

Name of Division : Satkhira OEM Division-2, BWD, Satkhira.
Name of Circle : Khulna OEM Circle, BWD, Khulna.
Name of Zone : South-Western Zone, BWD, Khulna.

মুক্ত সেচ
১৯/০১/২০২২
৮৬-৭৭৫

Construction of 2 Vent (1.50m x 1.80m) Drainage Cum Flushing Regulator (DS-4) on Bainbasot at km.13.00 in Polder 6-8 at Assasuni Upazila, in c/w "Drainage Improvement of Polder No. 1, 2, 6-8 & 6-8 (Ext) in Satkhira District, Under Satkhira OEM Division-2, BWD, Satkhira.

For

Design Data



BANGLADESH WATER DEVELOPMENT BOARD

১৩৪

DATA CHECK LIST FOR THE DESIGN CONSTRUCTION OF DRAINAGE

SLUICE

- A. Name of Project/Scheme : Drainage Improvement of Polder 1,2,6-8 and 6-8
- B. Name of Structure : Construction of 2 Vent (1.50m x 1.80m) Drainage Culm (Extension) in Sakkhra District
- C. Project Area : 75,790 Hectar.
- D. Catchments Area : 300 Hectar. (Only for this structure)
1. PURPOSE OF THE STRUCTURE
- Identify the purpose(s) that has to be saved by the structure and put tick-mark accordingly:
- 1.1 Drainage, Flood control and Irrigation.
- 1.2 Monsoon Drainage.
- 1.3 Post Monsoon Drainage
- 1.4 Prevention of early Flood.
- 1.5 Prevention of Flood.
- 1.6 Flushing of irrigation / fish culture (Gher) water.
- 1.7 Retention of post monsoon water for irrigation.

- 2.1 Project Map: A project index map showing the project boundary and all project feature such as embankment, improvement of drainage channel, irrigation canal, all drainage and Index Map enclosed.
- 2.2 Location Map: Enclosed.
- 2.3 Basin Map: Enclosed.
- 2.4 Site Plan: Enclosed.
- 3 HYDROLOGICAL DATA:
- A project index map showing the project boundary and all project feature such as embankment, improvement of drainage channel, irrigation canal, all drainage and Index Map enclosed.
2. MAPS (See instruction in Annexure-A)

1.1	Drainage, Flood control and Irrigation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.2	Monsoon Drainage.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.3	Post Monsoon Drainage	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.4	Prevention of early Flood.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.5	Prevention of Flood.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.6	Flushing of irrigation / fish culture (Gher) water.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.7	Retention of post monsoon water for irrigation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

While submitting proposal for the design of the Constructing sluice this data check list shall be filled up and sent to the design office along with other requisites mentioned here in.

- 3.1.1 Proposed structure.** Existing or proposed top elevation, top width and side slope of embankment/road at the structure site.
- 3.1.2 Structure.** Existing or proposed road/embankment profile for at least 500 m on each side of the structure related to embankment/Road connection the structure.
- 3.1 MISCELLANEOUS DATA**
- 4.1** Long-section of the drainage channel for the at least 0.130 km U/S of this structure \approx 0.150 km D/S up to out-fall River from this structure. Enclosed.
- 4.2** Cross-section of the drainage channel for the at least 0.130 km U/S of this structure \approx 0.150 km D/S up to out-fall river from this structure. Enclosed.
- 4.3** Data related to embankment/Road connection the structure.

- 3.3 DISCHARGE DATA:**
- 3.3.1** Is there any record of discharge in the channel? If so, enclosed the data as available site? If so, specify the name.
- 3.2.1** Is there any water level station on the drainage channel corresponding the proposed structure mentioned the name of the station(s). Yes _____ No _____
- 3.2.2** Specify the name of at least one station D/S of the structure site with the distance : N/A
- 3.2.3** Is there any water level station on the outfall river at or near the structure site? If so,
- 4.1** Are the bank of out-fall river and drainage channel far the structure site: (a) Yes _____ No _____
- 4.2** MORPHOLOGICAL DTE (See Annexures-A)
- 4.3** Long-section of the drainage channel for the at least 0.130 km U/S of this structure \approx 0.150 km D/S up to out-fall River from this structure. Enclosed.

Station No.	Name of station	Length of record available	Remarks
C L 518 Sankhra.	Sankra, Sankhra	1992-2017	Separate sheet enclosed here with.

- 3.1.2** Specify the name and length of record of the rainfall station closed of the catchment area of the proposed structures.

Station No.	Name of station	Length of record available	Remarks
C L 518	Sankra,Sankhra		Sankhra

3.1 Rain fall data: Enclosed.

3.2 Is there any rainfall station with in the catchments area?

3.3 Rain fall data: Enclosed.

13-01-22

(Shameem Hasnaim Mahmud)	Executive Engineer	BWDB, Salkhira.
(Gokul Chandra Paul)	Sub-Divisional Engineer (A.C)	Salkhira OEM Sub-Division-2
(Saddur rahman)	Sub-Assistant Engineer	Salkhira OEM Section-3.
		BWDB, Salkhira.

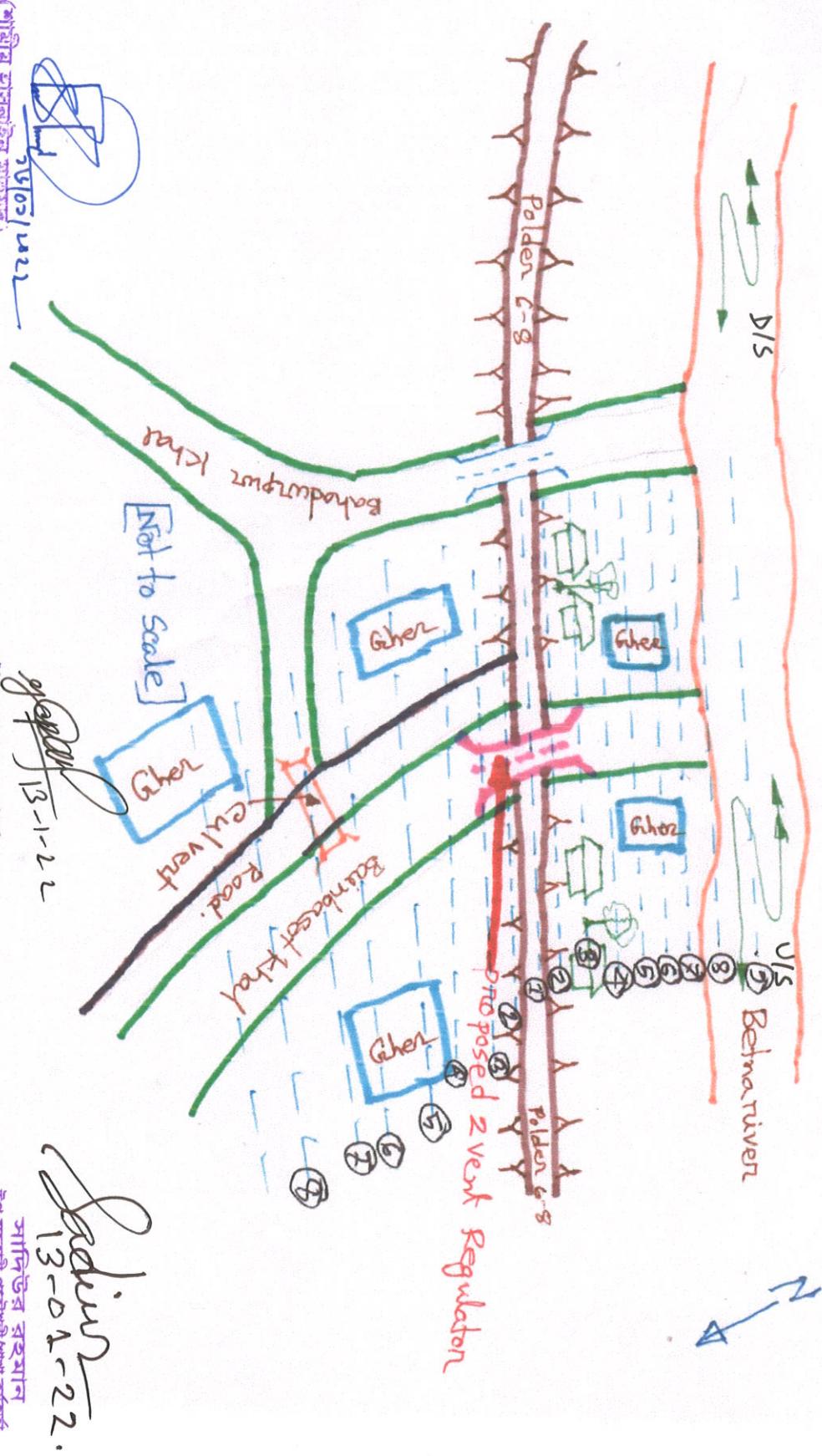
13-01-22

6. FOUNDATION DESIGN DATA: Will be Supplied by Ground Water Hydrology

- 5.2.3 (a) Is the complete drainage of the basin necessary?
- | | | | |
|--------------------------|-----|-------------------------------------|----|
| <input type="checkbox"/> | Yes | <input checked="" type="checkbox"/> | No |
|--------------------------|-----|-------------------------------------|----|
- From the field condition proposed invert level of the structure which can allow design drainage distance from the structure site.
- 5.2.4 (b) If not mentioned the drainage level require and distance of such level from the proposed structure site.
- From the field condition existing invert level of the structure which can allow design drainage distance highest level requirement SOB.
- 5.2.5 From the field condition proposed invert level of the structure which can allow design drainage period: All Season
- Date related to irrigation aspects:
- 5.3.1 Project cultivate area 300 hectars. (Fish Culture)
- 5.3.2 Principal crop sngle in the basin with present and future cropping past term: Fish Culture
- 5.3.3 For irrigation by flushing water, specify the period of such irrigation: N/A
6. FOUNDATION DESIGN DATA: Will be Supplied by Ground Water Hydrology
- Immediately.

- 5.1.3 Type of expected traffic loading on road/embankment.
- | | | | |
|--------------------------------|-----------------------|---------------------|--------------------|
| (i) Top Elevation 5.00 m (PWD) | (ii) Top width 5.00 m | (iii) C/S Slope 1:2 | (iv) R/S Slope 1:3 |
|--------------------------------|-----------------------|---------------------|--------------------|
- 5.1.4 General classification of road: Usually Track
- 5.2 (i) Highway/Federal road/Local road.
- 5.2 (ii) R&H/District council road/Pourashava road/UP Road/Village road
- 5.2 (iii) BWDB Embankment.
- Data related to drainage aspects.
- Are the existing section and bed slope of the drainage channel adequate for complete or desire level of drainage?
- 5.2.2 If not, does the scheme include re-excavation of drainage channel? If so, the design cross-section and long-section may be finished as requirement indicated in Para 4.2 and 4.3
- | | | | |
|--------------------------|-----|-------------------------------------|----|
| <input type="checkbox"/> | Yes | <input checked="" type="checkbox"/> | No |
|--------------------------|-----|-------------------------------------|----|
- 5.2.3 (a) Is the complete drainage of the basin necessary?
- | | | | |
|--------------------------|-----|-------------------------------------|----|
| <input type="checkbox"/> | Yes | <input checked="" type="checkbox"/> | No |
|--------------------------|-----|-------------------------------------|----|
- 5.2.4 (b) If not mentioned the drainage level require and distance of such level from the proposed structure site.
- From the field condition existing invert level of the structure which can allow design drainage distance highest level requirement SOB.
- 5.2.5 From the field condition proposed invert level of the structure which can allow design drainage distance from the structure site.
- 5.3.1 Project cultivate area 300 hectars. (Fish Culture)
- 5.3.2 Principal crop sngle in the basin with present and future cropping past term: Fish Culture
- 5.3.3 For irrigation by flushing water, specify the period of such irrigation: N/A
6. FOUNDATION DESIGN DATA: Will be Supplied by Ground Water Hydrology
- Immediately.

Site Plan Construction of 2 Vent (1.50m x 1.80m) Drainage Cum Flushing Regulator (DS-4) on Bainbasot at km.13.00 in Polder 6-8 at Assasuni Upazila, in c/w "Drainage Improvement of Polder No. 1, 2, 6-8 & 6-8 (Ext) in Satkhira District, Under Satkhira O&M Division-2, BWDB, Satkhira.

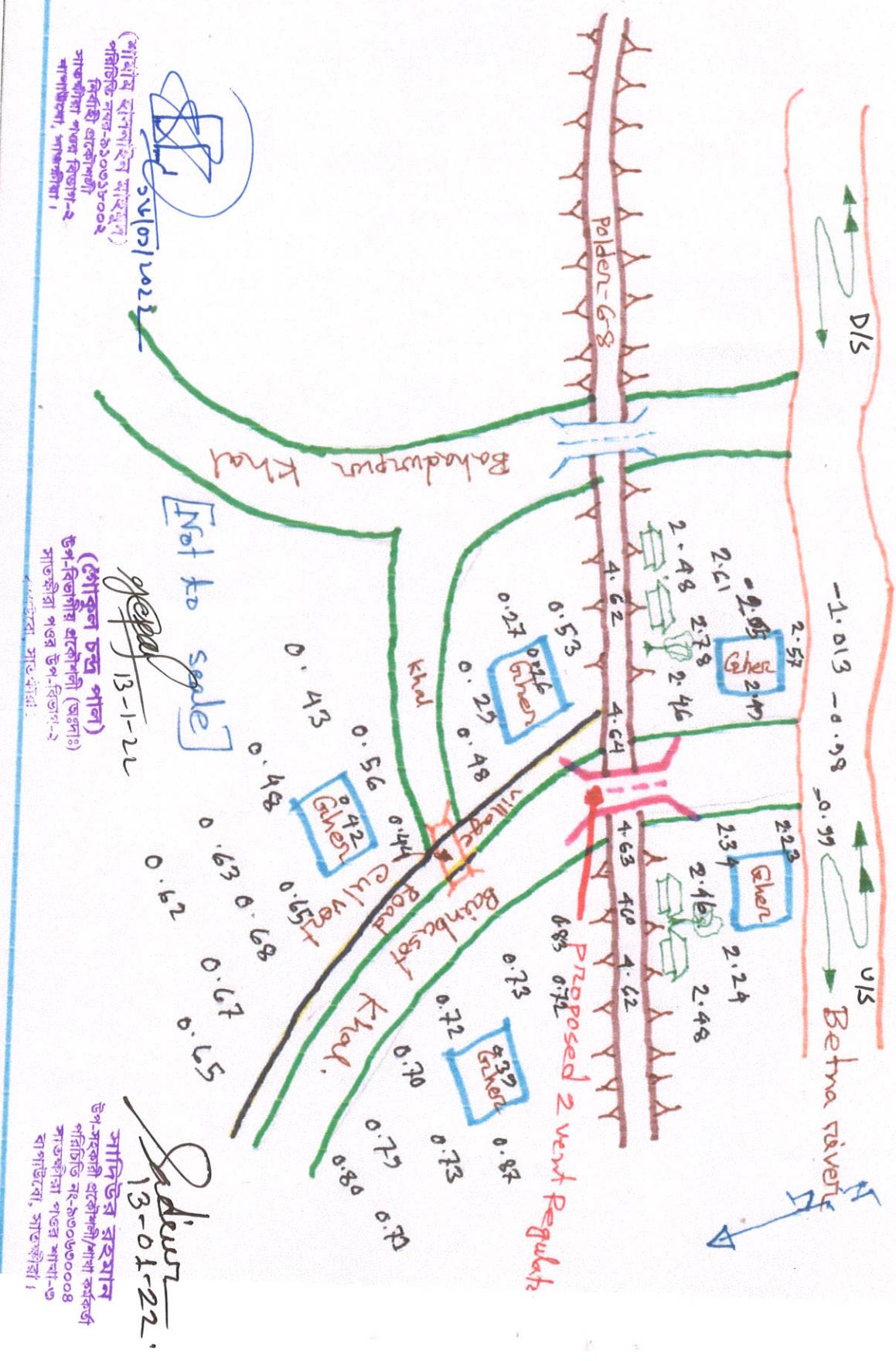


(শাস্তিকীয় পর্যবেক্ষণ অধিদপ্তর
পরিচালিত নথিবত-১২০৩১৮-০০২
লিখিত পত্র নথি নথি নথি
সাতকীরা পত্র নথি নথি-২
শাস্তিকীয় পত্র নথি নথি-১

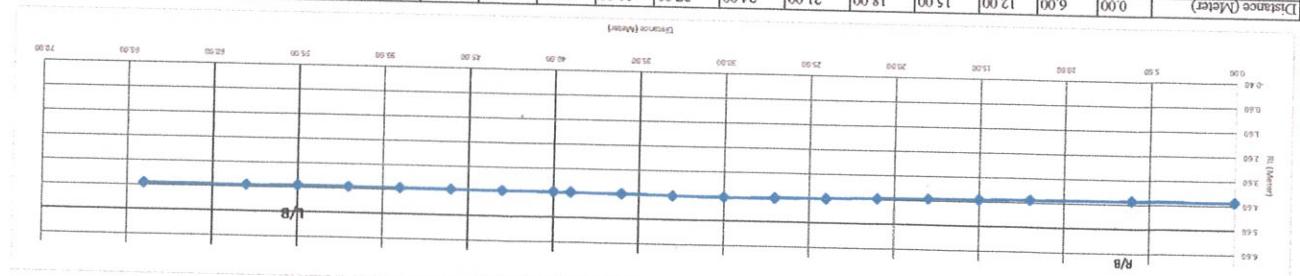
(প্রোকুল চন্দ্র পাল)
উপ-বিভাগীয় প্রকৌশলী (অংশধারী)
সাতকীরা পত্র নথি নথি-২
১০ পত্র নথি নথি-১

সান্দি উর বাইয়ান
উপ-সরকারী প্রকৌশলী/শাখা কর্মকর্তা
পরিচিতি নং-১২০৩০৫০০০৪
সাতকীরা পত্র নথি নথি-৩
শাস্তিকীয় পত্র নথি নথি-১

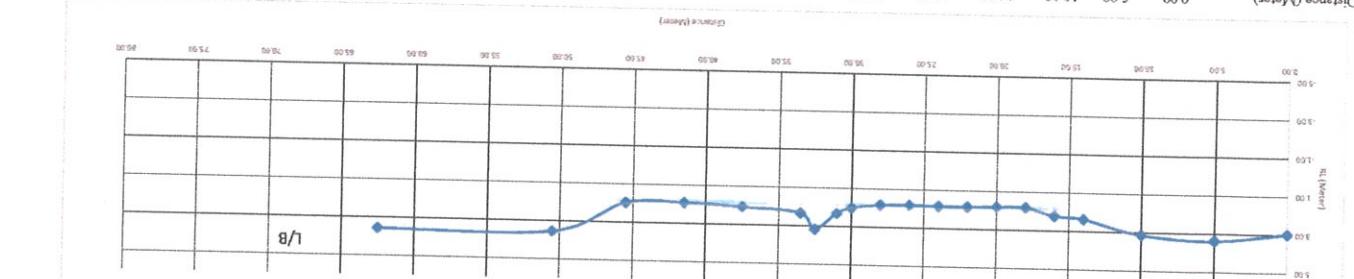
Site Plan Construction of 2 Vent (1.50m x 1.80m) Drainage Cum Flushing Regulator (DS-4) on Bainbasot at km.13.00 in Polder 6-8 at Assasuni Upazila, in c/w "
Drainage Improvement of Polder No. 1, 2, 6-8 & 6-8 (Ext) in Satkhira District, Under Satkhira O&M Division-2, BWDB, Satkhira.



