11-2-2　ボーリング柱状図

Soiltech
INTERNATIONAL LIMITED

Client : JICA'S BASIC DESIGN STUDY TEAM
Site : NO.3, KADAMRASUL G.P.S, BHATIARI, SITAKUNDA CHITTAGONG (Site No. IV-1)
Bore Chart of Boring No. 1.

DATE	DEPTH in m	THICKNESS in m	STRATA ENCOUNTERED	LOG	DIA OF BORING	STANDARD PENETRATION TEST BLOWS/30cm or ft.	REMARKS
26-10-98	3.20	3.20	Brown soft to med. stiff Clayey SILT trace fine sand		19.55m, 10cm Ø PERCUSSION METHOD	1 1 2 3	
						1 2 3 5	
	7.50	4.30	Grey stiff to very stiff SILT & Fine SAND.			2 2 5 7	
						3 4 6 10	
						4 5 7 12	
						5 8 10 18	
						7 8 9 17	
	11.50	4.00	Grey med. dense med. to fine SAND Trace silt.			8 9 10 19	
						8 9 11 20	
						7 10 12 22	
						9 12 14 26	
	13.50	2.00	Brown dense fine to med. SAND trace silt.			10 14 16 30	
						15 18 20 38	
						20 25 35 60	
	20.00	6.50	Grey hard SILT with clay & fine sand.			50 Blows for 13 cm	
						50 " " 12 cm	
						50 " " 12 cm	
						50 " " 10 cm	
						50 " " 10 cm	
						50 " " 10 cm	

REDUCED ELEV.

1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00

▽ 2.00m

DISTURBED SAMPLE ▭ UNDISTURBED SAMPLE ▬

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Client : JICA'S BASIC DESIGN STUDY TEAM
Site : NO. 4, GOLABARIA G. P. S, MURADPUR, SITAKUNDA CHITTAGONG. (Site No. IV-2)
Bore Chart of Boring No. 1.

DATE	DEPTH in m.	THICKNESS in m.	STRATA ENCOUNTERED	LOG	DIA OF BORING	STANDARD PENETRATION TEST BLOWS/45cm (15cm/6" | 15cm/6" | 30cm/1'-0") BLOWS/30cm or ft. (10 20 30 40 50 60 70 80 90)	REMARKS G.W.T. SOIL SAMPLES VANE SHEAR TEST (P.S.I.)	REDUCED ELEV.
28-10-98	2.30	2.30	Brown soft Clayey SILT trace fine sand.		22.55m, 10cm Ø PERCUSSION METHOD.	1 2 2 4		1.00
						1 1 2 3		2.00
						1 1 1 2		3.00
						1 1 1 2		4.00
						1 1 2 3		5.00
						1 1 2 3		6.00
						1 1 1 2		7.00
						1 1 2 3		8.00
	8.40	6.10	Grey soft Clayey SILT trace fine sand.			1 1 1 2		9.00
						1 2 2 4		10.00
						1 2 3 5		11.00
	12.40	4.00	Grey soft to med. stiff Fine Sandy SILT with clay.			2 3 4 7		12.00
						3 5 7 12		13.00
						5 7 8 15		14.00
						8 10 12 22		15.00
						11 11 12 23		16.00
						10 12 13 25		17.00
		10.60	Grey stiff to very stiff Clayey SILT with fine sand			12 14 15 29		18.00
						6 8 11 19		19.00
						5 5 10 15		20.00
						5 5 6 11		21.00
						4 4 6 10		22.00
	23.00					4 4 5 9		23.00

▽ 1.00m

DISTURBED SAMPLE ▨ UNDISTURBED SAMPLE ■

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INTERNATIONAL LIMITED

Client : JICA'S BESIC DESIGN STUDY TEAM
Site : NO. 5, NARALIA G. P. S, BARAKUNDA, SITAKUNDA CHITTAGONG (Site No. IV-3)
Bore Chart of Boring No. 1.

DATE	DEPTH in m.	THICKNESS in m.	STRATA ENCOUNTERED	LOG	DIA OF BORING	STANDARD PENETRATION TEST BLOWS/30cm or ft.	REMARKS G.W.T. SOIL SAMPLES VANE SHEAR TEST (P.S.I.)
27-10-98	1·10	1·10	Brown soft SILT with clay		22·55 m, 10cm Ø PERCUSSION METHOD.	1 1 1 2	▽ 1·00m
	5·20	4·10	Grey med. stiff to stiff Clayey SILT trace fine sand.			1 2 3 5 2 3 5 8 2 4 5 9 3 4 6 10	
	11·50	6·30	Grey med. dense med. to fine SAND with silt.			4 5 7 12 4 5 8 13 5 6 7 13 5 7 8 15 4 5 6 11 2 3 6 9	
	14·50	3·00	Grey med, stiff SILT with clay & fine sand.			1 2 3 5 1 2 2 4 1 2 5 7	
			Grey stiff to very stiff fine Sandy SILT with clay			1 5 7 12 2 6 8 14 3 8 10 18	
		8·50	Grey hard SILT with clay			13 18 18 36	
	23·00		Grey stiff to very stiff fine Sandy SILT with clay.			5 6 6 12 4 5 6 11 3 5 5 10 4 6 5 11 5 6 6 12	

REDUCED ELEV.

1·00 2·00 3·00 4·00 5·00 6·00 7·00 8·00 9·00 10·00 11·00 12·00 13·00 14·00 15·00 16·00 17·00 18·00 19·00 20·00 21·00 22·00 23·00

DISTURBED SAMPLE ▨ UNDISTURBED SAMPLE ■

GEOLOGICAL RECORD OF BORING

(Site No. IV-4) SITE NO. 8

PROJECT	MULTIPURPOSE CYCLONE SHELTERS (IV)	LOCATION	SADEK MOSTAN GPS, SITAKUNDA, CHITTAGONG.
GROUND ELEVATION	6.186m	DEPTH OF HOLE	20.0 m
ANGLE FROM VERTICAL			
DIAMATER OF HOLE	100mm	MACHINE	PERCUSSION
DATE OF DRILLING	24-10-98		
CORE RECOVERY		DEPTH OF GROUND WATTER LEVEL IN HOLE	1.90 m
		DRILLED BY: S. A.	LOGGED BY: R. R. P.

ELEVATION (M)	DEPTH (M)	THICKNESS (M)	FIELD OBSERVATION: COLUMN SECTION	SOIL OR ROCK CLASSIFICATION	COLOUR	DESCRIPTION	DEPTH (M)	N VALUE
1 – 2	2.50	2.50		CLAY	Light brown	medium plastic CLAY (medium stiff)		4 5
3	3.50	1.0		CLAY	Brownish grey	high plastic CLAY (stiff)	U-1	9
4 – 5	5.40	1.90		CLAY	Light brown & grey	high plastic CLAY (stiff)		8 9
6 – 7	7.45	2.05		sandy SILT	Light brown & grey	sandy SILT (medium dense)		12 14
8 – 9	9.35	1.90		SAND & SILT	Blueish grey	fine SAND & SILT (medium dense)	U-2	26 28
10 – 11 – 12	12.50	3.15		SAND, some silt	Light grey	fine SAND, some silt (dense)		43 43 45
13 – 14	14.20	1.70		sandy SILT	Brownish grey	sandy SILT (loose to medium dense)	U-3	9 13
15 – 16	16.50	2.30		SAND & SILT	Light grey	fine SAND & SILT		33 37
17 – 18 – 19 – 20	20.0	3.50		SAND, some silt	Blueish grey	fine SAND, some silt (dense to very dense)	U-4	43 45 48 52

N VALUE scale: 0 10 20 30 40 50 60

GEOLOGICAL RECORD OF BORING

(Site No. IV-5) SITE NO. 9

PROJECT	MULTIPURPOSE CYCLONE SHELTERS (IV)	LOCATION	WEST SAYEDPUR GPS, SITAKUNDA, CHITTAGONG.		
GROUND ELEVATION	4.414m	DEPTH OF HOLE	22.0 m	ANGLE FROM VERTICAL	
DIAMATER OF HOLE	100mm	MACHINE	PERCUSSION	DATE OF DRILLING	20-10-98
CORE RECOVERY		DEPTH OF GROUND WATTER LEVEL IN HOLE		1.95 m	
		DRILLED BY: S. A.		LOGGED BY: R. R. P.	

