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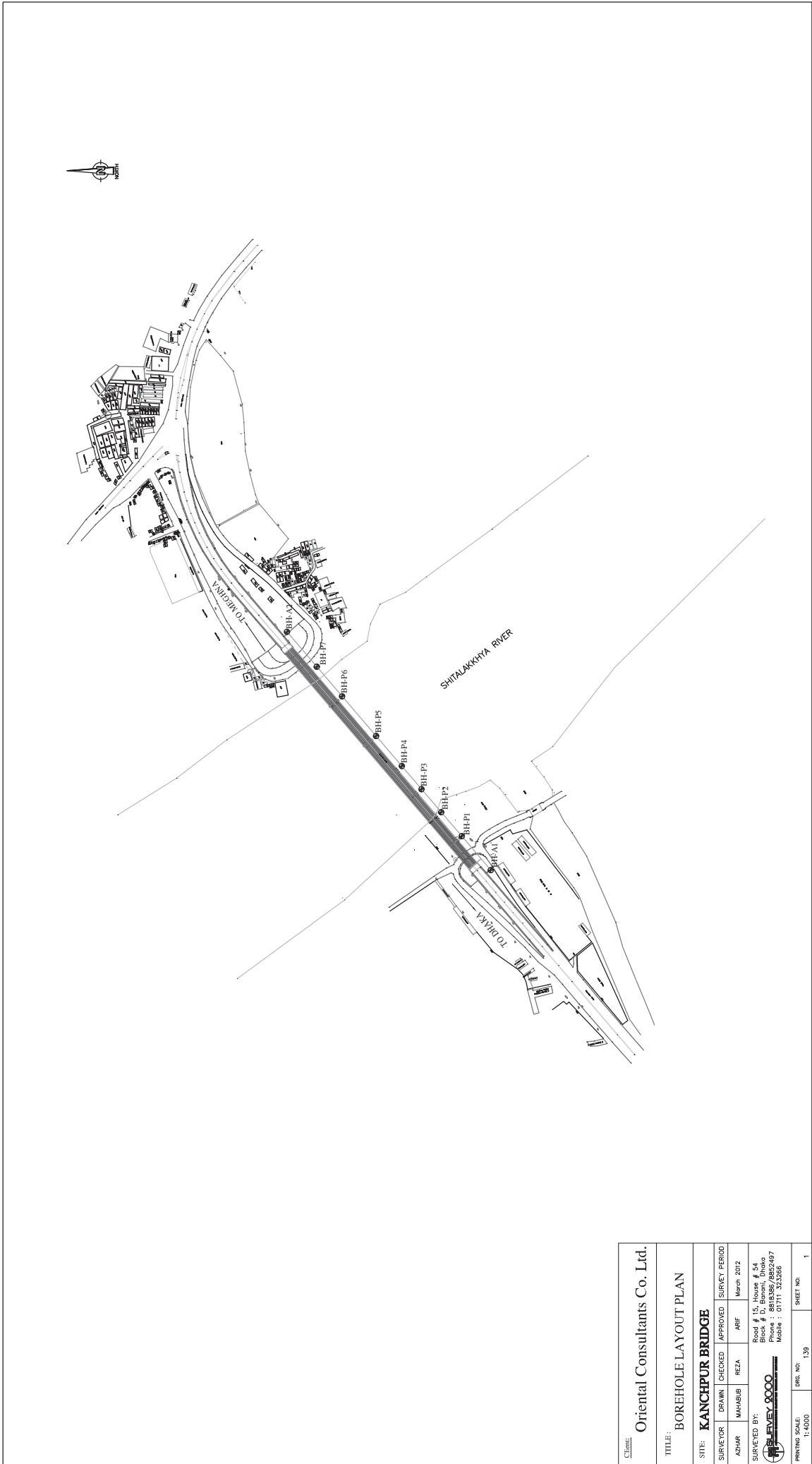
**APPENDIX 3.**  
**RECORDS OF GEOLOGICAL SURVEY**

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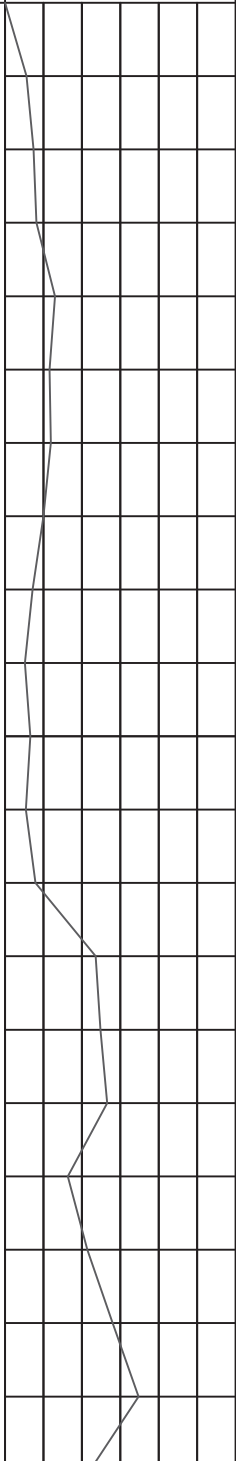
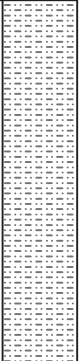

# **KANCHPUR BRIDGE**

## **BORE HOLE LOCATION MAP**



CLIENT: <b>Oriental Consultants Co. Ltd.</b>				
TITLE: <b>BOREHOLE LAYOUT PLAN</b>				
SITE: <b>KANCHPUR BRIDGE</b>				
SURVEYOR AZHAR	DRAWN MAHMOB	CHECKED REZA	APPROVED ARIF	SURVEY PERIOD March 2012
SURVEYED BY: 		Road # 15, House # 54 Block # D, Barani, Dhaka Phone : 8813387/8852487 Mobile : 0171-323266		
PRINTING SCALE: 1:4000	DWG. NO: 139	SHEET NO: 1		1





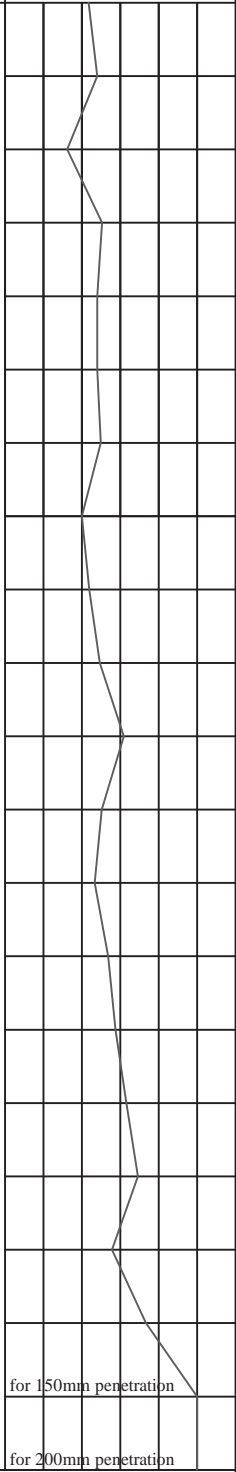


## **BORE LOGS**

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.										
Bore Hole No. : A1					Existing Ground Level : 10.0m										
Method of Boring : Percussion					Ground/ Water Level : -2.07m										
Boring Dia. : 100mm					Date Started : 07-02-2012										
Depth of Boring : 52.0m					Date Completed : 10-02-2012										
Legend :					 SAND  SILT  CLAY										
Co-ordinates :															
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation					
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values					
1.0	D1		7.0	Medium stiff to stiff Light brown medium plastic CLAY		1.0	2	3	3	6					
2.0	D2					2.0	2	3	5	8					
3.0	D3					3.0	2	3	6	9					
4.0	D4					4.0	4	4	9	13					
5.0	D5					5.0	4	4	7	11					
6.0	D6					6.0	4	4	8	12					
7.0	D7					7.0	4	4	6	10					
8.0	D8		5.0	Medium stiff to Stiff Grey non plastic SILT with trace of mica		8.0	3	3	4	7					
9.0	D9					9.0	2	3	1	4					
10.0	D10					10.0	3	3	3	6					
11.0	D11					11.0	2	2	3	5					
12.0	D12					12.0	2	3	5	8					
13.0	D13		9.0	Medium dense to dense Grey fine SAND with trace of mica		13.0	5	11	12	23					
14.0	D14					14.0	9	7	18	25					
15.0	D15					15.0	7	13	14	27					
16.0	D16					16.0	6	5	12	17					
17.0	D17					17.0	8	9	12	21					
18.0	D18					18.0	10	13	15	28					
19.0	D19					19.0	11	15	19	34					
20.0	D20					20.0	8	9	13	22					

Note : Boring Terminated at 52.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....





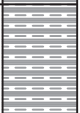

Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.												
Bore Hole No. : A1					Existing Ground Level : 10.0m												
Method of Boring : Percussion					Ground/ Water Level : -2.07m												
Boring Dia. : 100mm					Date Started : 07-02-2012												
Depth of Boring : 52.0m					Date Completed : 10-02-2012												
Legend :					 SAND  SILT  CLAY												
Co-ordinates :																	
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation							
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10 20 30 40 50 60						
21.0		D21	5.0	Very stiff Yellowish brown medium plastic CLAY		21.0	5	10	14	24							
22.0		D22				22.0	6	7	9	16							
23.0		D23				23.0	9	12	14	26							
24.0		D24				24.0	7	10	13	23							
25.0		D25				25.0	7	10	13	23							
26.0		D26				26.0	8	10	14	24							
27.0		D27	12.0	Very stiff to hard Light grey to grey medium plastic CLAY		27.0	6	8	12	20							
28.0		D28				28.0	6	8	14	22							
29.0		D29				29.0	6	9	16	25							
30.0		D30				30.0	6	12	19	31							
31.0		D31				31.0	8	11	14	25							
32.0		D32				32.0	8	11	12	23							
33.0		D33				33.0	8	12	15	27							
34.0		D34				34.0	9	13	16	29							
35.0		D35				35.0	8	13	18	31							
36.0		D36				36.0	7	13	21	34							
37.0		D37				37.0	8	11	17	28							
38.0		D38				38.0	8	10	27	37							
39.0		D39				2.0	Very dense Grey silty fine SAND with trace of mica		39.0	15			50	-	50	for 150mm penetration	
40.0		D40							40.0	20			50	-	50	for 200mm penetration	

Note : Boring Terminated at 52.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....






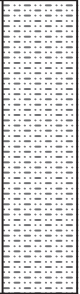

Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.											
Bore Hole No. : A1					Existing Ground Level : 10.0m											
Method of Boring : Percussion					Ground/ Water Level : -2.07m											
Boring Dia. : 100mm					Date Started : 07-02-2012											
Depth of Boring : 52.0m					Date Completed : 10-02-2012											
Legend :					 SAND  SILT  CLAY											
Co-ordinates :																
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation						
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60
41.0		D41	4.0	Hard Grey medium plastic CLAY		41.0	21	50	-	50	for 125mm penetration					
42.0		D42				42.0	20	50	-	50	for 125mm penetration					
43.0		D43				43.0	10	16	18	34						
44.0		D44				44.0	10	16	20	36						
45.0		D45	3.0	Very stiff to hard Reddish brown medium plastic CLAY		45.0	8	14	15	29						
46.0		D46				46.0	7	13	13	26						
47.0		D47				47.0	8	15	18	33						
48.0		D48	5.0	Dense to very dense Grey to light grey fine SAND with trace of mica		48.0	12	18	22	40						
49.0		D49				49.0	18	50	-	50	for 125mm penetration					
50.0		D50				50.0	22	50	-	50	for 125mm penetration					
51.0		D51				51.0	25	50	-	50	for 100mm penetration					
52.0		D52		52.0	30	50	-	50	for 50mm penetration							
53.0		D53		End of Boring												
54.0		D54														
55.0		D55														
56.0		D56														
57.0		D57														
58.0		D58														
59.0		D59														
60.0		D60														

Note : Boring Terminated at 52.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Logged by : Azhar  
Check by : Mahabub





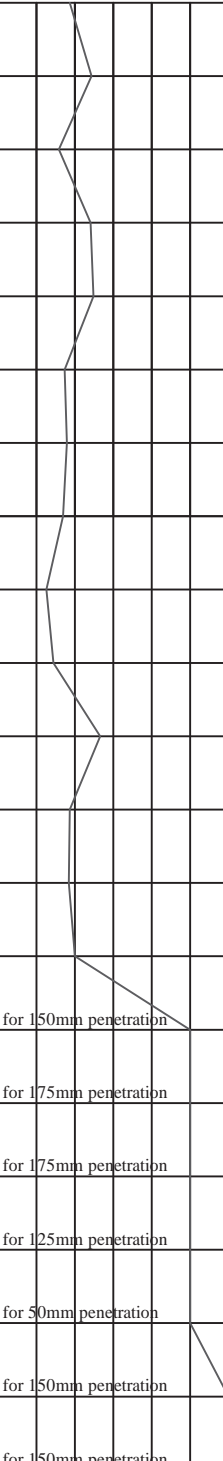
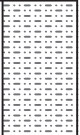

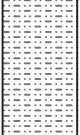



Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.													
Bore Hole No. : P1					Existing Ground Level : 5.73m													
Method of Boring : Percussion					Ground/ Water Level : - 0.97m													
Boring Dia. : 100mm					Date Started : 31-01-2012													
Depth of Boring : 45.0m					Date Completed : 03-02-2012													
Legend :					 SAND  SILT  CLAY													
Co-ordinates :																		
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation								
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60		
1.0	D1		5.0	Stiff to very stiff Grey medium plastic CLAY		1.0	0	0	0	00								
2.0	D2					2.0	0	0	0	00								
3.0	D3					3.0	5	6	11	17								
4.0	D4					4.0	7	10	12	22								
5.0	D5					5.0	3	4	7	11								
6.0	D6		2.0	Loose Grey silty fine SAND		6.0	2	4	5	9								
7.0	D7					7.0	2	3	4	7								
8.0	D8		4.0	Medium stiff to stiff Grey non plastic SILT		8.0	2	3	5	8								
9.0	D9					9.0	2	3	3	6								
10.0	D10					10.0	2	3	4	7								
11.0	D11					11.0	2	4	5	9								
12.0	D12		10.0	Medium dense Grey silty fine SAND with trace of mica		12.0	3	6	7	13								
13.0	D13					13.0	3	5	7	12								
14.0	D14					14.0	4	6	7	13								
15.0	D15					15.0	6	6	7	13								
16.0	D16					16.0	5	6	7	13								
17.0	D17					17.0	6	6	7	13								
18.0	D18					18.0	6	7	13	20								
19.0	D19					19.0	4	8	9	17								
20.0	D20					20.0	6	10	9	19								

Note : Boring Terminated at 45.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....





Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.							
Bore Hole No. : P1					Existing Ground Level : 5.73m							
Method of Boring : Percussion					Ground/ Water Level : - 0.97m							
Boring Dia. : 100mm					Date Started : 31-01-2012							
Depth of Boring : 45.0m					Date Completed : 03-02-2012							
Legend :					 SAND  SILT  CLAY							
Co-ordinates :												
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation		
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10 20 30 40 50 60	
21.0		D21	10.0	Stiff to very stiff Grey to light grey medium plastic CLAY		21.0	8	12	12	24		
22.0		D22				22.0	4	8	8	16		
23.0		D23				23.0	6	9	15	24		
24.0		D24				24.0	7	10	14	24		
25.0		D25				25.0	5	7	10	17		
26.0		D26				26.0	5	6	12	18		
27.0		D27				27.0	6	7	10	17		
28.0		D28				28.0	4	5	7	12		
29.0		D29				29.0	5	6	8	14		
30.0		D30				30.0	9	13	14	27		
31.0		D31	2.0	Very stiff Light grey non plastic SILT, few sand		31.0	5	8	11	19		
32.0		D32				32.0	5	7	12	19		
33.0		D33				33.0	5	7	13	20		
34.0		D34	1.0	Very dense Light grey silty very fine SAND		34.0	16	50	-	50	for 150mm penetration	
35.0		D35	2.0	Hard Light grey non plastic SILT few sand		35.0	13	40	10	50	for 175mm penetration	
36.0		D36	9.0	Very dense Grey to light grey silty fine SAND with trace of mica		36.0	14	42	8	50	for 175mm penetration	
37.0		D37				37.0	26	50	-	50	for 125mm penetration	
38.0		D38				38.0	42	50	-	50	for 50mm penetration	
39.0		D39				39.0	80	-	-	80	for 150mm penetration	
40.0		D40				40.0	77	-	-	77	for 150mm penetration	

Note : Boring Terminated at 45.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample





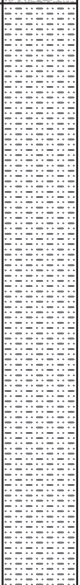


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Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.											
Bore Hole No. : P1					Existing Ground Level : 5.73m											
Method of Boring : Percussion					Ground/ Water Level : - 0.97m											
Boring Dia. : 100mm					Date Started : 31-01-2012											
Depth of Boring : 45.0m					Date Completed : 03-02-2012											
Legend :					 SAND	 SILT	 CLAY									
Co-ordinates :																
Location of Boring : Kanchpur						Blows on spoon			Graphical Representation							
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60
41.0		D41	9.0	Very dense Grey to light grey silty fine SAND with trace of mica		41.0	80	-	-	80	for 150mm penetration					
42.0		D42				42.0	79	-	-	79	for 150mm penetration					
43.0		D43				43.0	80	-	-	80	for 150mm penetration					
44.0		D44				44.0	76	-	-	76	for 150mm penetration					
45.0		D45				45.0	85	-	-	85	for 150mm penetration					
				End of Boring												
46.0		D46														
47.0		D47														
48.0		D48														
49.0		D49														
50.0		D50														
51.0		D51														
52.0		D52														
53.0		D53														
54.0		D54														
55.0		D55														
56.0		D56														
57.0		D57														
58.0		D58														
59.0		D59														
60.0		D60														

Note : Boring Terminated at 45.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample





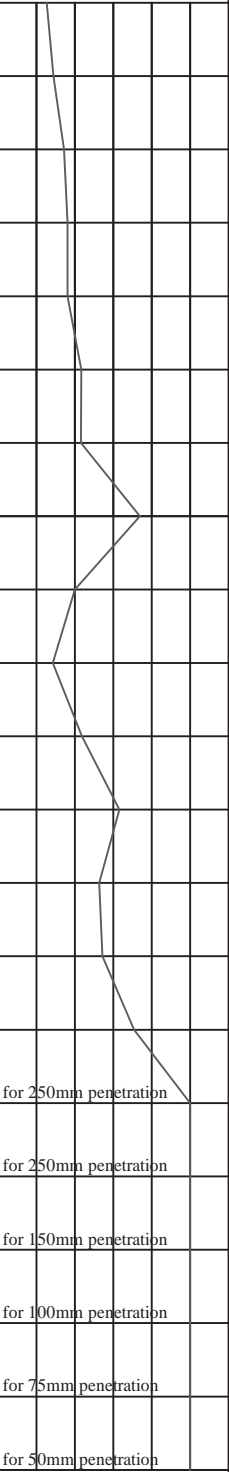

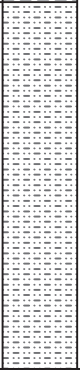
Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.							
Bore Hole No. : P2					Existing Ground Level : 3.76m							
Method of Boring : Percussion					Ground/ Water Level : +0.56m							
Boring Dia. : 100mm					Date Started : 11-02-2012							
Depth of Boring : 42.0m					Date Completed : 14-02-2012							
Legend :					 SAND  SILT  CLAY							
Co-ordinates :												
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation		
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10 20 30 40 50 60	
1.0	D1		2.0	Dense Grey coarse SAND with stonechips		1.0	7	22	22	44	[Graphical Representation]	
2.0	D2					2.0	10	16	24	40	[Graphical Representation]	
3.0	D3					3.0	2	2	2	4	[Graphical Representation]	
4.0	D4					4.0	2	4	4	8	[Graphical Representation]	
5.0	D5					5.0	1	2	2	4	[Graphical Representation]	
6.0	D6		8.0	Soft to very stiff Grey to dark grey non plastic SILT		6.0	1	2	2	4	[Graphical Representation]	
7.0	D7					7.0	1	2	2	4	[Graphical Representation]	
8.0	D8					8.0	6	9	8	17	[Graphical Representation]	
9.0	D9					9.0	2	3	4	7	[Graphical Representation]	
10.0	D10					10.0	5	6	7	13	[Graphical Representation]	
11.0	D11					11.0	5	6	8	14	[Graphical Representation]	
12.0	D12		7.0	Medium dense Grey to brown fine SAND with trace of mica		12.0	6	9	8	17	[Graphical Representation]	
13.0	D13					13.0	6	7	9	16	[Graphical Representation]	
14.0	D14					14.0	6	8	10	18	[Graphical Representation]	
15.0	D15					15.0	6	7	8	15	[Graphical Representation]	
16.0	D16					16.0	6	8	9	17	[Graphical Representation]	
17.0	D17					17.0	6	6	11	17	[Graphical Representation]	
18.0	D18		13.0	Stiff to very stiff Grey to light brown medium plastic CLAY		18.0	5	7	10	17	[Graphical Representation]	
19.0	D19					19.0	6	11	13	24	[Graphical Representation]	
20.0	D20					20.0	4	5	7	12	[Graphical Representation]	

Note : Boring Terminated at 42.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....






Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.							
Bore Hole No. : P2					Existing Ground Level : 3.76m							
Method of Boring : Percussion					Ground/ Water Level : +0.56m							
Boring Dia. : 100mm					Date Started : 11-02-2012							
Depth of Boring : 42.0m					Date Completed : 14-02-2012							
Legend :					 SAND  SILT  CLAY							
Co-ordinates :												
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation		
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10 20 30 40 50 60	
21.0		D21	5.0	Stiff to very stiff Grey to light brown medium plastic CLAY		21.0	5	7	7	14		
22.0		D22				22.0	5	7	10	17		
23.0		D23				23.0	7	7	11	18		
24.0		D24				24.0	5	8	9	17		
25.0		D25				25.0	6	10	12	22		
26.0		D26				26.0	7	9	13	22		
27.0		D27				27.0	6	14	24	38		
28.0		D28				28.0	4	8	12	20		
29.0		D29				29.0	5	6	9	15		
30.0		D30				30.0	7	9	12	21		
31.0		D31	7.0	Very stiff to hard Grey medium plastic CLAY		31.0	10	13	18	31		
32.0		D32				32.0	11	13	14	27		
33.0		D33				33.0	12	13	15	28		
34.0		D34				34.0	12	16	21	37		
35.0		D35				35.0	12	22	28	50 for 250mm penetration		
36.0		D36	7.0	Hard Light grey to grey non plastic SILT with trace of mica		36.0	30	38	12	50 for 250mm penetration		
37.0		D37				37.0	30	40	10	50 for 150mm penetration		
38.0		D38				38.0	30	45	5	50 for 100mm penetration		
39.0		D39				39.0	30	50	-	50 for 75mm penetration		
40.0		D40				40.0	40	50	-	50 for 50mm penetration		

Note : Boring Terminated at 42.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample




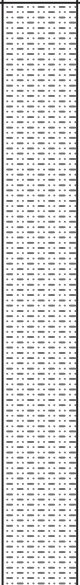

Cont'd.....

Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.											
Bore Hole No. : P2					Existing Ground Level : 3.76m											
Method of Boring : Percussion					Ground/ Water Level : +0.56m											
Boring Dia. : 100mm					Date Started : 11-02-2012											
Depth of Boring : 42.0m					Date Completed : 14-02-2012											
Legend :					 SAND	 SILT	 CLAY									
Co-ordinates :																
Location of Boring : Kanchpur					Blows on spoon				Graphical Representation							
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60
41.0		D41				41.0	50	-	-	50	for 150mm penetration					
42.0		D42				42.0	60	-	-	60	for 150mm penetration					
43.0		D43		End of Boring												
44.0		D44														
45.0		D45														
46.0		D46														
47.0		D47														
48.0		D48														
49.0		D49														
50.0		D50														
51.0		D51														
52.0		D52														
53.0		D53														
54.0		D54														
55.0		D55														
56.0		D56														
57.0		D57														
58.0		D58														
59.0		D59														
60.0		D60														

Note : Boring Terminated at 42.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample




Logged by : Azhar  
Check by : Mahabub


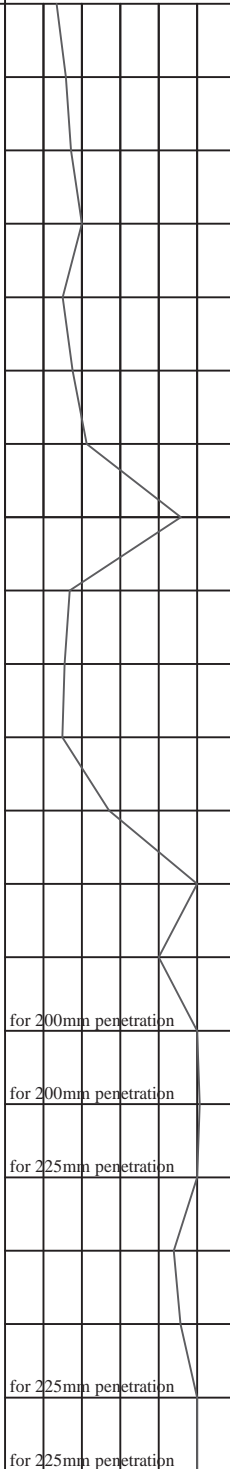

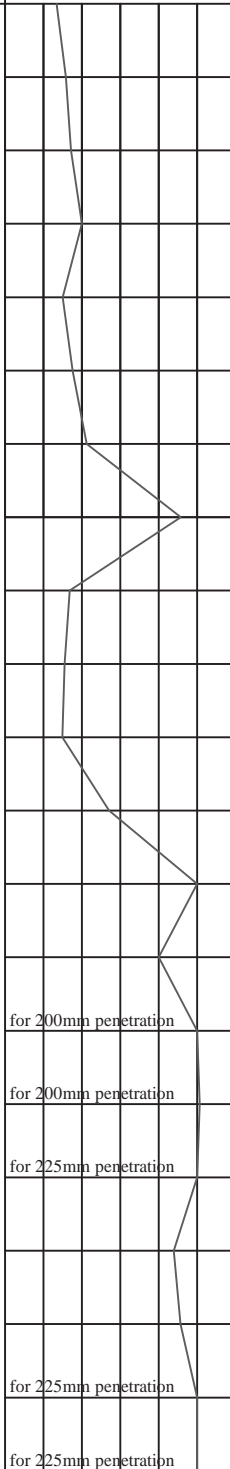


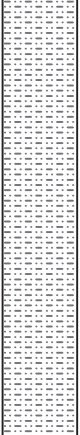
Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.													
Bore Hole No. : P3					Existing Ground Level : 1.47m													
Method of Boring : Percussion					Ground/ Water Level : -2.79m													
Boring Dia. : 100mm					Date Started : 04-02-2012													
Depth of Boring : 45.0m					Date Completed : 07-02-2012													
Legend :					 SAND  SILT  CLAY													
Co-ordinates :																		
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation								
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60		
1.0	D1		8.0	Soft Grey to light grey non plastic SILT with trace of mica		1.0	1	1	2	3								
2.0	D2					2.0	1	1	2	3								
3.0	D3					3.0	1	1	1	2								
4.0	D4					4.0	1	1	1	2								
5.0	D5					5.0	1	2	2	4								
6.0	D6					6.0	1	1	1	2								
7.0	D7					7.0	1	1	1	2								
8.0	D8					8.0	1	2	2	4								
9.0	D9		12.0	Loose to medium dense Grey to light grey fine SAND with trace of mica		9.0	2	3	4	7								
10.0	D10					10.0	4	6	8	14								
11.0	D11					11.0	5	7	10	17								
12.0	D12					12.0	5	7	7	14								
13.0	D13					13.0	4	5	6	11								
14.0	D14					14.0	4	6	7	13								
15.0	D15					15.0	5	7	9	16								
16.0	D16					16.0	5	6	8	14								
17.0	D17					17.0	5	6	7	13								
18.0	D18					18.0	5	8	8	16								
19.0	D19					19.0	5	7	8	15								
20.0	D20					20.0	5	6	7	13								

Note : Boring Terminated at 45.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....

Logged by : Azhar  
Check by : Mahabub

<b>Project : Construction of Kanchpur Bridge</b>		<b>Client : Oriental Consultants Co. Ltd.</b>	
Bore Hole No.	: P3	Existing Ground Level	: 1.47m
Method of Boring	: Percussion	Ground/ Water Level	: -2.79m
Boring Dia.	: 100mm	Date Started	: 04-02-2012
Depth of Boring	: 45.0m	Date Completed	: 07-02-2012
Legend :			
		SAND	SILT
			
		CLAY	
Co-ordinates :			

Location of Boring : Kanchpur						Blows on spoon				Graphical Representation				
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10 20 30 40 50 60			
21.0		D21	5.0	Very stiff Grey mixed brown medium to high plastic CLAY		21.0	5	8	9	17				
22.0		D22				22.0	5	8	10	18				
23.0		D23				23.0	5	8	12	20				
24.0		D24				24.0	5	6	9	15				
25.0		D25				25.0	6	8	9	17				
26.0		D26	1.0	Very stiff Light grey non plastic SILT with few sand		26.0	7	9	12	21				
27.0		D27	1.0	Dense Grey silty fine SAND with trace of mica		27.0	12	20	26	46				
28.0		D28	7.0	Very stiff to hard Grey to light grey medium to high plastic CLAY		28.0	6	8	9	17				
29.0		D29				29.0	6	8	8	16				
30.0		D30				30.0	6	7	8	15				
31.0		D31				31.0	7	12	15	27				
32.0		D32				32.0	8	20	30	50				
33.0		D33				33.0	12	19	21	40				
34.0		D34				34.0	15	22	28	50	for 200mm penetration			
35.0		D35				11.0	Hard Grey non plastic SILT, few sand, trace of mica		35.0	15	23	28	51	for 200mm penetration
36.0		D36							36.0	13	23	27	50	for 225mm penetration
37.0		D37							37.0	12	18	25	43	
38.0		D38	38.0	10	15				31	46				
39.0		D39	39.0	11	23				27	50	for 225mm penetration			
40.0		D40	40.0	11	24				26	50	for 225mm penetration			

Note : Boring Terminated at 45.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....

Logged by : Azhar  
Check by : Mahabub



Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.											
Bore Hole No. : P3					Existing Ground Level : 1.47m											
Method of Boring : Percussion					Ground/ Water Level : -2.79m											
Boring Dia. : 100mm					Date Started : 04-02-2012											
Depth of Boring : 45.0m					Date Completed : 07-02-2012											
Legend :					SAND	SILT	CLAY									
Co-ordinates :																
Location of Boring : Kanchpur						Blows on spoon			Graphical Representation							
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60
41.0		D41		Hard Grey non plastic SILT, few sand, trace of mica		41.0	50	-	-	50	for 150mm penetration					
42.0		D42				42.0	20	50	-	50	for 100mm penetration					
43.0		D43				43.0	30	50	-	50	for 100mm penetration					
44.0		D44				44.0	50	-	-	50	for 150mm penetration					
45.0		D45				45.0	55	-	-	55	for 150mm penetration					
				End of Boring												
46.0		D46														
47.0		D47														
48.0		D48														
49.0		D49														
50.0		D50														
51.0		D51														
52.0		D52														
53.0		D53														
54.0		D54														
55.0		D55														
56.0		D56														
57.0		D57														
58.0		D58														
59.0		D59														
60.0		D60														

Note : Boring Terminated at 45.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample





Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge						Client : Oriental Consultants Co. Ltd.						
Bore Hole No. : P4						Existing Ground Level : -8.0m						
Method of Boring : Percussion						Ground/ Water Level : +1.14m						
Boring Dia. : 100mm						Date Started : 24-02-2012						
Depth of Boring : 36.0m						Date Completed : 26-02-2012						
Legend :						SAND		SILT		CLAY		
Co-ordinates :												
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation		
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10 20 30 40 50 60	
1.0	D1		9.0	Medium dense to dense Light grey to grey fine SAND with trace of mica		1.0	14	18	22	40	40	
2.0	D2					2.0	15	20	24	44	44	
3.0	D3					3.0	17	22	26	48	48	
4.0	D4					4.0	17	23	27	50	50	
5.0	D5					5.0	16	22	28	50	50	
6.0	D6					6.0	4	5	8	13	13	
7.0	D7					7.0	5	7	9	16	16	
8.0	D8					8.0	8	10	12	22	22	
9.0	D9					9.0	6	8	10	18	18	
10.0	D10		4.0	Very stiff to hard Light grey mixed brown medium plastic CLAY		10.0	6	8	12	20	20	
11.0	D11					11.0	9	20	13	43	43	
12.0	D12					12.0	9	20	24	44	44	
13.0	D13		8.0	Stiff to hard Grey medium plastic CLAY		13.0	10	22	26	48	48	
14.0	D14					14.0	3	4	7	11	11	
15.0	D15					15.0	3	4	8	12	12	
16.0	D16					16.0	7	10	13	23	23	
17.0	D17					17.0	9	13	16	29	29	
18.0	D18					18.0	8	14	18	32	32	
19.0	D19					19.0	7	10	12	22	22	
20.0	D20					20.0	5	7	10	17	17	

Note : Boring Terminated at 36.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample





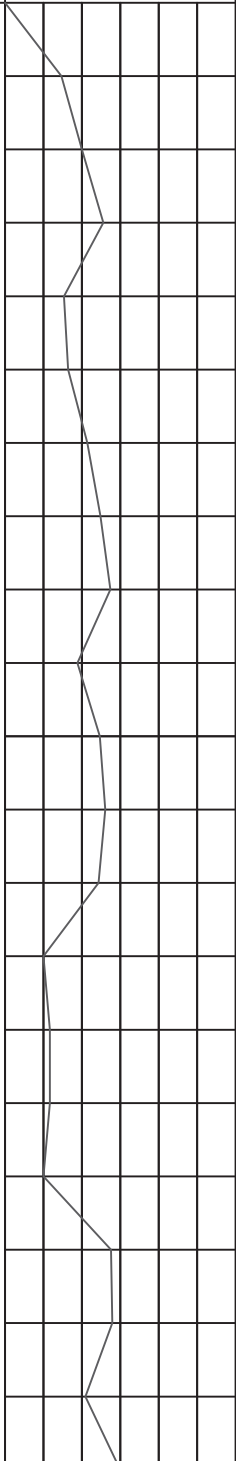


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Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.													
Bore Hole No. : P4					Existing Ground Level : -8.0m													
Method of Boring : Percussion					Ground/ Water Level : +1.14m													
Boring Dia. : 100mm					Date Started : 24-02-2012													
Depth of Boring : 36.0m					Date Completed : 26-02-2012													
Legend :					 SAND		 SILT		 CLAY									
Co-ordinates :																		
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation								
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60		
21.0		D21	15.0	Very dense Light grey to grey silty very fine SAND with trace of mica		21.0	6	8	19	27								
22.0		D22				22.0	14	21	29	50	for 275mm penetration							
23.0		D23				23.0	12	24	26	50	for 250mm penetration							
24.0		D24				24.0	14	27	23	50	for 200mm penetration							
25.0		D25				25.0	30	50	-	50	for 150mm penetration							
26.0		D26				26.0	30	50	-	50	for 100mm penetration							
27.0		D27				27.0	33	50	-	50	for 150mm penetration							
28.0		D28				28.0	12	32	18	50	for 150mm penetration							
29.0		D29				29.0	10	35	15	50	for 150mm penetration							
30.0		D30				30.0	12	32	18	50	for 150mm penetration							
31.0		D31				31.0	14	30	20	50	for 150mm penetration							
32.0		D32				32.0	29	50	-	50	for 150mm penetration							
33.0		D33				33.0	32	50	-	50	for 125mm penetration							
34.0		D34				34.0	34	50	-	50	for 75mm penetration							
35.0		D35				35.0	38	50	-	50	for 50mm penetration							
36.0		D36	36.0	40	50	-	50	for 50mm penetration										
37.0		D37	End of Boring															
38.0		D38																
39.0		D39																
40.0		D40																

Note : Boring Terminated at 36.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample























Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.									
Bore Hole No. : P5					Existing Ground Level : -10.0m									
Method of Boring : Percussion					Ground/ Water Level : +1.58m									
Boring Dia. : 100mm					Date Started : 20-02-2012									
Depth of Boring : 39.0m					Date Completed : 24-02-2012									
Legend :					 SAND  SILT  CLAY									
Co-ordinates :														
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation				
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values				
1.0	D1		6.0	Medium dense Grey fine SAND with trace of mica		1.0	5	6	8	14				
2.0	D2					2.0	7	9	11	20				
3.0	D3					3.0	9	12	15	27				
4.0	D4					4.0	4	6	9	15				
5.0	D5					5.0	6	7	10	17				
6.0	D6					6.0	7	9	12	21				
7.0	D7		7.0	Stiff to very stiff Light brown medium plastic CLAY		7.0	7	11	14	25				
8.0	D8					8.0	8	12	15	27				
9.0	D9					9.0	6	7	12	19				
10.0	D10					10.0	6	9	14	23				
11.0	D11					11.0	7	11	15	26				
12.0	D12					12.0	7	10	14	24				
13.0	D13		8.0	Stiff to very stiff Grey medium plastic CLAY		13.0	6	5	5	10				
14.0	D14					14.0	6	5	6	11				
15.0	D15					15.0	5	5	6	11				
16.0	D16					16.0	5	5	5	10				
17.0	D17					17.0	7	13	15	28				
18.0	D18					18.0	6	12	15	27				
19.0	D19					19.0	5	10	11	21				
20.0	D20					20.0	8	13	17	30				

Note : Boring Terminated at 39.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample












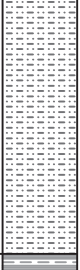











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Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.											
Bore Hole No. : P5					Existing Ground Level : -10.0m											
Method of Boring : Percussion					Ground/ Water Level : +1.58m											
Boring Dia. : 100mm					Date Started : 20-02-2012											
Depth of Boring : 39.0m					Date Completed : 24-02-2012											
Legend :					 SAND  SILT  CLAY											
Co-ordinates :																
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation						
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60
21.0		D21	8.0	Hard Grey to light Grey non plastic SILT with trace of mica		21.0	10	24	26	50	for 300mm penetration					
22.0		D22				22.0	16	37	13	50	for 200mm penetration					
23.0		D23				23.0	17	38	12	50	for 150mm penetration					
24.0		D24				24.0	30	50	-	50	for 125mm penetration					
25.0		D25				25.0	20	24	26	50	for 200mm penetration					
26.0		D26				26.0	10	23	27	50	for 175mm penetration					
27.0		D27				27.0	13	36	14	50	for 175mm penetration					
28.0		D28				28.0	13	37	13	50	for 150mm penetration					
29.0		D29				29.0	12	36	14	50	for 200mm penetration					
30.0		D30	5.0	Very stiff to hard Grey medium plastic CLAY		30.0	9	30	20	50						
31.0		D31				31.0	4	7	9	16						
32.0		D32				32.0	6	9	11	20						
33.0		D33				33.0	11	15	20	35						
34.0		D34				34.0	17	22	30	52						
35.0		D35				35.0	20	50	-	50	for 75mm penetration					
36.0		D36			5.0	Very dense Grey to light brown fine SAND with trace of mica		36.0	60	-	-	60	for 150mm penetration			
37.0		D37		37.0			80	-	-	80	for 150mm penetration					
38.0		D38		38.0			85	-	-	85	for 150mm penetration					
39.0		D39		39.0			90	-	-	90	for 150mm penetration					
40.0		D40		End of Boring												

Note : Boring Terminated at 39.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample



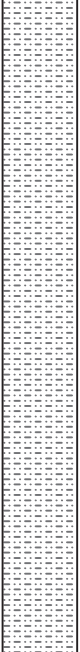


Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.							
Bore Hole No. : P6					Existing Ground Level : -7.0m							
Method of Boring : Percussion					Ground/ Water Level : +1.68m							
Boring Dia. : 100mm					Date Started : 18-02-2012							
Depth of Boring : 42.0m					Date Completed : 20-02-2012							
Legend :					 SAND  SILT  CLAY							
Co-ordinates :												
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation		
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10 20 30 40 50 60	
1.0	D1		3.0	Medium stiff Brown grey spotted medium plastic CLAY		1.0	2	3	5	8		
2.0	D2					2.0	2	3	3	6		
3.0	D3					3.0	2	3	3	6		
4.0	D4		3.0	Medium dense Brown grey spotted silty fine SAND		4.0	8	10	16	26		
5.0	D5					5.0	7	8	12	20		
6.0	D6					6.0	7	10	14	24		
7.0	D7		1.0	Very stiff Grey medium plastic CLAY		7.0	9	12	17	29		
8.0	D8					8.0	8	15	22	37		
9.0	D9		5.0	Hard Brown to grey non plastic SILT		9.0	10	18	21	39		
10.0	D10					10.0	11	20	23	43		
11.0	D11					11.0	12	19	22	41		
12.0	D12					12.0	12	21	24	45		
13.0	D13					13.0	11	17	18	35		
14.0	D14		5.0	Very stiff to hard Grey medium plastic CLAY		14.0	12	16	21	37		
15.0	D15					15.0	10	15	19	34		
16.0	D16					16.0	12	12	13	25		
17.0	D17					17.0	11	12	13	25		
18.0	D18		3.0	Very stiff to hard Grey non plastic SILT with trace of mica		18.0	10	13	14	27		
19.0	D19					19.0	10	14	20	34		
20.0	D20					20.0	9	15	25	40		

Note : Boring Terminated at 42.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....




Logged by : Azhar  
Check by : Mahabub


Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.													
Bore Hole No. : P6					Existing Ground Level : -7.0m													
Method of Boring : Percussion					Ground/ Water Level : +1.68m													
Boring Dia. : 100mm					Date Started : 18-02-2012													
Depth of Boring : 42.0m					Date Completed : 20-02-2012													
Legend :																		
Co-ordinates :																		
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation								
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	Graphical Representation							
											10	20	30	40	50	60		
21.0		D21	3.0	Very stiff Grey medium plastic CLAY		21.0	5	13	14	27								
22.0		D22				22.0	4	9	12	21								
23.0		D23				23.0	7	12	15	27								
24.0		D24	9.0	Hard Grey non plastic SILT with trace of mica		24.0	12	26	24	50	for 250mm penetration							
25.0		D25				25.0	14	36	14	50	for 200mm penetration							
26.0		D26				26.0	19	18	32	50	for 150mm penetration							
27.0		D27				27.0	24	28	22	50	for 150mm penetration							
28.0		D28				28.0	22	26	24	50	for 150mm penetration							
29.0		D29				29.0	18	21	29	50	for 125mm penetration							
30.0		D30				30.0	13	36	14	50	for 125mm penetration							
31.0		D31				31.0	12	35	15	50	for 150mm penetration							
32.0		D32				32.0	11	32	18	50	for 200mm penetration							
33.0		D33				5.0	Stiff to very stiff Grey medium plastic CLAY		33.0	8	12	14	26					
34.0		D34	34.0	5	6				8	14								
35.0		D35	35.0	6	9				12	21								
36.0		D36	36.0	11	16				21	37								
37.0		D37	5.0	Very dense Grey silty fine SAND with trace of mica		37.0	18	22	28	50	for 75mm penetration							
38.0		D38				38.0	22	50	-	50	for 150mm penetration							
39.0		D39				39.0	62	-	-	62	for 150mm penetration							
40.0		D40				40.0	75	-	-	75	for 150mm penetration							

Note : Boring Terminated at 42.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....