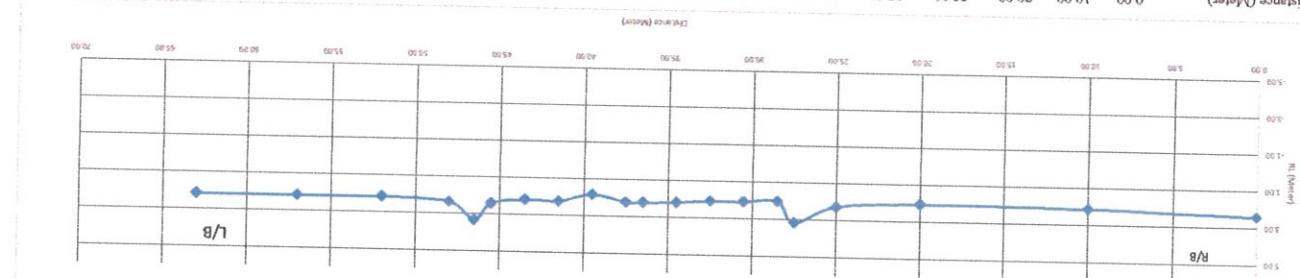
C/S No. 1 at Ch Km. 0.000 CL



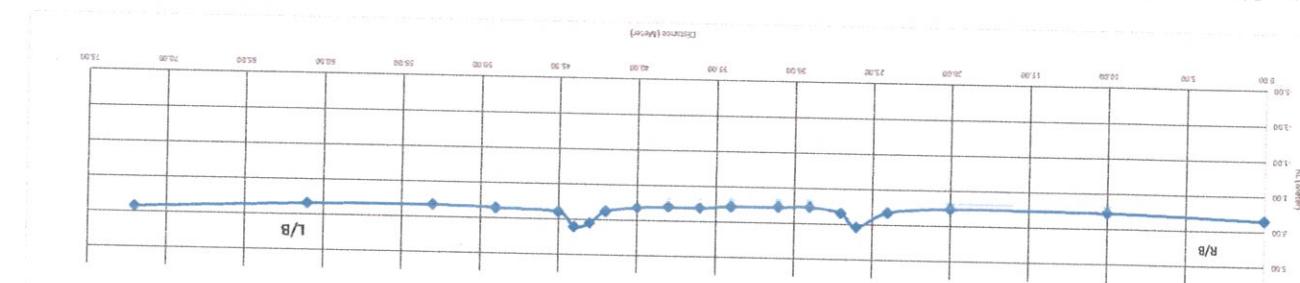
C/S No. 2 at Ch Km. 0.010 Down Stream

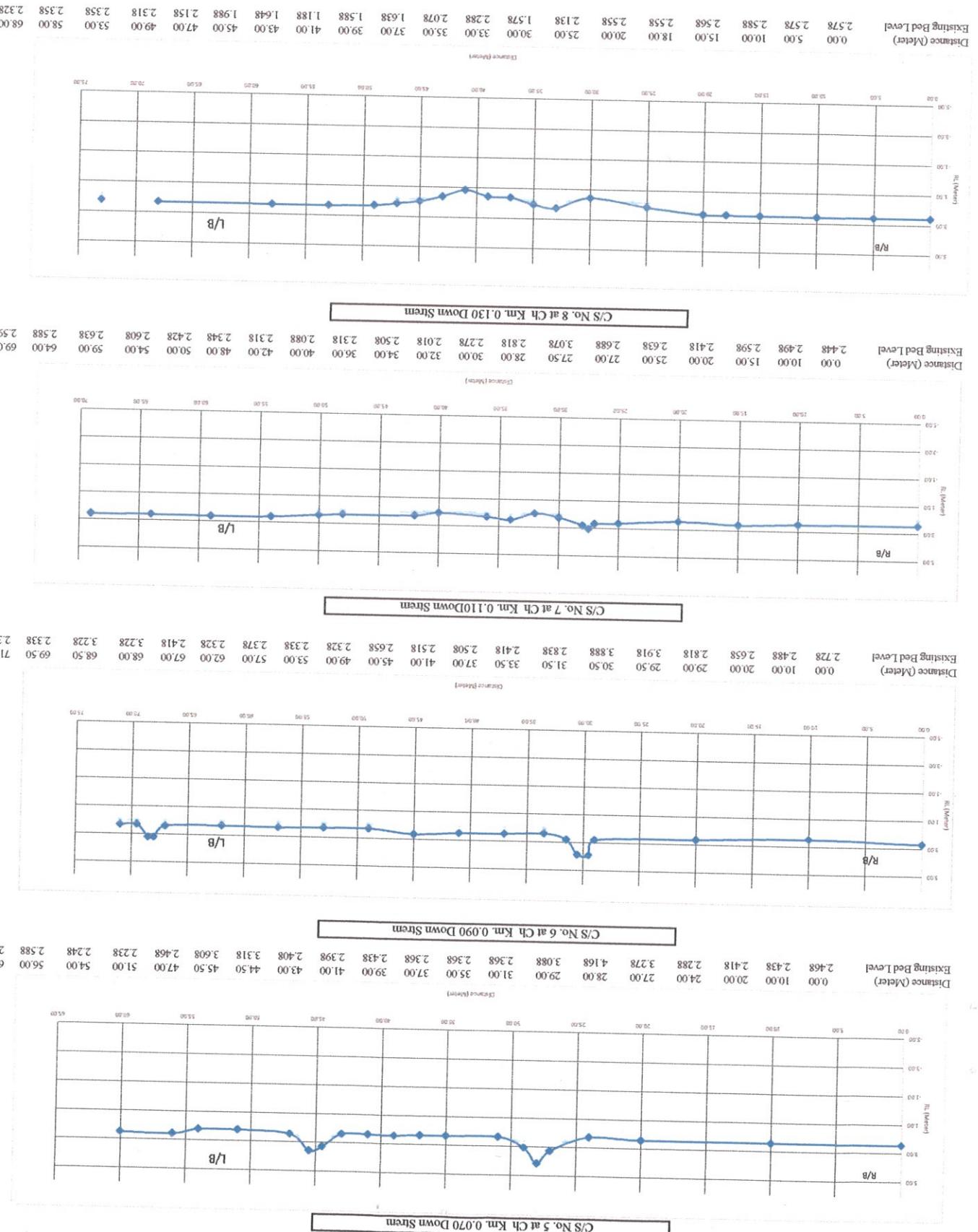


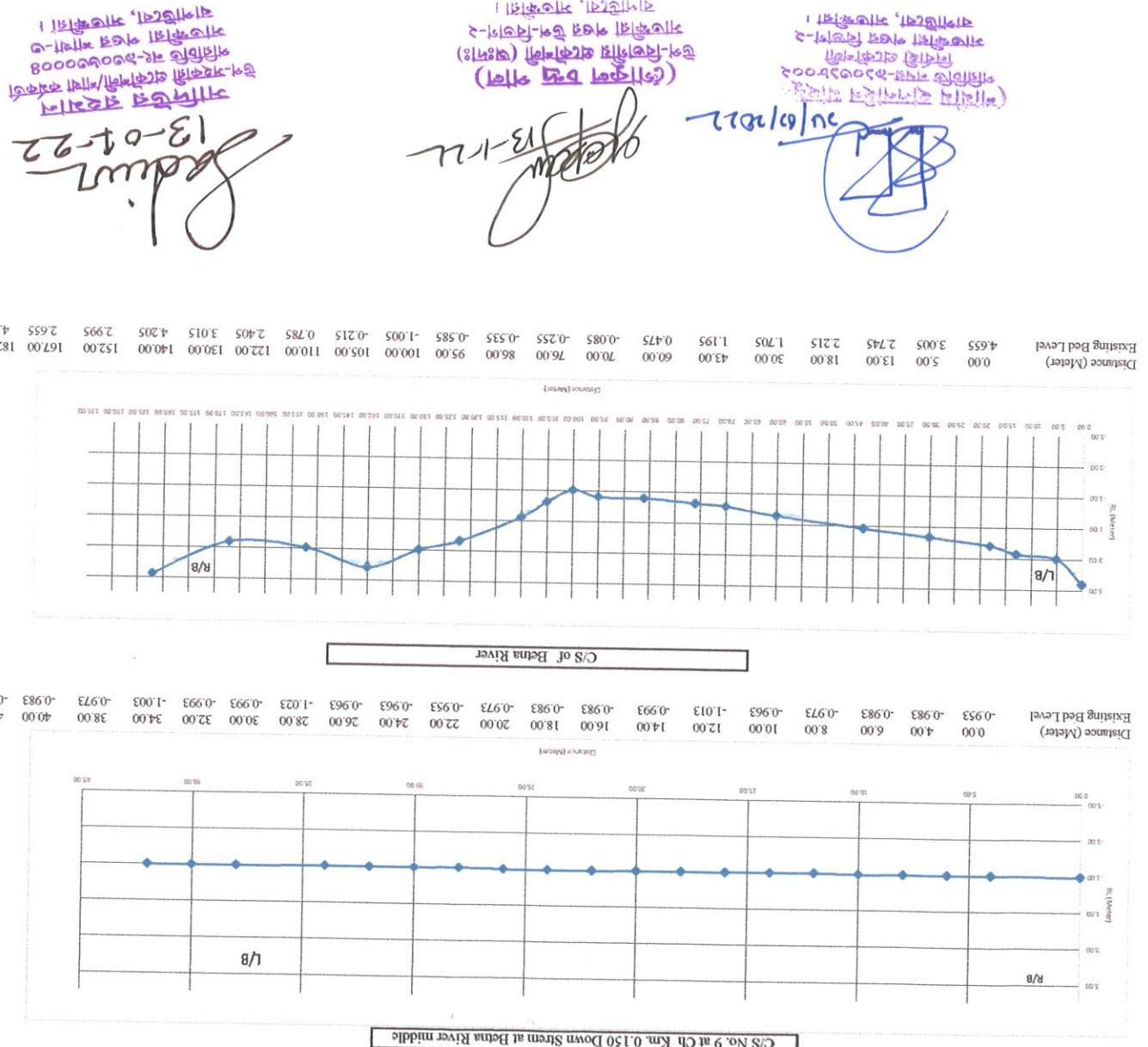
C/S No. 3 at Ch Km. 0.030 Down Stream



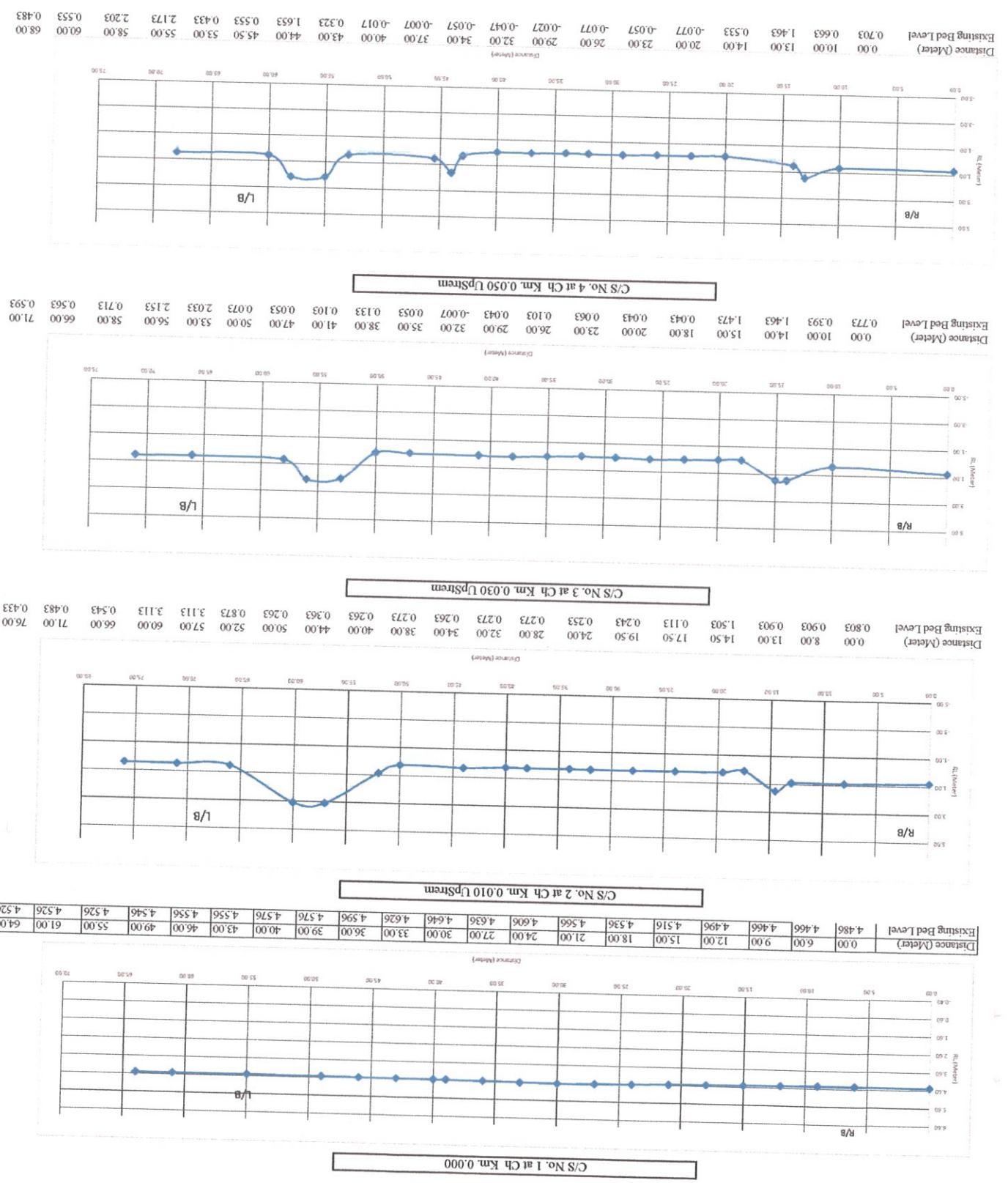
C/S No. 4 at Ch Km. 0.050 Down Stream







Cross Section for Construction of 2 Year (1.50 m x 1.80 m) Drainage Channel Regulator (DS-4) on Bankbase at Km.13.00 in Polder-6-8 at Assumut Lapazha, in C/W "Jungle Improvement of Polder-1,2,6-8 (Gext) in Saltillo District, Under Saltillo OEMD Division-2, BWDB, Sabah.

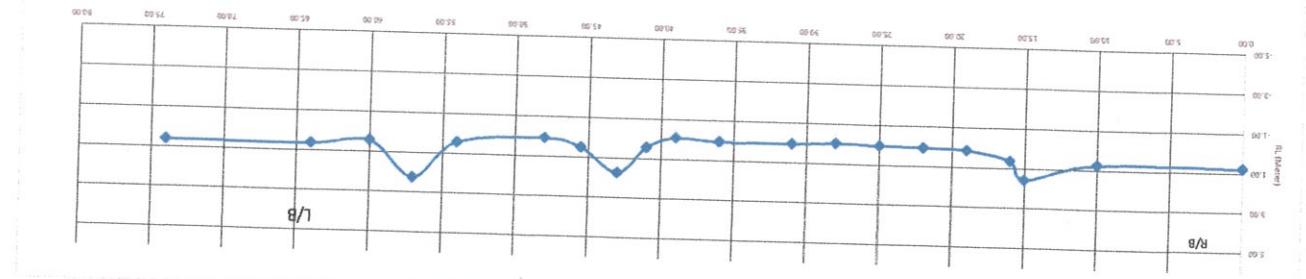
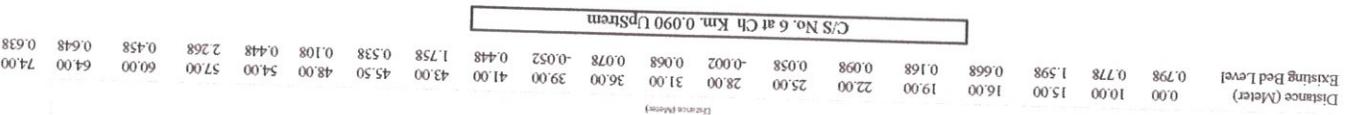
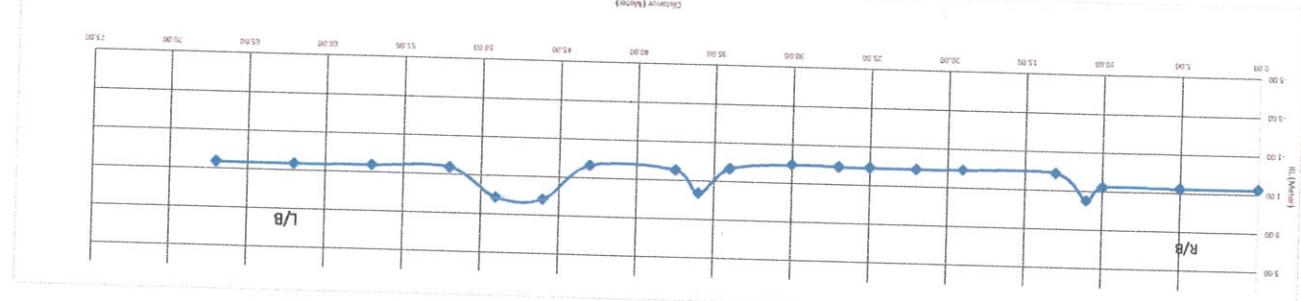
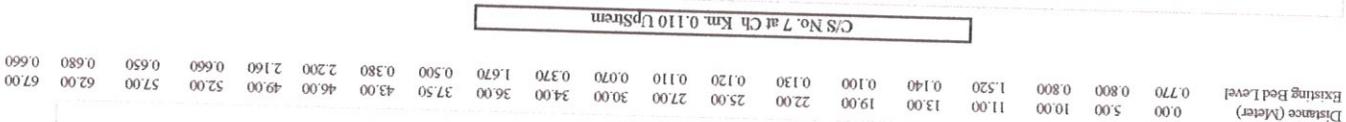
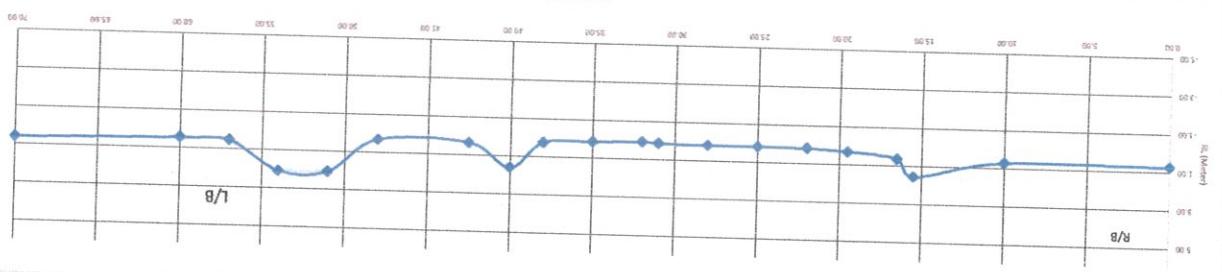
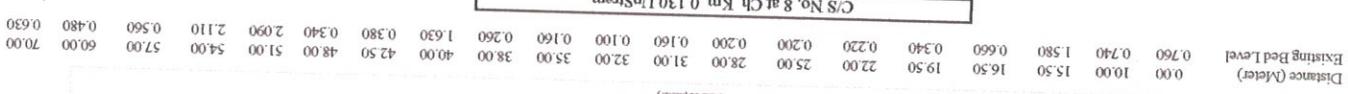
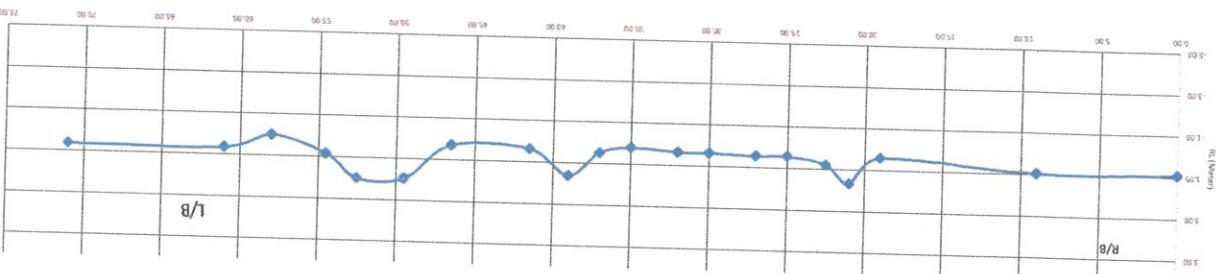
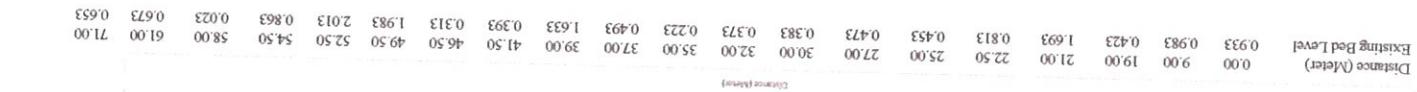


