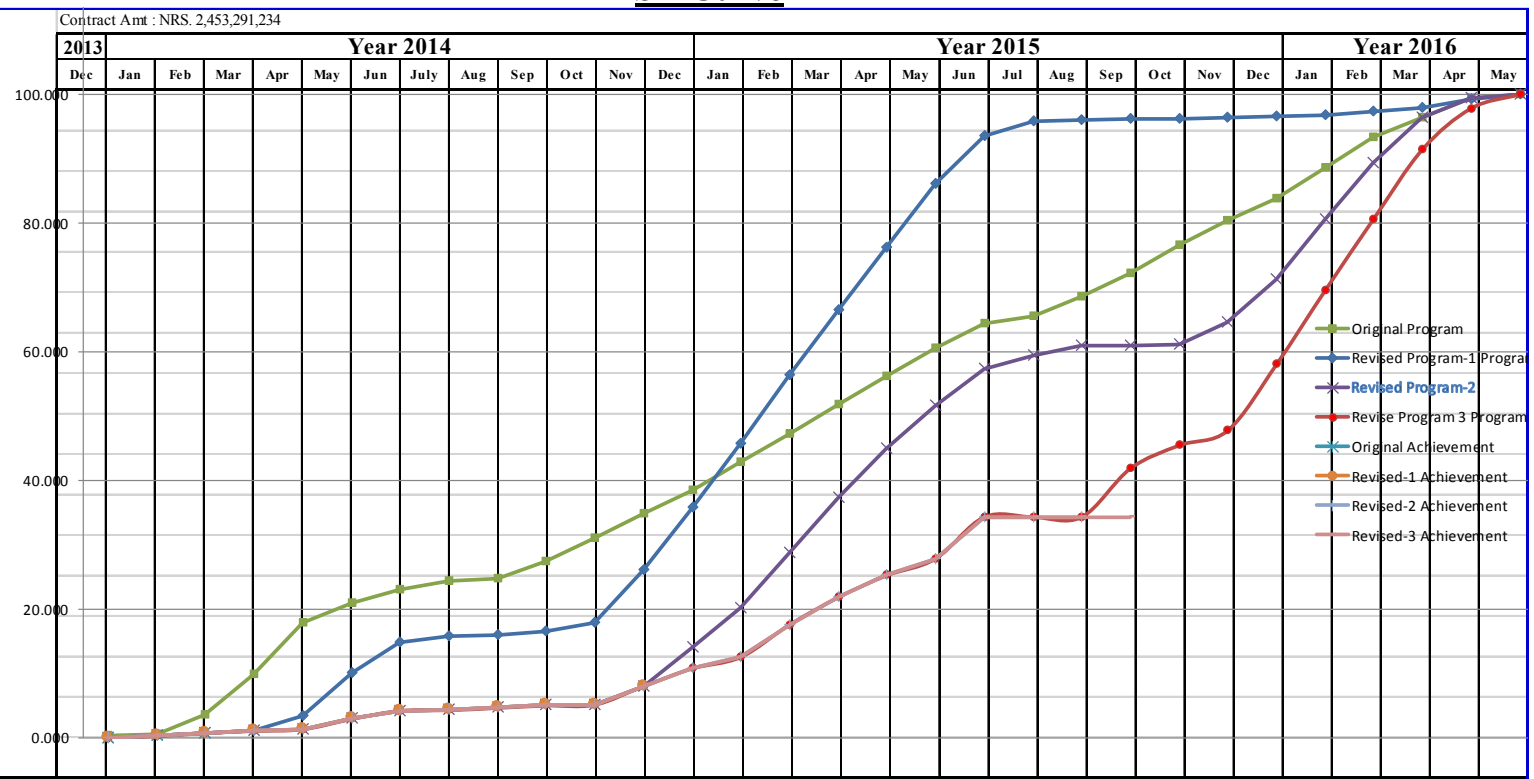
10 Conclusion

The workforce had arrive as scheduled to restart the project activities while the strike stared from 5th August has halted all the site activities keeping all our resource and manpower idle. The strike has got sever and lengthy while it has not stopped till the end of the month. The casting of precast slabs and chamber units at Katahari yard and Hume Pipe production at Hume Pipe production factory, Itahari has been stopped due to unavailability of the material and security reasons.

The strike completely halted the project activities at the key working season.