ELEVATION (M)	DEPTH (M)	THICKNESS (M)	FIELD OBSERVATION: COLUMN SECTION	SOIL OR ROCK CLASSIFICATION	COLOUR	DESCRIPTION	DEPTH (M)	N VALUE
1 – 2	2.50	2.50		CLAY	Light brown & grey	medium plastic CLAY (medium stiff)		4 5
3	3.75	1.25		CLAY	Light brown	medium plastic CLAY (soft)	U-1	2
4 – 5	5.09	1.34		CLAY	Brownish grey	medium plastic CLAY (medium stiff)		5 4
6	6.50	1.41			Light brown & grey	sandy SILT (loose)		9
7 – 8 – 9	9.60	3.10		sandy SILT	Light grey	sandy SILT (loose)	U-2	8 10 13
10 – 11 – 12	12.15	2.55		SAND, some silt	Grey	fine SAND, some silt (medium dense)		17 16 19
13	13.50	1.35		sandy SILT	Blueish grey	sandy SILT (medium dense)		14
14	14.50	1.0		compressible SILT	Brownish grey	medium compressible SILT, trace sand (stiff)	U-3	10
15 – 16 – 17 – 18 – 19	19.50	5.0		sandy CLAY	Grey	laminated sandy CLAY, medium plastic (medium stiff)	U-4	8 7 6 6 6
20	20.50	1.0		sandy SILT	Blueish grey	sandy SILT (medium dense)		15
21 – 22	22.0	1.50		SAND & SILT	Light grey	fine SAND & SILT (medium dense)		21 23

N VALUE: 0 10 20 30 40 50 60

GEOLOGICAL RECORD OF BORING

(Site No. IV-6) SITE NO. 10

PROJECT	MULTIPURPOSE CYCLONE SHELTERS (IV)	LOCATION	MADDHA BAGACHATAR GPS, SITAKUNDA, CHITTAGONG		
GROUND ELEVATION	4.50m	DEPTH OF HOLE	22.0 m	ANGLE FROM VERTICAL	
DIAMATER OF HOLE	100mm	MACHINE	PERCUSSION	DATE OF DRILLING	26-10-98
CORE RECOVERY		DEPTH OF GROUND WATTER LEVEL IN HOLE	1.0 m		
		DRILLED BY: S. A.		LOGGED BY: R. R. P.	

ELEVATION (M)	DEPTH (M)	THICKNESS (M)	FIELD OBSERVATION: COLUMN SECTION	SOIL OR ROCK CLASSIFICATION	COLOUR	DESCRIPTION	DEPTH (M)	N VALUE
1 2	2.50	2.50		CLAY	Brown	medium plastic CLAY (medium stiff)		5 5
3 4 5	5.35	2.85		compressible SILT	Brown & grey	laminated medium compressible SILT, trace sand (soft)	U-1	4 3 4
6 7	7.59			SAND & SILT	Light grey	fine SAND & SILT (medium dense)		13 15
8 9	9.50	1.91		SAND & SILT	Light grey	fine SAND & SILT (medium dense)	U-2	22 29
10 11 12	11.95	2.45		SAND, some silt	Brownish grey	fine SAND, some silt (dense)		33 34 8
13 14	14.50	2.55		sandy CLAY	Light grey	sandy CLAY, medium plastic (medium stiff)	U-3	7 6
15 16 17 18	18.20	3.70		sandy CLAY	Brownish grey	laminated sandy CLAY, medium plastic (medium stiff)		5 6 7 6
19 20	20.0	1.80		SAND & SILT	Grey	fine SAND & SILT (medium dense)	U-4	21 29
21 22	22.0	2.0		SAND, some silt	Light grey	fine SAND, some silt (dense)		32 34

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Client : JICA'S BASIC DESIGN STUDY TEAM
Site : NO.12, KHUDUKKHALI G.P.S, CHANUA, BANSKHALI CHITTAGONG. (Site No. IV-7)
Bore Chart of Boring No. 1.

DATE	DEPTH in m	THICKNESS in m	STRATA ENCOUNTERED	LOG	DIA OF BORING	STANDARD PENETRATION TEST BLOWS/45cm (15cm/6" / 15cm/6" / 30cm/1'-0")	BLOWS/30cm or ft. (10 20 30 40 50 60 70 80 90)	REMARKS (U.W.T. SOIL SAMPLES, VANE SHEAR TEST (P.S.I.))	REDUCED ELEV.
30-10-98	2.10	2.10	Brown med. stiff SILT with clay.		19.55m, 10cm Ø PERCUSSION METHOD	1 2 3 5			1.00
						1 2 2 4			2.00 ▽ 2.00m.
	7.40	5.30	Grey very soft SILT with clay trace fine sand.			0 0 1 1			3.00
						0 0 1 1			4.00
						0 0 1 1			5.00
						0 0 1 1			6.00
						0 0 1 1			7.00
	8.50	1.10	Grey med. stiff SILT with clay trace fine sand.			2 2 2 4			8.00
	10.80	2.30	Grey med. dense med. to fine SAND trace silt.			3 4 7 11			9.00
						4 6 8 14			10.00
						5 7 40 47			11.00
						10 15 25 40			12.00
						12 17 24 41			13.00
		6.30	Grey hard SILT with fine sand.			15 17 26 43			14.00
						20 30 35 65			15.00
						16 30 32 62			16.00
	17.10					18 23 30 53			17.00
		2.90	Grey med. dense fine to med SAND with silt.			8 12 15 27			18.00
						7 9 16 25			19.00
	20.00					6 8 10 18			20.00

DISTURBED SAMPLE ▨ UNDISTURBED SAMPLE ■

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Client : JICA'S BASIC DESIGN STUDY TEAM
Site : NO.13, EAST GANDAMARA G.P.S, GANDAMARA BANSKHALI CHITTAGONG. (Site No. IV-8)
Bore Chart of Boring No. 1

DATE	DEPTH in m	THICKNESS in m	STRATA ENCOUNTERED	LOG	DIA OF BORING	STANDARD PENETRATION TEST BLOWS/30cm or ft.	REMARKS
28-10-98	3.20	3.20	Brown Soft SILT with clay		19.55m, 10cm Ø PERCUSSION METHOD	1 2 3 5	
						1 1 1 2	
						1 0 1 1	
						1 1 1 2	
						1 1 1 2	
						1 1 1 2	
	11.50	8.30	Grey soft to med. stiff SILT with clay trace fine sand.			1 2 2 4	
						2 2 3 5	
						3 4 5 9	
						2 4 4 8	
						3 3 5 8	
	14.50	3.00	Grey med. dense fine SAND & SILT.			4 6 7 13	
						5 7 8 15	
						5 6 7 13	
	17.50	3.00	Grey med. stiff SILT with fine sand & clay.			3 3 4 7	
						2 2 3 5	
						2 3 3 6	
	20.00	2.50	Grey very stiff SILT with fine sand.			3 7 8 15	
						6 8 10 18	
						9 10 10 20	

REDUCED ELEV. | SAMPLES

1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00

▽ 4.10m.

DISTURBED SAMPLE ▨ UNDISTURBED SAMPLE ■

Soiltech
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Client : JICA'S BASIC DESIGN STUDY TEAM
Site NO. 14, CHAPA CHARI RASHIDIA G.P.S, BAHARCHARA BANSKHALI, CHITTAGONG (Site No. IV-9)
Bore Chart of Boring No. 1

DATE	DEPTH in m	THICKNESS in m	STRATA ENCOUNTERED	LOG	DIA OF BORING	STANDARD PENETRATION TEST BLOWS/45cm (15cm/6" / 15cm/6" / 30cm/1-0") BLOWS/30cm or ft. (10 20 30 40 50 60 70 80 90)	REMARKS G.W.T. SOIL SAMPLES VANE SHEAR TEST (P.S.I.)