دستگاه ملزوماتیک
پایه ایستاده شده بر روی
کارخانه هیدرولیک
برای انداختن
کارخانه هیدرولیک

13-04-22
جاذب

دستگاه ملزوماتیک
پایه ایستاده شده بر روی
کارخانه هیدرولیک
برای انداختن
کارخانه هیدرولیک

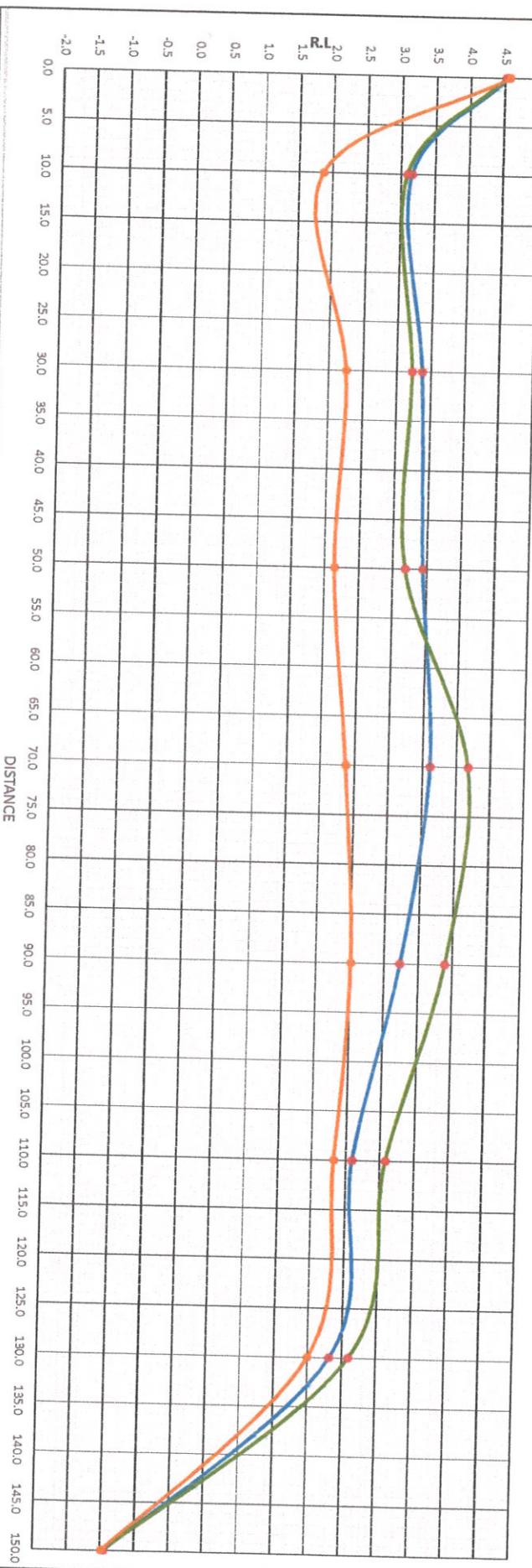
دستگاه ملزوماتیک
پایه ایستاده شده بر روی
کارخانه هیدرولیک
برای انداختن
کارخانه هیدرولیک



Long Section Down Stream Construction of 2 Vent (1.50m x 1.80m) Drainage Cum Flushing Regulator (DS-4) on Bainbasot at km.13.00 in Polder 6-8 at Assasuni Upazila, in c/w " Drainage Improvement of Polder No. 1, 2, 6-8 & 6-8 (Ext) in Satkhira District, Under Satkhira O&M Division-2, BWDB, Satkhira.

Down Stream (0.00m-150.00m)

—●— Left Bank (M) —●— Right Bank (M) - - - C.L. (m)



Distance (M)	0.00	10.00	30.00	50.00	70.00	90.00	110.00	130.00	150.00
Left Bank (M)	4.546	3.158	3.368	3.438	3.608	3.228	2.588	2.308	-0.962
C.L (m)	4.576	1.858	2.248	2.138	2.368	2.508	2.318	1.988	-0.993
Right Bank (M)	4.516	3.088	3.218	3.178	4.168	3.888	3.078	2.588	-0.983

(শোমীর ইস্যুনি মারফুদ,

পরিচালিত নথৰ-১০০২১৮০০২

বিস্থাপনী এন্ড কোম্পানী

সাতক্ষীরা পতেজ বিলাশ-২

বাগুড়িগুলি, সাতক্ষীরা।

২৫/০১/২২

উপ-সরকারী অধিকারী/শাখা কর্মকর্তা

পরিচিতি নথ-১০০২১৮০০৮

সাতক্ষীরা পতেজ শাখা-৩

বাগুড়িগুলি, সাতক্ষীরা।

১৩-০১-২২

সান্দিত্ত রহমান
সাতক্ষীরা পতেজ উপ-নথি (অঙ্গণ-২)

উপ-সরকারী অধিকারী/শাখা কর্মকর্তা

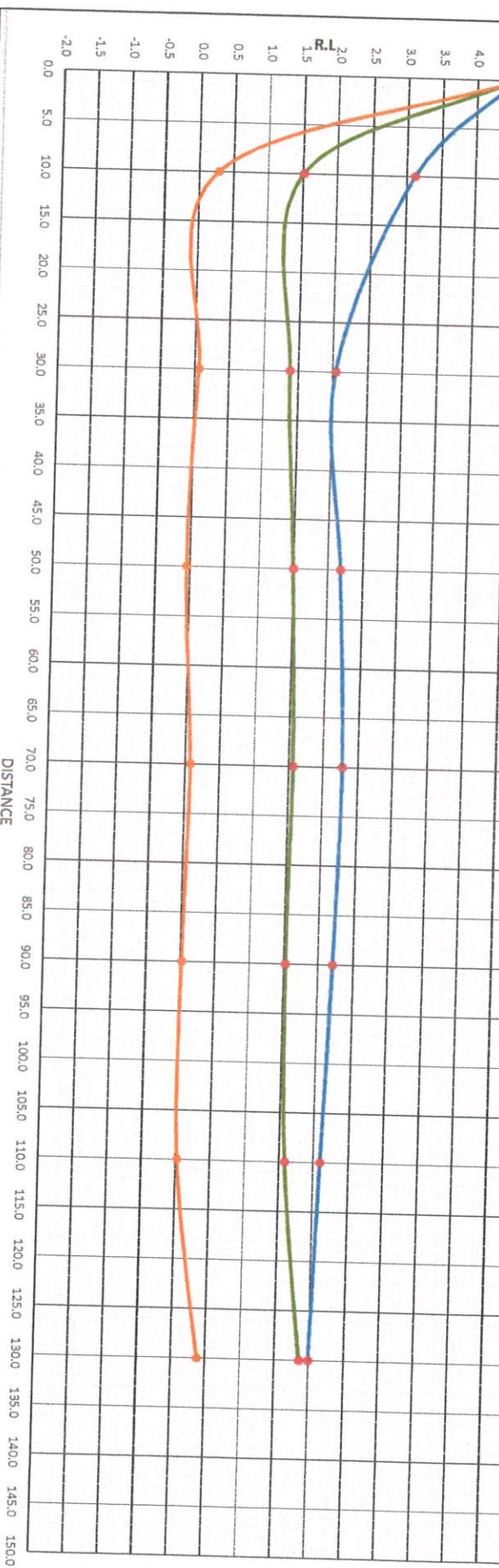
পরিচিতি নথ-১০০২১৮০০৮

সাতক্ষীরা পতেজ শাখা-৩

বাগুড়িগুলি, সাতক্ষীরা।

Long Section Up Stream Construction of 2 Vent (1.50m x 1.80m) Drainage Cum Flushing Regulator (DS-4) on Bainbasot at km.13.00 in Polder 6-8 at Assasuni Upazila, in c/w " Drainage Improvement of Polder No. 1, 2, 6-8 & 6-8 (Ext) in Satkhira District, Under Satkhira O&M Division-2, BWDB, Satkhira.

Up Stream (0.00m-130.00m)



Distance (M)	0.00	10.00	30.00	50.00	70.00	90.00	110.00	130.00
Left Bank (M)	4.546	3.113	2.033	2.173	2.268	2.200	2.090	1.983
C.I. (m)	4.576	0.273	0.053	-0.057	0.068	0.012	0.016	0.373
Right Bank (M)	4.516	1.503	1.373	1.493	1.558	1.520	1.580	1.853

১০/০১/২০২২

১৩-১-২২

১৩-০৪-২২

অধিকার্য অসমাইল মালয়দ

পরিচালিত নথি-১০১০১০১০০০০

বিবরণী প্রক্রিয়া বিভাগ-২

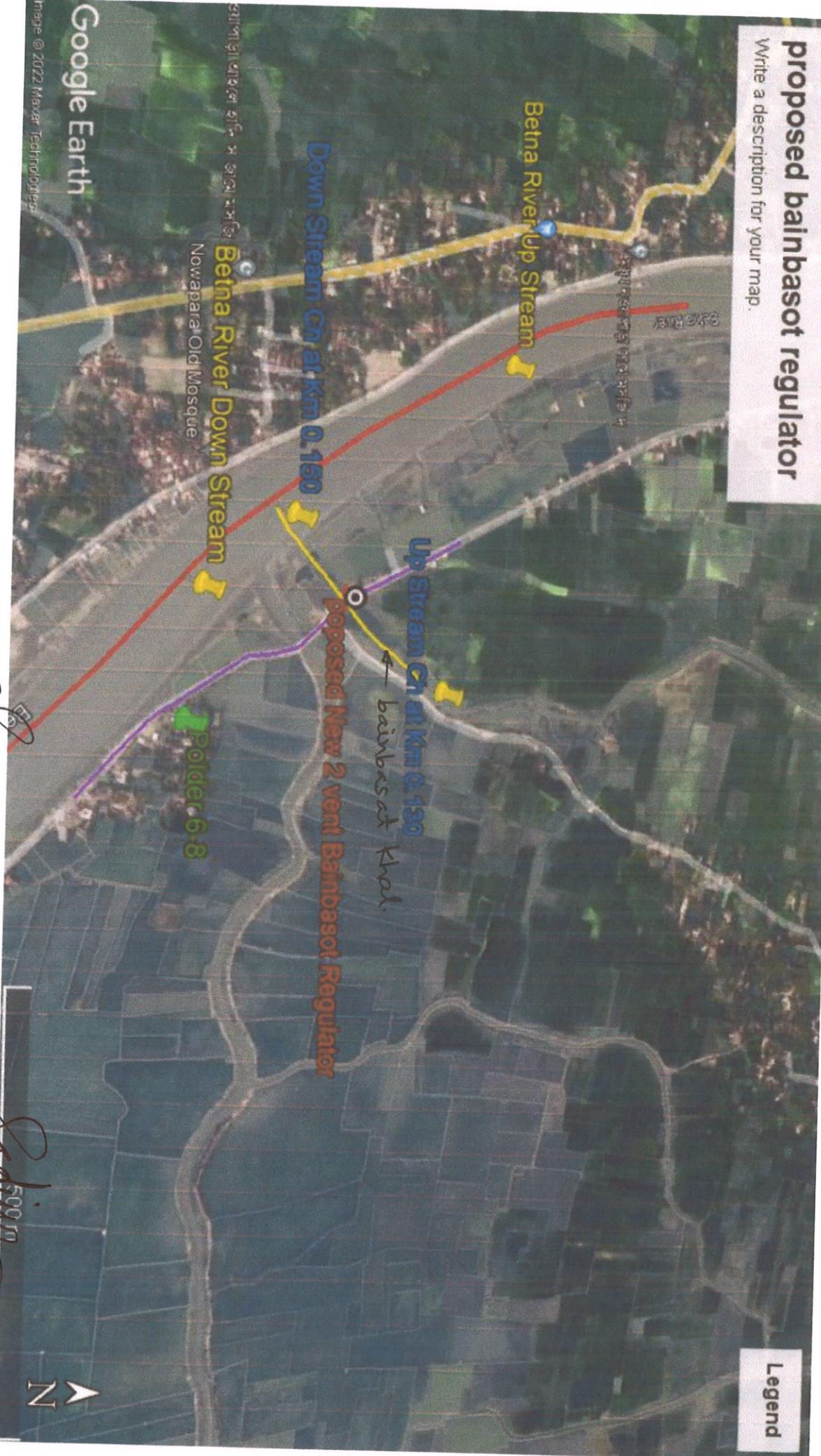
সাতক্ষীরা পত্র শান্তিপুর-২

শান্তিপুর, পাঞ্জাবীগঠ

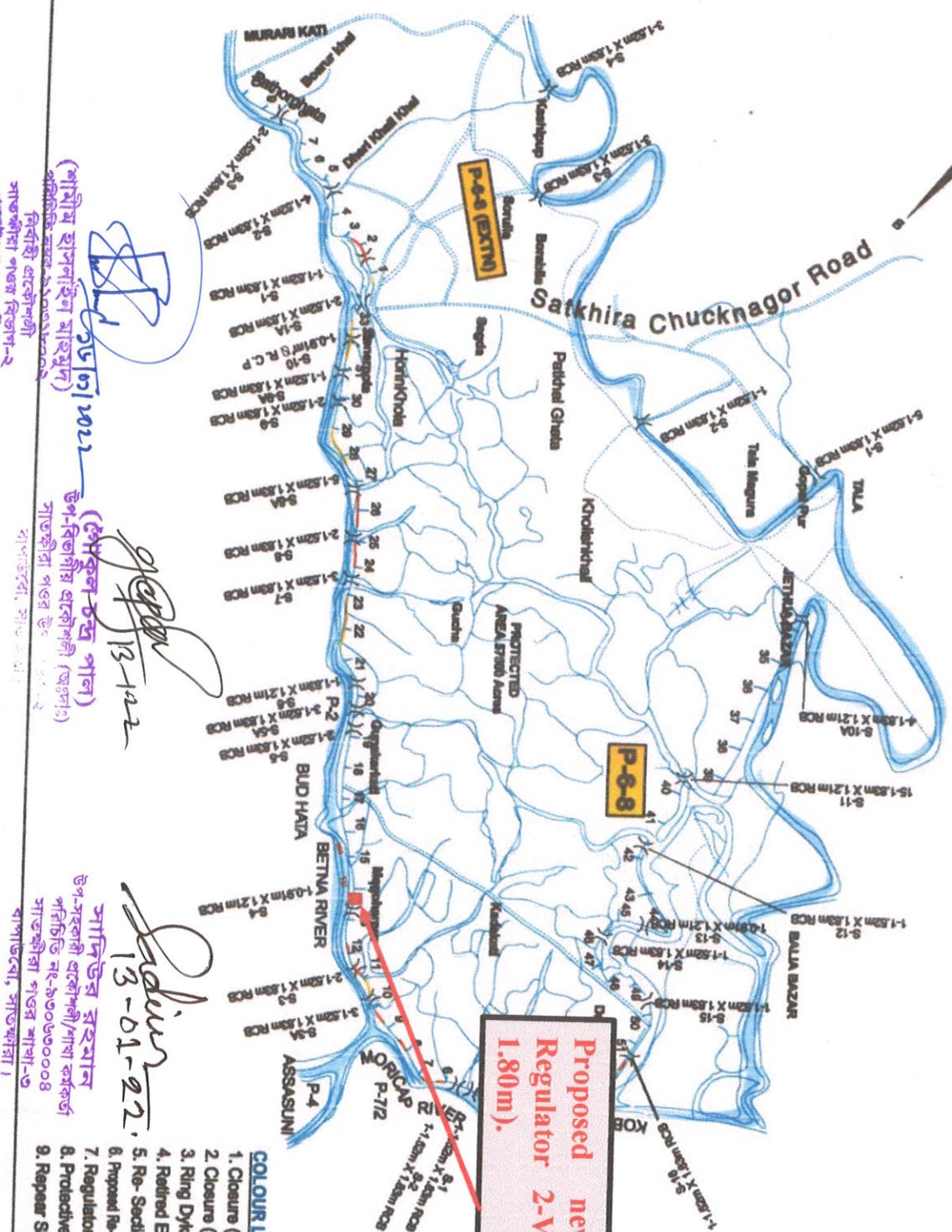
(কেন্দ্ৰীয় প্ৰকৌশলী (অঞ্চলী)
উপ-বিভাগীয় পত্ৰ উপ-বিভাগ-২
নাতকীয়া পত্ৰ উপ-বিভাগ-১
শান্তিপুর, সাতক্ষীরা।

proposed Bainbasot regulator

Write a description for your map.



