

Figure 3.3.2.34
Faridabad Lift Station (2)
The Study on North Dhaka Sewerage System in North Dhaka

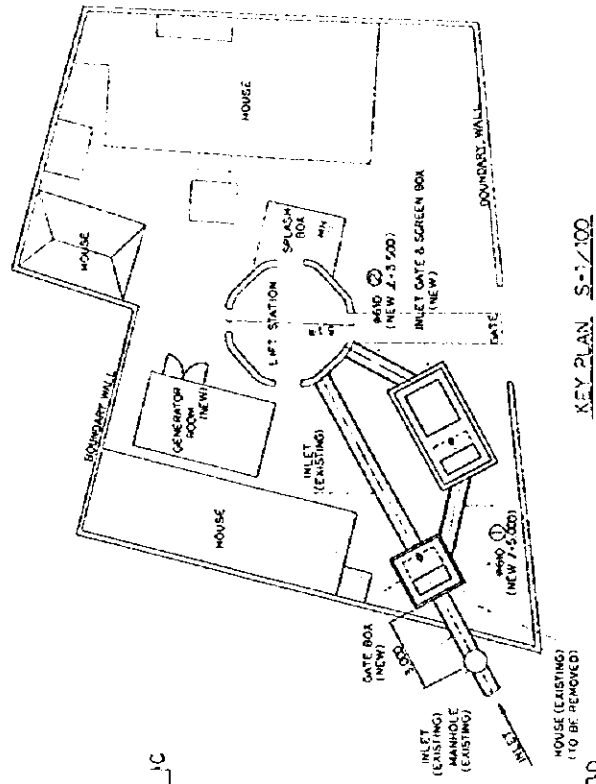
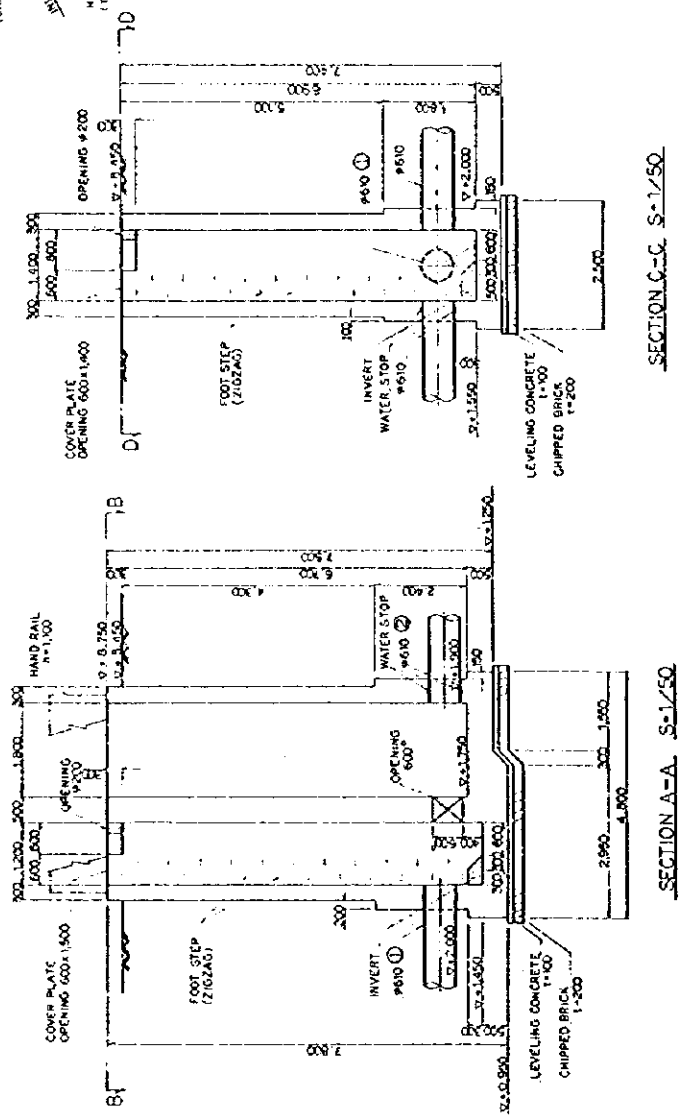
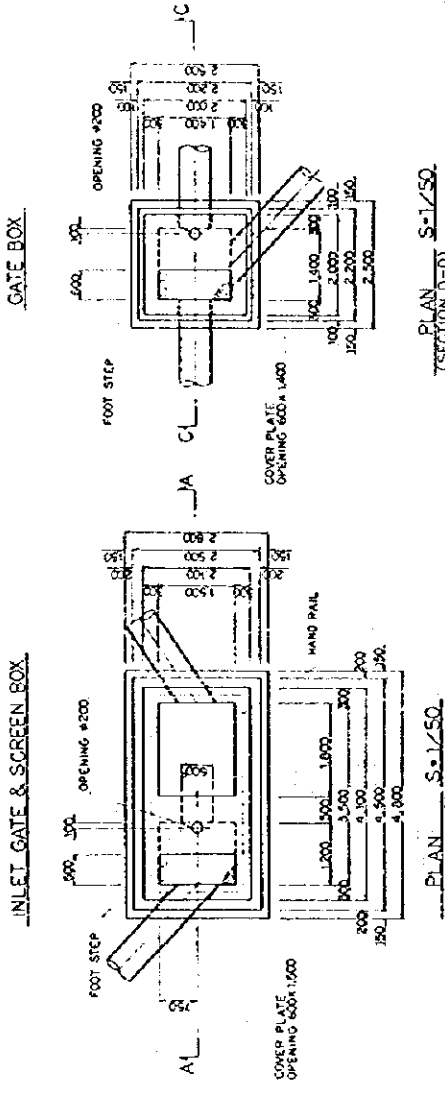


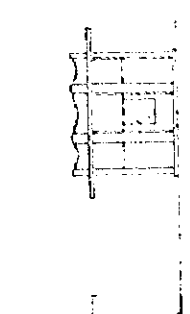
Figure 3.3.2.35

Moghbar Lift Station (1)

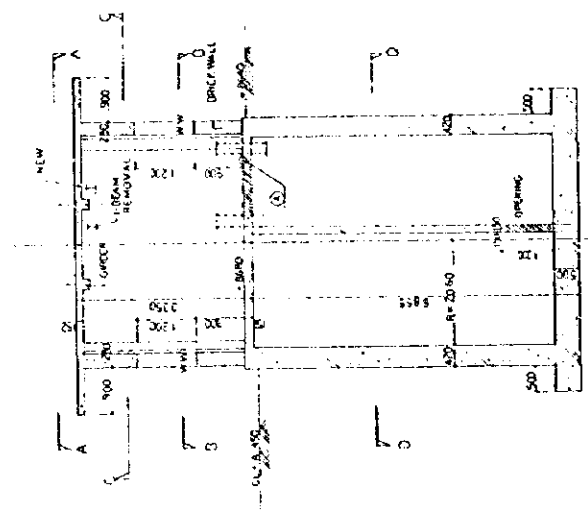
The Study on North Dhaka Sewerage System in North Dhaka

STABILIZATION SCHEDULE (MOGHBAZAR)

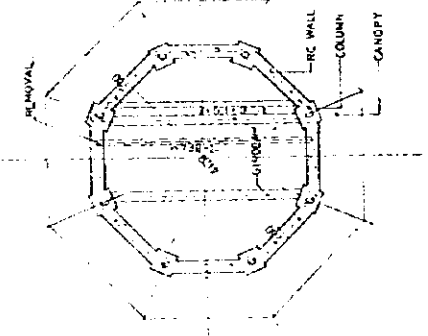
STRUCTURE	
ROOF	RECONSTRUCTION
PAVING	P.L.
EXT. FINISHING	PAINT
WALL	PAINT
ROOF	WATER PROOFING
EXT. FINISHING	P.L.
FLOOR	P.L.
WALL	PAINT
PARTITION	SPERMO. WALLING
CELLING	PAINT
DOOR	M. D. FINISHING
WINDOW	PAINT & GLAZING
STAIRCASE	WOODEN
CEILING	GLASS
FURNITURE	CEILING & LIGHTING
P.L. COVER	WOODEN
POINT STOP	WOODEN
MANHOLE COVER	P.L.
STAIR	CORROSION RESISTANT



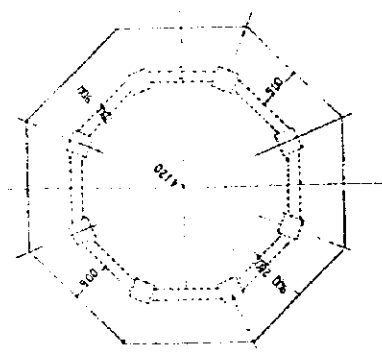
ELEVATION 1/100



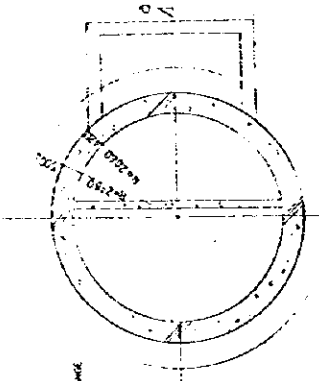
FLOOR PLAN 1/50



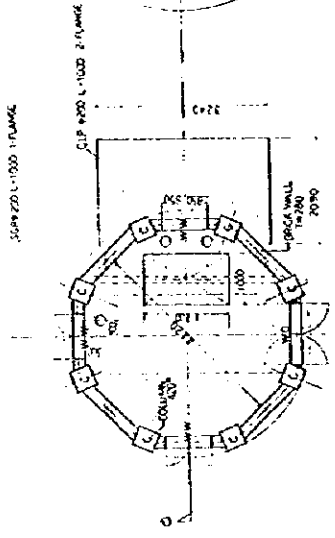
E-C SECTION UPWARD VIEW 1/50



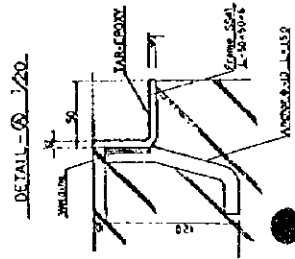
A-A DOWN VIEW 1/50



D-D SECTION 1/50



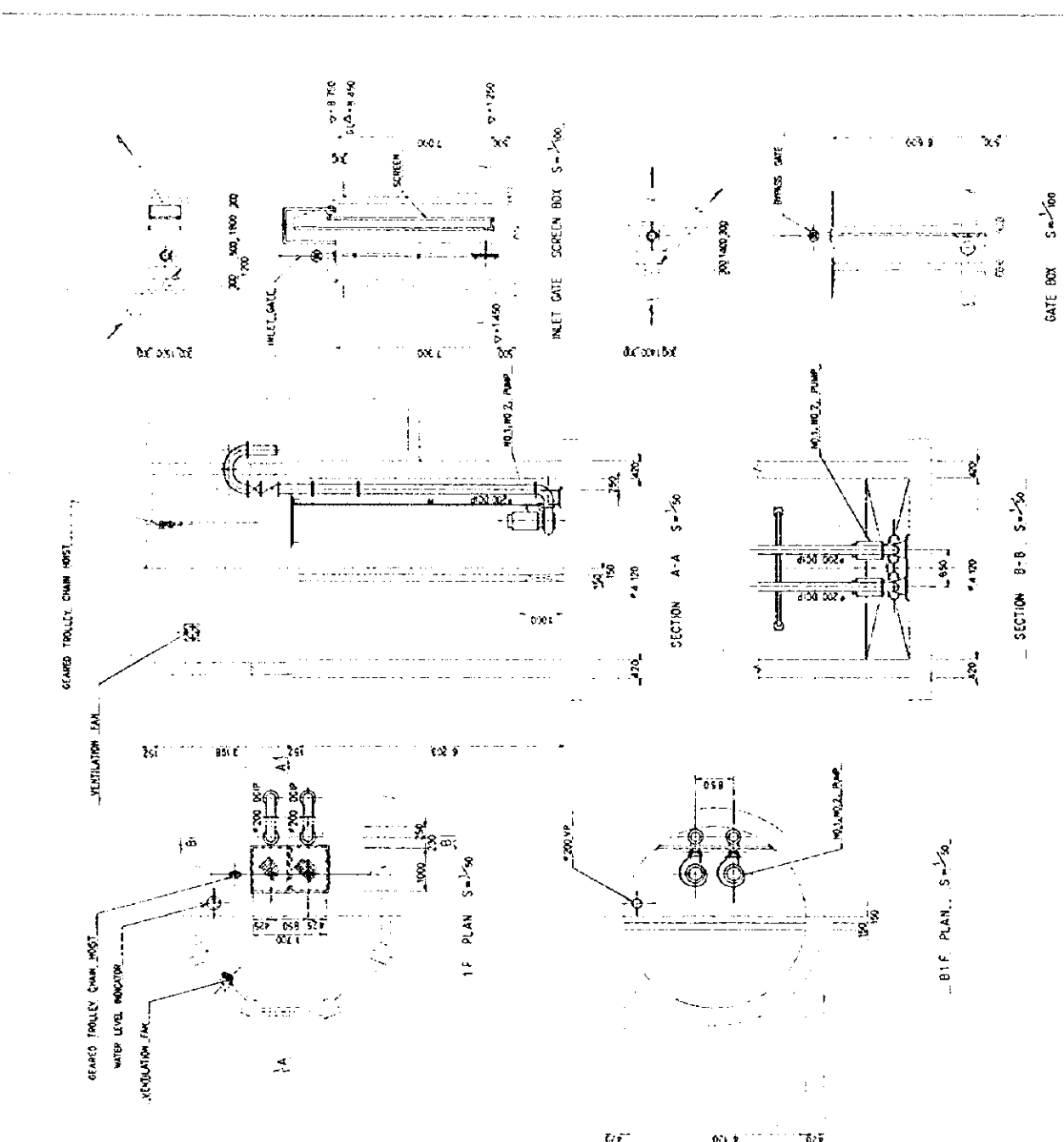
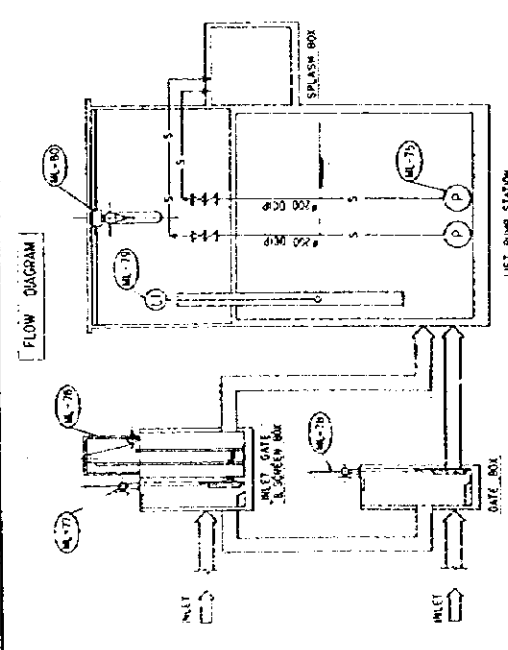
G-G SECTION 1/50



DETAIL 1/20

Figure 3.3.2.36

Moghbazar Lift Station (2)



EXPLANATOR NOTES

LINE MARK	DESCRIPTION	TYPE	MARK	DESCRIPTION
---	SEWAGE	GATE VALVE	○	PROPOSED
---		CHECK VALVE	○	EXISTING
○		PUMP		
○		WATER LEVEL INDICATOR		

LEGEND

LINE MARK	DESCRIPTION	TYPE	MARK	DESCRIPTION
---	SEWAGE	GATE VALVE	○	PROPOSED
---		CHECK VALVE	○	EXISTING
○		PUMP		
○		WATER LEVEL INDICATOR		

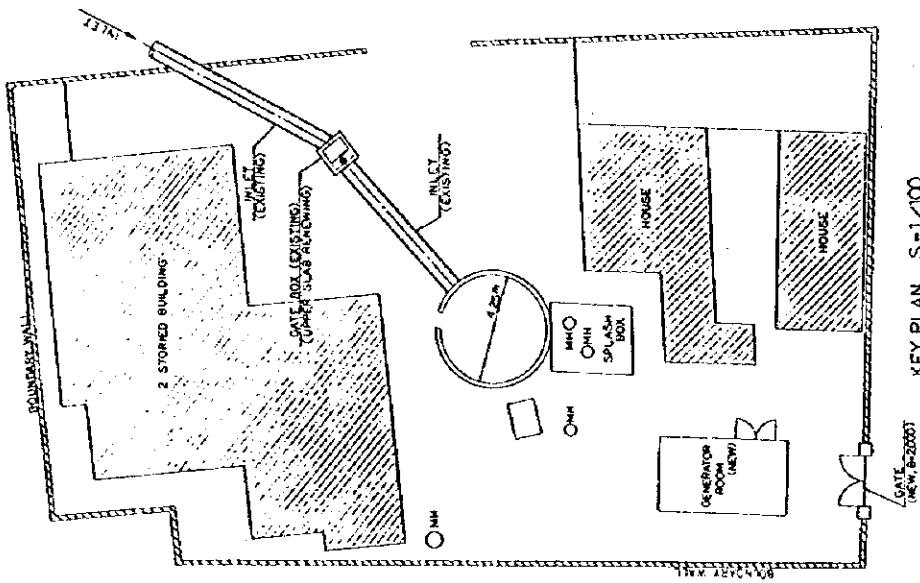
EQUIPMENT LIST

ITEM NO.	NAME OF EQUIPMENT	SPECIFICATION	POWER (KW)	QUANTITY	REMARKS
ML-75	HO. NO. 2. PUMP	DETACHABLE TYPE SUBMERSIBLE	MS	2	
ML-76	SCREEN	BAR SCREEN WITH MANUAL WHICH IS 70mm		1	
ML-77	INLET GATE	FC MANUALLY OPERATED 4000x600mm		1	
ML-78	BRASS GATE	FC MANUALLY OPERATED 4000x600mm		1	
ML-79	WATER LEVEL INDICATOR	FLOTT TYPE 4000x600mm		1	
ML-80	GEARED TROLLEY CHAIN HOIST	MANUALLY OPERATED 1000kg		1	

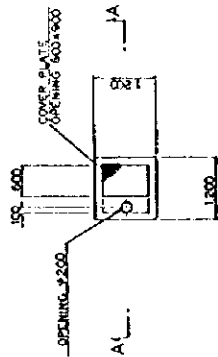
Figure 3.3.2.37
Moghbar Lift Station (3)

P & T

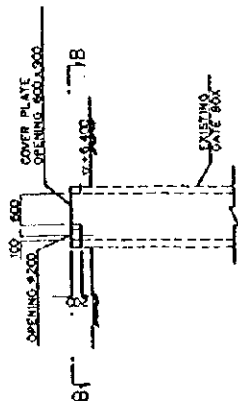
NAWABGANJ



GATE BOX

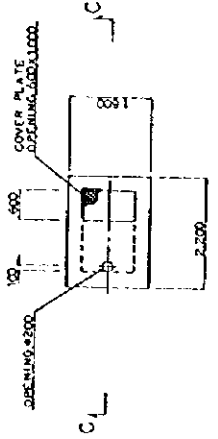


SECTION B-B S-1/50

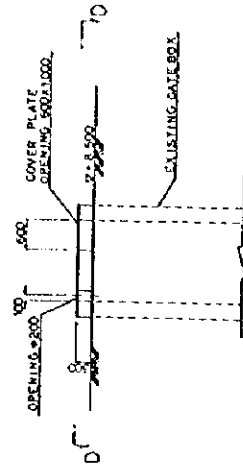


SECTION A-A S-1/50

GATE BOX



SECTION D-D S-1/50



SECTION C-C S-1/50

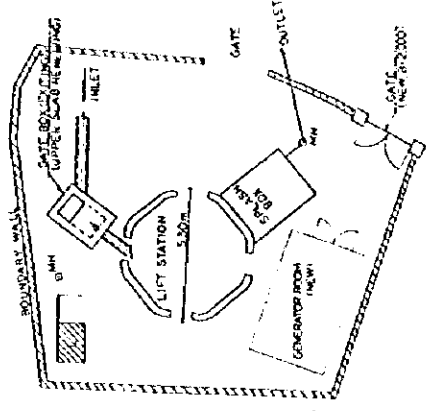


Figure 3.3.2.38

P & T & Nawabganj Lift Station

The Study on North Dhaka Sewerage System in North Dhaka

REHABILITATION SCHEDULE

PAINTWORK	REPAIR
ROOF	REPAIR
WALL	REPAIR
FLOOR	REPAIR
CEILING	REPAIR
DOOR	REPAIR
WINDOW	REPAIR
PLUMBING	REPAIR
ELECTRICAL	REPAIR
MECHANICAL	REPAIR
CONCRETE	REPAIR
IRONWORK	REPAIR
GLASS	REPAIR
STEEL	REPAIR
WOOD	REPAIR
BRICK	REPAIR
STONE	REPAIR
MASONRY	REPAIR
PAVING	REPAIR
LANDSCAPING	REPAIR
MECHANICAL	REPAIR
ELECTRICAL	REPAIR
PLUMBING	REPAIR
CONCRETE	REPAIR
IRONWORK	REPAIR
GLASS	REPAIR
STEEL	REPAIR
WOOD	REPAIR
BRICK	REPAIR
STONE	REPAIR
MASONRY	REPAIR
PAVING	REPAIR
LANDSCAPING	REPAIR

NOTE: 1. TOP MARKING WORK SEE DWG. CL.

