

THE PEOPLE'S REPUBLIC OF BANGLADESH  
DEPARTMENT OF PUBLIC HEALTH ENGINEERING  
MINISTRY OF LOCAL GOVERNMENT RURAL DEVELOPMENT  
AND COOPERATIVES, LOCAL GOVERNMENT DIVISION

STUDY ON  
STORM WATER DRAINAGE SYSTEM IMPROVEMENT PROJECT  
IN DHAKA CITY

DATA BOOK I

— SURVEY DRAWINGS —

OCTOBER 1987

JAPAN INTERNATIONAL COOPERATION AGENCY

STUDY ON STORM WATER DRAINAGE SYSTEM IMPROVEMENT PROJECT IN DHAKA CITY

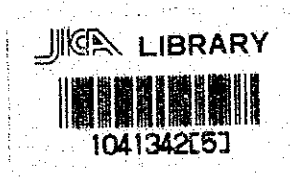
DATA BOOK I

OCT. 1987

JICA  
101  
61  
SD  
BR

SDS  
87-103





國際協力事業団	
受入 月日 '88. 2. 24	101
	61.7
登録No. 17234	SDS

**THE PEOPLE'S REPUBLIC OF BANGLADESH**  
**DEPARTMENT OF PUBLIC HEALTH ENGINEERING**  
MINISTRY OF LOCAL GOVERNMENT RURAL DEVELOPMENT  
AND COOPERATIVES, LOCAL GOVERNMENT DIVISION

**STUDY ON**  
**STORM WATER DRAINAGE SYSTEM IMPROVEMENT PROJECT**  
**IN DHAKA CITY**

**DATA BOOK I**

**— SURVEY DRAWINGS —**

**OCTOBER 1987**

**JAPAN INTERNATIONAL COOPERATION AGENCY**

THE PEOPLE'S REPUBLIC OF BANGLADESH

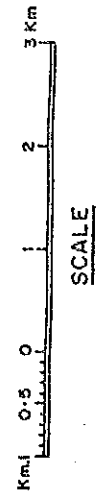
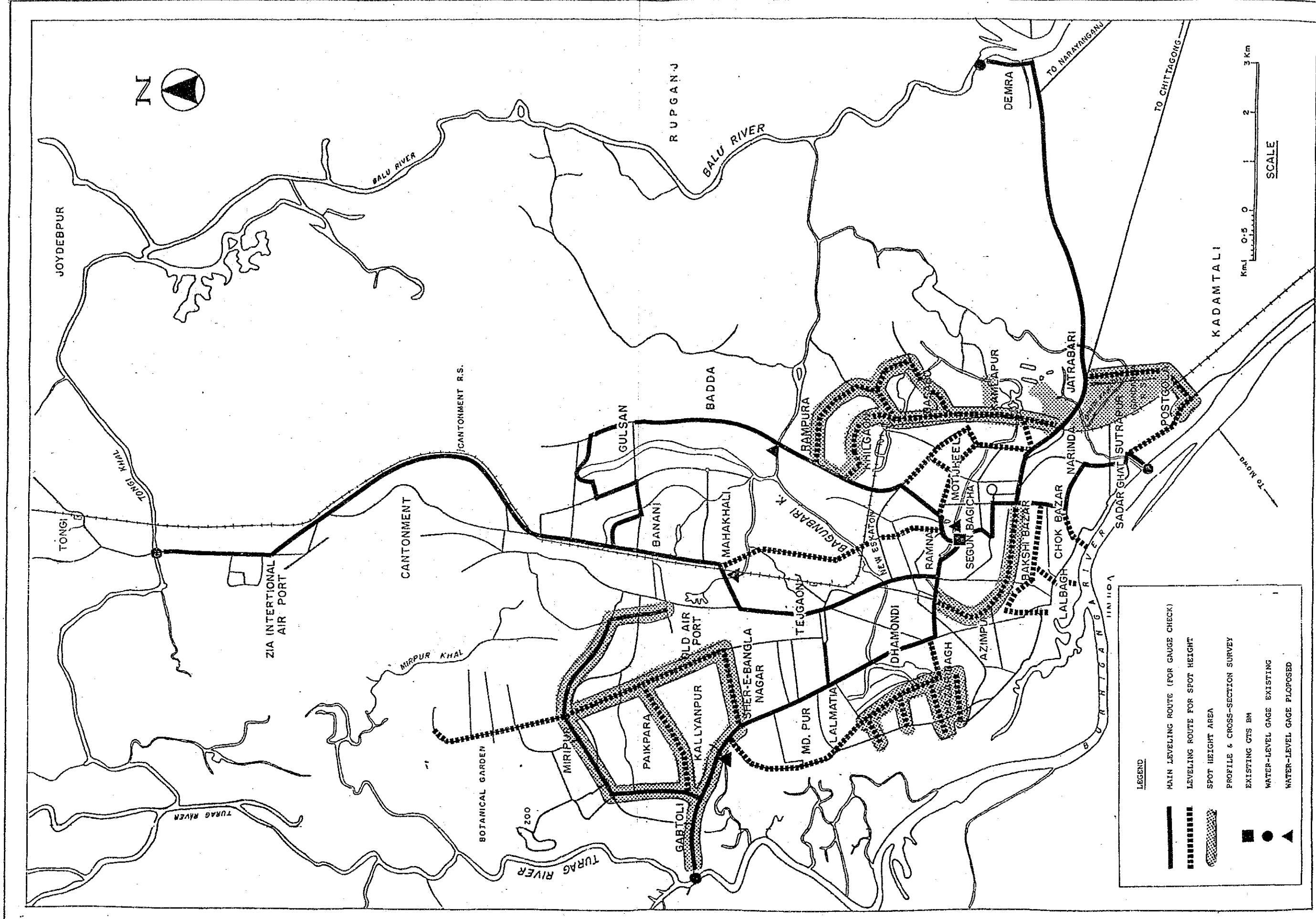
STUDY ON STORM WATER DRAINAGE SYSTEM IMPROVEMENT PROJECT  
IN DHAKA CITY