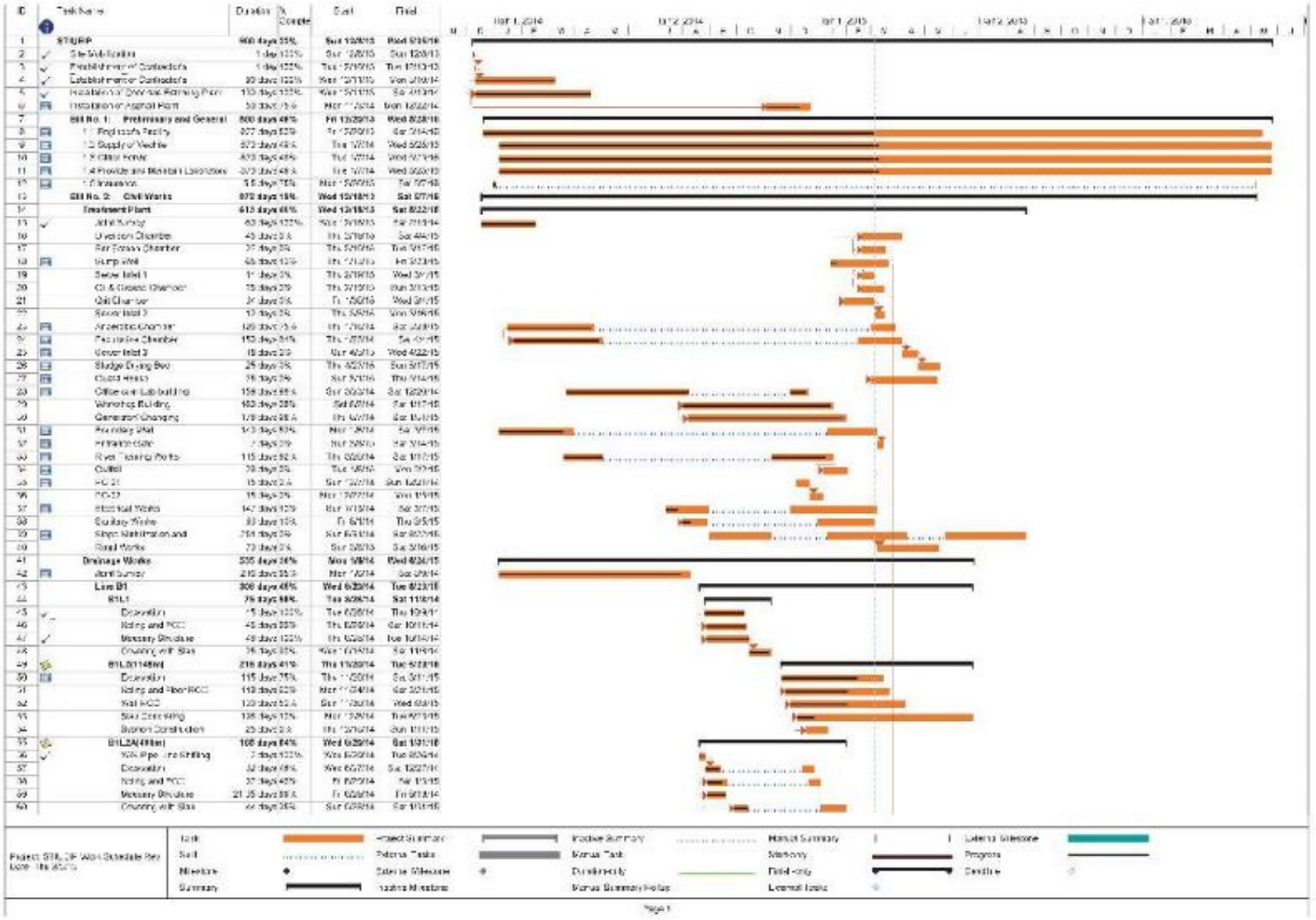
ANNEX

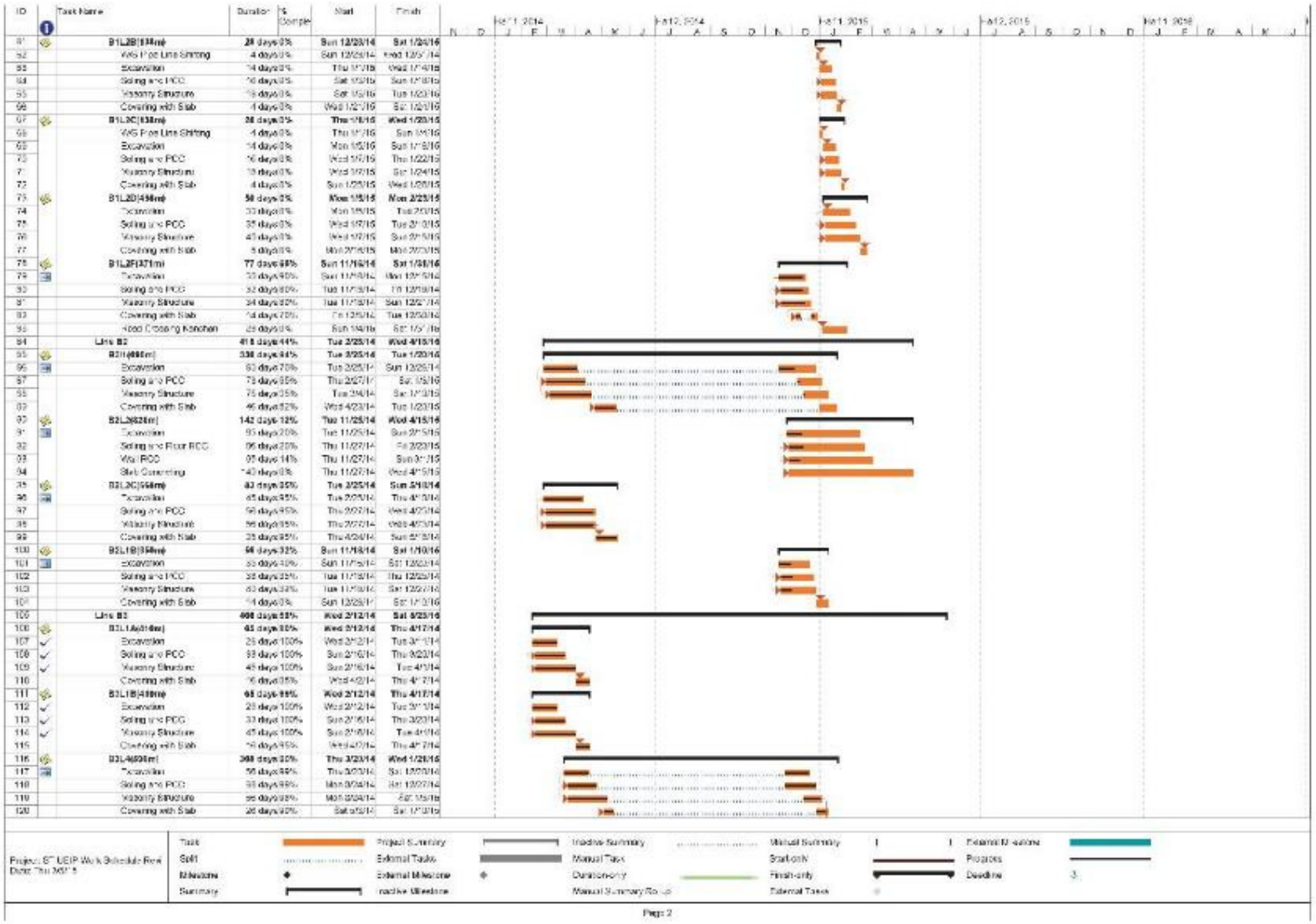
S – Curve



		Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Original Program	Program	0.347	0.421	3.602	9.884	17.815	20.832	23.051	24.263	24.739	27.449	31.092	34.754	38.454	42.889	47.290	51.750	56.206	60.607	64.409	65.577	68.595	72.253	76.666	80.311	83.908	88.615	93.343	96.493	99.384	100.00
	Achievement	0.000	0.286	0.735																											
Revised Program-1	Program	0.000	0.286	0.735	1.064	3.352	9.958	14.764	15.767	15.950	16.526	17.942	26.016	35.826	45.709	56.375	66.431	76.156	86.021	93.466	95.750	95.997	96.156	96.301	96.446	96.591	96.736	97.380	97.981	99.208	100.00
	Achievement	0.000	0.286	0.735	1.064	1.329	2.904	4.218	4.315	4.658	5.021	5.161	8.016																		
Revised Program-2	Program	0.000	0.286	0.735	1.064	1.329	2.904	4.218	4.315	4.658	5.021	5.161	8.016	14.040	20.110	28.740	37.218	44.942	51.596	57.295	59.335	60.916	60.995	61.074	64.650	71.294	80.551	89.408	96.407	99.410	100.0
	Achievement	0.000	0.286	0.735	1.064	1.329	2.904	4.218	4.315	4.658	5.021	5.161	8.016	10.770	12.570	17.570	21.820	25.250	27.850	34.317	34.317	34.317									
Revise Program 3	Program	0.000	0.286	0.735	1.064	1.329	2.904	4.218	4.315	4.658	5.021	5.161	8.016	10.770	12.570	17.570	21.820	25.250	27.850	34.317	34.317	34.317	41.847	45.447	47.767	58.037	69.507	80.672	91.462	97.820	100
	Achievement	0.000	0.286	0.735	1.064	1.329	2.904	4.218	4.315	4.658	5.021	5.161	8.016	10.770	12.570	17.570	21.820	25.250	27.850	34.317	34.317	34.317	34.317								

Work Schedule and Progress





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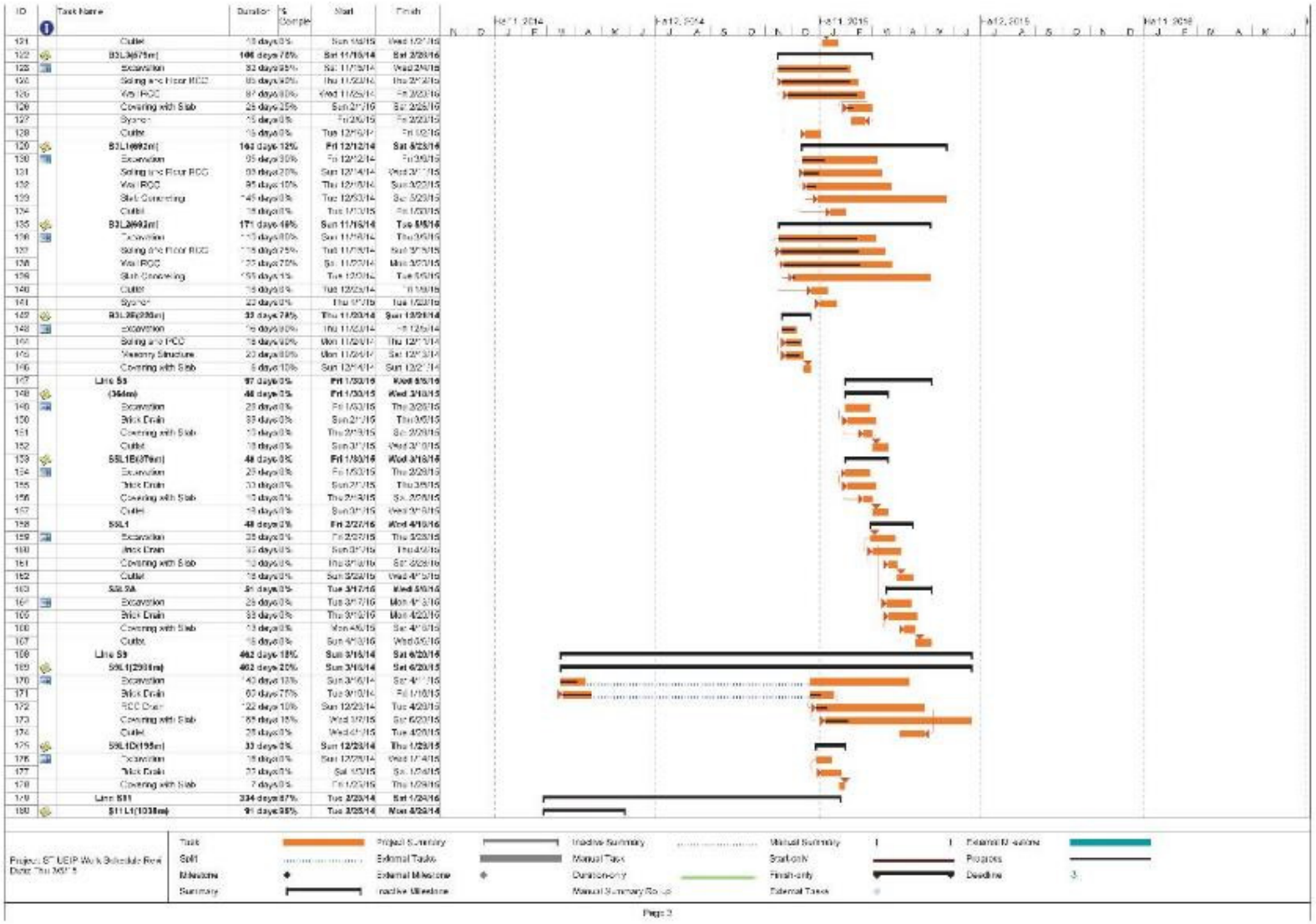
Site Office: Katahari, Judi