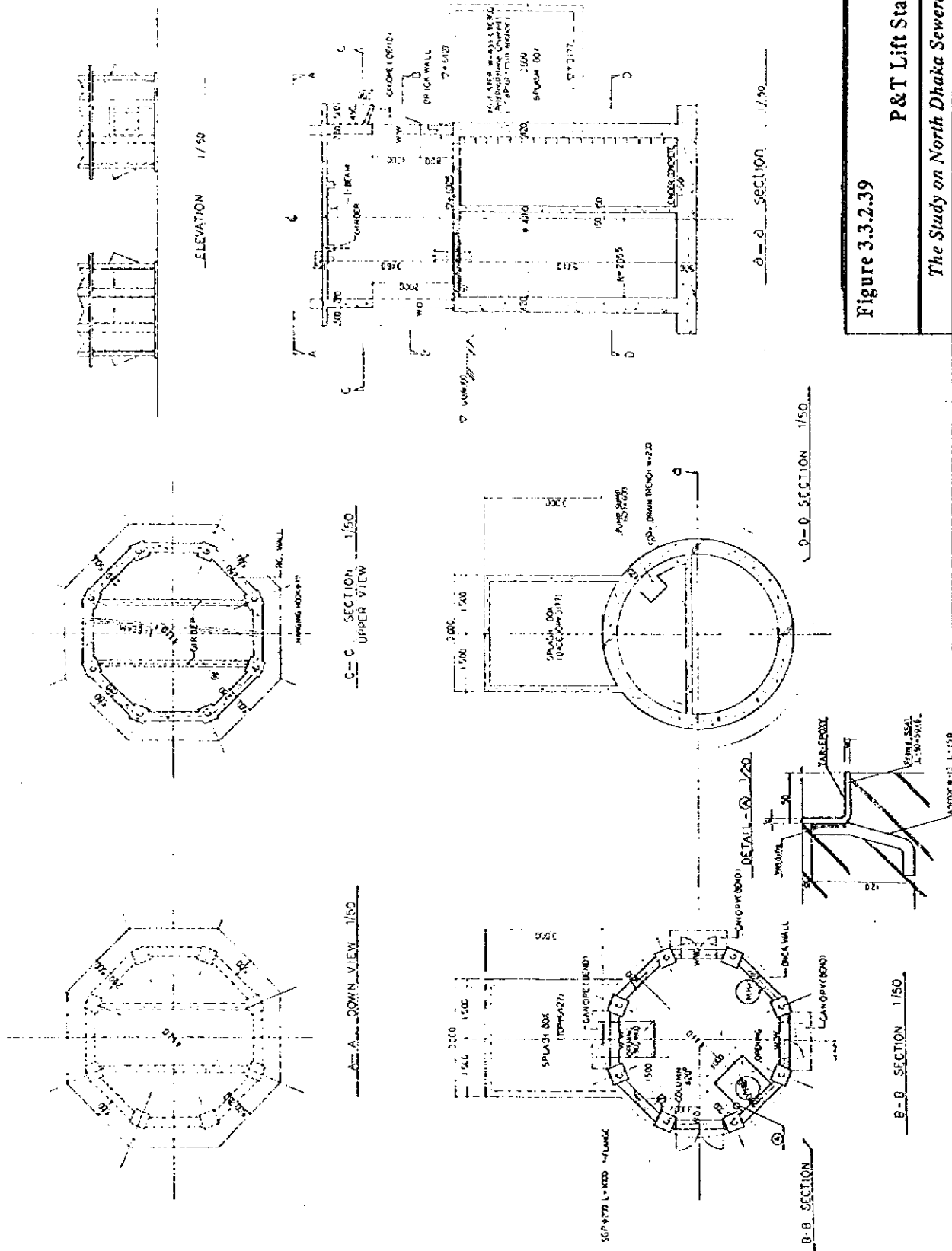
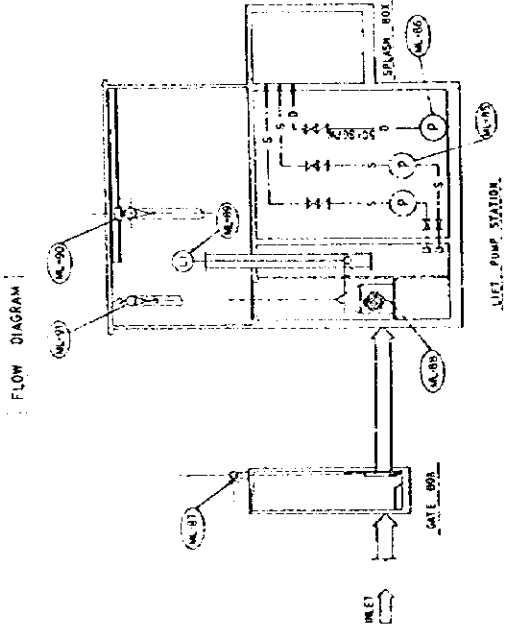
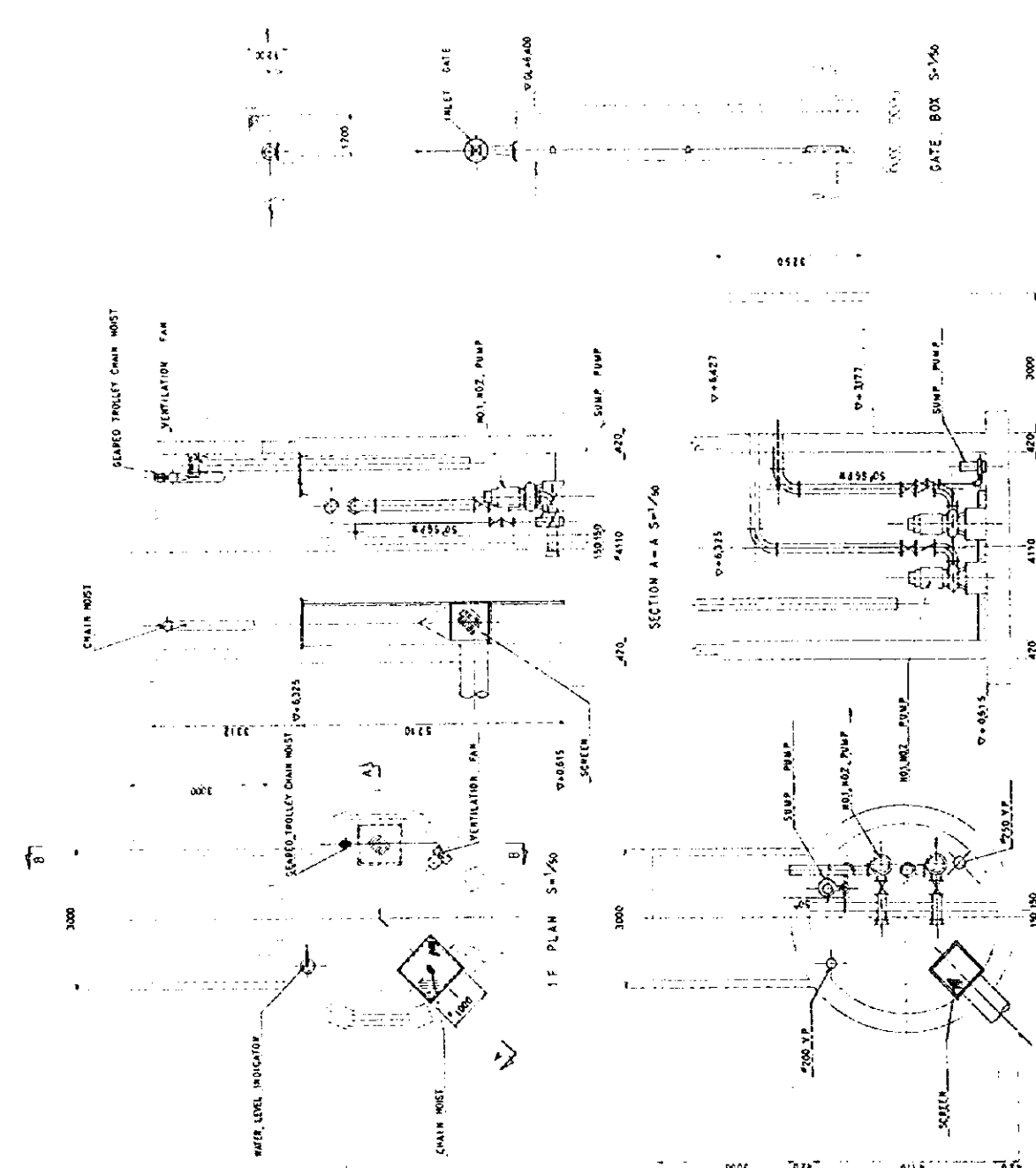


Figure 3.3.2.39 P&T Lift Station (1)

The Study on North Dhaka Sewerage System in North Dhaka



LEGEND

LINE MARK	DESCRIPTION	MARK	TYPE
-S-	SEWAGE	⊗	GATE VALVE
-D-	DRAIN	⊕	CHECK VALVE
		⊙	PUMP
		⊖	LEVEL INDICATOR

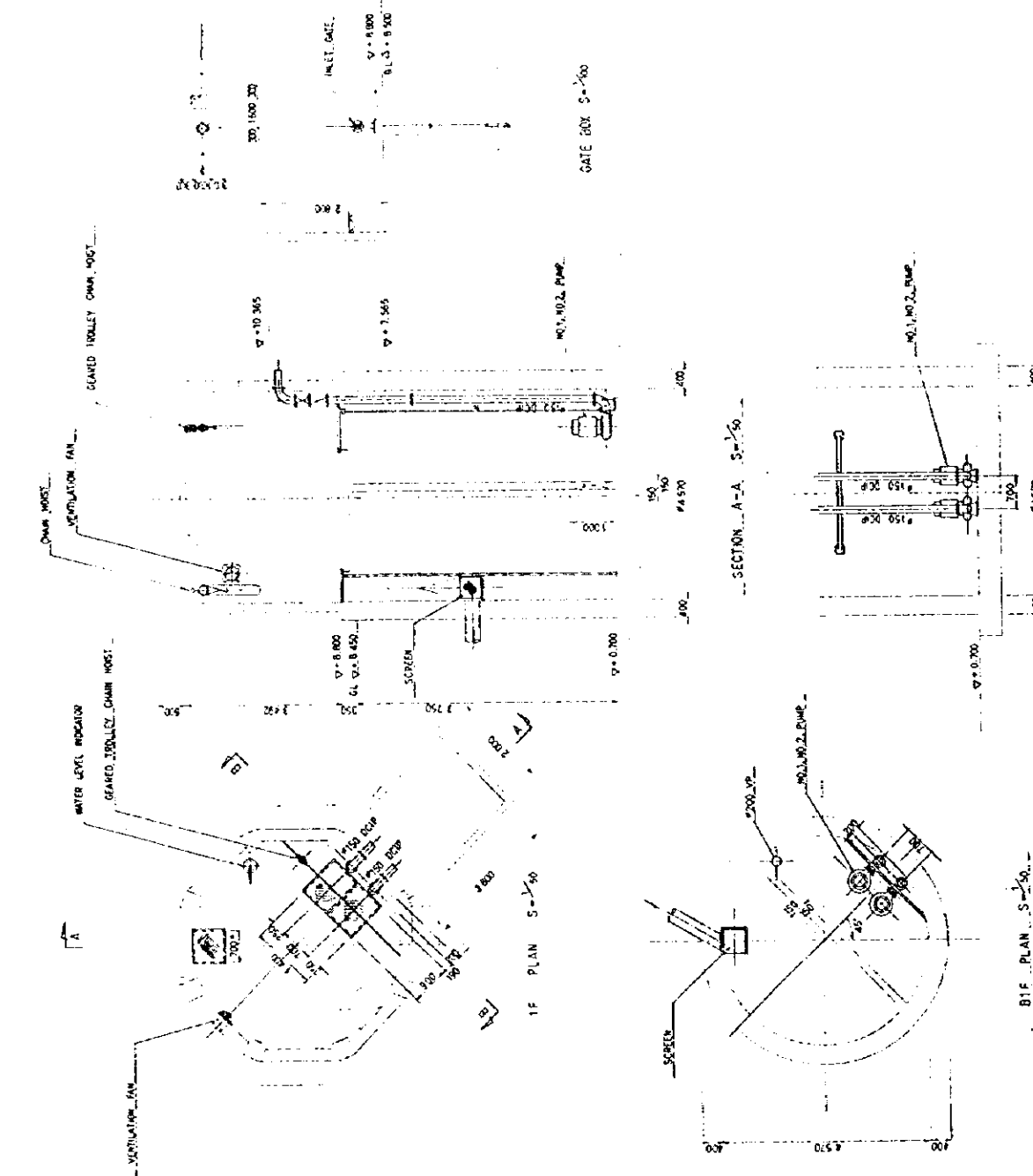
EXPLANATOR NOTES

LINE MARK	DESCRIPTION
-S-	PROPOSED
-D-	EXISTING

EQUIPMENT LIST

NO.	NAME OF EQUIPMENT	SPECIFICATION	POWER (KW)	CAPACITY	REMARKS
M-05	M-01 HO. 2. PUMP	VERTICAL ENDED #200 V.P.	15	2	EXISTING
M-06	SUMP PUMP	SENSIBLE PUMP #200 V.P.	15	1	
M-07	INLET GATE	FC MANUALLY OPERATED #500 M.M.	-	-	
M-08	SCREEN	CAGE TYPE SCREEN	-	-	REINSTALLED PUMP WELL
M-09	WATER LEVEL INDICATOR	FLOAT TYPE	-	-	HIGH/LOW LEVEL SWITCH
M-90	GEARED TROLLEY CHAIN HOIST	MANUALLY OPERATED 0.5HP 7.50M	-	-	FOR SUMP PUMP
M-91	CHAIN HOIST	MANUALLY OPERATED 0.5HP 7.50M	-	-	FOR SCREEN

Figure 3.3.2.40
P & T Lift Station (2)
The Study on North Dhaka Sewerage System in North Dhaka



EXPLANATOR NOTES

LINE MARK	DESCRIPTION	TYPE	DESCRIPTION
○	PROPOSED	GATE VALVE	PROPOSED
□	EXISTING	CHECK VALVE	EXISTING
⊙	PUMP	PUMP	
⊕	LEVEL INDICATOR	LEVEL INDICATOR	

LEGEND

LINE MARK	DESCRIPTION	MARK	TYPE
—	SEWAGE	○	GATE VALVE
—		□	CHECK VALVE
⊙		⊙	PUMP
⊕		⊕	LEVEL INDICATOR

EQUIPMENT LIST

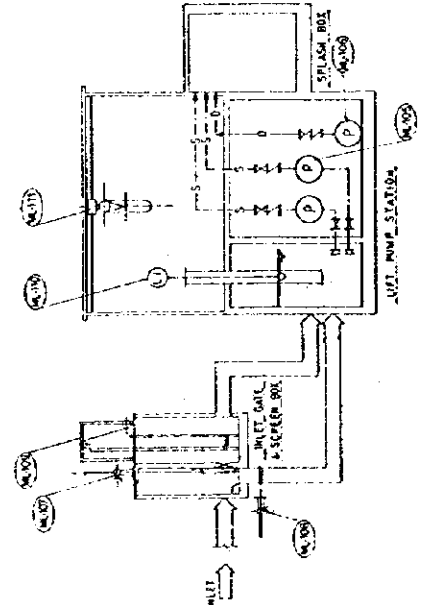
ITEM NO.	NAME OF EQUIPMENT	SPECIFICATION	POWER CAPACITY	REMARKS
M-55	NO.1 NO.2. PUMP	DETACHABLE TYPE, SINGER-LE	75	2
M-56	INLET GATE	PC MANUALLY OPERATED	—	1
M-57	SCREEN	CAGE TYPE SCREEN	—	1
M-58	WATER LEVEL INDICATOR	FLOTT TYPE	—	1
M-59	GEARED TROLLEY CHAIN HOIST	MANUALLY OPERATED	—	1
M-60	CHAIN HOIST	MANUALLY OPERATED	—	1

Figure 3.3.2.42

Nawabganj Lift Station (2)

The Study on North Dhaka Sewerage System in North Dhaka

FLOW DIAGRAM



LINE MARK	DESCRIPTION	TYPE	MARK	DESCRIPTION
S	SEWAGE	GATE VALVE	(Symbol)	PROPOSED
O	DRAIN	CHECK VALVE	(Symbol)	EXISTING
P		PUMP	(Symbol)	
LI		LEVEL INDICATOR	(Symbol)	

EXPLORATOR	NOTES

EQUIPMENT LIST

ITEM NO	NAME OF EQUIPMENT	SPECIFICATION	POWER QUANTITY	REMARKS
ML-105	NO. 1, NO. 2, PUMP	VERTICAL, IMMERSED, 750 x 750 mm x 1750 mm	75, 2	EXISTING
ML-106	SUMP PUMP	IMMERSED PUMP, 1500 x 1500 mm x 1500 mm	15, 1	
ML-107	INLET GATE	P.C. MANUALLY OPERATED, 500 x 1525 mm	-	
ML-108	BYPASS GATE	P.C. MANUALLY OPERATED, 500 x 1525 mm	-	
ML-109	SCREEN	SEWAGE WITH MANUALLY OPERATED FLIGHT TYPE	-	
ML-110	WATER LEVEL INDICATOR	FLIGHT TYPE	-	HIGH/LOW LEVEL SWITCH
ML-111	SCALED TROLLEY CHAIN HOIST	MANUALLY OPERATED, 1500 x 1500 mm	-	

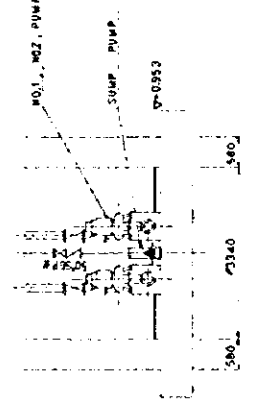
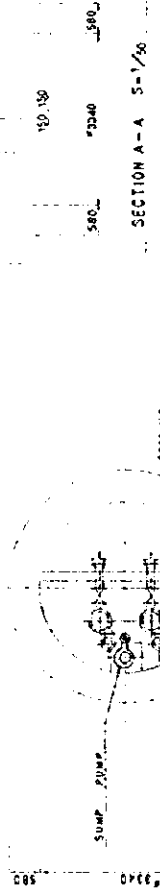
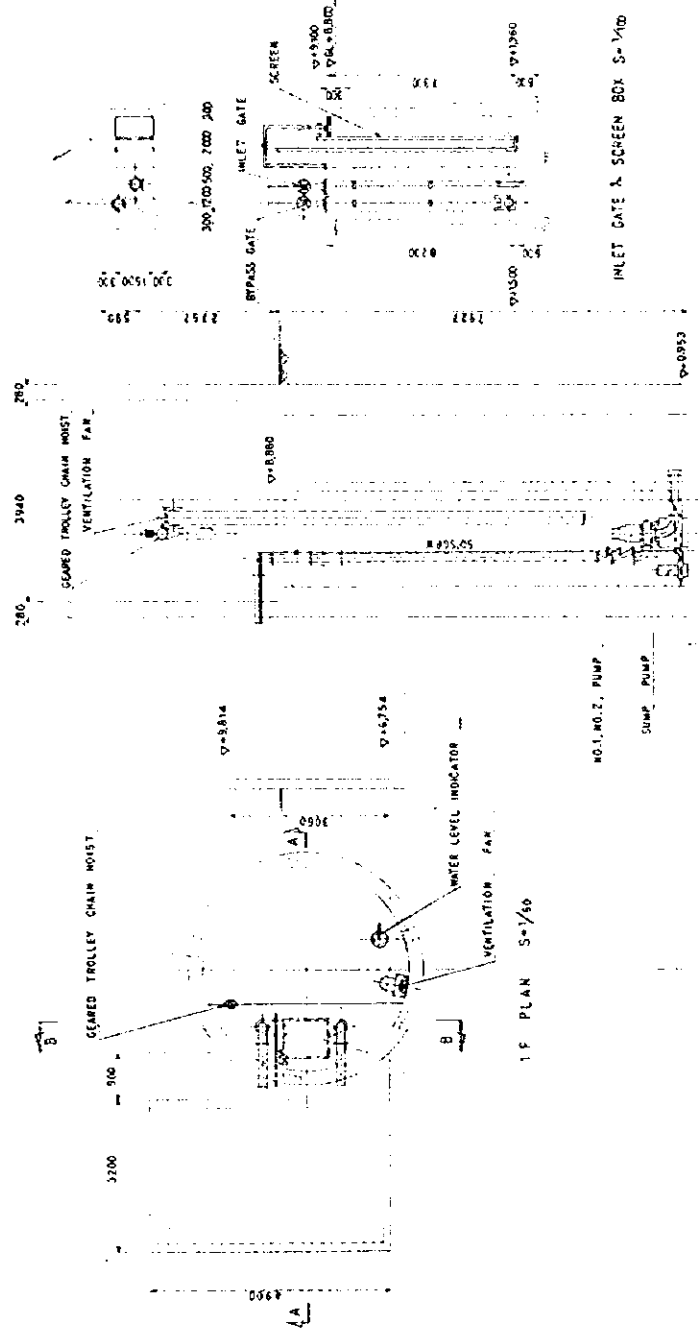
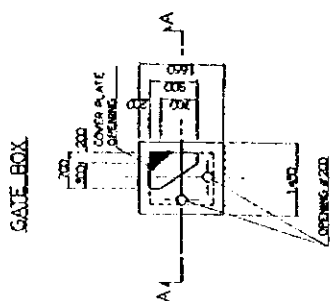
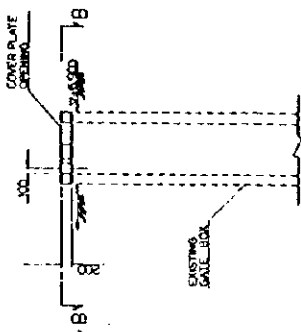


Figure 3.3.2.45

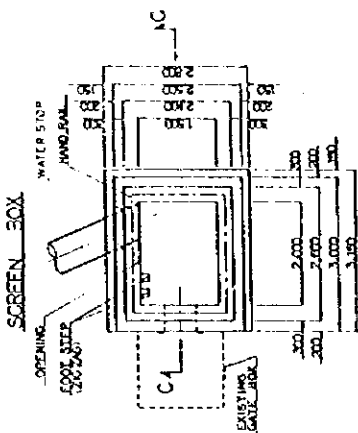
Azimpur Lift Station (3)