INDEX MAP OF POLDER NO:- 6-8 & 6-8 (Exttn)
BANGLADESH WATER DEVELOPMENT BOARD,
SATKHIRA O & M DIVISION - 2



**Proposed new Bainbashot
Regulator 2-Vent (1.50m X
1.80m).**

COLOUR LEGEND:

1. Closure (Complete) :
2. Closure (In-Complete) :
3. Ring Dyke Construction :
4. Refined Embankment :
5. Re-Sectioning of Embankt, Propose :
6. Proposed Re-Sectioning of Embankt. (Wavy) :
7. Regulator/Stule Gate :
8. Protective Work :
9. Repair Sluice :

(শামীয় হাসলাইন মাইলস্টোর্ন)

(সেপ্টেম্বর-চতুর্থ
পাল)
উপ-বিতানীয় প্রকৌশলী (অঞ্চল)

সাতক্ষীরা পতের উপর অঞ্চল

দাখিলের সাথে আপডেট

সামিন্দির রেফার্মেন্ট
পরিচালনা নং-১৩০৫০০০০০৮
সাতক্ষীরা পতের শাখা-১
বালাইজেন, সাতক্ষীরা।

সাতক্ষীরা পতের বিভাগ-২
শামাজিক, পাতের পাতের।

সাতক্ষীরা পতের পাতের।

দাখিলের সাথে আপডেট

District	Station	Station ID	Month	Rainfall(mm)	Year	Rainfall (mm)
Satkhira	Satkhira	CL518	January,2004	0.00	2004	1455.50
Satkhira	Satkhira	CL518	February,2004	0.00	2004	1455.50
Satkhira	Satkhira	CL518	March,2004	0.00	2004	1455.50
Satkhira	Satkhira	CL518	April,2004	134.00	2004	1455.50
Satkhira	Satkhira	CL518	May,2004	96.50	2004	1455.50
Satkhira	Satkhira	CL518	June,2004	356.60	2004	1455.50
Satkhira	Satkhira	CL518	July,2004	260.00	2004	1455.50
Satkhira	Satkhira	CL518	August,2004	134.20	2004	1455.50
Satkhira	Satkhira	CL518	September,2004	224.00	2004	1455.50
Satkhira	Satkhira	CL518	October,2004	250.20	2004	1455.50
Satkhira	Satkhira	CL518	November,2004	0.00	2004	1455.50
Satkhira	Satkhira	CL518	December,2004	0.00	2004	1455.50
Satkhira	Satkhira	CL518	January,2005	5.50	2005	984.30
Satkhira	Satkhira	CL518	February,2005	0.00	2005	984.30
Satkhira	Satkhira	CL518	March,2005	129.90	2005	984.30
Satkhira	Satkhira	CL518	April,2005	4.00	2005	984.30
Satkhira	Satkhira	CL518	May,2005	95.50	2005	984.30
Satkhira	Satkhira	CL518	June,2005	244.50	2005	984.30
Satkhira	Satkhira	CL518	July,2005	504.90	2005	984.30
Satkhira	Satkhira	CL518	August,2005	0.00	2005	984.30
Satkhira	Satkhira	CL518	September,2005	0.00	2005	984.30
Satkhira	Satkhira	CL518	October,2005	0.00	2005	984.30
Satkhira	Satkhira	CL518	November,2005	0.00	2005	984.30
Satkhira	Satkhira	CL518	December,2005	0.00	2005	984.30
Satkhira	Satkhira	CL518	January,2006	0.00	2006	1621.50
Satkhira	Satkhira	CL518	February,2006	0.00	2006	1621.50
Satkhira	Satkhira	CL518	March,2006	145.50	2006	1621.50
Satkhira	Satkhira	CL518	April,2006	45.50	2006	1621.50
Satkhira	Satkhira	CL518	May,2006	0.00	2006	1621.50
Satkhira	Satkhira	CL518	June,2006	611.80	2006	1621.50
Satkhira	Satkhira	CL518	July,2006	389.60	2006	1621.50
Satkhira	Satkhira	CL518	August,2006	442.40	2006	1621.50
Satkhira	Satkhira	CL518	September,2006	420.00	2006	1621.50
Satkhira	Satkhira	CL518	October,2006	117.70	2006	1621.50
Satkhira	Satkhira	CL518	November,2006	92.40	2006	1621.50
Satkhira	Satkhira	CL518	December,2006	0.00	2006	1621.50
Satkhira	Satkhira	CL518	January,2007	0.00	2007	1912.90
Satkhira	Satkhira	CL518	February,2007	155.40	2007	1912.90
Satkhira	Satkhira	CL518	March,2007	19.00	2007	1912.90
Satkhira	Satkhira	CL518	April,2007	80.30	2007	1912.90
Satkhira	Satkhira	CL518	May,2007	44.70	2007	1912.90
Satkhira	Satkhira	CL518	June,2007	80.30	2007	1912.90
Satkhira	Satkhira	CL518	July,2007	506.20	2007	1912.90
Satkhira	Satkhira	CL518	August,2007	138.40	2007	1912.90
Satkhira	Satkhira	CL518	September,2007	436.30	2007	1912.90
Satkhira	Satkhira	CL518	October,2007	189.30	2007	1912.90
Satkhira	Satkhira	CL518	November,2007	92.40	2007	1912.90
Satkhira	Satkhira	CL518	December,2007	0.00	2007	1912.90
Satkhira	Satkhira	CL518	January,2008	0.00	2008	1585.40
Satkhira	Satkhira	CL518	February,2008	86.70	2008	1585.40
Satkhira	Satkhira	CL518	March,2008	34.40	2008	1585.40
Satkhira	Satkhira	CL518	April,2008	16.30	2008	1585.40
Satkhira	Satkhira	CL518	May,2008	89.00	2008	1585.40
Satkhira	Satkhira	CL518	June,2008	125.00	2008	1585.40
Satkhira	Satkhira	CL518	July,2008	213.60	2008	1585.40
Satkhira	Satkhira	CL518	August,2008	312.00	2008	1585.40
Satkhira	Satkhira	CL518	September,2008	285.00	2008	1585.40
Satkhira	Satkhira	CL518	October,2008	289.40	2008	1585.40
Satkhira	Satkhira	CL518	November,2008	163.30	2008	1585.40
Satkhira	Satkhira	CL518	December,2008	0.00	2008	1585.40
Satkhira	Satkhira	CL518	January,2009	0.00	2009	1473.80
Satkhira	Satkhira	CL518	February,2009	0.00	2009	1473.80
Satkhira	Satkhira	CL518	March,2009	4.50	2009	1473.80
Satkhira	Satkhira	CL518	April,2009	306.10	2009	1473.80
Satkhira	Satkhira	CL518	May,2009	0.00	2009	1473.80
Satkhira	Satkhira	CL518	June,2009	55.70	2009	1473.80
Satkhira	Satkhira	CL518	July,2009	114.90	2009	1473.80
Satkhira	Satkhira	CL518	August,2009	340.50	2009	1473.80
Satkhira	Satkhira	CL518	September,2009	428.50	2009	1473.80
Satkhira	Satkhira	CL518	October,2009	306.10	2009	1473.80
Satkhira	Satkhira	CL518	November,2009	0.00	2009	1473.80
Satkhira	Satkhira	CL518	December,2009	0.00	2009	1473.80

District	Station	Station ID	Month	Rainfall(mm)	Year	Rainfall (mm)
Satkhira	Satkhira	CL518	January,1998	49.10	1998	1888.90
Satkhira	Satkhira	CL518	February,1998	72.00	1998	1888.90
Satkhira	Satkhira	CL518	March,1998	217.60	1998	1888.90
Satkhira	Satkhira	CL518	April,1998	155.00	1998	1888.90
Satkhira	Satkhira	CL518	May,1998	128.60	1998	1888.90
Satkhira	Satkhira	CL518	June,1998	99.00	1998	1888.90
Satkhira	Satkhira	CL518	July,1998	377.70	1998	1888.90
Satkhira	Satkhira	CL518	August,1998	174.40	1998	1888.90
Satkhira	Satkhira	CL518	September,1998	262.20	1998	1888.90
Satkhira	Satkhira	CL518	October,1998	188.10	1998	1888.90
Satkhira	Satkhira	CL518	November,1998	170.60	1998	1888.90
Satkhira	Satkhira	CL518	December,1998	0.00	1998	1888.90
Satkhira	Satkhira	CL518	January,1999	0.00	1999	1527.50
Satkhira	Satkhira	CL518	February,1999	0.00	1999	1527.50
Satkhira	Satkhira	CL518	March,1999	0.00	1999	1527.50
Satkhira	Satkhira	CL518	April,1999	32.80	1999	1527.50
Satkhira	Satkhira	CL518	May,1999	135.30	1999	1527.50
Satkhira	Satkhira	CL518	June,1999	7.50	1999	1527.50
Satkhira	Satkhira	CL518	July,1999	380.50	1999	1527.50
Satkhira	Satkhira	CL518	August,1999	205.50	1999	1527.50
Satkhira	Satkhira	CL518	September,1999	223.20	1999	1527.50
Satkhira	Satkhira	CL518	October,1999	365.90	1999	1527.50
Satkhira	Satkhira	CL518	November,1999	241.60	1999	1527.50
Satkhira	Satkhira	CL518	December,1999	44.20	1999	1527.50
Satkhira	Satkhira	CL518	January,2000	157.70	1999	1527.50
Satkhira	Satkhira	CL518	February,2000	164.10	1999	1527.50
Satkhira	Satkhira	CL518	March,2000	44.20	1999	1527.50
Satkhira	Satkhira	CL518	April,2000	20.30	1999	1527.50
Satkhira	Satkhira	CL518	May,2000	48.70	1999	1527.50
Satkhira	Satkhira	CL518	June,2000	0.00	1999	1527.50
Satkhira	Satkhira	CL518	July,2000	391.60	1999	1527.50
Satkhira	Satkhira	CL518	August,2000	180.00	1999	1527.50
Satkhira	Satkhira	CL518	September,2000	1527.50	1999	1527.50
Satkhira	Satkhira	CL518	October,2000	1527.50	1999	1527.50
Satkhira	Satkhira	CL518	November,2000	1527.50	1999	1527.50
Satkhira	Satkhira	CL518	December,2000	0.00	1999	1527.50
Satkhira	Satkhira	CL518	January,2001	189.90	2000	1880.40
Satkhira	Satkhira	CL518	February,2001	20.30	2000	1880.40
Satkhira	Satkhira	CL518	March,2001	48.70	2000	1880.40
Satkhira	Satkhira	CL518	April,2001	0.00	2000	1880.40
Satkhira	Satkhira	CL518	May,2001	13.00	2000	1880.40
Satkhira	Satkhira	CL518	June,2001	13.00	2000	1880.40
Satkhira	Satkhira	CL518	July,2001	185.80	2000	1880.40
Satkhira	Satkhira	CL518	August,2001	82.90	2000	1880.40
Satkhira	Satkhira	CL518	September,2001	0.00	2000	1880.40
Satkhira	Satkhira	CL518	October,2001	104.30	2000	1880.40
Satkhira	Satkhira	CL518	November,2001	202.70	2000	1880.40
Satkhira	Satkhira	CL518	December,2001	55.90	2000	1880.40
Satkhira	Satkhira	CL518	January,2002	0.00	2001	1162.50
Satkhira	Satkhira	CL518	February,2002	13.00	2001	1162.50
Satkhira	Satkhira	CL518	March,2002	0.00	2001	1162.50
Satkhira	Satkhira	CL518	April,2002	13.00	2001	1162.50
Satkhira	Satkhira	CL518	May,2002	185.80	2001	1162.50
Satkhira	Satkhira	CL518	June,2002	114.70	2001	1162.50
Satkhira	Satkhira	CL518	July,2002	114.70	2001	1162.50
Satkhira	Satkhira	CL518	August,2002	378.40	2001	1162.50
Satkhira	Satkhira	CL518	September,2002	31.20	2001	1162.50
Satkhira	Satkhira	CL518	October,2002	0.00	2001	1162.50
Satkhira	Satkhira	CL518	November,2002	85.50	2001	1162.50
Satkhira	Satkhira	CL518	December,2002	0.00	2001	1162.50
Satkhira	Satkhira	CL518	January,2003	15.50	2002	1506.60
Satkhira	Satkhira	CL518	February,2003	0.00	2002	1506.60
Satkhira	Satkhira	CL518	March,2003	0.00	2002	1506.60
Satkhira	Satkhira	CL518	April,2003	16.80	2002	1506.60
Satkhira	Satkhira	CL518	May,2003	89.50	2002	1506.60
Satkhira	Satkhira	CL518	June,2003	200.10	2002	1506.60
Satkhira	Satkhira	CL518	July,2003	0.00	2002	1506.60
Satkhira	Satkhira	CL518	August,2003	199.30	2002	1506.60
Satkhira	Satkhira	CL518	September,2003	24.10	2002	1506.60
Satkhira	Satkhira	CL518	October,2003	465.90	2002	1506.60
Satkhira	Satkhira	CL518	November,2003	0.00	2002	1506.60
Satkhira	Satkhira	CL518	December,2003	15.50	2003	1506.60

District	Station	Station_ID	Month	Rainfall(mm)	Year	Rainfall (mm)
Satkhira	Satkhira	CL518	January,1992	10.00	1992	1558.90
Satkhira	Satkhira	CL518	February,1992	65.50	1992	
Satkhira	Satkhira	CL518	March,1992	0.00	1992	
Satkhira	Satkhira	CL518	April,1992	8.00	1992	
Satkhira	Satkhira	CL518	May,1992	219.10	1992	
Satkhira	Satkhira	CL518	June,1992	208.30	1992	
Satkhira	Satkhira	CL518	July,1992	342.20	1992	
Satkhira	Satkhira	CL518	August,1992	301.50	1992	
Satkhira	Satkhira	CL518	September,1992	48.00	1992	
Satkhira	Satkhira	CL518	October,1992	356.30	1992	
Satkhira	Satkhira	CL518	November,1992	0.00	1992	
Satkhira	Satkhira	CL518	December,1992	0.00	1992	
Satkhira	Satkhira	CL518	January,1993	4.00	1993	1771.80
Satkhira	Satkhira	CL518	February,1993	17.00	1993	
Satkhira	Satkhira	CL518	March,1993	59.50	1993	
Satkhira	Satkhira	CL518	April,1993	47.00	1993	
Satkhira	Satkhira	CL518	May,1993	204.70	1993	
Satkhira	Satkhira	CL518	June,1993	311.00	1993	
Satkhira	Satkhira	CL518	July,1993	272.60	1993	
Satkhira	Satkhira	CL518	August,1993	233.00	1993	
Satkhira	Satkhira	CL518	September,1993	458.30	1993	
Satkhira	Satkhira	CL518	October,1993	149.50	1993	
Satkhira	Satkhira	CL518	November,1993	152.20	1993	
Satkhira	Satkhira	CL518	December,1993	0.00	1993	
Satkhira	Satkhira	CL518	January,1994	5.00	1994	1613.60
Satkhira	Satkhira	CL518	February,1994	27.00	1994	
Satkhira	Satkhira	CL518	March,1994	7.00	1994	
Satkhira	Satkhira	CL518	April,1994	165.80	1994	
Satkhira	Satkhira	CL518	May,1994	92.00	1994	
Satkhira	Satkhira	CL518	June,1994	336.00	1994	
Satkhira	Satkhira	CL518	July,1994	389.80	1994	
Satkhira	Satkhira	CL518	August,1994	348.20	1994	
Satkhira	Satkhira	CL518	September,1994	34.50	1994	
Satkhira	Satkhira	CL518	October,1994	204.80	1994	
Satkhira	Satkhira	CL518	November,1994	34.50	1994	
Satkhira	Satkhira	CL518	December,1994	0.00	1994	
Satkhira	Satkhira	CL518	January,1995	361.93	1995	1774.43
Satkhira	Satkhira	CL518	February,1995	387.00	1995	
Satkhira	Satkhira	CL518	March,1995	3.30	1995	
Satkhira	Satkhira	CL518	April,1995	33.50	1995	
Satkhira	Satkhira	CL518	May,1995	60.50	1995	
Satkhira	Satkhira	CL518	June,1995	189.00	1995	
Satkhira	Satkhira	CL518	July,1995	306.00	1995	
Satkhira	Satkhira	CL518	August,1995	306.00	1995	
Satkhira	Satkhira	CL518	September,1995	112.70	1995	
Satkhira	Satkhira	CL518	October,1995	112.70	1995	
Satkhira	Satkhira	CL518	November,1995	211.70	1995	
Satkhira	Satkhira	CL518	December,1995	211.70	1995	
Satkhira	Satkhira	CL518	January,1996	361.93	1996	1901.70
Satkhira	Satkhira	CL518	February,1996	24.60	1996	
Satkhira	Satkhira	CL518	March,1996	7.20	1996	
Satkhira	Satkhira	CL518	April,1996	32.40	1996	
Satkhira	Satkhira	CL518	May,1996	102.20	1996	
Satkhira	Satkhira	CL518	June,1996	391.20	1996	
Satkhira	Satkhira	CL518	July,1996	273.30	1996	
Satkhira	Satkhira	CL518	August,1996	273.30	1996	
Satkhira	Satkhira	CL518	September,1996	0.00	1996	
Satkhira	Satkhira	CL518	October,1996	0.00	1996	
Satkhira	Satkhira	CL518	November,1996	0.00	1996	
Satkhira	Satkhira	CL518	December,1996	0.00	1996	
Satkhira	Satkhira	CL518	January,1997	361.93	1997	2439.10
Satkhira	Satkhira	CL518	February,1997	49.50	1997	
Satkhira	Satkhira	CL518	March,1997	20.60	1997	
Satkhira	Satkhira	CL518	April,1997	3.20	1997	
Satkhira	Satkhira	CL518	May,1997	134.60	1997	
Satkhira	Satkhira	CL518	June,1997	109.10	1997	
Satkhira	Satkhira	CL518	July,1997	128.80	1997	
Satkhira	Satkhira	CL518	August,1997	100.50	1997	
Satkhira	Satkhira	CL518	September,1997	57.80	1997	
Satkhira	Satkhira	CL518	October,1997	49.50	1997	
Satkhira	Satkhira	CL518	November,1997	49.50	1997	
Satkhira	Satkhira	CL518	December,1997	49.50	1997	

Rainfall Data

جامعة عجمان، كلية التربية
كلية التربية والعلوم الإنسانية - ٦
العنوان: شارع ٤٢ - ٣٥٠٦٥٠٨
الهاتف: ٩٧١٦٦٦٦٦٦٦٦٦
البريد الإلكتروني: tce@aju.ae

١٣-٠٤-٢٢
جامعة عجمان

جامعة عجمان، كلية التربية
كلية التربية والعلوم الإنسانية - ٢
العنوان: شارع ٦٦٦٦٦٦٦٦٦٦٦
الهاتف: ٩٧١٦٦٦٦٦٦٦٦٦
البريد الإلكتروني: tce@aju.ae
(جامعة عجمان برج صلاة)

١٣-٠٤-٢٢
جامعة عجمان

Station ID	Month	Rainfall(mm)	Year	Rainfall (mm)
Q518	Jun_10	311.70	2010	955.80
Q518	Jul_10	255.10		
Q518	Aug_10	190.70		
Q518	Sepember_10	198.30		
Q518	Oct_10	217.90	2011	1771.90
Q518	Nov_11	479.90		
Q518	Dec_11	824.20		
Q518	Jan_12	224.80	2012	1138.80
Q518	Feb_12	53.50		
Q518	Mar_12	198.30		
Q518	Apr_13	315.70	2013	1395.40
Q518	May_13	315.70		
Q518	Jun_14	360.10		
Q518	Jul_14	254.40	2014	1297.10
Q518	Aug_14	254.40		
Q518	Sepember_14	275.60		
Q518	Oct_14	275.60		
Q518	Nov_15	236.50	2015	857.60
Q518	Dec_15	183.10		
Q518	Jan_16	177.40		
Q518	Feb_16	177.40		
Q518	Mar_16	177.40	2016	1306.80
Q518	Apr_16	176.20		
Q518	May_16	177.40		
Q518	Jun_16	177.40		
Q518	Jul_16	176.20		
Q518	Aug_16	415.80		
Q518	Sepember_16	123.80		
Q518	Oct_16	123.80		
Q518	Nov_17	122.10	2017	1612.70
Q518	Dec_17	122.10		
Q518	Jan_17	231.90		
Q518	Feb_17	231.90		
Q518	Mar_17	572.60		
Q518	Apr_17	572.60		
Q518	May_17	572.60		
Q518	Jun_17	572.60		
Q518	Jul_17	572.60		
Q518	Aug_17	193.20		
Q518	Sepember_17	193.20		
Q518	October_17	20.90		
Q518	November_17	285.00		
Saddira	CL518	Total = 39783.03		