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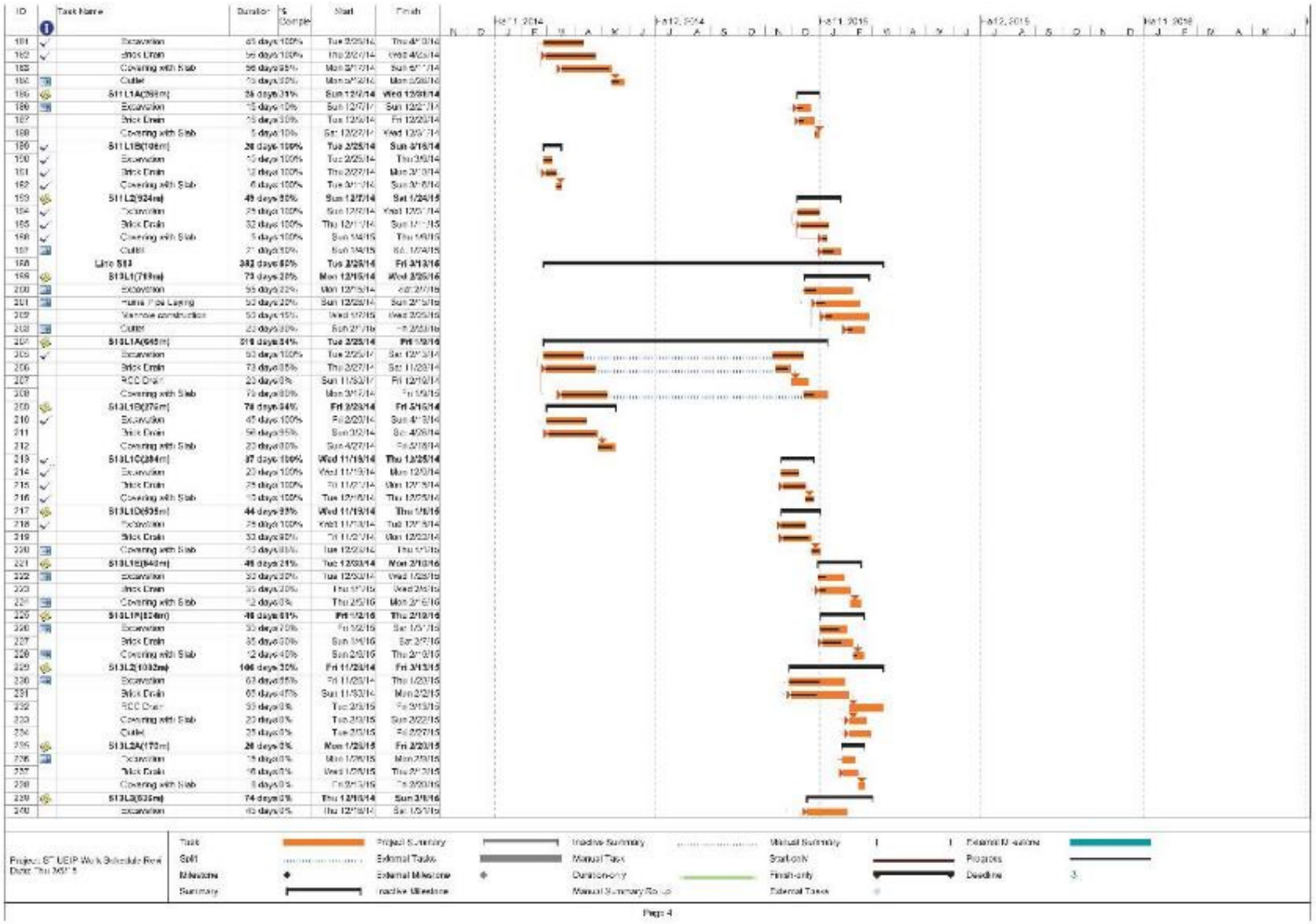

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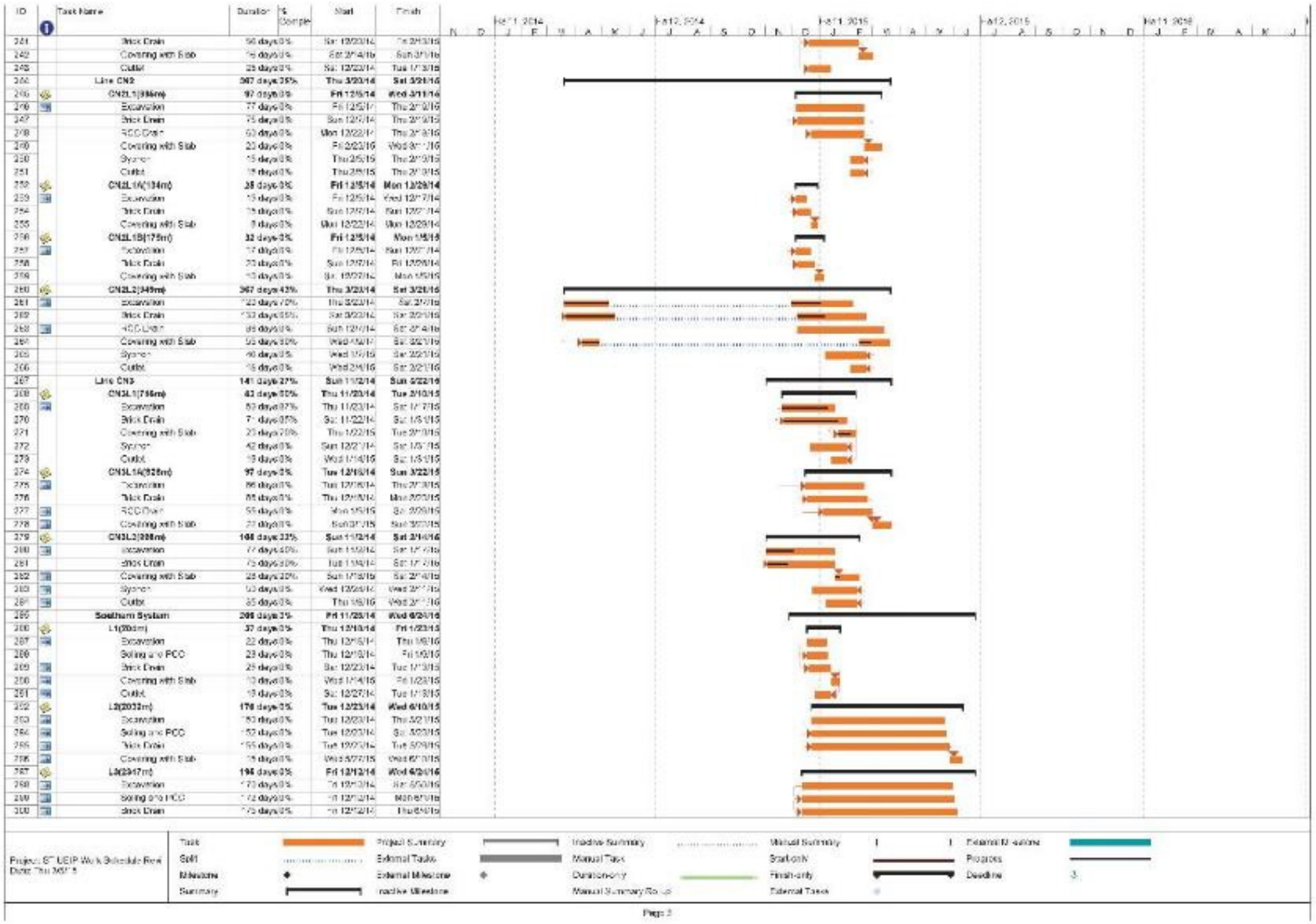