**SURVEY DRAWINGS**

MARCH 1987

JAPAN INTERNATIONAL COOPERATION AGENCY

# SURVEY AREA MAP



LEGEND	
	MAIN LEVELING ROUTE (FOR GAUGE CHECK)
	LEVELING ROUTE FOR SPOT HEIGHT
	PROFILE & CROSS-SECTION SURVEY
	EXISTING GTS BM
	WATER-LEVEL GAGE EXISTING
	WATER-LEVEL GAGE PROPOSED

## CONTENTS

### Survey Area Map

#### 1. Bench Mark

1-1	Location of Bench Mark .....	1
1-2	Description of Bench Mark .....	2

#### 2. Profile and Cross Section of Khal

2-1	Location of Cross Section .....	6
2-2	Profile of Khal .....	7
L-1	Profile of Mahammadpur Khal (1) .....	7
L-2	Profile of Mahammadpur Khal (2), Royer Bazar Khal .....	8
L-3	Profile of Mirpur Khal (1) .....	9
L-4	Profile of Mirpur Khal (2), Mirpur Section .....	10
L-5	Profile of Basantek, Katchukhet 1,2 Khal .....	11
L-6	Profile of Banani Khal .....	12
L-7	Profile of Banani Mahakhali Khal .....	13
L-8	Profile of Gulshan Khal .....	14
L-9	Profile of Kamalapur, Paribagh, Mohakali Khal .....	15
L-10	Profile of Begunbari Khal (1) .....	16
L-11	Profile of Begunbari Khal (2) .....	17
L-12	Profile of Begunbari Khal (3) .....	18
L-13	Profile of Segunbagicha Khal .....	19
L-14	Profile of Khilgaon Khal .....	20
L-15	Profile of Dholai Khal .....	21
L-16	Profile of Gerani Khal (1) .....	22
L-17	Profile of Gerani Khal (2) .....	23
L-18	Profile of Deb Dulai Khal .....	24
L-19	Profile of Basabu Khal .....	25
2-3	Cross Section of Khal .....	26
C-1	Cross Section of Mahammadpur, Royer Bazar Khal .....	26
C-2	Cross Section of Mirpur Khal .....	27
C-3	Cross Section of Mirpur Section (1) .....	28
C-4	Cross Section of Basantek Khal, Mirpur Section (2) .....	29
C-5	Cross Section of Banani Khal - 1,2 .....	30
C-6	Cross Section of Gulshan Khal .....	31
C-7	Cross Section of Mahakhali Khal - 1,2 .....	32
C-8	Cross Section of Begunbari Khal (1) .....	33
C-9	Cross Section of Begunbari Khal (2) .....	34
C-10	Cross Section of Begunbari Khal (3) .....	35
C-11	Cross Section of Begunbari Khal (4) .....	36
C-12	Cross Section of Paribagh Khal .....	37

C-13	Cross Section of Segunbagicha Khal (1) .....	38
C-14	Cross Section of Segunbagicha Khal (2) .....	39
C-15	Cross Section of Kamalapur Khal .....	40
C-16	Cross Section of Khilgaon Khal (1) .....	41
C-17	Cross Section of Khilgaon Khal (2) .....	42
C-18	Cross Section of Dholai Khal (1) .....	43
C-19	Cross Section of Dholai Khal (2) .....	44
C-20	Cross Section of Dholai Khal (3) .....	45
C-21	Cross Section of Dholai Khal (4) .....	46
C-22	Cross Section of Dholai Khal (5) .....	47
C-23	Cross Section of Dholai Khal (6) .....	48
C-24	Cross Section of Gerani Khal (1) .....	49
C-25	Cross Section of Gerani Khal (2) .....	50
C-26	Cross Section of Deb Dulai Khal .....	51
C-27	Cross Section of Basabu Khal .....	52

#### 3. Profile of Drain

3-1	Route of Drain .....	53
3-2	Profile of Drain .....	54
P-1	Profile of Drain (Naya Paltan) .....	54
P-2	Profile of Drain (Ramna and Purana Paltan) .....	55
P-3	Profile of Drain (Narinda - Branch) .....	56
P-4	Profile of Drain (Narinda - Main) .....	57