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

BANGLADESH WATER DEVELOPMENT BOARD

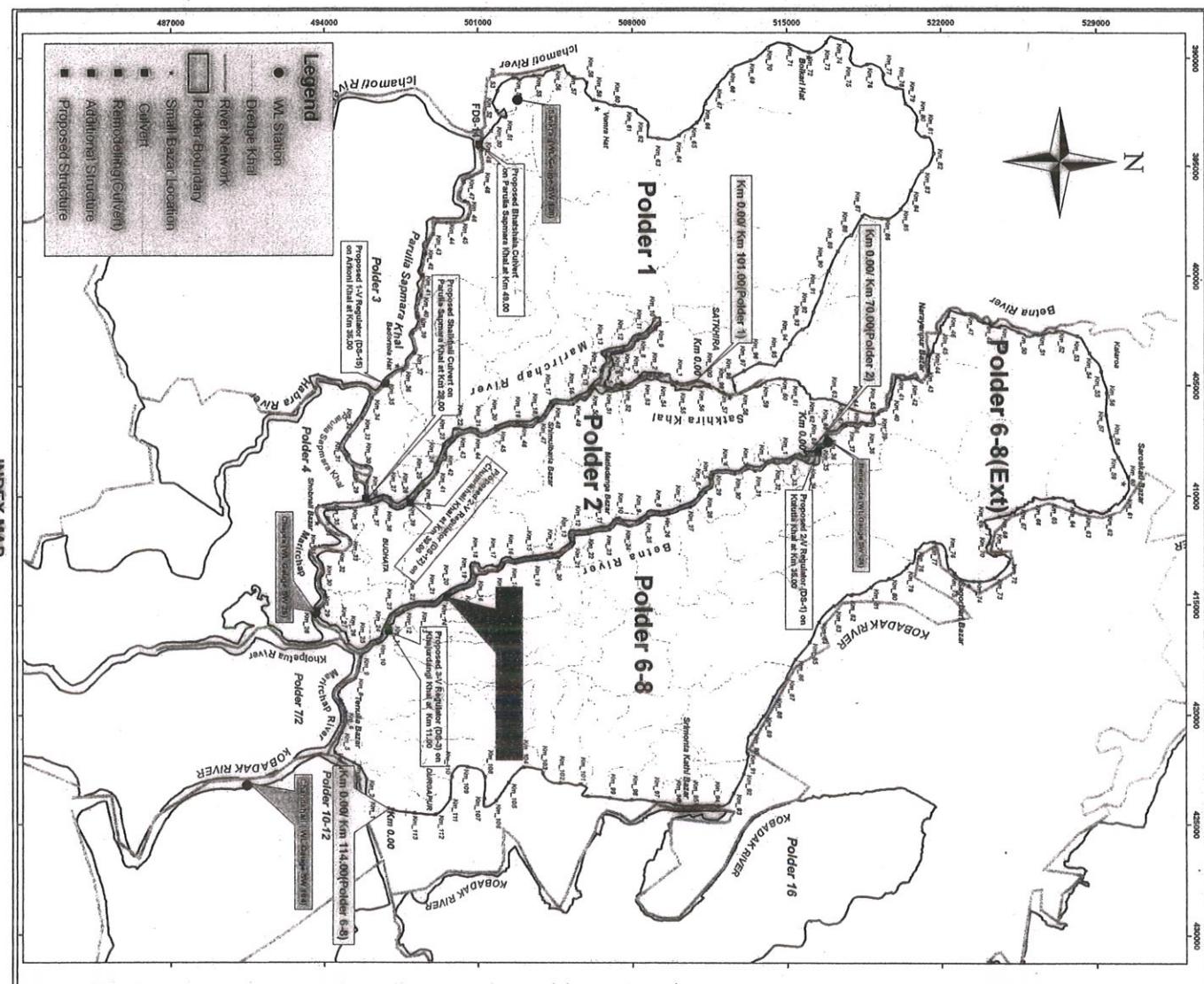


**DRAINAGE IMPROVEMENT OF POLDER 1, 2, 6-8 6-8(Ext.) BY MATHEMATICAL
MODELLING UNDER SATKHIRA DISTRICT**

**DESIGN OF 2-VENT (1.50mX1.80m) DRAINAGE CUM FLUSHING REGULATOR
(DS-4) ON BAINBOSHTO KHAL AT Km14.00 IN POLDER 6-8**

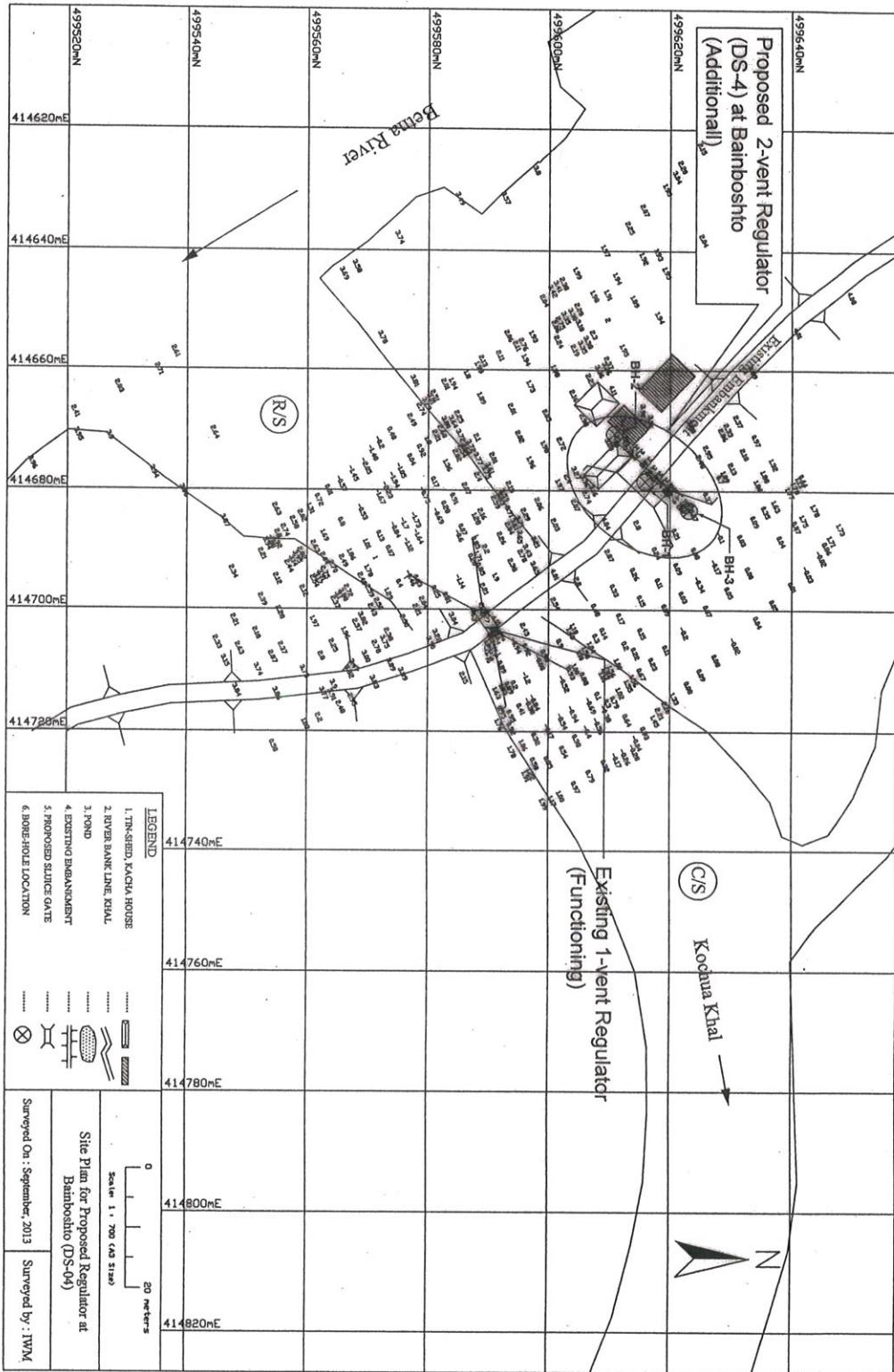
SATKHIRA O & M DIVISION-2, BWDB, SATKHIRA.

NOVEMBER, 2013



INDEX MAP

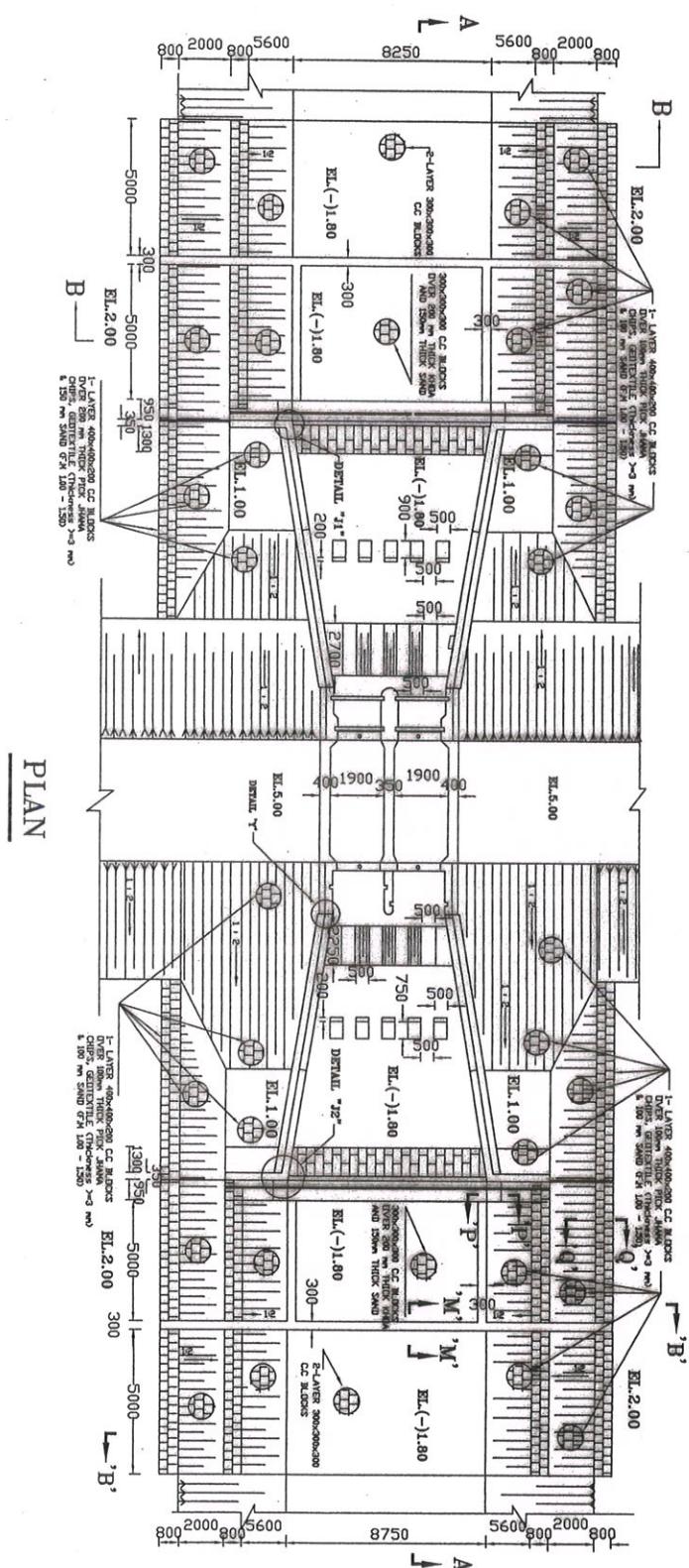
BANGLADESH WATER DEVELOPMENT BOARD			
DESIGN CIRCLE - V			
CHECKED BY:	REVIEWED BY:	APPROVED BY:	
<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	10/11/13
Md. Kamrul Islam Assistant Engineer	Md. Mahfuzur Rahman Executive Engineer	Md. Kader Ali Supervising Engineer	
GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH			
CONSULTANT : INSTITUTE OF WATER MODELLING (IWM)			
DRAINAGE IMPROVEMENT OF PODER 1-2-6-8 (CALCULATED BY MATHEMATICAL MODELLING UNDER SATKHIRA DISTRICT			
SATKHIRA O & M DIVISION-2, BWDB, SATKHIRA,			
DESIGN OF 2-VENT (1.50mmx1.80mm) DRAINAGE GUM FLUSHING REGULATOR			
(DS-4) ON BAINBOSHTO KHAL AT Km 14.00 IN PODER 6-8			
INDEX MAP			
DESIGNED BY:	CHECKED BY:	RECOMMENDED & SUBMITTED BY:	
<i>[Signature]</i>	<i>[Signature]</i>		
ARZEL H. KHAN DESIGN ENGINEER	M.A.H. BHUJAN DESIGN ENGINEER	ZAHIRUL HAQUE KHAN TEAM LEADER	
DATE: NOVEMBER, 2013 DWG NO.: IWM / (P- 6-8) / SAT-2 / DS-04 PAGE: 01/14			



BANGLADESH WATER DEVELOPMENT BOARD
GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
CONSULTANT :- INSTITUTE OF WATER MODELLING (IWM)
DRAINAGE IMPROVEMENT OF POLDER 1, 2, 4 & 6 (P-6) BY MATHEMATICAL MODELLING UNDER SATKHIRA DISTRICT
SATKHIRA O & M DIVISION-2, BWDB, SATKHIRA.
**DESIGN OF 2-VENT (1.50mX1.80m) DRAWDOWN CUM FLUSHING REGULATOR
(DS-4) ON BAINBOSHTO KHAL AT Km14.00 IN POLDER 6-8**

SITE PLAN

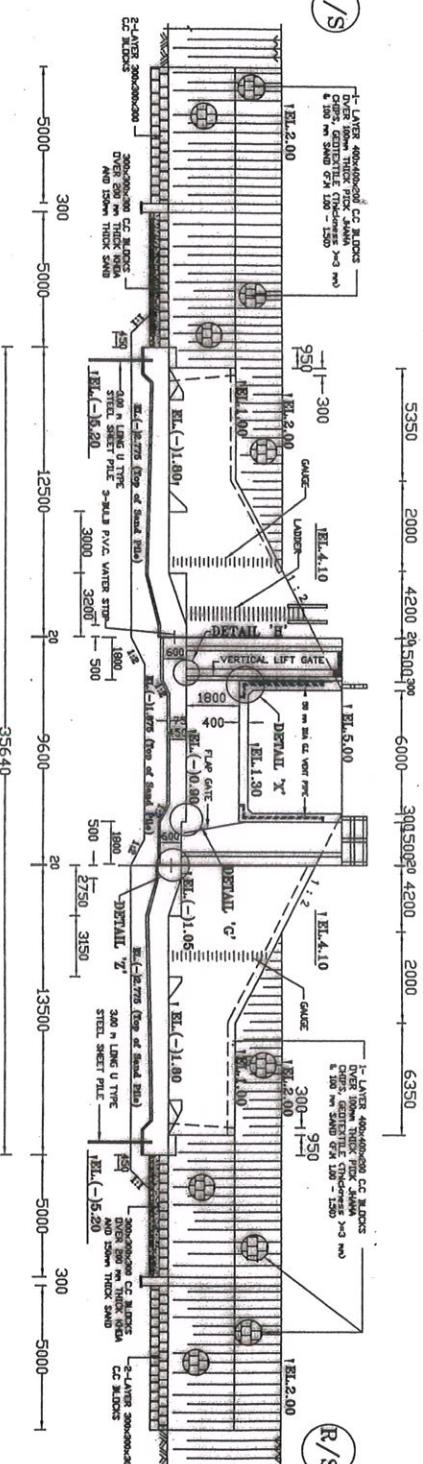
DESIGN CIRCLE - V	DESIGNED BY:	CHECKED BY:	RECOMMENDED & SUBMITTED BY:
CHECKED BY: <i>[Signature]</i>	APPROVED BY: <i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
Md. Kamruzzaman Assistant Engineer	Md. Mdakunur Rahman Executive Engineer	ARZEL H. KHAN DESIGN ENGINEER	M.A.H. BHUJWAN DESIGN ENGINEER
		ZAHIR-Ul HAQUE KHAN TEAM LEADER	



PLAN

NOTES:-
FOR DETAIL OF SECTIONS, SEE DWG NO.:IWM / (P-6-9) / SAT-2 / DS-04, SHEET No. 05 of 14, 10 of 14 & 11 of 14

BANGLADESH WATER DEVELOPMENT BOARD					
DESIGN CIRCLE - V					
CHECKED BY:	REVIEWED BY:	APPROVED BY:	DESIGNED BY:	CHECKED BY:	RECOMMENDED & SUBMITTED BY:
Md. Kothiruzzaman	Md. Mahfuzur Rahman	ARZEL H. KHAN	M.A.H. BHUJAN	ZAMIR-JUL HAQUE KHAN	
Assistant Engineer	Executive Engineer	DESIGN ENGINEER	DESIGN ENGINEER	TEAM LEADER	
DATED: NOVEMBER, 2013 DWG NO.:IWM / (P-6-9) / SAT-2 / DS-04 PAGE: 04/14					



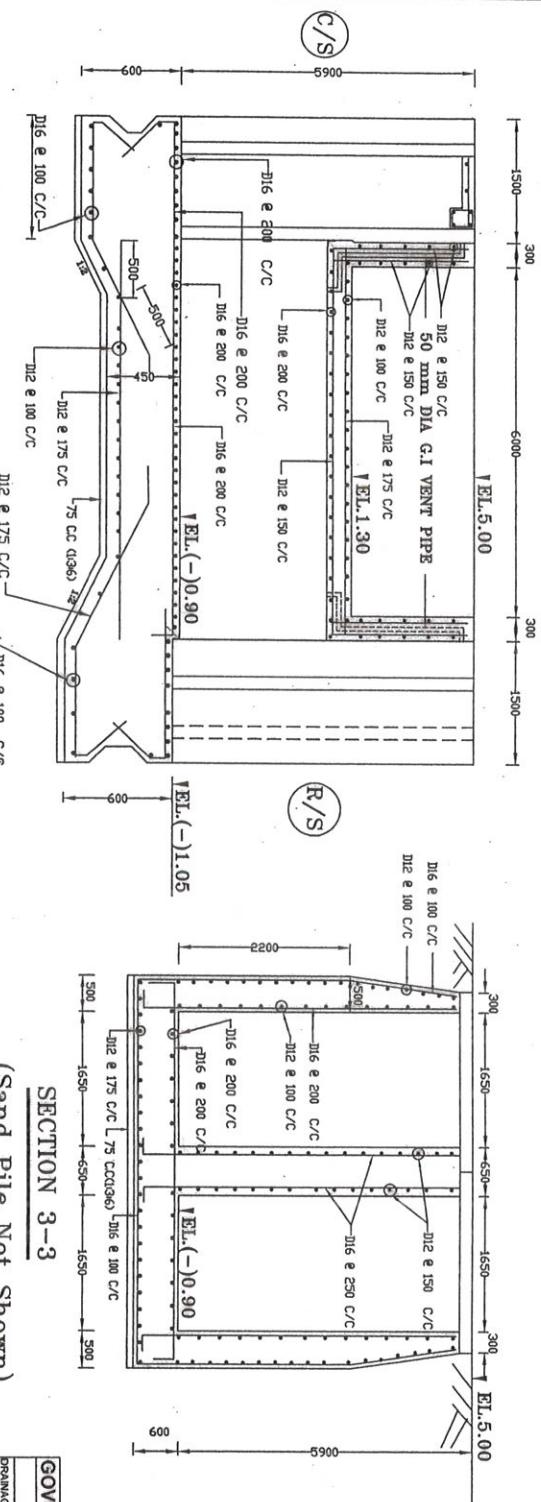
SECTION A-A (SEE PLAN)