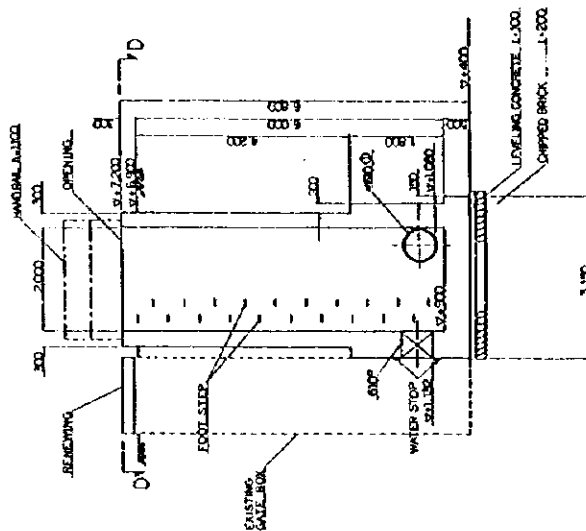
PLAN B-B, S=1/50



SECTION A-A, S=1/50



PLAN C-C, S=1/50



SECTION C-C, S=1/50

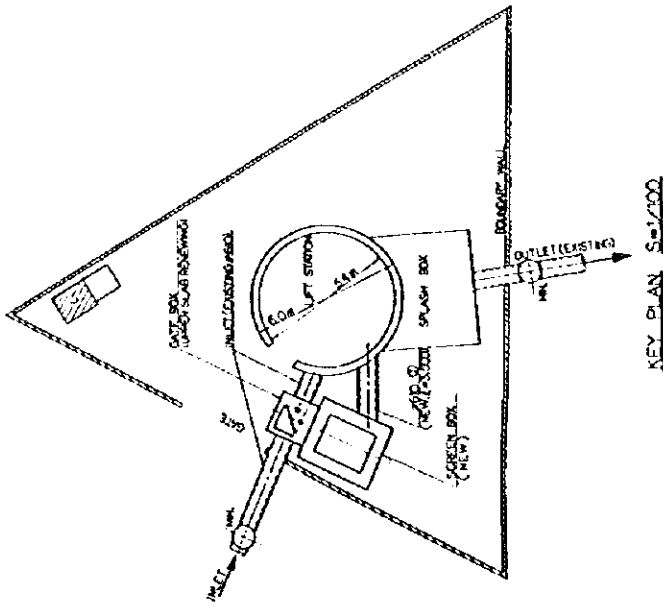
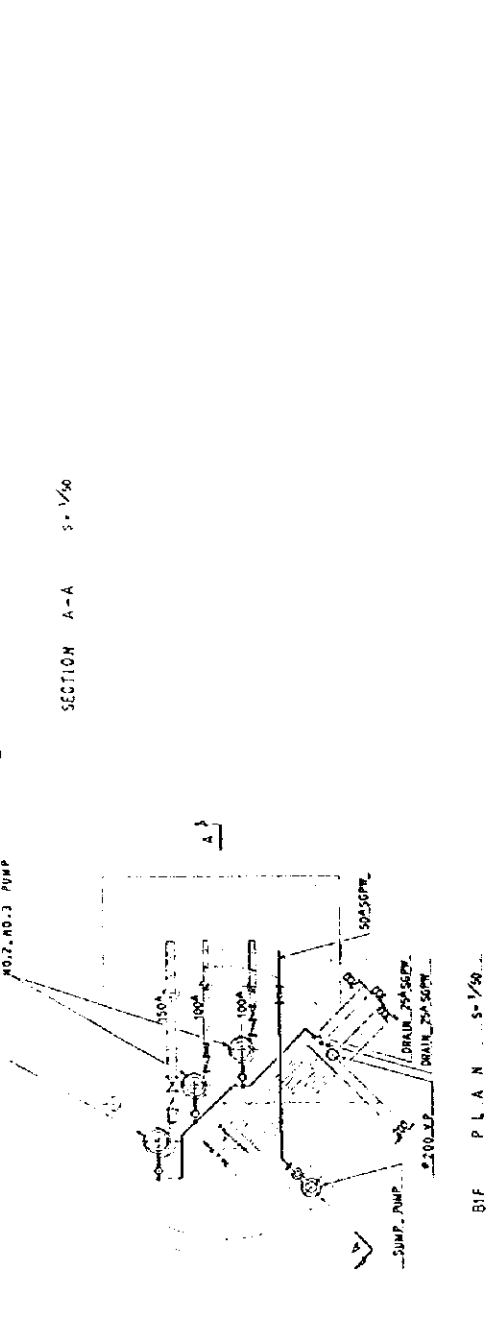
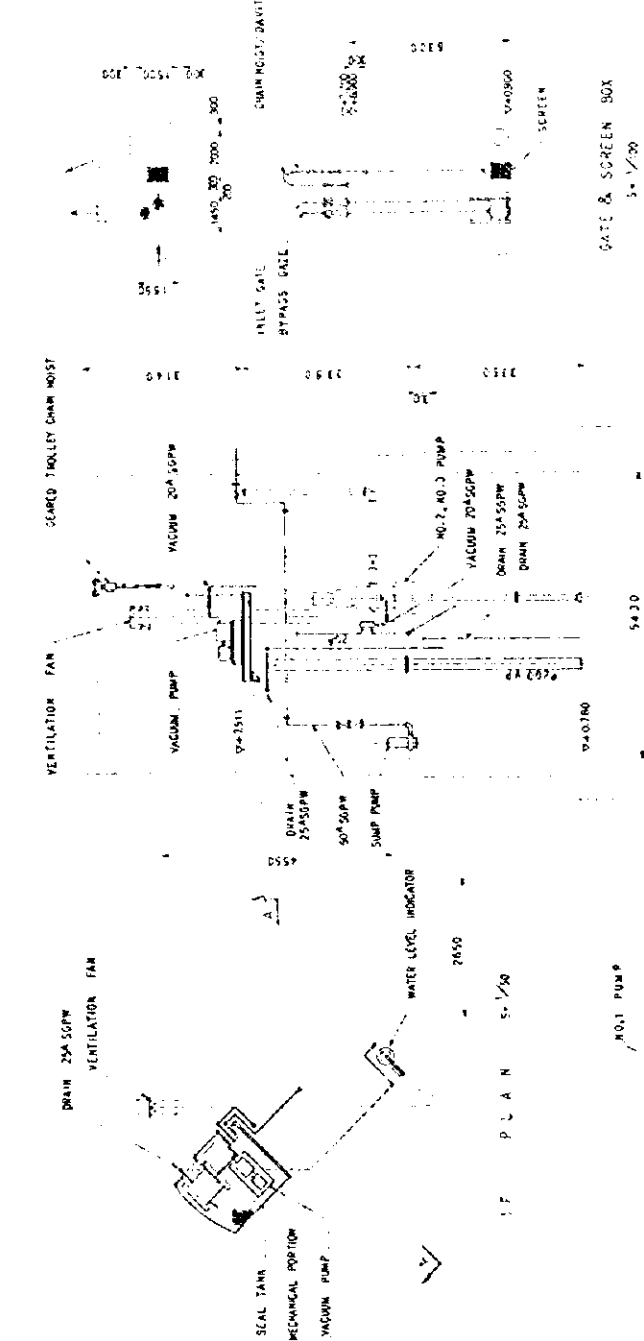


Figure 3.3.2.46
Medical College Lift Station (1)

The Study on North Dhaka Sewerage System in North Dhaka



EXPLANATORY NOTES

LINE	DESCRIPTION
---	PROMISED
---	EXISTING

LEGEND

LINE MARK	DESCRIPTION	MADE	TYPE
---	WATER	---	GATE VALVE
---	SEWAGE	---	CHECK VALVE
---	DRAIN	(P)	PUMP
---	VACUUM	(V)	GATE
(I)	LEVEL INDICATOR		

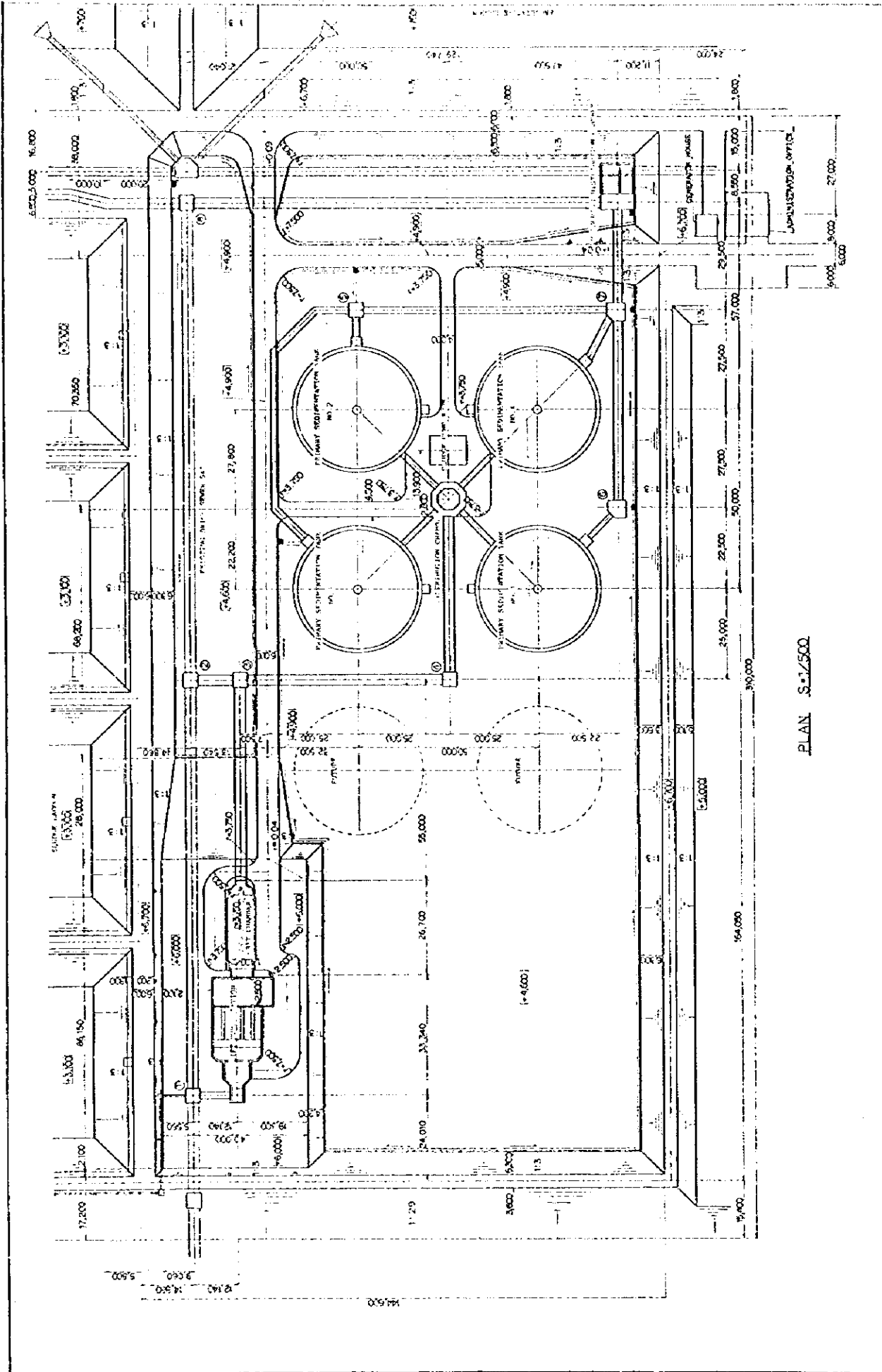
EQUIPMENT LIST

ITEM NO.	NAME OF EQUIPMENT	SPECIFICATION	LOWER CHAMBER (LWC)	UNIT	REMARKS
ML-115	NO.1 PUMP	VERTICAL CENTRIFUGAL	1	1	EXISTING
ML-116	A. B	150 x 23 x 11 mm 7.5	2	2	EXISTING
ML-117	VACUUM PUMP	110 x 11 x 7 mm 7.5	0.5	1	
ML-118	SUMP PUMP	WATER SEAL TYPE 0.7 m ³ /hr x 800 mm	0.5	1	
ML-119	INLET GATE	SUBMERSIBLE PUMP 150 x 0.2 m x 10 m	1	1	
ML-120	BYPASS GATE	FC, MANUALLY OPERATED 600 x 5.87 m	1	1	
ML-121	SCREEN	DITTO 600 x 5.87 m	1	1	
ML-122	WATER LEVEL INDICATOR	EAGE TYPE SCREEN	1	1	NON-LOW LEVEL SWITCH
ML-123	GEARED TROLLEY CHAIN HOIST	FLOAT TYPE	1	1	
ML-124	CHAIN HOIST	MANUALLY OPERATED 0.5 ton x 10 m	1	1	
		MANUALLY OPERATED 0.5 ton x 8 m	1	1	FOR CASE SCREEN

Figure 3.3.2.48
Medical College Lift Station (3)

The Study on North Dhaka Sewerage System in North Dhaka

Appendix 3.4.1 Detail Drawings of Pagla STP

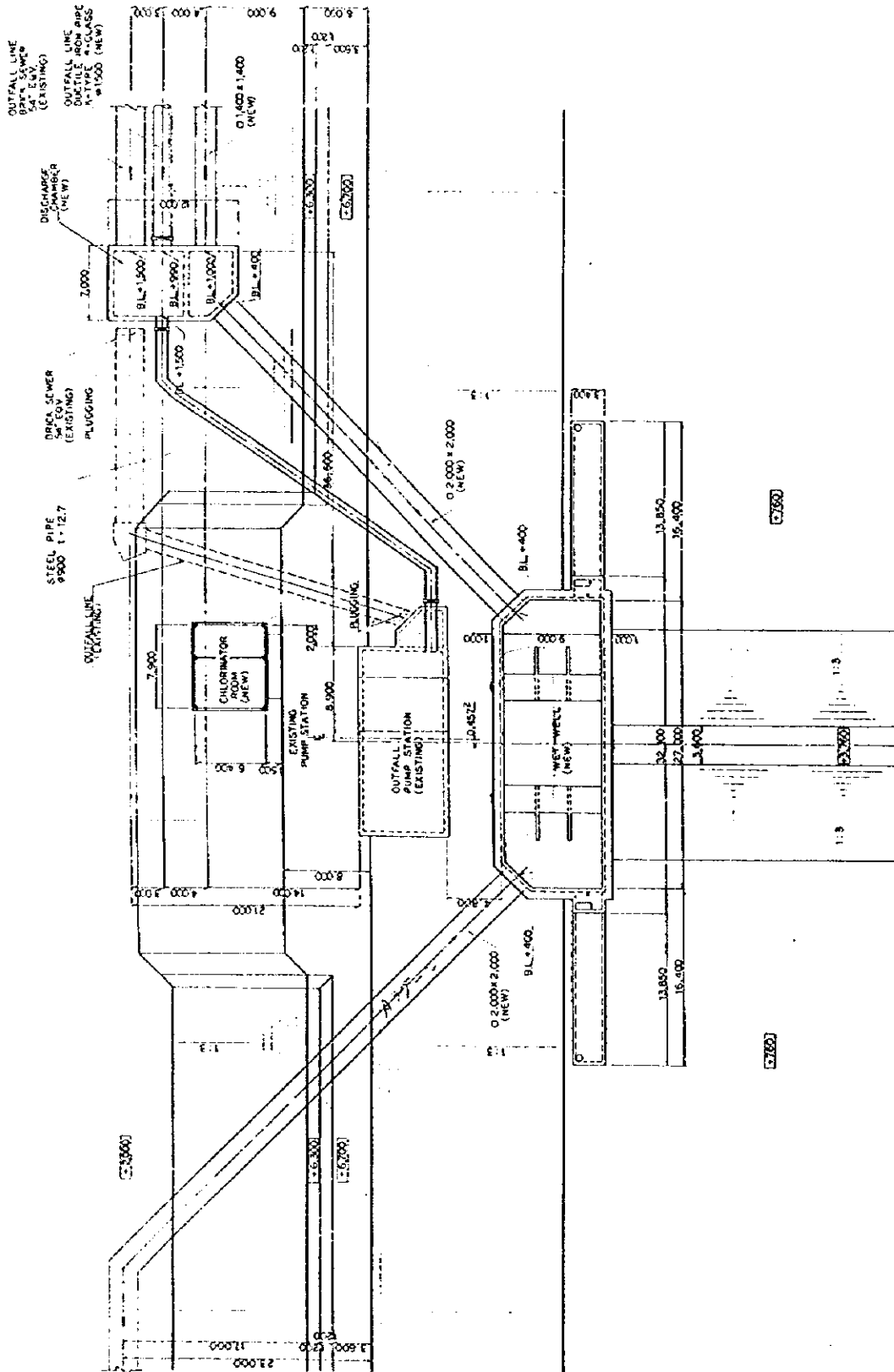


PLAN S-1/500

Figure 3.4.1.1

Detail Plan (1)

The Study on North Dhaka Sewerage System in North Dhaka



PLAN. S-1/200.

Figure 3.4.1.2

Detail Plan (2)

The Study on North Dhaka Sewerage System in North Dhaka

EXTERIOR FINISH SCHEDULE

Column, Corner, Eaves	Fair faced concrete
Base	Fair faced concrete
Wall	Fair faced brick, paint
Roof	Line concrete water proofing (as per drawing), dimension joint

INTERIOR FINISH SCHEDULE

ROOM	FLOOR	WALL	CEILING	Columns
ENTRANCE	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE
OFFICE (WORKSPACE RM)	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE
POWER CONTROL ROOM	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE
WORK SHOP	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE
LABORATORY	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE
TOILET	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE
CONTROL STAIRCASE	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE
Generator	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE	FAIR FACED CONCRETE

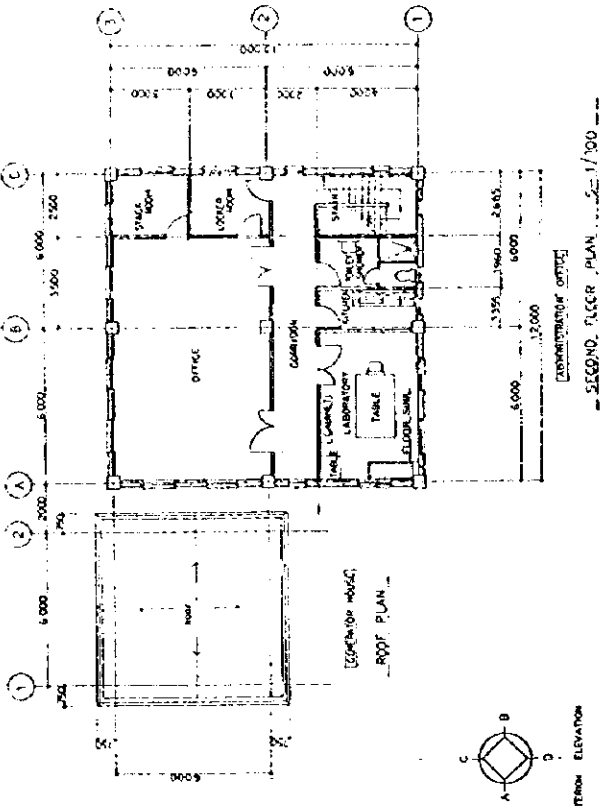
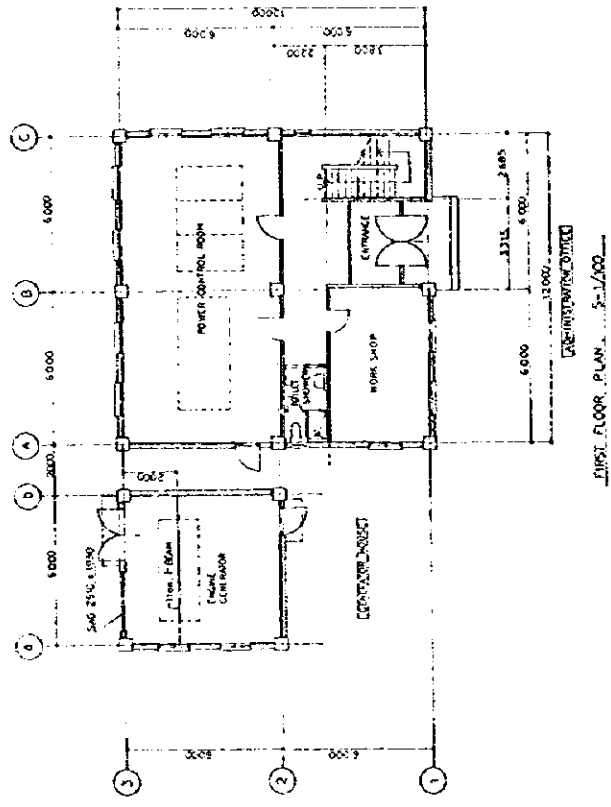
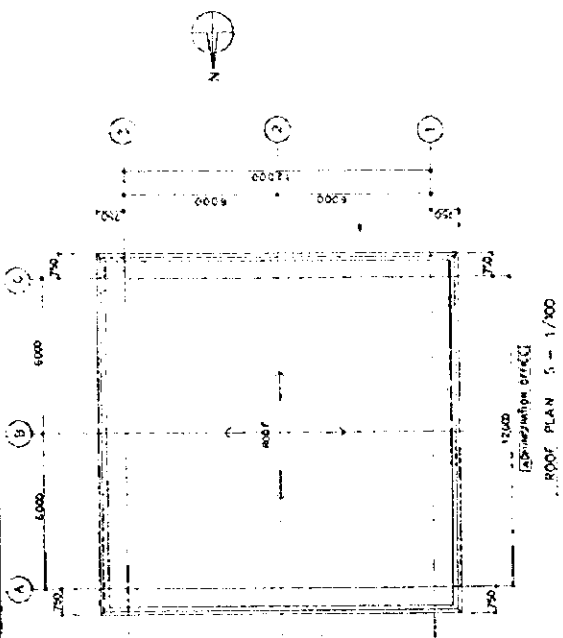


Figure 3.4.1.3

Administration Office (1)