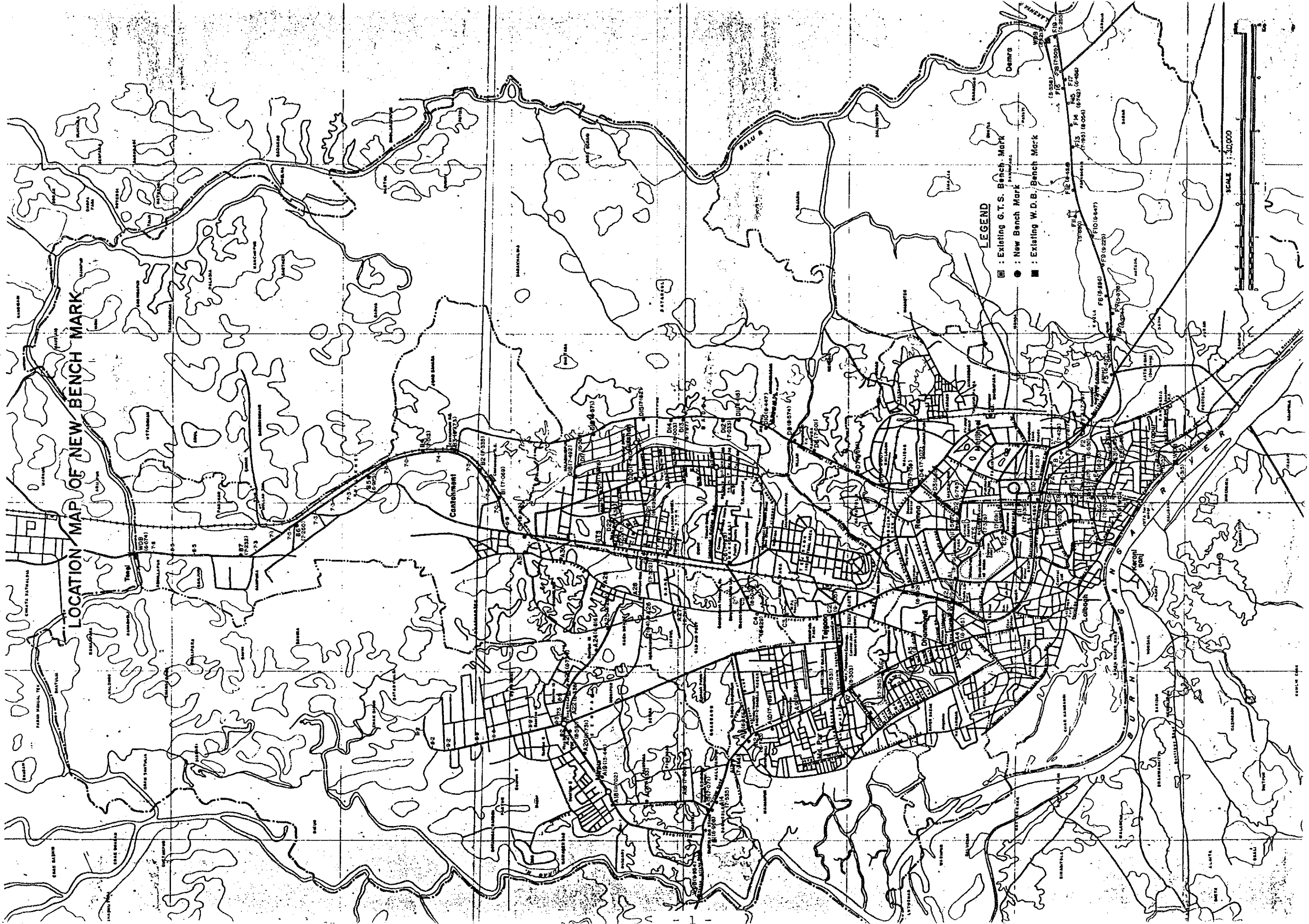
#### 4. Topographic Map

4-1	Location of Topographic Survey .....	58
4-2	Detailed Location .....	59
4-3	Topographic Map .....	61
T-1	Topographic Map of Dholai Khal (1) .....	61
T-2	Topographic Map of Dholai Khal (2) .....	62
T-3	Topographic Map of Dholai Khal (3) .....	63
T-4	Topographic Map of Segunbagicha Khal (1) (Railway) .....	64
T-5	Topographic Map of Begunbari Khal (1) .....	65
T-6	Topographic Map of Kallyanpur .....	66
T-7	Topographic Map of Begunbari Khal (2) .....	67
T-8	Topographic Map of Begunbari Khal (3) .....	68
T-9	Topographic Map of Paribagh Khal .....	69
T-10	Topographic Map of Segunbagicha Khal (2) .....	70
T-11	Topographic Map of Segunbagicha Khal (3) .....	71
T-12	Topographic Map of Segunbagicha Khal (4) .....	72



