

SOILMAT LABORATORIES

B-136, Block-1, Opp. N.E.D. University, Main University Road, Gulistan-e-Jauhar,
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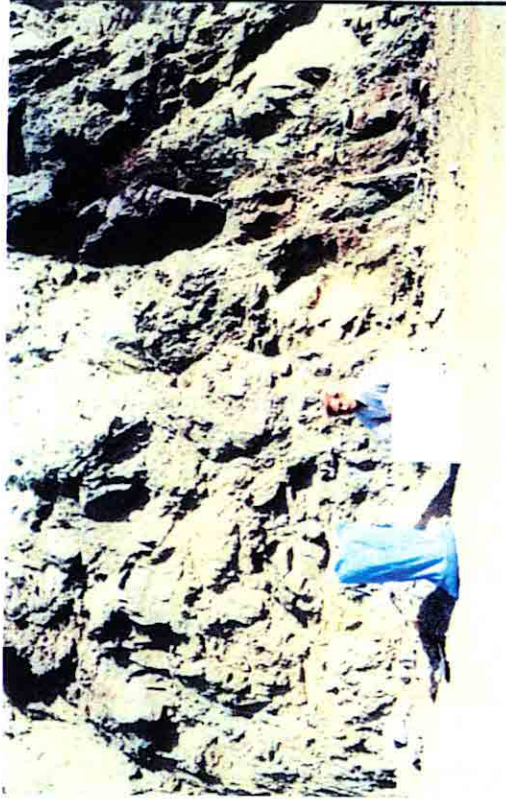
CLIENT: M/s Construction Project Consultants Inc. (CPC)
PROJECT: Upgradation and Improvement of National Highway (N-25) Kararo to Wad (Section 96 KM)

SUMMARY OF CUTTING SAMPLES

S.No.	SAMPLE MARK	SOIL CLASS	ATTERBERG LIMIT		M.D.D gm/cc	O.M.C %	C.B.R VALUE				#4 SIEVE RETAINED		ABRASION LOSS %	SOUNDNESS Na ₂ SO ₄ LOSS %	FLAKINESS %	POTENTIAL REACTIVITY OF AGGREGATES ASTM C 289			
			L.L	P.I			90%	95%	98%	100%	SP. GR.	ABSORPTION %				Sc	Rc	REMARKS	
01	Pit # 1 CH: 0+950 L/S	--	--	--	--	--	--	--	--	--	2.774	1.002	46.9	23.6	31.2	28.6	47.9	Innocuous	
02	Pit # 2 CH: 13+310 R/S	A-1-a	N/P		2.260	7.0	61.4	72.5	80.1	86.0	2.693	0.649	--	--	--	--	--	--	
03	Pit # 3 CH: 22+500 L/S	--	--	--	--	--	--	--	--	--	2.769	0.993	48.3	26.5	33.6	26.9	46.3	Innocuous	
04	Pit # 4 CH: 27+400 L/S	--	--	--	--	--	--	--	--	--	2.782	0.991	45.5	23.9	33.2	27.8	47.6	Innocuous	
05	Pit # 5 CH: 36+000 R/S	A-1-a	N/P		2.282	5.9	72.3	82.1	88.9	94.0	2.661	0.662	--	--	--	--	--	--	
06	Pit # 6 CH: 45+300 L/S	A-1-a	N/P		2.240	8.0	60.1	70.6	77.6	82.9	2.650	0.761	--	--	--	--	--	--	
07	Pit # 7 CH: 55+300 R/S	A-1-a	N/P		2.263	6.6	68.1	79.0	86.9	92.6	2.683	0.629	--	--	--	--	--	--	
08	Pit # 8 CH: 60+250 L/S	A-1-a	N/P		2.246	7.9	59.0	70.4	77.8	82.8	2.684	0.622	--	--	--	--	--	--	
09	Pit # 9 CH: 66+100 R/S	--	--	--	--	--	--	--	--	--	2.764	1.016	46.3	24.9	32.7	28.2	48.2	Innocuous	
10	Pit # 10 CH: 70+150 L/S	A-4	28.6	8.4	2.003	11.5	7.9	16.5	22.3	28.4	2.623	0.893	--	--	--	--	--	--	
11	Pit # 11 CH: 89+250 R/S	A-1-b	20.6	5.3	2.223	9.4	39.1	48.8	55.4	59.8	2.655	0.721	--	--	--	--	--	--	



CH: 36+000 R/S (5)



CH: 66+100 R/S (9)



CH: 45+300 L/S (6)



CH: 70+150 L/S (10)

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CLIENT: M/s Construction Project Consultants Inc. (CPC)
PROJECT: Upgradation and Improvement of National Highway (N-25) Kararo to Wad (Section 96 KM)

SUMMARY OF WATER SAMPLES

S.No.	SAMPLE MARK	pH VALUE	CHLORIDE CONTENT ppm ≤ 1000 ppm	SULPHATE CONTENT ppm ≤ 1300 ppm	T.D.S. ppm $\frac{kg}{m^3}$
01	Perennial Stream CH: 5+000 L/S	7.78	165	240	900
02	Perennial Stream CH: 36+280 L/S	7.72	105	100	230
03	Hand Pump CH: 40+500 R/S	7.62	355	220	1100
04	Perennial Stream CH: 51+155 L/S	8.17	275	260	1200
05	Tube-well CH: 80+250 R/S	8.15	130	42	470
06	Tube-well CH: 96+000 L/S	8.19	135	26	490

0.3 kg/m³



CH: 5+000 L/S (1)



CH: 51+155 L/S (2)



CH: 80+250 L/S (3)



CH: 96+000 L/S (4)