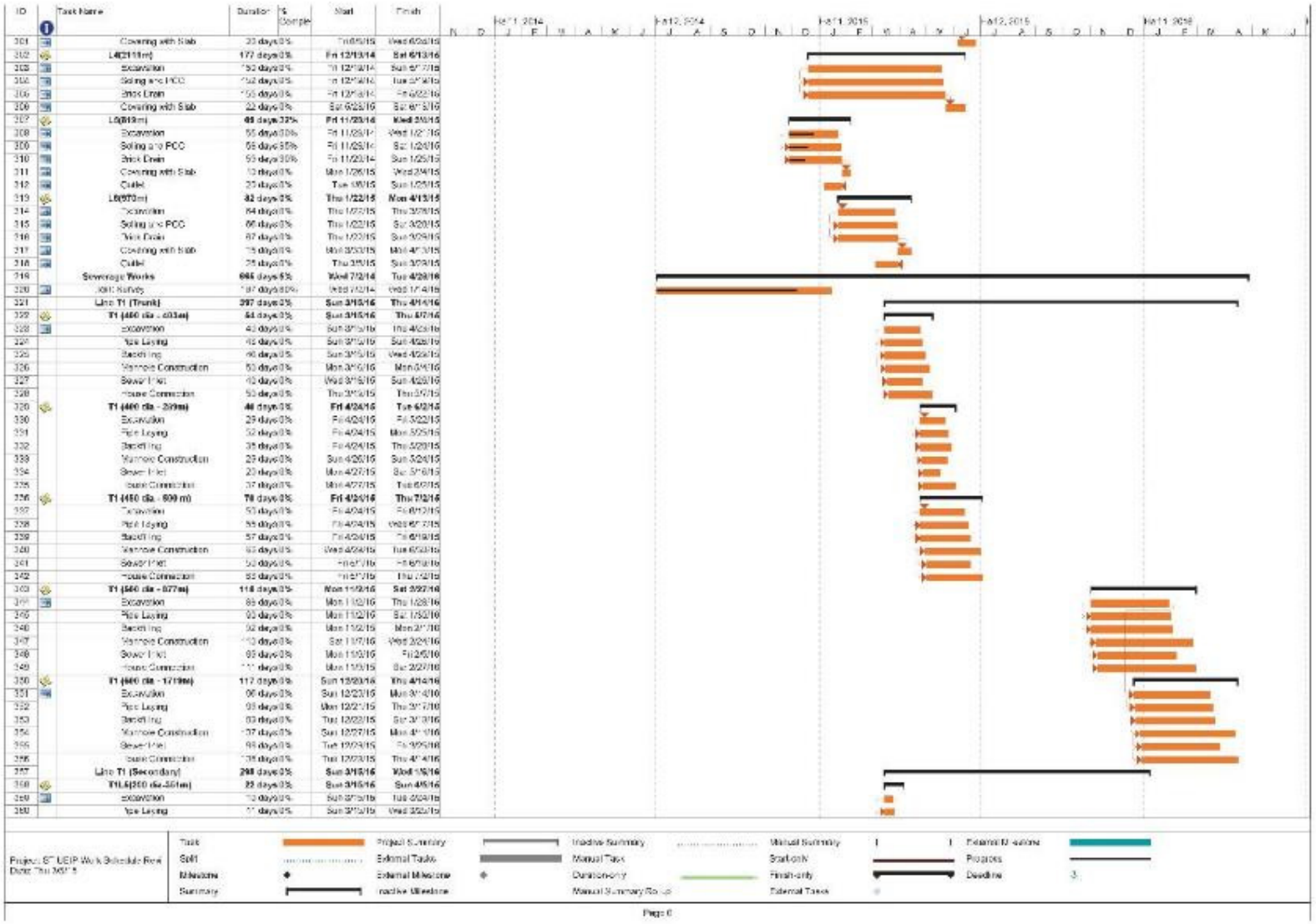
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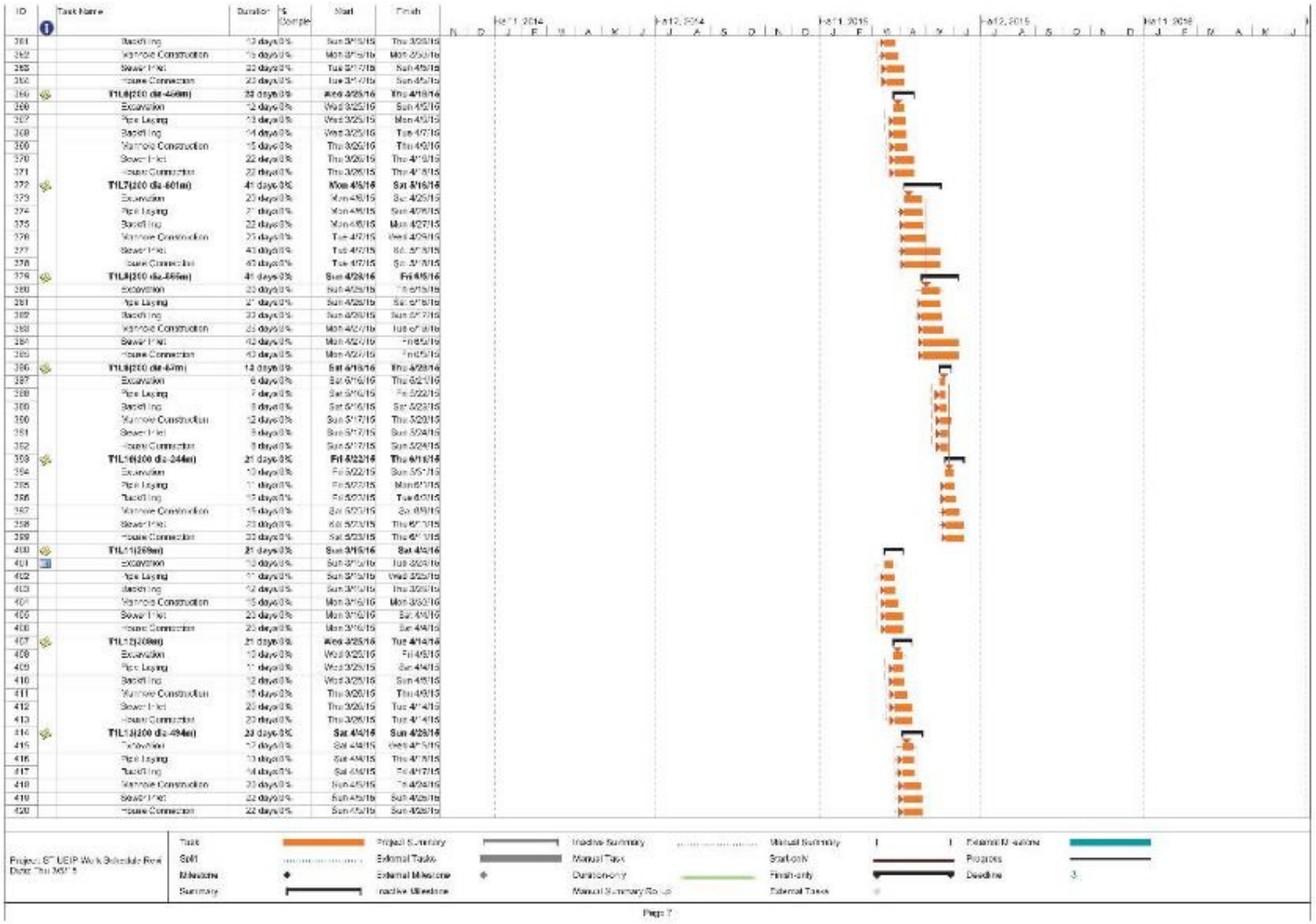
Page 6