## 1. BENCH MARK

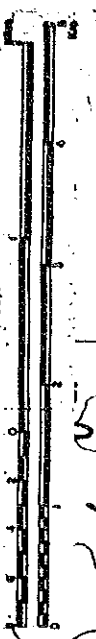
# LOCATION MAP OF NEW BENCH MARK



**LEGEND**

- : Existing G.T.S. Bench Mark
- : New Bench Mark
- : Existing W.D.B. Bench Mark

SCALE : 1:30,000



DESCRIPTION AND HEIGHTS OF BENCH-MARKS

BM Name	Description of Bench-Marks	Height above M.S.L (GTS)
	Line A	Meter
A1	On the pucca base of light post at Shahbag near P.G. Hospital.	9,451
A2	On the traffic island at Katabon near Mosque.	9,288
A3	On the traffic island at New Elephant Road.	8,307
A4	On the traffic island at Science Laboratory.	8,645
A5	On the base of P.P. near the west corner of Dhanmondi play field, Road No. 9.	8,490
A6	On the base of P.P. near the New Model High School Boys and Girls, Road No. 11 (South side).	7,365
A7	On the traffic island near the Manik Miya Avenue.	8,303
A8	On the light post of traffic island at Ashad Gate.	8,531
A9	On the gate of state guest house near the Residential College, Sher-e-Banglanagar.	8,305
A10	On the light post of Dr. Nurul Islams Talukdar's Dispensary at College Gate near piles clinic.	7,469
A11	On the gate S/E side 23/4 No. Gate at Khil-Jee Road, Dhaka-7.	6,743
A12	On the base of P.P. S/E corner of Shamoli Cinema Hall.	6,866
A13	On the light post of culvert, Mirpur Gabtoli Road, S/E of Shamoli.	7,384
A14	On the base of light post in front of the star steel works, at Darus Salam, Mirpur Road.	7,535
A15	On the base of light post near the Technical College Gate side.	7,071
A16	On the base of light post in front of water tank at Mirpur Road near P.W.D. Office.	7,608
A17	On the base of light post near the P.W.D Vibagiya Procosholi Doptor at Mirpur Road.	7,633

BM Name	Description of Bench-Marks	Height above M.S.L (GTS)
	Line A	Meter
A18	On the base of tower post Mirpur Sec. 1 No. (Trapic Mur) near the Mirpur Upa-Shohar Government Primary School.	11,702
A19	On the gate of Bangladesh Institute of Bank Management near the U.C.P. Technical School, Mirpur-2.	13,441
A20	On the gate of Metropolitan Police Office near the National Bangladesh High School at Mirpur-2.	11,731
A21	On the base of tower post in front of Sultan Decorator's shop, Mirpur-10.	8,591
A22	On the base of light post near the inter-trade Distribution at Mirpur Road-10.	8,338
A23	On the gate of Hormon Prathomick Biddaloy (S.O.S. Jubo Polly School) near the old BRTC bus DEPO., Mirpur-13.	6,724
A24	On the S/W side, Mirpur-14 No. Police Fari at Mirpur.	6,816
A25	On the top of culvert pillar, oposite side of Manik Hotel at Mirpur Road-14.	6,282
A26	On the light post of shop No. 50 at Cant's Supermarket at Kachuket.	7,104
A27	On the light post of M.P. check post Building at Kaf-rulcantt.	8,211
A28	On the Signboard of shadhid Mynul Road near President Jiya's House.	-
A29	On the plinth level S/E corner of Sahid Sattar Market.	-
A30	On the base of Transformer post near the signboard, cantonment-sadar-administrative branch on Cantonment Road.	-
A31	On the top of signboard of Staff Quarter's Shahid Basar Road near the cantonment trapic Mur.	-

BM Name	Description of Bench-Marks	Height above M.S.L (GTS)
	Line B	Meter
B1	Bottom of P.P. No. 523014 south side of New Airport Road near by Banani Railway Station.	7,069
B2	Bottom of P.P. No. 523028 east side of B.R.T.C. bus Terminal and Railway Gate of Sawra Bazar.	7,335
B3	On the mile post (Dhaka 14 K.M.) on highway.	6,773
B4	Bottom of P.P. No. 523055 opposite of Uttra Bank Zoyar Shara Branch, east side of B.R.T.C. bus stand.	7,013
B5	On the perapat wall S/W corner of Khagrapara or Kawrapara Bridge.	6,929
B6	On the plinth of check post of Zia International Airport.	7,260
B7	Bottom of P.P. in front of Jasimuddin Avenue side of Tongi Road, Uttra Model Town.	7,232
WAPDA BM	Established west side of Tongi bridge near the river bank.	6,674
	Line C	
C1	Bottom of P.P. in front of 27 Zohura Market between star agency and sowdagar agency west side of Mymensingh Road, Bangla Motor.	8,992
C2	On the foot path S/E corner of Metropolitan Police box side of New Airport Road Firmgate.	9,405
C3	On the gate of Secretariat.	-
C4	On the plinth of local objection P.D.B. center, west side of New Airport Road.	8,629
C5	Bottom of 11 K.V. Transmission line opposite of Shahin College gate (P.P. No : 445183.).	8,504
C6	On the plinth of Metropolitan box near the Rail crossing of Mohakhali Railgate.	7,728
C7	Bottom of the P.P. No : 485028 near the Rail crossing of cantonment gate.	8,047

BM Name	Description of Bench-Marks	Height above M.S.L. (GTS)
	Line C	Meter
C8	Bottom of the P.P. No : 484044 N/E corner of Poni Photographers, Banani (New Airport Road)	7,302
G.T.S BM	Near the Railway culvert, north side of Banani Rail Station.	-
C9	On the plinth of cantonment canon No-3 west side of New Airport Road, North side of Railway Crossing, Banani.	8,412
	Line D	
D1	On the traffic island of trifurcated road at Kakrail near Kakrail Mosque.	7,567
D2	On the traffic island of trifurcated road at Kakrail near Rajmoni Cinema Hall.	6,945
D3	On the traffic island at Santinagar trifurcated Road.	6,801
D4	On the traffic island at Malibag trifurcated Road.	7,307
D5	On the traffic island at Mouchak trifurcated Road.	7,158
D6	On the traffic island at chowdhary para trifurcated Road.	6,966
D7	On the traffic island at east Hazipara near Wills Garments Ltd.	6,574
D8	On the ground level S/W corner of Agrani Bank at Rampura T.V. Branch.	7,001
D9	On the plinth of P.P. No. 614/009 near Rampura Bridge.	8,574
D10	On the plinth N/E corner of S.N. Traders at Badda.	6,447
D11	On the N/W corner of a Culvert North side of Merul Bazar.	6,415
D12	On the plinth of gate S/E corner of Badda Baitul Aman Zame Moszid.	7,033
D13	On the ground level S/E corner of Tania Flower and Rice Mill, 92/1, North Badda.	6,797