REDUCED ELEV. | SAMPLES

DEPTH	THICKNESS	STRATA ENCOUNTERED	15cm/6"	15cm/6"	30cm/1-0"	REDUCED ELEV.
	2.00	Brown stiff SILT with clay	2	4	6 10	1.00
2.00			2	3	4 7	2.00
	3.00	Grey soft to med. stiff Clayey SILT trace fine sand.	1	1	1 2	3.00
			1	2	2 4	4.00
			1	2	2 4	5.00
5.00			2	3	6 9	6.00
			2	3	3 6	7.00
			3	3	4 7	8.00
	10.10	Grey med. dense fine to med. SAND & SILT.	4	5	6 11	9.00
			5	5	7 12	10.00
			6	6	6 12	11.00
			5	7	7 14	12.00
			5	6	9 15	13.00
			6	7	9 16	14.00
15.10			7	7	8 15	15.00
	4.90	Grey stiff to very stiff SILT with clay & fine sand	3	3	3 6	16.00
			3	4	5 9	17.00
			3	5	5 10	18.00
			5	7	10 17	19.00
20.00			6	8	10 18	20.00

27-10-98

19.55m, 10cm Ø PERCUSSION METHOD

▽ 4.60m.

DISTURBED SAMPLE ▭ UNDISTURBED SAMPLE ■

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Client : JICA'S BASIC DESIGN STUDY TEAM
Site NO.15, JALIAGHATA G.P.S, SARAL, BANSKHALI, CTG.
(Site No. IV-10)
Bore Chart of Boring No. 1

DATE	DEPTH in m	THICKNESS in m	STRATA ENCOUNTERED	LOG	DIA OF BORING	STANDARD PENETRATION TEST BLOWS/30cm or ft.	REMARKS U.W.T. SOIL SAMPLES VANE SHEAR TEST (P.S.I.)	REDUCED ELEV.
26-10-98	1.20	1.20	Brown soft SILT with clay		150mm Ø PERCUSSION METHOD 19.55m, 100mm Ø	1 2 3 5		1.00
						1 0 1 1		2.00
						1 0 1 1		3.00
						1 1 2 3		4.00
						1 1 1 2		5.00
						1 2 2 4		6.00
						1 1 1 2		7.00
		13.90	Grey soft to med. stiff Clayey SILT trace fine sand			1 2 2 4		8.00
						2 2 2 4		9.00
						1 2 3 5		10.00
						2 3 3 6		11.00
						3 4 4 8		12.00
						3 4 5 9		13.00
						3 3 4 7		14.00
	15.10					3 4 5 9		15.00
		4.90	Grey stiff SILT with fine sand & clay.			4 7 8 15		16.00
						5 8 8 16		17.00
						4 5 6 11		18.00
						6 6 8 14		19.00
	20.00					5 7 8 15		20.00

▽ 3.65m

DISTURBED SAMPLE ▨ UNDISTURBED SAMPLE ■

GEOLOGICAL RECORD OF BORING

SITE NO. 16 (Site No. IV-11)

PROJECT	MULTIPURPOSE CYCLONE SHELTERS (IV)	LOCATION	RAHAMOTABAD GPS, MIRSHARAI, CHITTAGONG.
GROUND ELEVATION	4.880m	DEPTH OF HOLE	21.0 m
ANGLE FROM VERTICAL			
DIAMATER OF HOLE	100mm	MACHINE	PERCUSSION
DATE OF DRILLING	27-10-98		
CORE RECOVERY		DEPTH OF GROUND WATTER LEVEL IN HOLE	1.20 m
		DRILLED BY: A. M.	LOGGED BY: R. R. P.

ELEVATION (M)	DEPTH (M)	THICKNESS (M)	FIELD OBSERVATION					N VALUE
			COLUMN SECTION	SOIL OR ROCK CLASSIFICATION	COLOUR	DESCRIPTION	DEPTH (M)	0 10 20 30 40 50 60
1 2 3	3.50	3.50		CLAY	Light brown & grey	high plastic CLAY (medium stiff)	U-1	7 4 4
4 5	5.50	2.0		sandy CLAY	Grey	sandy CLAY, medium plastic (soft)		2 3
6 7 8 9	9.30	3.80		SAND & SILT	Grey	fine SAND & SILT (medium dense)	U-2	14 15 16 18
10 11	11.20	1.90		SAND, some silt	Light grey	fine SAND, some silt (medium dense)		25 28
12 13 14	14.0	2.80		SAND, some silt	Light brown	fine SAND, some silt (dense)		35 38 35
15 16	16.20	2.20		SAND & SILT	Grey	fine SAND & SILT (medium dense)	U-3	16 38
17 18	18.25	2.05		SAND, some silt	Light grey	fine SAND, some silt (dense)		31 34
19 20 21	21.0	2.75		SAND, some silt	Brownish grey	fine SAND, some silt (dense)	U-4	37 39 43

GEOLOGICAL RECORD OF BORING

SITE NO. 17 (Site No. IV-12)

PROJECT	MULTIPURPOSE CYCLONE SHELTERS (IV)	LOCATION	JOHRA AZIZ GPS, MIRSHARAI, CHITTAGONG.		
GROUND ELEVATION	8.290m	DEPTH OF HOLE	20.0 m	ANGLE FROM VERTICAL	
DIAMATER OF HOLE	100mm	MACHINE	PERCUSSION	DATE OF DRILLING	25-10-98
CORE RECOVERY		DEPTH OF GROUND WATTER LEVEL IN HOLE	1.80 m		
		DRILLED BY: A. M.	LOGGED BY: R. R. P.		

ELEVATION (M)	DEPTH (M)	THICKNESS (M)	FIELD OBSERVATION: COLUMN SECTION	SOIL OR ROCK CLASSIFICATION	COLOUR	DESCRIPTION	DEPTH (M)	N VALUE
	1, 2, 3 / 3.50	3.50		CLAY, trace sand	Light brown & grey	medium plastic CLAY, trace sand (medium stiff to stiff)	U-1	5, 9, 7
	4 / 4.20	0.70		sandy CLAY	Yellowish br. & gr.	sandy CLAY, med. plastic (med. stiff)		7
	5 / 5.40	1.20		SAND, some silt	Light brown & grey	fine SAND, some silt (med. dense)		10
	6 / 6.50	1.10		SAND, some silt	Grey	fine SAND & SILT (loose)		7
	7, 8 / 8.50	2.0		SAND, some silt	Blueish grey	fine SAND, some silt (med. dense)	U-2	18, 21
	9 / 9.40	0.90		Decomposed wood	Dark brown	decomposed wood with soft CLAY		9
	10 / 10.40	1.0		SAND, some silt	Light grey	fine SAND, some silt (med. dense)		27
	11 / 11.30	0.90		sandy CLAY	Light grey	sandy CLAY (stiff)		14
	12, 13, 14 / 14.0	2.70		SAND, some silt	Light grey	fine SAND, some silt (med. dense)	U-3	20, 23, 27
	15, 16 / 16.30	2.30		sandy CLAY	Light brown & grey	sandy CLAY, high plastic (very stiff)		30, 24
	17, 18 / 18.20	1.90		sandy CLAY	Yellowish br. & gr.	sandy CLAY, high plastic (very stiff)		28, 26
	19, 20 / 20.0	1.80		SAND, some silt	Brownish grey	fine SAND, some silt (dense)	U-4	30, 34

Soiltech
INTERNATIONAL LIMITED

Client : JICA'S BASIC DESIGN STADY TEAM
Site NO. 20, MONDARHAT GPS (Hashim Nagar GPS), MOGHADIA MIRSHARAI, CHITTAGONG. (Site No. IV-13)
Bore Chart of Boring No. 1

DATE	DEPTH in m	THICKNESS in m	STRATA ENCOUNTERED	LOG	DIA OF BORING	STANDARD PENETRATION TEST BLOWS/30cm or ft.	REMARKS
31-10-98	6.46	6.46	Brown med. stiff Clayey SILT trace fine sand.		19.55m, 10cm Ø PERCUSSION METHOD	2 2 2 4	REDUCED ELEV. 1.00
						2 2 3 5	2.00
						1 1 2 3	3.00
						1 2 2 4	4.00
						1 2 5 7	5.00
						3 4 10 14	6.00
						5 8 10 18	7.00
						7 10 12 22	8.00
						7 11 14 25	9.00
						9 10 16 26	10.00
						10 12 18 30	11.00
						12 15 21 36	12.00
	13.20	6.74	Grey med. dense fine to med SAND with silt.			10 14 18 30	13.00
	14.40	1.20	Grey stiff SILT with clay			3 4 5 9	14.00
						10 8 10 18	15.00
						5 7 10 17	16.00
						4 8 9 17	17.00
						5 10 12 22	18.00
						8 12 17 29	19.00
	20.00	5.60	Grey med. dense fine to med. SAND with silt.			10 13 18 31	20.00

▽ 1.40m.