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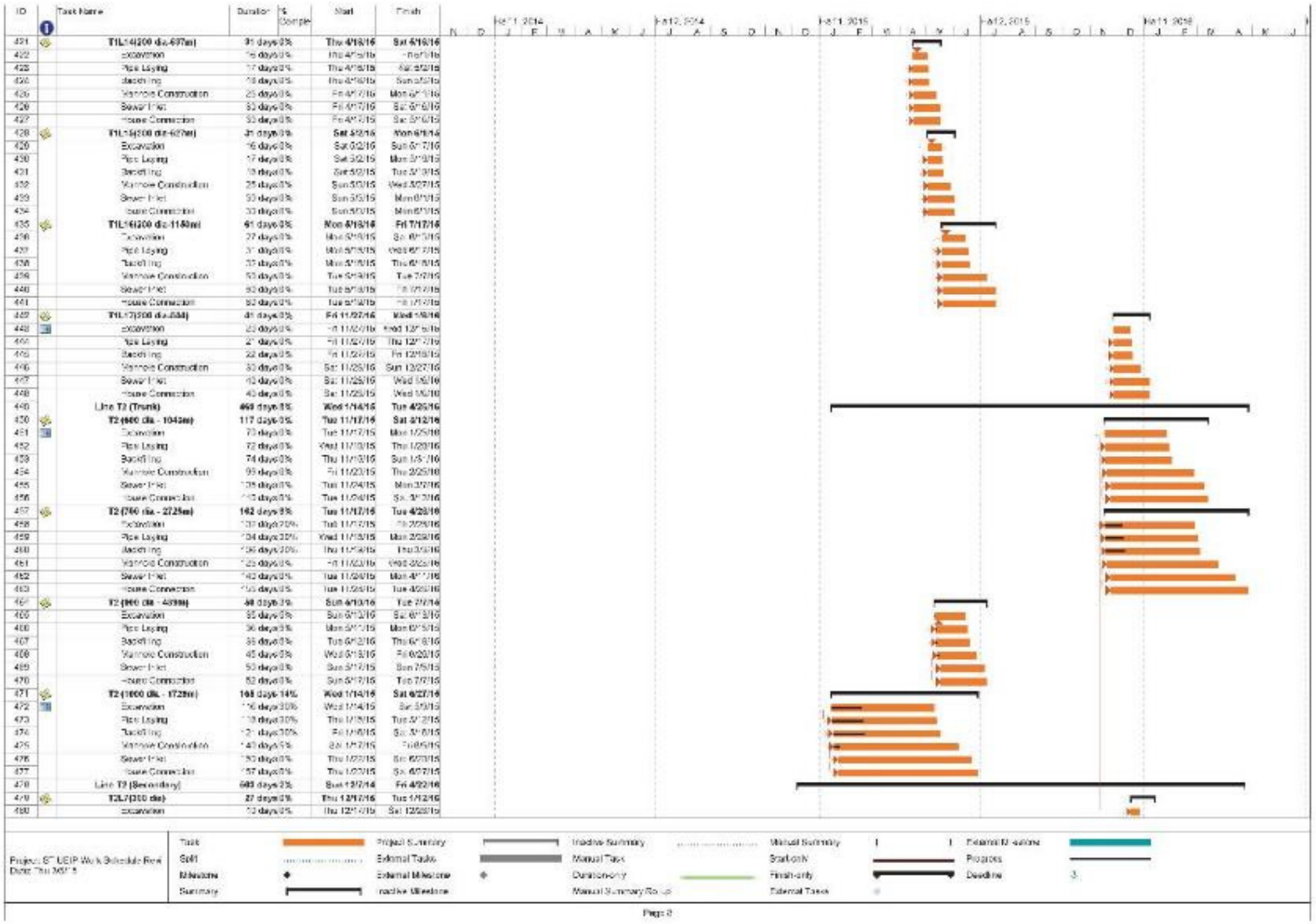
Site Office: Katahari, Judi



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Site Office: Katahari, Judi

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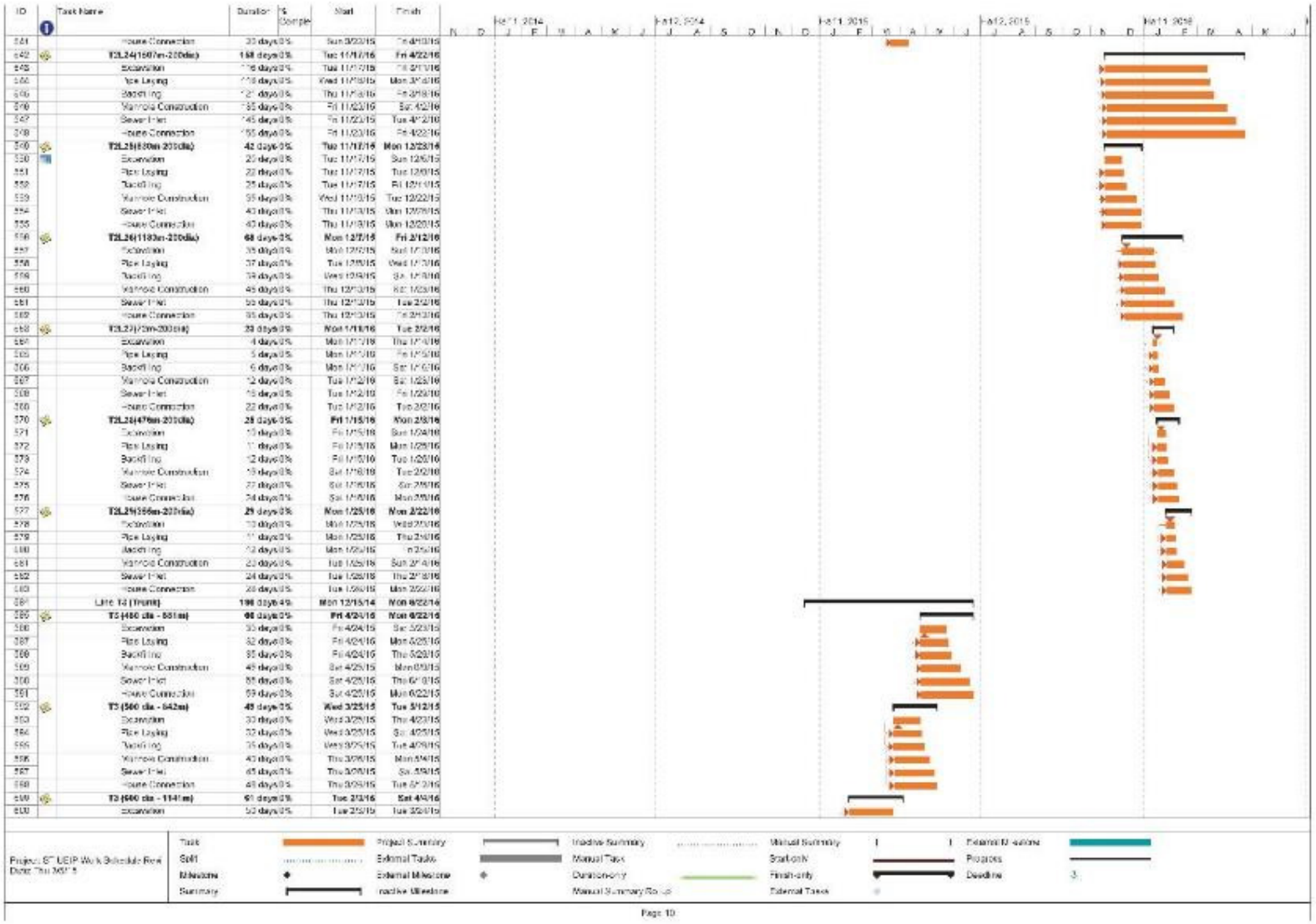