The Study on North Dhaka Sewerage System in North Dhaka

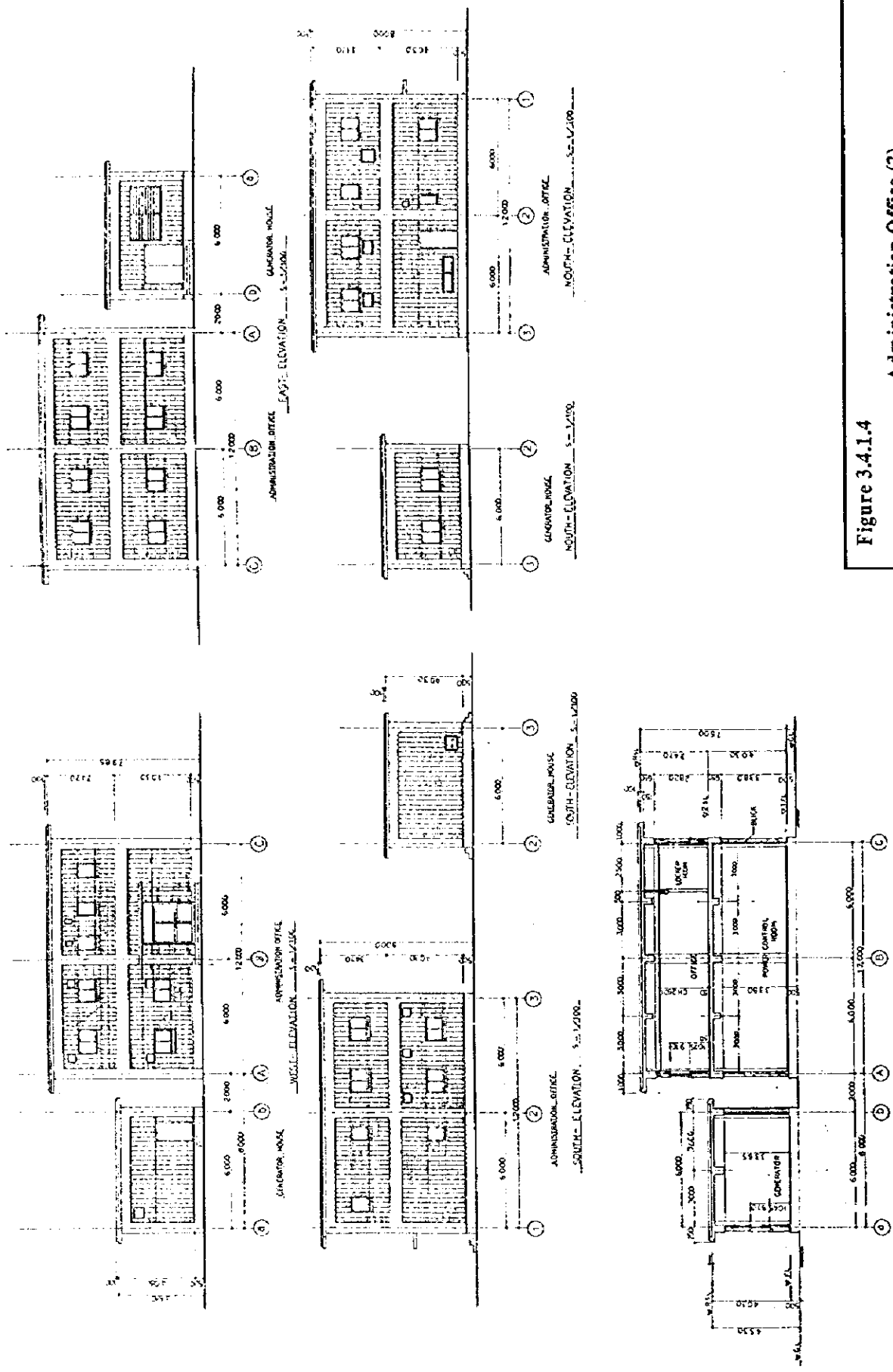
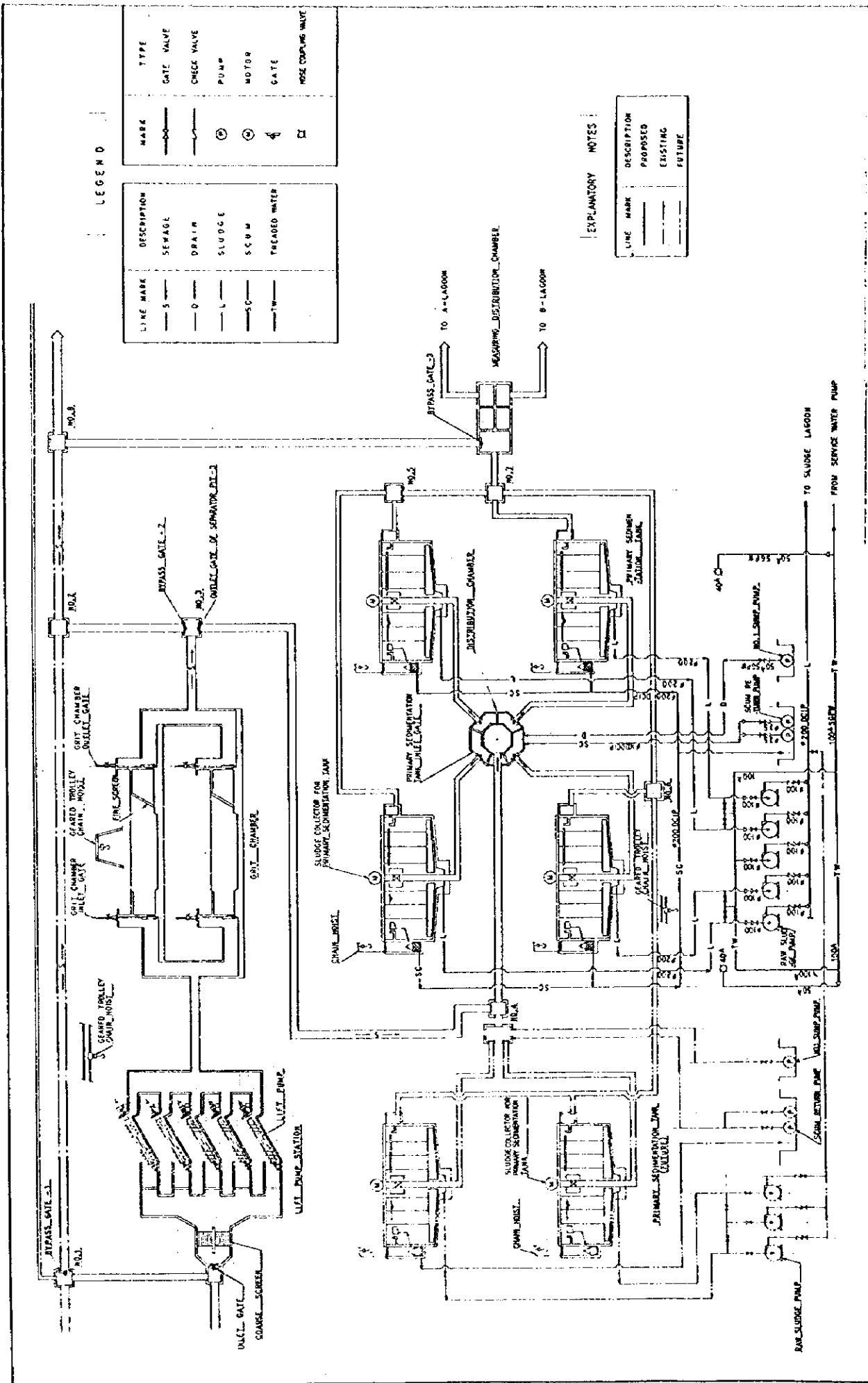


Figure 3.4.1.4
Administration Office (2)
The Study on North Dhaka Sewerage System in North Dhaka



LEGEND

LINE MARK	DESCRIPTION	MARK	TYPE
—S—	SEWAGE	—○—	GATE VALVE
—D—	DRAIN	—□—	CHECK VALVE
—L—	SLUDGE	⊙	PUMP
—SC—	SCUM	⊙	MOTOR
—TW—	TREATED WATER	⊙	GATE
		⊙	ROSE COUPLING VALVE

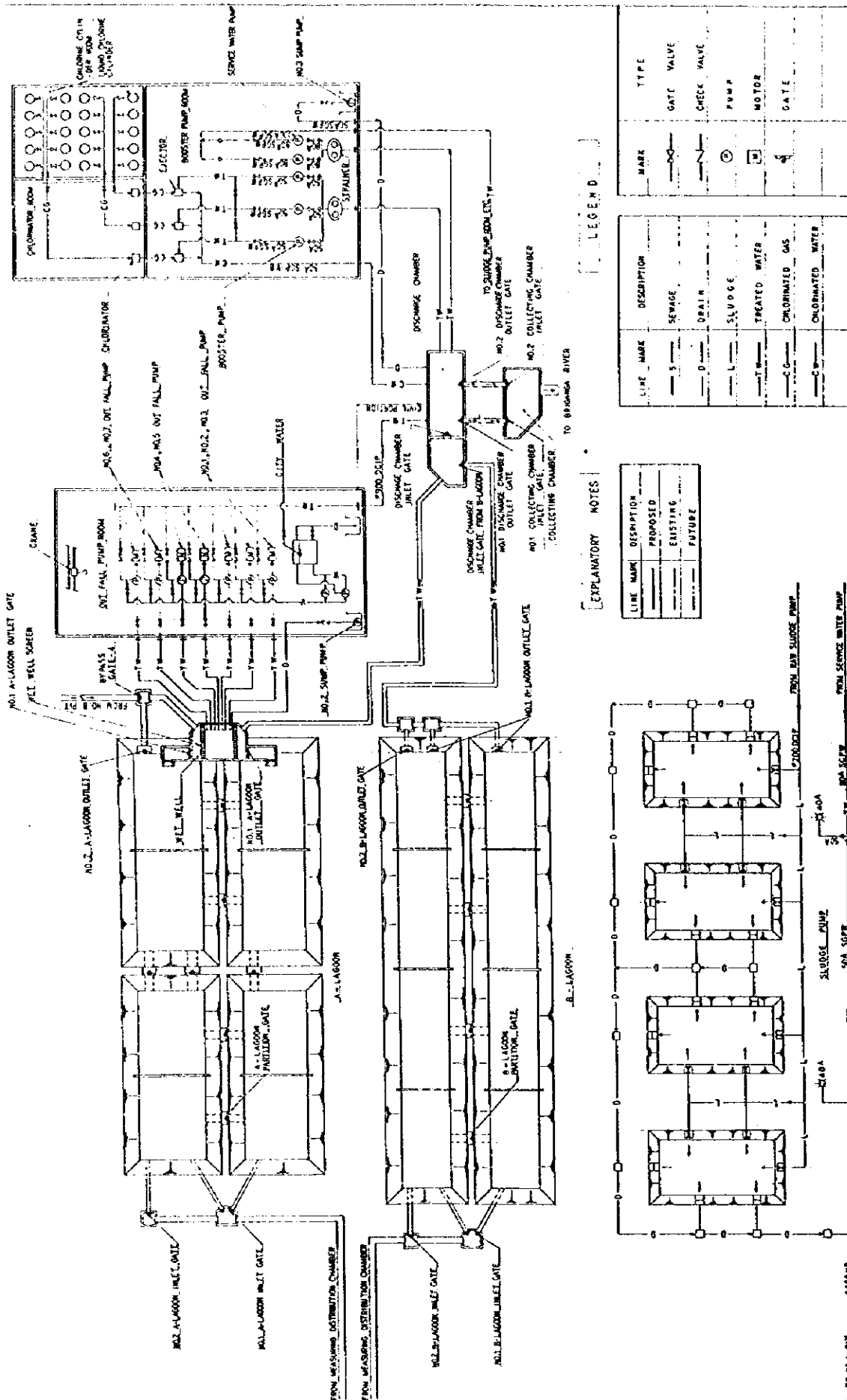
EXPLANATORY NOTES

LINE MARK	DESCRIPTION
—	PROPOSED
---	EXISTING
---	FUTURE

Figure 3.4.1.5

General Flow Diagram (1)

The Study on North Dhaka Sewerage System in North Dhaka



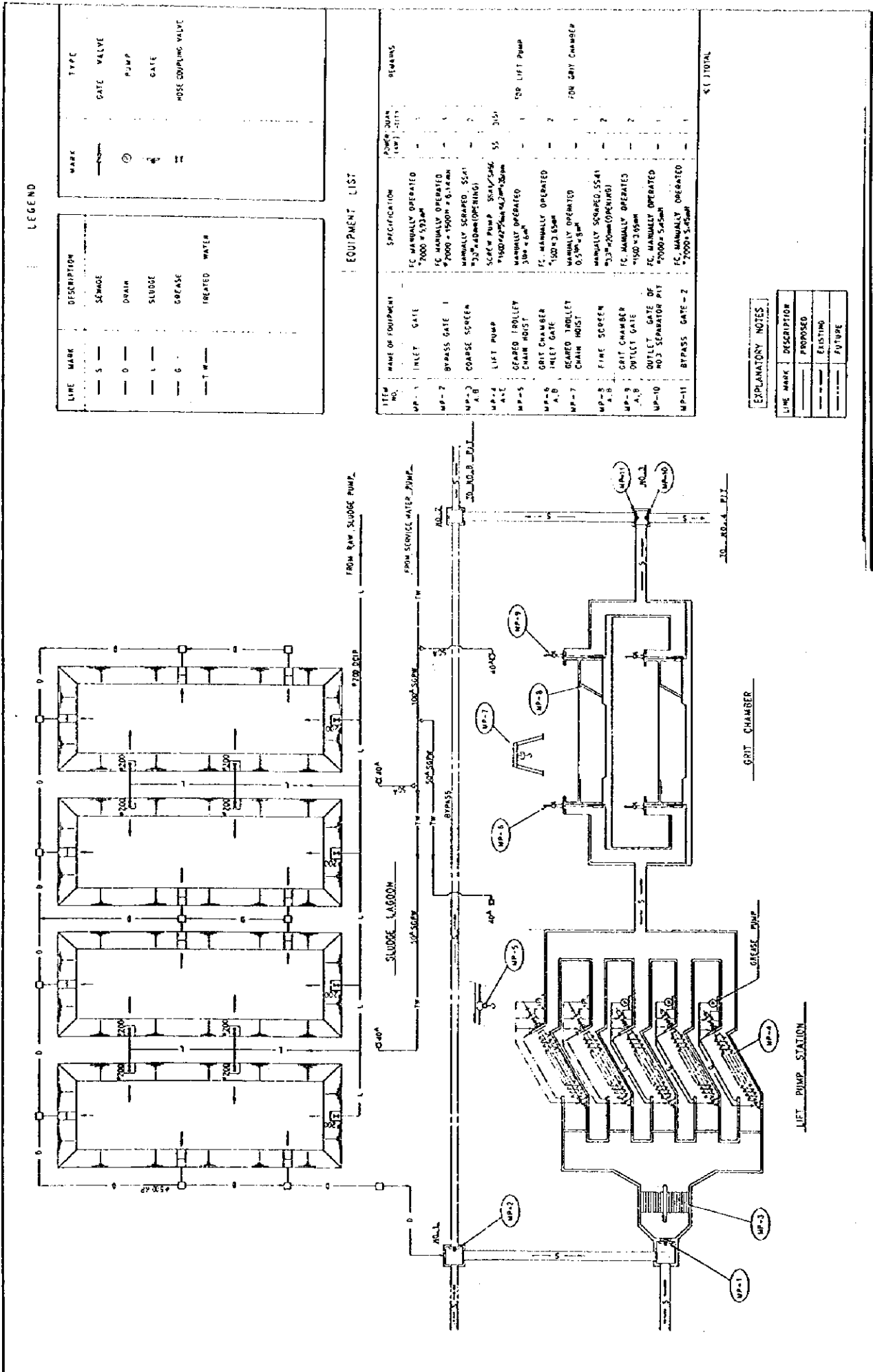
LEGEND

LINE MARK	DESCRIPTION	TYPE
S	SEWAGE	GATE VALVE
D	DRAIN	CHECK VALVE
L	SLUDGE	PUMP
T	TREATED WATER	MOTOR
C	CHLORINATED GAS	GATE
C	CHLORINATED WATER	

EXPLANATORY NOTES

LINE MARK	DESCRIPTION
---	PROPOSED
---	EXISTING
---	FUTURE

Figure 3.4.1.6
 General Flow Diagram (2)
 The Study on North Dhaka Sewerage System in North Dhaka



LEGEND

LINE MARK	DESCRIPTION	MARK	TYPE
— S —	SEWAGE	—	DATE VALVE
— O —	DRAIN	⊙	PUMP
— L —	SLUDGE	⊕	GATE
— G —	GREASE	⊖	HOSE COUPLING VALVE
— T W —	TREATED WATER	—	

EQUIPMENT LIST

ITEM NO.	NAME OF EQUIPMENT	SPECIFICATION	PUMP SHAFT (HP) (LITR)	REMARKS
MP-1	INLET GATE	FC MANUALLY OPERATED 7000 x 532mm	1	
MP-7	BYPASS GATE 1	FC MANUALLY OPERATED 7000 x 1500H x 6.12mm	1	
MP-3	GREASE SCREEN	MANUALLY OPERATED, SS41 750 x 400mm (OPENING)	2	
MP-4	LIFT PUMP	SCREW PUMP, SS41/CASE, SS 1500 x 750 x 1200mm	55	3/4"
MP-5	GEARED TROLLEY CHAIN HOIST	MANUALLY OPERATED 300 x 600mm	1	TOP LIFT PUMP
MP-6	GRIT CHAMBER	FC MANUALLY OPERATED 1500 x 3.65mm	2	
MP-8	INLET GATE	MANUALLY OPERATED 0.50m x 0.8m	1	FOR GRIT CHAMBER
MP-9	GEARED TABLET CHAIN HOIST	MANUALLY OPERATED, SS41 750 x 400mm (OPENING)	2	
MP-10	OUTLET GATE	FC MANUALLY OPERATED 1500 x 3.65mm	2	
MP-11	BY-PASS GATE - 2	FC MANUALLY OPERATED 7000 x 5.45mm	1	

EXPLANATORY NOTES:

LINE MARK	DESCRIPTION
— — —	PROPOSED
— — —	EXISTING
— — —	FUTURE

Figure 3.4.1.7

Flow Diagram of Lift Pump Station, Grit Chamber and Sludge Lagoon

The Study on North Dhaka Sewerage System in North Dhaka

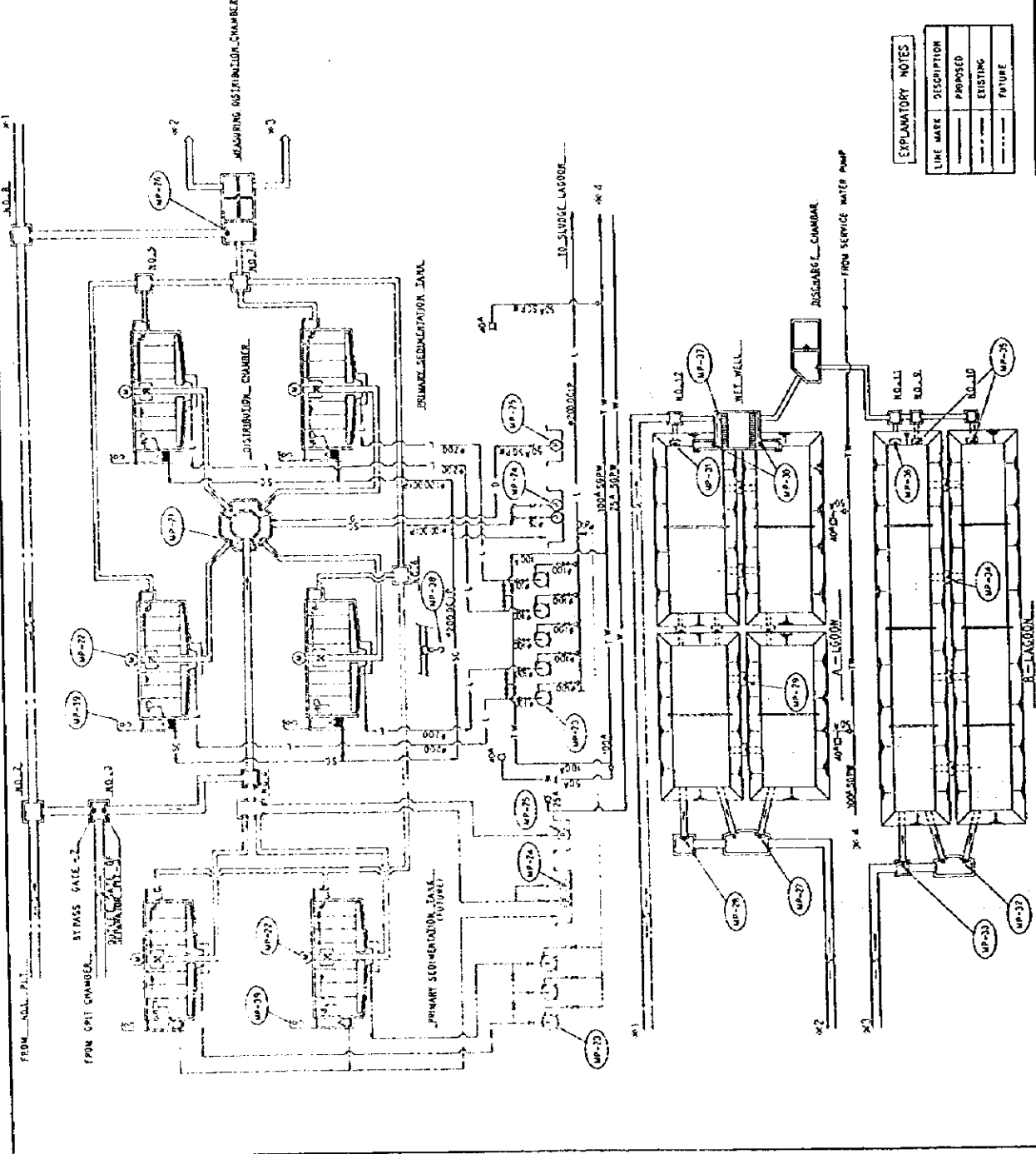
LEGEND

LINE MARK	DESCRIPTION	TYPE
---	SEWAGE	PIPE
- - -	DRAIN	PIPE
---	SLUDGE	PIPE
---	SCUM	PIPE
---	RECAGED WATER	PIPE
---	CITY WATER	PIPE

MARK	TYPE
○	GATE VALVE
○	CHECK VALVE
○	PUMP
○	STOP
○	GATE
○	HOSE COUPLING VALVE

EQUIPMENT LIST

ITEM NO.	NAME OF EQUIPMENT	SPECIFICATION	POWER QUANT. (KW/HP)	REMARKS
WP-21	PRIMARY SEDIMENTATION TANK INLET GATE	FC MANUALLY OPERATED	-	A
WP-22	SLUDGE COLLECTION FOR P1 PRIMARY SEDIMENTATION TANK	*1000 x 5.95m CENTER DRIVEN	3.7	416
WP-23	RAW SLUDGE PUMP	HORIZONTAL SLURRY PUMP	5.5	5.81
WP-24	SCUM RETURN PUMP	PORTABLE TYPE DETACHABLE TYPE SUBMERSIBLE PUMP	1.5	740
WP-25	NO1 SUMP PUMP	SUBMERSIBLE PUMP	0.75	112
WP-26	BYPASS GATE - 3	FC MANUALLY OPERATED	-	1
WP-27	NO1 B-LAGOON INLET GATE	FC MANUALLY OPERATED	-	7
WP-28	NO2 A-LAGOON INLET GATE	FC MANUALLY OPERATED	-	1
WP-29	A-LAGOON PARTITION GATE	FC MANUALLY OPERATED	-	1
WP-30	NO1 A-LAGOON SOLEIL GATE	FC MANUALLY OPERATED	-	7
WP-31	NO2 A-LAGOON OUTLET GATE	FC MANUALLY OPERATED	-	1
WP-32	NO1 B-LAGOON INLET GATE	FC MANUALLY OPERATED	-	7
WP-33	NO2 B-LAGOON INLET GATE	FC MANUALLY OPERATED	-	1
WP-34	NO1 B-LAGOON PARTITION GATE	FC MANUALLY OPERATED	-	1
WP-35	NO2 B-LAGOON OUTLET GATE	FC MANUALLY OPERATED	-	2
WP-36	NO2 B-LAGOON OUTLET GATE	FC MANUALLY OPERATED	-	1
WP-37	WET WELL SCREEN	W 9.0 m x 2.0 m OPENING	-	2
WP-38	GEARED TROLLEY CHAIN HOIST	MANUALLY OPERATED 0.5 ton x 10m	-	1
WP-39	CHAIN HOIST	FC MANUALLY OPERATED 0.5 ton x 9m	-	1