SAMPLES

DISTURBED SAMPLE ▨ UNDISTURBED SAMPLE ■

Soiltech
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Client : JICA'S BASIC DESIGN STUDY TEAM
Site NO.21, KAZIR TALUK GPS, MOGHADIA, MIRSHARAI CHITTAGONG. (Site No. IV-14)
Bore Chart of Boring No. 1.

DATE	DEPTH in m.	THICKNESS in m.	STRATA ENCOUNTERED	LOG	DIA OF BORING	STANDARD PENETRATION TEST BLOWS/30cm or ft.	REMARKS U.W.T. SOIL SAMPLES VANE SHEAR TEST (P.S.L.)
2-11-98	5.50	5.50	Brown med. stiff SILT with clay trace fine sand.		27.55m, 10cm Ø PERCUSSION METHOD.	2 2 3 5	
						2 2 2 4	
						2 3 3 6	
						2 3 3 6	
						2 2 3 5	
	8.30	2.80	Grey soft Clayey SILT trace fine sand.			0 1 1 2	
						0 1 1 2	
						1 1 2 3	
	16.40	8.10	Grey loose fine to med. SAND with silt.			3 4 4 8	
						4 4 5 9	
						5 5 6 11	
						4 5 10 15	
						3 3 8 11	
						3 4 8 12	
						5 5 10 15	
	19.20	2.80	Grey dense to med. dense fine to med. SAND trace silt			5 6 10 16	
						15 24 27 51	
						15 25 30 55	
						10 15 20 35	
	22.00	2.80	Grey med. dense fine to med. SAND with silt.			5 6 7 13	
						14 6 8 14	
						5 7 7 14	

REDUCED ELEV. SAMPLES

1.00 ▽1.20m. 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00 22.00

DISTURBED SAMPLE ☒ UNDISTURBED SAMPLE

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Client : JICA'S BASIC DESIGN STUDY TEAM

Site NO. 22, MODDHO MIANI GPS, MIANI, MIRSHARAI CHITTAGONG. (Site No. IV-15)

Bore Chart of Boring No. 1.

DATE	DEPTH in m.	THICKNESS in m.	STRATA ENCOUNTERED	LOG	DIA OF BORING	STANDARD PENETRATION TEST BLOWS/30cm or ft.	REMARKS W.W.T. SOIL SAMPLES VANE SHEAR TEST (P.S.L.)
1-11-98	3.50	3.50	Brown med. stiff SILT with clay trace fine sand.		20.35m, 10cm Ø PERCUSSION METHOD.	1 1 2 3	
						1 2 3 5	
						1 1 2 3	
						1 2 3 5	
	6.20	2.70	Grey med. stiff to soft SILT with clay trace fine sand.			1 1 2 3	
						0 1 1 2	
	8.40	2.20	Grey loose to med. dense fine to med. SAND trace silt.			2 3 4 7	
						3 5 6 11	
						10 13 18 31	
						10 14 19 33	
		7.00	Grey dense to med. dense fine SAND & SILT.			11 15 20 35	
						11 15 22 37	
						7 10 15 25	
						8 11 16 27	
	15.40					10 12 18 30	
						8 9 12 21	
						9 10 13 23	
		5.60	Grey med. dense to dense med. to fine SAND trace silt.			8 10 12 22	
						9 17 13 24	
						10 12 13 25	
	21.00					18 22 25 47	

REDUCED ELEV.

1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00

▽ 1.50m.

DISTURBED SAMPLE ☒ UNDISTURBED SAMPLE ▬

Soiltech
INTERNATIONAL LIMITED

Client : JICA'S BASIC DESIGN STUDY TEAM
Site NO. 23, SHAHID ABDUL KALAM GPS, MIANI MIRSHARAI, CHITTAGONG. (Site No. IV-16)
Bore Chart of Boring No. 1.

DATE	DEPTH in m	THICKNESS in m	STRATA ENCOUNTERED	LOG	DIA OF BORING	STANDARD PENETRATION TEST BLOWS/15cm	BLOWS/30cm or ft.	REMARKS G.W.T. SOIL SAMPLES VANE SHEAR TEST (P.S.L)	REDUCED ELEV.	SAMPLES
30-10-98	3.20	3.20	Brown med. stiff to soft Clayey SILT trace fine sand		19.55m, 10cm Ø PERCUSSION METHOD	2 2 3 5	10 20 30 40 50 60 70 80 90	▽ 1.50m.	1.00	
						1 2 2 4			2.00	
	5.40	2.20	Grey soft Clayey SILT trace fine sand.			0 1 1 2			3.00	
						0 1 1 2			4.00	
						1 2 2 4			5.00	
						3 4 6 10			6.00	
						7 10 15 25			7.00	
						8 10 15 25			8.00	
						3 8 13 21			9.00	
		10.00	Grey med. dense fine SAND & SILT with clay			7 10 13 23			10.00	
						8 12 14 26			11.00	
						6 9 12 21			12.00	
						7 9 13 22			13.00	
						9 12 13 25			14.00	
	15.40					11 14 15 29			15.00	
						15 24 27 51			16.00	
		4.60	Grey fine to med. SAND with silt.			16 25 27 52			17.00	
						15 25 25 50			18.00	
						17 26 28 54			19.00	
	20.00					16 25 30 55			20.00	

DISTURBED SAMPLE ▨ UNDISTURBED SAMPLE ■

Soiltech
INTERNATIONAL LIMITED

Client : JICA'S BASIC DESIGN STUDY TEAM
Site NO. 24, TARAKALIA GPS, HAITKANDI, MIRSHARAI CHITTAGONG (Site No. IV-17)
Bore Chart of Boring No. 1.

DATE	DEPTH in m.	THICKNESS in m.	STRATA ENCOUNTERED	LOG	DIA OF BORING	STANDARD PENETRATION TEST BLOWS/30cm or ft.	REMARKS
	3.10	3.10	Brown med. stiff to stiff SILT with clay trace fine sand.		55 m, 10cm Ø PERCUSSION METHOD.	1 2 3 5	
						2 3 4 7	
						3 5 7 12	
	6.30	3.20	Grey loose fine to med. SAND & SILT trace clay.			2 3 4 7	
						1 2 3 5	
						2 3 4 7	
						3 4 6 10	
	13.20	6.90	Grey med. dense fine SAND with silt.			4 5 7 12	
						7 8 9 17	
						8 9 10 19	
						9 10 13 23	
						15 17 20 37	
						10 12 16 28	
	17.30	4.10	Grey dense to med. dense fine SAND with silt.			10 13 16 29	
						12 14 20 34	
						16 18 28 46	
						13 15 17 32	
	21.00	3.70	Grey med. dense fine Sandy SILT with clay.			7 9 11 20	
						6 8 10 19	
						5 8 10 18	
						5 7 8 15	

REDUCED ELEV.

1.00 ▽ 1.25m.
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
13.00
14.00
15.00
16.00
17.00
18.00
19.00
20.00
21.00

DISTURBED SAMPLE ▭ UNDISTURBED SAMPLE ▬

Soiltech
INTERNATIONAL LIMITED

Client :
Site NO. 25, KHAZURIA GPS, WAHEDPUR, MIRSHARAI CHITTAGONG. (Site No. IV-18)
Bore Chart of Boring No. 1.

DATE	DEPTH in m	THICKNESS in m	STRATA ENCOUNTERED	LOG	DIA OF BORING	STANDARD PENETRATION TEST BLOWS/30cm or ft.	REMARKS G.W.T. SOIL SAMPLES VANE SHEAR TEST (P.S.L)
29-10-98	4.00	4.00	Grey med. stiff to stiff SILT with clay trace fine sand.		20-55m, 10cm Ø PERCUSSION METHOD	1 2 4 6 2 2 4 6 2 4 6 10 3 4 7 11 4 5 8 13 3 4 5 9 5 7 8 15 6 8 9 17 12 14 17 31 8 9 10 19 8 10 12 22 10 11 13 24 8 10 12 22 9 11 13 24 10 15 20 35 9 10 13 23 10 12 15 27 10 13 16 29 10 13 16 29 10 15 18 33 11 17 20 37	REDUCED ELEV. 1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00
	21.00	17.00	Grey med. dense to dense fine to med, SAND with silt				▽ 1.50m.