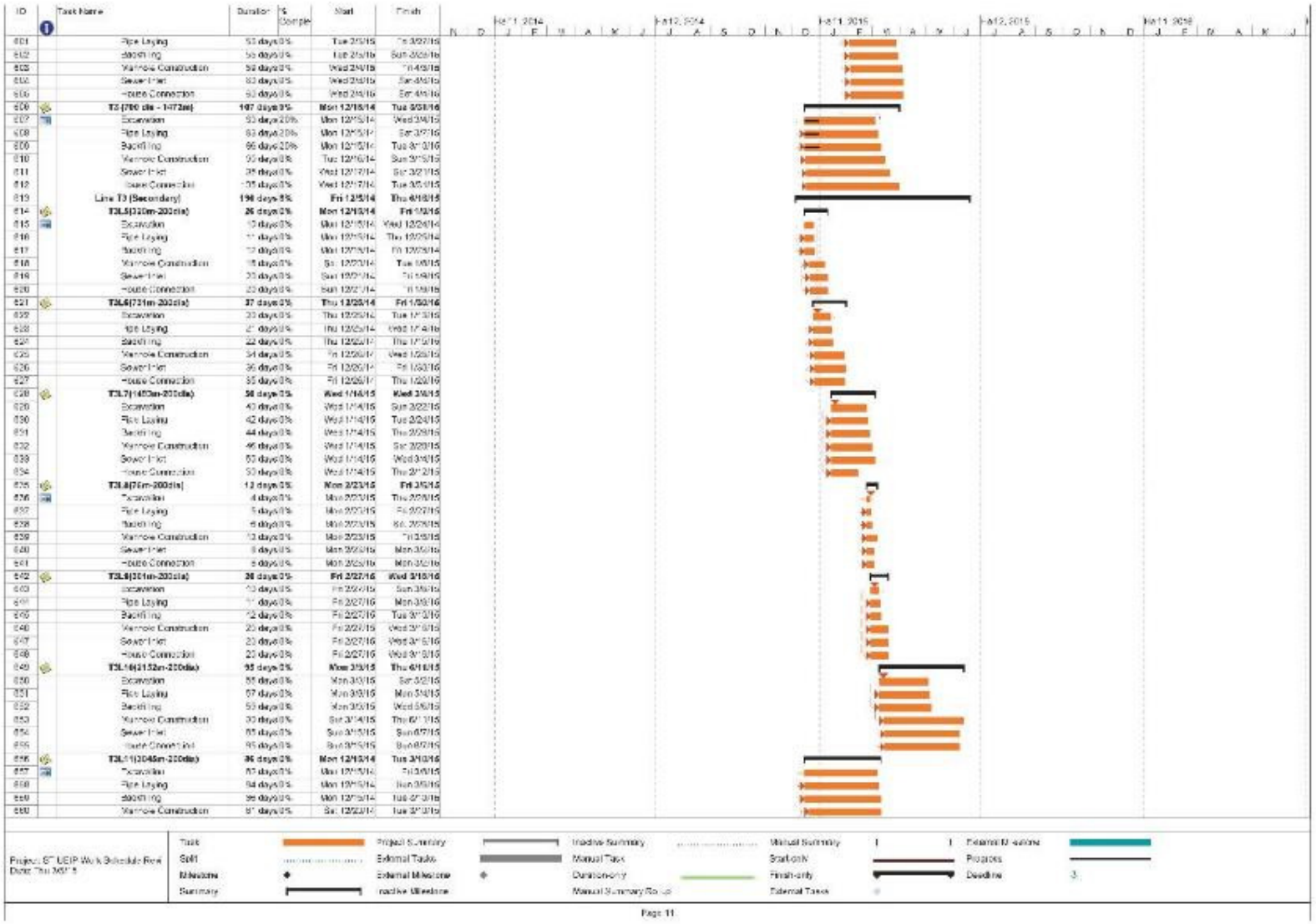

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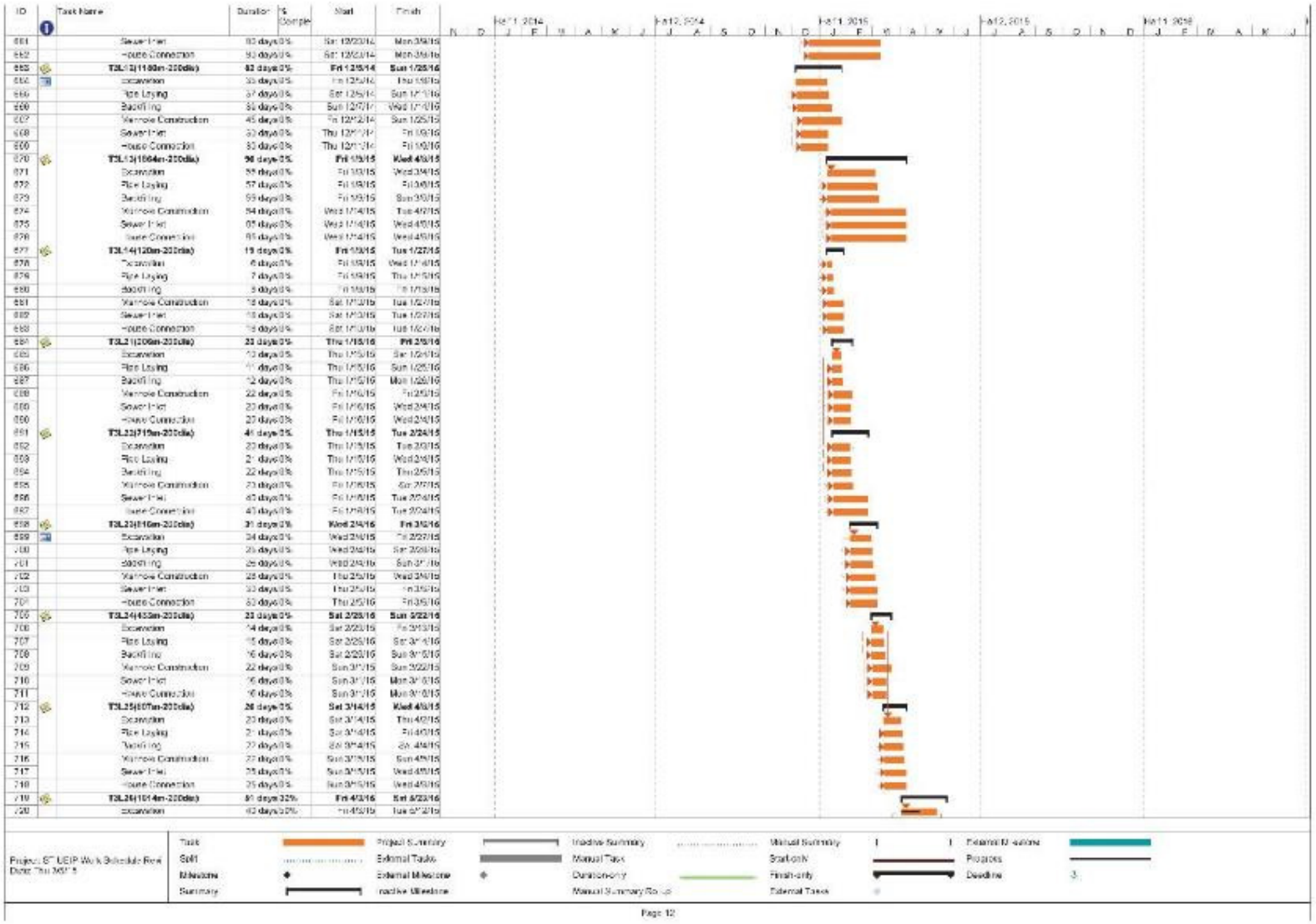

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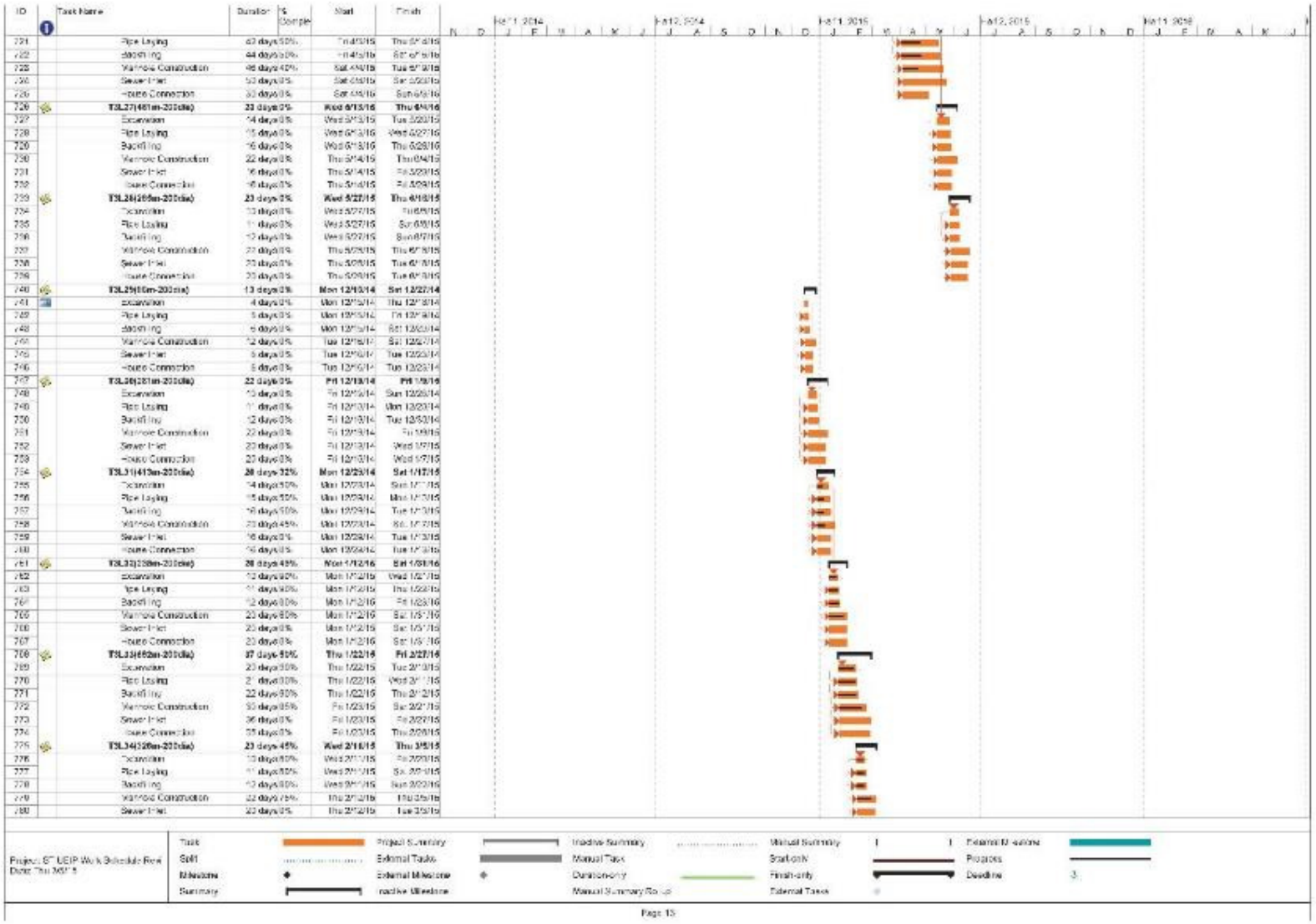
Site Office: Katahari, Judi