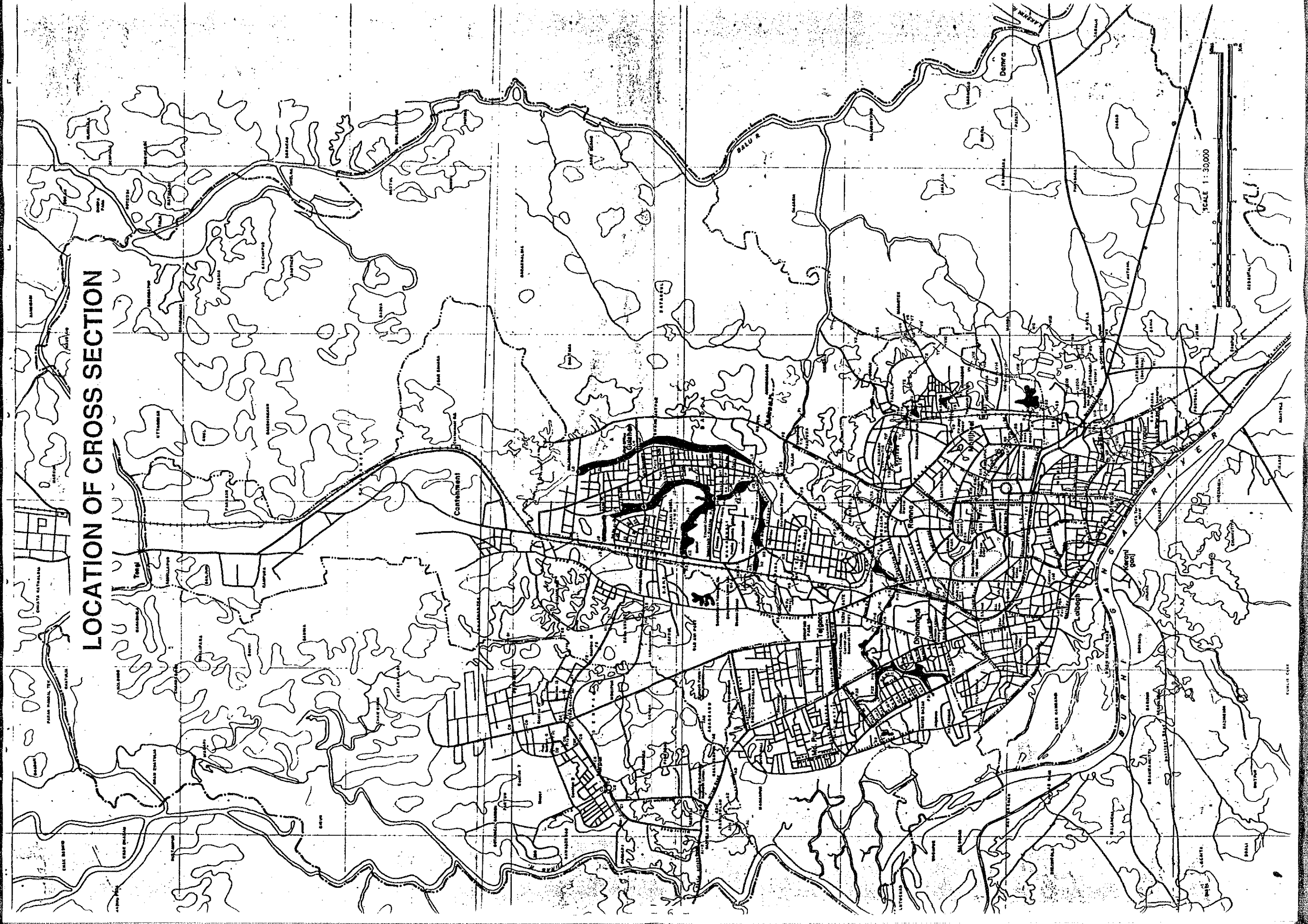
BM Name	Description of Bench-Marks	Height above M.S.L. (GTS)
	Line D	Meter
D14	On the Railling N/W corner of bridge at north Badda.	8,003
D15	On the plinth S/W corner of prince steel agency at Baridhara.	7,162
D16	Bottom of P.P. No. 609/190 at Baridhara.	6,571
D17	Bottom of P.P. No. 609/211 at Kalachanpur.	6,385
D18	On the culvert S/W corner beside the foot path of Kalachanpur Lake.	7,492
D19	On the road Demercation post at Gulshan Road No. 71.	7,596
D20	On the S/W corner of island Gulshan-2.	7,430
D21	On the S/W corner of culvert at Kamal Ataturk Road.	6,998
D22	Bottom of P.P. No. 483/006 at Banani Road No. 27.	7,436
D23	On the S/W corner of culvert at Banani Road No. 27.	7,002
	Line E	
E1	On the plinth on Telephone box at Sutrapur trifurcate Road.	6,905
E2	On the plinth of Middle west corner of private house No-95, Hrishikesh Das Road.	6,861
E3	On the plinth S/W corner of Dhaka Steel House at Narinda-Dolaikhal trifurcate Road.	6,656
E4	On the ground level south west corner of Goalbhat Mosque.	6,210
E5	On the traffic island at trifurcate road of English Road.	7,617
E6	On the traffic island at north-south Road trifurcated.	7,005
E7	On the traffic island at Bongsal trifurcated Road.	7,055
E8	On the traffic island of Hazi Osman Goni Road.	6,959