4. 既存道路状況調査

- 既存舗装の材料調査
- 既存舗装厚調査
- 既存道路の状況写真 (1 km五と

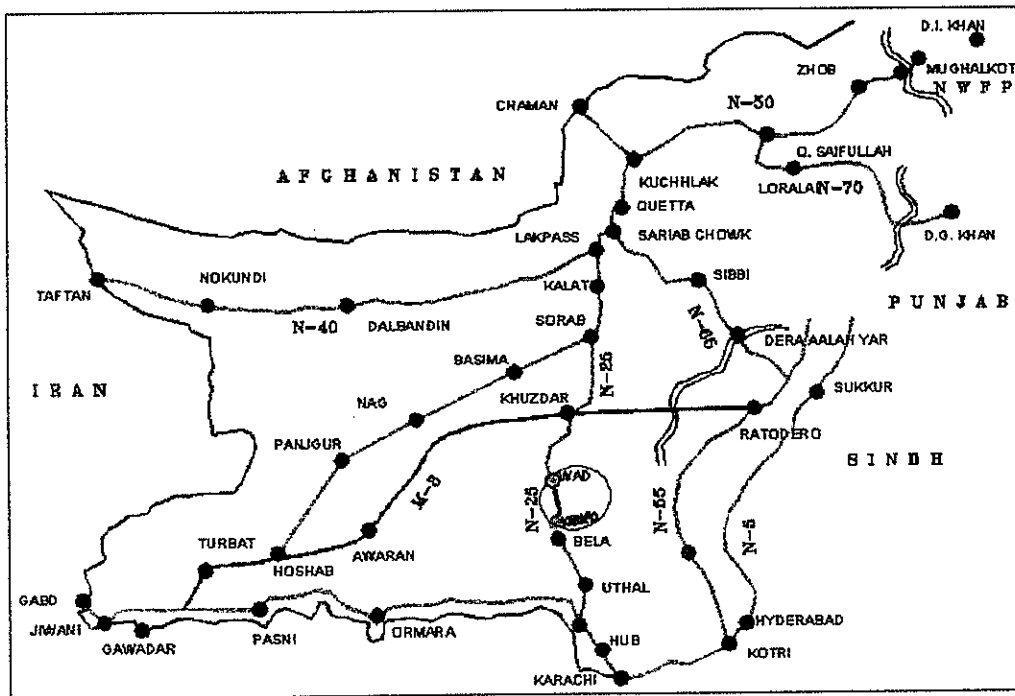
EXISTING ROAD CONDITION SURVEY

ON

THE BASIC DESIGN STUDY ON THE PROJECT

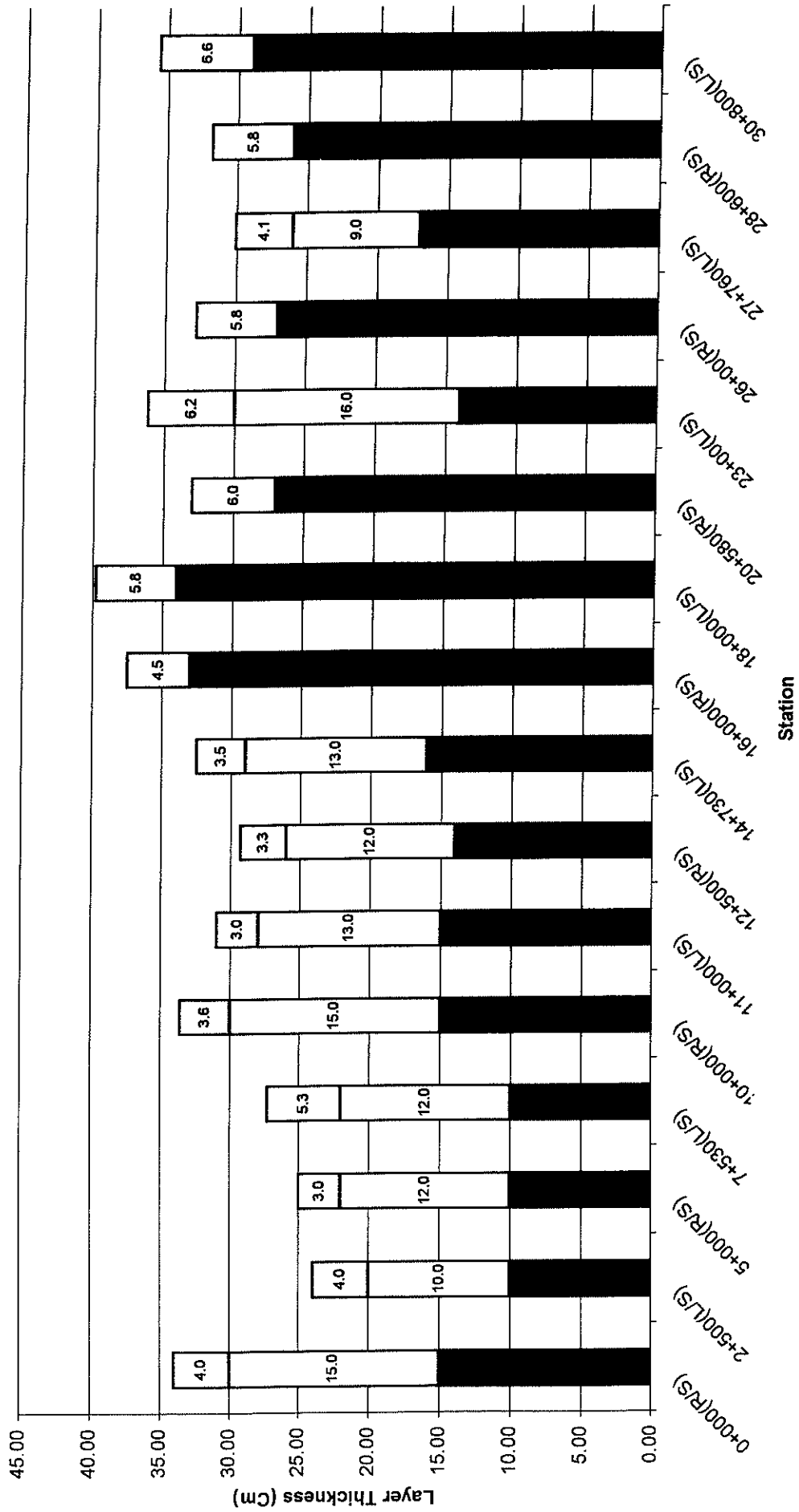
FOR

**IMPROVEMENT OF KARARO – WAD SECTION
OF NATIONAL HIGHWAY N-25
IN THE ISLAMIC REPUBLIC OF PAKISTAN**



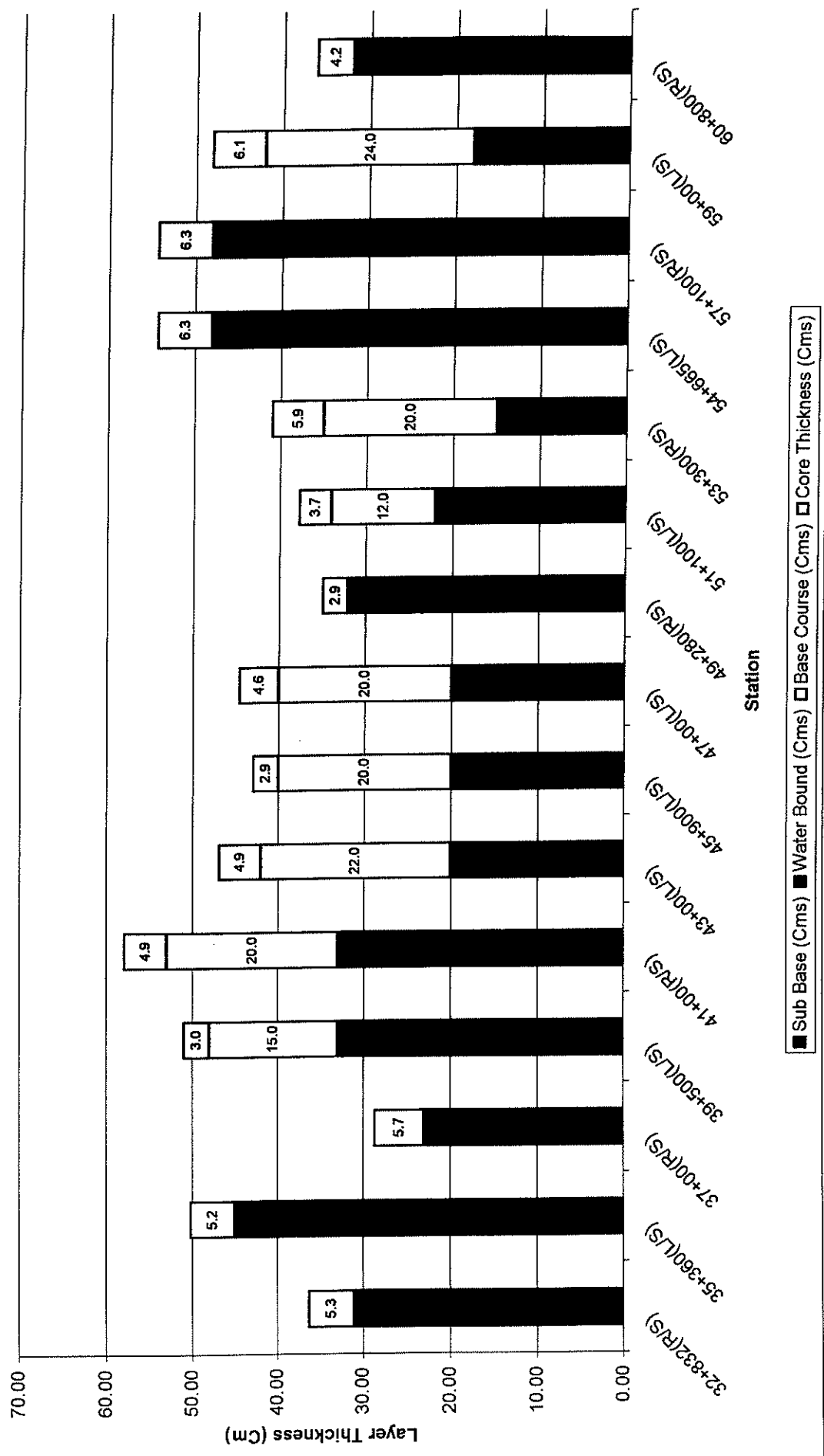
JANUARY 2005

Location Vs Layer Thickness

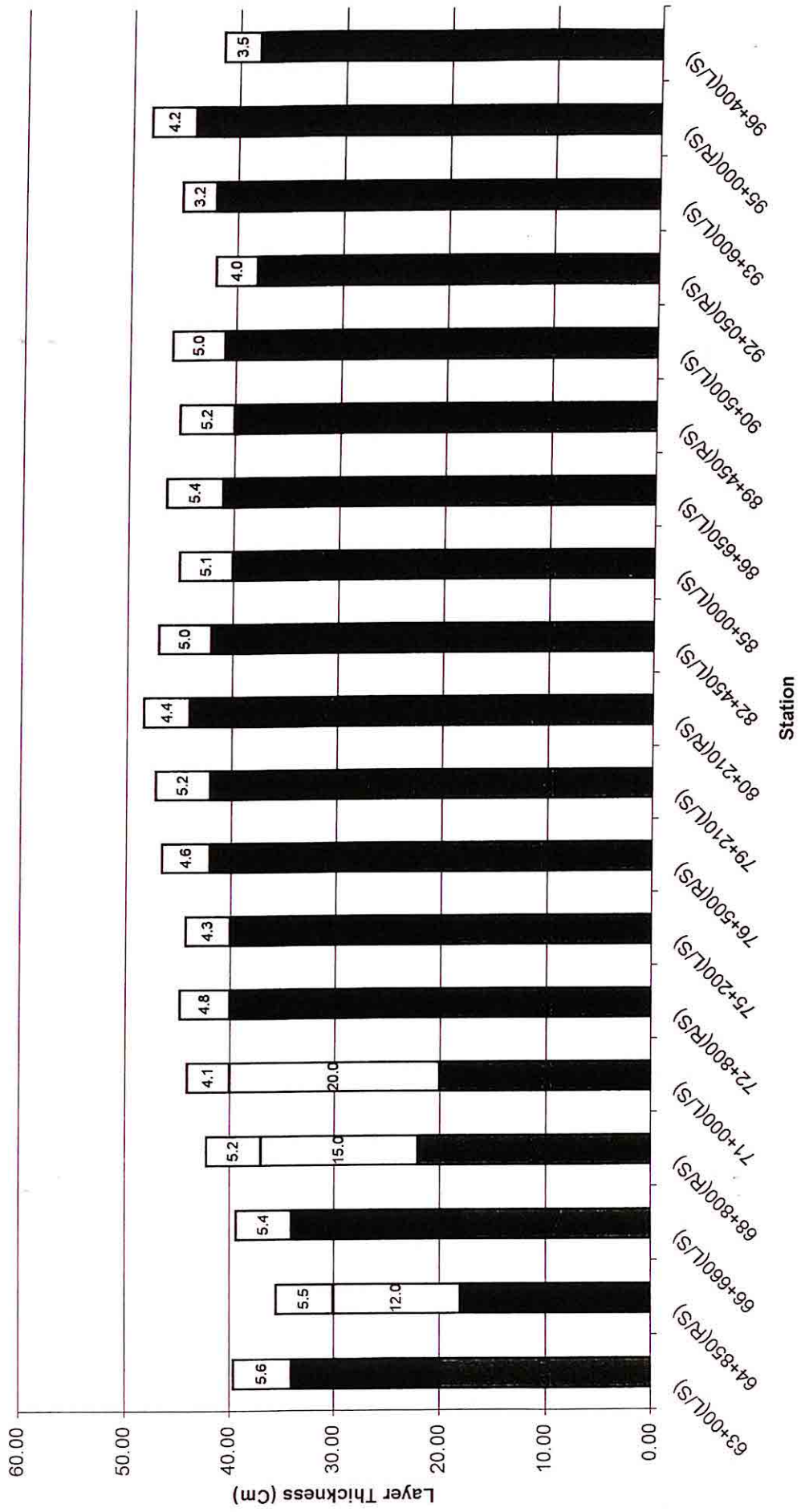


Sub Base (Cms)
 Water Bound (Cms)
 Base Course (Cms)
 Core Thickness (Cms)

Location Vs Layer Thickness



Location Vs Layer Thickness



Sub Base (Cms)
 Water Bound (Cms)
 Base Course (Cms)
 Core Thickness (Cms)

PICTURES OF ROAD



CHAINAGE 00+000



CHAINAGE 01+000



CHAINAGE 02+000

PICTURES OF ROAD



CHAINAGE 03+000



CHAINAGE 04+000



CHAINAGE 05+000

PICTURES OF ROAD



CHAINAGE 06+000



CHAINAGE 07+000



CHAINAGE 08+000

PICTURES OF ROAD



CHAINAGE 09+000



CHAINAGE 10+000

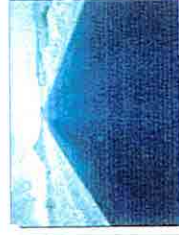


CHAINAGE 11+000

PICTURES OF ROAD



CHAINAGE 12+000



CHAINAGE 13+000



CHAINAGE 14+000

PICTURES OF ROAD



CHAINAGE 15+000



CHAINAGE 16+000



CHAINAGE 17+000

PICTURES OF ROAD



CHAINAGE 18+000



CHAINAGE 19+000



CHAINAGE 20+000

PICTURES OF ROAD



CHAINAGE 21+000



CHAINAGE 22+000



CHAINAGE 23+000

PICTURES OF ROAD



CHAINAGE 24+000



CHAINAGE 25+000



CHAINAGE 26+000

PICTURES OF ROAD



CHAINAGE 28+000



CHAINAGE 29+000



CHAINAGE 30+000

PICTURES OF ROAD



CHAINAGE 31+000



CHAINAGE 32+000



PICTURES OF ROAD



CHAINAGE 33+000



CHAINAGE 34+000



CHAINAGE 35+000

PICTURES OF ROAD



CHAINAGE 36+000



CHAINAGE 37+000



CHAINAGE 38+000

PICTURES OF ROAD



CHAINAGE 39+000



CHAINAGE 40+000



CHAINAGE 41+000

PICTURES OF ROAD



CHAINAGE 44+000



CHAINAGE 45+000



CHAINAGE 46+000

PICTURES OF ROAD



CHAINAGE 49+000



CHAINAGE 50+000



CHAINAGE 51+000



CHAINAGE 47+000



CHAINAGE 48+000



CHAINAGE 49+000

PICTURES OF ROAD



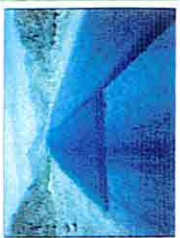
CHAINAGE 53+000



CHAINAGE 54+000



CHAINAGE 56+000



CHAINAGE 55+000



CHAINAGE 57+000

PICTURES OF ROAD



CHAINAGE 58+000



CHAINAGE 60+000



CHAINAGE 59+000



CHAINAGE 61+000

PICTURES OF ROAD



CHAINAGE 64+000



CHAINAGE 66+000



CHAINAGE 65+000



CHAINAGE 67+000

PICTURES OF ROAD



CHAINAGE 69+000



CHAINAGE 71+000



CHAINAGE 70+000



CHAINAGE 72+000



CHAINAGE 73+000



CHAINAGE 74+000

PICTURES OF ROAD



CHAINAGE 74+000



CHAINAGE 75+000



CHAINAGE 77+000



CHAINAGE 75+000



CHAINAGE 76+000



CHAINAGE 78+000

PICTURES OF ROAD



CHAINAGE 85+000



CHAINAGE 87+000



CHAINAGE 86+000



CHAINAGE 88+000



CHAINAGE 90+000

PICTURES OF ROAD



CHAINAGE 91+000



CHAINAGE 92+000