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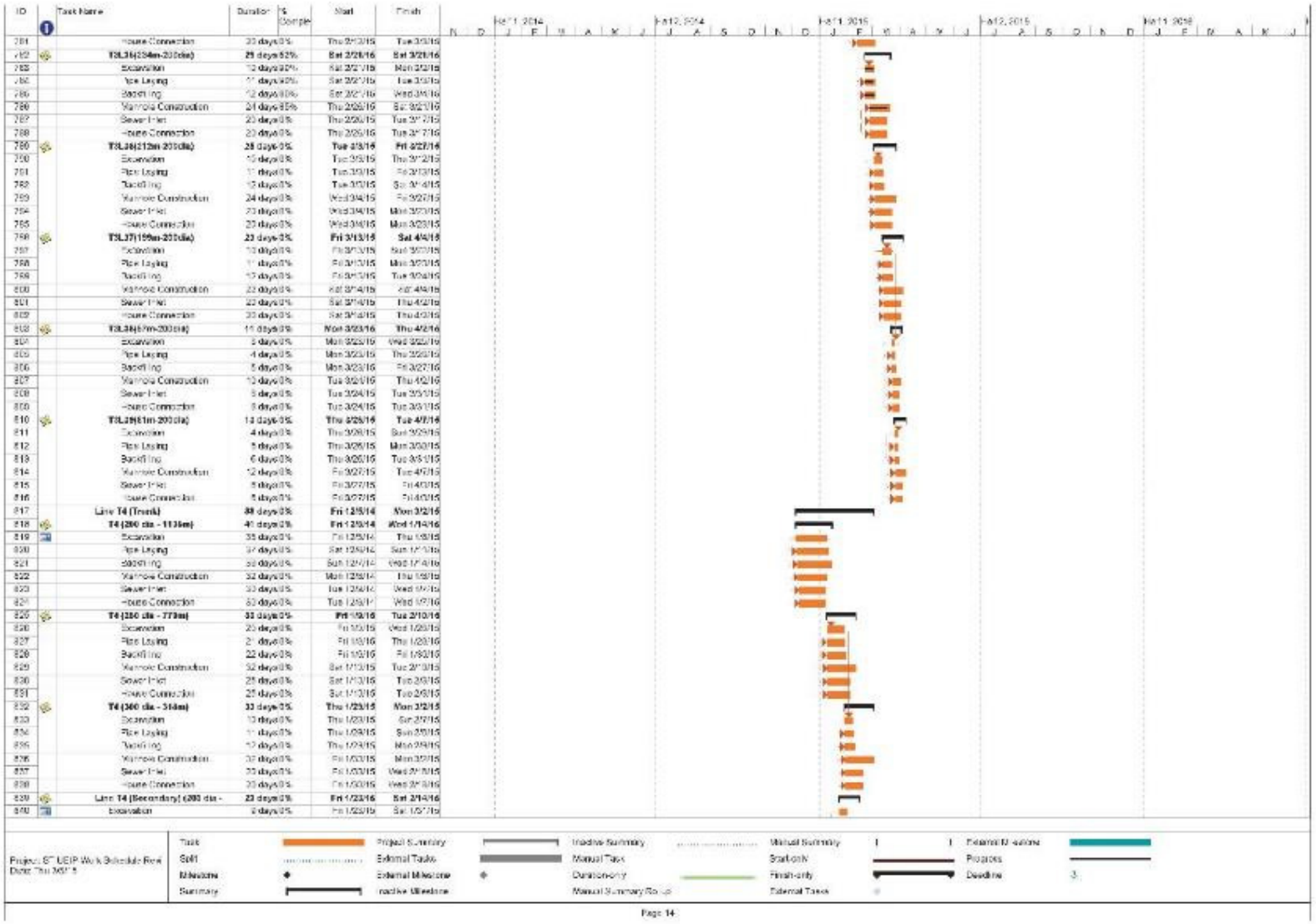

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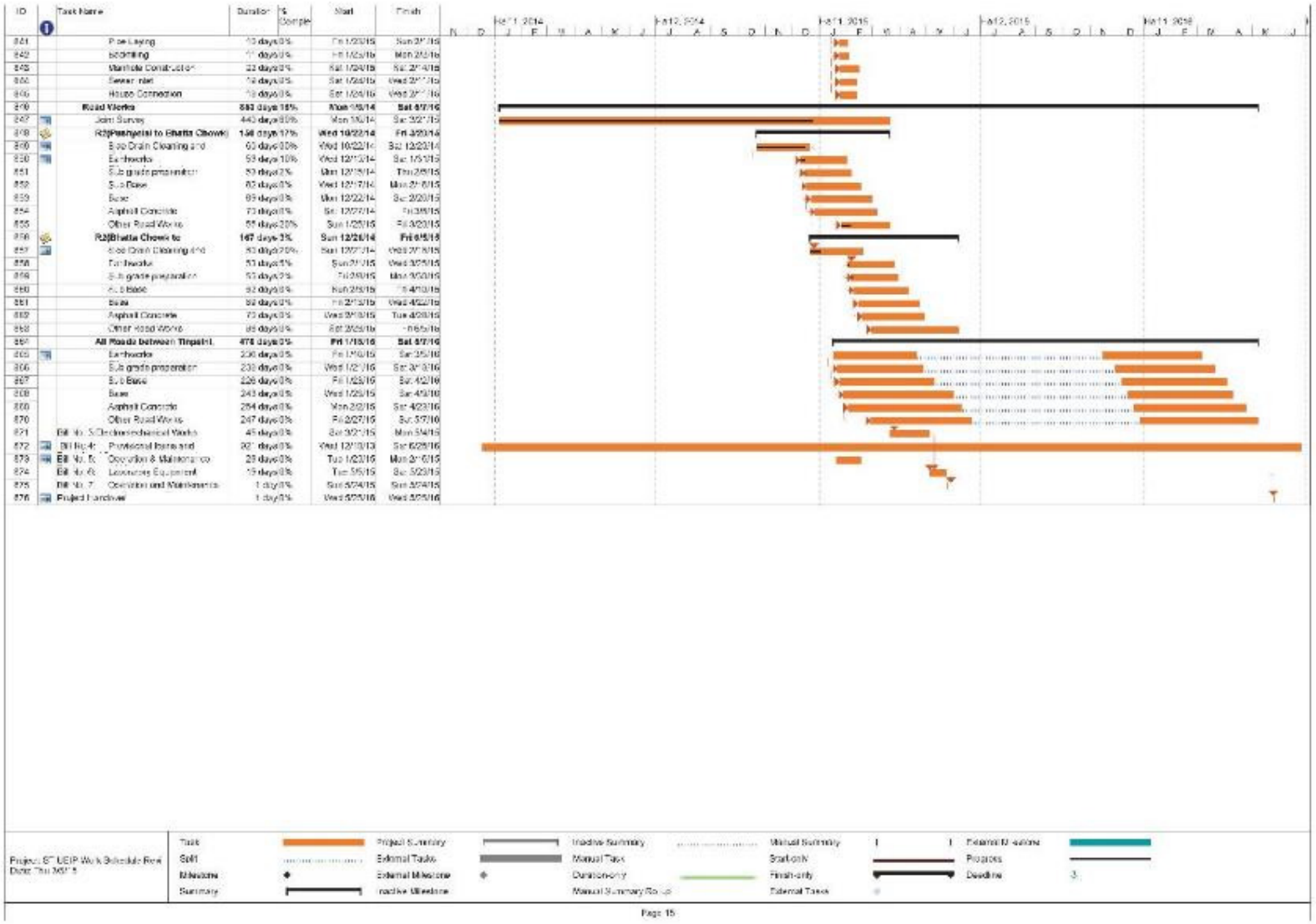
Site Office: Katahari, Judi



Photographs of the Month

Figure 1 All the equipment and asphalt plant remain idle due to strike

Figure 2 Batching Plant at Katahari Yard remain Idle due to strike

Site-Specific EMAP Monitoring Checklist

Name of Contractor: M/S CTCE-KALIKA J.V. Contract No: STIUEIP/W/BRT/ICB-01 For the Month of September 2015
Consulting Engineers: SMEC-Brisbane-AQUA-BDA-CEMAT

(Insert sign √, or scale where applicable)