Logged by : Azhar  
Check by : Mahabub
























Project : Construction of Kanchpur Bridge		Client : Oriental Consultants Co. Ltd.	
Bore Hole No.	: P6	Existing Ground Level	: -7.0m
Method of Boring	: Percussion	Ground/ Water Level	: +1.68m
Boring Dia.	: 100mm	Date Started	: 18-02-2012
Depth of Boring	: 42.0m	Date Completed	: 20-02-2012
Legend :			
		SAND	SILT
			
			CLAY
Co-ordinates :			

Location of Boring : Kanchpur						Blows on spoon				Graphical Representation						
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60
41.0		D41		Very dense Grey silty fine SAND with trace of mica		41.0	82	-	-	82	for 150mm penetration					
42.0		D42		End of Boring		42.0	90	-	-	90	for 150mm penetration					
43.0		D43														
44.0		D44														
45.0		D45														
46.0		D46														
47.0		D47														
48.0		D48														
49.0		D49														
50.0		D50														
51.0		D51														
52.0		D52														
53.0		D53														
54.0		D54														
55.0		D55														
56.0		D56														
57.0		D57														
58.0		D58														
59.0		D59														
60.0		D60														

Note : Boring Terminated at 42.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Logged by : Azhar  
Check by : Mahabub









Project : Construction of Kanchpur Bridge						Client : Oriental Consultants Co. Ltd.												
Bore Hole No. : P7						Existing Ground Level : 3.93m												
Method of Boring : Percussion						Ground/ Water Level : 1.34m												
Boring Dia. : 100mm						Date Started : 14-02-2012												
Depth of Boring : 45.0m						Date Completed : 17-02-2012												
Legend :						 SAND		 SILT		 CLAY								
Co-ordinates :																		
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation								
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60		
1.0		D1	10.0	Soft Light brown medium plastic CLAY		1.0	1	2	2	4								
2.0		D2		Soft to medium stiff Grey to brown non plastic SILT		2.0	1	2	3	5								
3.0		D3					3.0	1	2	3	5							
4.0		D4					4.0	1	3	4	7							
5.0		D5					5.0	1	2	2	4							
6.0		D6			Soft to medium stiff Dark grey to brown medium plastic CLAY		6.0	1	2	2	4							
7.0		D7					7.0	1	1	1	2							
8.0		D8					8.0	1	1	2	3							
9.0		D9					9.0	2	2	3	5							
10.0		D10					10.0	2	3	4	7							
11.0		D11	11.0	Stiff to hard Light brown medium plastic CLAY		11.0	3	4	6	10								
12.0		D12							12.0	4	5	8	13					
13.0		D13							13.0	5	6	9	15					
14.0		D14							14.0	6	8	12	20					
15.0		D15							15.0	7	10	15	25					
16.0		D16							16.0	7	8	12	20					
17.0		D17							17.0	7	7	13	20					
18.0		D18							18.0	4	5	7	12					
19.0		D19							19.0	5	7	8	15					
20.0		D20							20.0	7	9	10	19					

Note : Boring Terminated at 45.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....




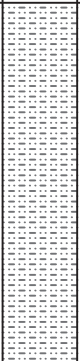
Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.													
Bore Hole No. : P7					Existing Ground Level : 3.93m													
Method of Boring : Percussion					Ground/ Water Level : 1.34m													
Boring Dia. : 100mm					Date Started : 14-02-2012													
Depth of Boring : 45.0m					Date Completed : 17-02-2012													
Legend :					 SAND  SILT  CLAY													
Co-ordinates :																		
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation								
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60		
21.0		D21	8.0	Hard Brown to Yellowish brown non plastic SILT with very fine SAND and trace of mica		21.0	9	17	31	48								
22.0		D22				22.0	17	30	20	50	for 225mm penetration							
23.0		D23				23.0	17	32	18	50	for 225mm penetration							
24.0		D24				24.0	18	33	17	50	for 200mm penetration							
25.0		D25				25.0	18	36	14	50	for 175mm penetration							
26.0		D26				26.0	18	34	16	50	for 175mm penetration							
27.0		D27				27.0	18	36	14	50	for 175mm penetration							
28.0		D28				28.0	10	15	21	36								
29.0		D29				29.0	11	18	24	42								
30.0		D30	3.0	Stiff to very stiff Grey to black medium plastic CLAY		30.0	4	5	9	14								
31.0		D31				31.0	5	7	10	17								
32.0		D32				32.0	7	9	18	27								
33.0		D33				33.0	8	10	20	30								
34.0		D34	13.0	Hard Grey non plastic SILT, few sand with trace of mica		34.0	10	41	9	50	for 175mm penetration							
35.0		D35				35.0	12	42	8	50	for 150mm penetration							
36.0		D36				36.0	22	30	20	50	for 200mm penetration							
37.0		D37				37.0	25	32	18	50	for 125mm penetration							
38.0		D38				38.0	16	40	10	50	for 100mm penetration							
39.0		D39				39.0	17	50	-	50	for 100mm penetration							
40.0		D40				40.0	19	50	-	50	for 125mm penetration							

Note : Boring Terminated at 45.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample




Cont'd.....


Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.											
Bore Hole No. : P7					Existing Ground Level : 3.93m											
Method of Boring : Percussion					Ground/ Water Level : 1.34m											
Boring Dia. : 100mm					Date Started : 14-02-2012											
Depth of Boring : 45.0m					Date Completed : 17-02-2012											
Legend :					 SAND  SILT  CLAY											
Co-ordinates :																
Location of Boring : Kanchpur					Blows on spoon				Graphical Representation							
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60
41.0		D41		Hard Grey non plastic SILT, few sand with trace of mica		41.0	21	50	-	50	for 150mm penetration					
42.0		D42				42.0	20	50	-	50	for 175mm penetration					
43.0		D43				43.0	18	50	-	50	for 150mm penetration					
44.0		D44				44.0	19	50	-	50	for 125mm penetration					
45.0		D45				45.0	17	50	-	50	for 125mm penetration					
				End of Boring												
46.0		D46														
47.0		D47														
48.0		D48														
49.0		D49														
50.0		D50														
51.0		D51														
52.0		D52														
53.0		D53														
54.0		D54														
55.0		D55														
56.0		D56														
57.0		D57														
58.0		D58														
59.0		D59														
60.0		D60														

Note : Boring Terminated at 45.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Logged by : Azhar  
Check by : Mahabub

<b>Project : Construction of Kanchpur Bridge</b>		<b>Client : Oriental Consultants Co. Ltd.</b>	
Bore Hole No.	: A2	Existing Ground Level	: 13.05m
Method of Boring	: Percussion	Ground/ Water Level	: 8.94m
Boring Dia.	: 100mm	Date Started	: 17-02-2012
Depth of Boring	: 45.0m	Date Completed	: 19-02-2012
Legend :			
		SAND	SILT
			
		CLAY	
Co-ordinates :			

Location of Boring : Kanchpur						Blows on spoon				Graphical Representation		
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values		
1.0		D1	28.0	Medium stiff to very stiff Grey to brown medium plastic CLAY		1.0	3	7	11	18		
2.0		D2				2.0	3	7	13	20		
3.0		D3				3.0	2	5	7	12		
4.0		D4				4.0	2	5	9	14		
5.0		D5				5.0	2	3	5	8		
6.0		D6				6.0	2	3	6	9		
7.0		D7				7.0	2	4	6	10		
8.0		D8				8.0	3	3	7	10		
9.0		D9				9.0	3	4	5	9		
10.0		D10				10.0	3	5	7	12		
11.0		D11				11.0	3	6	9	15		
12.0		D12				12.0	2	5	6	11		
13.0		D13				13.0	4	6	7	13		
14.0		D14				14.0	4	7	8	15		
15.0		D15				15.0	3	6	10	16		
16.0		D16				16.0	4	5	6	11		
17.0		D17				17.0	3	6	8	14		
18.0		D18				18.0	4	6	10	16		
19.0		D19				19.0	3	4	4	8		
20.0		D20				20.0	3	6	5	11		

Note : Boring Terminated at 45.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....





Logged by : Azhar  
Check by : Mahabub

Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.												
Bore Hole No. : A2					Existing Ground Level : 13.05m												
Method of Boring : Percussion					Ground/ Water Level : 8.94m												
Boring Dia. : 100mm					Date Started : 17-02-2012												
Depth of Boring : 45.0m					Date Completed : 19-02-2012												
Legend :					SAND	SILT	CLAY										
Co-ordinates :																	
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation							
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60	
21.0		D21				21.0	4	5	6	11							
22.0		D22				22.0	3	4	6	10							
23.0		D23				23.0	4	5	7	12							
24.0		D24				24.0	4	6	8	14							
25.0		D25				25.0	5	7	9	16							
26.0		D26				26.0	6	10	13	23							
27.0		D27				27.0	6	8	16	24							
28.0		D28				28.0	6	12	18	30							
29.0		D29		Very stiff to hard Light brown medium plastic CLAY		29.0	7	13	21	34							
30.0		D30				30.0	7	9	15	24							
31.0		D31	7.0			31.0	7	11	18	29							
32.0		D32				32.0	8	12	20	32							
33.0		D33				33.0	8	13	22	35							
34.0		D34				34.0	10	15	24	39							
35.0		D35				35.0	10	16	25	41							
36.0		D36		Hard Brown to grey non plastic SILT with trace of mica		36.0	16	35	15	50	for 175mm penetration						
37.0		D37	10.0			37.0	18	37	13	50	for 175mm penetration						
38.0		D38				38.0	21	50	-	50	for 150mm penetration						
39.0		D39				39.0	23	50	-	50	for 150mm penetration						
40.0		D40				40.0	24	50	-	50	for 125mm penetration						

Note : Boring Terminated at 45.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....

Logged by : Azhar  
Check by : Mahabub

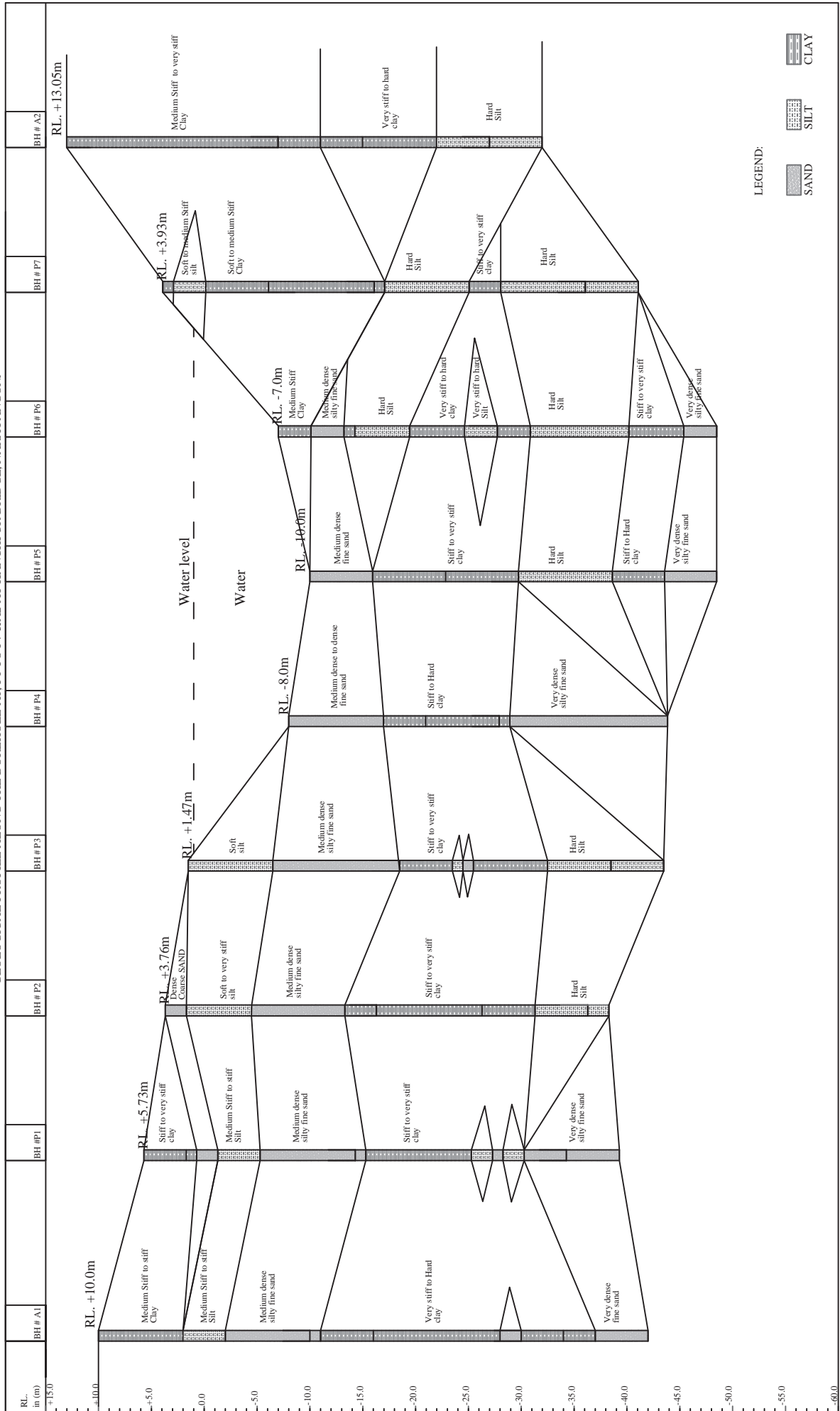
Project : Construction of Kanchpur Bridge					Client : Oriental Consultants Co. Ltd.											
Bore Hole No. : A2					Existing Ground Level : 13.05m											
Method of Boring : Percussion					Ground/ Water Level : 8.94m											
Boring Dia. : 100mm					Date Started : 17-02-2012											
Depth of Boring : 45.0m					Date Completed : 19-02-2012											
Legend :					 SAND	 SILT	 CLAY									
Co-ordinates :																
Location of Boring : Kanchpur						Blows on spoon				Graphical Representation						
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60
41.0		D41		Hard Brown to grey non plastic SILT with trace of mica		41.0	26	50	-	50	for 75mm penetration					
42.0		D42	42.0			28	50	-	50	for 75mm penetration						
43.0		D43	43.0			29	50	-	50	for 100mm penetration						
44.0		D44	44.0			32	50	-	50	for 100mm penetration						
45.0		D45	45.0			35	50	-	50	for 100mm penetration						
				End of Boring												
46.0		D46														
47.0		D47														
48.0		D48														
49.0		D49														
50.0		D50														
51.0		D51														
52.0		D52														
53.0		D53														
54.0		D54														
55.0		D55														
56.0		D56														
57.0		D57														
58.0		D58														
59.0		D59														
60.0		D60														

Note : Boring Terminated at 45.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Logged by : Azhar  
Check by : Mahabub

## **GEOLOGICAL PROFILE**

SURVEY 2000  
GEOLOGICAL PROFILE ALONG THE BOREHOLE A1, P1 TO P7 & A2 AT KANCHPUR BRIDGE, NARAYANGONJ





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# **PRESSURE METER TEST**

**PRESSUREMETER TEST DATA RESULTS**

No.	(1) P kg/cm <sup>2</sup>	(2) P' = P - RG kg/cm <sup>2</sup>	(3) RG kg/cm <sup>2</sup>	(4) Rn <sub>0</sub> mm	(5) Rn <sub>30</sub> mm	(6) Rn <sub>60</sub> mm	(7) Rn <sub>120</sub> mm	(8) Creep Index, I <sub>c</sub> mm	(9) Rs cm	(10) Ro cm
1	2.04	2.57	-0.53	-2.29	-2.28	-2.28	-2.28	0.00	2.12	3.51
2	2.34	2.75	-0.40	-1.86	-2.01	-2.01	-2.01	0.00	2.15	3.53
3	2.65	2.95	-0.30	-1.76	-1.79	-1.79	-1.79	0.00	2.17	3.54
4	2.96	2.95	0.00	-1.30	-1.13	-1.13	-1.08	0.05	2.24	3.59
5	3.26	2.99	0.27	-0.56	-0.44	-0.44	-0.41	0.03	2.31	3.63
6	3.57	3.03	0.54	0.23	0.24	0.24	0.31	0.07	2.38	3.68
7	4.08	3.12	0.96	1.27	1.43	1.55	1.61	0.18	2.51	3.76
8	4.59	3.42	1.17	2.16	2.24	2.26	2.32	0.08	2.58	3.81
9	5.10	3.86	1.24	2.45	2.46	2.53	2.58	0.12	2.61	3.83
10	5.61	4.31	1.30	2.68	2.70	2.75	2.80	0.10	2.63	3.84
11	6.12	4.76	1.35	2.88	2.91	2.94	3.01	0.10	2.65	3.86
12	6.63	5.22	1.41	3.10	3.14	3.19	3.24	0.10	2.67	3.87
13	7.14	5.65	1.49	3.38	3.43	3.46	3.56	0.13	2.71	3.89
14	7.65	6.11	1.54	3.65	3.70	3.73	3.79	0.09	2.73	3.91
15	8.15	6.56	1.60	3.90	3.93	3.97	4.05	0.12	2.76	3.93
16	8.66	7.01	1.66	4.16	4.18	4.24	4.31	0.13	2.78	3.95
17	9.17	7.47	1.70	4.12	4.44	4.48	4.53	0.09	2.80	3.96
18	10.19	8.43	1.76	4.65	4.70	4.79	4.82	0.12	2.83	3.98

REMARKS:	TIME TAKEN :
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(2) ... P' (kg/cm <sup>2</sup> ) effective pressure obtained by (1) - (3) : P' = P - RG (3) ... RG (kg/cm <sup>2</sup> ) obtained from Rn (120) using Rg Calibration Chart. (8) ... Creep Index, I <sub>c</sub> Obtained by (7) - (5); I <sub>c</sub> = Rn (120) - Rn (30) in mm. (9) ... R <sub>s</sub> inside radius obtained by the following equations: <u>Medium Rubber</u> <span style="margin-left: 200px;"><u>Hard Rubber</u></span> $R_s(\text{cm}) = \{Rn(120) + 23.5\} / 10$ for P <= 10 $R_s(\text{cm}) = \{Rn(120) + 23.5\} / 10$ for P <= 20 $R_s(\text{cm}) = \{Rn(120) + 23.5 - [P - 10]/666\} / 10$ for P > 10 $R_s(\text{cm}) = \{Rn(120) + 23.5 - [P - 20] / 400\} / 10$ for P > 20	TEST LOCATION:	TEST DEPTH:
	<b>P2</b>	<b>23M</b>
	<b>KANCHPUR</b>	
	TEST NO.:	TEST DATE:
	<b>1</b>	<b>23.02.2012</b>
	PAGE:	N - VALUE:
		<b>18</b>
(10) ... R <sub>o</sub> outside radius, obtained by using $R_o = (R_s^2 + A/\pi)^{1/2}$ , where A = 24.63cm <sup>2</sup> .		

RUBBER TYPE:	GROUND WATER LEVEL:	N VALUE:	SOIL TYPE:	SPECIALIST SUB-CONTRACTOR:
<b>MEDIUM</b>		<b>18</b>	<b>MEDIUM PLASTIC CLAY</b>	
PROJECT:			<b>SURVEY2000</b>	
<b>PREPERATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL HIGHWAY NO.1 BRIDGE CONSTRUCTION AND REHABILITATION PROJECT.</b>			TEL: 8818386,01711323266	
			Email: survey2k@yahoo.com	
CLIENT:		CONSULTANT:		
<b>BANGLADESH ROADS &amp; HIGHWAY Department</b>		<b>ORIENTAL CONSULTANTS CO. LTD</b>		

**PRESSUREMETER TEST DATA RESULTS**

No.	(1) P Mpa	(2) Rn <sub>0</sub> mm	(3) Rn <sub>30</sub> mm	(4) Rn <sub>60</sub> mm	(5) Rn <sub>120</sub> mm
1	0.2	-2.290	-2.280	-2.280	-2.280
2	0.23	-1.860	-2.010	-2.010	-2.010
3	0.26	-1.760	-1.790	-1.790	-1.790
4	0.29	-1.300	-1.130	-1.130	-1.080
5	0.32	-0.560	-0.440	-0.440	-0.410
6	0.35	0.230	0.240	0.240	0.310
7	0.4	1.270	1.430	1.550	1.610
8	0.45	2.160	2.240	2.260	2.320
9	0.5	2.450	2.460	2.530	2.580
10	0.55	2.680	2.700	2.750	2.800
11	0.6	2.880	2.910	2.940	3.010
12	0.65	3.100	3.140	3.190	3.240
13	0.7	3.380	3.430	3.460	3.560
14	0.75	3.650	3.700	3.730	3.790
15	0.8	3.900	3.930	3.970	4.050
16	0.85	4.160	4.180	4.240	4.310
17	0.9	4.120	4.440	4.480	4.530
18	1	4.650	4.700	4.790	4.820
19	1.1	4.970	5.060	5.130	5.200
20	1.3	5.830	5.970	6.100	6.200
21	1.5	7.310	7.550	7.750	8.020
22	1.7	10.680	11.060	11.350	11.590
23	1.8	13.300	13.600	14.000	14.500
24					
25					
26					

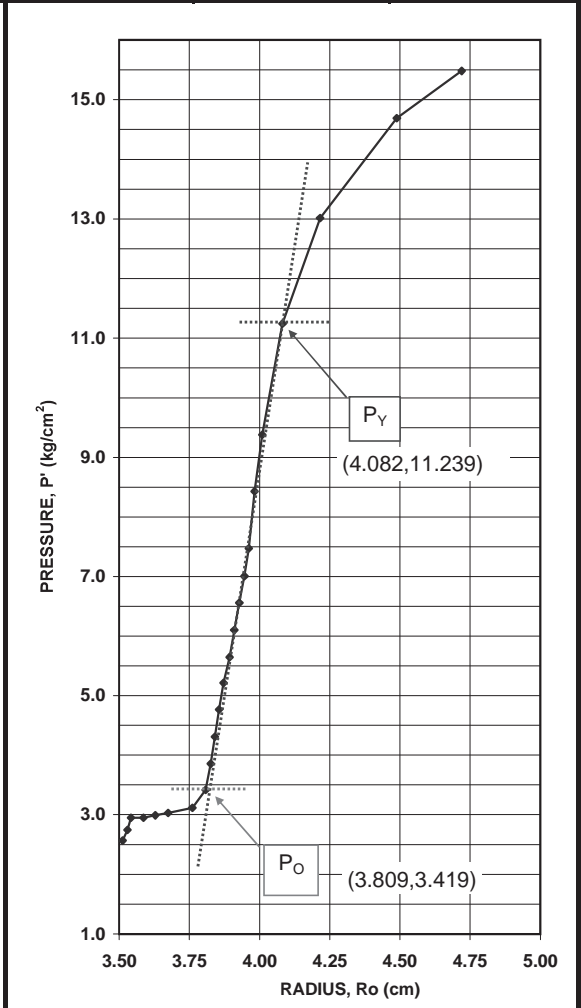
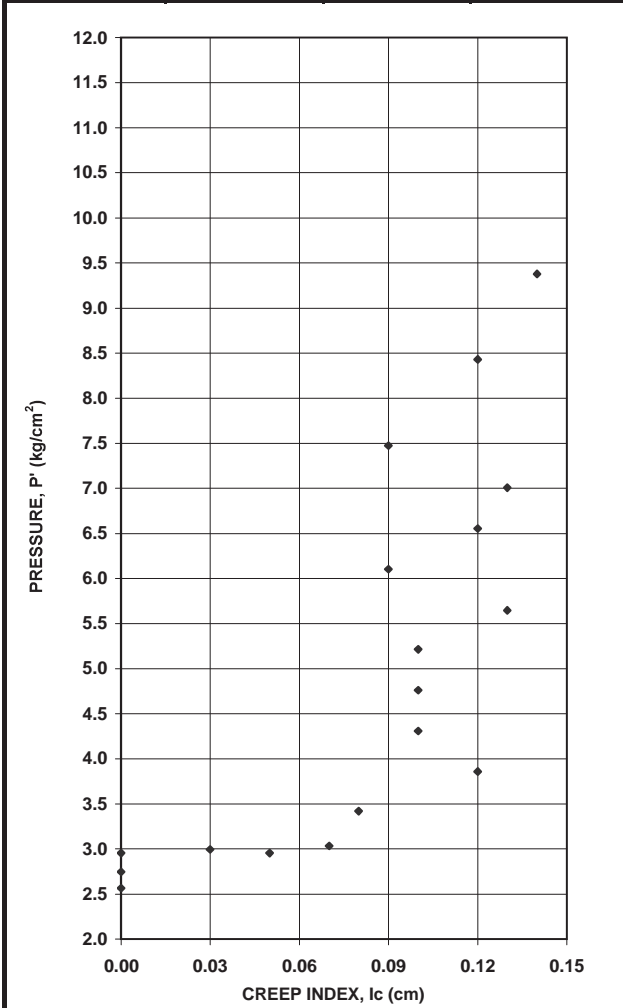
REMARKS:	TIME TAKEN :
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(2) ... P' (kg/cm <sup>2</sup> ) effective pressure obtained by (1) - (3) : P' = P - RG (3) ... RG (kg/cm <sup>2</sup> ) obtained from Rn (120) using Rg Calibration Chart. (8) ... Creep Index, I <sub>c</sub> Obtained by (7) - (5); I <sub>c</sub> = Rn (120) - Rn (30) in mm. (9) ... R <sub>s</sub> inside radius obtained by the following equations: <u>Medium Rubber</u> R <sub>s</sub> (cm) = {Rn(120) + 23.5} / 10 for P <= 10 R <sub>s</sub> (cm) = {Rn(120) + 23.5-[P-10]/666} /10 for P>10  (10) ... R <sub>o</sub> outside radius, obtained by using R <sub>o</sub> = (R <sub>s</sub> <sup>2</sup> + A/π) <sup>1/2</sup> , where A = 24.63cm <sup>2</sup> .	TEST LOCATION: <b>P2 KANCHPUR</b>	TEST DEPTH: <b>23M</b>
	TEST NO.: <b>1</b>	TEST DATE: <b>23.02.2012</b>
	PAGE:	N - VALUE: <b>18</b>