DISTURBED SAMPLE ▨ UNDISTURBED SAMPLE ■

GEOLOGICAL RECORD OF BORING

SITE NO. 28 (Site No. IV-19)

PROJECT	MULTIPURPOSE CYCLONE SHELTERS (IV)	LOCATION	NORTH EAST AZAMNAGAR GPS, MIRSHARAI, CHITTAGONG
GROUND ELEVATION	4.8785m	DEPTH OF HOLE	20.0 m
ANGLE FROM VERTICAL			
DIAMATER OF HOLE	100mm	MACHINE	PERCUSSION
DATE OF DRILLING	24-10-98		
CORE RECOVERY		DEPTH OF GROUND WATTER LEVEL IN HOLE	1.60 m
		DRILLED BY: A. M.	LOGGED BY: R. R. P.

ELEVATION (M)	DEPTH (M)	THICKNESS (M)	FIELD OBSERVATION: COLUMN SECTION	SOIL OR ROCK CLASSIFICATION	COLOUR	DESCRIPTION	DEPTH (M)	N VALUE
1 2 3	2.50	2.50		CLAY	Light brown & grey	medium plastic CLAY (medium stiff)	U-1	6 8 3
4 5 6 7	7.50	5.0		sandy CLAY	Grey	Grey laminated sandy CLAY (soft)		2 3 3 3
8 9	9.0	1.50		sandy SILT	Grey	fine sandy SILT (loose)	U-2	5 10
10	10.30	1.30		SAND & SILT	Light brown	fine SAND & SILT		13
11 12 13	13.40	3.10		CLAY	Grey	high plastic CLAY (soft)		3 3 4
14 15	15.40	2.0		CLAY	Brownish grey	high plastic CLAY (stiff)	U-3	9 12
16 17 18	18.30	2.90		SAND, some silt	Light grey	fine SAND, some silt (medium dense)		24 21 22
19 20	20.0	1.70		SAND, some silt	Light brown & grey	fine SAND, some silt (dense)	U-4	31 39

N VALUE: 0 10 20 30 40 50 60

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Client : JICA'S BASIC DESIGN STUDY TEAM
Site NO. 29, KURUA GPS, HAILKANDI MIRSHARAI CHITTAGONG. (Site No. IV-20)
Bore Chart of Boring No. 1

DATE	DEPTH in m	THICKNESS in m	STRATA ENCOUNTERED	LOG	DIA OF BORING	STANDARD PENETRATION TEST BLOWS/45cm (15cm/6" / 15cm/6" / 15cm/6")	BLOWS/30cm or ft.	REMARKS	REDUCED ELEV.	SAMPLES
29-10-98	4.10	4.10	Brown med. stiff Clayey SILT trace fine sand.		19.55m, 10cm Ø PERCUSSION METHOD	2 2 3 5	10 20 30 40 50 60 70 80 90	9.W.T. SOIL SAMPLES VANE SHEAR TEST (P.S.L)	1.00 ▽ 1.35m.	
	7.30	3.20	Grey soft Clayey SILT trace fine sand.			2 3 3 6			2.00	
						2 2 3 5			3.00	
						2 2 2 4			4.00	
						2 1 2 3			5.00	
						0 1 1 2			6.00	
						1 1 1 2			7.00	
	12.20	4.90	Grey med. dense to loose fine SAND with silt.			4 6 7 13			8.00	
						2 3 5 8			9.00	
						4 4 6 10			10.00	
						3 4 5 9			11.00	
						3 5 5 10			12.00	
	17.20	5.00	Grey med. stiff SILT with clay trace fine sand.			3 3 4 7			13.00	
						2 2 3 5			14.00	
						2 2 4 6			15.00	
						3 3 3 6			16.00	
						3 3 5 8			17.00	
	20.00	2.80	Grey dense fine to med. SAND with silt.			10 14 15 29			18.00	
						11 15 17 32			19.00	
						12 15 20 35			20.00	

DISTURBED SAMPLE ▨ UNDISTURBED SAMPLE ■

GEOLOGICAL RECORD OF BORING

SITE NO. 31 (Site No. IV-21)

PROJECT	MULTIPURPOSE CYCLONE SHELTERS (IV)	LOCATION	BANSKHALI GPS, MIRSHARAI, CHITTAGONG.		
GROUND ELEVATION	4.660m	DEPTH OF HOLE	21.0 m	ANGLE FROM VERTICAL	
DIAMATER OF HOLE	100mm	MACHINE	PERCUSSION	DATE OF DRILLING	26-10-98
CORE RECOVERY		DEPTH OF GROUND WATTER LEVEL IN HOLE		1.0 m	
		DRILLED BY: A. M.		LOGGED BY: R.R.P.	

ELEVATION (M)	DEPTH (M)	THICKNESS (M)	FIELD OBSERVATION: COLUMN SECTION	SOIL OR ROCK CLASSIFICATION	COLOUR	DESCRIPTION	DEPTH (M)
1	1.40	1.40		CLAY	Light brown & grey	high plastic CLAY (soft)	
2	2.50	1.10		CLAY	Light brown	medium plastic CLAY (medium stiff)	
3, 4, 5	5.50	3.0		compressible SILT, trace sand	Grey	Grey medium compressible SILT, trace sand (soft)	U-1
6	6.50	1.0		sandy SILT	Grey	non-plastic sandy SILT (loose)	
7	7.50	1.0		sandy CLAY	Grey	sandy CLAY, medium plastic (medium stiff)	
8	8.40	0.90		SAND & SILT	Grey	fine SAND & SILT (loose)	U-2
9, 10, 11	11.40	3.0		SAND & SILT	Deep grey	fine SAND & SILT (medium dense)	
12, 13, 14	14.20	2.80		SAND, little silt	Light brown	fine SAND, little silt (dense)	U-3
15, 16	16.30	2.10		SAND, some silt	Brownish grey	fine SAND, some silt (medium dense)	
17, 18, 19	19.20	2.90		SAND, some silt	Light grey	fine SAND, some silt (medium dense to dense)	U-4
20, 21	21.0	1.80		SAND, little silt	Light brown & grey	fine SAND, little silt (dense)	

N VALUE

0	10	20	30	40	50	60
3	6	3	4	3	7	6
9	21	19	16	32	34	30
19	17	24	30	34	37	41

11-2-3　土質試験結果一覧表

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SOIL MECHANIC & MATERIAL TESTING LABORATORY
D H A K A

SUMMARY OF LABORATORY TEST RESULTS

CLIENT Jica's Basic Design Study Team
SITE Sitakunda, Chittagong.

		SITE No. 3 (Site No. IV-1)							SITE No. 4 (Site No. IV-2)					
Borehole No.		1							1					
Sample No.		U-1	U-2	U-3	U-4	D-7	D-12	D-17	U-1	U-2	U-3	U-4	D-9	D-22
Depth in ~~feet~~ Meter		0.10 to 0.55	1.10 to 1.55	2.10 to 2.55	3.10 to 3.55	6.55 to 7.00	11.55 to 12.00	16.55 to 17.00	1.10 to 1.55	3.10 to 3.55	4.10 to 4.55	5.10 to 5.55	8.55 to 9.00	21.55 to 22.00
Moisture content (Natural)		22.00	23.00	26.00	27.47				44.00	33.50	33.49	31.73		
Specific gravity					2.567	2.607	2.677	2.663	2.572			2.567	2.574	2.577
Atterberg Limits	Liquid Limit, Lw	55.00	47.36		52.63			43.47	56.41			64.86	43.47	55.00
	Plastic Limit, Pw	28.00	25.00		27.50			26.08	28.00			30.76	25.38	26.92
Density	Wet (lbs/cft)	127.74	125.97	122.88	125.09				108.29	115.80	119.78	121.10		
	Dry (lbs/cft)	104.75	102.10	97.24	98.12				75.14	86.19	89.72	91.93		
Grain size Analysis	Gravel (%)													
	Sand (%)	6				44	96	10	3			4	32	11
	Silt (%)	66				56	4	78	71			60	54	61
	Clay (%)	28				-	-	12	26			36	14	28
Consolidation tests	Natural void ratio, eo													
	Compression index, Cc													
Unconfined Compression tests	Strain at failure (%)	10.71	10.71	7.14	5.35				10.71	8.92	10.71	8.92		
	Stress undist.(lbs/sq.inch)	4.86	8.24	15.80	13.91				5.05	12.84	9.36	11.11		
	Stress remould.(lbs/sq.inch)	3.06	4.79	10.54	8.81				2.87	7.67	5.24	6.92		
	Sensitivity	1.588	1.720	1.499	1.578				1.759	1.674	1.786	1.605		
Triaxial Compression Qc tests	C (p.s.i)													
	∅ (degree)													

A11-71

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SUMMARY OF LABORATORY TEST RESULTS

CLIENT: Jica's Basic Design Study Team
SITE: Sitakunda, Chittagong.