CHAINAGE 94+000



CHAINAGE 93+000



CHAINAGE 95+000

K.5180+000

K.5179+000

K.5182+000

K.5181+000

K.5184+000

K.5183+000

5. 地質調査

- ボーリング調査概要表
- ボーリング調査による柱状図

**DRAFT REPORT
ON
GEOTECHNICAL INVESTIGATION
AT
VARIOUS BRIDGES FOR
IMPROVEMENT OF
KARARO-WAD SECTION (N-25)
NATIONAL HIGHWAY
BALUCHISTAN.**

FEBRUARY

2005.

BORE HOLES LOCATION CHART

S.No.	ST. No.	Chainage (Km)	NHA B.No.	BH No.	Depth (m)	Borehole Locations
01	ST - 6	01+964	222/1	01	19.0	7.0m from Abt: 01, 6.0m from Bridge
02	ST - 11	03+625	225/1	01	19.0	3.0m from Abt: 01, 3.0m from Bridge
				02	20.0	5.0m from P-6 3.5m from Bridge
				03	20.0	2.80m from Abt: 02, 3.0 from Bridge
03	ST - 21	7+810	230/1	01	24.0	5.0m before Abt: 01, 3.0m from Road
04	ST - 25	10+97	232/2	01	18.0	3.0m from Abt: 02, 3.0m from Bridge
05	ST - 26	11+190	232/3	01	22.0	2.0m from Abt: 01, 6.0m from Bridge
				02	22.0	2.50m from Bridge Near P-2
				03	20.0	4.10m from Bridge Near P-4
				04	23.0	1.75m from Bridge, 5.0m from P-1
06	ST - 38	13+841	235/1	01	24.0	3.80m from Abt: 01, 4.0m from Abt: 01 to P-1
				02	25.0	3.40m from P-3
				03	21.0	4.0 from Abt: 02, 4.20m from Abt: 02 to P-5
07	ST - 43	14+878	236/1	01	18.0	6.30m from Bridge
				02	22.0	2.0m form Centre of Bridge
				03	17.0	3.90m from P-1, 1.20m from Bridge
08	ST - 54	17+384	239/1	01	20.0	3.0m from Abt: 01, 2.80m from Bridge
				02	20.0	Centre of P-3 - P-4. 1.0m from Bridge
				03	22.0	5.9m from Abt: 02, 1.20m from Bridge
09	ST - 68	20+612	242/2	01	21.0	2.0m from Abt: 01, 4.0m from Bridge
10	ST - 69	20+732	242/3	01	19.0	3.5m from P-1
				02	20.0	3.5m from P-3
11	ST - 78	25+788	247/1	01	23.0	Near Road Side 5.0m from Abt: 01, 2.0m from Road
12	ST - 137	41+002	262/6	01	21.0	In the Centre of Abt: 01 and Abt: 02 3.0m from Bridge
13	ST - 150	42+95	264/4	01	22.0	Near Abt: 02, 3.0m from Bridge
14	ST - 163	45+340	267/1	01	23.0	5.0m from Abt: 02, 2.0m from Road
15	ST - 171	46+978	268/4	01	23.0	5.0m from Abt: 01, 2.0m from Road
16	ST - 177	48+450	270/1	01	19.0	2.50m from Abt: 01, 2.50m from Bridge
				02	20.0	1.0m from P-2, 3.0m from Bridge
				03	20.0	1.0m from P-6, 3.20m from Bridge
				04	19.0	3.0m from Abt: 02, 4.0m from Bridge
17	ST - 178	48+775	270/2	01	19.0	3.0m from Abt: 01
18	ST - 230	60+160	282/2 J - 220	01	22.0	2.0m from Abt: 02, 8.0m from Road
				02	14.0	13.0m from Abt: 01, 3.30m from Road
19	ST - 253	64+438	None	01	25.0	22.0m from Abt: 01, 0.5m from Road
20	ST - 279	69+796	None	01	16.50	10.0m from Abt: 02, 12.0m from P-2, 8.0m from Bridge
				02	16.50	5.0m from Abt: 01, 13.3m from P-1
21	ST - 280	69+930	None	01	13.0	2.30m from Abt: 01, 22.0m from Abt: 02, 19.0m from P-1
22	ST - 72	22+850	244/1	01	16.0	3.0m from Abt: 01, 3.0m from Bridge
				02	15.0	3.0m from Abt: 02, 3.0m from Bridge