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
Preparation for construction				**Indicate in 1-5 scale**	**Indicate in 1-5 scale**	**Compliance (C); Non Compliance (NC) Not applicable (NA)**				
						C			**NC**	**NA**
						<25%	25-50%	**>75%**		
	Identify the temporary areas required by the project and locate them with proper marking	May result social tensions	Prepare the details of temporary land acquisition and other private properties	2	2					
			Submit to Supervising Engineer	2	2					
			Follow RAP for temporary acquisition	2	2					
	Submit applications to get an approval Submit such agreement and permits to Supervising Engineers for official information	May result social conflict and legal obstructions resulting in delay of work	Obtain Letters of Approval and Agreement for (i) temporary acquisition of land and properties (ii) relocation of religious site, foot trails, (iii) disruption of water supply, and others	2	2					
	Delineate and peg the areas required	May result social conflict and legal obstructions resulting in delay of work Pegging of project area	Pegging of all constructions site and labor camp	2	2					
			Maintain records of trees and other properties likely to be affected	2	2					
	Construct workforce camp	Haphazard camps resulting in social stress and degradation of local environment	Establish workforce camp at designated site only	2	2					
	Make employment policy for local and affected people as per EMP	Local people may be deprived of opportunities, Minors may be employed	Employ local people (not under age 14) especially SPAF, and PAF in jobs	2	2					
			Settle wage rate based on DWEC and provide the list of employees to Supervising Engineer	2	2					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
				Indicate in 1-5 scale	Indicate in 1-5 scale	Compliance (C); Non Compliance (NC) Not applicable (NA)				
						C			NC	NA
						<25%	25-50%	>75%		
Construction Phase: Physical Environment	**Construction Activity**									
	Adopt cut and fill principle during earthworks Disposal of excess materials in designated area Apply Bio-engineering for controlling of erosion and Gully	Soil Erosion sedimentation and slope instability	Adopt 'cut and fill' approach, wherever possible	2	2					
			Avoid works during monsoon	2	2					
			Provide proper drainage facilities	3	3					
			Stockpile top soil for reuse	2	3					
			Adopt gully control and bioengineering	2	3					
			Procure aggregates from already existing sites	2	2					
			Dispose spoil in designated area	2	3					
	Quarrying from river bed	Change in River Hydrology and River Morphology	Avoid Quarrying/Mining activity in river/streams for extraction of materials required for project shall not be done so that change the river cross sections and longitudinal profile do not occur	2	2					
			Ensure care so that irrigation canal/channel are not adversely affected by the project construction	2	1					
			Ensure care of stone spout in order not to disturb the existing flow.	2	1					

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						C			NC	NA
						<25%	25-50%	>75%		
	Disturbance of drainage Dumping of waste in the river Construct of toilets in the camps Storing of materials in the project area Handling of toxic materials Dumping of excess materials Quarry operation	Water Pollution	Avoid camping facility within drainage	1	1					
			Prohibition on dumping of wastes in the water source	2	2					
			Provision of sanitary facility and prohibition on defecation in open areas	2	2					
			Proper storage of construction aggregates, hazardous, and toxic materials and proper disposal of chemical containers, packaging materials, plastic bags provide training to workforce on safe handling of toxic materials	2	2					
			Disposal of waste in the designated area	2	2					
			provide dumping site and waste treatment facility	2	3					
			Avoid excessive mining from riverbed.	2	2					
	Movement of vehicles Operation of crusher Earthworks Stockpiling of construction waste and construction materials	Air Quality deterioration	Spraying of water in dry season at construction site and disposal site (Three time a day)	2	2					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
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						C			NC	NA
						<25%	25-50%	>75%		
			Limit speed of construction vehicle	2	2					
			Safe place	2	2					
			Regularly maintain equipment and cover the stockpile	2	3					
			Compliance of vehicles with National Vehicle Mass Emission Standards, 2756 BS	2	2					
			Arrange proper ventilation in confined working areas	3	2					
	Movement of vehicles Operation of crusher Operation of construction machineries and equipment Horn honking	Noise and vibration	Fit mufflers to control noise							
			speed limit of construction vehicle	2	2					
			Use light horn in vehicles	2	2					
			Maintenance of equipment	2	2					
			Prohibit the operation of crushing plant between 7 PM to 6 AM	3	2					
			Compensate the damages caused by vibration	3	3					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
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						C			NC	NA
						<25%	25-50%	>75%		
	Scrapping of top spoil	Effect on Soil quality	Stockpile reusable top soil properly in safe yard	1	2					
	Storage of fuel, lubricating oil, chemicals etc.	Solid waste problems, health risk	Store all materials, toxic, non-toxic and hazardous materials in safe place (warehouse)	1	1					
	Project activities producing wastes such as used tyres, lubricating oil, exhausted battery etc		Collect, segregate and dispose waste at designated area	2	2					
Construction Phase: Biological Environment	**Construction Activity**									
	vegetation clearance for construction of project structures	Vegetation clearance	Cut only marked trees	2	1					
	Fuel wood and NTFPs collection by workforce	Loss of vegetation species	Prohibit fuel wood and timber collection	2	1					
			Prohibit illegal NTFPs collection and Trade	3	2					
	vegetation clearance for construction of project structures and compensation to them		Provide LPG/kerosene to workforce	3	2					
			Stockpile the felled trees and take permission from concerned authority for its use	2	3					
			Plant trees @ 5 times of each felled trees	2	3					
			Compensate for affected trees from private and community forests	3	3					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
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						C			NC	NA
						<25%	25-50%	>75%		
Construction Phase: Socio-Economic Environment	compensation and Rehabilitation as per RAP	Land Intake and compensation to affected people	Avoid involuntary displacement	3	3					
			Compensation, Rehabilitation and employment opportunity to the affected people	2	3					
			Provide all possible assistance to the displaced people until the displaced people are settled	3	3					
			Provide disturbance and rehabilitation cost	3	4					
			Protect traditional rights of locals	1	1					
			Compensate for any loss of crops, trees and other natural resources	3	3					
			Establish technical committee to assess damage caused by vibration for compensation	3	3					
	Reinstatement of damaged community services and infrastructures	Reinstatement of community services and infrastructures	Compensate or reinstate community assets such as temples, bridges and irrigation canals, electricity poles, telephone lines, drinking water pipes, sewerage lines, roads, trails, cremation sites etc	3	3					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
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						C			NC	NA
						<25%	25-50%	>75%		
	Influx of outside workforce, money and disharmony activity	Increase in crime and community stress	Instruct Workforce for not to indulge in Gambling and drinking alcohol	3	2					
			Prohibit Visiting of workers to nearby village after 7 pm and living outside	3	2					
			Instruct workforce to respect local culture, tradition, rights etc.	3	2					
			Request police to patrol in the camp site and adjoining villages	3	2					
			Launch awareness programs concerning the human trafficking and possibility of spread of STDs and HIV/AIDS	3	2					
	Project Activities relating to health and safety issues at work areas	Health and hygiene (unsafe working conditions, accidents, fire hazard, transmission of communicable disease)	Provide facilities of health check, proper sanitation and hygiene, health care, control of epidemic diseases to workforce	2	1					
			Provide awareness on STD, HIV/AIDS	2	1					
			Place adequate warning system, signboard, hoarding post and prohibit visiting risky area as necessary	2	1					
			Make available first aid kits ambulance and fire fighting gears	1	1					
			Make available protection gears to all construction workers and compensate for the loss of life or any type of injuries	1	1					
	Dislocation of archaeological artifacts, if any	Loss of Archaeological and cultural sites	Protect archaeological and cultural sites In case of relocation, consult local community	3	2					

Project stage	Project Activity	Potential Environmental Impacts	Proposed mitigation measures	Mitigation Compliance	Mitigation Effectiveness	DSC Remarks				
Preparation for construction				**Indicate in 1-5 scale**	**Indicate in 1-5 scale**	**Compliance (C); Non Compliance (NC) Not applicable (NA)**				
						C			**NC**	**NA**
						<25%	25-50%	**>75%**		
	Demolition of unnecessary structures	Decline in aesthetics and inconvenience to people	Remove all unnecessary structures and reinstall the facilities and others to the original condition	3	2					
	Traffic management at construction sites	Traffic Congestion	Provide information about construction schedule to the local people	3	2					

Space for additional remarks (if any):

Prepared by: **CTCE/KALIKA JV** Submitted to: **SMEC-Brisbane-AQUA-BDA-CEMAT**

Date of submission: **Sepetember, 2014**

Note: *Scale 1. Very Good (all implemented); 2. Good (the majority implemented); 3. Fair (some implemented); 4. Poor (few implemented); 5. Very Poor (very few or no implemented*

LAB REPORT

SUMMARY