RUBBER TYPE: <b>M</b>	SOIL TYPE: <b>MEDIUM PLASTIC CLAY</b>	SPECIALIST SUB-CONTRACTOR:
PROJECT: <b>PREPARATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL BRIDGE CONSTRUCTION AND REHABILITATION PROJECT</b>		<b>SURVEY2000</b> TEL: 8818386,01711323266 Email: survey2k@yahoo.com
CLIENT: <b>ORIENTAL CONSUTANTS CO.LTD</b>		

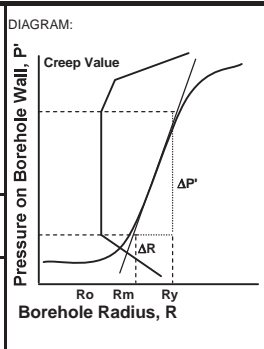
### PRESSUREMETER TEST DATA RESULTS

	EARTH PRESSURE AT REST	YIELD PRESSURE	FAILURE PRESSURE	COEFFICIENT OF SOIL REACTION	MODULUS OF ELASTICITY	MEAN RADIUS OF K VALUE CALCULATION
NO. OF CYCLE	<b>P<sub>o</sub></b> (kg/cm <sup>2</sup> )	<b>P<sub>y</sub></b> (kg/cm <sup>2</sup> )	<b>P<sub>f</sub></b> (kg/cm <sup>2</sup> )	<b>K<sub>m</sub></b> (kg/cm <sup>3</sup> )	<b>E<sub>m</sub></b> (kg/cm <sup>2</sup> )	<b>R<sub>m</sub></b> (cm)
1st	3.419	11.239	-	28.645	146.923	3.946



REMARKS:

P<sub>o</sub>, P<sub>o</sub>' ..... Earth Pressure at Rest  
 P<sub>y</sub>, P<sub>y</sub>' ..... Yield Pressure  
 $E = (1 + \nu) \cdot R_m \cdot K_m$  ..... Modulus of Elasticity  
 $\nu = 0.3$



TEST LOCATION: <b>P2</b> <b>KANCHPUR</b>	TEST DEPTH: <b>23M</b>
TEST NO.: <b>1</b>	TEST DATE: <b>23.02.2012</b>
SPECIALIST SUB-CONTRACTOR: <b>SURVEY2000</b>	
TEL: 8818386,01711323266 Email: survey2k@yahoo.com	

RUBBER TYPE: <b>MEDIUM</b>	N VALUE: <b>18</b>	SOIL TYPE: <b>MEDIUM PLASTIC CLAY</b>
PROJECT: <b>PREPARATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL HIGHWAY NO.1 BRIDGE CONSTRUCTION AND REHABILITATION PROJECT</b>		

CLIENT: <b>BANGLADESH ROADS &amp; HIGHWAY DEPARTMENT</b>	CONSULTANT: <b>ORIENTAL COSULTANTS CO. LTD</b>
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**PRESSUREMETER TEST DATA RESULTS**

No.	(1) P kg/cm <sup>2</sup>	(2) P' = P - RG kg/cm <sup>2</sup>	(3) RG kg/cm <sup>2</sup>	(4) Rn <sub>0</sub> mm	(5) Rn <sub>30</sub> mm	(6) Rn <sub>60</sub> mm	(7) Rn <sub>120</sub> mm	(8) Creep Index, I <sub>c</sub> mm	(9) Rs cm	(10) Ro cm
1	3.67	4.02	-0.35	-1.89	-1.89	-1.89	-1.89	0.00	2.16	3.54
2	4.18	4.44	-0.26	-1.69	-1.68	-1.70	-1.70	-0.02	2.18	3.55
3	4.69	4.77	-0.08	-1.46	-1.42	-1.37	-1.27	0.15	2.22	3.58
4	5.20	5.17	0.03	-1.23	-1.15	-1.12	-1.01	0.14	2.25	3.59
5	5.71	5.57	0.14	-0.97	-0.91	-0.86	-0.74	0.17	2.28	3.61
6	6.22	5.99	0.23	-0.70	-0.65	-0.59	-0.51	0.14	2.30	3.62
7	7.24	6.85	0.38	-0.40	-0.31	-0.23	-0.11	0.20	2.34	3.65
8	8.26	7.74	0.52	-0.03	0.06	0.14	0.26	0.20	2.38	3.67
9	9.28	8.63	0.64	0.32	0.40	0.47	0.62	0.22	2.41	3.70
10	10.30	9.51	0.79	0.74	0.84	0.91	1.05	0.21	2.46	3.72
11	11.31	10.40	0.91	1.15	1.24	1.32	1.45	0.21	2.50	3.75
12	12.84	11.79	1.06	1.61	1.71	1.77	1.93	0.22	2.54	3.78
13	14.37	13.19	1.18	2.06	2.16	2.23	2.37	0.21	2.59	3.81
14	15.90	14.61	1.29	2.50	2.59	2.66	2.78	0.19	2.63	3.84
15	17.43	16.05	1.38	2.91	2.99	3.05	3.14	0.15	2.66	3.86
16	18.96	17.49	1.47	3.29	3.37	3.41	3.48	0.11	2.70	3.89
17	21.00	19.43	1.57	3.68	3.77	3.85	3.93	0.16	2.74	3.92
18	23.04	21.35	1.69	4.21	4.31	4.39	4.46	0.15	2.80	3.96
19	25.08	23.25	1.83	4.80	4.96	5.04	5.16	0.20	2.86	4.01
20	27.12	25.14	1.98	5.58	5.77	5.86	5.99	0.22	2.95	4.07
21	29.15	27.03	2.13	6.54	6.64	6.85	6.94	0.30	3.04	4.13
22	32.21	29.84	2.38	8.21	8.47	8.63	8.83	0.36	3.23	4.27
23	34.25	31.68	2.57	10.23	10.38	10.52	10.70	0.32	3.42	4.42
24	36.29	33.57	2.72	11.78	12.02	12.19	12.48	0.46	3.59	4.56
25	38.33	35.47	2.86	13.46	13.89	14.10	14.36	0.47	3.78	4.71
26	40.37	37.33	3.03	15.43	15.93	16.15	16.55	0.62	4.00	4.88
27	43.43	40.23	3.20	18.07	18.30	18.31	18.31	0.01	4.18	5.03

REMARKS:				TIME TAKEN :			
(2) ... P' (kg/cm <sup>2</sup> ) effective pressure obtained by (1) - (3) : P' = P - RG (3) ... RG (kg/cm <sup>2</sup> ) obtained from Rn (120) using Rg Calibration Chart. (8) ... Creep Index, I <sub>c</sub> Obtained by (7) - (5); I <sub>c</sub> = Rn (120) - Rn (30) in mm. (9) ... R <sub>s</sub> inside radius obtained by the following equations: <u>Medium Rubber</u> <span style="margin-left: 200px;"><u>Hard Rubber</u></span> $R_s(\text{cm}) = \{Rn(120) + 23.5\} / 10$ for P <= 10 <span style="margin-left: 100px;"><math>R_s(\text{cm}) = \{Rn(120) + 23.5\} / 10</math> for P &lt;= 20</span> $R_s(\text{cm}) = \{Rn(120) + 23.5 - [P-10]/666\} / 10$ for P > 10 <span style="margin-left: 100px;"><math>R_s(\text{cm}) = \{Rn(120) + 23.5 - [P-20] / 400\} / 10</math> for P &gt; 20</span> (10) ... R <sub>o</sub> outside radius, obtained by using $R_o = (R_s^2 + A/\pi)^{1/2}$ , where A = 24.63cm <sup>2</sup> .				TEST LOCATION:	TEST DEPTH:		
				<b>P2</b>	<b>35M</b>		
				TEST NO.:	TEST DATE:		
<b>2</b>	<b>25.02.2012</b>						
PAGE:	N - VALUE:						
	<b>50</b>						
RUBBER TYPE:	GROUND WATER LEVEL:	N VALUE:	SOIL TYPE:	SPECIALIST SUB-CONTRACTOR:			
<b>HARD</b>		<b>50</b>	<b>HARD PLASTIC CLAY</b>	<b>SURVEY2000</b> TEL: 8818386 Email: survey2k@yahoo.com			
PROJECT:							
<b>PREPERATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL HIGHWAY NO.1 BRIDGE CONSTRUCTION AND REHABILITATION PROJECT.</b>							
CLIENT:			CONSULTANT:				
<b>BANGLADESH ROADS &amp; HIGHWAY Department</b>			<b>ORIENTAL CONSULTANTS CO. LTD</b>				

## PRESSUREMETER TEST DATA RESULTS

No.	(1) P Mpa	(2) Rn <sub>0</sub> mm	(3) Rn <sub>30</sub> mm	(4) Rn <sub>60</sub> mm	(5) Rn <sub>120</sub> mm
1	0.36	-1.890	-1.890	-1.890	-1.890
2	0.41	-1.690	-1.680	-1.700	-1.700
3	0.46	-1.460	-1.420	-1.370	-1.270
4	0.51	-1.230	-1.150	-1.120	-1.010
5	0.56	-0.970	-0.910	-0.860	-0.740
6	0.61	-0.700	-0.650	-0.590	-0.510
7	0.71	-0.400	-0.310	-0.230	-0.110
8	0.81	-0.030	0.060	0.140	0.260
9	0.91	0.320	0.400	0.470	0.620
10	1.01	0.740	0.840	0.910	1.050
11	1.11	1.150	1.240	1.320	1.450
12	1.26	1.610	1.710	1.770	1.930
13	1.41	2.060	2.160	2.230	2.370
14	1.56	2.500	2.590	2.660	2.780
15	1.71	2.910	2.990	3.050	3.140
16	1.86	3.290	3.370	3.410	3.480
17	2.06	3.680	3.770	3.850	3.930
18	2.26	4.210	4.310	4.390	4.460
19	2.46	4.800	4.960	5.040	5.160
20	2.66	5.580	5.770	5.860	5.990
21	2.86	6.540	6.640	6.850	6.940
22	3.16	8.210	8.470	8.630	8.830
23	3.36	10.230	10.380	10.520	10.700
24	3.56	11.780	12.020	12.190	12.480
25	3.76	13.460	13.890	14.100	14.360
26	3.96	15.430	15.930	16.150	16.550
	4.26	18.070	18.300	18.310	18.310

REMARKS:

TIME TAKEN :

(2) ... P' (kg/cm<sup>2</sup>) effective pressure obtained by (1) - (3) : P' = P - RG  
 (3) ... RG (kg/cm<sup>2</sup>) obtained from Rn (120) using Rg Calibration Chart.  
 (8) ... Creep Index, I<sub>c</sub> Obtained by (7) - (5); I<sub>c</sub> = Rn (120) - Rn (30) in mm.  
 (9) ... R<sub>s</sub> inside radius obtained by the following equations:  
Medium Rubber  
 $R_s(\text{cm}) = \{Rn(120) + 23.5\} / 10$  for P ≤ 10  
 $R_s(\text{cm}) = \{Rn(120) + 23.5 - [P-10]/666\} / 10$  for P > 10  
 (10) ... R<sub>o</sub> outside radius, obtained by using  $R_o = (R_s^2 + A/\pi)^{1/2}$ , where A = 24.63cm<sup>2</sup>.

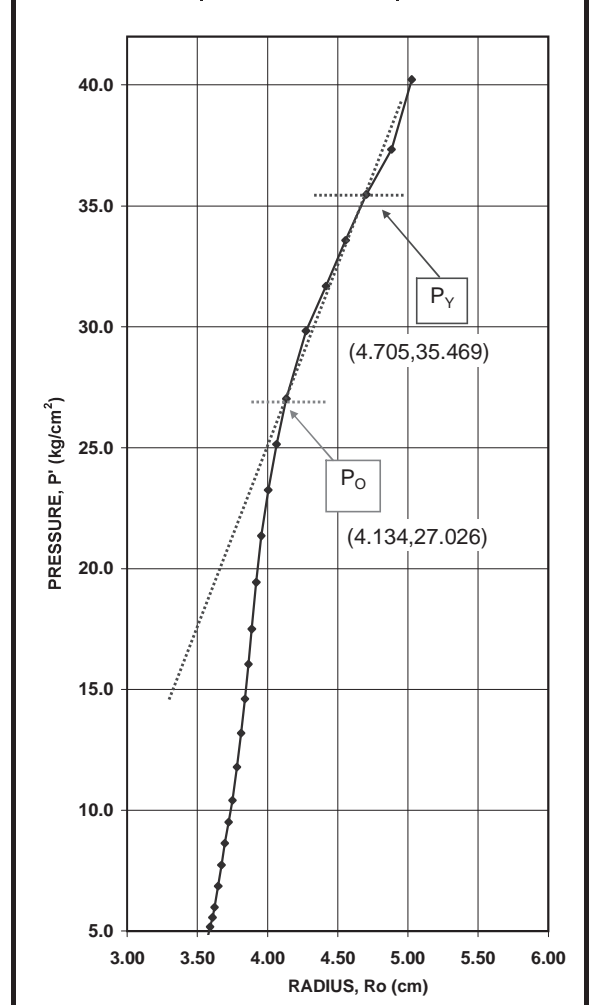
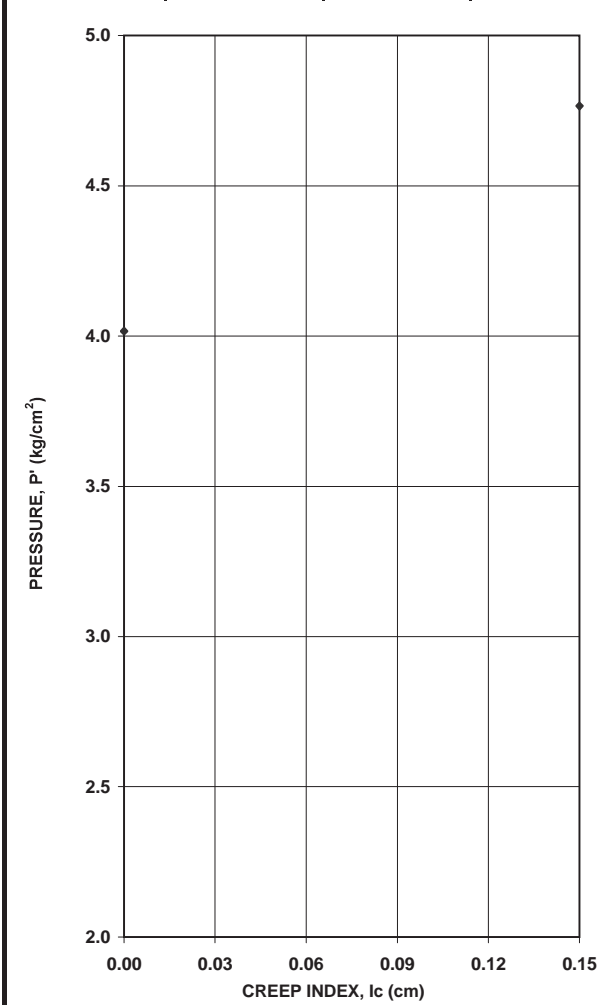
TEST LOCATION: <b>P2 KANCHPUR</b>	TEST DEPTH: <b>35M</b>
TEST NO.: <b>2</b>	TEST DATE: <b>25.02.2012</b>
PAGE:	N - VALUE: <b>50</b>

RUBBER TYPE: <b>M</b>	SOIL TYPE: <b>HARD PLASTIC CLAY</b>
PROJECT: <b>PREPARATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL BRIDGE CONSTRUCTION AND REHABILITATION PROJECT</b>	
CLIENT: <b>ORIENTAL CONSUTANTS CO.LTD</b>	

SPECIALIST SUB-CONTRACTOR:  
  
**SURVEY2000**  
**TEL: 8818386,01711323266**  
**Email: survey2k@yahoo.com**

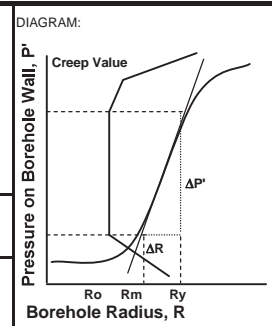
### PRESSUREMETER TEST DATA RESULTS

	EARTH PRESSURE AT REST	YIELD PRESSURE	FAILURE PRESSURE	COEFFICIENT OF SOIL REACTION	MODULUS OF ELASTICITY	MEAN RADIUS OF K VALUE CALCULATION
NO. OF CYCLE	Po (kg/cm <sup>2</sup> )	Py (kg/cm <sup>2</sup> )	Pf (kg/cm <sup>2</sup> )	Km (kg/cm <sup>3</sup> )	Em (kg/cm <sup>2</sup> )	Rm (cm)
1st	27.026	35.469	-	14.786	84.953	4.420



REMARKS:

Po, Po' ..... Earth Pressure at Rest  
 Py, Py' ..... Yield Pressure  
 $E = (1 + \nu) \cdot Rm \cdot Km$  ..... Modulus of Elasticity  
 $\nu = 0.3$



TEST LOCATION: <b>P2 KANCHPUR</b>	TEST DEPTH: <b>35M</b>
TEST NO.: <b>2</b>	TEST DATE: <b>25.02.2012</b>

RUBBER TYPE: <b>HARD</b>	N VALUE: <b>50</b>	SOIL TYPE: <b>HARD PLASTIC CLAY</b>
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**SURVEY2000**  
 TEL: 8818386,01711323266  
 Email: survey2k@yahoo.com

PROJECT:  
**PREPARATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL HIGHWAY NO.1 BRIDGE CONSTRUCTION AND REHABILITATION PROJECT**