M/s SOILMAT ENGINEERS		BORING LOG				
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan						
PROJECT: Up-gradation & Improvement of National Highway B/W Kararo-Wad Section N-25						
LOCATION: NHA # B-2251 (C/I: B1+964) Station 0						
BOREHOLE LOCATION: 6.0 m from Bridge 7.0 m from Abut 01			BORING NO.: 01			
TYPE OF BORING: Rotary		DATE COMMENCED: 06/02/2005				
DIA OF CASING: 125mm (Ø125)		DATE COMPLETED: 07/02/2005				
DIA OF BORING: 100mm		SUPERVISOR: GEOL. M. ASHRAF/IMHAZ				
G.W.L.: Not Encountered		SCALE: 1:100				
DIA OF CORING: NX		PREPARED BY: Geol. M. Aslam Ishaq				
CHECKED BY: Geotech Engr. Al-Kazim Mansour						
DEPTH (m)	SOIL DESCRIPTION	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (m)	CUR %	REMARKS
1	Greyish white very dense BOULDERS, COBBLES PEBBLES & GRAVELS (cutting) with sand	CPT	1.00	R		DS: 0.0-1.0 m DS of CPT
2		"	2.00	"		
3		"	3.00	"		
4		"	4.00	"		
5		SPT	5.00	48		DS of SPT
6	Greyish white to SAND with gravel & cutting pie. of cobbles	CPT	6.00	R		DS of CPT
7	Greyish white very dense COBBLES, PEBBLES and GRAVELS (cutting) with sand	"	7.00	"		
8		"	8.00	"		
9		"	9.00	"		
10		SPT	10.00	47		DS of SPT
11	Gre. white to SAND with cut. of cobbles, pebbles & FC gravels	CPT	11.00	R		DS of CPT
12	Greyish white very dense GRAVELS with sand occasional cuttings of cobbles	"	12.00	"		
13	Grey, white very dense SAND with cutting of cobbles & gravels	SPT	14.00	47		DS of SPT
15	Greyish white very dense gravelly SAND occasional cuttings of pebbles	CPT	15.00	R		DS of CPT
16		"	16.00	"		
17		"	17.00	"		
18	Greyish white very dense GRAVELS with sand occasional cuttings of cobbles and pebbles	"	18.00	"		
19		"	19.00	"		
End of Borehole # 01 at the depth of 19.00 m						

M/s SOILMAT ENGINEERS		BORING LOG				
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan						
PROJECT: Up-gradation & Improvement of National Highway B/W Kararo-Wad Section N-25						
LOCATION: NHA # B-2251 (C/I: B2+625) Station 11						
BOREHOLE LOCATION: 5.0 m from P-1 3.5 m from Bridge			BORING NO.: 02			
TYPE OF BORING: Rotary		DATE COMMENCED: 06/02/2005				
DIA OF CASING: 125mm (Ø125)		DATE COMPLETED: 07/02/2005				
DIA OF BORING: 100mm		SUPERVISOR: GEOL. M. ASHRAF/IMHAZ				
G.W.L.: 1.00 m		SCALE: 1:100				
DIA OF CORING: NX		PREPARED BY: Geol. M. Aslam Ishaq				
CHECKED BY: Geotech Engr. Al-Kazim Mansour						
DEPTH (m)	SOIL DESCRIPTION	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (m)	CUR %	REMARKS
1	Br. grey sandy GRAVELS some cobbles & pebbles (cut.) & silty clay	SPT	1.00	29		DS: 0.0-1.0 m
2	Brownish grey dense to very dense sandy silty CLAY traces of fine gravel	"	2.00	33		
3		"	3.00	32		
4		"	4.00	45		
5		SPT	5.00	R		
6	Brownish grey dense to very dense gravelly SAND, occasional cobbles & pebbles (cuttings)	"	6.00	46		
7		"	7.00	48		
8		"	8.00	46		
9		"	9.00	R		
10		"	10.00	"		
11		"	11.00	43		
12		"	12.00	48		
13		"	13.00	46		
14		"	14.00	49		
15		"	15.00	48		
16	ditto - but very dense	"	16.00	R		
17		"	17.00	"		
18		"	18.00	"		
19		"	19.00	"		
20		"	20.00	"		EOB (20.0 m)

M/s SOILMAT ENGINEERS		BORING LOG				
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan						
PROJECT: Up-gradation & Improvement of National Highway B/W Kararo-Wad Section N-25						
LOCATION: NHA # B-2251 (C/I: B2+625) Station 11						
BOREHOLE LOCATION: 2.0 m from Abt. 01 2.0 m from Bridge			BORING NO.: 01			
TYPE OF BORING: Rotary		DATE COMMENCED: 06/02/2005				
DIA OF CASING: 125mm (Ø125)		DATE COMPLETED: 07/02/2005				
DIA OF BORING: 100mm		SUPERVISOR: GEOL. M. ASHRAF/IMHAZ				
G.W.L.: 1.00 m		SCALE: 1:100				
DIA OF CORING: NX		PREPARED BY: Geol. M. Aslam Ishaq				
CHECKED BY: Geotech Engr. Al-Kazim Mansour						
DEPTH (m)	SOIL DESCRIPTION	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (m)	CUR %	REMARKS
1	Brownish grey medium dense to dense silty fine to coarse SAND traces of clay occasional cobbles and pebbles	SPT	1.00	28		DS: 0.0-1.0 m
2		"	2.00	31		
3		"	3.00	32		
4		"	4.00	31		
5		SPT	5.00	R		
6	Brownish grey dense to very dense gravelly SAND occasional cobbles and pebbles (cuttings)	"	6.00	43		
7		"	7.00	47		
8		"	8.00	47		
9		"	9.00	R		
10		"	10.00	48		
11		"	11.00	44		
12		"	12.00	49		
13		"	13.00	46		
14		"	14.00	48		
15	ditto - but very dense	"	15.00	R		
16		"	16.00	"		
17		"	17.00	"		
18		"	18.00	"		
19		"	19.00	"		
End of Borehole # 01 (Abt. 01) at the depth of 19.00 m						

M/s SOILMAT ENGINEERS		BORING LOG				
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan						
PROJECT: Up-gradation & Improvement of National Highway B/W Kararo-Wad Section N-25						
LOCATION: NHA # B-2251 (C/I: B2+625) Station 11						
BOREHOLE LOCATION: 2.0 m from Abt. 01 2.0 m from Bridge			BORING NO.: 03			
TYPE OF BORING: Rotary		DATE COMMENCED: 06/02/2005				
DIA OF CASING: 125mm (Ø125)		DATE COMPLETED: 07/02/2005				
DIA OF BORING: 100mm		SUPERVISOR: GEOL. M. ASHRAF/IMHAZ				
G.W.L.: 1.20 m		SCALE: 1:100				
DIA OF CORING: NX		PREPARED BY: Geol. M. Aslam Ishaq				
CHECKED BY: Geotech Engr. Al-Kazim Mansour						
DEPTH (m)	SOIL DESCRIPTION	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (m)	CUR %	REMARKS
1	Brownish grey dense to very dense gravelly SAND with pebbles & cobbles (cuttings) traces of silty clay	SPT	1.00	30		DS: 0.0-1.0 m
2		"	2.00	33		
3		"	3.00	36		
4		"	4.00	39		
5		SPT	5.00	R		
6	Brownish grey dense to very dense gravelly SAND, occasional cobbles & pebbles (cuttings)	"	6.00	47		
7		"	7.00	49		
8		"	8.00	45		
9		"	9.00	R		
10		"	10.00	"		
11		"	11.00	"		
12		"	12.00	48		
13		"	13.00	R		
14		"	14.00	49		
15		"	15.00	47		
16	ditto - but very dense	"	16.00	R		
17		"	17.00	"		
18		"	18.00	"		
19		"	19.00	"		
20		"	20.00	"		EOB (20.0 m)