(Sand Pile Under Barrel, C/S & R/S Apron not Shown)

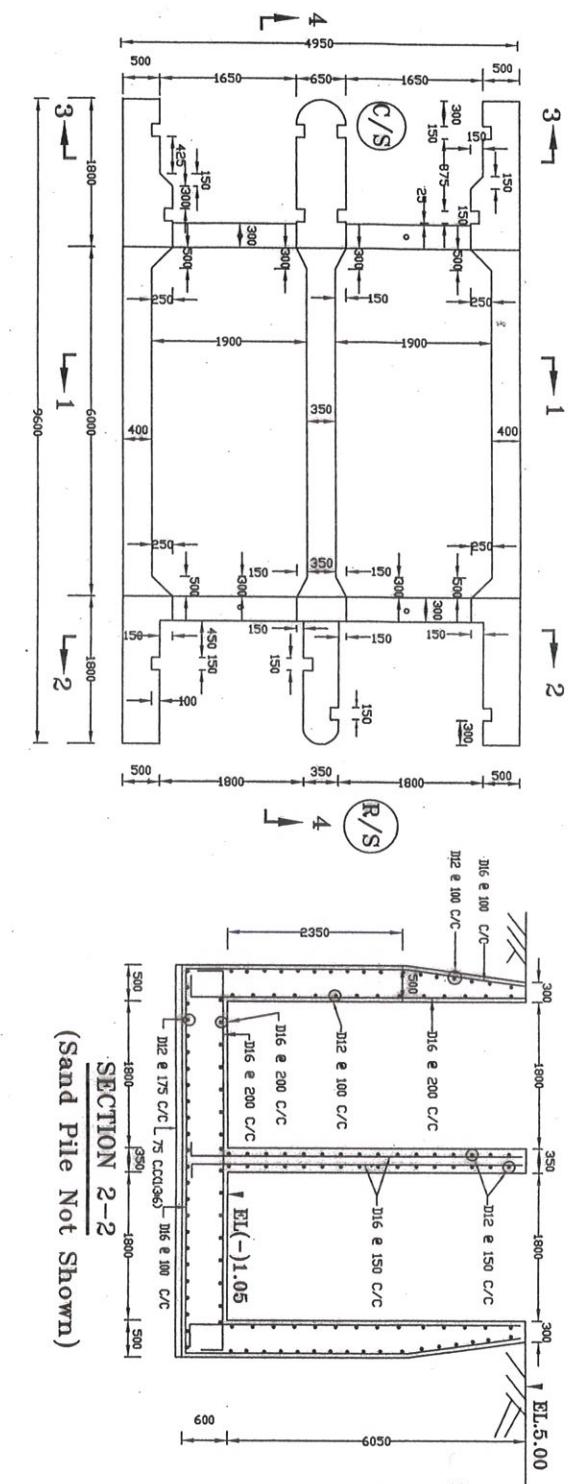
NOTES:

- THE SPECIFICATION OF MATERIALS & WORKMANSHIP SHALL BE CONFORM TO THE 'STANDARD TECHNICAL SPECIFICATION OF BWDB' IN GENERAL.
- ALL DIMENSIONS ARE IN MILLIMETER BUT ALL ELEVATIONS ARE IN METER (PWD) UNLESS OTHERWISE MENTIONED IN THE DRAWING.
- CONCRETE SHALL BE Poured IN DRY BED CONDITIONS.
- THE SURFACE OF CONSTRUCTION JOINTS SHALL BE WASHED THOROUGHLY WITH WATER JET AND SHALL BE CLEAN ENOUGH AND SURFACE DRY PRIOR TO PLACEMENT OF ADJOINING CONCRETE.
- CONCRETE SHALL DEVELOP A CRUSHING STRENGTH (CYLINDER STRENGTH) OF 20.00 N/mm² AT 28 DAYS AND SHALL BE CHECKED BY COLLECTING SAMPLES AND TESTING DURING CONSTRUCTION.
- CONCRETE MIXTURE SHALL BE Poured AS QUICK AS POSSIBLE BUT NOT LATER THAN 45 MINUTES AFTER MIXING.
- REINFORCEMENT SHALL BE DEFORMED M.S. BARS, f_y = 414 N / Sq.mm (MADE FROM BILLET) IN RCC WORKS.
- MINIMUM LAP LENGTH SHALL BE 40 TIMES THE BAR DIAMETERS.
- ALL EXPANSION JOINTS SHALL HAVE A GAP OF 20 mm.
- UNLESS OTHERWISE SPECIFIED, BACK FILLING SHALL BE DONE WITH SAND (F_{MDO}=0.80) FREE FROM VEGETABLE ROOTS AND ORGANIC MATTER. BACK FILLING FOR U-SHAPED WALL SHALL BE DONE SIMULTANEOUSLY ON BOTH WALLS.
- CONCRETE FOR C.C. BLOCKS SHALL DEVELOP A MINIMUM CRUSHING STRENGTH OF 9.00 N/mm² (CYLINDER STRENGTH) AT 28 DAYS CURING.
- CURING OF C.C. BLOCKS SHALL BE CONTINUED FOR MINIMUM 21 DAYS.
- DESIGN OF GATE AND HOISTING SYSTEM SHALL BE PREPARED BY THE CONSULTANT AND IT WILL BE VATTED BY DESIGN CIRCLE-III, BWDB, DHAKA.
- CLEAR COVER
 - OPERATING DECK & RAILING
 - CONCRETE ADJACENT TO EARTH
 - CONCRETE EXPOSED TO WEATHER & WATER OR OTHERS
 - BEAM
- THE WORK SHALL BE EXECUTED AFTER ADMINISTRATIVE AND FINANCIAL APPROVAL FROM THE COMPETENT AUTHORITY.

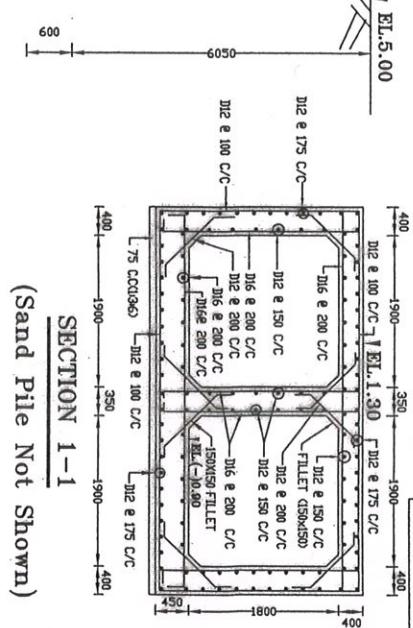
BANGLADESH WATER DEVELOPMENT BOARD			
DESIGN CIRCLE - V			
CHECKED BY:	REVIEWED BY:	APPROVED BY:	
Md. Kamruzzaman	Md. Md. Muktadir Rahaman	ARZEL H. KHAN	M.A.H. BHUJYAN
Assistant Engineer	Executive Engineer	DESIGN ENGINEER	DESIGN ENGINEER
		ZAFIR-Ul HAQUE KHAN	TEAM LEADER
NOTES & SECTION	NOTES & SECTION	NOTES & SECTION	NOTES & SECTION
DESIGNED BY:	CHECKED BY:	RECOMMENDED & SUBMITTED BY:	
DATED: NOVEMBER, 2013	DWG NO.: IWM / (P- 6-8) / SAT-2 / DS-04	PAGE: 05/14	



BOTTOM PLAN OF ABUTMENT AND PIER



(Sand Pile Not Shown)



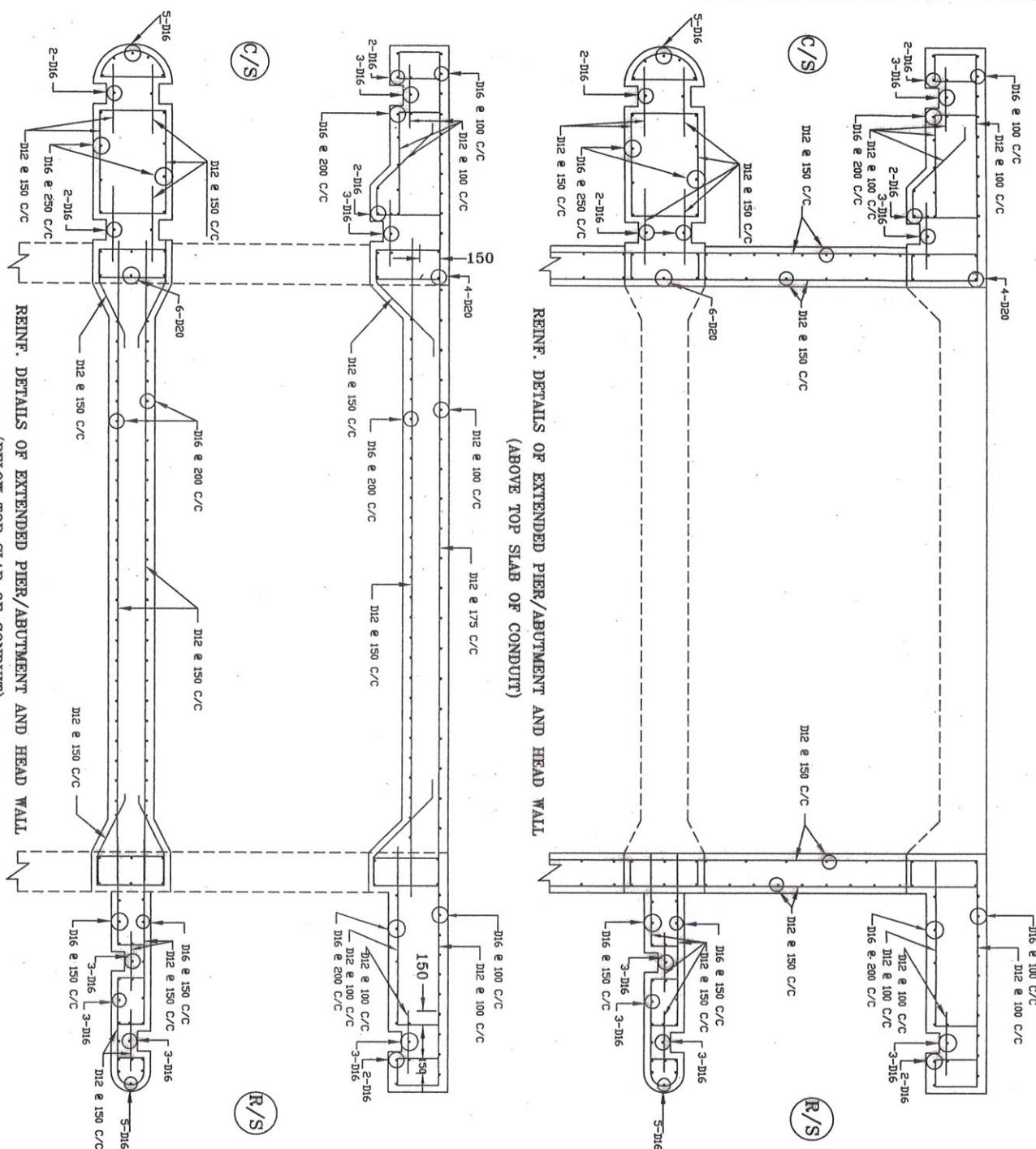
(Sand Pile Not Shown)

SECTION 4-4 (Sand Pile Not Shown)

SECTION 3-3 (Sand Pile Not Shown)

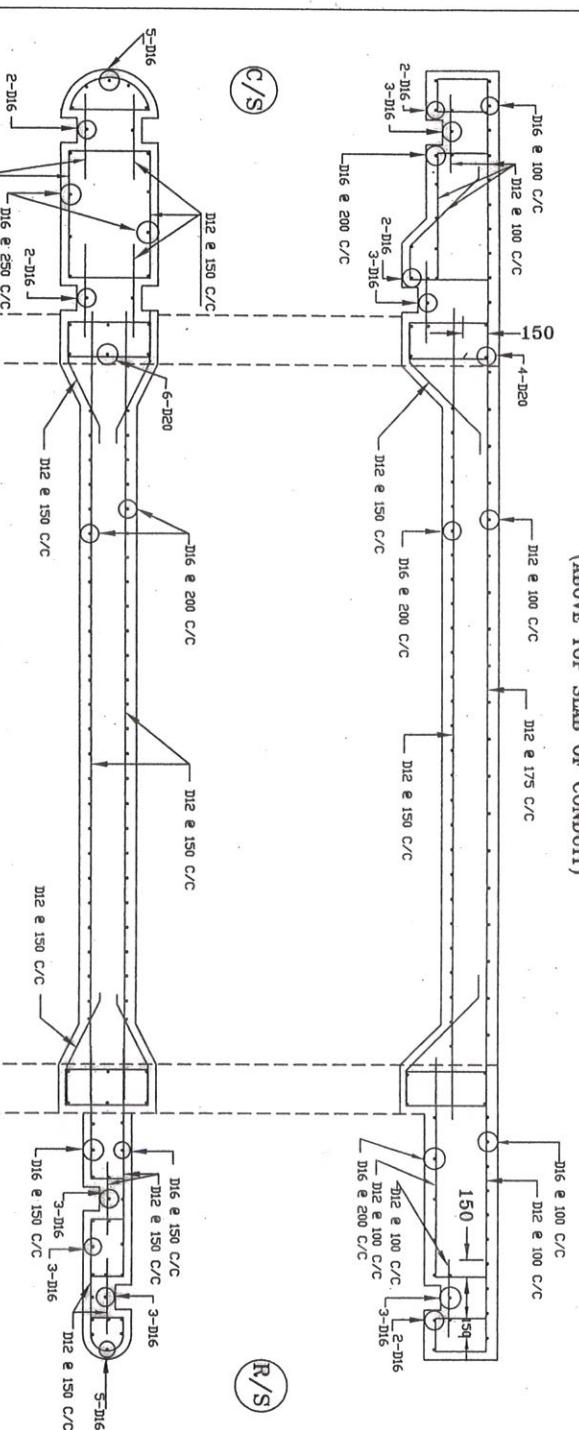
GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
CONSULTANT: INSTITUTE OF WATER MODELLING (IWM)
DRAINAGE IMPROVEMENT OF POLDER 1, 2, 3 & 6 (EI-6) BY MATHEMATICAL MODELING UNDER SATKHIRA DISTRICT
SATKHIRA O & M DIVISION-2, BWDB, SATKHIRA.
DESIGN OF 2-VENT (1.50mX1.80m) DRAINAGE CUM FLUSHING REGULATOR
(DS-4) ON BAINBOSHTO KHAL AT Km14.00 IN POLDER 6-8

BANGLADESH WATER DEVELOPMENT BOARD			
DESIGN CIRCLE - V			
DESIGNED BY:	RECHECKED BY:	APPROVED BY:	RECOMMENDED & SUBMITTED BY:
Md. Kamruzzaman	Md. Mahinur Rahman	Md. Kudrist Ali	ZAHIR-JUL HAQUE KHAN
Assistant Engineer	Executive Engineer	Supervising Engineer	TEAM LEADER
			PAGE: 06/14
			DATED: NOVEMBER, 2013 DWG NO.: IWM / (P-6-9) SAT-2/ DS-04



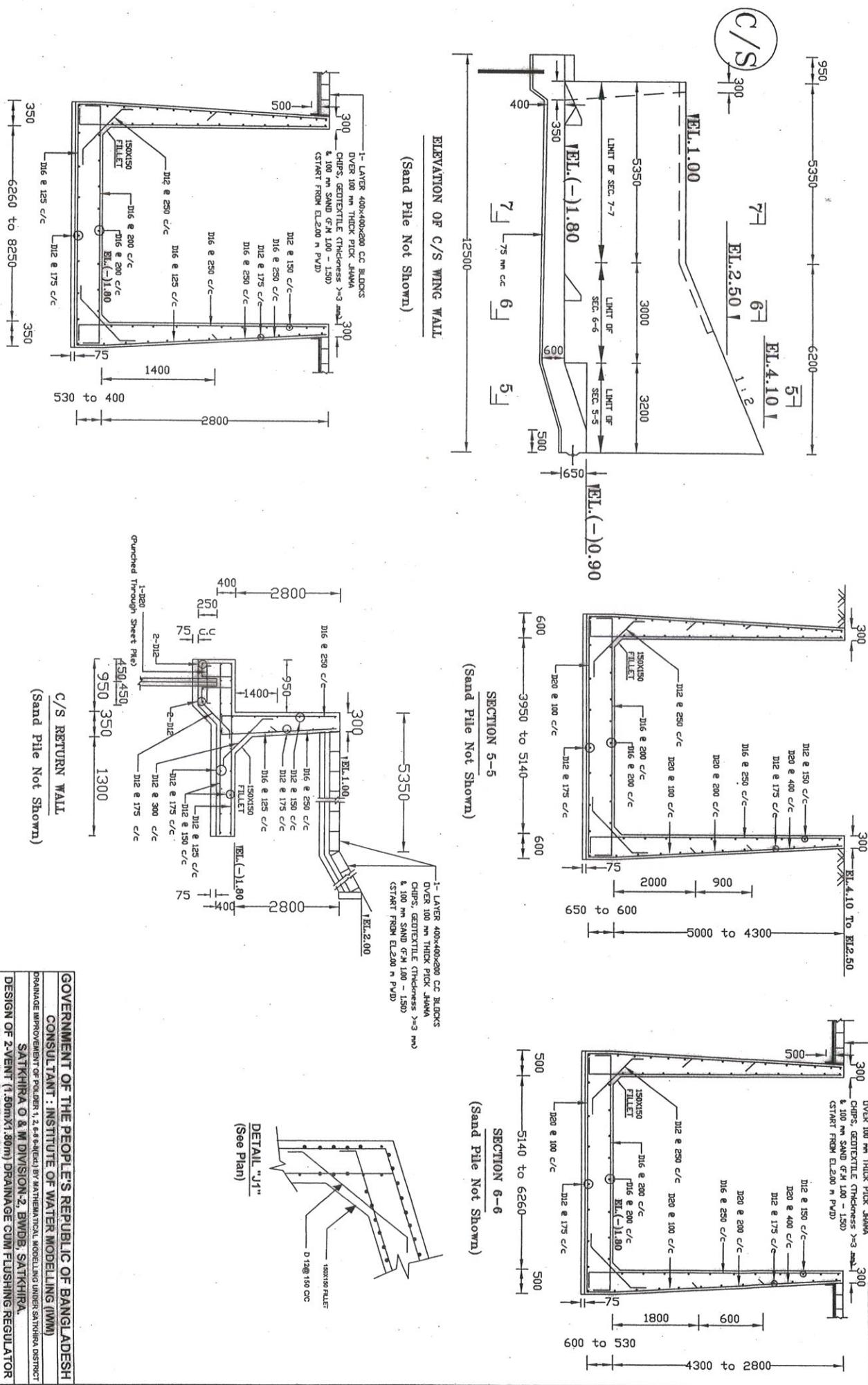
**REINF. DETAILS OF EXTENDED PIER/ABUTMENT AND HEAD WALL
(BELOW TOP SLAB OF CONDUIT)**