CLIENT:  
**BANGLADESH ROADS & HIGHWAY DEPARTMENT**

CONSULTANT:  
**ORIENTAL COSULTANTS CO. LTD**

**PRESSUREMETER TEST DATA RESULTS**

No.	(1) P kg/cm <sup>2</sup>	(2) P' = P - RG kg/cm <sup>2</sup>	(3) RG kg/cm <sup>2</sup>	(4) Rn <sub>0</sub> mm	(5) Rn <sub>30</sub> mm	(6) Rn <sub>60</sub> mm	(7) Rn <sub>120</sub> mm	(8) Creep Index, I <sub>c</sub> mm	(9) Rs cm	(10) Ro cm
1	0.10	0.75	-0.65	-2.56	-2.55	-2.55	-2.54	0.01	2.10	3.50
2	0.61	1.20	-0.59	-2.43	-2.43	-2.43	-2.42	0.01	2.11	3.50
3	1.12	1.64	-0.52	-2.28	-2.27	-2.27	-2.26	0.01	2.12	3.51
4	1.63	1.88	-0.25	-1.86	-1.87	-1.72	-1.68	0.19	2.18	3.55
5	2.14	1.88	0.26	-0.93	-0.81	-0.68	-0.44	0.37	2.31	3.63
6	2.65	1.99	0.66	0.25	0.37	0.52	0.66	0.29	2.42	3.70
7	3.67	2.44	1.23	1.87	2.02	2.20	2.56	0.54	2.61	3.82
8	4.69	3.13	1.56	2.98	3.28	3.47	3.86	0.58	2.74	3.91
9	5.71	3.84	1.87	4.56	4.86	4.99	5.39	0.53	2.89	4.02
10	6.73	4.61	2.12	6.29	6.47	6.61	6.86	0.39	3.04	4.13
11	7.75	5.47	2.28	7.64	7.85	7.93	8.04	0.19	3.15	4.22
12	10.81	8.03	2.78	12.95	13.11	13.20	13.31	0.20	3.68	4.62
13	12.23	9.12	3.11	17.35	17.35	17.38	17.43	0.08	4.09	4.96
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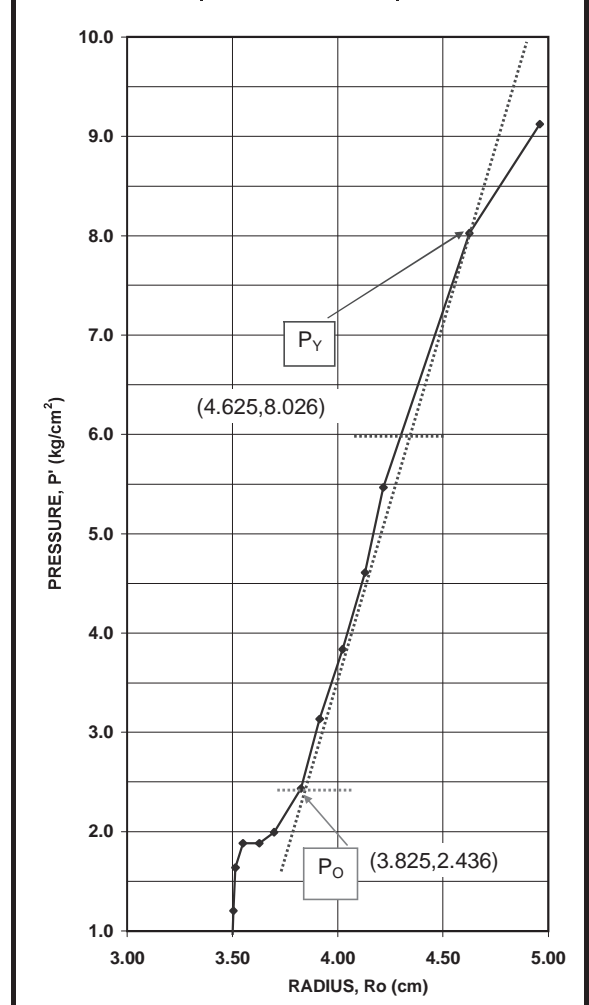
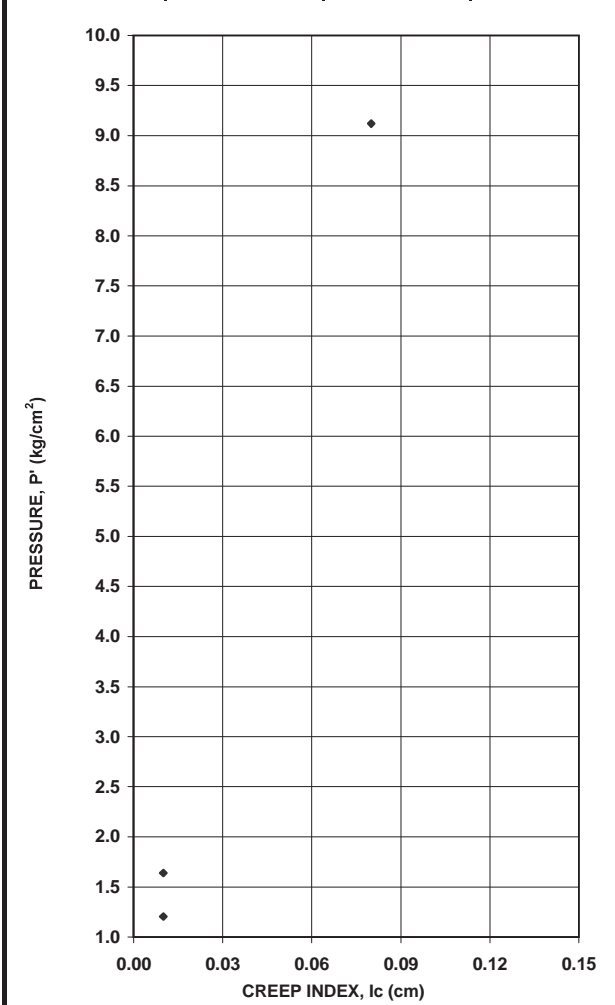
REMARKS:				TIME TAKEN :			
(2) ... P' (kg/cm <sup>2</sup> ) effective pressure obtained by (1) - (3) : P' = P - RG (3) ... RG (kg/cm <sup>2</sup> ) obtained from Rn (120) using Rg Calibration Chart. (8) ... Creep Index, I <sub>c</sub> Obtained by (7) - (5); I <sub>c</sub> = Rn (120) - Rn (30) in mm. (9) ... R <sub>s</sub> inside radius obtained by the following equations: <u>Medium Rubber</u> <span style="margin-left: 200px;"><u>Hard Rubber</u></span> $R_s(\text{cm}) = \{Rn(120) + 23.5\} / 10$ for P <= 10 <span style="margin-left: 100px;"><math>R_s(\text{cm}) = \{Rn(120) + 23.5\} / 10</math> for P &lt;= 20</span> $R_s(\text{cm}) = \{Rn(120) + 23.5 - [P-10]/666\} / 10$ for P > 10 <span style="margin-left: 100px;"><math>R_s(\text{cm}) = \{Rn(120) + 23.5 - [P-20] / 400\} / 10</math> for P &gt; 20</span>				TEST LOCATION: <b>P2 KANCHPUR</b>		TEST DEPTH: <b>20M</b>	
				TEST NO.: <b>3</b>		TEST DATE: <b>21.02.2012</b>	
				PAGE:		N - VALUE: <b>12</b>	
(10) ... R <sub>o</sub> outside radius, obtained by using $R_o = (R_s^2 + A/\pi)^{1/2}$ , where A = 24.63cm <sup>2</sup> .				SPECIALIST SUB-CONTRACTOR:			
RUBBER TYPE: <b>MEDIUM</b>		GROUND WATER LEVEL: <b>12</b>		N VALUE: <b>12</b>		SOIL TYPE: <b>MEDIUM PLASTIC CLAY</b>	
PROJECT: <b>PREPERATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL HIGHWAY NO.1 BRIDGE CONSTRUCTION AND REHABILITATION PROJECT.</b>				<b>SURVEY2000</b> TEL: 8818386 Email: survey2k@yahoo.com			
CLIENT: <b>BANGLADESH ROADS &amp; HIGHWAY Department</b>				CONSULTANT: <b>ORIENTAL CONSULTANTS CO. LTD</b>			





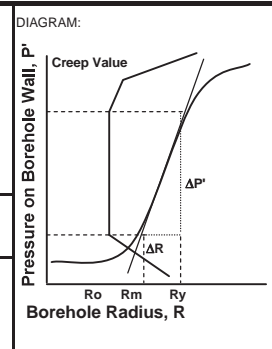
### PRESSUREMETER TEST DATA RESULTS

	EARTH PRESSURE AT REST	YIELD PRESSURE	FAILURE PRESSURE	COEFFICIENT OF SOIL REACTION	MODULUS OF ELASTICITY	MEAN RADIUS OF K VALUE CALCULATION
NO. OF CYCLE	Po (kg/cm <sup>2</sup> )	Py (kg/cm <sup>2</sup> )	Pf (kg/cm <sup>2</sup> )	Km (kg/cm <sup>3</sup> )	Em (kg/cm <sup>2</sup> )	Rm (cm)
1st	2.436	8.026	-	6.988	38.379	4.225



REMARKS:

Po, Po' ..... Earth Pressure at Rest  
 Py, Py' ..... Yield Pressure  
 $E = (1 + \nu) \cdot R_m \cdot K_m$  ..... Modulus of Elasticity  
 $\nu = 0.3$



TEST LOCATION: <b>P2 KANCHPUR</b>	TEST DEPTH: <b>20M</b>
TEST NO.: <b>3</b>	TEST DATE: <b>21.02.2012</b>
SURVEY2000 TEL: 8818386,01711323266 Email: survey2k@yahoo.com	

RUBBER TYPE: <b>MEDIUM</b>	N VALUE: <b>12</b>	SOIL TYPE: <b>MEDIUM PLASTIC CLAY</b>
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PROJECT:  
**PREPARATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL HIGHWAY NO.1 BRIDGE CONSTRUCTION AND REHABILITATION PROJECT**

CLIENT:  
**BANGLADESH ROADS & HIGHWAY DEPARTMENT**

CONSULTANT:  
**ORIENTAL COSULTANTS CO. LTD**



## PRESSUREMETER TEST DATA RESULTS

No.	(1) P Mpa	(2) R <sub>n0</sub> mm	(3) R <sub>n30</sub> mm	(4) R <sub>n60</sub> mm	(5) R <sub>n120</sub> mm
1	0.09	-2.14	2.14	-2.14	-2.15
2	0.14	-2.04	-1.95	-1.94	-1.93
3	0.19	-1.82	-1.80	-1.79	-1.78
4	0.24	-1.60	-1.54	-1.50	-1.44
5	0.29	-1.20	-1.15	-1.08	-1.05
6	0.34	-0.85	-0.78	-0.72	-0.65
7	0.39	-0.47	-0.28	-0.22	-0.16
8	0.44	0.03	0.20	0.22	0.37
9	0.54	1.15	1.44	1.56	1.68
10	0.64	2.67	3.00	3.20	3.35
11	0.74	4.95	5.38	5.62	5.93
12	0.84	7.34	8.30	8.69	9.16
13	0.94	10.56	11.25	11.46	11.82
14	1.1	12.52	12.87	13.05	13.35
15	1.25	14.20	14.58	14.80	15.05
16	1.4	15.93	16.44	16.74	19.92
17	1.55	17.95	18.10	18.18	18.23
18	1.7	18.24	18.24	18.24	18.24
19					
20					
21					
22					
23					
24					
25					
26					

REMARKS:

TIME TAKEN :

(2) ... P' (kg/cm<sup>2</sup>) effective pressure obtained by (1) - (3) : P' = P - RG  
 (3) ... RG (kg/cm<sup>2</sup>) obtained from Rn (120) using Rg Calibration Chart.  
 (8) ... Creep Index, I<sub>c</sub> Obtained by (7) - (5); I<sub>c</sub> = Rn (120) - Rn (30) in mm.  
 (9) ... R<sub>s</sub> inside radius obtained by the following equations:  
Medium Rubber  
 R<sub>s</sub>(cm) = {Rn(120) + 23.5} / 10 for P <= 10  
 R<sub>s</sub>(cm) = {Rn(120) + 23.5-[P-10]/666} /10 for P>10  
 (10) ... R<sub>o</sub> outside radius, obtained by using R<sub>o</sub> = (R<sub>s</sub><sup>2</sup> + A/π)<sup>1/2</sup>, where A = 24.63cm<sup>2</sup>.

TEST LOCATION:

TEST DEPTH:

**P6  
KANCHPUR****14M**

TEST NO.:

TEST DATE:

**1****28.02.2012**

PAGE:

N - VALUE:

**37**

RUBBER TYPE:

SOIL TYPE:

**M****HARD PLASTIC CLAY**

PROJECT:

**PREPARATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL  
BRIDGE CONSTRUCTION AND REHABILITATION PROJECT**

SPECIALIST SUB-CONTRACTOR:

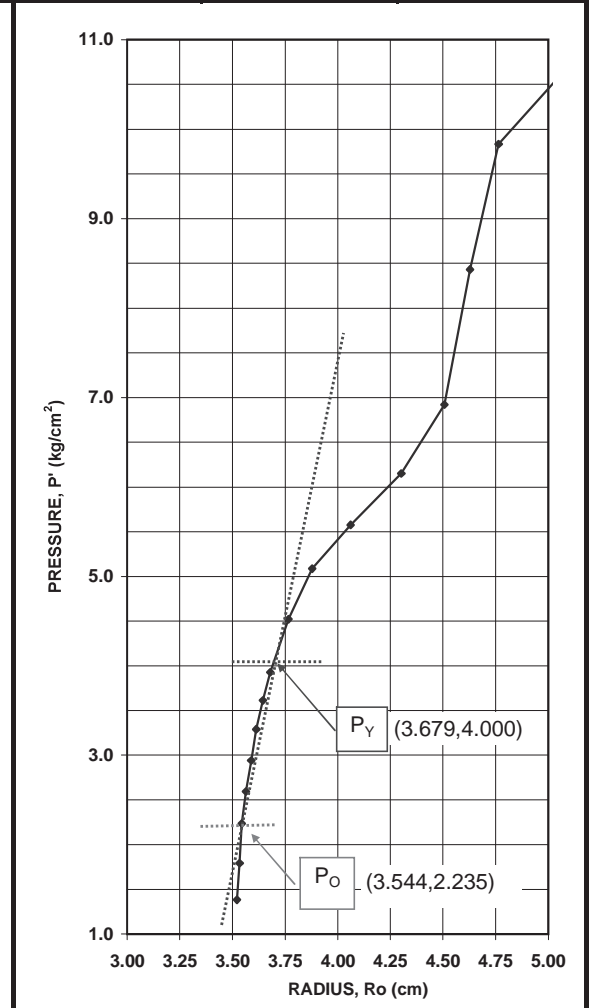
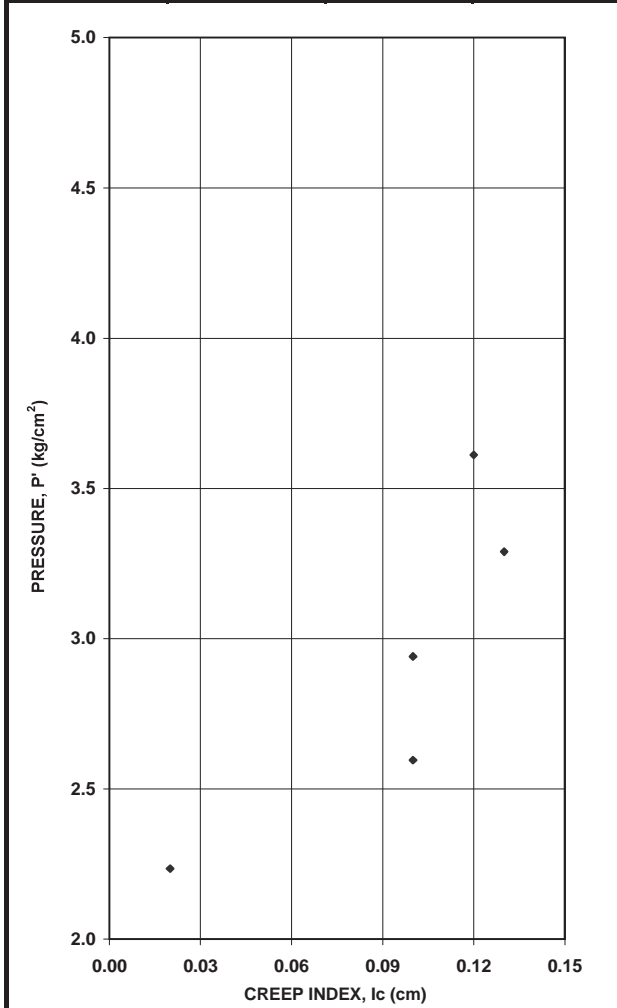
**SURVEY2000  
TEL: 8818386,01711323266  
Email: survey2k@yahoo.com**

CLIENT:

ORIENTAL CONSUTANTS CO.LTD

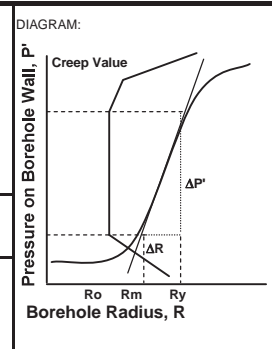
### PRESSUREMETER TEST DATA RESULTS

	EARTH PRESSURE AT REST	YIELD PRESSURE	FAILURE PRESSURE	COEFFICIENT OF SOIL REACTION	MODULUS OF ELASTICITY	MEAN RADIUS OF K VALUE CALCULATION
NO. OF CYCLE	$P_o$ (kg/cm <sup>2</sup> )	$P_y$ (kg/cm <sup>2</sup> )	$P_f$ (kg/cm <sup>2</sup> )	$K_m$ (kg/cm <sup>3</sup> )	$E_m$ (kg/cm <sup>2</sup> )	$R_m$ (cm)
1st	2.235	4.000	-	13.074	61.382	3.612



REMARKS: ..

$P_o, P_o'$  ..... Earth Pressure at Rest  
 $P_y, P_y'$  ..... Yield Pressure  
 $E = (1 + \nu) \cdot R_m \cdot K_m$  ..... Modulus of Elasticity  
 $\nu = 0.3$



TEST LOCATION: <b>P6 KANCHPUR</b>	TEST DEPTH: <b>14M</b>
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TEST NO.: <b>1</b>	TEST DATE: <b>28.02.2012</b>
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RUBBER TYPE: <b>MEDIUM</b>	N VALUE: <b>37</b>	SOIL TYPE: <b>HARD PLASTIC CLAY</b>
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SPECIALIST SUB-CONTRACTOR:  
**SURVEY2000**  
**TEL: 8818386,01711323266**  
**Email: survey2k@yahoo.com**

PROJECT:  
**PREPARATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL HIGHWAY NO.1 BRIDGE CONSTRUCTION AND REHABILITATION PROJECT**

CLIENT:  
**BANGLADESH ROADS & HIGHWAY DEPARTMENT**

CONSULTANT:  
**ORIENTAL COSULTANTS CO. LTD**



**PRESSUREMETER TEST DATA RESULTS**

No.	(1) P Mpa	(2) Rn <sub>0</sub> mm	(3) Rn <sub>30</sub> mm	(4) Rn <sub>60</sub> mm	(5) Rn <sub>120</sub> mm
1	0.22	-1.49	-1.49	-1.49	-1.48
2	0.25	-1.25	-1.16	-1.12	-1.10
3	0.28	-0.69	-0.59	-0.54	-0.51
4	0.31	0.08	0.05	0.09	0.15
5	0.36	1.19	1.35	1.40	1.46
6	0.41	2.60	2.68	2.78	2.88
7	0.46	3.30	3.40	3.48	3.58
8	0.52	3.37	3.77	3.84	3.96
9	0.58	4.09	4.18	4.23	4.32
10	0.64	4.45	4.50	4.56	4.60
11	0.7	4.73	4.80	4.84	4.90
12	0.8	5.11	5.17	5.22	5.30
13	0.9	5.59	5.64	5.68	5.77
14	1	6.15	6.25	6.30	6.38
15	1.2	6.90	7.10	7.20	7.25
16	1.3	7.28	7.44	9.32	9.45
17	1.4	11.10	11.26	11.50	11.65
18	1.5	12.50	12.80	12.96	13.21
19	1.6	14.58	14.73	14.82	14.93
20	1.75	15.97	16.08	16.14	16.30
21	1.85	17.75	17.84	17.90	18.03
22					
23					
24					
25					
26					

REMARKS:

TIME TAKEN :

(2) ... P' (kg/cm<sup>2</sup>) effective pressure obtained by (1) - (3) : P' = P - RG  
 (3) ... RG (kg/cm<sup>2</sup>) obtained from Rn (120) using Rg Calibration Chart.  
 (8) ... Creep Index, I<sub>c</sub> Obtained by (7) - (5); I<sub>c</sub> = Rn (120) - Rn (30) in mm.  
 (9) ... R<sub>s</sub> inside radius obtained by the following equations:  
Medium Rubber  
 R<sub>s</sub>(cm) = {Rn(120) + 23.5} / 10 for P <= 10  
 R<sub>s</sub>(cm) = {Rn(120) + 23.5-[P-10]/666} /10 for P>10  
 (10) ... R<sub>o</sub> outside radius, obtained by using R<sub>o</sub> = (R<sub>s</sub><sup>2</sup> + A/π)<sup>1/2</sup>, where A = 24.63cm<sup>2</sup>.

TEST LOCATION:  
**P6  
KANCHPUR**

TEST DEPTH:  
**21M**

TEST NO.:  
**2**

TEST DATE:  
**28.02.2012**

PAGE:

N - VALUE:

**35**

RUBBER TYPE:

**M**

SOIL TYPE:

**HARD PLASTIC CLAY**

SPECIALIST SUB-CONTRACTOR:

**SURVEY2000**

PROJECT:

**PREPARATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL BRIDGE CONSTRUCTION AND REHABILITATION PROJECT**

TEL: 8818386

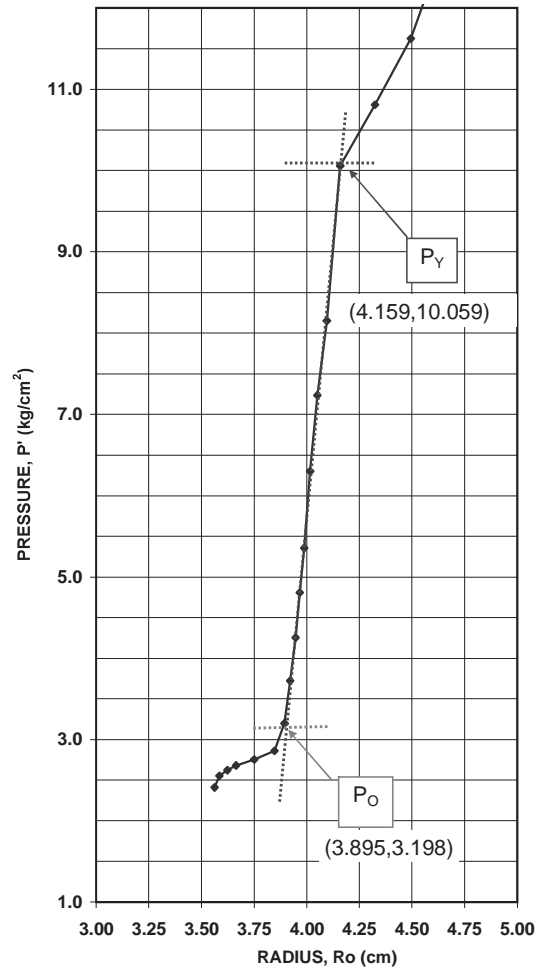
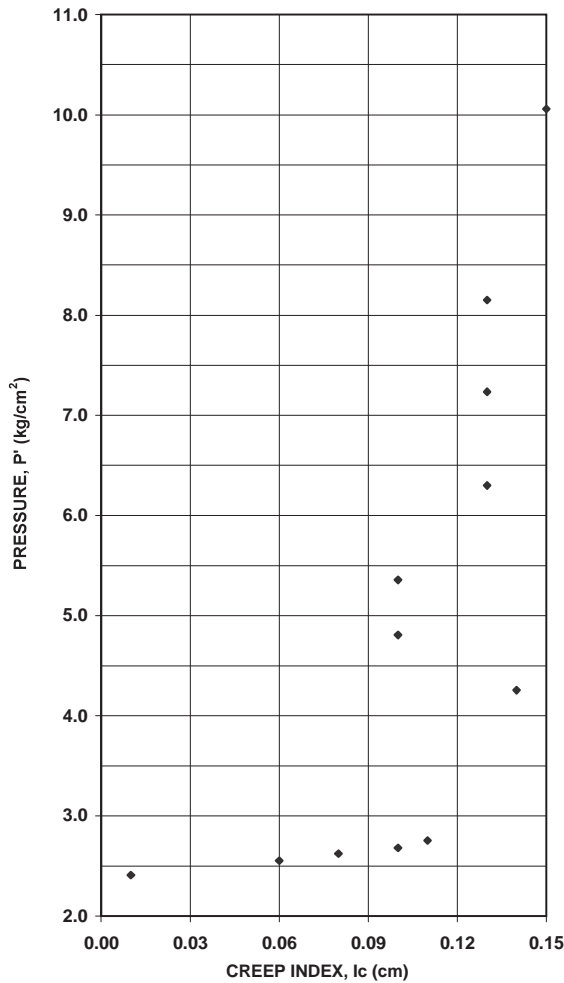
Email: survey2k@yahoo.com