BM Name	Description of Bench-Marks	Height above M.S.L. (GTS)
	Line E	Meter
E9	On the Gulistan traffic island, Kaptan Bazar.	7,883
E10	On the Fulbaria Traffic Island.	8,454
E11	On the G.P.O. Traffic Island.	7,431
E12	On the Traffic Island at Press Club trifurcated road.	7,691
	Line F	
F1	On the plinth of Traffic Island at Tikatoli More.	7,817
F2	On the plinth of Studio Viena at 75 Shamebag.	6,650
F3	On the plinth of Sayadabad Railway crossing Guard Room it is on the west side of Railway line and north site of Chittagong Road.	7,797
F4	On the plinth of the S/W corner of Sayadabad Bridge.	9,609
F5	On the plinth of the N/E corner of Uttra Bank at Jattrabari.	6,682
F6	On the plinth of the south west corner of north Jattrabari culvert, culvert No : 14-1/3.	6,974
F7	On the gate of Shukur Bhuia at Kajla.	5,878
F8	On the bottom of boundary wall of Rupsha Re-roling Mill's and Industries Ltd. on Chittagong Road Kajla.	5,696
F9	On the plinth of the S/E corner of Matuail Bridge, Bridge No : 41-1/4.	9,229
F10	On the plinth of the S/W corner of Matuail Bridge near Matuail Community Center, Bridge No : 131-2/4.	7,647
F11	On the plinth of the S/W corner of Konapara Mosque near Matuail Islamia Maddrasa.	5,680
F12	On the plinth of Konapara Bridge at N/W corner, Bridge No : 52-1/5.	8,434
F13	On the Parapetwall of the S/E corner of Konapara Bridge in front of Sufia Rolling Steel Mills Ltd, Bridge No : 15-2/5.	7,196

BM Name	Description of Bench-Marks	Height above M.S.L. (GTS)
	Line F	Meter
F14	On the plinth of the S/E corner of Konapara Bridge, Bridge No : 45-3/5.	8,054
F15	On the plinth of the S/W corner of Dilla Bridge, Bridge No : 15-1/6.	6,742
F16	On the plinth of the S/W corner of Dilla Culvert near Marm Industrial Chemicals Ltd.	5,358
F17	On the plinth of the gate near the Banani Jute Mills Staff Quarter, south side of Emra Road.	6,456
F18	On the Island of Demra Trifurcate-road.	7,509
F19	On the pucca Drain S/E corner of Latif Baowani Jute Mills Ltd.	5,255
F20	On the Safety Tank N/E corner of Latif Baowani Jute Mills Ltd, near east side of the river.	6,107
F21	On the 1st step of Moklatur Rahman shop near Baowani High School.	5,719
WAPDA BM.	North side of Demra Bazar.	6,121
FB	On the gate of Bangladesh Homopatic College Hospital, 46/2 Twenbe Circular Road.	7,852
FC	Bottom of the Transformer in front of art Press Ltd, 16 No. Air Street Wari Road.	7,427
	Line G	
G1	On the plinth of petrol pump station oposite of Beauty Cinema Hall at Gabtoli bus stand.	6,908
WAPDA BM	Under the Mirpur Bridge at Gabtoli.	9,934