150

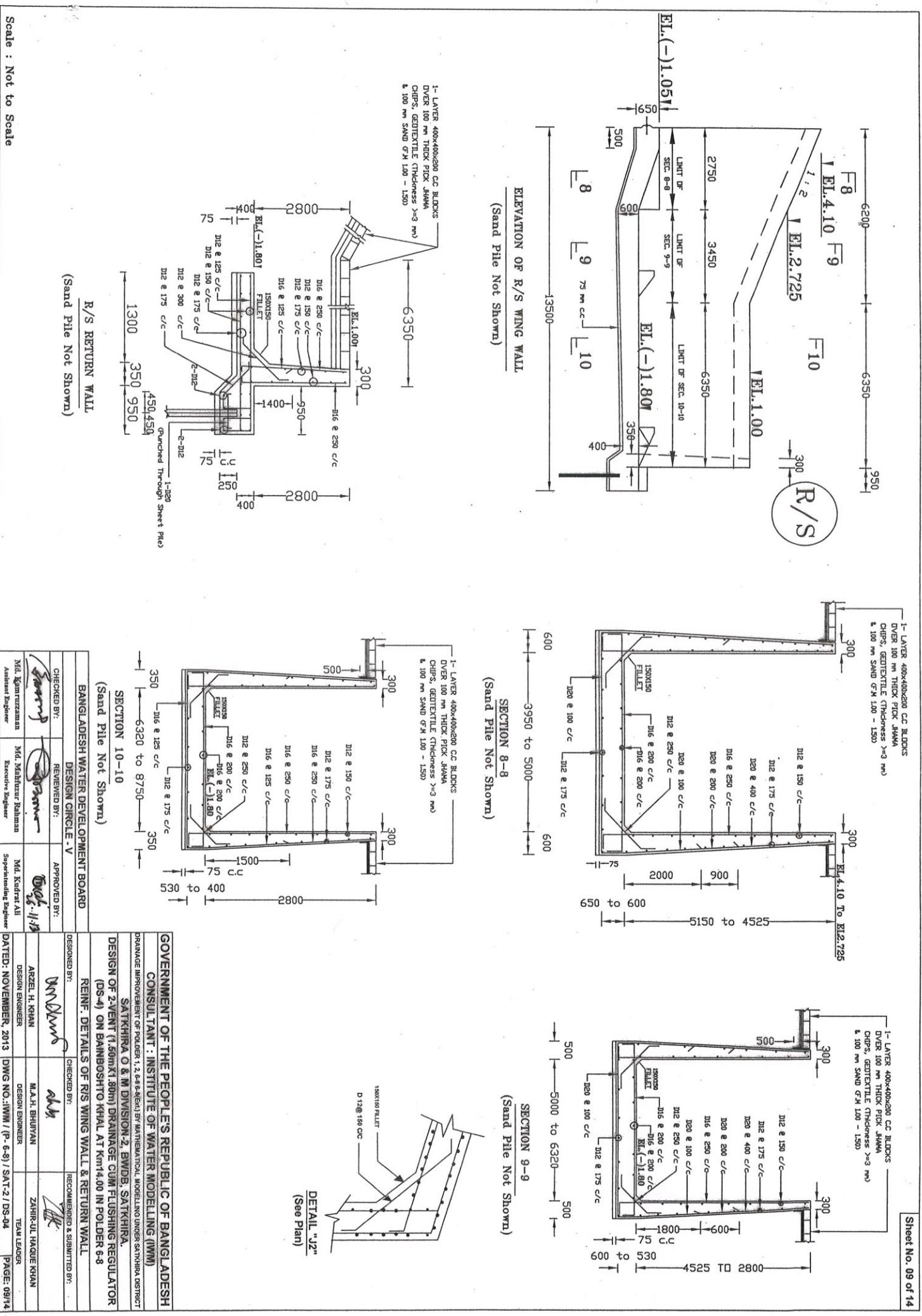


150

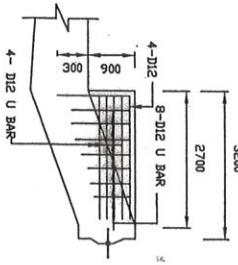
BANGLADESH WATER DEVELOPMENT BOARD					
DESIGN CIRCLE - V					
CHECKED BY:	REVIEWED BY:	APPROVED BY:			
Md. Kamruzzaman	Md. Mdaknur Rahman	Md. Kafur Ali	DESIGN ENGINEER	DESIGN ENGINEER	TEAM LEADER
Assistant Engineer	Executive Designer	Superintending Engineer	DATED: NOVEMBER, 2013	DWG NO.:WWM / (P-6-9) / SAT-Z / DS-04	PAGE: 07/14



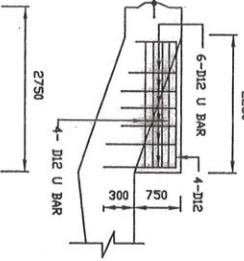
Scale : Not to Scale



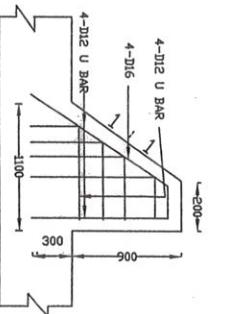
**REINF. DETAILS OF
C/S CHUTE BLOCK**



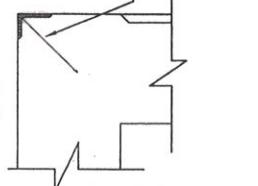
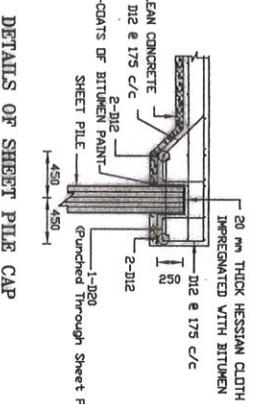
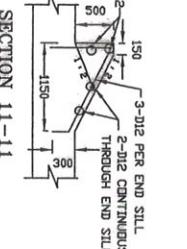
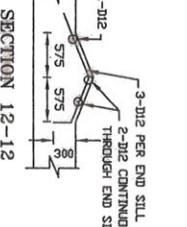
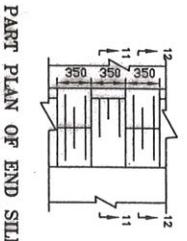
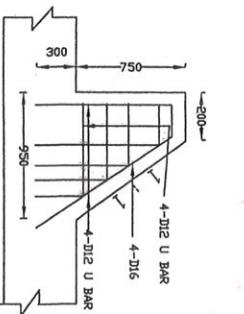
**REINF. DETAILS OF
R/S CHUTE BLOCK**



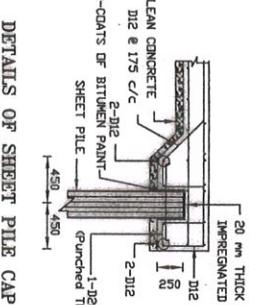
**REINF. DETAILS OF
C/S BAFFLE BLOCK**



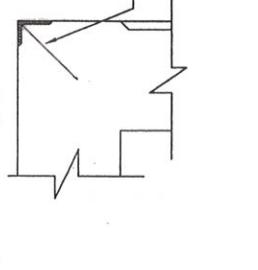
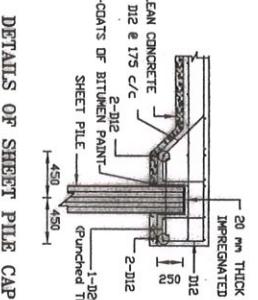
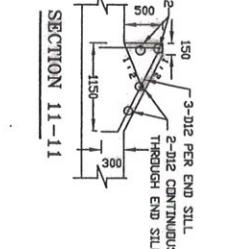
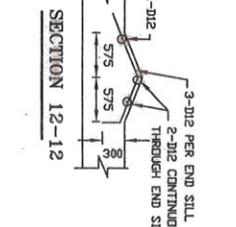
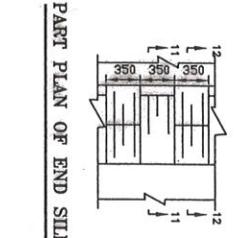
**REINF. DETAILS OF
R/S BAFFLE BLOCK**



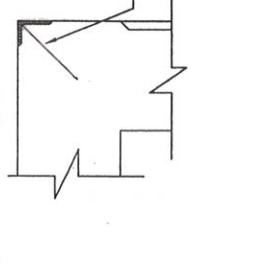
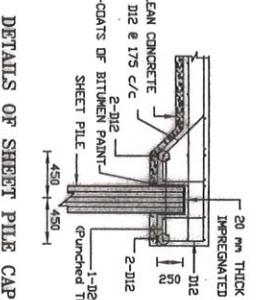
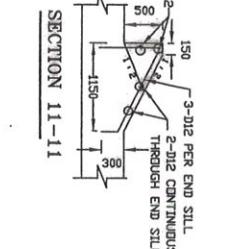
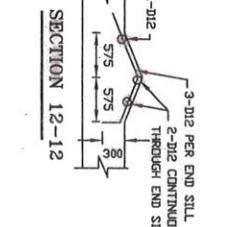
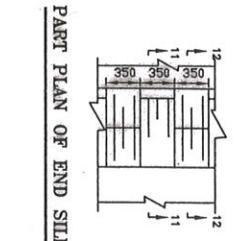
DETAIL 'X'(SEE SEC. A-A)



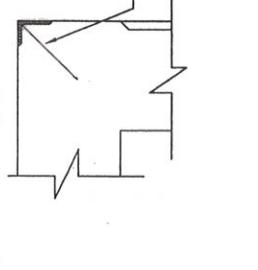
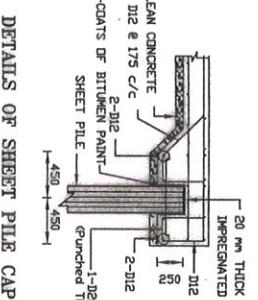
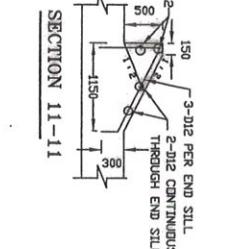
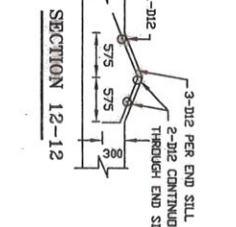
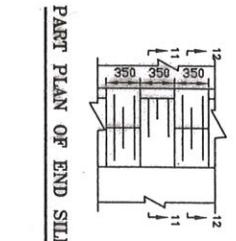
DETAIL 'G'(SEE SEC. A-A)



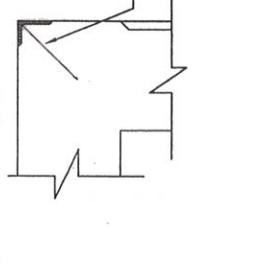
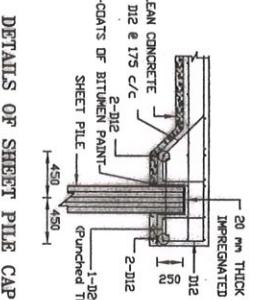
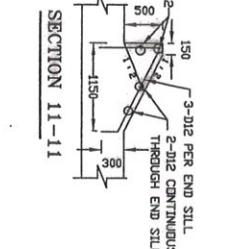
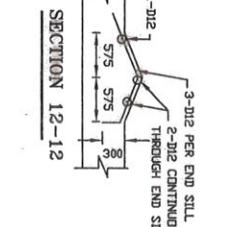
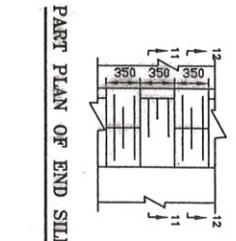
DETAIL 'Y'(SEE PLAN)



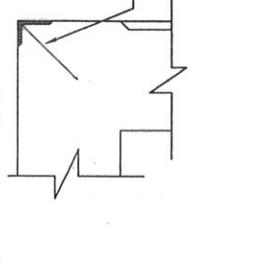
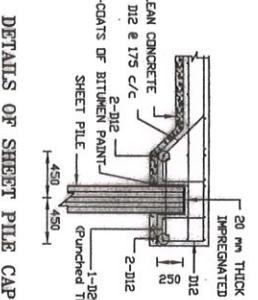
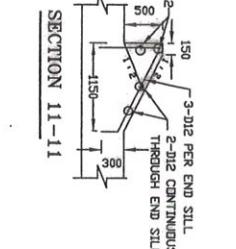
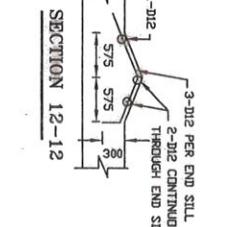
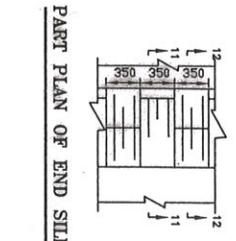
DETAIL 'X'(SEE SEC. A-A)



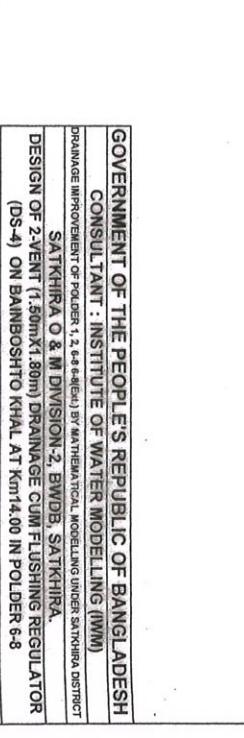
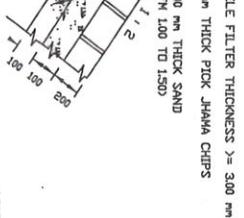
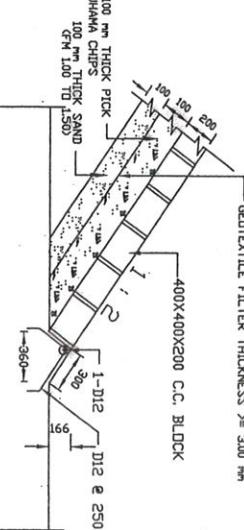
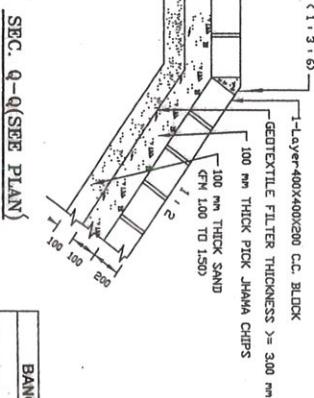
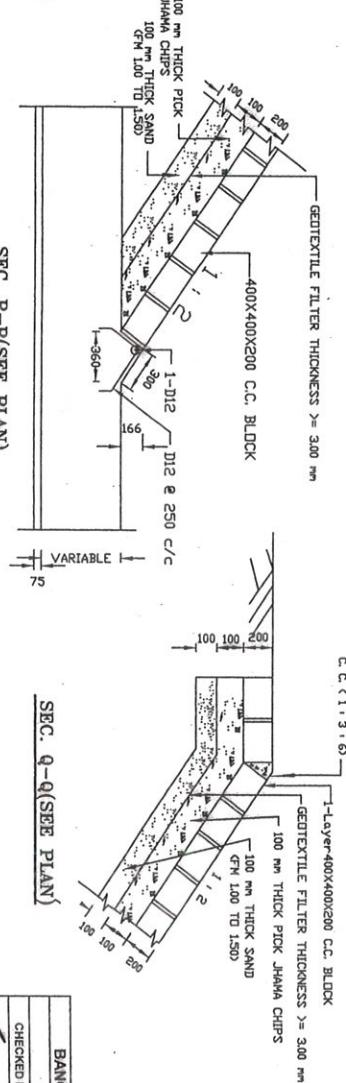
DETAIL 'Y'(SEE PLAN)

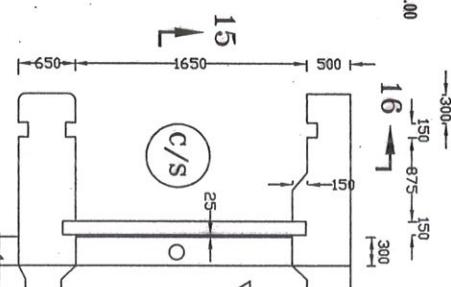
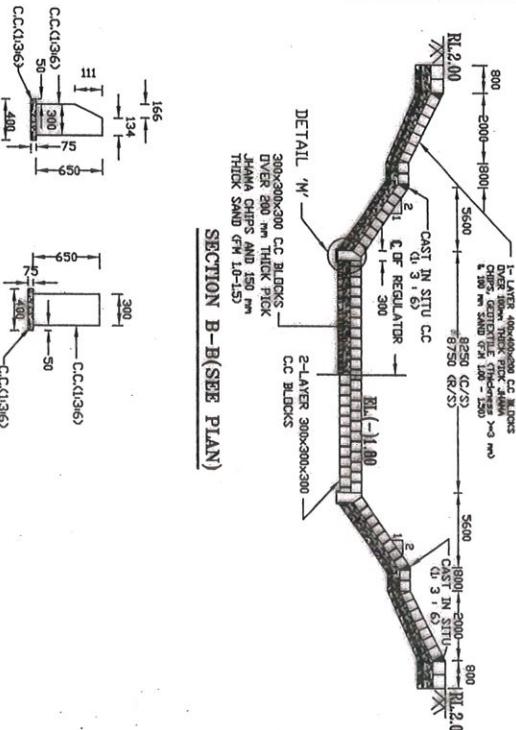


DETAIL 'X'(SEE SEC. A-A)

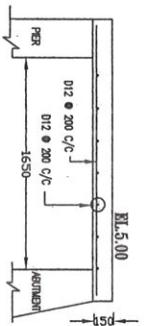


DETAIL 'Y'(SEE PLAN)



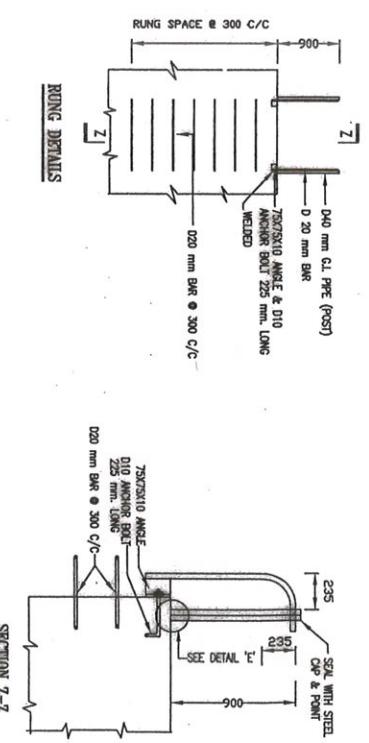
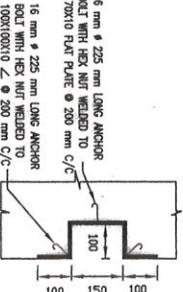
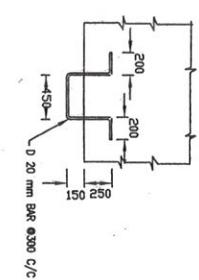


PLAN OF OPERATING SLAB
FOR VERTICAL GATE



DETAILS OF OPERATING SLAB FOR VERTICAL LIFT GATE

SECTION 16-16



DETAILS OF GATE GROOVE FOR NORMAL VENT

200
150
300
300
150
200

D6 @ 150 C/C

200
150
300
300
150
200

D6 @ 150 C/C

200
150
300
300
150
200

FILLET 20x20

SECTION 14-14

200
150
300
300
150
200

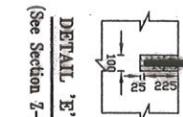
D6 @ 150 C/C

200
150
300
300
150
200

FILLET 20x20

SECTION 13-13

DETAIL 'E'
(See Section 2-2)



BANGLADESH WATER DEVELOPMENT BOARD
DESIGN CIRCLE 'V'

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

CONSULTANT : INSTITUTE OF WATER MODELLING (IWM)

DRAINAGE IMPROVEMENT OF POLDER 1,2, 4&6 (SATELLITE BY MATHEMATICAL MODELING UNDER SATKHIRA DISTRICT

SATKHIRA O & M DIVISION-2, BWDB, SATKHIRA.