CLIENT:

ORIENTAL CONSUTANTS CO.LTD

### PRESSUREMETER TEST DATA RESULTS

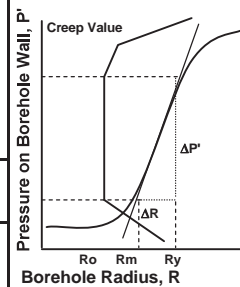
	EARTH PRESSURE AT REST	YIELD PRESSURE	FAILURE PRESSURE	COEFFICIENT OF SOIL REACTION	MODULUS OF ELASTICITY	MEAN RADIUS OF K VALUE CALCULATION
NO. OF CYCLE	Po (kg/cm <sup>2</sup> )	Py (kg/cm <sup>2</sup> )	Pf (kg/cm <sup>2</sup> )	Km (kg/cm <sup>3</sup> )	Em (kg/cm <sup>2</sup> )	Rm (cm)
1st	3.198	10.059	-	25.989	136.053	4.027



REMARKS:

Po, Po' ..... Earth Pressure at Rest  
 Py, Py' ..... Yield Pressure  
 $E = (1 + \nu) \cdot R_m \cdot K_m$  ..... Modulus of Elasticity  
 $\nu = 0.3$

DIAGRAM:



TEST LOCATION: <b>P6 KANCHPUR</b>	TEST DEPTH: <b>21M</b>
TEST NO.: <b>2</b>	TEST DATE: <b>28.02.2012</b>

RUBBER TYPE: **MEDIUM**      N VALUE: **35**      SOIL TYPE: **HARD PLASTIC CLAY**

SPECIALIST SUB-CONTRACTOR:  
**SURVEY2000**  
 TEL: 8818386  
 Email: survey2k@yahoo.com

PROJECT:  
**PREPARATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL HIGHWAY NO.1 BRIDGE CONSTRUCTION AND REHABILITATION PROJECT**

CLIENT: **BANGLADESH ROADS & HIGHWAY DEPARTMENT**      CONSULTANT: **ORIENTAL COSULTANTS CO. LTD**





**PRESSUREMETER TEST DATA RESULTS**

No.	(1) P Mpa	(2) Rn <sub>0</sub> mm	(3) Rn <sub>30</sub> mm	(4) Rn <sub>60</sub> mm	(5) Rn <sub>120</sub> mm
1	0.14	-2.480	-2.460	-2.460	-2.420
2	0.17	-2.280	-2.250	-2.250	-2.190
3	0.2	-2.000	-1.860	-1.840	-1.720
4	0.23	-1.630	-1.570	-1.410	-1.320
5	0.26	-1.180	-1.070	-0.990	-0.850
6	0.29	-0.620	-0.500	-0.400	-0.300
7	0.34	0.140	0.290	0.390	0.620
8	0.39	1.140	1.490	1.660	1.850
9	0.44	2.420	2.880	3.010	3.190
10	0.49	4.050	4.400	4.540	4.680
11	0.54	5.650	6.080	6.220	6.340
12	0.62	7.390	7.600	7.740	7.990
13	0.7	8.620	8.750	8.910	9.130
14	0.78	9.660	9.790	9.900	10.010
15	0.86	10.120	10.570	10.670	10.860
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

REMARKS:

TIME TAKEN :

(2) ... P' (kg/cm<sup>2</sup>) effective pressure obtained by (1) - (3) : P' = P - RG  
 (3) ... RG (kg/cm<sup>2</sup>) obtained from Rn (120) using Rg Calibration Chart.  
 (8) ... Creep Index, I<sub>c</sub> Obtained by (7) - (5); I<sub>c</sub> = Rn (120) - Rn (30) in mm.  
 (9) ... R<sub>s</sub> inside radius obtained by the following equations:  
Medium Rubber  
 R<sub>s</sub>(cm) = {Rn(120) + 23.5} / 10 for P <= 10  
 R<sub>s</sub>(cm) = {Rn(120) + 23.5-[P-10]/666} /10 for P>10  
 (10) ... R<sub>o</sub> outside radius, obtained by using R<sub>o</sub> = (R<sub>s</sub><sup>2</sup> + A/π)<sup>1/2</sup>, where A = 24.63cm<sup>2</sup>.

TEST LOCATION: <b>P7 KANCHPUR</b>	TEST DEPTH: <b>17m</b>
TEST NO.: <b>1</b>	TEST DATE: <b>27.02.2012</b>
PAGE:	N - VALUE: <b>20</b>

RUBBER TYPE: <b>M</b>	SOIL TYPE: <b>HARD PLASTIC CLAY</b>
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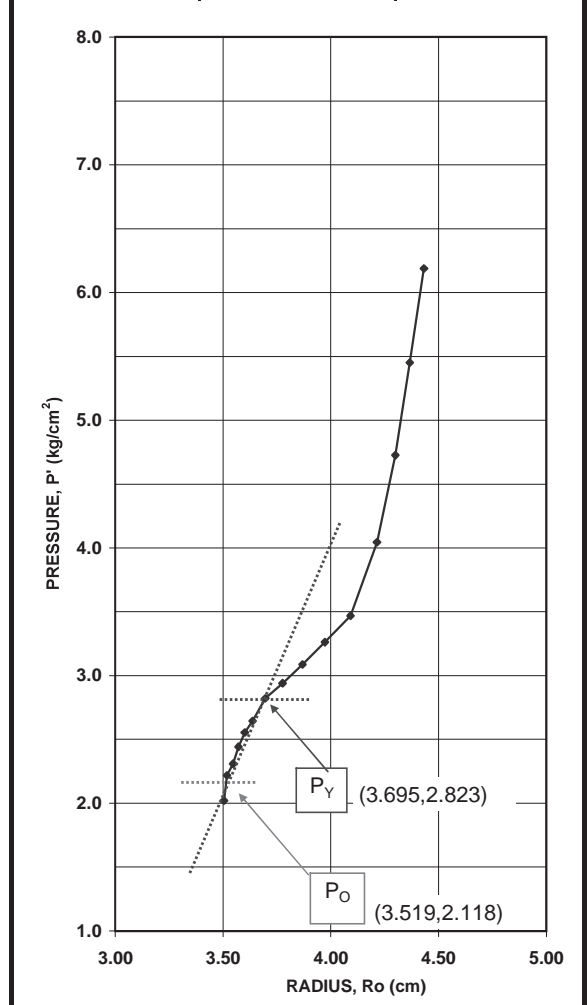
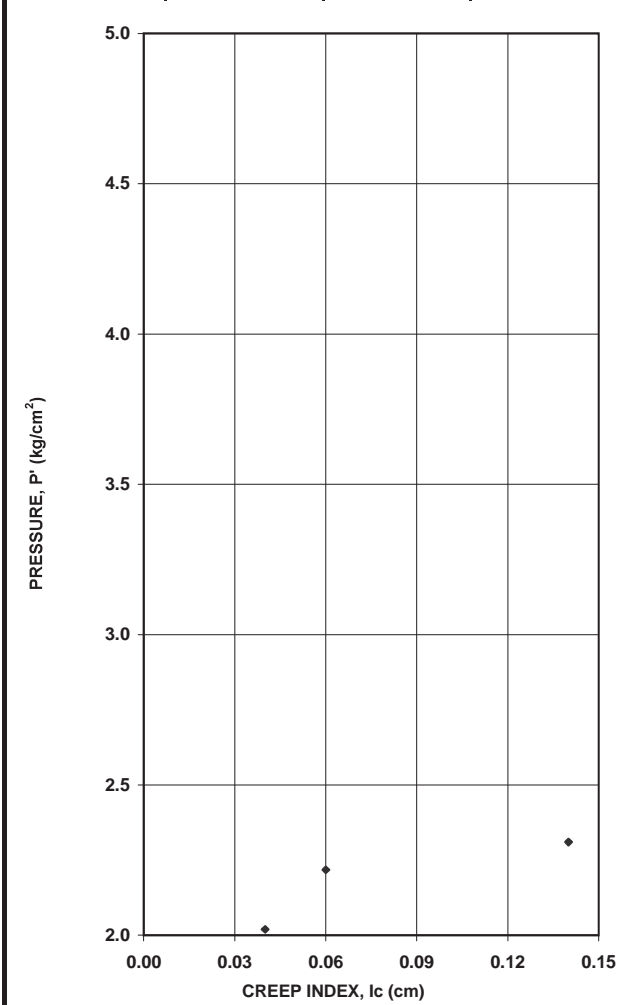
SPECIALIST SUB-CONTRACTOR:  
**SURVEY2000**  
 TEL: 8818386  
 Email: survey2k@yahoo.com

PROJECT:  
**PREPARATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL  
 BRIDGE CONSTRUCTION AND REHABILITATION PROJECT**

CLIENT: **ORIENTAL CONSUTANTS CO.LTD**

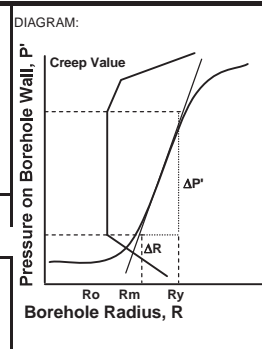
### PRESSUREMETER TEST DATA RESULTS

	EARTH PRESSURE AT REST	YIELD PRESSURE	FAILURE PRESSURE	COEFFICIENT OF SOIL REACTION	MODULUS OF ELASTICITY	MEAN RADIUS OF K VALUE CALCULATION
NO. OF CYCLE	Po (kg/cm <sup>2</sup> )	Py (kg/cm <sup>2</sup> )	Pf (kg/cm <sup>2</sup> )	Km (kg/cm <sup>3</sup> )	Em (kg/cm <sup>2</sup> )	Rm (cm)
1st	2.118	2.823	-	4.006	18.783	3.607



REMARKS:

Po, Po' ..... Earth Pressure at Rest  
 Py, Py' ..... Yield Pressure  
 $E = (1 + \nu) \cdot R_m \cdot K_m$  ..... Modulus of Elasticity  
 $\nu = 0.3$



TEST LOCATION: <b>P7</b> <b>KANCHPUR</b>	TEST DEPTH: <b>17m</b>
TEST NO.: <b>1</b>	TEST DATE: <b>27.02.2012</b>
<b>SURVEY2000</b>	
TEL: 8818386	
Email: survey2k@yahoo.com	

RUBBER TYPE: <b>MEDIUM</b>	N VALUE: <b>20</b>	SOIL TYPE: <b>HARD PLASTIC CLAY</b>
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PROJECT:  
**PREPARATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL HIGHWAY NO.1 BRIDGE CONSTRUCTION AND REHABILITATION PROJECT**

CLIENT:  
**BANGLADESH ROADS & HIGHWAY DEPARTMENT**

CONSULTANT:  
**ORIENTAL COSULTANTS CO. LTD**

### PRESSUREMETER TEST DATA RESULTS

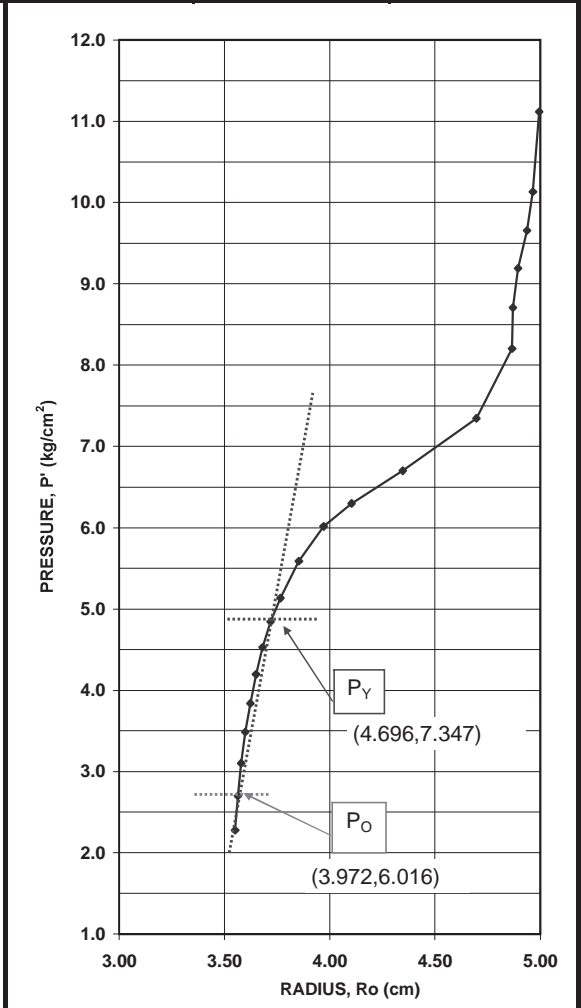
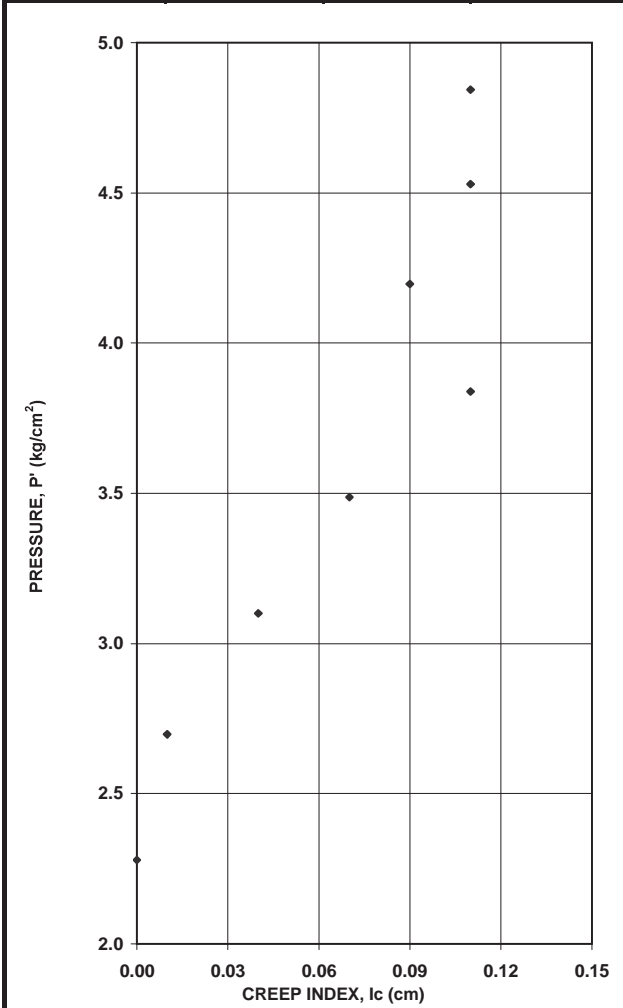
No.	(1) P kg/cm <sup>2</sup>	(2) P' = P - RG kg/cm <sup>2</sup>	(3) RG kg/cm <sup>2</sup>	(4) Rn <sub>0</sub> mm	(5) Rn <sub>30</sub> mm	(6) Rn <sub>60</sub> mm	(7) Rn <sub>120</sub> mm	(8) Creep Index, I <sub>c</sub> mm	(9) R <sub>s</sub> cm	(10) R <sub>o</sub> cm
1	2.04	2.28	-0.24	-1.66	-1.65	-1.65	-1.65	0.00	2.19	3.55
2	2.55	2.70	-0.15	-1.46	-1.45	-1.45	-1.44	0.01	2.21	3.56
3	3.06	3.10	-0.04	-1.30	-1.23	-1.21	-1.19	0.04	2.23	3.58
4	3.57	3.49	0.08	-1.03	-0.96	-0.93	-0.89	0.07	2.26	3.60
5	4.08	3.84	0.24	-0.69	-0.60	-0.52	-0.49	0.11	2.30	3.62
6	4.59	4.20	0.39	-0.29	-0.18	-0.12	-0.09	0.09	2.34	3.65
7	5.10	4.53	0.57	0.22	0.29	0.38	0.40	0.11	2.39	3.68
8	5.61	4.84	0.76	0.68	0.87	0.93	0.98	0.11	2.45	3.72
9	6.12	5.13	0.98	1.38	1.54	1.60	1.68	0.14	2.52	3.77
10	6.93	5.59	1.34	2.49	2.80	2.84	2.98	0.18	2.65	3.85
11	7.75	6.02	1.73	3.99	4.32	4.46	4.67	0.35	2.82	3.97
12	8.36	6.30	2.06	5.78	6.09	6.33	6.50	0.41	3.00	4.10
13	9.17	6.70	2.47	8.55	9.06	9.47	9.75	0.69	3.33	4.35
14	10.19	7.35	2.85	12.93	13.47	13.79	14.20	0.73	3.77	4.70
15	11.21	8.20	3.01	15.50	16.10	16.22	16.30	0.20	3.98	4.87
16	11.72	8.71	3.02	16.32	16.34	16.34	16.35	0.01	3.99	4.87
17	12.23	9.19	3.04	16.55	16.58	16.63	16.64	0.06	4.01	4.89
18	12.74	9.66	3.09	16.82	16.89	16.99	17.15	0.26	4.07	4.94
19	13.25	10.13	3.12	17.33	17.40	17.45	17.50	0.10	4.10	4.96
20	14.27	11.12	3.15	17.76	17.81	17.84	17.86	0.05	4.14	4.99

REMARKS:				TIME TAKEN :		
<p>(2) ... P' (kg/cm<sup>2</sup>) effective pressure obtained by (1) - (3) : P' = P - RG</p> <p>(3) ... RG (kg/cm<sup>2</sup>) obtained from Rn (120) using Rg Calibration Chart.</p> <p>(8) ... Creep Index, I<sub>c</sub> Obtained by (7) - (5); I<sub>c</sub> = Rn (120) - Rn (30) in mm.</p> <p>(9) ... R<sub>s</sub> inside radius obtained by the following equations:</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p><u>Medium Rubber</u></p> <p>R<sub>s</sub>(cm) = {Rn(120) + 23.5} / 10 for P &lt;= 10</p> <p>R<sub>s</sub>(cm) = {Rn(120) + 23.5 - [P-10]/666} / 10 for P &gt; 10</p> </div> <div style="text-align: center;"> <p><u>Hard Rubber</u></p> <p>R<sub>s</sub>(cm) = {Rn(120) + 23.5} / 10 for P &lt;= 20</p> <p>R<sub>s</sub>(cm) = {Rn(120) + 23.5 - [P-20] / 400} / 10 for P &gt; 20</p> </div> </div> <p>(10) ... R<sub>o</sub> outside radius, obtained by using <math>R_o = (R_s^2 + A/\pi)^{1/2}</math>, where A = 24.63cm<sup>2</sup>.</p>				TEST LOCATION:	TEST DEPTH:	
				<b>P7</b>	<b>24m</b>	
				<b>KANCHPUR</b>		
				TEST NO.:	TEST DATE:	
				<b>2</b>	<b>27.02.2012</b>	
				PAGE:	N - VALUE:	
					<b>50</b>	
RUBBER TYPE:		GROUND WATER LEVEL:	N VALUE:	SOIL TYPE:		
<b>MEDIUM</b>			<b>50</b>	<b>HARD NON PLASTIC SILT</b>		
PROJECT:				SPECIALIST SUB-CONTRACTOR:		
<p><b>PREPERATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL HIGHWAY NO.1 BRIDGE CONSTRUCTION AND REHABILITATION PROJECT.</b></p>				<b>SURVEY2000</b>		
				TEL: 8818386 Email: survey2k@yahoo.com		
CLIENT:			CONSULTANT:			
<b>BANGLADESH ROADS &amp; HIGHWAY Department</b>			<b>ORIENTAL CONSULTANTS CO. LTD</b>			

PRESSUREMETER TEST DATA RESULTS					
No.	(1) P Mpa	(2) Rn <sub>0</sub> mm	(3) Rn <sub>30</sub> mm	(4) Rn <sub>60</sub> mm	(5) Rn <sub>120</sub> mm
1	0.2	-1.66	-1.65	-1.65	-1.65
2	0.25	-1.46	-1.45	-1.45	-1.44
3	0.3	-1.30	-1.23	-1.21	-1.19
4	0.35	-1.03	-0.96	-0.93	-0.89
5	0.4	-0.69	-0.60	-0.52	-0.49
6	0.45	-0.29	-0.18	-0.12	-0.09
7	0.5	0.22	0.29	0.38	0.40
8	0.55	0.68	0.87	0.93	0.98
9	0.6	1.38	1.54	1.60	1.68
10	0.68	2.49	2.80	2.84	2.98
11	0.76	3.99	4.32	4.46	4.67
12	0.82	5.78	6.09	6.33	6.50
13	0.9	8.55	9.06	9.47	9.75
14	1	12.93	13.47	13.79	14.20
15	1.1	15.50	16.10	16.22	16.30
16	1.15	16.32	16.34	16.34	16.35
17	1.2	16.55	16.58	16.63	16.64
18	1.25	16.82	16.89	16.99	17.15
19	1.3	17.33	17.40	17.45	17.50
20	1.4	17.76	17.81	17.84	17.86
21					
22					
23					
24					
25					
26					
REMARKS:			TIME TAKEN :		
<p>(2) ... P' (kg/cm<sup>2</sup>) effective pressure obtained by (1) - (3) : P' = P - RG</p> <p>(3) ... RG (kg/cm<sup>2</sup>) obtained from Rn (120) using Rg Calibration Chart.</p> <p>(8) ... Creep Index, I<sub>c</sub> Obtained by (7) - (5); I<sub>c</sub> = Rn (120) - Rn (30) in mm.</p> <p>(9) ... R<sub>s</sub> inside radius obtained by the following equations:  <u>Medium Rubber</u>  R<sub>s</sub>(cm) = {Rn(120) + 23.5} / 10 for P &lt;= 10  R<sub>s</sub>(cm) = {Rn(120) + 23.5-[P-10]/666} /10 for P&gt;10</p> <p>(10) ... R<sub>o</sub> outside radius, obtained by using R<sub>o</sub> = (R<sub>s</sub><sup>2</sup> + A/π)<sup>1/2</sup>, where A = 24.63cm<sup>2</sup>.</p>			TEST LOCATION: <b>P7 KANCHPUR</b>	TEST DEPTH: <b>24m</b>	
			TEST NO.: <b>2</b>	TEST DATE: <b>27.02.2012</b>	
			PAGE:	N - VALUE: <b>50</b>	
			SPECIALIST SUB-CONTRACTOR: <b>SURVEY2000</b> TEL: 8818386 Email: survey2k@yahoo.com		
RUBBER TYPE: <b>M</b>	SOIL TYPE: <b>HARD NON PLASTIC SILT</b>	PROJECT: <b>PREPARATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL BRIDGE CONSTRUCTION AND REHABILITATION PROJECT</b>			
CLIENT: <b>ORIENTAL CONSUTANTS CO.LTD</b>					