M/s SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan										
PROJECT: Up-gradation & Improvement of National Highway B/W Karara-Wad Section N-25										
LOCATION: NHA # B-2301 (C/I: 7+810) Station 21			SHEET # 01							
COORDINATES 3.0 m from Road 5.0 m before Abc #1		TYPE OF BORING: Rotary	BORING NO.: 01							
G.S.E.: Not Encountered		DIA OF CASING: 115mm (0.8-1.0)	DATE COMMENCED: 09/02/2005							
SCALE: 1:100		DIA OF BORING: 100mm	DATE COMPLETED: 09/02/2005							
SUPERVISOR: GEOL. M. ASHRAF/INT/IZ										
DEPTH IN METERS	DEPTH IN FEET	LOG SYSTEM	SOIL DESCRIPTION	SOIL SAMPLES	TYPE OF SAMPLE	DEPTH (M)	TYPE VALUE	C.R. N.	R.O.B. N.	REMARKS
1		SP	Brownish grey medium dense fine to coarse SAND some fine gravels	1:1:1:1	SPT	1.00	14			DN: 0.0-1.0 m
2				1:1:1:1	"	2.00	15			
3				1:1:1:1	"	3.00	16			
4				1:1:1:1	"	4.00	18			
5				1:1:1:1	"	5.00	16			
6				1:1:1:1	"	6.00	19			
7				1:1:1:1	"	7.00	23			
8				1:1:1:1	"	8.00	23			R
9				1:1:1:1	"	9.00	25			
10				1:1:1:1	"	10.00	27			
11			ditto - but dense	1:1:1:1	"	11.00	30			
12				1:1:1:1	"	12.00	27			
13				1:1:1:1	"	13.00	36			
14	14.00			1:1:1:1	"	14.00	33			
15			Dark grey dense fine SAND traces of silty clay converting into loosely cemented sandy shale	S X X	"	15.00	32			
16	16.00			1:1:1:1	"	16.00	33			
17		SW-SM	Brownish grey dense to very dense coarse to fine SAND traces of silty gravels	S X X	"	17.00	35			DS of Core:
18				1:1:1:1	"	18.00	38			
19				1:1:1:1	"	19.00	45			
20				S X X	"	20.00	R			

Continue

M/s SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan										
PROJECT: Up-gradation & Improvement of National Highway B/W Karara-Wad Section N-25										
LOCATION: NHA # B-2322 (C/I: 10+970) Station 25			SHEET # 01							
COORDINATES 4.0 m from Abc #2 3.0 m from Bridge		TYPE OF BORING: Rotary	BORING NO.: 01							
G.S.E.: Not Encountered		DIA OF CASING: 115mm (0.8-1.0)	DATE COMMENCED: 26/01/2005							
SCALE: 1:100		DIA OF BORING: 100mm	DATE COMPLETED: 26/01/2005							
SUPERVISOR: GEOL. M. ASHRAF/INT/IZ										
DEPTH IN METERS	DEPTH IN FEET	LOG SYSTEM	SOIL DESCRIPTION	SOIL SAMPLES	TYPE OF SAMPLE	DEPTH (M)	TYPE VALUE	C.R. N.	R.O.B. N.	REMARKS
1		SW	Brownish grey medium dense fine to coarse SAND some fine gravels traces of silty clay	1:1:1:1	SPT	1.00	16			DN: 0.0-1.0 m
2				1:1:1:1	"	2.00	25			
3				1:1:1:1	"	3.00	24			
4				1:1:1:1	"	4.00	29			
5				1:1:1:1	"	5.00	28			
6			ditto - but dense to very dense	S X X	"	6.00	36			
7				1:1:1:1	"	7.00	41			
8				1:1:1:1	"	8.00	R			
9				1:1:1:1	"	9.00	"			
10		GW	Brownish grey dense to very dense coarse to fine GRAVELS and coarse to fine SAND, with cobbles, pebbles (cuttings)	1:1:1:1	"	10.00	"			
11				1:1:1:1	"	11.00	"			
12		GW		1:1:1:1	"	12.00	48			
13				1:1:1:1	"	13.00	45			
14				1:1:1:1	"	14.00	R			
15				1:1:1:1	"	15.00	"			
16				1:1:1:1	"	16.00-16.00	RUN			DS of Core:
17				1:1:1:1	"	16.00-17.00	"			DS of Core:
18	18.00			1:1:1:1	"	17.00-18.00	"			DS of Core:
End of Borehole # 1 at the depth of 18.00 m										

Prepared by: Geol. M. Ashraf
Checked by: Geotech Engr. Al-Kadiri Mansour

M/s SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan										
PROJECT: Up-gradation & Improvement of National Highway B/W Karara-Wad Section N-25										
LOCATION: NHA # B-2301 (C/I: 7+810) Station 21			Cont. Sheet # 2/2							
COORDINATES		TYPE OF BORING: Rotary	BORING NO.: 01							
G.S.E.: Not Encountered		DIA OF CASING: 115mm (0.8-1.0)	DATE COMMENCED: 09/02/2005							
SCALE: 1:100		DIA OF BORING: 100mm	DATE COMPLETED: 09/02/2005							
SUPERVISOR: GEOL. M. ASHRAF/INT/IZ										
DEPTH IN METERS	DEPTH IN FEET	LOG SYSTEM	SOIL DESCRIPTION	SOIL SAMPLES	TYPE OF SAMPLE	DEPTH (M)	TYPE VALUE	C.R. N.	R.O.B. N.	REMARKS
21			Brownish grey dense to very dense coarse to fine SAND traces of silty gravels	1:1:1:1	SPT	21.00	R			
22				1:1:1:1	"	22.00	"			
23				S X X	"	23.00	"			
24	24.00			1:1:1:1	"	24.00	"			
End of Borehole # 01 at the depth of 24.00 m										

Prepared by: Geol. M. Ashraf
Checked by: Geotech Engr. Al-Kadiri Mansour

M/s SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan										
PROJECT: Up-gradation & Improvement of National Highway B/W Karara-Wad Section N-25										
LOCATION: NHA # B-2323 (C/I: 11+190) Station 26			SHEET # 02							
COORDINATES 6.0 m from Bridge 2.0 m from Abc #1		TYPE OF BORING: Rotary	BORING NO.: 01							
G.S.E.: Not Encountered		DIA OF CASING: 115mm (0.8-1.0)	DATE COMMENCED: 09/02/2005							
SCALE: 1:100		DIA OF BORING: 100mm	DATE COMPLETED: 09/02/2005							
SUPERVISOR: GEOL. M. ASHRAF/INT/IZ										
DEPTH IN METERS	DEPTH IN FEET	LOG SYSTEM	SOIL DESCRIPTION	SOIL SAMPLES	TYPE OF SAMPLE	DEPTH (M)	TYPE VALUE	C.R. N.	R.O.B. N.	REMARKS
1		SW	Brownish grey medium dense to dense fine to coarse SAND traces of fine gravels	1:1:1:1	SPT	1.00	18			DN: 0.0-1.0 m
2				1:1:1:1	"	2.00	24			
3		SW	ditto - but traces of clay	1:1:1:1	"	3.00	20			
4				1:1:1:1	"	4.00	22			
5				1:1:1:1	"	5.00	25			
6				S X X	"	6.00	30			
7				1:1:1:1	"	7.00	21			
8				1:1:1:1	"	8.00	24			
9				1:1:1:1	"	9.00	32			
10				1:1:1:1	"	10.00	27			
11			ditto - but dense to very dense	1:1:1:1	"	11.00	33			
12				1:1:1:1	"	12.00	37			
13				S X X	"	13.00	44			
14	14.00			1:1:1:1	"	14.00	45			
15		SM	Brownish grey dense to very dense silty coarse to fine SAND traces of gravels	1:1:1:1	"	15.00	54			
16				1:1:1:1	"	16.00	44			
17				1:1:1:1	"	17.00	46			
18	18.00			S X X	"	18.00	R			
19			ditto - but with cobbles & pebbles	1:1:1:1	Run	18.00-19.00				DS of Core:
20				1:1:1:1	"	19.00-20.00				DS of Core:

Continue

M/s SOILMAT ENGINEERS		BORING LOG	
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan			BORING NO.: 01
PROJECT: Up-gradation & Improvement of National Highway B/W Karara-Wad Section S-25			
LOCATION: NHA # B-2323 (CH: 11+190) Station 26			Cont. Sheet # 2/2
BORING NO.	DEPTH (m)	SOIL DESCRIPTION	REMARKS
21		ditto -	DS of Core:
22	22.00	End of Borehole # 01 At The Depth of 22.00 m	DS of Core:

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG	
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan			BORING NO.: 02
PROJECT: Up-gradation & Improvement of National Highway B/W Karara-Wad Section S-25			
LOCATION: NHA # B-2323 (CH: 11+190) Station 26			Cont. Sheet # 2/2
BORING NO.	DEPTH (m)	SOIL DESCRIPTION	REMARKS
21		ditto-but with cobbles & boulders	DS of Core:
22	22.00	End of Borehole # 02 At The Depth of 22.00 m	DS of Core:

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG	
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan			BORING NO.: 02
PROJECT: Up-gradation & Improvement of National Highway B/W Karara-Wad Section S-25			
LOCATION: NHA # B-2323 (CH: 11+190) Station 26			SHEET # 1/1
BORING NO.	DEPTH (m)	SOIL DESCRIPTION	REMARKS
1	1.00	Brownish grey dense gravelly fine to medium coarse SAND traces of clay	DS: 0.0-1.0 m
2	2.00	ditto - but medium dense	
3	3.00	ditto - but medium dense	
4	4.00	ditto - but medium dense	
5	5.00	Brownish grey medium dense to dense coarse to fine SAND traces of gravel and silty clay	
6	6.00	ditto - but dense to very dense	
7	7.00	ditto - but dense to very dense	
8	8.00	ditto - but dense to very dense little gravels	
9	9.00	ditto - but dense to very dense	
10	10.00	ditto - but dense to very dense	
11	11.00	ditto - but dense to very dense	
12	12.00	Water Loss: 11.9-12.0	
13	13.00	ditto - but dense to very dense	
14	14.00	ditto - but dense to very dense	
15	15.00	ditto - but dense to very dense	
16	16.00	ditto - but dense to very dense	
17	17.00	ditto - but dense to very dense	
18	18.00	ditto - with pebbles rubble and boulders (cuttings)	
19	19.00	ditto - but dense to very dense	
20	20.00	ditto-but with cobbles & boulders	DS of Core:

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG	
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan			BORING NO.: 03
PROJECT: Up-gradation & Improvement of National Highway B/W Karara-Wad Section S-25			
LOCATION: NHA # B-2323 (CH: 11+190) Station 26			SHEET # 1/1
BORING NO.	DEPTH (m)	SOIL DESCRIPTION	REMARKS
1	1.00	Brownish grey medium dense gravelly fine to coarse SAND traces of clay	DS: 0.0-1.0 m
2	2.00	ditto - but medium dense	
3	3.00	ditto - but medium dense	
4	4.00	ditto - but medium dense	
5	5.00	ditto - but medium dense	
6	6.00	ditto - but medium dense	
7	7.00	ditto - but medium dense	
8	8.00	ditto - but dense to very dense little gravels	
9	9.00	ditto - but dense to very dense	
10	10.00	ditto - but dense to very dense	
11	11.00	ditto - but dense to very dense	
12	12.00	Water Loss: 11.9-12.0	
13	13.00	ditto - but dense to very dense	
14	14.00	ditto - but dense to very dense	
15	15.00	ditto - but dense to very dense	
16	16.00	ditto - but dense to very dense	
17	17.00	ditto - but dense to very dense	
18	18.00	ditto - with pebbles rubble and boulders (cuttings)	
19	19.00	ditto - but dense to very dense	
20	20.00	ditto-but with cobbles & boulders	DS of Core:

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansoor

M/S SOILMAT ENGINEERS		BORING LOG							
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan									
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25									
LOCATION: NHA # B-2323 (C/L: 11+190) Station 26			SHEET # 1/2						
BORING HOLE LOCATION	1.75 m from Bridge 5.0 m from P-1	TYPE OF BORING: Rotary	BORING NO.: 04						
		DIA OF CASING: 125mm (R.O-15.0)							
		DIA OF BORING: 100mm	DATE COMMENCED: 01/01/2005						
		DIA OF COREING: 50	DATE COMPLETED: 01/02/2005						
C.W. F.	Not Encountered	SUPERVISOR: GEOL. M. ASHRAF/MS1117							
SCALE: 1:100									
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SYMBOL	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (mm)	C.P. %	MOH. %	REMARKS
1		Brownish grey medium dense silty fine to coarse SAND little fine gravels	SPT		1.00	27			DS: 0.0-1.0 m
2					2.00	25			
3		ditto - but traces of clay			3.00	28			
4					4.00	26			
5					5.00	28			
6		ditto - but dense			6.00	32			
7					7.00	36			
8					8.00	42			
9					9.00	49			
10		Brownish grey dense to very dense gravelly coarse to fine SAND			10.00	47			
11					11.00	R			
12					12.00	43			
13					13.00	47			
14					14.00	R			
15					15.00	48			
16					16.00	R			
17					17.00	"			
18					18.00	46			
19					19.00	R			
20		ditto - but with pebbles cobbles & boulders (rustings)			19.00-20.00				DS of Core

Continued

M/S SOILMAT ENGINEERS		BORING LOG							
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan									
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25									
LOCATION: NHA # B-2351 (C/L: 13+841) Station 38			SHEET # 1/2						
BORING HOLE LOCATION	3.8 m from 1st: 01 4.8 m from 2nd: 01 to P-1	TYPE OF BORING: Rotary	BORING NO.: 01						
		DIA OF CASING: 125mm (R.O-15.0)							
		DIA OF BORING: 100mm	DATE COMMENCED: 31/01/2005						
		DIA OF COREING: 50	DATE COMPLETED: 01/02/2005						
C.W. F.	Not Encountered	SUPERVISOR: GEOL. M. ASHRAF/MS1117							
SCALE: 1:100									
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SYMBOL	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (mm)	C.P. %	MOH. %	REMARKS
1		Brownish grey medium dense silty fine to coarse SAND some coarse to fine gravels traces of clay	SPT		1.00	15			DS: 0.0-1.0 m
2					2.00	16			
3					3.00	22			
4					4.00	18			
5					5.00	24			
6					6.00	24			
7					7.00	19			
8		Brownish grey dense to very dense coarse to fine SAND, traces of gravels			8.00	30			
9					9.00	30			
10					10.00	35			
11					11.00	42			
12					12.00	46			
13					13.00	R			
14					14.00	"			
15					15.00	48			
16					16.00	R			
17					17.00	49			
18					18.00	R			
19					19.00	49			
20					20.00	R			

Continued

M/S SOILMAT ENGINEERS		BORING LOG							
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan									
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25									
LOCATION: NHA # B-2323 (C/L: 11+190) Station 26			Cont. Sheet # 2/2						
BORING NO.: 04									
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SYMBOL	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (mm)	C.P. %	MOH. %	REMARKS
21		ditto -			20.00-21.00				DS of Core
22					21.00-22.00				DS of Core
23					22.00-23.00				DS of Core
End of Borehole # 04 at the Depth of 23.00 m									

Prepared by: Genl. M. Aslam Isahq

Checked by: Geotech Engr. Al-Kazim Mansour

M/S SOILMAT ENGINEERS		BORING LOG							
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan									
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25									
LOCATION: NHA # B-2351 (C/L: 13+841) Station 38			Cont. Sheet # 2/2						
BORING NO.: 01									
DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SYMBOL	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (mm)	C.P. %	MOH. %	REMARKS
21		ditto - but very dense		SPT	21.00	R			
22					22.00	"			
23					23.00	"			
24					24.00	"			
End of Borehole # 01 at the depth of 24.00 m									