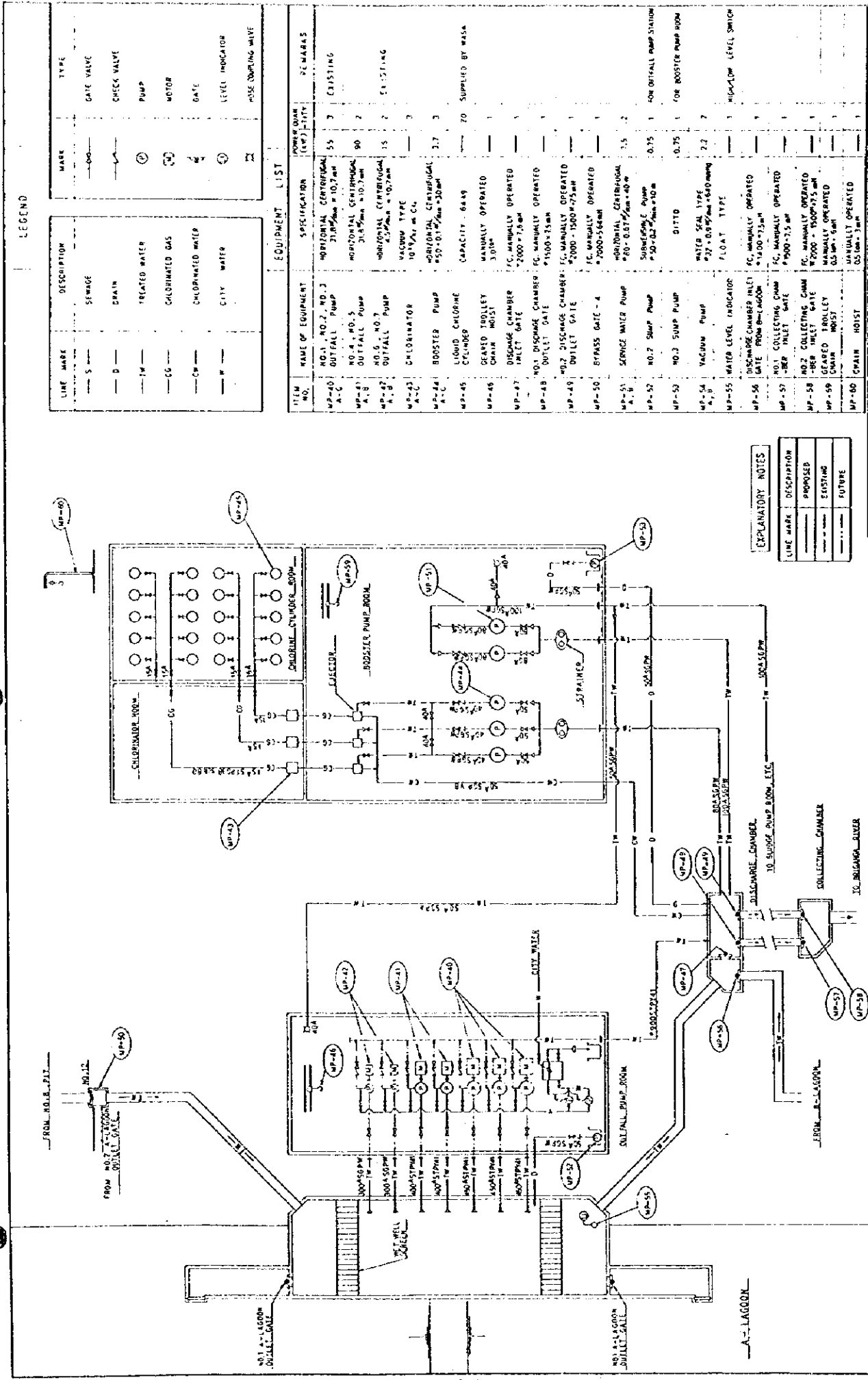
EXPLANATORY NOTES

LINE MARK	DESCRIPTION
---	PROPOSED
- - -	EXISTING
---	FUTURE

Figure 3.4.1.8

Flow Diagram of Primary Sedimentation Tank and Lagoon

The Study on North Dhaka Sewerage System in North Dhaka



LEGEND

LINE MARK	DESCRIPTION	TYPE
S	SEWAGE	GATE VALVE
D	DRAIN	CHECK VALVE
TW	TREATED WATER	PUMP
CG	CHLORINATED GAS	MOTOR
CW	CHLORINATED WATER	GATE
W	CITY WATER	LEVEL INDICATOR
		ROSE COUPLING VALVE

ITEM NO.	NAME OF EQUIPMENT	SPECIFICATION	POWER (KW)	QTY	REMARKS
MP-40	NO. 1, NO. 2, NO. 3 OUTFALL PUMP	HORIZONTAL CENTRIFUGAL 3100mm x 10.7mm	55	7	EXISTING
MP-41	NO. 4, NO. 5 OUTFALL PUMP	HORIZONTAL CENTRIFUGAL 3100mm x 10.7mm	90	2	
MP-42	NO. 6, NO. 7 OUTFALL PUMP	HORIZONTAL CENTRIFUGAL 4500mm x 10.7mm	15	2	EXISTING
MP-43	CHLORINATOR	VACUUM TYPE 1019A, m C4	3	1	
MP-44	BOOSTER PUMP	VERTICAL CENTRIFUGAL 550-017mm x 30mm	3.7	3	
MP-45	LIQUID CHLORINE CYLINDER	CAPACITY - 64kg		70	SUPPLIED BY WASA
MP-46	GEARED TROLLEY CHAIN HOIST	MANUALLY OPERATED 300kg		1	
MP-47	DISCHARGE CHAMBER INLET GATE	FC, MANUALLY OPERATED 2000 x 75mm		1	
MP-48	NO. 1 DISCHARGE CHAMBER OUTLET GATE	FC, MANUALLY OPERATED 1500 x 15mm		1	
MP-49	NO. 2 DISCHARGE CHAMBER OUTLET GATE	FC, MANUALLY OPERATED 2000 x 1500 x 75mm		1	
MP-50	BYPASS GATE - 4	FC, MANUALLY OPERATED 2000 x 564mm		1	
MP-51	SERVICE WATER PUMP	HORIZONTAL CENTRIFUGAL 800-0817mm x 40mm	1.5	2	
MP-52	NO. 7 SUMP PUMP	SUBMERSIBLE PUMP 150-027mm x 10mm	0.75	1	FOR OUTFALL PUMP STATION
MP-53	NO. 3 SUMP PUMP	DITTO	0.75	1	FOR BOOSTER PUMP ROOM
MP-54	VACUUM PUMP	WATER SEAL TYPE 22-009mm x 640mm	2.2	7	
MP-55	WATER LEVEL INDICATOR	FLOAT TYPE		1	HIGH/LOW LEVEL SWITCH
MP-56	DISCHARGE CHAMBER INLET GATE FROM B-LAGOON	FC, MANUALLY OPERATED 1100 x 75mm		1	
MP-57	NO. 1 COLLECTING CHAMBER INLET GATE	FC, MANUALLY OPERATED 1500 x 75mm		1	
MP-58	NO. 2 COLLECTING CHAMBER INLET GATE	FC, MANUALLY OPERATED 2000 x 1500 x 75mm		1	
MP-59	GEARED TROLLEY CHAIN HOIST	MANUALLY OPERATED 0.5 ton - 6mt		1	
MP-60	CHAIN HOIST	MANUALLY OPERATED 0.5 ton - 3mt		1	

LINE MARK	DESCRIPTION
---	PROPOSED
---	EXISTING
---	FUTURE

Figure 3.4.1.9
Flow Diagram of Outfall Pump and Chlorination Facility
The Study on North Dhaka Sewerage System in North Dhaka

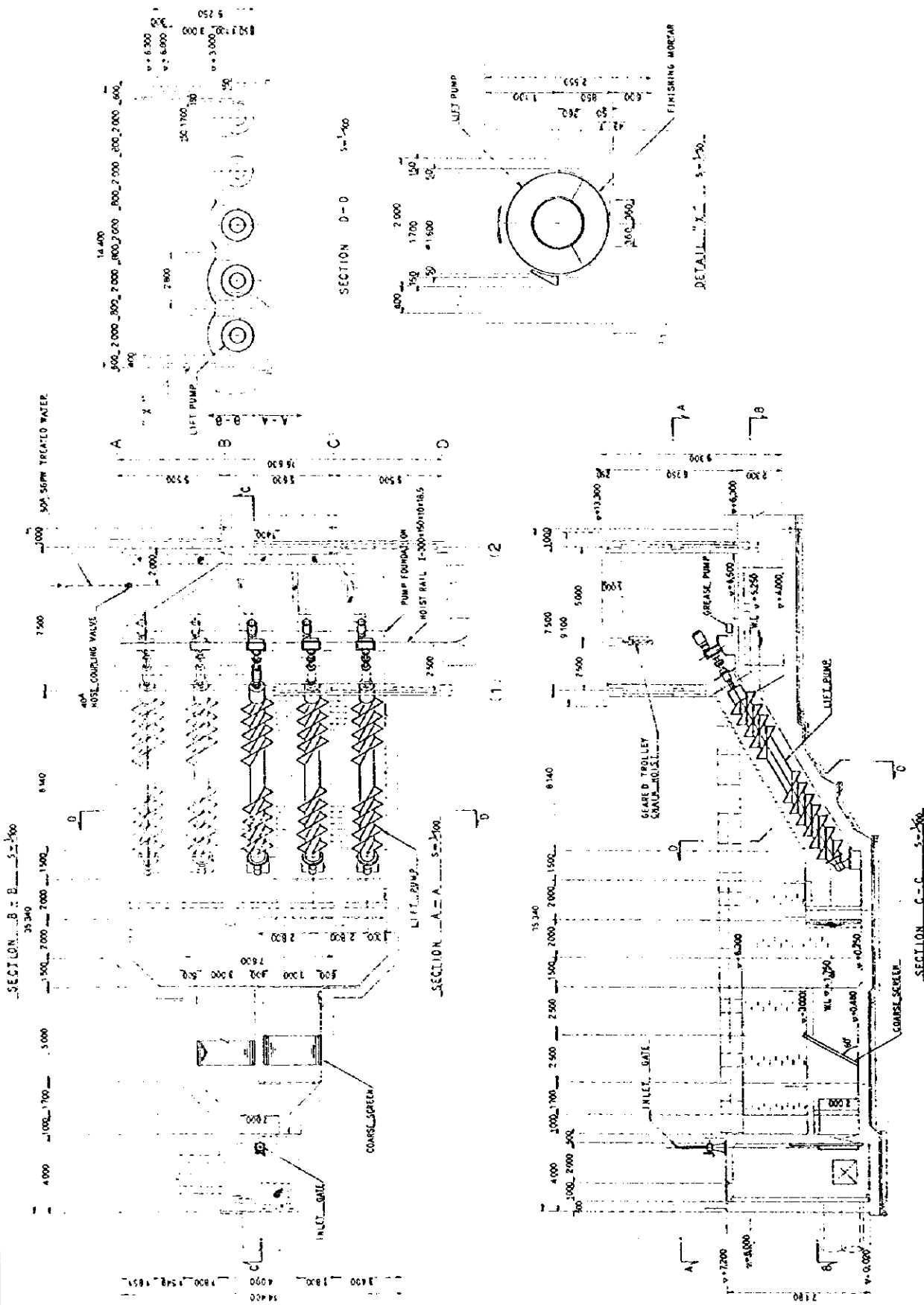
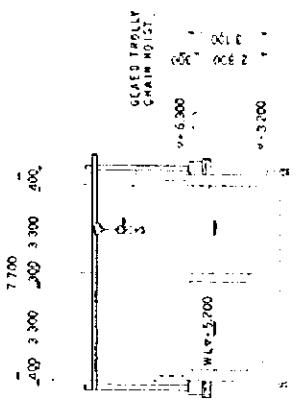
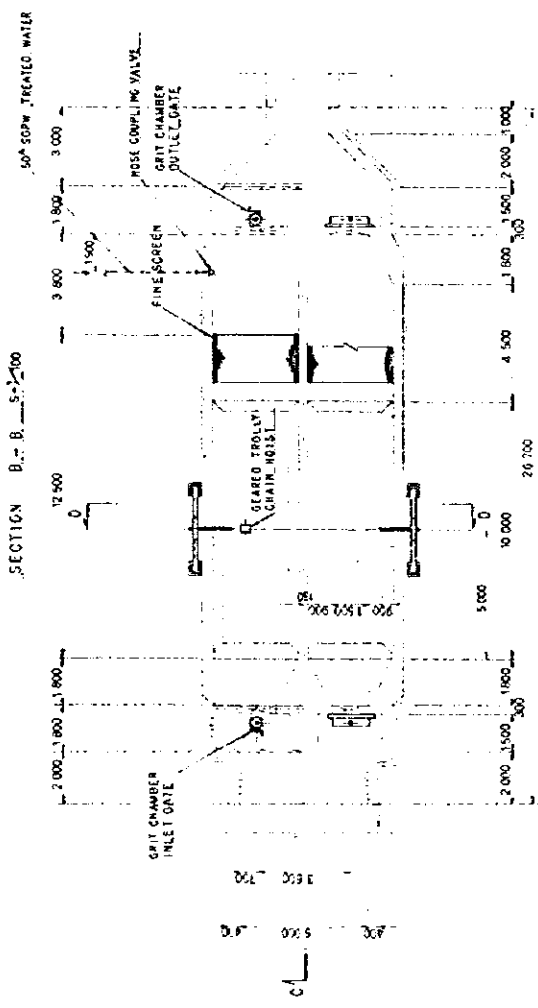
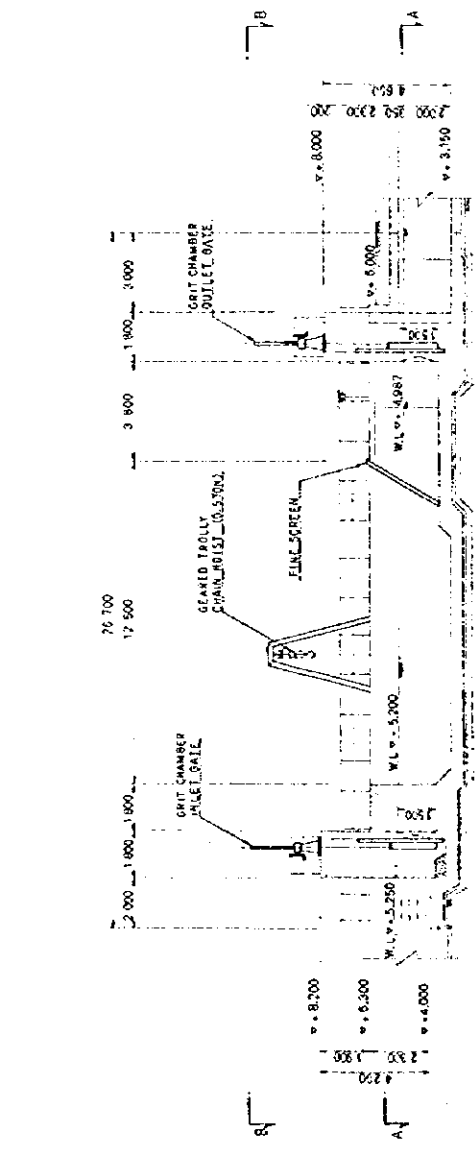