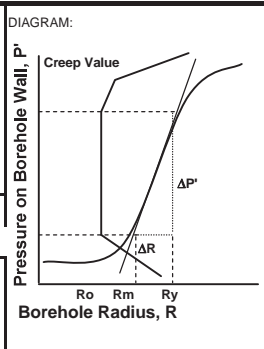
### PRESSUREMETER TEST DATA RESULTS

	EARTH PRESSURE AT REST	YIELD PRESSURE	FAILURE PRESSURE	COEFFICIENT OF SOIL REACTION	MODULUS OF ELASTICITY	MEAN RADIUS OF K VALUE CALCULATION
NO. OF CYCLE	Po (kg/cm <sup>2</sup> )	Py (kg/cm <sup>2</sup> )	Pf (kg/cm <sup>2</sup> )	Km (kg/cm <sup>3</sup> )	Em (kg/cm <sup>2</sup> )	Rm (cm)
1st	2.692	4.843	-	13.877	65.695	3.642



REMARKS:

Po, Po' ..... Earth Pressure at Rest  
 Py, Py' ..... Yield Pressure  
 $E = (1 + \nu) \cdot R_m \cdot K_m$  ..... Modulus of Elasticity  
 $\nu = 0.3$



TEST LOCATION: <b>P7</b> <b>KANCHPUR</b>	TEST DEPTH: <b>24m</b>
TEST NO.: <b>2</b>	TEST DATE: <b>27.02.2012</b>

**SURVEY2000**  
 TEL: 8818386  
 Email: survey2k@yahoo.com

RUBBER TYPE: <b>MEDIUM</b>	N VALUE: <b>50</b>	SOIL TYPE: <b>HARD NON PLASTIC SILT</b>
-------------------------------	-----------------------	--

PROJECT:  
**PREPARATORY SURVEY FOR DHAKA-CHITTAGONG NATIONAL HIGHWAY NO.1 BRIDGE CONSTRUCTION AND REHABILITATION PROJECT**

CLIENT:  
**BANGLADESH ROADS & HIGHWAY DEPARTMENT**

CONSULTANT:  
**ORIENTAL COSULTANTS CO. LTD**

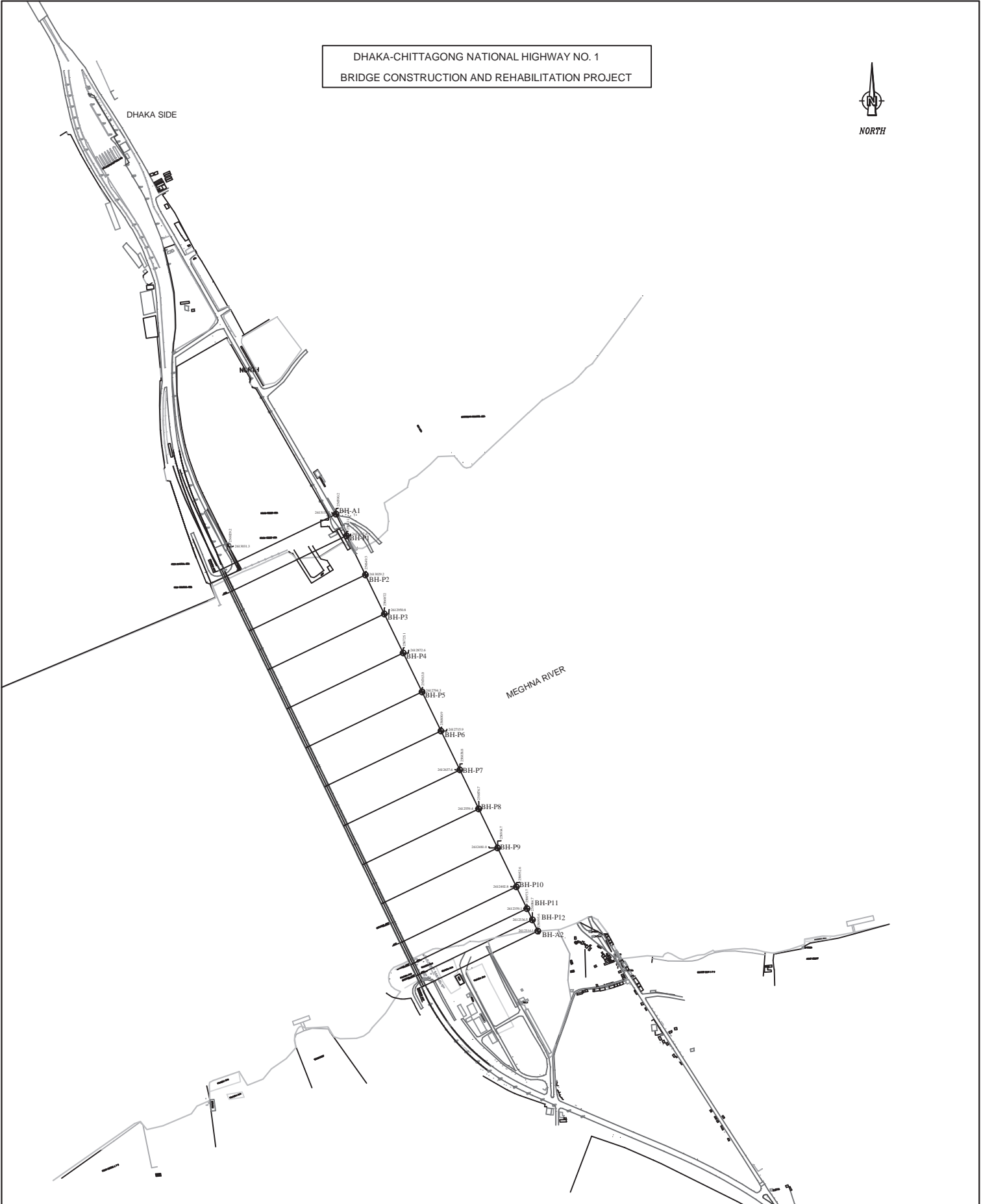
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# MEGHNA BRIDGE

## **BORE HOLE LOCATION MAP**








DHAKA-CHITTAGONG NATIONAL HIGHWAY NO. 1  
BRIDGE CONSTRUCTION AND REHABILITATION PROJECT



Client: Oriental Consultants Co. Ltd.				
TITLE: BOREHOLE LAYOUT PLAN				
SITE: MEGHNA BRIDGE				
SURVEYOR	DRAWN	CHECKED	APPROVED	SURVEY PERIOD
AZHAR	MAHABUB	REZA	ARIF	March 2012
SURVEYED BY:		Road # 15, House # 54 Block # D, Banani, Dhaka Phone : 8818336/8852487 Mobile : 01711 323269		
PRINTING SCALE: 1:10,000		DWG. NO: 142	SHEET NO: 1	





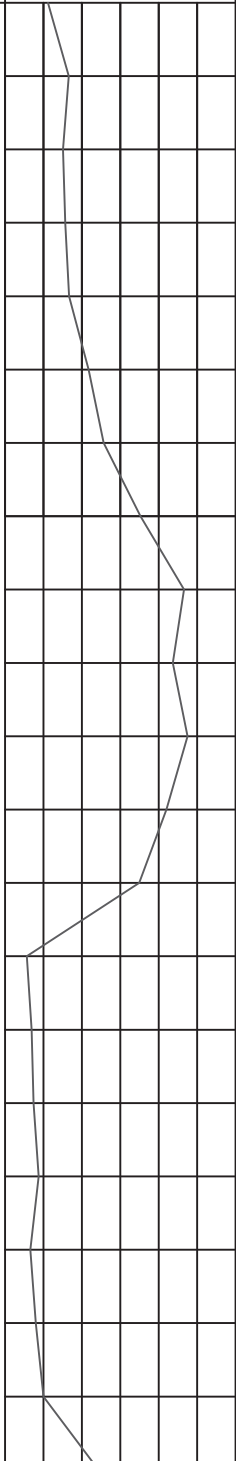


## **BORE LOGS**

Project : Construction of Meghna Bridge						Client : Oriental Consultants Co. Ltd.												
Bore Hole No. : A1						Existing Ground Level : +4.86m												
Method of Boring : Percussion						Ground/ Water Level : -0.62m												
Boring Dia. : 100mm						Date Started : 06-03-2012												
Depth of Boring : 52.0m						Date Completed : 08-03-2012												
Legend :						 SAND		 SILT		 CLAY								
Co-ordinates :																		
Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation								
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60		
1.0		D1	6.0	Very loose to medium dense Brown to light brown silty very fine SAND with trace of mica		1.0	1	0	1	1								
2.0		D2				2.0	4	5	6	11								
3.0		D3				3.0	5	6	7	13								
4.0		D4				4.0	2	3	5	8								
5.0		D5				5.0	2	4	6	10								
6.0		D6				6.0	2	4	7	11								
7.0		D7	16.0	Loose to medium dense Grey to brown silty very fine SAND with trace of mica		7.0	2	3	6	9								
8.0		D8				8.0	2	4	7	11								
9.0		D9				9.0	2	4	6	10								
10.0		D10				10.0	2	5	6	11								
11.0		D11				11.0	3	6	7	13								
12.0		D12				12.0	3	6	7	13								
13.0		D13				13.0	2	5	6	11								
14.0		D14				14.0	3	4	7	11								
15.0		D15				15.0	2	3	5	8								
16.0		D16				16.0	2	4	5	9								
17.0		D17				17.0	3	4	6	10								
18.0		D18				18.0	3	5	7	12								
19.0		D19				19.0	3	6	9	15								
20.0		D20				20.0	4	5	6	11								

Note : Boring Terminated at 52.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....




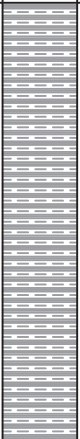

Logged by : Azhar  
Check by : Mahabub

Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.							
Bore Hole No. : A1					Existing Ground Level : +4.86m							
Method of Boring : Percussion					Ground/ Water Level : -0.62m							
Boring Dia. : 100mm					Date Started : 06-03-2012							
Depth of Boring : 52.0m					Date Completed : 08-03-2012							
Legend :					 SAND  SILT  CLAY							
Co-ordinates :												
Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation		
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10 20 30 40 50 60	
21.0		D21	10.0	Loose to medium dense Grey to brown silty fine SAND with trace of mica		21.0	4	7	10	17		
22.0		D22				22.0	5	7	8	15		
23.0		D23				23.0	5	8	8	16		
24.0		D24				24.0	6	8	9	17		
25.0		D25				25.0	6	10	12	22		
26.0		D26				26.0	7	11	15	26		
27.0		D27				27.0	8	14	21	35		
28.0		D28				28.0	8	14	23	47		
29.0		D29				29.0	9	15	28	43		
30.0		D30				30.0	10	16	32	48		
31.0		D31				31.0	10	15	27	42		
32.0		D32				32.0	9	15	20	35		
33.0		D33	4.0	Medium stiff Grey medium plastic CLAY		33.0	2	3	3	6		
34.0		D34				34.0	2	3	4	7		
35.0		D35				35.0	2	4	4	8		
36.0		D36				36.0	3	4	5	9		
37.0		D37	3.0	Medium stiff to stiff Black high plastic CLAY with organic		37.0	3	3	4	7		
38.0		D38				38.0	3	4	5	9		
39.0		D39				39.0	3	4	6	10		
40.0		D40				40.0	6	10	14	24		

Note : Boring Terminated at 52.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample






Cont'd.....

Logged by : Azhar  
Check by : Mahabub

Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.													
Bore Hole No. : A1					Existing Ground Level : +4.86m													
Method of Boring : Percussion					Ground/ Water Level : -0.62m													
Boring Dia. : 100mm					Date Started : 06-03-2012													
Depth of Boring : 52.0m					Date Completed : 08-03-2012													
Legend :					 SAND  SILT  CLAY													
Co-ordinates :																		
Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation								
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60		
41.0		D41	6.0	Very stiff Brown to reddish brown high plastic CLAY		41.0	7	11	16	27								
42.0		D42				42.0	10	12	16	28								
43.0		D43				43.0	11	14	18	32								
44.0		D44				44.0	5	9	14	23								
45.0		D45				45.0	6	10	16	26								
46.0		D46				46.0	7	11	18	29								
47.0		D47	6.0	Dense to very dense Reddish brown to yellowish brown silty very fine SAND with few clay and trace of mica		47.0	8	12	20	32								
48.0		D48				48.0	20	27	23	50								
49.0		D49				49.0	25	32	18	50								
50.0		D50				50.0	30	35	15	50								
51.0		D51				51.0	40	50	0	50								
52.0		D52				52.0	45	50	0	50								
53.0		D53		End of Boring														
54.0		D54																
55.0		D55																
56.0		D56																
57.0		D57																
58.0		D58																
59.0		D59																
60.0		D60																

Note : Boring Terminated at 52.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample




Logged by : Azhar  
Check by : Mahabub


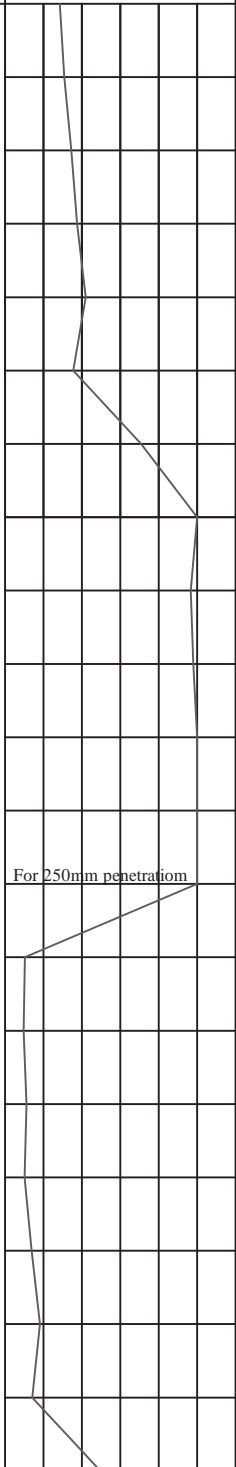

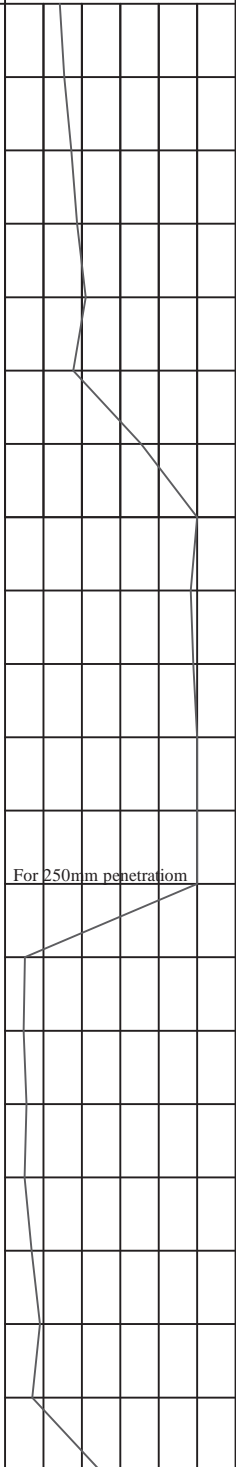

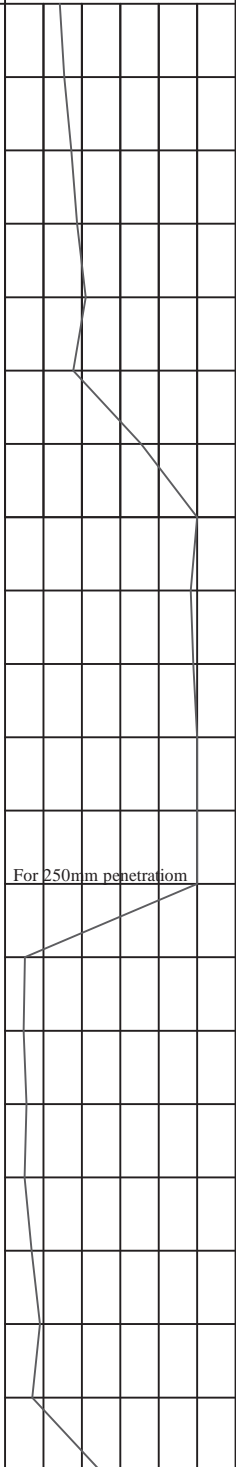
Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.											
Bore Hole No. : P1					Existing Ground Level : +4.21m											
Method of Boring : Percussion					Ground/ Water Level : -0.81m											
Boring Dia. : 100mm					Date Started : 05-03-2012											
Depth of Boring : 53.0m					Date Completed : 09-03-2012											
Legend :					 SAND	 SILT	 CLAY									
Co-ordinates :																
Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation						
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60
1.0	D1		4.0	Dense Light grey fine SAND with rubbish		1.0	10	16	20	36						
2.0	D2					2.0	0	0	0	00						
3.0	D3					3.0	0	0	0	00						
4.0	D4					4.0	0	0	0	00						
5.0	D5		21.0	Medium dense Grey to light grey fine SAND with trace of mica		5.0	4	5	6	11						
6.0	D6					6.0	4	5	8	13						
7.0	D7					7.0	5	6	10	16						
8.0	D8					8.0	3	6	6	12						
9.0	D9					9.0	3	6	6	12						
10.0	D10					10.0	4	4	3	7						
11.0	D11					11.0	4	7	9	16						
12.0	D12					12.0	4	5	7	12						
13.0	D13					13.0	5	6	7	13						
14.0	D14					14.0	4	5	9	14						
15.0	D15					15.0	4	5	6	11						
16.0	D16					16.0	5	6	8	14						
17.0	D17					17.0	6	7	9	16						
18.0	D18					18.0	5	5	6	11						
19.0	D19					19.0	5	6	7	13						
20.0	D20					20.0	5	7	7	14						

Note : Boring Terminated at 53.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....

Logged by : Azhar  
Check by : Mahabub




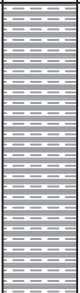


<b>Project : Construction of Meghna Bridge</b>		<b>Client : Oriental Consultants Co. Ltd.</b>	
Bore Hole No.	: P1	Existing Ground Level	: +4.21m
Method of Boring	: Percussion	Ground/ Water Level	: -0.81m
Boring Dia.	: 100mm	Date Started	: 05-03-2012
Depth of Boring	: 53.0m	Date Completed	: 09-03-2012
Legend :			
		SAND	SILT
			
			CLAY
Co-ordinates :			

Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation		
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10 20 30 40 50 60	
21.0		D21	7.0	Medium dense Grey to light grey fine SAND with trace of mica		21.0	5	7	8	15		
22.0		D22				22.0	6	8	10	18		
23.0		D23				23.0	6	9	10	19		
24.0		D24				24.0	6	10	11	21		
25.0		D25				25.0	6	8	10	18		
26.0		D26	7.0	Dense to very dense Grey fine SAND with trace of mica		26.0	18	15	21	36		
27.0		D27				27.0	12	20	30	50		
28.0		D28				28.0	13	20	28	48		
29.0		D29				29.0	17	24	25	49		
30.0		D30				30.0	18	26	24	50		
31.0		D31				31.0	18	25	25	50		
32.0		D32				32.0	19	26	24	50		
33.0		D33				33.0	1	2	3	5		
34.0		D34	7.0	Medium stiff Grey to dark grey medium to high plastic CLAY with organic matter		34.0	1	2	3	5		
35.0		D35				35.0	1	2	4	6		
36.0		D36				36.0	1	2	3	5		
37.0		D37				37.0	2	3	4	7		
38.0		D38				38.0	3	4	5	9		
39.0		D39				39.0	2	3	4	7		
40.0		D40				40.0	6	10	15	25		

Note : Boring Terminated at 53.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....






Logged by : Azhar  
Check by : Mahabub

Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.													
Bore Hole No. : P1					Existing Ground Level : +4.21m													
Method of Boring : Percussion					Ground/ Water Level : -0.81m													
Boring Dia. : 100mm					Date Started : 05-03-2012													
Depth of Boring : 53.0m					Date Completed : 09-03-2012													
Legend :					 SAND  SILT  CLAY													
Co-ordinates :																		
Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation								
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60		
41.0		D41	5.0	Very Stiff Light grey high plastic CLAY		41.0	7	9	13	22								
42.0		D42				42.0	8	9	12	21								
43.0		D43				43.0	7	9	13	22								
44.0		D44				44.0	6	9	15	24								
45.0		D45	2.0	Very Stiff Yellowish brown high plastic CLAY		45.0	5	8	17	25								
46.0		D46				46.0	7	10	18	28								
47.0		D47	7.0	Dense to very dense Reddish to yellowish brown fine SAND with trace of mica		47.0	8	12	21	33								
48.0		D48				48.0	15	30	20	50	For 225mm penetration							
49.0		D49				49.0	20	25	25	50	For 200mm penetration							
50.0		D50				50.0	22	29	21	50	For 175mm penetration							
51.0		D51				51.0	30	50	-	50	For 125mm penetration							
52.0		D52				52.0	27	41	9	50	For 150mm penetration							
53.0		D53				53.0	28	30	20	50	For 175mm penetration							
				End of Boring														
54.0		D54																
55.0		D55																
56.0		D56																
57.0		D57																
58.0		D58																
59.0		D59																
60.0		D60																

Note : Boring Terminated at 53.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Logged by : Azhar  
Check by : Mahabub








Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.										
Bore Hole No. : P2					Existing Ground Level : -7.17m										
Method of Boring : Percussion					Ground/ Water Level : -0.47m										
Boring Dia. : 100mm					Date Started : 05-03-2012										
Depth of Boring : 50.0m					Date Completed : 09-03-2012										
Legend :					 SAND  SILT  CLAY										
Co-ordinates :															
Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation					
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10 20 30 40 50 60				
1.0	D1		17.0	Loose to medium dense Grey fine SAND with trace of mica		1.0	2	2	3	5					
2.0	D2					2.0	2	3	4	7					
3.0	D3					3.0	1	2	3	5					
4.0	D4					4.0	2	3	3	6					
5.0	D5					5.0	3	4	5	9					
6.0	D6					6.0	2	4	6	10					
7.0	D7					7.0	3	3	5	8					
8.0	D8					8.0	3	3	4	7					
9.0	D9					9.0	4	5	6	11					
10.0	D10					10.0	6	7	8	15					
11.0	D11					11.0	6	7	8	15					
12.0	D12					12.0	3	7	10	17					
13.0	D13					13.0	3	7	12	19					
14.0	D14					14.0	6	10	12	22					
15.0	D15					15.0	5	7	11	18					
16.0	D16					16.0	5	8	12	20					
17.0	D17					17.0	5	9	14	23					
18.0	D18		4.0	Very dense Grey fine SAND with trace of mica		18.0	7	22	28	50	For 275mm penetration				
19.0	D19					19.0	12	30	20	50	For 275mm penetration				
20.0	D20					20.0	10	21	29	50					

Note : Boring Terminated at 50.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....