		SITE No.5 (Site No. IV-3)						
Borehole No.		1						
Sample No.		U-1	U-2	U-3	U-4	D-6	D-13	D-20
Depth in feet		1.10 to 1.55	3.10 to 3.55	4.10 to 4.55	5.10 to 5.55	5.55 to 6.00	12.55 to 13.00	19.55 to 20.00
Moisture content (Natural)		37.00	35.00	31.00	33.00			
Specifice gravity				2.588	2.663	2.585	2.574	
Atterberg Limits	Liquid Limit, Lw	52.63	56.41				47.36	38.08
	Plastic Limit, Pw	27.55	26.92				26.40	23.07
Density	Wet (lbs/cft)	118.98	117.13	118.46	120.22			
	Dry (lbs/cft)	87.07	86.63	90.17	90.17			
Grain size Analysis	Gravel (%)							
	Sand (%)			3		75	16	38
	Silt (%)			69		25	70	50
	Clay (%)			30		-	14	12
Consolidation tests	Natural void ratio, e.o.							
	Compression index, Cc							
Unconfined Compression tests	Strain at failure (%)	10.71	10.71	10.71	7.14			
	Stress undist.(lbs/sq.inch)	8.61	8.98	12.54	4.29			
	Stress remould.(lbs/sq.inch)	5.05	5.55	7.30	2.68			
	Sensitivity	1.704	1.618	1.717	1.600			
Triaxial Compression Qc tests	C (p.s.i)							
	∅ (degree)							

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SOIL MECHANIC & MATERIAL TESTING LABORATORY
DHAKA

SUMMARY OF LABORATORY TEST RESULTS

(Site No. IV-4)
SITE NO. 8
Sadek Mostan GPS, Sitakunda, Chittagong.

Bore hole No.										
Sample No.		D-1	D-2	U-1	D-5	D-6	U-2	U-3	U-4	
Depth - m		0.5 1.0	1.5 2.0	3.0 3.5	4.5 5.0	5.5 6.0	8.0 8.5	14.0 14.5	19.0 19.5	
Natural Moisture content (%)				26.55			25.72	24.76	24.11	
Specific gravity				2.683			2.643	2.639	2.632	
Atterberg Limits	Liquid Limit, W_l (%)	46	48	51	53					
	Plastic Limits, Ip (%)	19	20	27	29					
Density	Wet (gm/cc)									
	Dry (gm/cc)			1.520			1.546	1.572	1.586	
Grain size analysis	Gravel (%)									
	Sand (%)					19	59	64	77	
	Silt or Clay % (fines)					81	41	36	23	
Consolidation tests	Natural Void ration eo									
	Compression index, Cc									
Unconfined Compression tests	Strain at failure (%)			14						
	Stress undist. (kg/cm^2)			0.997						
	Stress remould ( )									
	Sensitivity									
Direct shear Tests	ϕ (degree)						27	29.5	31	
	C (kg/cm^2)						0.140	0.07	0.050	

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DHAKA

SUMMARY OF LABORATORY TEST RESULTS

(Site No. IV-5)
SITE NO. 9
West Sayedpur GPS, Sitakunda, Chittagong.

Bore hole No.		BH-1								
Sample No.		D-2	U-1	D-6	U-2	D-11	U-3	U-4	D-22	
Depth - m		1.5 2.0	3.0 3.5	5.5 6.0	8.0 8.5	10.5 11.0	14.0 14.5	19.0 19.5	21.5 22.0	
Natural Moisture content (%)			34.11		25.13		24.18	25.18		
Specific gravity			2.681		2.643		2.672	2.673		
Atterberg Limits	Liquid Limit, W_l (%)	47	46				38	47		
	Plastic Limits, Ip (%)	21	18				12	20		
Density	Wet (gm/cc)									
	Dry (gm/cc)		1.3208		1.508		1.558	1.4784		
Grain size analysis	Gravel (%)									
	Sand (%)			10	15	67			61	
	Silt or clay % (fines)			90	85	33			39	
Consolidation tests	Natural Void ration, eo									
	Compression index, Cc									
Unconfined Compression tests	Strain at failure (%)		15				12	14		
	Stress undist. (kg/cm^2)		0.3705				1.212	0.722		
	Stress remould ( )									
	Sensitivity									
Direct shear Tests	ϕ (degree)				19.5					
	C (kg/cm^2)				0.110					

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SOIL MECHANIC & MATERIAL TESTING LABORATORY
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SUMMARY OF LABORATORY TEST RESULTS

(Site No. IV-6)
SITE NO. 10
Maddha Bagachatar GPS, Sitakunda, Chittagong.

Bore hole No.										
Sample No.		D-2	U-1	D-6	U-2	D-11	D-13	U-3	D-16	U-4
Depth - m		1.5 2.0	3.0 3.5	5.5 6.0	8.0 8.5	10.5 11.0	12.5 13.0	14.0 14.5	15.5 16.0	19.0 19.5
Natural Moisture content (%)		32.11			26.0			26.98		24.98
Specific gravity			2.672		2.652			2.681		2.636
Atterberg Limits	Liquid Limit, W_l (%)	47	37				49	48		
	Plastic Limits, Ip (%)	21	10				19	20		
Density	Wet (gm/cc)									
	Dry (gm/cc)	1.3220			1.502			1.4623		1.552
Grain size analysis	Gravel (%)									
	Sand (%)			54	57					65
	Silt of clay % (fines)			46	43					35
Consolidation tests	Natural Void ration, eo									
	Compression index, Cc									
Unconfined Compression tests	Strain at failure (%)	14						15		
	Stress undist. (kg/cm^2)	0.3992						0.6589		
	Stress remould ( )									
	Sensitivity									
Direct shear Tests	ϕ (degree)				29					30
	C (kg/cm^2)				0.140					0.120

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SOIL MECHANIC & MATERIAL TESTING LABORATORY
D H A K A

SUMMARY OF LABORATORY TEST RESULTS

CLIENT: Jica's Basic Design Saudy Team
SITE : Banskhali, Chittagong

		SITE No. 12 (Site No. IV-7)						SITE No. 13 (Site No. IV-8)						
Borehole No.		1						1						
Sample No.		U-1	U-2	U-3	U-4	D-10	D-19	U-1	U-2	U-3	D-6	U-4	D-12	D-17
Depth in [illegible] Meter		2.10 to 2.55	4.10 to 4.55	5.10 to 5.55	8.10 to 8.55	9.55 to 10.00	18.55 to 19.00	1.10 to 1.55	2.10 to 2.55	3.10 to 3.55	5.55 to 6.00	8.10 to 8.55	11.55 to 12.00	16.55 to 17.00
Moisture content (Natural)		55.10	60.43	44.78	33.64			25.55	27.39	40.65		43.76		
Specifice gravity		2.567			2.607	2.706	2.621	2.588			2.574		2.621	2.615
Atterberg Limits	Liquid Limit, Lw	55.02	57.43		39.02		N.P	53,33		57.50	42.85		38.13	
	Plastic Limit, Pw	27.50	29.16		24.61			28.57		29.16	25.60		23.07	
Density	Wet (lbs/cft)	100.77	98.56	104.31	126.41			125.97	123.31	113.15		108.02		
	Dry (lbs/cft)	64.97	61.43	71.80	98.58			100.33	96.79	80.44		75.14		
Grain size Analysis	Gravel (%)													
	Sand (%)	4			37	95	50	2			9		43	25
	Silt (%)	72			53	5	50	69			75		45	58
	Clay (%)	24			10	-	-	29			16		12	17
Consolidation tests	Natural void ratio, eo													
	Compression index, Cc													
Unconfined Compression tests	Strain at failure (%)	10.71	10.71	10.71	7.14			10.71	10.71	8.92		7.14		
	Stress undist.(lbs/sq.inch)	3.74	2.81	5.24	5.46			12.74	8.98	3.06		6.05		
	Stress remould.(lbs/sq.inch)	2.30	1.91	3.18	2.87			7.49	5.36	2.14		3.45		
	Sensitivity	1.626	1.471	1.65	1.902			1.699	1.675	1.429		1.753		
Triaxial Compression Qc tests	C (p.s.i)													
	ϕ (degree)													

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SOIL MECHANIC & MATERIAL TESTING LABORATORY
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SUMMARY OF LABORATORY TEST RESULTS

CLIENT Jica's Basic Design Study Team
SITE Banskhali, Chittagong.