Figure 3.4.1.10

Lift Pump Station



SECTION A-A S-100

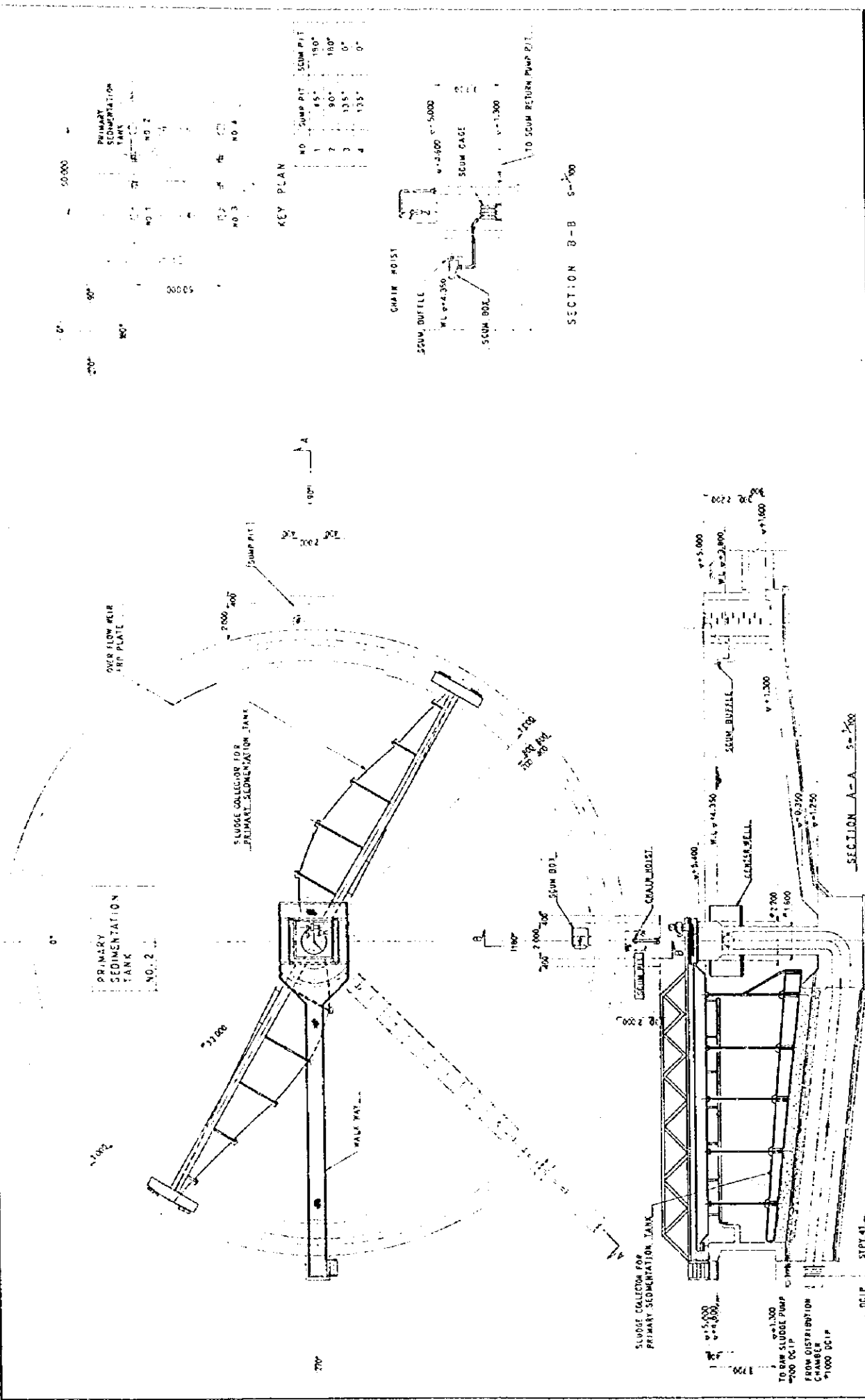


SECTION C-C S-100

Figure 3.4.1.11

Grit Chamber

The Study on North Dhaka Sewerage System in North Dhaka



KEY PLAN

NO	SCUM PIT	SCUM PIT
1	45°	180°
2	90°	180°
3	135°	0°
4	135°	0°

Figure 3.4.1.12

Primary Sedimentation Tank

The Study on North Dhaka Sewerage System in North Dhaka

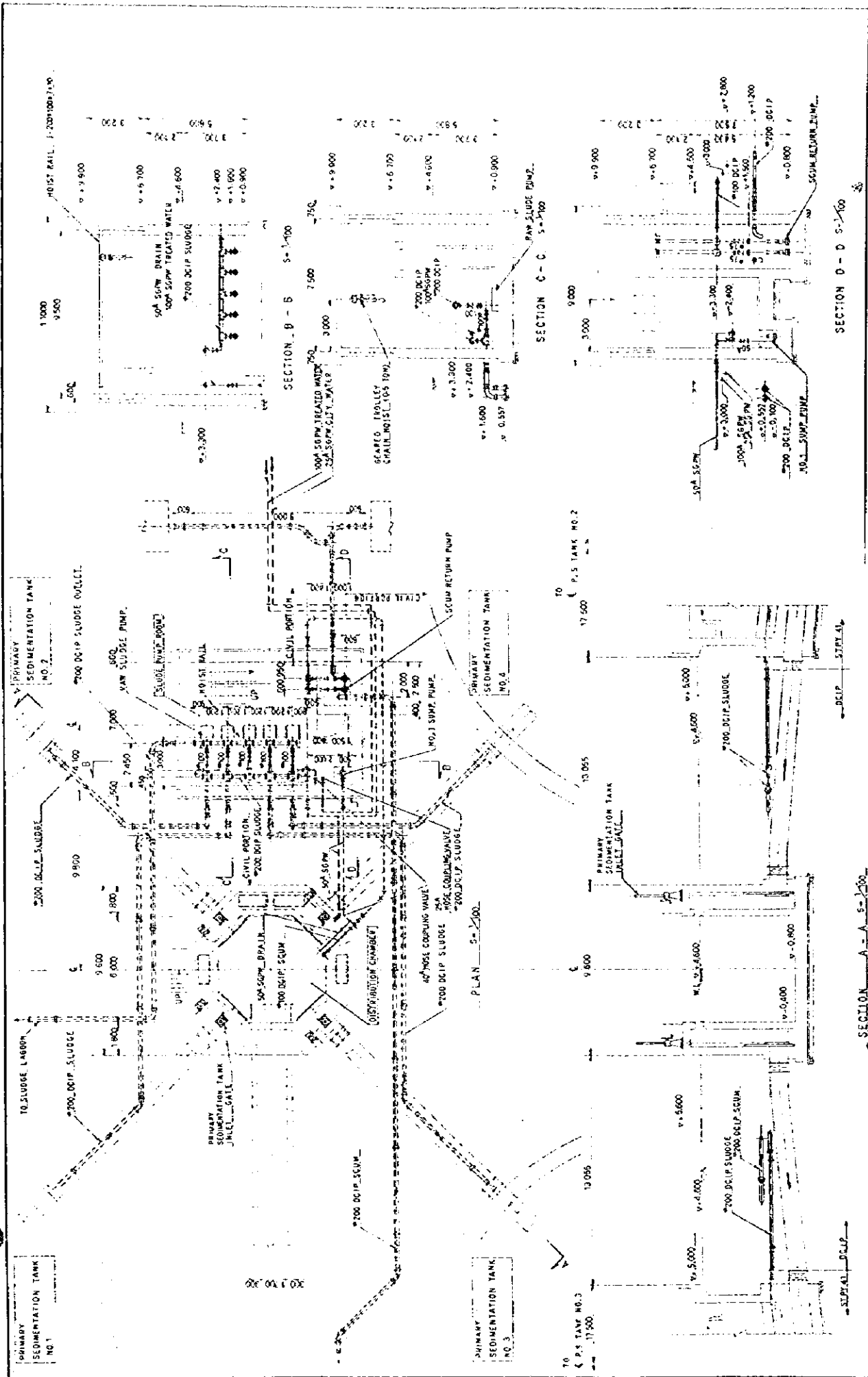


Figure 3.4.1.13

Distribution Chamber, Sludge Pump Room

The Study on North Dhaka Sewerage System in North Dhaka

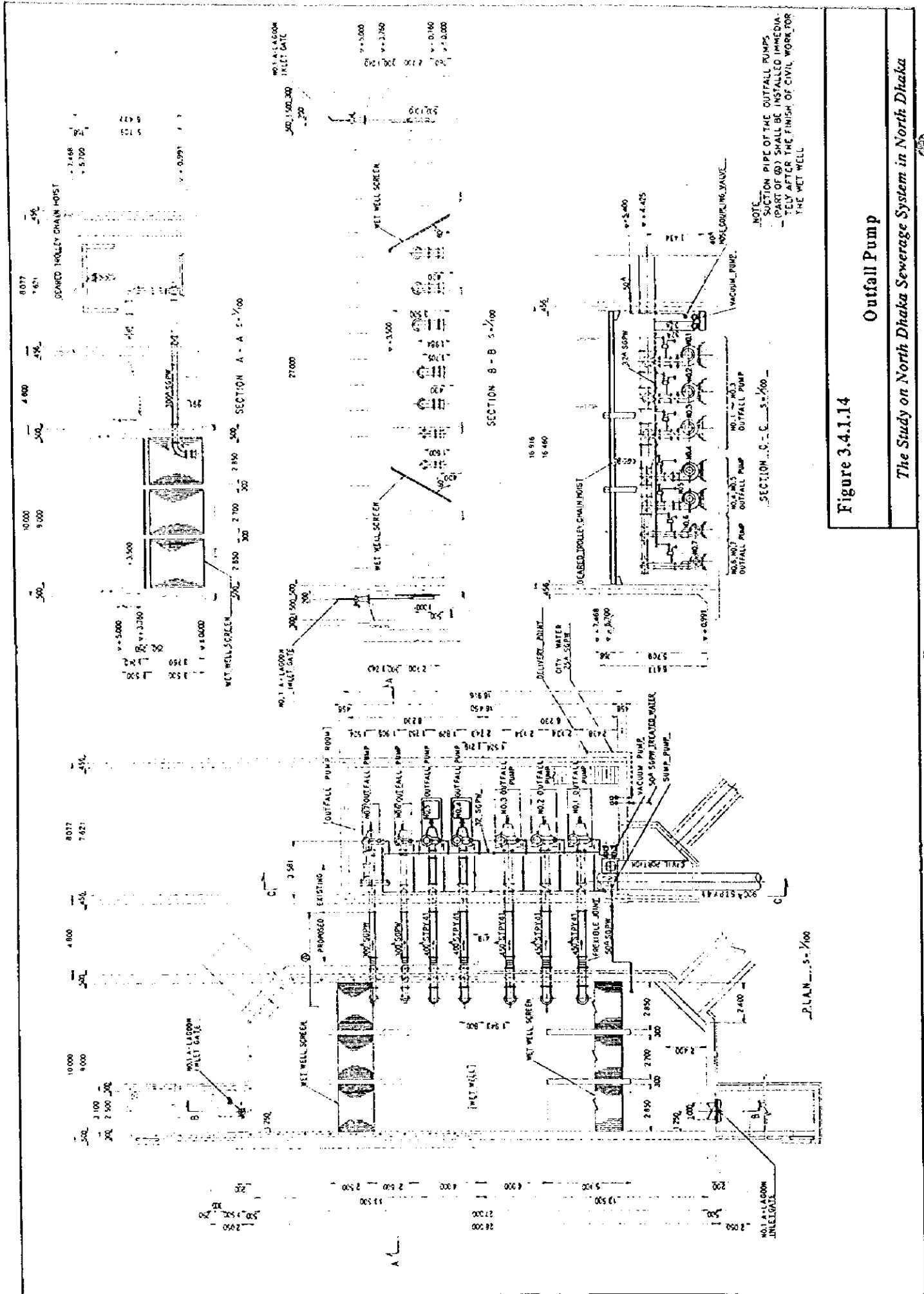


Figure 3.4.1.14

Outfall Pump

The Study on North Dhaka Sewerage System in North Dhaka

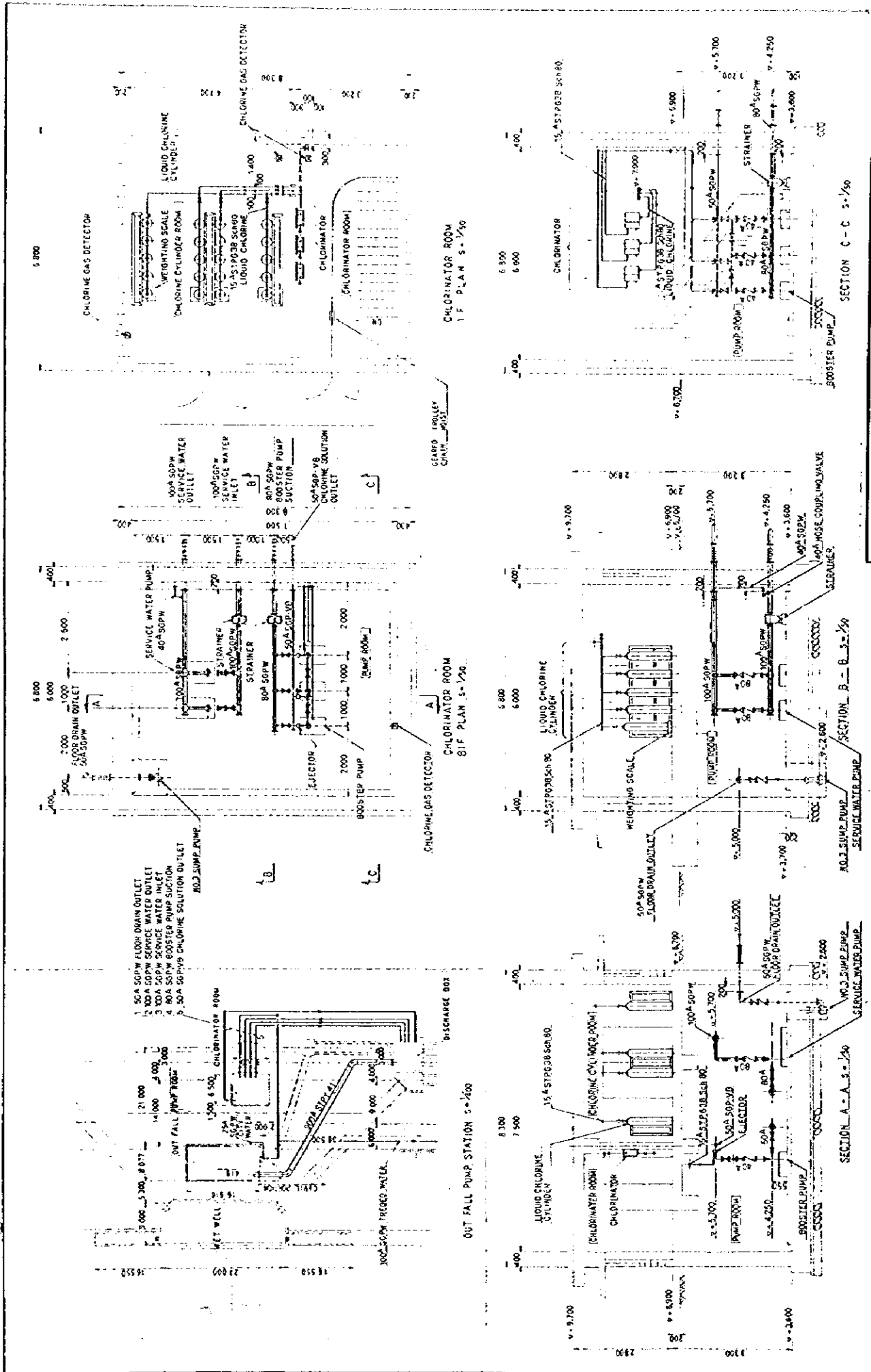


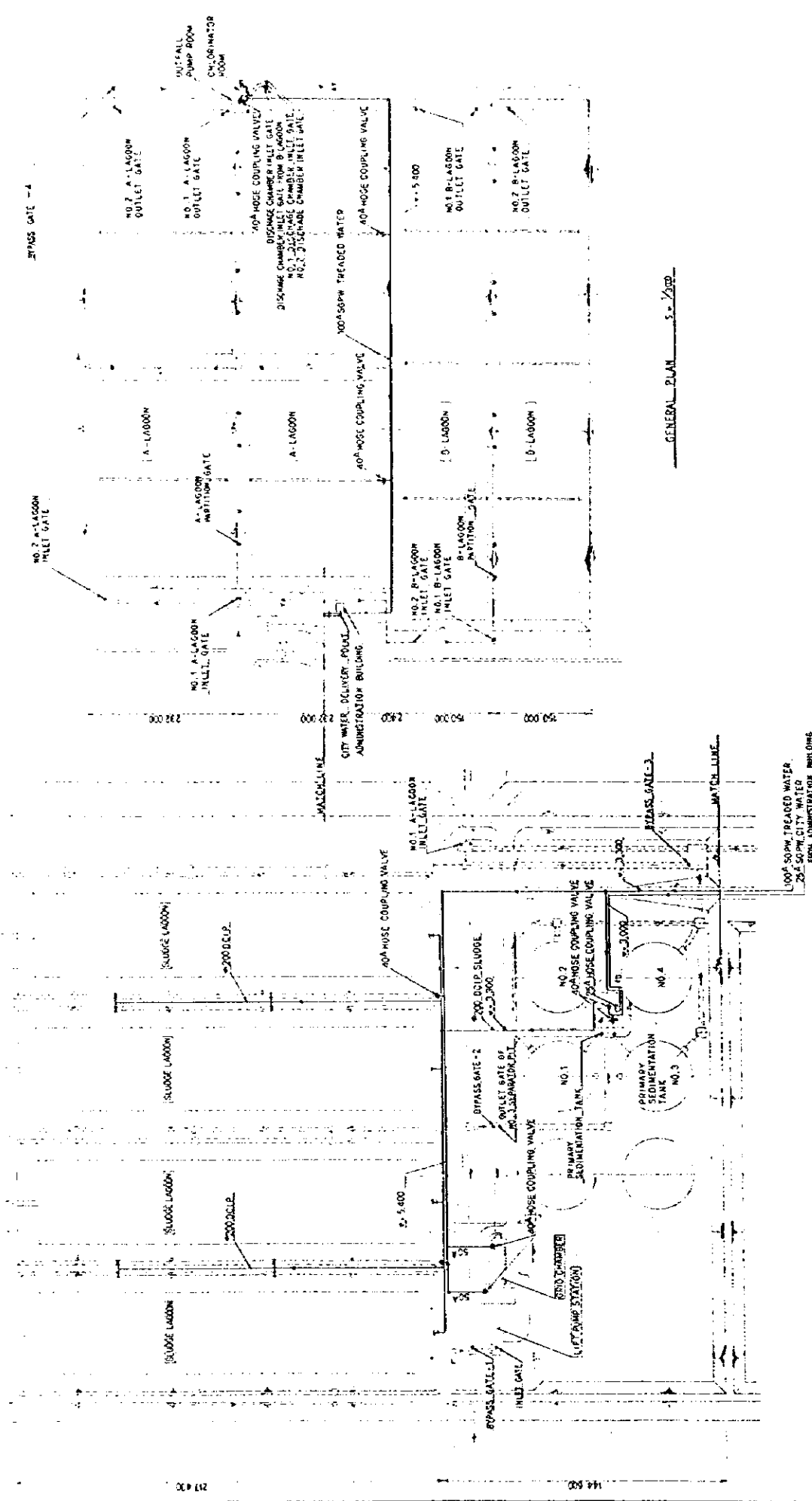
Figure 3.4.1.15
Chlorination Facility
The Study on North Dhaka Sewerage System in North Dhaka

-15 400

400 - 67 400 - 269 600

25 000 338 000

415 500



PLAN 9-1100

GENERAL PLAN 5-1100

Figure 3.4.1.16

General Plan of Pipe Arrangement

The Study on North Dhaka Sewerage System in North Dhaka

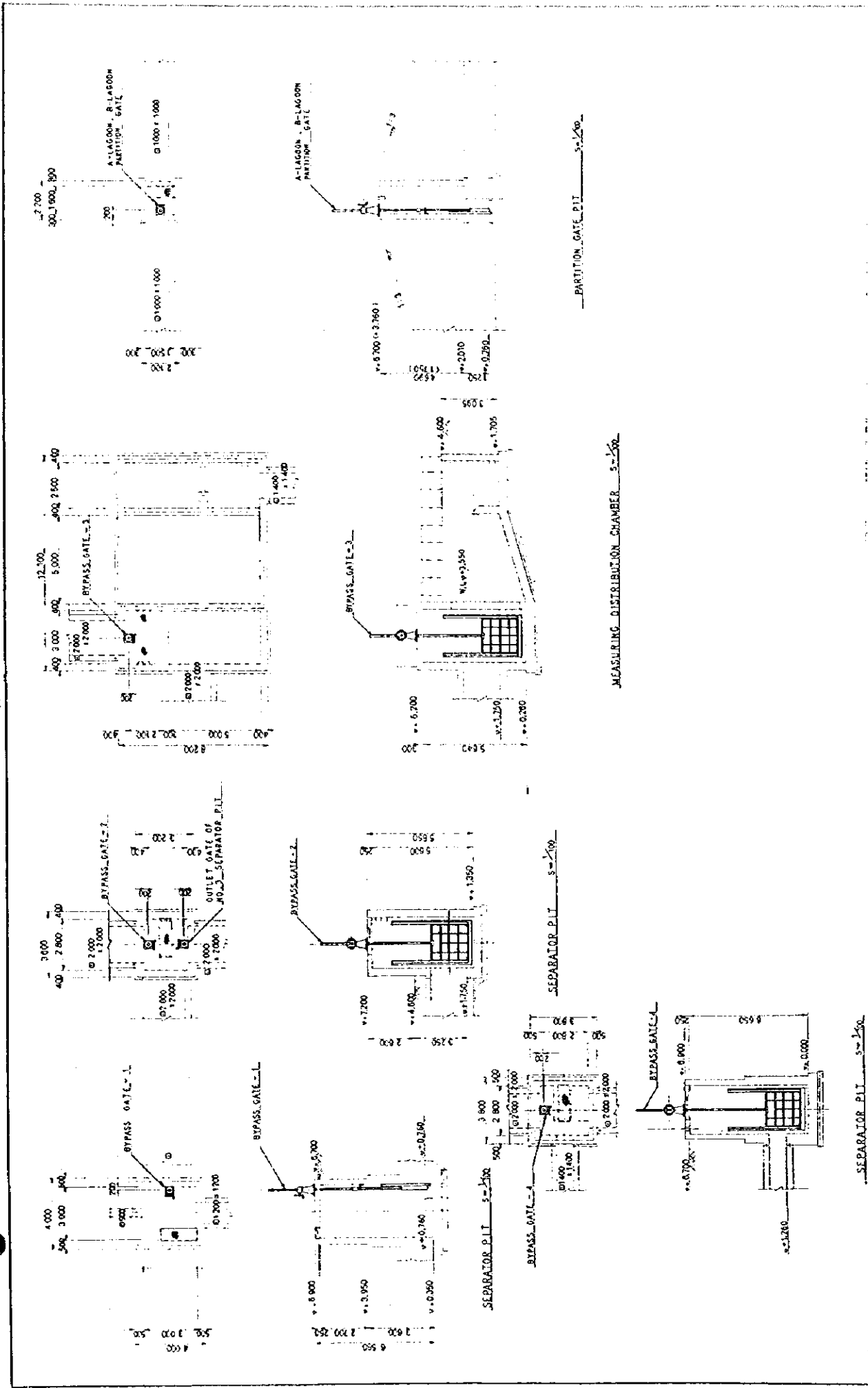


Figure 3.4.1.17

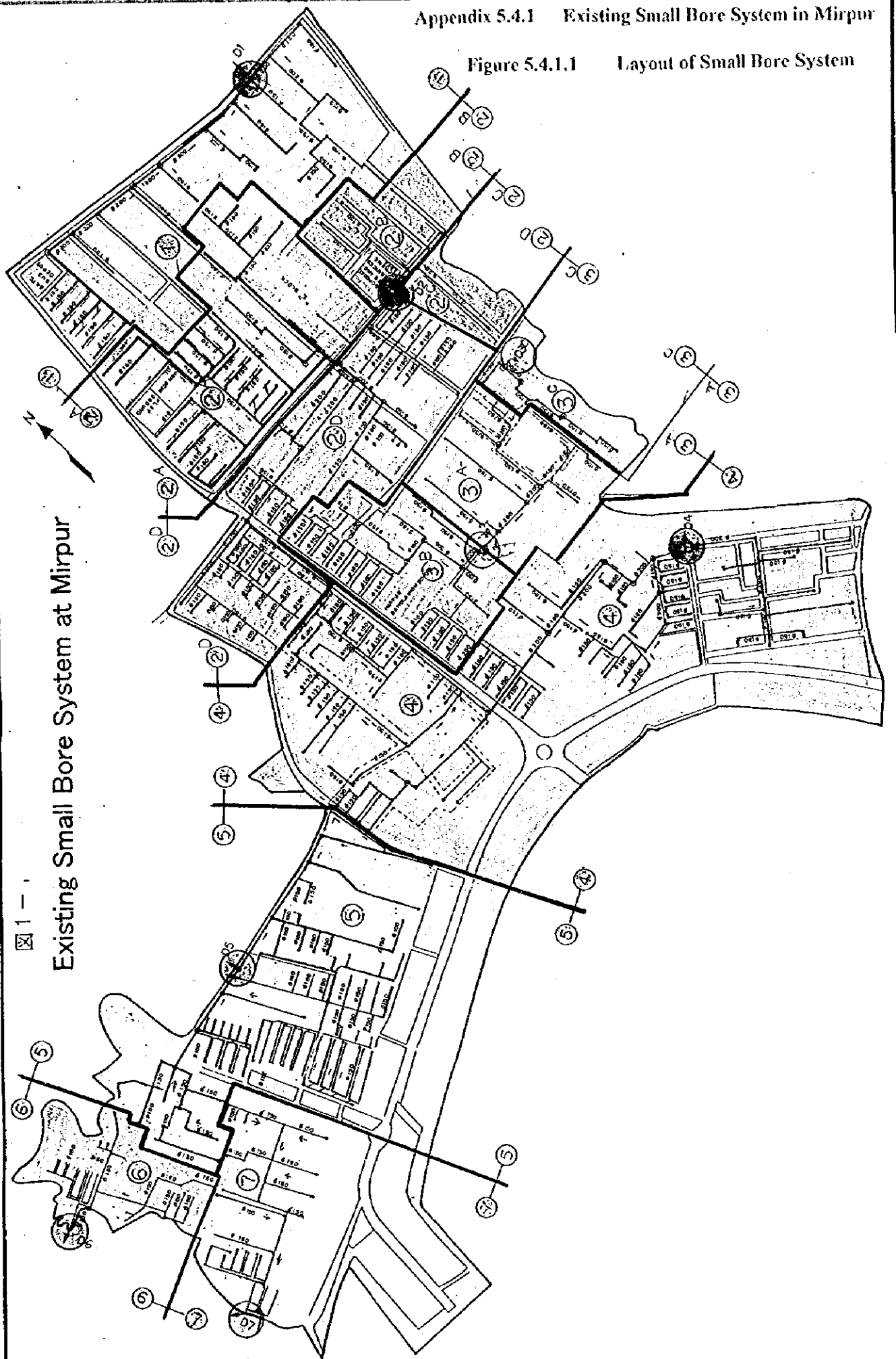
Gate Pit (1)

A. 5

PRESENT STATUS IN NORTH DHAKA



Figure 5.4.1.1 Layout of Small Bore System



Existing Small Bore System at Mirpur

1 - 1

Table 5.4.1.1 Summary of Quantity Calculation










Item		Unit	Quantity	Remark	
1	No. of Served Household	HH	16,806		
2	Served Area	m ²	5,068,960		
3	Total Pipe Length	φ 50mm	m	-	
		φ 100mm	m	4,842	
		φ 150mm	m	59,859	
		φ 200mm	m	5,493	
		φ 300mm	m	1,226	
		φ 400mm	m	364	
		Total	m	71,784	
4	New Septic Tank	(9.0 × 3.0) (A)800 	Numbers	27	
		(5.25 × 2.75) (B)600 	Numbers	33	
			Numbers	59	
		Total	Numbers	119	
5	Septic Tank	Proposed Septic Tank 	Numbers	271	
		Existing Septic Tank 	Numbers	440	
		Total	Numbers	711	
6	Manhole	Proposed Clean Out 	Numbers	1,258	
		Proposed Manhole 	Numbers	108	
		Total	Numbers	1,355	
7	Pit	Proposed Pit 	Numbers	123	
		Service Pits & Pipe Work 	Numbers	1,844	
		Total	Numbers	1,967	

Table 5.4.1.2 Pipe Length and Number of Connections by Area

Served Area No.	Served Population	Septic Tank						PIT				Total Pipe Length					Served Area (m ²)
		New		Proposed	Existing	Proposed Clean Out	Proposed Manhole	PIT	PIT	φ 100mm (m)	φ 150mm (m)	φ 200mm (m)	φ 300mm (m)	φ 400mm (m)			
		Existing	Proposed														
D1	2,473	0	0	11	78	38	121	20	12	648	1,021	5,682	223	0	0	429,360	
D2 ^A	1,383	0	0	25	1	60	170	4	23	267	2,958	5,721	0	0	354	485,370	
D2 ^B	506	0	0	0	15	15	25	2	2	164	22	1,281	90	0	0	153,000	
D2 ^C	480	0	0	0	14	0	19	3	0	0	0	620	198	0	0	44,800	
D2 ^D	2,735	1	1	15	36	50	172	12	10	99	0	8,383	1,163	312	0	342,150	
D3 ^A	835	0	0	0	23	27	46	7	0	273	0	2,158	297	0	0	173,250	
D3 ^B	755	0	0	8	10	25	78	5	8	219	0	3,443	0	0	0	238,350	
D3 ^C	698	1	1	0	18	23	45	5	4	161	0	1,940	640	0	0	29,950	
D4	2,550	10	10	0	14	114	240	16	16	0	36	11,192	1,078	178	364	1,358,890	
D5	2,393	11	11	0	58	30	228	10	32	0	481	11,625	763	52	0	1,092,250	
D6	621	2	2	0	3	32	53	7	7	0	324	2,455	336	70	0	201,840	
D7	902	2	2	0	1	36	61	6	9	0	0	3,896	446	260	0	519,750	
Total	16,331	27	27	59	271	450	1,258	97	123	1,831	4,842	58,396	5,234	872	718	5,068,960	