DESIGN OF 2-VENT (1.50MMX1.80MM) DRAINAGE CUM FLUSHING REGULATOR
(DS-4) ON BAINBOSHTO KHAL AT Km14.00 IN POLDER 6-8

ACCESSORIES & DETAILS

RECOMMENDED & SUBMITTED BY:

DESIGNED BY:

RECHECKED BY:

APPROVED BY:

REVISED BY:

ARZEL H. KHAN

M.A.H. BHUIYAN

ZAHIR-Ul-HAQEE KHAN

DESIGN ENGINEER

DESIGN ENGINEER

TEAM LEADER

Md. Kamruzzaman

Md. Matinur Rahman

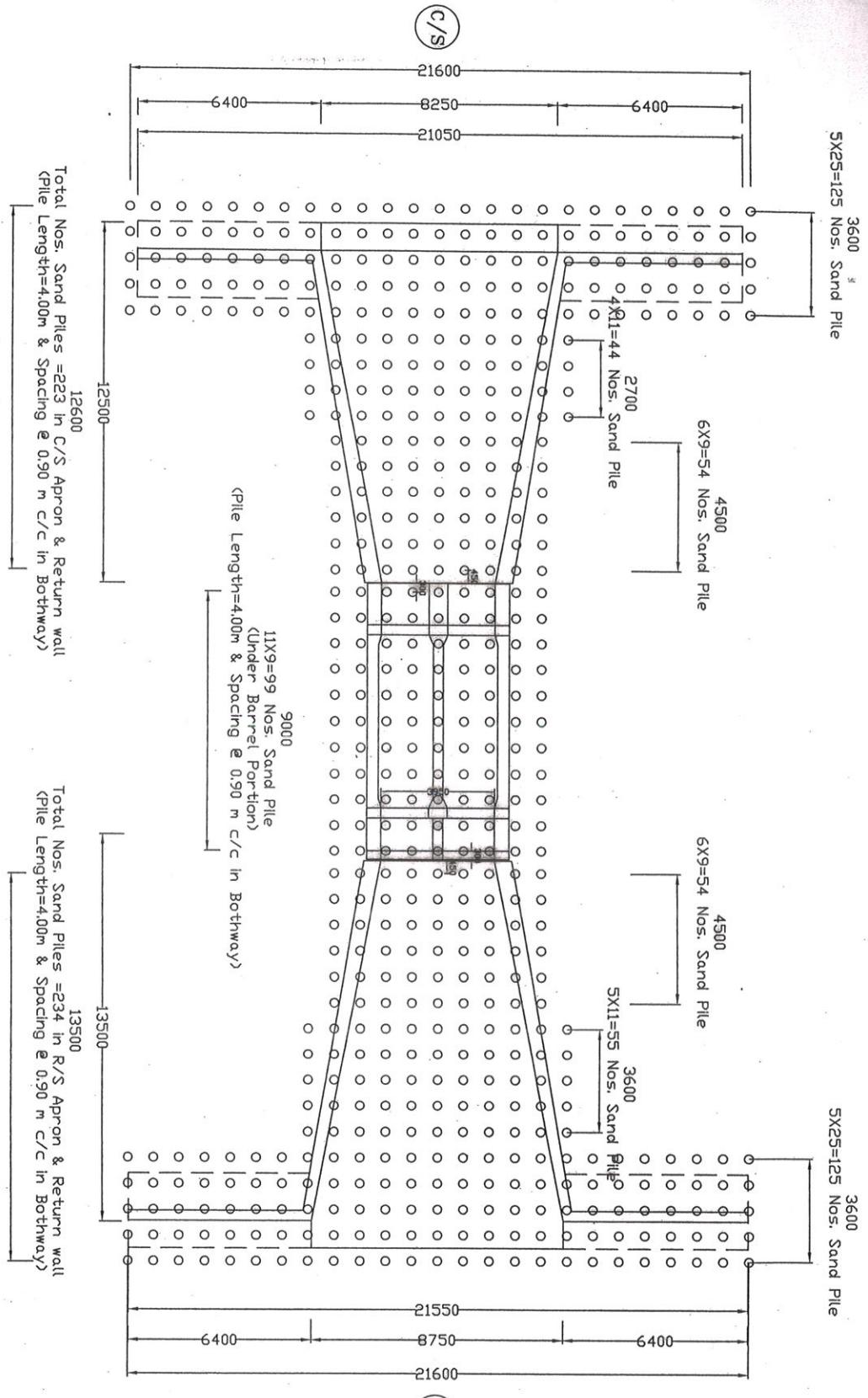
Executive Engineer

Supervising Engineer

Assistant Engineer

DATED: NOVEMBER, 2013 DWG NO.:WMM / (P-6-8) / SAT-2 / DS-04

PAGE: 11/14



LAYOUT PLAN OF SAND PILE UNDER BARREL, C/S AND R/S APRON & RETURN WALL

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

CONSULTANT : INSTITUTE OF WATER MODELLING (IWM)
DRAINAGE IMPROVEMENT OF POLDER 1,2, 4& 6 (IEI), BY MATHEMATICAL MODELING UNDER SATKHIRA DISTRICT
DESIGN OF SATKHIRA O & M DIVISION, BWDB, SATKHIRA,
DESIGN OF 2-VENT (1.50mX1.30m) DRAINAGE CUM FLUSHING REGULATOR
(DS-4) ON BAINBOSHTO KHAL AT Km 14.00 IN POLDER 6-8

LAYOUT PLAN OF SAND PILE

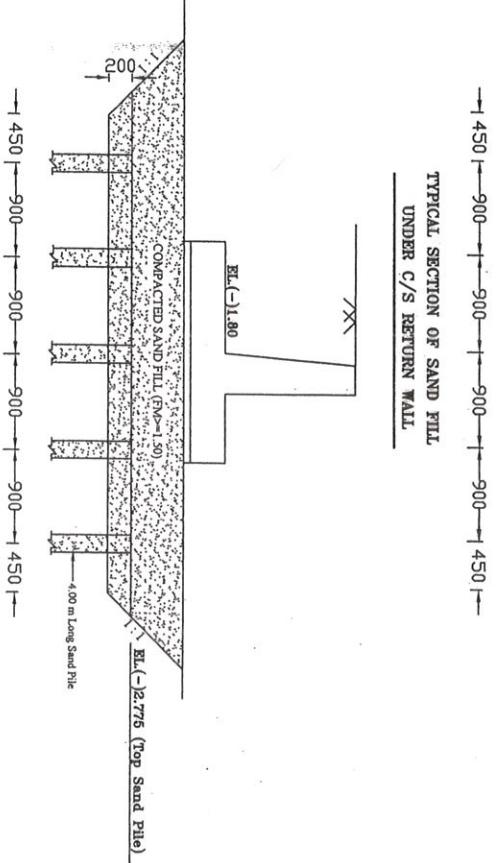
BANGLADESH WATER DEVELOPMENT BOARD		DESIGN CIRCLE - V	RECOMMENDED & SUBMITTED BY:
CHECKED BY:	APPROVED BY:	DESIGNED BY: 	RECOMMENDED & SUBMITTED BY:
		ARZEL H. KHAN DESIGN ENGINEER	ZAFIRUL HAQUE KHAN TEAM LEADER

Scale : Not To Scale

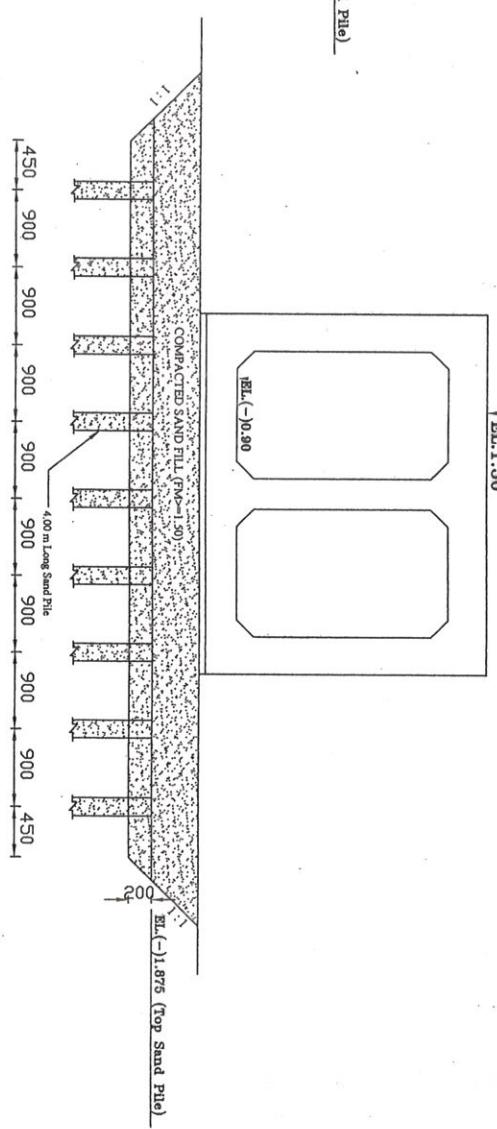
NOTES FOR SAND PILE :

1. SAND PILE OF 4.00 m LENGTH WITH 300 mm CASING DIAMETER SPECIFIED IN THE DRAWING SHALL HAVE TO BE CONSTRUCTED AS PER STANDARD DISPLACEMENT METHOD.
2. SAND TO BE USED IN IPILING SHALL BE FREE FROM ALL ORGANIC AND FOREIGN MATERIALS AND SHALL HAVE $F_{N\phi} = 2.00$.
3. DIAMETER, CONTINUITY OF PILE SHALL HAVE TO BE CHECKED BY MEASURING SAND FORCE VOLUME FOR EACH EXECUTED PILE.
4. AFTER EXECUTION OF ALL SAND PILE SPT VALUES SHALL HAVE TO BE DETERMINED BY THE FIELD TESTS. SPT VALUES ATTAINED AT 1.50 m INTERVALS UPTO A DEPTH OF 6.00 m AT RANDOM LOCATIONS OF BARRELS, US FLOOR, DIS FLOOR AND RETURN WALLS SHALL BE DETERMINED.
5. AFTER PILING SPT VALUE IN BETWEEN AND AT THE CENTRE OF PILE AT FOUNDATION LEVEL SHALL BE MINIMUM 8 TO 10 RESPECTIVELY.

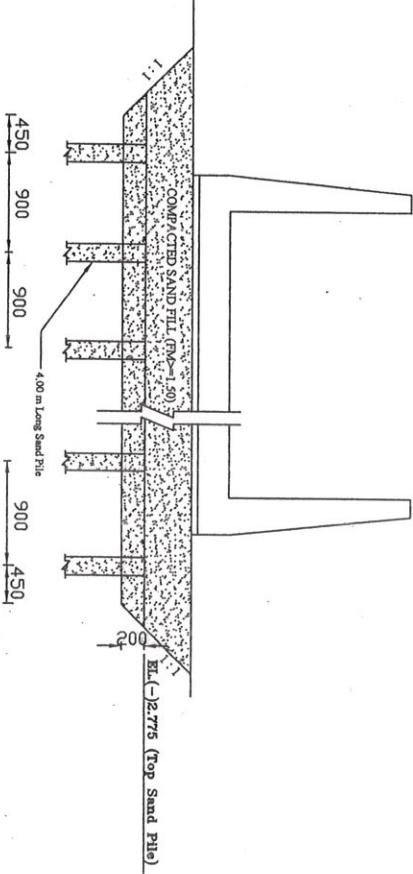
**TYPICAL SECTION OF SAND FILL
UNDER C/S RETURN WALL**



**TYPICAL SECTION OF SAND FILL
UNDER R/S RETURN WALL**



**TYPICAL SECTION OF SAND
FILL UNDER BARREL**



GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
CONSULTANT : INSTITUTE OF WATER MODELLING (IWM)
DRAINAGE IMPROVEMENT OF POLDER 1, 2, 4 & 6 (P-1, 2, 4, 6) BY MATHEMATICAL MODELLING UNDER SATKHIRA DISTRICT

**SATKHIRA O & M DIVISION-2, BWDB, SATKHIRA,
DESIGN OF 2-VENT (1.50mX1.80m) DRAINAGE CUM FLUSHING REGULATOR
(DS-4) ON BAINBOSHTO KHAL AT Km14.00 IN POLDER 6-8**

DETAILS OF SAND PILE

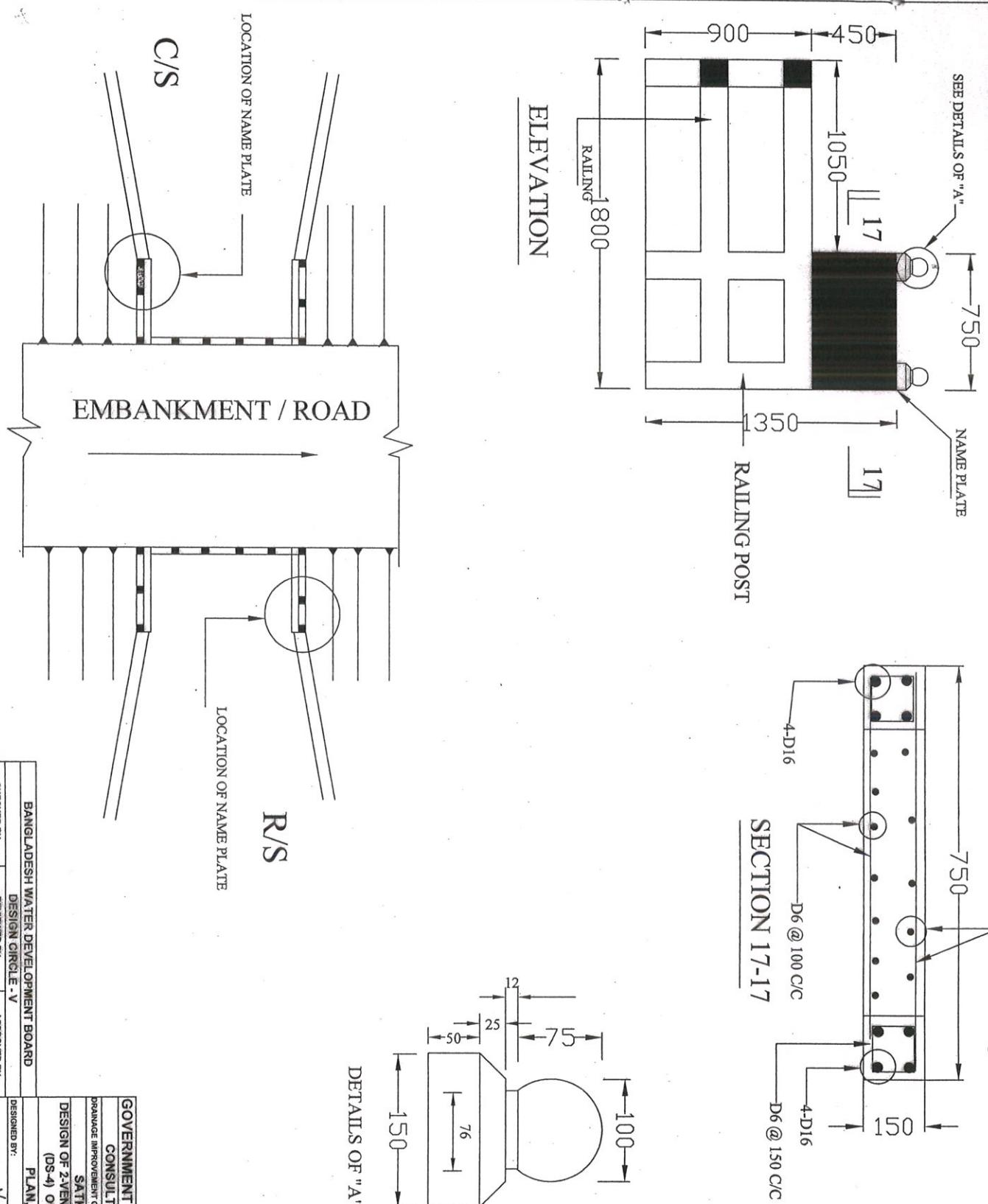
DESIGNED BY: *[Signature]* CHECKED BY: *[Signature]* RECOMMENDED & SUBMITTED BY: *[Signature]*

REVIEWED BY: *[Signature]* APPROVED BY: *[Signature]*

Scale : Not To Scale

**TYPICAL SECTION OF SAND
FILL UNDER WING WALL**

Mr. Md. Khanuzzaman	Mr. Md. Muntasiruzzaman	Mr. Md. Kader Ali	Mr. Md. Kader Ali	DATED: NOVEMBER, 2013	DWG NO.: IWM / P-6-3 / SAT-2 / DS-04	PAGE: 13/14
---------------------	-------------------------	-------------------	-------------------	-----------------------	--------------------------------------	-------------



GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH	
CONSULTANT : INSTITUTE OF WATER MODELLING (IWM)	
DRAINAGE IMPROVEMENT OF POLDER 1, 2 & 4 (SATKHERA) BY MATHEMATICAL MODELLING UNDER SATKHERA DISTRICT	
SATKHERA 0 & 11 DIVISION-2, BUNDE, SATKHERA,	
DESIGN OF 2-VENT (1.50mX1.80m) DRAINAGE CUM FLUSHING REGULATOR (DS-4) ON BAINBOSHTO KHAL AT Km14.00 IN POLDER 6-8	
PLAN, ELEVATION & DETAILS OF NAME PLATE	
DESIGN CIRCLE - ✓	RECOMMENDED & SUBMITTED BY:
DESIGNED BY: <i>[Signature]</i>	CHECKED BY: <i>[Signature]</i>
REVIEWED BY: <i>[Signature]</i>	APPROVED BY: <i>[Signature]</i>
Md. Kamruzzaman	ARZEL H. KHAN
Md. Mahfuzur Rahman	M.A.H. BHUJYAN
Md. Kader Ali	ZAHIR-U-L HAQUE KHAN
Assistant Engineer	DESIGN ENGINEER
Executive Engineer	DESIGN ENGINEER
Supertending Engineer	TEAM LEADER
DATED: NOVEMBER, 2013	PAGE: 14/14
DWG NO.: IWM / (P- 6-8) / SAT-2 DS-04	