Borehole No.		SITE No. 14 (Site No. IV-9)							SITE No, 15 (Site No. IV-10)					
		1							1					
Sample No.		U-1	U-2	U-3	U-4	D-6	D-14	D-18	U-1	U-2	U-3	U-4	D-9	D-16
Depth in ~~feet~~ Miter		1.10 to 1.55	2.10. to 2.55	4.10 to 4.55	5.10 to 5.55	5.55 to 6.00	13.55 to 14.00	17.55 to 18.00	1.10 to 1.55	3.10 to 3.55	6.10 to 6.55	7.10 to 7.55	8.55 to 9.00	15.55 to 16.00
Moisture content (Natural)		27.72	33.82	42.69	33.16				36.22	54.66	55.26	48.46		
Specifice gravity			2.577			2.561	2.663	2.593		2.588		2.574	2.567	2.604
Atterberg Limits	Liquid Limit, Lw		54.87			63.15	N.P	37.72		57.14	53.50	52.50	57.14	
	Plastic Limit, Pw		28.57			30.76		23.33		29.60	28.57	27.50	29.16	
Density	Wet (lbs/cft)	124.20	120.66	112.26	117.13				118.01	102.54	104.31	106.96		
	Dry (lbs/cft)	97.24	90.16	78.67	87.95				86.63	66.30	67.18	72.04		
Grain size Analysis	Gravel (%)													
	Sand (%)		4			4	52	13		2		4	4	19
	Silt (%)		66			59	48	69		70		72	65	64
	Clay (%)		30			37	-	18		28		24	31	17
Consolidation tests	Natural void ratio, e o													
	Compression index, Cc													
Unconfined Compression tests	Strain at failure (%)	8.92	8.92	8.92	10.71				8.92	10.71	8.92	10.71		
	Stress undist.(lbs/sq.inch)	23.96	14.95	3.45	5.43				12.07	2.99	3.25	3.74		
	Stress remould.(lbs/sq.inch)	15.91	8.24	2.34	3.25				6.92	2.10	2.30	2.49		
	Sensitivity	1.505	1.814	1.474	1.670				1.744	1.423	1.413	1.502		
Triaxial Compression Qc tests	C (p.s.i)													
	∅ (degree)													

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SUMMARY OF LABORATORY TEST RESULTS

(Site No. IV-11)
SITE NO. 16
Rahamotabad GPS, Mirsharai, Chittagong.

Bore hole No.										
Sample No.		D-2	D-3	U-1	D-5	U-2	D-12	U-3	U-4	
Depth - m		1.5 2.0	2.5 3.0	3.0 3.5	4.5 5.0	8.0 8.5	11.5 12.0	14.0 14.5	19.0 19.5	
Natural Moisture content (%)				29.62		24.36		25.11	25.09	
Specific gravity				2.683		2.636		2.642	2.624	
Atterberg Limits	Liquid Limit, W_l (%)	54	52	51	46					
	Plastic Limits, Ip (%)	30	27	28	21					
Density	Wet (gm/cc)									
	Dry (gm/cc)			1.3143		1.533		1.548	1.567	
Grain size analysis	Gravel (%)									
	Sand (%)					61	74	64	78	
	Silt or clay % (fines)					39	26	36	22	
Consolidation tests	Natural Void ration, eo									
	Compression index, Cc									
Unconfined Compression tests	Strain at failure (%)			15						
	Stress undist. (kg/cm^2)			0.384						
	Stress remould ( )									
	Sensitivity									
Direct shear Tests	ϕ (degree)					28		27	31	
	C (kg/cm^2)					0.11		0.140	0.035	

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SUMMARY OF LABORATORY TEST RESULTS

(Site No. IV-12)
SITE NO. 17
Johora Aziz GPS, Mirsharai, Chittagong.

Bore hole No.										
Sample No.		D-2	U-1	D-6	D-10	D-13	U-3	D-17	U-4	
Depth - m		1.5 2.0	3.0 3.5	5.5 6.0	9.5 10.0	12.5 13.0	14.0 14.5	16.0 16.5	19.0 19.5	
Natural Moisture content (%)			26.72	23.62			20.09		24.18	
Specific gravity			2.681	2.653			2.682		2.629	
Atterberg Limits	Liquid Limit, W_l (%)	49	47				55	53		
	Plastic Limits, Ip (%)	21	20				30	29		
Density	Wet (gm/cc)									
	Dry (gm/cc)		1.536	1.494			1.830		1.578	
Grain size analysis	Gravel (%)									
	Sand (%)			54	73	69			76	
	Silt or clay % (fines)			46	27	31			24	
Consolidation tests	Natural Void ration, eo									
	Compression index, Cc									
Unconfined Compression tests	Strain at failure (%)		13				5			
	Stress undist. (kg/cm^2)		0.844				2.782			
	Stress remould ( )									
	Sensitivity									
Direct shear Tests	ϕ (degree)			27.5					30.5	
	C (kg/cm^2)			0.1400					0.050	

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SUMMARY OF LABORATORY TEST RESULTS

CLIENT Jicaba Basic Design study Team
SITE Mirsharai, Chittagong.

		SITE No. 20 (Site No. IV-13)							SITE No. 21 (Site No. IV-14)						
Borehole No.		1							1						
Sample No.		U-1	U-2	U-3	U-4	D-8	D-12	D-19	U-1	U-2	U-3	U-4	D-7	D-12	D-18
Depth in ~~Feet~~ Miter		1.10 to 1.55	2.10 to 2.55	3.10 to 3.55	4.10 to 4.55	7.55 to 8.00	11.55 to 12.00	18.55 to 19.00	0.10 to 1.55	2.10 to 2.55	3.10 to 3.55	4.10 to 4.55	6.55 to 7.00	11.55 to 12.00	17.55 to 18.00
Moisture content (Natural)		29.80	30.91	29.30	29.57				33.00	32.91	28.18	34.35			
Specific gravity				2.574		2.683	2.691	2.674		2.572			2.561	2.688	2.706
Atterberg Limits	Liquid Limit, Lw	55.26	52.38	54.54	50.00					47.17	51,05	58.09	65.78		
	Plastic Limit, Pw	26.92	27.50	28.57	27.40					26.40	26.38	28.57	31.11		
Density	Wet (lbs/cft)	119.34	119.78	122.87	121.99				117.57	120.66	124.64	115.80			
	Dry (lbs/cft)	91.93	91.49	95.03	94.14				88.40	90.78	97.84	86.19			
Grain size Analysis	Gravel (%)														
	Sand (%)			2		81	87	84	4				2	78	96
	Silt (%)			69		19	13	16	73				64	22	4
	Clay (%)			29		–	–	–	23				34	–	–
Consolidation tests	Natural void ratio, eo														
	Compression index, Cc														
Unconfined Compression tests	Strain at failure (%)	8.92	8.92	8.92	10.71				8.92	8.92	8.92	8.92			
	Stress undist.(lbs/sq.inch)	12.84	8.62	12.65	22.84				16.10	17.63	19.36	5.36			
	Stress remould.(lbs/sq.inch)	7.49	5.17	6.92	14.42				8.98	9.92	12.36	3.06			
	Sensitivity	1.714	1.667	1.828	1.583				1.792	1.777	1.566	1.751			
Triaxial Compression Qc tests	C (p.s.i)														
	∅ (degree)														

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SUMMARY OF LABORATORY TEST RESULTS