Table 5.4.1.3 Detailed Pipe and Number of Connections by Section in Area D1

section No.	Population	Septic Tank				Proposed Clean Out	Proposed Manhole	PIT			Total Pipe Length					Served Area (m ²)		
		New		Proposed	Existing													
1	308	0	0	6	5	7	40	0	10	44	99	1,734	0	0	0	0	0	
2	428	0	0	0	6	12	21	6	0	43	0	823	223	0	0	0	0	
3	220	0	0	0	2	14	7	0	0	76	0	532	0	0	0	0	0	
4	322	0	0	0	10	2	15	4	0	95	170	539	0	0	0	0	0	
5	432	0	0	0	19	0	6	1	0	142	311	0	0	0	0	0	0	
6	306	0	0	0	20	0	10	1	0	113	188	484	0	0	0	0	0	
7	349	0	0	0	16	3	17	3	2	112	253	851	0	0	0	0	0	
8	108	0	0	5	0	0	5	5	0	33	0	719	0	0	0	0	0	
Total	2,473	0	0	11	78	38	121	20	12	658	1,021	5,682	223	0	0	0	0	0

Table S.4.1.4 Detailed Pipe and Number of Connections by Section in Area D2^A

section No.	Population	Septic Tank					Proposed Clean Out	Proposed Manhole	PIT	Total Pipe Length					Served Area (m ²)	
		New		Proposed	Existing	PIT				φ 100mm (m)	φ 150mm (m)	φ 200mm (m)	φ 300mm (m)	φ 400mm (m)		
D2 ^A																
1	297	0	0	15	0	2	76	1	9	8	1,293	3,051	0	0	0	0
2	293	0	0	1	0	12	19	2	3	42	585	890	0	0	0	0
3	318	0	0	0	1	7	19	1	0	43	517	243	0	0	0	0
4	498	0	0	6	0	15	29	0	6	87	360	800	0	0	0	0
5	314	0	0	3	0	18	16	2	5	66	92	416	0	0	0	0
6	118	0	0	0	0	6	11	8	0	29	111	321	0	354	0	0
Total	1,838	0	0	25	1	60	170	14	23	275	2,958	5,721	0	354	0	0

Table 5.4.1.5 Detailed Pipe and Number of Connections by Section in Area D2^B

section No.	Population	Septic Tank						Existing	Proposed Clean Out	Proposed Manhole	PIT			Total Pipe Length					Served Area (m ²)	
D2 ^B																				
4	304	0	0	0	10	9	21	1	2	105	22	1,039	0	0	0	0	0	0	0	0
5	202	0	0	0	5	6	4	1	0	59	0	242	90	0	0	0	0	0	0	0
Total	506	0	0	0	15	15	25	2	2	164	22	1,281	90	0	0	0	0	0	0	0

Table S.4.1.6 Detailed Pipe and Number of Connections by Section in Area D2^C













section No.	Population	Septic Tank				Existing	Proposed Clean Out	Proposed Manhole	PIT			Total Pipe Length					Served Area (m ²)
																	
D2 ^C																	
9	480	0	0	0	14	0	19	3	0	0	0	620	198	0	0		
Total	480	0	0	0	14	0	19	3	0	0	0	620	198	0	0		0

Table 5.4.1.7 Detailed Pipe and Number of Connections by Section in Area D2^D









section No.	Population	Septic Tank						Proposed Clean Out	Proposed Manhole	PIT		Total Pipe Length					Served Area (m ²)
		New		Proposed	Existing	PIT				φ 100mm (m)	φ 150mm (m)	φ 200mm (m)	φ 300mm (m)	φ 400mm (m)			
																	
D2 ^D																	
9	292	0	0	0	13	0	17	2	0	0	0	720	172	0	0		
10	548	0	0	0	14	0	12	1	0	0	0	734	0	0	0		
11	434	1	2	0	8	0	39	0	5	0	0	1,870	0	0	0		
12	222	0	0	4	3	6	40	3	4	34	0	1,667	487	0	0		
13	464	0	0	0	6	12	19	0	0	49	0	853	0	0	0		
14	262	0	0	0	3	10	7	1	0	16	0	333	137	48	0		
15	103	0	0	0	3	4	10	2	0	0	0	0	366	0	0		
16	410	0	0	11	0	4	28	3	1	0	0	2,207	0	284	0		
Total	2,735	1	2	15	50	36	172	12	10	99	0	8,384	1,162	312	0		0

Table 5.4.1.8 Detailed Pipe and Number of Connections by Section in Area D3^A

section No.	Population	Septic Tank				PIT			Total Pipe Length					Served Area (m ²)	
		New	Proposed	Existing	Proposed Clean Out	Proposed Manhole	φ 100mm (m)	φ 150mm (m)	φ 200mm (m)	φ 300mm (m)	φ 400mm (m)				
D3 ^A															
1	125	0	0	0	4	0	50	0	203	0	0	0	0	0	0
2	240	0	0	12	10	4	71	0	375	230	0	0	0	0	0
3	116	0	0	2	9	0	38	0	375	0	0	0	0	0	0
4	286	0	0	12	20	2	91	0	1,018	0	0	0	0	0	0
5	68	0	0	1	3	1	23	0	187	67	0	0	0	0	0
Total	835	0	0	27	46	7	273	0	2,158	297	0	0	0	0	0

Table 5.4.1.9 Detailed Pipe and Number of Connections by Section in Area D3^B








section No.	Population	Septic Tank					Proposed Clean Out	Proposed Manhole	PIT		Total Pipe Length					Served Area (m ²)		
		New		Proposed	Existing	PIT			PIT	φ 100mm (m)	φ 150mm (m)	φ 200mm (m)	φ 300mm (m)	φ 400mm (m)				
																		
D3 ^B																		
6	198	0	0	5	3	5	32	0	5	38	0	1.725	0	0	0	0		
7	361	0	0	3	3	12	38	5	3	103	0	1.395	260	0	0	0		
8	196	0	0	0	4	8	8	0	0	73	0	323	0	0	0	0		
Total	755	0	0	8	10	25	78	5	8	214	0	3.443	260	0	0	0	0	0

Table S.4.1.10 Detailed Pipe and Number of Connections by Section in Area D3^C




section No.	Population	Septic Tank						PIT					Total Pipe Length					Served Area (m ²)
		New			Existing	Proposed Clean Out	Proposed Manhole	PIT	φ 100mm (m)	φ 150mm (m)	φ 200mm (m)	φ 300mm (m)	φ 400mm (m)	Served Area (m ²)				
																		
D3 ^C																		
9	238	1	3	0	9	0	32	2	4	0	1,464	0	0	0	0			
10	460	0	0	0	4	18	13	3	0	161	476	640	0	0	0			
Total	698	1	3	0	13	18	45	5	4	161	1,940	640	0	0	0	0		

Table 5.4.1.1.1 Detailed Pipe and Number of Connections by Section in Area D3



section No.	Population	Septic Tank				Proposed Clean Out	Proposed Manhole	PIT	Total Pipe Length					Served Area (m ²)
		New		Existing	Proposed				φ 100mm (m)	φ 150mm (m)	φ 200mm (m)	φ 300mm (m)	φ 400mm (m)	
														
D4														
1	191	1	0	0	10	15	5	0	0	848	0	141	364	
2	108	4	0	0	1	34	0	6	0	1,829	0	0	0	
3	215	1	0	0	13	26	1	1	0	1,492	0	0	0	
4	258	2	2	0	9	26	0	3	0	1,621	0	0	0	
5	318	0	0	0	17	16	2	0	0	653	0	0	0	
6	287	0	0	0	17	21	1	0	0	1,043	0	0	0	
7	228	1	1	0	11	26	0	3	0	1,462	0	0	0	
8	102	1	2	0	6	39	4	3	0	1,969	564	37	0	
9	421	0	0	0	7	16	0	0	0	823	0	0	0	
10	302	0	0	0	17	21	3	0	0	914	514	0	0	
11	120	0	0	0	6	0	0	0	0	0	0	0	0	
Total	2,550	10	5	0	114	240	16	16	0	12,654	1,078	178	364	0

Table S.4.1.12 Detailed Pipe and Number of Connections by Section in Area D5

section No.	Population	Septic Tank					Existing	Proposed Clean Out	Proposed Manhole	PIT			Total Pipe Length					Served Area (m ²)
		New		Proposed									φ 100mm (m)	φ 150mm (m)	φ 200mm (m)	φ 300mm (m)	φ 400mm (m)	
D5																		
1	443	0	0	19	0	0	8	0	0	0	0	0	520	0	0	0		
2	388	0	0	18	1	1	7	1	0	0	0	0	503	75	0	0		
3	358	0	0	5	12	1	13	1	0	0	0	0	72	678	0	0		
4	194	1	5	0	3	5	41	0	6	0	0	0	124	1,801	0	0		
5	57	1	1	0	0	0	26	0	2	0	0	0	0	1,374	0	0		
6	228	6	5	0	0	0	81	4	18	0	0	0	0	4,495	0	0		
7	386	2	2	0	2	8	42	5	5	0	0	0	285	1,549	688	52	0	
8	339	1	0	0	4	11	10	0	1	0	0	0	0	705	0	0		
Total	2,393	11	13	0	58	30	228	11	32	0	0	0	481	11,625	763	52	0	0

Table 5.4.1.13 Detailed Pipe and Number of Connections by Section in Area D6

section No.	Population	Septic Tank					Proposed Clean Out	Proposed Manhole	PIT		Total Pipe Length					Served Area (m ²)	
		New		Proposed	Existing					φ 100mm (m)	φ 150mm (m)	φ 200mm (m)	φ 300mm (m)	φ 400mm (m)			
D6																	
1	168	0	0	0	12	0	13	5	1	0	58	477	336	70	0		
2	230	0	0	0	13	0	10	2	1	0	266	489	0	0	0		
3	108	0	0	0	7	0	3	0	0	0	0	303	0	0	0		
4	135	2	2	0	3	0	27	0	5	0	0	1,186	0	0	0		
Total	641	2	2	0	32	3	53	7	7	0	324	2,455	336	70	0		0

Table 5.4.1.14 Detailed Pipe and Number of Connections by Section in Area D7

D section No.	Population	Septic Tank					Proposed Clean Out	Proposed Manhole	PIT	Total Pipe Length					Served Area (m ²)	
		New		Proposed	Existing	φ 100mm (m)				φ 150mm (m)	φ 200mm (m)	φ 300mm (m)	φ 400mm (m)			
		□	▨													
D7																
1	209	2	0	0	12	15	0	2	0	911	0	0	0	0	0	
2	212	0	0	0	13	11	1	1	0	636	120	0	0	0	0	
3	220	0	0	0	2	9	5	0	0	195	326	260	0	0	0	
4	204	0	3	0	9	8	0	1	0	1,119	0	0	0	0	0	
5	57	0	5	0	0	18	0	5	0	1,035	0	0	0	0	0	
Total	902	2	8	0	36	61	6	9	0	3,896	446	260	0	0	0	0

A. 7

PLANNING FUNDAMENTALS

Appendix 7.4.1 Identification of Service Level by Area

Table 7.4.1.1 Study Area and Population in 1991

SPZ No.	Total Area of SPZ		Study Area		South Dhaka Area		Other Area	
	Area	Population	Area	Population	Area	Area	Area	Area
1	858	226,362	0	0	858	226,362		
2	1,343	350,713	0	0	1,343	350,713		
3	1,149	823,905	0	0	1,149	823,905		
4	3,284	829,663	1,273	309,912	2,011	519,751		
5	2,625	398,324	2,625	398,324	0	0		
6	932	159,661	932	159,661	0	0		
7	1,888	760,567	0	0	1,888	760,567		
12	5,990	133,817	3,659	62,140	0	0	2,331	71,677
13 - 1	2,137	107,121	2,137	107,121	0	0		
13 - 2	6,998	151,636	6,998	151,636	0	0		
14	3,226	162,443	3,226	162,443	0	0		
Total	30,430	4,104,212	20,850	1,351,237	7,249	2,681,298	2,331	71,677

- Note:
- 1) Area in hector
 - 2) Distribution ratio of area and population to the Study Area of SPZ No.4 are 38.76% and 37.35%.
 - 3) Distribution ratio of area and population to the Study Area of SPZ No.12 are 61.09% and 46.44%.
 - 4) Source: Dhaka Metropolitan Development Plan 1995-2015 (DMDP)

Table 7.4.1.2 Study Area and Present Population for SPZ Based on DMDP

SPZ No.	Name of Mouza/Ward	Code	House Hold	Area (1991)		Population (1991)	Population per H/H
				Acre	ha		
SPZ-1	* WARD NO-52	2058	5,633	207	84	34,563	6.1
	* WARD NO-52	2059	599	61	25	3,061	5.1
	* WARD NO-54	2061	5,680	207	84	36,857	6.5
	* WARD NO-62	2071	7,935	312	126	50,810	6.4
	* WARD NO-63	2072	208	10	4	1,412	6.8
	* WARD NO-63	2073	3,649	518	210	24,954	6.8
	* WARD NO-64	2074	511	65	26	4,592	9.0
	* WARD NO-64	2075	3,863	341	138	34,288	8.9
	* WARD NO-65	2076	5,777	398	161	35,825	6.2
	Sub-Total of Study Area			0	0	0	0
Sub-Total			33,855	2,119	858	226,362	6.7
SPZ-2	* WARD NO-18	2020	2,915	471	191	20,353	7.0
	* WARD NO-19	2021	8,361	334	135	53,337	6.4
	* WARD NO-20	2022	6,674	420	170	43,314	6.5
	* WARD NO-68	2079	8,465	172	70	54,044	6.4
	* WARD NO-69	2080	2,300	106	43	13,697	6.0
	* WARD NO-69	2081	9,932	848	343	57,594	5.8
	* WARD NO-70	2082	9,508	262	106	56,072	5.9
	* WARD NO-71	2083	9,739	703	285	52,302	5.4
	Sub-Total of Study Area			0	0	0	0
Sub-Total			57,894	3,316	1,343	350,713	6.1
SPZ-3	* WARD NO-22	2024	7,271	164	66	42,725	5.9
	* WARD NO-23	2025	8,827	138	56	43,652	4.9
	* WARD NO-24	2026	5,375	98	40	32,328	6.0
	* WARD NO-25	2027	5,881	173	70	33,863	5.8
	* WARD NO-26	2028	3,381	53	21	20,221	6.0
	* WARD NO-27	2029	2,703	87	35	18,061	6.7
	* WARD NO-28	2030	8,297	140	57	43,727	5.3
	* WARD NO-29	2031	935	22	9	7,028	7.5
	* WARD NO-29	2032	2,639	38	15	17,137	6.5
	* WARD NO-30	2033	1,964	22	9	12,840	6.5
	* WARD NO-30	2034	1,289	32	13	12,361	9.6
	* WARD NO-31	2035	4,619	106	43	30,177	6.5
	* WARD NO-32	2036	9,094	128	52	55,888	6.1
	* WARD NO-33	2037	5,065	111	45	35,382	7.0
	* WARD NO-34	2038	4,123	43	17	26,945	6.5
	* WARD NO-35	2039	3,497	58	23	22,992	6.6
	* WARD NO-36	2040	2,695	43	17	19,252	7.1
	* WARD NO-36	2041	244	67	27	2,342	9.6
	* WARD NO-37	2042	5,976	103	42	39,710	6.6
	* WARD NO-38	2043	4,071	135	55	23,998	5.9
	* WARD NO-39	2044	5,393	101	41	32,924	6.1
	* WARD NO-40	2045	6,147	101	41	36,294	5.9
	* WARD NO-41	2046	4,295	57	23	27,407	6.4
	* WARD NO-42	2047	3,259	92	37	21,125	6.5
	* WARD NO-43	2048	4,681	102	41	29,137	6.2
	* WARD NO-44	2049	5,818	132	53	40,746	7.0
	* WARD NO-45	2050	3,766	180	73	21,963	5.8
* WARD NO-46	2051	5,636	172	70	31,837	5.6	
* WARD NO-47	2053	8,515	143	58	41,843	4.9	
Sub-Total of Study Area			0	0	0	0	0.0
Sub-Total			135,456	2,841	1,149	823,905	6.1
SPZ-4	* HASLAI	694	1,473	52	21	7,412	5.0
	* BAG CHANDKHAN	695	1,249	55	22	5,894	4.7
	* JANGALBARI	696	1,478	28	11	7,571	5.1
	* DUKURIA	697	298	5	2	1,648	5.5

SPZ No.	Name of Mouza/Ward	Code	House Hold	Area (1991)		Population (1991)	Population per II/II	
				Acre	ha			
	* NAWAB CHIAR	698	915	179	72	5,183	5.7	
	* KALUNAGAR	700	0	47	19	0	0.0	
	* CHIAR KAMRANGI	701	8,814	535	217	45,128	5.1	
	* RAMCHANDRAPUR	743	0	272	110	0	0.0	
	* KATASUR	745	0	291	118	0	0.0	
	WARD NO-07	2008	11,490	877	355	69,434	6.0	
	WARD NO-08	2009	14,137	883	357	72,422	5.1	
	WARD NO-09	2010	14,193	853	345	74,491	5.2	
	WARD NO-10	2011	10,169	355	144	53,109	5.2	
	WARD NO-10	2012	7,497	179	72	40,456	5.4	
	* WARD NO-11	2013	10,377	272	110	49,010	4.7	
	* WARD NO-12	2014	14,608	925	374	76,106	5.2	
	* WARD NO-13	2015	9,732	297	120	56,267	5.8	
	* WARD NO-14	2016	7,593	351	142	45,443	6.0	
	* WARD NO-15	2017	4,447	595	241	30,479	6.9	
	* WARD NO-16	2018	8,494	351	142	45,201	5.3	
	* WARD NO-17	2019	15,501	469	190	84,525	5.5	
	* WARD NO-21	2023	11,074	247	100	59,884	5.4	
	Sub-Total of Study Area			57,486	3,147	1,273	309,912	5.4
	Sub-Total			153,539	8,118	3,284	829,663	5.4
	SPZ-5	WARD NO-01	2001	11,300	1,017	412	51,068	4.5
WARD NO-01		2002	5,612	651	263	29,400	5.2	
WARD NO-02		2003	12,242	834	338	63,174	5.2	
WARD NO-03		2004	18,935	340	138	101,150	5.3	
WARD NO-04		2005	9,908	1,285	520	53,564	5.4	
WARD NO-05		2006	9,413	1,769	716	47,930	5.1	
WARD NO-06		2007	9,926	587	238	52,038	5.2	
Sub-Total of Study Area			77,336	6,483	2,625	398,324	5.2	
Sub-Total			77,336	6,483	2,625	398,324	5.2	
SPZ-6	WARD NO-72	2084	8,035	1,578	639	46,514	5.8	
	WARD NO-73	2085	8,437	271	110	44,282	5.2	
	WARD NO-74	2086	12,638	453	183	68,865	5.4	
	Sub-Total of Study Area			29,110	2,302	932	159,661	5.5
	Sub-Total			29,110	2,302	932	159,661	5.5
SPZ-7	* WARD NO-47	2052	13,257	332	134	67,670	5.1	
	* WARD NO-49	2054	8,249	146	59	41,502	5.0	
	* WARD NO-50	2055	8,567	236	96	46,070	5.4	
	* WARD NO-51	2056	13,856	353	143	70,924	5.1	
	* WARD NO-51	2057	3,002	201	81	14,781	4.9	
	* WARD NO-53	2060	11,942	501	203	62,425	5.2	
	* WARD NO-55	2062	10,049	257	104	55,482	5.5	
	* WARD NO-56	2063	13,127	743	301	70,501	5.4	
	* WARD NO-57	2064	8,385	373	151	48,815	5.8	
	* WARD NO-58	2065	5,481	170	69	30,671	5.6	
	* WARD NO-58	2066	3,422	177	72	19,563	5.7	
	* WARD NO-59	2067	4,448	215	87	26,025	5.9	
	* WARD NO-60	2068	12,206	257	104	71,276	5.8	
	* WARD NO-60	2069	4,397	165	67	28,758	6.5	
	* WARD NO-61	2070	945	40	16	6,004	6.4	
	* WARD NO-66	2077	11,452	225	91	65,599	5.7	
	* WARD NO-67	2078	6,110	272	110	34,501	5.6	
Sub-Total of Study Area			0	0	0	0	0.0	
Sub-Total			138,895	4,663	1,888	760,567	5.5	
SPZ-II(2)	* DAMRIPARA	308	154	381	154	851	5.5	
	* PAYATI	309	240	369	149	1,441	6.0	
	* KAMARGHOP	312	1,195	160	65	5,531	4.6	
	* DEILLA	313	297	90	36	1,547	5.2	
	* BAMAIL	314	590	52	21	2,838	4.8	