## 2. PROFILE AND CROSS SECTION OF KHAL

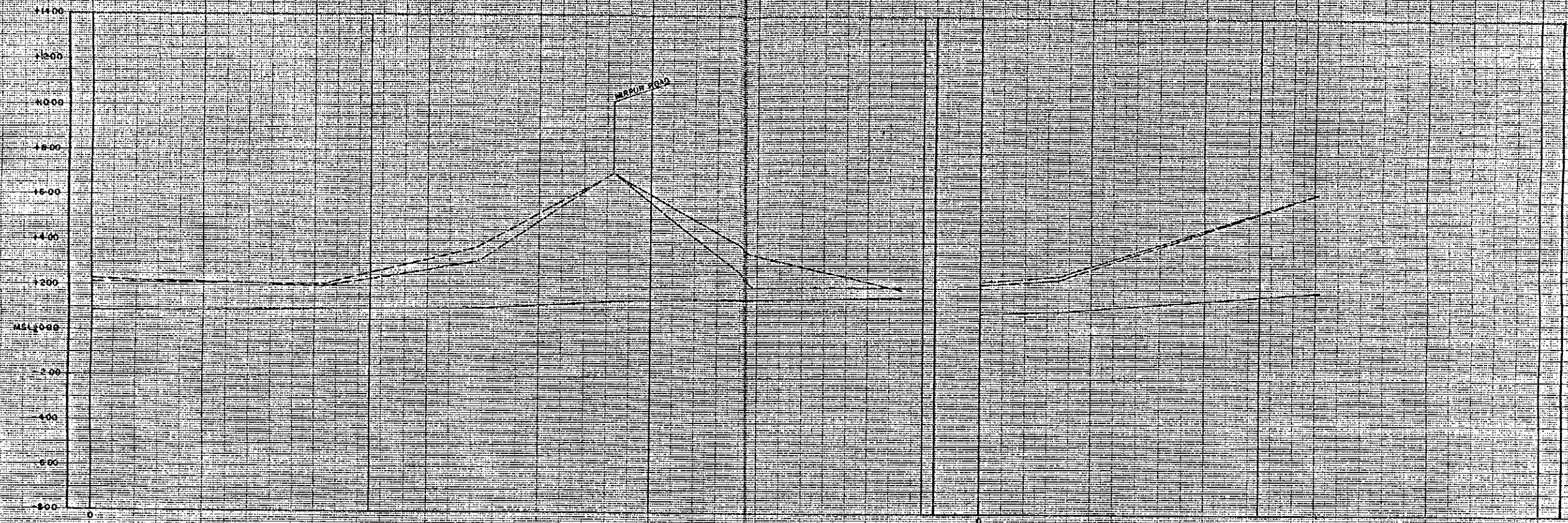
# LOCATION OF CROSS SECTION



SCALE 1:30,000

CUNLIE CHAS



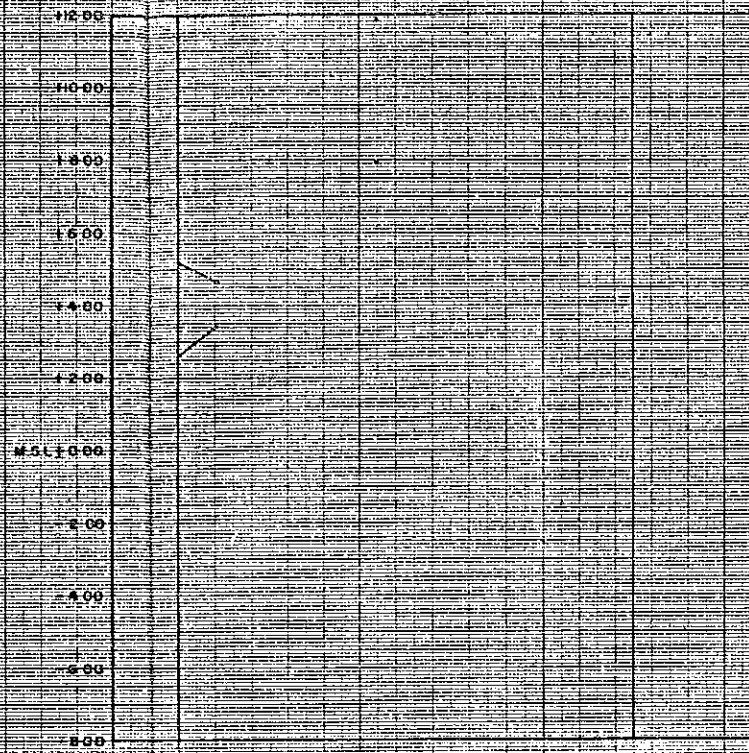
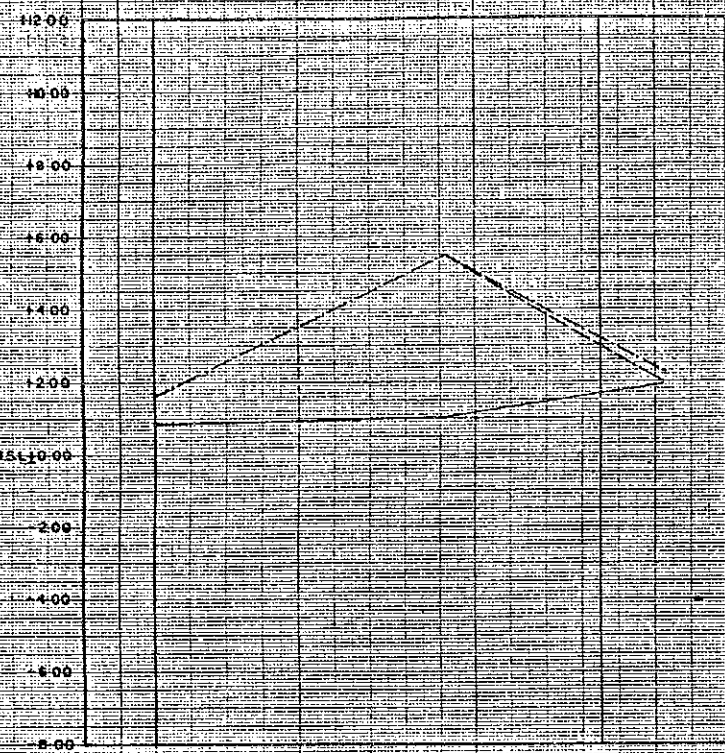


PROPOSED TOP ELEV OF RETAINING WALL	PROPOSED BOTTOM ELEV OF KHAL	EXISTING ELEV OF LEFT BANK	EXISTING ELEV OF RIGHT BANK	EXISTING BOTTOM ELEV OF KHAL	ACCUMULATE DISTANCE (M)	NO
		8	4	0	0	1
					810	A-2
					1021	A-3
					1338	A-4
					1703	A-5
					2058	A-6
					2440	A-7
					2829	A-8
					3217	A-9