Prepared by: Genl. M. Aslam Isahq

Checked by: Geotech Engr. Al-Kazim Mansour

M/s SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan										
PROJECT: Up-gradation & Improvement of National Highway BAV Karara-Wad Section N-25										
LOCATION: NHA # B 2351 (CT: 13+841) Station 38										
BOREHOLE LOCATION: 4.40 m from P-1		BORING NO.: 02								
TYPE OF BORING: Rotary		DATE COMMENCED: 11/01/2005								
DIA OF CASING: 125mm (ØB-13.0)		DATE COMPLETED: 01/02/2005								
DIA OF BORING: 100mm		SUPERVISOR: GEOL. M. ASHRAF/DT/14								
S.M.I. Not Encountered		SCALE: 1:100								
DEPTH (M)	STARTING DEPTH (M)	END DEPTH (M)	SOIL DESCRIPTION	SOL. NUMBER	TYPE OF SAMPLE	DEPTH (M)	WATER VALUE (M.M)	C.P. %	MO.D. %	REMARKS
1		7.00	Brownish grey medium dense gravelly fine to medium coarse SAND	NPT	1.00	13				DS: ØB-13.0 m
2				"	2.00	10				
3				"	3.00	11				
4				"	4.00	16				
5				"	5.00	18				
6				"	6.00	17				
7				"	7.00	20				
8			Brownish grey medium dense to very dense coarse to fine SAND traces of gravels		8.00	24				
9					9.00	28				
10					10.00	31				
11					11.00	3A				
12					12.00	46				
13					13.00	49				
14					14.00	R				
15					15.00	"				
16					16.00	47				
17					17.00	K				
18					18.00	48				
19					19.00	IL				
20					20.00	48				

Continues

M/s SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan										
PROJECT: Up-gradation & Improvement of National Highway BAV Karara-Wad Section N-25										
LOCATION: NHA # B 2351 (CT: 13+841) Station 38										
BOREHOLE LOCATION: 4.8 m from Abt: 02 4.10 m Abt: 02 to P-5		BORING NO.: 03								
TYPE OF BORING: Rotary		DATE COMMENCED: 11/01/2005								
DIA OF CASING: 125mm (ØB-13.0)		DATE COMPLETED: 01/02/2005								
DIA OF BORING: 100mm		SUPERVISOR: GEOL. M. ASHRAF/DT/14								
S.M.I. Not Encountered		SCALE: 1:100								
DEPTH (M)	STARTING DEPTH (M)	END DEPTH (M)	SOIL DESCRIPTION	SOL. NUMBER	TYPE OF SAMPLE	DEPTH (M)	WATER VALUE (M.M)	C.P. %	MO.D. %	REMARKS
1		7.00	Brownish grey medium dense fine to coarse SAND little fine gravels traces of clay	NPT	1.00	14				DS: ØB-13.0 m
2				"	2.00	11				
3				"	3.00	16				
4				"	4.00	18				
5				"	5.00	23				
6			ditto - but traces of gravels		6.00	20				
7					7.00	37				
8			ditto - but dense to very dense		8.00	31				
9					9.00	37				
10					10.00	45				
11					11.00	R				
12			ditto - but rock fragments		12.00	44				
13					13.00	R				
14					14.00	47				
15					15.00	IL				
16					16.00	49				
17					17.00	R				
18					18.00	"				
19			Greyish brown friable to soft SANDSTONE		18.00-19.00	55	35			
20					19.00-20.00	67	34			

Continues

M/s SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan										
PROJECT: Up-gradation & Improvement of National Highway BAV Karara-Wad Section N-25										
LOCATION: NHA # B 2351 (CT: 13+841) Station 38										
BOREHOLE LOCATION: 4.40 m from P-1		BORING NO.: 02								
TYPE OF BORING: Rotary		DATE COMMENCED: 11/01/2005								
DIA OF CASING: 125mm (ØB-13.0)		DATE COMPLETED: 01/02/2005								
DIA OF BORING: 100mm		SUPERVISOR: GEOL. M. ASHRAF/DT/14								
S.M.I. Not Encountered		SCALE: 1:100								
DEPTH (M)	STARTING DEPTH (M)	END DEPTH (M)	SOIL DESCRIPTION	SOL. NUMBER	TYPE OF SAMPLE	DEPTH (M)	WATER VALUE (M.M)	C.P. %	MO.D. %	REMARKS
21		25.00	ditto - but very dense	NPT	21.00	R				
22				"	22.00	"				
23				"	23.00	"				
24				"	24.00	"				
25				"	25.00	"				
25			End of Borehole # 02 at the depth of 25.00 m							

Prepared by: Geol. M. Ashraf Ishaq
Checked by: Geotech Engr. Al-Kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan										
PROJECT: Up-gradation & Improvement of National Highway BAV Karara-Wad Section N-25										
LOCATION: NHA # B 2351 (CT: 13+841) Station 38										
BOREHOLE LOCATION: 4.8 m from Abt: 02 4.10 m Abt: 02 to P-5		BORING NO.: 03								
TYPE OF BORING: Rotary		DATE COMMENCED: 11/01/2005								
DIA OF CASING: 125mm (ØB-13.0)		DATE COMPLETED: 01/02/2005								
DIA OF BORING: 100mm		SUPERVISOR: GEOL. M. ASHRAF/DT/14								
S.M.I. Not Encountered		SCALE: 1:100								
DEPTH (M)	STARTING DEPTH (M)	END DEPTH (M)	SOIL DESCRIPTION	SOL. NUMBER	TYPE OF SAMPLE	DEPTH (M)	WATER VALUE (M.M)	C.P. %	MO.D. %	REMARKS
21		21.00	Greyish brown friable to soft SANDSTONE		20.00-21.00					
			End of Borehole # 03 at the depth of 21.00 m							

Prepared by: Geol. M. Ashraf Ishaq
Checked by: Geotech Engr. Al-Kazim Mansoor

M/S SOILMAT ENGINEERS		BORING LOG						
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan								
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25								
LOCATION: NHA # B-236/1 (CT: 14+878) Station 43								
BOREHOLE LOCATION		TYPE OF BORING: Rotary	BORING NO.: 01					
1.30 m from Bridge		DIA OF CASING: 125mm (Ø0-12.0)	DATE COMMENCED: 29/01/2005					
Not Encountered		DIA OF BORING: 100mm	DATE COMPLETED: 30/01/2005					
G.W.L. Not Encountered		DIA OF CORING: NX	SUPERVISOR: GEOL. M. ASHRAF ZEFANIAH					
SCALE: 1:100								
DEPTH (m)	SOIL SAMPLE NO.	SOIL SYSTEM	SOIL DESCRIPTION	SOIL SAMPLE	DEPTH (m)	TEST VALUE	UNIT	REMARKS
1		SM	Brownish grey, medium dense silty medium coarse SAND little fine gravels	SPT	1.00	14		DS: 0.0-1.0 m
2					2.00	19		
3					3.00	22		
4	4.00				4.00	20		
5		SP	Grey, medium dense fine to coarse SAND traces of silty gravels		5.00	25		
6					6.00	28		
7					7.00	26		
8					8.00	29		
9			ditto - but dense		9.00	35		
10					10.00	33		
11					11.00	34		
12			ditto - some pebbles & cobbles (cuttings)		12.00	37		
13					13.00	42		
14					14.00	47		
15	14.00		Light to dark grey hard BASALT	RUN	15.00-16.00	67	26	CW: 15.50-15.66
16				CPT	16.00			
17				RUN	16.00-17.00	70	32	
18				CPT	17.00			
19	18.00			RUN	17.00-18.00	60	20	CW: 17.50-17.60
20				CPT	18.00			
End of Borehole # 01 at the depth of 18.00 m								

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansoor

M/S SOILMAT ENGINEERS		BORING LOG						
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan								
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25								
LOCATION: NHA # B-236/1 (CT: 14+878) Station 43								
BOREHOLE LOCATION		TYPE OF BORING: Rotary	BORING NO.: 02					
1.30 m from Bridge		DIA OF CASING: 125mm (Ø0-12.0)	DATE COMMENCED: 29/01/2005					
Not Encountered		DIA OF BORING: 100mm	DATE COMPLETED: 30/01/2005					
G.W.L. Not Encountered		DIA OF CORING: NX	SUPERVISOR: GEOL. M. ASHRAF ZEFANIAH					
SCALE: 1:100								
DEPTH (m)	SOIL SAMPLE NO.	SOIL SYSTEM	SOIL DESCRIPTION	SOIL SAMPLE	DEPTH (m)	TEST VALUE	UNIT	REMARKS
21			Grey, medium dense to very dense fine to coarse SAND little gravels, pebbles, cobbles (cuttings) and silty clay	SPT	21.00			
22		SW			22.00			
End of Borehole # 02 at the depth of 22.00 m								