CLIENT Jica's Basic design study Team
SITE Mirsharai,, Chittagong

		SITE No. 22 (Site No. IV-15)							SITE No. 23 (Site No. IV-16)						
Borehole No.		1							1						
Sample No.		U-1	U-2	U-3	U-4	D-7	D-13	D-20	U-1	U-2	U-3	U-4	D-6	D-11	D-17
Depth in ~~feet~~ Meter		0.10 to 0.55	1.10 to 1.55	2.10 to 2.55	3.10 to 3.55	6.55 to 7.00	12.55 to 13.00	19.55 to 20.00	1.10 to 1.55	2.10 to 2.55	3.10 to 3.55	4.10 to 4.55	5.55 to 6.00	10.55 to 11.00	16.55 to 17.00
Moisture content (Natural)		28.76	27.60	31.40	36.50				30.74	34.80	34.40	35.02			
Specifice gravity					2.593	2.691	2.663	2.706		2.574			2.561	2.601	2.691
Atterberg Limits	Liquid Limit, Lw	47.61	53.50		48.00		N.P		47.22	49.72			66.66	37.20	
	Plastic Limit, Pw	26.66	28.00		25.00				26.08	27.50			32.00	24.00	
Density	Wet (lbs/cft)	124.64	124.64	120.22	114.03				123.31	118.45	118.45	117.57			
	Dry (lbs/cft)	96.79	97.68	91.49	83.53				94.32	87.86	88.13	87.07			
Grain size Analysis	Gravel (%)														
	Sand (%)				5	93	58	96		2			1	46	92
	Silt (%)				81	7	42	4		74			61	40	8
	Clay (%)				14	-	-	-		24			38	14	-
Consolidation tests	Natural void ratio, eo														
	Compression index, Cc														
Unconfined Compression tests	Strain at failure (%)	8.92	10.71	8.92	10.71				10.71	10.71	8.92	8.92			
	Stress undist.(lbs/sq.inch)	21.08	13.67	12.26	7.67				19.29	11.79	8.43	7.28			
	Stress remould.(lbs/sq.inch)	14.23	7.66	8.24	4.79				13.29	7.28	4.98	4.40			
	Sensitivity	1.481	1.784	1.487	1.601				1.451	1.619	1.692	1.654			
Triaxial Compression Qc tests	C (p.s.i)														
	∅ (degree)														

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SUMMARY OF LABORATORY TEST RESULTS

CLIENT : Jica's Basic Design Study Team
SITE : Mirsharai, Chittagong.

		SITE No. 24 (Site No. IV-17)							SITE No. 25 (Site No. IV-18)						
Borehole No.		1							1						
Sample No.		U-1	U-2	U-3	U-4	D-6	D-11	D-19	U-1	U-2	U-3	U-4	D-8	D-13	D-19
Depth in ~~feet~~ Miter		0.10 to 0.55	1.10 to 1.55	2.10 to 2.55	3.10 to 3.55	5.55 to 6.00	10.55 to 11.00	18.55 to 19.00	0.10 to 0.55	1.10 to 1.55	2.10 to 2.55	3.10 to 3.55	7.55 to 8.00	12.55 to 13.00	18.55 to 19.00
Moisture content (Natural)		27.46	32.14	27.31	27.04				24.20	31.55	34.03	32.38			
Specific gravity					2.593	2.621	2.683	2.607				2.588	2.691	2.683	2.691
Atterberg Limits	Liquid Limit, Lw		48.83		44.18	N.P		39.54	54.54	52.27	40.90	48.78			
	Plastic Limit, Pw		26.66		25.38			23.07	28.57	26.92	24.61	26.66			
Density	Wet (lbs/cft)	125.26	114.38	121.55	119.60				127.91	119.78	118.72	122.87			
	Dry (lbs/cft)	98.38	86.63	95.47	94.14				102.98	91.05	88.40	92.82			
Grain size Analysis	Gravel (%)														
	Sand (%)				6	55	80	33				4	90	78	83
	Silt (%)				80	39	20	49				78	10	22	17
	Clay (%)				14	6	–	18				18	–	–	–
Consolidation tests	Natural void ratio, e_o														
	Compression index, Cc														
Unconfined Compression tests	Strain at failure (%)	8.92	10.71	8.92	5.35				8.92	8.92	10.71	10.71			
	Stress undist.(lbs/sq.inch)	25.88	6.74	15.91	16.29				27,60	19.55	13.85	18.16			
	Stress remould.(lbs/sq.inch)	15.91	4.21	9.92	9.39				20.97	11.04	7.49	12.07			
	Sensitivity	1.626	1.60	1.603	1.734				1.316	1.770	1.849	1.504			
Triaxial Compression Qc tests	C (p.s.i)														
	ϕ (degree)														

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SUMMARY OF LABORATORY TEST RESULTS

(Site No. IV-19)
SITE NO. 28
North East Azamnagar GPS, Mirsharai, Chittagong.

Bore hole No.										
Sample No.		D-2	U-1	U-2	D-10	D-11	U-3	D-16	U-4	
Depth - m		1.5 2.0	3.0 3.5	8.0 8.5	9.5 10.0	10.5 11.0	14.0 14.5	15.5 16.0	19.0 19.5	
Natural Moisture content (%)			31.22	26.36			24.86		24.18	
Specific gravity			2.680	2.665			2.682		2.632	
Atterberg Limits	Liquid Limit, W_l (%)	48	46			51	57			
	Plastic Limits, Jp (%)	20	19			28	32			
Density	Wet (gm/cc)									
	Dry (gm/cc)		1.302	1.462			1.574		1.557	
Grain size analysis	Gravel (%)									
	Sand (%)			12	62			68	77	
	Silt or clay % (fines)			88	38			32	23	
Consolidation tests	Natural Void ration, eo									
	Compression index, Cc									
Unconfined Compression tests	Strain at failure (%)		14				12			
	Stress undist. (kg/cm^2)		0.3265				1.228			
	Stress remould ( )									
	Sensitivity									
Direct shear Tests	ϕ (degree)			28.5					30	
	C (kg/cm^2)			0.125					0.07	

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SUMMARY OF LABORATORY TEST RESULTS

CLIENT Jica's Basic Design Study Team
SITE Mirsharai, Chittagong

		SITE No. 29 (Site No. IV-20)						
Borehole No.		1						
Sample No.		U-1	U-2	U-3	U-4	D-5	D-10	D-17
Depth in ~~xxx~~ Miter		1.10 to 1.55	2.10 to 2.55	3.10 to 3.55	4.10 to 4.55	4.55 to 5.00	9.55 to 10.00	16.55 to 17.00
Moisture content (Natural)		31.26	30.72	36.73	38.94			
Specific gravity			2.567			2.572	2.691	2.574
Atterberg Limits	Liquid Limit, Lw	54.76	57.14			54.76		49.72
	Plastic Limit, Pw	27.50	29.16			28.57		26.66
Density	Wet (lbs/cft)	118.01	121.10	118.45	116.68			
	Dry (lbs/cft)	89.90	92.64	86.63	83.93			
Grain size Analysis	Gravel (%)							
	Sand (%)		1			8	89	10
	Silt (%)		69			67	11	79
	Clay (%)		30			25	-	21
Consolidation tests	Natural void ratio, eo							
	Compression index, Cc							
Unconfined Compression tests	Strain at failure (%)	10.71	10.71	8.92	8,92			
	Stress undist.(lbs/sq.inch.)	12.17	13.10	19.36	9.20			
	Stress remould.(lbs/sq.inch)	6.92	7.47	12.49	5.17			
	Sensitivity	1.758	1.753	1.553	1.779			
Triaxial Compression Qc tests	C (p.s.i)							
	ø (degree)							

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SUMMARY OF LABORATORY TEST RESULTS

(Site No. IV-21)
SITE NO. 31
Banskhali GPS, Mirsharai, Chittagong.

Bore hole No.										
Sample No.		D-1	D-2	U-1	D-7	U-2	D-12	U-3	U-4	
Depth - m		0.5 1.0	1.5 2.0	3.0 3.5	6.5 7.0	8.0 8.5	11.5 12.0	14.0 14.5	19.0 19.5	
Natural Moisture content (%)				27.94		26.02		24.72	23.78	
Specific gravity				2.668		2.643		2.638	2.623	
Atterberg Limits	Liquid Limit, W_l (%)	53	46	36	47					
	Plastic Limits, Ip (%)	28	20	10	19					
Density	Wet (gm/cc)									
	Dry (gm/cc)			1.341		1.510		1.528	1.579	
Grain size analysis	Gravel (%)									
	Sand (%)					58	81	71	85	
	Silt or clay % (fines)					42	19	29	15	
Consolidation tests	Natural Void ration, eo									
	Compression index, Cc									
Unconfined Compression tests	Strain at failure (%)			14						
	Stress undist. (kg/cm^2)			0.4335						
	Stress remould ( )									
	Sensitivity									
Direct shear Tests	ϕ (degree)					26.5		29.5	32	
	C (kg/cm^2)					0.100		0.08	0.030	