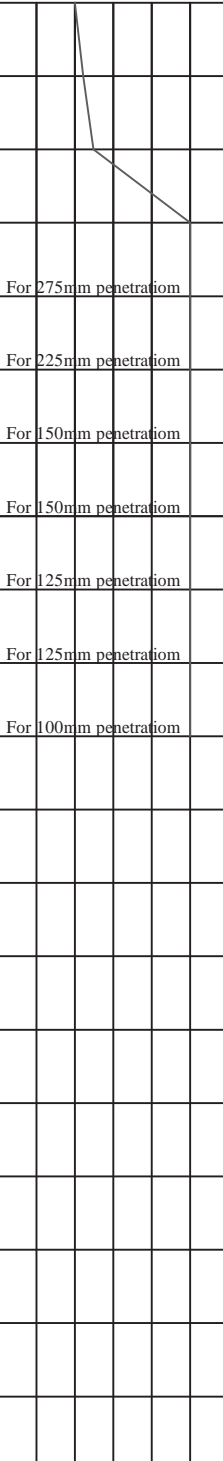
Logged by : Azhar  
Check by : Mahabub

Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.												
Bore Hole No. : P2					Existing Ground Level : -7.17m												
Method of Boring : Percussion					Ground/ Water Level : -0.47m												
Boring Dia. : 100mm					Date Started : 05-03-2012												
Depth of Boring : 50.0m					Date Completed : 09-03-2012												
Legend :					 SAND	 SILT	 CLAY										
Co-ordinates :																	
Location of Boring : Meghnaghat						Blows on spoon			Graphical Representation								
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60	
21.0		D21	9.0	Soft to medium stiff Grey medium plastic CLAY		21.0	13	26	24	50	For 275mm penetration						
22.0		D22				22.0	1	2	3	5							
23.0		D23				23.0	1	3	3	6							
24.0		D24				24.0	1	2	2	4							
25.0		D25				25.0	1	1	2	3							
26.0		D26				26.0	1	2	3	5							
27.0		D27				27.0	2	3	4	7							
28.0		D28				28.0	2	3	5	8							
29.0		D29				29.0	2	3	3	6							
30.0		D30	12.0	Stiff to very stiff Light grey to brown medium plastic CLAY		30.0	2	2	3	5							
31.0		D31				31.0	4	5	6	11							
32.0		D32				32.0	4	5	7	12							
33.0		D33				33.0	4	6	8	14							
34.0		D34				34.0	4	6	10	16							
35.0		D35				35.0	5	7	10	17							
36.0		D36				36.0	4	8	11	19							
37.0		D37				37.0	5	9	12	21							
38.0		D38				38.0	5	7	8	15							
39.0		D39				39.0	5	8	8	16							
40.0		D40	40.0	6	9	11	20										

Note : Boring Terminated at 50.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample







Cont'd.....

Logged by : Azhar  
Check by : Mahabub

Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.							
Bore Hole No. : P2					Existing Ground Level : -7.17m							
Method of Boring : Percussion					Ground/ Water Level : -0.47m							
Boring Dia. : 100mm					Date Started : 05-03-2012							
Depth of Boring : 50.0m					Date Completed : 09-03-2012							
Legend :					 SAND		 SILT		 CLAY			
Co-ordinates :												
Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation		
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10 20 30 40 50 60	
41.0		D41	8.0	Very dense Brown to yellowish brown fine SAND with trace of mica		41.0	6	9	13	22		
42.0		D42				42.0	7	10	14	24		
43.0		D43				43.0	11	18	32	50		
44.0		D44				44.0	18	30	20	50		For 275mm penetration
45.0		D45				45.0	20	32	18	50		For 225mm penetration
46.0		D46				46.0	21	50	-	50		For 150mm penetration
47.0		D47				47.0	23	50	-	50		For 150mm penetration
48.0		D48				48.0	26	50	-	50		For 125mm penetration
49.0		D49				49.0	27	50	-	50		For 125mm penetration
50.0		D50				50.0	28	50	-	50		For 100mm penetration
				End of Boring								
51.0		D51										
52.0		D52										
53.0		D53										
54.0		D54										
55.0		D55										
56.0		D56										
57.0		D57										
58.0		D58										
59.0		D59										
60.0		D60										

Note : Boring Terminated at 50.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample







Logged by : Azhar  
Check by : Mahabub

Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.												
Bore Hole No. : P3					Existing Ground Level : -9.36m												
Method of Boring : Percussion					Ground/ Water Level : -0.22m												
Boring Dia. : 100mm					Date Started : 05-03-2012												
Depth of Boring : 40.0m					Date Completed : 07-03-2012												
Legend :					 SAND  SILT  CLAY												
Co-ordinates :																	
Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation							
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values							
1.0		D1	7.0	Loose Grey to brown fine SAND with trace of mica		1.0	3	4	6	10							
2.0		D2				2.0	1	3	3	6							
3.0		D3				3.0	2	2	2	4							
4.0		D4				4.0	2	3	5	8							
5.0		D5				5.0	2	5	5	10							
6.0		D6				6.0	1	2	2	4							
7.0		D7				7.0	2	3	5	8							
8.0		D8	10.0	Medium dense Grey silty very fine SAND with trace of mica		8.0	4	6	8	14							
9.0		D9				9.0	6	8	10	18							
10.0		D10				10.0	5	10	14	24							
11.0		D11				11.0	6	10	16	26							
12.0		D12				12.0	6	11	18	29							
13.0		D13				13.0	7	12	19	31							
14.0		D14				14.0	8	13	14	27							
15.0		D15				15.0	9	11	12	23							
16.0		D16				16.0	6	7	10	17							
17.0		D17				17.0	8	10	13	23							
18.0		D18				4.0	Medium dense to dense Grey to brown silty fine to very fine SAND with trace of mica		18.0	8	12	15	27				
19.0		D19							19.0	8	13	17	30				
20.0		D20							20.0	6	14	19	33				

Note : Boring Terminated at 40.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....







Logged by : Azhar  
Check by : Mahabub

Project : Construction of Meghna Bridge						Client : Oriental Consultants Co. Ltd.												
Bore Hole No. : P3						Existing Ground Level : -9.36m												
Method of Boring : Percussion						Ground/ Water Level : -0.22m												
Boring Dia. : 100mm						Date Started : 05 - 03 - 2012												
Depth of Boring : 40.0m						Date Completed : 07 - 03 - 2012												
Legend :						 SAND		 SILT		 CLAY								
Co-ordinates :																		
Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation								
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60		
21.0		D21	6.0	Medium stiff to stiff Grey to dark grey medium plastic CLAY		21.0	7	15	20	35								
22.0		D22				22.0	2	4	5	9								
23.0		D23				23.0	1	3	3	6								
24.0		D24				24.0	2	2	3	5								
25.0		D25				25.0	2	3	5	8								
26.0		D26				26.0	3	4	6	10								
27.0		D27	6.0	Medium dense to dense Light grey silty very fine SAND with trace of mica		27.0	3	6	8	14								
28.0		D28				28.0	5	10	15	25								
29.0		D29				29.0	4	9	12	21								
30.0		D30				30.0	5	10	15	25								
31.0		D31				31.0	6	12	17	29								
32.0		D32				32.0	10	13	20	33								
33.0		D33	7.0	Very dense Brown to reddish brown silty fine SAND with trace of mica		33.0	10	12	23	35								
34.0		D34				34.0	11	30	50	50								
35.0		D35				35.0	12	32	28	50								
36.0		D36				36.0	17	50	0	50								
37.0		D37				37.0	20	50	0	50								
38.0		D38				38.0	18	50	0	50								
39.0		D39				39.0	19	50	0	50								
40.0		D40				40.0	22	50	0	50								

Note : Boring Terminated at 40.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

End of Boring






Logged by : Azhar  
Check by : Mahabub

Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.											
Bore Hole No. : P4					Existing Ground Level : -11.34m											
Method of Boring : Percussion					Ground/ Water Level : -0.85m											
Boring Dia. : 100mm					Date Started : 08 - 03 - 2012											
Depth of Boring : 42.0m					Date Completed : 10 - 03 - 2012											
Legend :					 SAND  SILT  CLAY											
Co-ordinates :																
Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation						
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values						
1.0		D1	2.0	Very loose Brown fine SAND with trace of mica		1.0	0	0	1	1						
2.0		D2				2.0	3	1	2	3						
3.0		D3	10.0	Medium dense Grey to light grey silty fine SAND with trace of mica		3.0	7	12	12	24						
4.0		D4				4.0	5	8	10	18						
5.0		D5				5.0	4	5	7	12						
6.0		D6				6.0	3	5	8	13						
7.0		D7				7.0	4	6	10	16						
8.0		D8				8.0	4	7	12	19						
9.0		D9				9.0	5	9	13	22						
10.0		D10				10.0	5	8	10	18						
11.0		D11				11.0	6	9	12	21						
12.0		D12				12.0	7	10	13	23						
13.0		D13	6.0	Medium dense Brown fine SAND with trace of mica		13.0	7	8	16	24						
14.0		D14				14.0	8	12	10	22						
15.0		D15				15.0	8	13	16	29						
16.0		D16				16.0	6	10	11	21						
17.0		D17				17.0	6	12	12	24						
18.0		D18				18.0	6	13	19	32						
19.0		D19					19.0	1	2	2	4					
20.0		D20					20.0	2	2	3	5					

Note : Boring Terminated at 42.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....




Logged by : Azhar  
Check by : Mahabub


Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.													
Bore Hole No. : P4					Existing Ground Level : -11.34m													
Method of Boring : Percussion					Ground/ Water Level : -0.85m													
Boring Dia. : 100mm					Date Started : 08 - 03 - 2012													
Depth of Boring : 42.0m					Date Completed : 10 - 03 - 2012													
Legend :					 SAND  SILT  CLAY													
Co-ordinates :																		
Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation								
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60		
21.0		D21	12.0	Medium stiff to very stiff Grey medium plastic CLAY, few sand		21.0	2	3	4	7								
22.0		D22				22.0	2	2	3	5								
23.0		D23				23.0	2	2	2	4								
24.0		D24				24.0	2	3	5	8								
25.0		D25				25.0	2	3	8	11								
26.0		D26				26.0	3	5	6	11								
27.0		D27				27.0	5	6	8	14								
28.0		D28				28.0	5	6	12	18								
29.0		D29				29.0	3	6	10	16								
30.0		D30				30.0	3	5	13	18								
31.0		D31	12.0	Medium dense to very dense Brown to Reddish brown fine SAND with trace of mica		31.0	9	13	16	29								
32.0		D32				32.0	8	15	19	34								
33.0		D33				33.0	10	18	24	42								
34.0		D34				34.0	10	15	19	34								
35.0		D35				35.0	12	20	23	43								
36.0		D36				36.0	15	30	20	50								
37.0		D37				37.0	18	40	10	50								
38.0		D38				38.0	16	50	0	50								
39.0		D39				39.0	17	50	0	50								
40.0		D40				40.0	28	50	0	50								

Note : Boring Terminated at 42.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....

Logged by : Azhar  
Check by : Mahabub





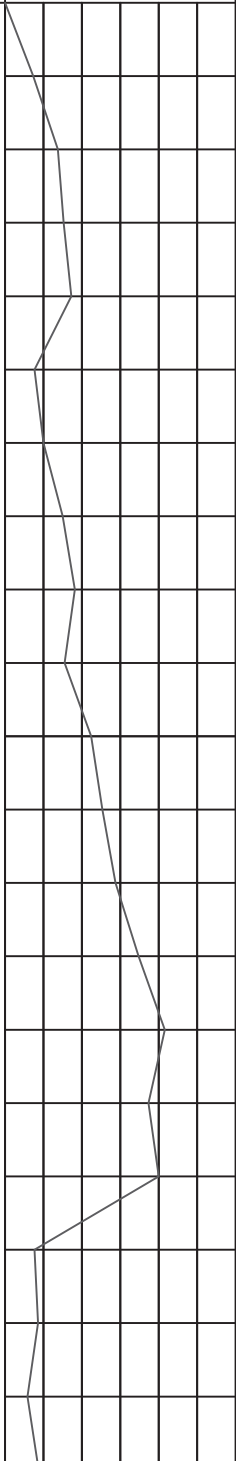


Project : Construction of Meghna Bridge		Client : Oriental Consultants Co. Ltd.	
Bore Hole No.	: P4	Existing Ground Level	: -11.34m
Method of Boring	: Percussion	Ground/ Water Level	: -0.85m
Boring Dia.	: 100mm	Date Started	: 08 - 03 - 2012
Depth of Boring	: 42.0m	Date Completed	: 10 - 03 - 2012
Legend :			
		SAND	SILT
			
			CLAY
Co-ordinates :			

Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation						
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60
41.0		D41		Medium dense to very dense Brown to Reddish brown fine SAND with trace of mica		41.0	30	50	0	50						
42.0		D42				42.0	29	50	0	50						
				End of Boring												
43.0		D43														
44.0		D44														
45.0		D45														
46.0		D46														
47.0		D47														
48.0		D48														
49.0		D49														
50.0		D50														
51.0		D51														
52.0		D52														
53.0		D53														
54.0		D54														
55.0		D55														
56.0		D56														
57.0		D57														
58.0		D58														
59.0		D59														
60.0		D60														

Note : Boring Terminated at 42.0m from EGL.  
D for Disturbed sample  
UD for Undisturbed sample

Logged by : Azhar  
Check by : Mahabub







Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.									
Bore Hole No. : P5					Existing Ground Level : -12.74m									
Method of Boring : Percussion					Ground/ Water Level : -0.25m									
Boring Dia. : 100mm					Date Started : 11- 03 -2012									
Depth of Boring : 40.0m					Date Completed : 14 - 03 -2012									
Legend :					 SAND  SILT  CLAY									
Co-ordinates :														
Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation				
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values				
1.0	D1		8.0	Loose to medium dense Grey silty very fine SAND with trace of mica		1.0	2	3	5	8				
2.0	D2					2.0	3	5	8	13				
3.0	D3					3.0	3	5	10	15				
4.0	D4					4.0	5	8	10	18				
5.0	D5					5.0	2	3	5	8				
6.0	D6					6.0	2	4	6	10				
7.0	D7					7.0	3	5	10	15				
8.0	D8					8.0	3	6	12	18				
9.0	D9		8.0	Medium dense to dense Light grey silty very fine SAND with trace of mica		9.0	4	6	10	16				
10.0	D10					10.0	4	8	15	23				
11.0	D11					11.0	5	9	17	26				
12.0	D12					12.0	6	8	21	29				
13.0	D13					13.0	7	11	23	34				
14.0	D14					14.0	10	16	25	41				
15.0	D15					15.0	12	17	20	37				
16.0	D16					16.0	10	18	22	40				
17.0	D17		11.0	Medium stiff to stiff Grey medium plastic CLAY		17.0	2	3	5	8				
18.0	D18					18.0	3	4	5	9				
19.0	D19					19.0	2	3	3	6				
20.0	D20					20.0	4	4	5	9				

Note : Boring Terminated at 40.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....






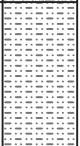



Logged by : Azhar  
Check by : Mahabub

Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.													
Bore Hole No. : P5					Existing Ground Level : -12.74m													
Method of Boring : Percussion					Ground/ Water Level : -0.25m													
Boring Dia. : 100mm					Date Started : 11-03-2012													
Depth of Boring : 40.0m					Date Completed : 14-03-2012													
Legend :					 SAND  SILT  CLAY													
Co-ordinates :																		
Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation								
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60		
21.0		D21	13.0	Medium stiff to stiff Grey medium plastic CLAY		21.0	2	2	4	6								
22.0		D22				22.0	2	3	3	6								
23.0		D23				23.0	2	3	5	8								
24.0		D24				24.0	2	2	3	5								
25.0		D25				25.0	3	3	5	8								
26.0		D26				26.0	3	4	5	9								
27.0		D27				27.0	1	2	2	4								
28.0		D28				28.0	7	15	18	33								
29.0		D29				29.0	7	20	30	50								
30.0		D30				30.0	8	18	32	50								
31.0		D31				31.0	10	24	26	50								
32.0		D32				32.0	12	26	24	50								
33.0		D33				33.0	15	35	15	50								
34.0		D34	34.0	15	37	13	50											
35.0		D35	35.0	17	50	0	50											
36.0		D36	36.0	20	50	0	50											
37.0		D37	37.0	22	50	0	50											
38.0		D38	38.0	24	50	0	50											
39.0		D39	39.0	27	50	0	50											
40.0		D40	40.0	27	50	0	50											

Note : Boring Terminated at 40.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

End of Boring








Logged by : Azhar  
Check by : Mahabub

Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.						
Bore Hole No. : P6					Existing Ground Level : -16.02m						
Method of Boring : Percussion					Ground/ Water Level : -0.78m						
Boring Dia. : 100mm					Date Started : 14 - 03 -2012						
Depth of Boring : 42.0m					Date Completed : 17 - 03 -2012						
Legend :					 SAND  SILT  CLAY						
Co-ordinates :											
Location of Boring : Meghnaghat						Blows on spoon				Graphical Representation	
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	
1.0		D1	6.0	Dense to very dense Grey to brown fine SAND with trace of mica		1.0	10	20	26	46	
2.0		D2				2.0	16	26	24	50	
3.0		D3				3.0	18	40	10	50	
4.0		D4				4.0	7	16	18	34	
5.0		D5				5.0	8	15	18	33	
6.0		D6				6.0	9	16	20	36	
7.0		D7	9.0	Medium dense to dense Grey fine SAND with trace of mica		7.0	7	11	15	26	
8.0		D8				8.0	7	12	16	28	
9.0		D9				9.0	8	14	18	32	
10.0		D10				10.0	4	12	15	27	
11.0		D11				11.0	6	11	14	25	
12.0		D12				12.0	8	12	18	30	
13.0		D13				13.0	7	14	16	30	
14.0		D14				14.0	9	13	19	32	
15.0		D15				15.0	8	15	20	35	
16.0		D16	2.0	Very stiff Grey non plastic SILT with few sand, trace of mica		16.0	4	6	11	17	
17.0		D17	1.0	Medium dense Grey silty fine SAND with trace of mica		17.0	4	7	13	20	
18.0		D18	1.0	Medium stiff Grey medium plastic CLAY		18.0	5	8	14	22	
19.0		D19	1.0	Loose Grey silty fine SAND with trace of mica		19.0	2	3	3	6	
20.0		D20	1.0			20.0	3	4	5	9	

Note : Boring Terminated at 42.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....





Logged by : Azhar  
Check by : Mahabub

Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.										
Bore Hole No. : P6					Existing Ground Level : -16.02m										
Method of Boring : Percussion					Ground/ Water Level : -0.78m										
Boring Dia. : 100mm					Date Started : 14 - 03 -2012										
Depth of Boring : 42.0m					Date Completed : 17 - 03 -2012										
Legend :					 SAND  SILT  CLAY										
Co-ordinates :															
Location of Boring : Meghnaghat					Blows on spoon				Graphical Representation						
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10 20 30 40 50 60				
21.0		D21	1.0	Stiff Grey low plastic CLAY		21.0	4	5	6	11					
22.0		D22	3.0	Loose Brown fine SAND with trace of mica		22.0	2	3	4	7					
23.0		D23				23.0	2	3	5	8					
24.0		D24				24.0	3	4	6	10					
25.0		D25				9.0	Dense to very dense Light brown to brown silty very fine to fine SAND with trace of mica		25.0	10	16	18	34		
26.0		D26	26.0	12	32				18	50					
27.0		D27	27.0	14	35				15	50					
28.0		D28	28.0	16	36				14	50					
29.0		D29	29.0	19	35				15	50					
30.0		D30	30.0	20	37				13	50					
31.0		D31	31.0	22	40				10	50					
32.0		D32	32.0	24	50				0	50					
33.0		D33	33.0	28	50				0	50					
34.0		D34	9.0	Very dense Light brown to brown silty fine SAND with trace of mica					34.0	30	50	0	50		
35.0		D35							35.0	35	50	0	50		
36.0		D36							36.0	35	50	0	50		
37.0		D37							37.0	36	50	0	50		
38.0		D38							38.0	37	50	0	50		
39.0		D39							39.0	40	50	0	50		
40.0		D40							40.0	40	50	0	50		

Note : Boring Terminated at 42.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Cont'd.....

Logged by : Azhar  
Check by : Mahabub

Project : Construction of Meghna Bridge					Client : Oriental Consultants Co. Ltd.											
Bore Hole No. : P6					Existing Ground Level : -16.02m											
Method of Boring : Percussion					Ground/ Water Level : -0.78m											
Boring Dia. : 100mm					Date Started : 14 - 03 -2012											
Depth of Boring : 42.0m					Date Completed : 17 - 03 -2012											
Legend :					 SAND	 SILT	 CLAY									
Co-ordinates :																
Location of Boring : Meghnaghat					Blows on spoon				Graphical Representation							
Depth below G.L. (m)	Type of Sample	Sample No.	Thickness in (m)	DESCRIPTION OF SOIL STRATA	Symbol	SPT intervals (m)	15 cm penetration	15 cm penetration	15 cm penetration	N-Values	10	20	30	40	50	60
41.0		D41		Very dense Brown silty fine SAND with trace of mica		41.0	45	50	0	50						
42.0		D42				42.0	42	50	0	50						
43.0		D43		End of Boring												
44.0		D44														
45.0		D45														
46.0		D46														
47.0		D47														
48.0		D48														
49.0		D49														
50.0		D50														
51.0		D51														
52.0		D52														
53.0		D53														
54.0		D54														
55.0		D55														
56.0		D56														
57.0		D57														
58.0		D58														
59.0		D59														
60.0		D60														

Note : Boring Terminated at 42.0m from EGL  
D for Disturbed sample  
UD for Undisturbed sample

Logged by : Azhar  
Check by : Mahabub