SPZ No.	Name of Mouza/Ward	Code	House Hold	Area (1991)		Population (1991)	Population per II/II
				Acre	ha		
	* GHOP DAKSHIN	315	1,754	217	88	8,300	4.7
	* SARALIA	316	5,851	485	196	22,733	3.9
	* JOKA	317	1,562	372	151	7,312	4.7
	* DAGAR	318	2,493	755	306	11,759	4.7
	* PARADAGAR	319	2,358	489	198	12,367	5.2
	* MATUAIL	320	5,251	2,080	842	28,739	5.5
	* DANIA	321	15,519	650	263	82,279	5.3
	* KADAMTALI	322	4,011	766	310	20,337	5.1
	* SYAMPUR	323	4,098	120	49	19,788	4.8
	* AH.BAHAR	324	828	91	37	3,984	4.8
	* JURAIN	325	0	8	3	0	0.0
	* JURAIN	325	0	134	54	0	0.0
	Sub-Total of Study Area		0	0	0	0	0.0
	Sub-Total		46,201	7,219	2,922	229,806	5.0
SPZ-12	* NANDIPARA	292	2,994	997	403	16,138	5.4
	* GAZARIA	293	706	1,145	463	4,346	6.2
	* GAURNAGAR	294	185	137	55	1,157	6.3
	* NASIRABAD	295	327	110	45	2,149	6.6
	* UTTAR DURGAPUR	296	0	72	29	0	0.0
	* CHAK DURGAPUR	297	0	5	2	0	0.0
	* BALU DHITPUR	298	372	523	212	2,316	6.2
	* PURBA DURGAPUR	299	57	16	6	306	5.4
	* TIHULTHULIA	300	230	143	58	1,314	5.7
	* MENDIPURA	301	0	27	11	0	0.0
	* KAHETPARA	302	82	254	103	452	5.5
	* SUNNA	303	224	255	103	1,070	4.8
	* AMALIA	304	695	635	257	3,771	5.4
	* PASCHIM DURGAPUR	305	0	17	7	0	0.0
	* DAKSHINGAON	306	1,960	551	223	10,624	5.4
	* MANDA	307	4,644	375	152	21,570	4.6
	* NARAIBAG	310	764	241	98	4,272	5.6
	* DEMRA	311	469	36	15	2,192	4.7
	* MERADIA	407	0	197	80	0	0.0
	ULUN	408	0	23	9	0	0.0
	BADDA	409	0	1,300	526	0	0.0
	SUTIBHOLA	410	0	294	119	0	0.0
	SATARKUL	411	1,002	1,655	670	6,195	6.2
	BHATARA	412	7,173	1,321	535	36,274	5.1
	BARA KATHALDIA	413	203	1,228	497	1,145	5.6
	DUMNI	414	397	1,023	414	2,320	5.8
	DHELNA	415	81	63	25	523	6.5
	MASTUL	416	219	226	91	1,304	6.0
	PATIRA	417	546	414	168	3,118	5.7
	BARA BERAID	418	1,580	966	391	9,543	6.0
	CHHOTTA BERAID	419	102	108	44	502	4.9
	PURBA HARARDIA	420	13	167	68	94	7.2
	PASCHIM HARARDIA	421	53	128	52	333	6.3
	NIGUR APAIDE	422	99	77	31	789	8.0
	RAJARBAG	752	0	46	19	0	0.0
	* BRAMMAN CHIRAN	755	0	22	9	0	0.0
	Sub-Total of Study Area		11,468	9,039	3,659	62,140	5.4
	Sub-Total		25,177	14,797	5,990	133,817	5.3
SPZ-13(I)	FATEMANAGAR	285	0	46	19	0	0.0
	KAPRAL	286	0	472	191	0	0.0
	DHAMALKOT	288	0	292	118	0	0.0
	JOARSAHARA	289	0	1,476	597	0	0.0
	LALASARAI	290	0	564	228	0	0.0
	CHHOTTA MAGBAZAR	291	0	113	46	0	0.0

SPZ No.	Name of Mouza/Ward	Code	House Hold	Area (1991)		Population (1991)	Population per H/II
				Acre	ha		
	SAMAIR	403	0	181	73	0	0.0
	MAHAMHALI	404	0	97	39	0	0.0
	KHOSKHANA	1215	0	6	2	0	0.0
	TBJKUNIPARA	1216	0	4	2	0	0.0
	BAGUNBARI	1217	0	30	12	0	0.0
	WARD NO-75	2087	8,292	1,604	649	41,542	5.0
	WARD NO-75	2088	3,457	398	161	20,826	6.0
	CONTONMENT REST ZONE		6,779	0	0	44,753	6.6
	Sub-Total of Study Area		18,528	5,283	2,137	107,121	5.8
	Sub-Total		18,528	5,283	2,137	107,121	5.8
SPZ-13(2)	PURAKAR	281	2,143	281	114	9,862	4.6
	SOLPUR	282	0	149	60	0	0.0
	FAIDABAD	283	4,200	1,051	425	24,683	5.9
	ABDULLAPUR	284	815	208	84	4,257	5.2
	UJANPUR	384	130	216	87	706	5.4
	MAUSAID	385	256	416	168	1,557	6.1
	NIRNI	386	0	103	42	0	0.0
	NAYAKHOLA	387	42	68	28	238	5.7
	NIRNICHAL	388	0	30	12	0	0.0
	GOBINDAPUR	389	227	305	123	1,317	5.8
	SNANGHATA	390	52	362	147	277	5.3
	CHAMURKHAN	391	234	195	79	1,326	5.7
	AMAIA	392	110	131	53	645	5.9
	KASKARA	393	156	44	18	816	5.2
	PALASIA	394	0	48	19	0	0.0
	CHHOTA PALASIA	395	332	39	16	1,588	4.8
	BHATURIA	396	123	150	61	738	6.0
	BAOTHAR	397	227	290	117	1,352	6.0
	BARUA	398	1,135	1,130	457	6,496	5.7
	DAKSHIN KHAN	399	7,152	3,047	1,233	40,769	5.7
	ANUL	400	70	51	21	350	5.0
	UTTARKHAN	401	2,961	2,807	1,136	16,521	5.6
	MAUSAR	402	98	53	21	567	5.8
	GRAM BHATULIA	702	0	247	100	0	0.0
	ASUTIA	703	44	122	49	274	6.2
	BAILJURI	704	1,044	681	276	6,274	6.0
	RANABHOLA	705	658	306	124	3,462	5.3
	RASADIA	706	241	36	15	1,068	4.4
	KAMARPARA	707	1,173	145	59	5,220	4.5
	BHATULIA	708	475	133	54	2,360	5.0
	RAJABARI	709	329	50	20	1,614	4.9
	DHAUR	710	482	448	181	2,762	5.7
	NALBHOG	711	498	446	180	2,987	6.0
	CHANDALBHOG	712	201	137	55	1,138	5.7
	DIABARI	713	277	468	189	1,572	5.7
	BAUNIA	714	1,554	2,869	1,161	8,840	5.7
	DIGUN	719	0	35	14	0	0.0
	Sub-Total of Study Area		27,439	17,297	6,998	151,636	5.5
	Sub-Total		27,439	17,297	6,998	151,636	5.5
SPZ-14	GAZIPURA	1245	471	291	118	2,591	5.5
	SALIKCHHARA	1246	0	38	15	0	0.0
	AUCHUPPARA	1247	2,450	494	200	12,761	5.2
	KHARTAIL	1248	164	158	64	990	6.0
	SATAIS	1249	440	607	246	2,475	5.6
	GUIA	1252	208	228	92	1,365	6.6
	RAJPUR	1253	18	33	13	171	9.5
	ANDARUL	1254	37	61	25	258	7.0
	BHAKRAL	1255	68	413	167	470	6.9

SPZ No.	Name of Mouza/Ward	Code	House Hold	Area (1991)		Population (1991)	Population per H/H
				Acre	ha		
	CHAK BHADAM ASUTHA	1256	0	148	60	0	0.0
	JAMAIDIA	1257	0	67	27	0	0.0
	BHADAM	1258	110	211	85	683	6.2
	GUSULIA	1259	72	139	56	397	5.5
	DARAIL	1260	85	161	65	451	5.3
	KAKAIL SATAIS	1261	441	759	307	2,808	6.4
	BARA DEORA	1262	591	434	176	3,657	6.2
	PARAN MANDAL TEK	1263	43	38	15	224	5.2
	CHHOTA KATHALDIA	1264	137	140	57	739	5.4
	MASIMPUR	1265	3,453	473	191	16,178	4.7
	TANGI	1266	2,254	254	103	11,110	4.9
	ARUPUR	1267	8,023	307	124	38,163	4.8
	PAGAR	1268	1,837	633	256	10,070	5.5
	SIMLUN	1269	291	286	116	1,559	5.4
	MARKUN	1270	2,129	420	170	8,807	4.1
	GOPALPUR	1271	1,306	77	31	6,036	4.6
	HIMARDIGHI	1272	1,214	156	63	6,200	5.1
	SAILARGATI	1273	200	25	10	858	4.3
	DATTAPARA	1274	7,318	925	374	33,422	4.6
	Sub-Total of Study Area		33,360	7,976	3,226	162,443	4.9
	Sub-Total		33,360	7,976	3,226	162,443	4.9
	Total of Study Area		254,727	51,527	20,850	1,351,237	5.3
	Total		776,790	82,414	33,352	4,334,018	5.6

- Note: 1) Area indicated by * is not included the Study Area.
2) Source: Dhaka Metropolitan Development Plan 1995-2015(DMDP)
3) Area datas are from GIS.

Table 7.4.1.3 Measurement and Adjustment of SPZ Area

(Unit: ha)

Zone (SPZ No.)	Areas		Established Urban	Established Urban + Fringe	Established Urban + New Urban	Established Urban		Urban Fringe	New Urban	Peripheral Urban Development	Cantonment Security Zone	Others	Total
	Whole Area	Urban				+ Residential	Non-residential						
	(a)	(b)	(c)	(d)	(d)	(d)	(e)	(f)	(g)	(h)	(i)		
1	Measured	860	0	0	0	0	0	0	0	0	0	0	860
	Adjustment	858	0	0	0	0	0	0	0	0	0	0	858
2	Measured	1,340	40	0	0	0	0	0	0	0	0	55	1,343
	Adjustment	1,343	40	0	0	0	0	0	0	0	0	55	1,343
3	Measured	1,155	50	0	0	0	0	0	0	0	0	28	1,158
	Adjustment	1,149	50	0	0	0	0	0	0	0	0	28	1,149
4	Measured	2,102	712	0	0	0	161	0	0	0	0	816	2,064
	Adjustment	2,011	694	0	0	0	157	0	0	0	0	795	2,011
4	Measured	1,315	0	0	0	0	105	0	0	0	0	168	1,315
	Adjustment	1,273	0	0	0	63	102	0	0	0	0	163	1,273
5	Measured	2,638	113	0	0	228	0	429	0	0	113	833	2,576
	Adjustment	2,625	115	0	0	232	0	437	0	0	115	849	2,625
6	Measured	920	95	0	0	67	0	0	0	0	0	130	915
	Adjustment	932	97	0	0	68	0	0	0	0	0	132	932
7	Measured	1,905	1,148	0	0	0	0	348	0	0	0	8	1,912
	Adjustment	1,888	1,133	0	0	0	0	344	0	0	0	8	1,888
12	Measured	3,910	452	0	0	0	0	273	1,735	0	0	1,414	3,910
	Adjustment	3,659	423	0	0	0	0	255	1,624	0	0	1,323	3,659
13-1	Measured	2,106	230	0	0	830	266	204	253	0	62	0	2,074
	Adjustment	2,137	237	0	0	855	274	210	261	0	64	0	2,137
13-2	Measured	7,026	333	245	65	485	293	293	4,667	0	0	610	7,026
	Adjustment	6,998	332	244	65	483	292	292	4,647	0	0	608	6,998
14	Measured	3,232	0	0	0	0	0	0	0	925	0	1,088	3,051
	Adjustment	3,226	0	0	0	0	0	0	0	978	0	1,150	3,226
	Measured	26,604	2,025	245	1,190	816	1,465	6,655	925	175	5,142	26,292	
	Adjustment	26,211	1,988	244	1,220	820	1,453	6,532	978	179	5,103	26,211	

Note: 1) Others: Flood flows Area, Watershed Area, Proposed Flood Retention Pond, and so on.

2) SPZA is inside of Study Area and SPZA' is outside of Study Area.

3) Source: Dhaka Metropolitan Development Plan 1995-2015, "Composit Policies Map".

Appendix 7.5.1 Design Population for Study Area

Table 7.5.1.1 Population Distribution in Year 2020 to SPZ Based on DMDP

Zone SPZ No.	Existing Urban Area			New Urban Area			Additional New Area			Total	
	2005	1991-2005 increase	2020	2005	increase	2020	2005	increase	2015	2005	2020
	1	393,000	147,000	435,000	0	0	0	0	0	0	393,000
2	609,000	227,000	673,000	15,000	13,000	28,000	0	0	0	624,000	701,000
3	1,082,000	195,000	1,137,000	0	0	0	0	0	0	1,082,000	1,137,000
4	1,337,000	438,000	1,460,000	180,000	153,000	333,000	240,000	171,000	411,000	1,757,000	2,204,000
5	524,000	94,000	551,000	130,000	110,000	240,000	0	0	0	654,000	791,000
6	265,000	89,000	290,000	30,000	25,000	55,000	75,000	53,000	128,000	370,000	473,000
7	1,228,000	404,000	1,342,000	150,000	127,000	277,000	50,000	36,000	86,000	1,428,000	1,705,000
8	402,000	108,000	433,000	45,000	38,000	83,000	35,000	25,000	60,000	482,000	576,000
9-1	168,000	14,000	172,000	5,000	4,000	9,000	5,000	4,000	9,000	178,000	190,000
9-2	166,000	12,000	169,000	5,000	4,000	9,000	25,000	18,000	43,000	196,000	221,000
9-3	146,000	8,000	148,000	0	0	0	25,000	18,000	43,000	171,000	191,000
10	230,000	15,000	234,000	0	0	0	5,000	4,000	9,000	235,000	243,000
11-1	374,000	99,000	402,000	0	0	0	320,000	227,000	547,000	694,000	949,000
11-2	357,000	109,000	388,000	50,000	42,000	92,000	200,000	142,000	342,000	607,000	822,000
12	222,000	78,000	244,000	0	0	0	300,000	213,000	513,000	522,000	757,000
13-1	126,000	19,000	131,000	0	0	0	80,000	57,000	137,000	206,000	268,000
13-2	173,000	20,000	179,000	0	0	0	250,000	178,000	428,000	423,000	607,000
14	165,000	3,000	166,000	25,000	21,000	46,000	210,000	149,000	359,000	400,000	571,000
14-2	87,000	0	87,000	0	0	0	70,000	50,000	120,000	157,000	207,000
15	122,000	2,000	123,000	30,000	25,000	55,000	80,000	57,000	137,000	232,000	315,000
16	194,000	0	194,000	0	0	0	120,000	85,000	205,000	314,000	399,000
17-1	81,000	2,000	82,000	20,000	17,000	37,000	75,000	53,000	128,000	176,000	247,000
17-2	75,000	0	75,000	0	0	0	65,000	46,000	111,000	140,000	186,000
17-3	175,000	0	175,000	0	0	0	55,000	39,000	94,000	230,000	269,000
18	275,000	0	275,000	0	0	0	85,000	60,000	145,000	360,000	420,000
19	455,000	2,000	456,000	13,000	11,000	24,000	120,000	85,000	205,000	588,000	685,000
Total	9,431,000	2,085,000	10,021,000	698,000	590,000	1,288,000	2,490,000	1,770,000	4,260,000	12,619,000	15,569,000

Table 7.5.1.2 Yearly Population Projection of SPZ Related the Study (1)

SPZ No.	Area (ha)	1991			1997			2005		
		Existing Urban Area	Existing Urban Area	New Urban Area	Additional New Area	Total	Existing Urban Area	New Urban Area	Additional New Area	Total
1	858	246,000	309,000	0	0	309,000	393,000	0	0	393,000
2	1,343	382,000	479,000	6,000	0	485,000	609,000	15,000	0	624,000
3	1,149	887,000	971,000	0	0	971,000	1,082,000	0	0	1,082,000
4	3,284	899,000	1,087,000	77,000	103,000	1,267,000	1,337,000	180,000	240,000	1,757,000
5	2,625	430,000	470,000	56,000	0	526,000	524,000	130,000	0	654,000
6	932	176,000	214,000	13,000	32,000	259,000	265,000	30,000	75,000	370,000
7	1,888	824,000	997,000	64,000	21,000	1,082,000	1,228,000	150,000	50,000	1,428,000
12	5,990	144,000	177,000	0	129,000	306,000	222,000	0	300,000	522,000
13-1	2,137	107,000	115,000	0	34,000	149,000	126,000	0	80,000	206,000
13-2	6,998	153,000	162,000	0	107,000	269,000	173,000	0	250,000	423,000
14	3,226	162,000	163,000	11,000	90,000	264,000	165,000	25,000	210,000	400,000
Total	30,430	4,410,000	5,144,000	227,000	516,000	5,887,000	6,124,000	530,000	1,205,000	7,859,000

Table 7.5.1.3 Yearly Population Projection of SPZ on North Dhaka Area (1)

SPZ No.	Area (ha)	1991			1997			2005		
		Existing Urban Area	Existing Urban Area	New Urban Area	Additional New Area	Total	Existing Urban Area	New Urban Area	Additional New Area	Total
4	1,273	336,000	414,000	30,000	40,000	484,000	519,000	70,000	93,000	682,000
5	2,625	430,000	470,000	56,000	0	526,000	524,000	130,000	0	654,000
6	932	176,000	214,000	13,000	32,000	259,000	265,000	30,000	75,000	370,000
12	3,659	67,000	97,000	0	78,000	175,000	136,000	0	183,000	319,000
13-1	2,137	107,000	115,000	0	34,000	149,000	126,000	0	80,000	206,000
13-2	6,998	153,000	162,000	0	107,000	269,000	173,000	0	250,000	423,000
14	3,226	162,000	163,000	11,000	90,000	264,000	165,000	25,000	210,000	400,000
Total	20,830	1,431,000	1,635,000	110,000	381,000	2,126,000	1,908,000	255,000	891,000	3,054,000

Note: 1) Population distribution ratio to North Dhaka Area of SPZ No.4: 1991=37.35%, 1997 and 2005=38.76%
 2) Population distribution ratio to North Dhaka Area of SPZ No.12: 1991=46.44%, 1997 and 2005=61.09%

Table 7.5.1.4 Yearly Population Projection of SPZ on South Dhaka Area (1)

SPZ No.	Area (ha)	1991			1997			2005		
		Existing Urban Area	Existing Urban Area	New Urban Area	Additional New Area	Total	Existing Urban Area	New Urban Area	Additional New Area	Total
1	858	246,000	309,000	0	0	309,000	393,000	0	0	393,000
2	1,343	382,000	479,000	6,000	0	485,000	609,000	15,000	0	624,000
3	1,149	887,000	971,000	0	0	971,000	1,082,000	0	0	1,082,000
4	2,011	563,000	673,000	47,000	63,000	783,000	818,000	110,000	147,000	1,075,000
7	1,888	824,000	997,000	64,000	21,000	1,082,000	1,228,000	150,000	50,000	1,428,000
Total	7,249	2,902,000	3,429,000	117,000	84,000	3,630,000	4,130,000	275,000	197,000	4,602,000

Note: 1) Population distribution ratio to South Dhaka Area of SPZ No.4: 1991=62.65%, 1997 and 2005=61.24%

Table 7.5.1.5 Yearly Population Projection of SPZ Related the Study (2)

SPZ No.	Area (ha)	2010			2015			2020					
		Existing Urban Area	New Urban Area	Additional New Area	Total	Existing Urban Area	New Urban Area	Additional New Area	Total	Existing Urban Area	New Urban Area	Additional New Area	Total
1	858	407,000	0	0	407,000	421,000	0	0	421,000	435,000	0	0	435,000
2	1,343	630,000	19,000	0	649,000	652,000	24,000	0	676,000	673,000	28,000	0	701,000
3	1,149	1,100,000	0	0	1,100,000	1,119,000	0	0	1,119,000	1,137,000	0	0	1,137,000
4	3,284	1,378,000	231,000	297,000	1,906,000	1,419,000	282,000	354,000	2,055,000	1,460,000	333,000	411,000	2,204,000
5	2,625	533,000	167,000	0	700,000	542,000	203,000	0	745,000	551,000	240,000	0	791,000
6	932	273,000	38,000	93,000	404,000	282,000	47,000	110,000	439,000	290,000	55,000	128,000	473,000
7	1,888	1,266,000	192,000	62,000	1,520,000	1,304,000	235,000	74,000	1,613,000	1,342,000	277,000	86,000	1,705,000
12	5,990	229,000	0	371,000	600,000	237,000	0	442,000	679,000	244,000	0	513,000	757,000
13-1	2,137	128,000	0	99,000	227,000	129,000	0	118,000	247,000	131,000	0	137,000	268,000
13-2	6,998	175,000	0	309,000	484,000	177,000	0	369,000	546,000	179,000	0	428,000	607,000
14	3,226	165,000	32,000	260,000	457,000	166,000	39,000	309,000	514,000	166,000	46,000	359,000	571,000
Total	30,430	6,284,000	679,000	1,491,000	8,454,000	6,448,000	830,000	1,776,000	9,054,000	6,608,000	979,000	2,062,000	9,649,000

Table 7.5.1.6 Yearly Population Projection of SPZ on North Dhaka Area (2)

SPZ No.	Area (ha)	2010			2015			2020					
		Existing Urban Area	New Urban Area	Additional New Area	Total	Existing Urban Area	New Urban Area	Additional New Area	Total	Existing Urban Area	New Urban Area	Additional New Area	Total
4	1,273	535,000	90,000	115,000	740,000	550,000	109,000	137,000	796,000	566,000	129,000	159,000	854,000
5	2,625	533,000	167,000	0	700,000	542,000	203,000	0	745,000	551,000	240,000	0	791,000
6	932	273,000	38,000	93,000	404,000	282,000	47,000	110,000	439,000	290,000	55,000	128,000	473,000
12	3,659	140,000	0	226,000	366,000	145,000	0	270,000	415,000	149,000	0	313,000	462,000
13-1	2,137	128,000	0	99,000	227,000	129,000	0	118,000	247,000	131,000	0	137,000	268,000
13-2	6,998	175,000	0	309,000	484,000	177,000	0	369,000	546,000	179,000	0	428,000	607,000
14	3,226	165,000	32,000	260,000	457,000	166,000	39,000	309,000	514,000	166,000	46,000	359,000	571,000
Total	20,850	1,949,000	327,000	1,102,000	3,378,000	1,991,000	398,000	1,313,000	3,702,000	2,032,000	470,000	1,524,000	4,026,000

Note: 1) Population distribution ratio to North Dhaka Area of SPZ No.4: 38.76%
2) Population distribution ratio to North Dhaka Area of SPZ No.12: 61.09%

Table 7.5.1.7 Yearly Population Projection of SPZ on South Dhaka Area (2)

SPZ No.	Area (ha)	2010			2015			2020					
		Existing Urban Area	New Urban Area	Additional New Area	Total	Existing Urban Area	New Urban Area	Additional New Area	Total	Existing Urban Area	New Urban Area	Additional New Area	Total
1	858	407,000	0	0	407,000	421,000	0	0	421,000	435,000	0	0	435,000
2	1,343	630,000	19,000	0	649,000	652,000	24,000	0	676,000	673,000	28,000	0	701,000
3	1,149	1,100,000	0	0	1,100,000	1,119,000	0	0	1,119,000	1,137,000	0	0	1,137,000
4	2,011	843,000	141,000	182,000	1,166,000	869,000	173,000	217,000	1,259,000	894,000	204,000	252,000	1,350,000
7	1,888	1,266,000	192,000	62,000	1,520,000	1,304,000	235,000	74,000	1,613,000	1,342,000	277,000	86,000	1,705,000
Total	7,249	4,246,000	352,000	244,000	4,842,000	4,365,000	432,000	291,000	5,088,000	4,481,000	509,000	338,000	5,328,000

Note: 1) Population distribution ratio to South Dhaka Area of SPZ No.4: 61.24%