**LEGEND**  
 ———— EXISTING RIGHT GROUND LINE  
 ———— EXISTING LEFT GROUND LINE  
 ———— EXISTING BOTTOM LINE

PROFILE OF MARHAMMADPUR KHAL  
 NOA1-A6 NO A1/1-NO A1/2

SCALE: H:V: 5000V:1000  
 DATE: FEBRUARY, 1937



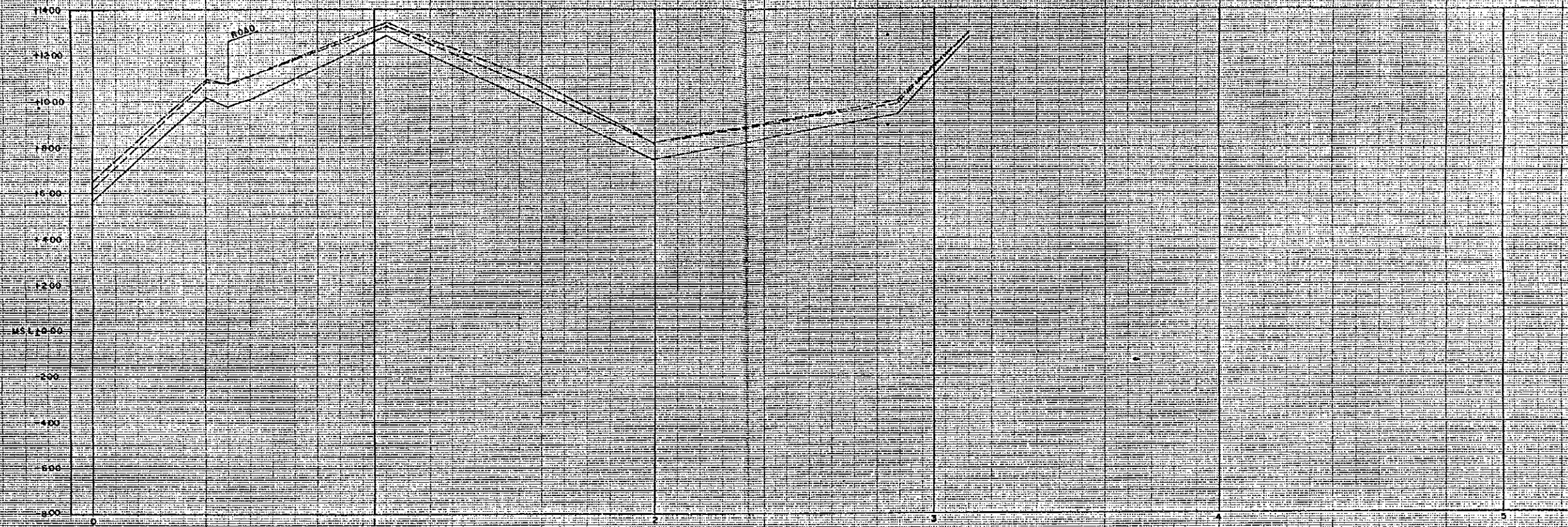
PROPOSED TOPELEV OF RETAINING WALL			
PROPOSED BOTTOM ELEV OF KHAL			
EXISTING ELEV OF LEFT BANK	8.00	8.00	8.00
EXISTING ELEV OF RIGHT BANK	8.00	8.00	8.00
EXISTING BOTTOM ELEV OF KHAL	8.00	8.00	8.00
ACCUMULATE DISTANCE (M)	0	11.57	22.76
NO	1	2	3

PROPOSED TOPELEV OF RETAINING WALL			
PROPOSED BOTTOM ELEV OF KHAL			
EXISTING ELEV OF LEFT BANK	8.00	8.00	8.00
EXISTING ELEV OF RIGHT BANK	8.00	8.00	8.00
EXISTING BOTTOM ELEV OF KHAL	8.00	8.00	8.00
ACCUMULATE DISTANCE (M)	0	11.57	22.76
NO	1	2	3

**LEGEND**

- EXISTING RIGHT GROUND LINE
- EXISTING LEFT GROUND LINE
- EXISTING BOTTOM LINE

PROFILE OF MOHAMMADPUR ROYERBAZAR KHAL			
NO. A-1/2; B1-B2			
DWG NO.	L-2	SCALE	H=1:8,000 V=1:100
		DATE	FEBRUARY, 1987



NO	PROPOSED TOP ELEV OF RETAINING WALL	PROPOSED BOTTOM ELEV OF KHAL	EXISTING ELEV OF LEFT BANK	EXISTING ELEV OF RIGHT BANK	EXISTING BOTTOM ELEV OF KHAL	ACCUMULATE DISTANCE(M)
0			1050	1050	1050	0
0-1			1092	1087	1082	40
0-2			1074	1074	1074	80
0-3			1117	1117	1117	160
0-4			1117	1117	1117	240
0-5			1044	1026	1026	320
0-6			1096	1058	1058	400
0-7			1008	1008	1008	480
0-8			1007	1036	1036	560
0-9			1082	1082	1082	640

**LEGEND**  
 - - - - - EXISTING RIGHT GROUND LINE  
 - - - - - EXISTING LEFT GROUND LINE  
 - - - - - EXISTING BOTTOM LINE

PROFILE OF MIRPUR-KHAL MO. C1-C6

DRG. NO. **3** SCALE H:V 5,000 V:1,000  
 DATE FEBRUARY 1987