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansoor

M/S SOILMAT ENGINEERS		BORING LOG						
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan								
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25								
LOCATION: NHA # B-236/1 (CT: 14+878) Station 43								
BOREHOLE LOCATION		TYPE OF BORING: Rotary	BORING NO.: 02					
2.0 m from Centre of Bridge		DIA OF CASING: 125mm (Ø0-12.0)	DATE COMMENCED: 29/01/2005					
Not Encountered		DIA OF BORING: 100mm	DATE COMPLETED: 30/01/2005					
G.W.L. Not Encountered		DIA OF CORING: NX	SUPERVISOR: GEOL. M. ASHRAF ZEFANIAH					
SCALE: 1:100								
DEPTH (m)	SOIL SAMPLE NO.	SOIL SYSTEM	SOIL DESCRIPTION	SOIL SAMPLE	DEPTH (m)	TEST VALUE	UNIT	REMARKS
1		SP-SM	Grey, medium dense fine to coarse SAND little silty fine gravels	SPT	1.00	16		DS: 0.0-1.0 m
2					2.00	18		
3					3.00	21		
4		SW	Grey, medium dense fine to coarse SAND little fine gravels traces of silt		4.00	20		
5					5.00	26		
6					6.00	25		
7					7.00	28		
8			ditto - but dense		8.00	33		
9					9.00	36		
10					10.00	40		
11					11.00	31		
12					12.00	39		
13					13.00	42		
14					14.00	50		
15			ditto - but very dense occasional pebbles & cobbles (cuttings)	RUN	15.00-15.90	R		
16				CPT	15.90			
17				RUN	15.90-16.00	75	37	CW: 15.60-15.81
18				CPT	16.00			
19			ditto - but dense	RUN	16.00-17.00	67	67	CW: 16.50-16.72
20				CPT	17.00			
End of Borehole # 03 at the depth of 17.00 m								

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansoor

M/S SOILMAT ENGINEERS		BORING LOG						
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan								
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25								
LOCATION: NHA # B-236/1 (CT: 14+878) Station 43								
BOREHOLE LOCATION		TYPE OF BORING: Rotary	BORING NO.: 03					
1.30 m from Bridge		DIA OF CASING: 125mm (Ø0-12.0)	DATE COMMENCED: 29/01/2005					
Not Encountered		DIA OF BORING: 100mm	DATE COMPLETED: 30/01/2005					
G.W.L. Not Encountered		DIA OF CORING: NX	SUPERVISOR: GEOL. M. ASHRAF ZEFANIAH					
SCALE: 1:100								
DEPTH (m)	SOIL SAMPLE NO.	SOIL SYSTEM	SOIL DESCRIPTION	SOIL SAMPLE	DEPTH (m)	TEST VALUE	UNIT	REMARKS
1		SW	Grey, medium dense fine to coarse SAND traces of silty fine gravels	SPT	1.00	12		DS: 0.0-1.0 m
2					2.00	21		
3					3.00	22		
4		SW	ditto - but some gravels		4.00	24		
5					5.00	27		
6					6.00	31		
7					7.00	33		
8		SW	ditto - but traces of silty gravels		8.00	38		
9					9.00	39		
10					10.00	38		
11					11.00	41		
12			ditto - traces of pebbles & cobbles (cuttings)		12.00	R		
13					13.00	43		
14	14.00		Light grey hard BASALT	CPT	14.00	R		
15				RUN	14.00-15.90	60	25	CW: 14.50-14.65
16				CPT	15.90			
17				RUN	15.90-16.00	75	37	CW: 15.60-15.81
18				CPT	16.00			
19				RUN	16.00-17.00	67	67	CW: 16.50-16.72
20				CPT	17.00			
End of Borehole # 03 at the depth of 17.00 m								

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan										
PROJECT: Up-gradation & Improvement of National Highway B/VV Karara-Wad Section N-25										
LOCATION: NHIA # B 2391 (CH: 17+384) Station 54			SHEET # 01							
BOREHOLE LOCATION	3.0 m from Abc. 01 2.80 m from Bridge	TYPE OF BORING: Rotary	BORING NO.: 01							
		DIA OF CASING: 125mm (Ø-Ø-125)								
		DIA OF BORING: 100mm	DATE COMMENCED: 14/01/2005							
C.W.L.	Not Encountered	DIA OF CORE: NX	DATE COMPLETED: 15/01/2005							
SCALE:	1:100	SUPERVISOR: GEOL. M. ASHRAF								
DEPTH (m)	STARTING DEPTH (m)	USE SYSTEM	SOIL DESCRIPTION	SOIL SYMBOLS	TYPE OF SAMPLE	DEPTH (m)	TEST VALUE (kg/cm ²)	C.R. %	M.O.R. %	REMARKS
1		SP	Brownish grey loose fine to coarse SAND traces of silty fine gravels	XXXX	SPT	1.00	7			DS: 0.0-1.0
2					"	2.00	9			
3			ditto - but medium dense		"	3.00	11			
4					"	4.00	12			
5					"	5.00	14			
6					"	6.00	17			
7		SP			"	7.00	17			
8		SP			"	8.00	18			
9					"	9.00	19			
10					"	10.00	22			
11		SP			"	11.00	24			
12					"	12.00	30			
13			ditto - but dense		"	13.00	33			
14					"	14.00	40			
15					"	15.00	46			
16			ditto - but very dense		"	16.00	R			
17		SP			"	17.00	"			
18					"	18.00	"			
19					"	19.00	"			
20	20.00				"	20.00	"			E.O.B (20.0)

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. M-Kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan										
PROJECT: Up-gradation & Improvement of National Highway B/VV Karara-Wad Section N-25										
LOCATION: NHIA # B 2391 (CH: 17+384) Station 54			SHEET # 02							
BOREHOLE LOCATION	1.20 m from Bridge 5.8 m from Abc. 02	TYPE OF BORING: Rotary	BORING NO.: 03							
		DIA OF CASING: 125mm (Ø-Ø-125)								
		DIA OF BORING: 100mm	DATE COMMENCED: 14/01/2005							
C.W.L.	Not Encountered	DIA OF CORE: NX	DATE COMPLETED: 16/01/2005							
SCALE:	1:100	SUPERVISOR: GEOL. M. ASHRAF/MUHAMMAD								
DEPTH (m)	STARTING DEPTH (m)	USE SYSTEM	SOIL DESCRIPTION	SOIL SYMBOLS	TYPE OF SAMPLE	DEPTH (m)	TEST VALUE (kg/cm ²)	C.R. %	M.O.R. %	REMARKS
1		SP-SM	Brownish grey medium dense fine to coarse SAND some fine gravels traces of silt	XXXX	SPT	1.00	13			DS: 0.0-1.0
2					"	2.00	17			
3	3.00				"	3.00	33			
4		SP	Brownish grey dense fine to coarse SAND little coarse to fine gravels	XXXX	"	4.00	31			
5					"	5.00	31			
6					"	6.00	33			
7					"	7.00	34			
8					"	8.00	36			
9					"	9.00	39			
10					"	10.00	43			
11					"	11.00	47			
12					"	12.00	49			
13	13.00				"	13.00	R			
14		SM	Brownish grey very dense silty coarse to fine SAND little fine gravels	XXXX	"	14.00	"			
15					"	15.00	"			
16					"	16.00	47			
17			ditto - but very dense		"	17.00	R			
18					"	18.00	"			
19					"	19.00	"			
20		SW-SM	Brownish grey very dense silty SAND converting into sandstone	XXXX	Itan	19.00-20.00	5			NH

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. M-Kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan										
PROJECT: Up-gradation & Improvement of National Highway B/VV Karara-Wad Section N-25										
LOCATION: NHIA # B 2391 (CH: 17+384) Station 54			SHEET # 01							
BOREHOLE LOCATION	1.8 m from Bridge Between P-3 P-4	TYPE OF BORING: Rotary	BORING NO.: 02							
		DIA OF CASING: 125mm (Ø-Ø-125)								
		DIA OF BORING: 100mm	DATE COMMENCED: 14/01/2005							
C.W.L.	Not Encountered	DIA OF CORE: NX	DATE COMPLETED: 14/01/2005							
SCALE:	1:100	SUPERVISOR: GEOL. M. ASHRAF/MUHAMMAD								
DEPTH (m)	STARTING DEPTH (m)	USE SYSTEM	SOIL DESCRIPTION	SOIL SYMBOLS	TYPE OF SAMPLE	DEPTH (m)	TEST VALUE (kg/cm ²)	C.R. %	M.O.R. %	REMARKS
1		GW	Brown loose, coarse to fine GRAVELS with coarse to fine sand, traces of silt	XXXX	SPT	1.00	6			DS: 0.0-1.0
2	2.00				"	2.00	9			
3		SW	Brownish grey loose coarse to fine SAND some fine gravels	XXXX	"	3.00	11			
4			ditto - but medium dense		"	4.00	12			
5					"	5.00	14			
6		SW	ditto - but little fine gravels		"	6.00	16			
7					"	7.00	17			
8					"	8.00	20			
9					"	9.00	19			
10					"	10.00	22			
11	11.00				"	11.00	23			
12		SW	Brownish grey medium dense coarse to fine SAND traces of silty fine gravels	XXXX	"	12.00	25			
13					"	13.00	28			
14					"	14.00	34			
15		SW	Brownish grey very dense fine to coarse SAND traces of fine gravels	XXXX	"	15.00	45			
16					"	16.00	R			
17		SP			"	17.00	"			
18			ditto -		"	18.00	"			
19					"	19.00	"			
20	20.00	SM	Dark grey very dense clayey cal. silty SAND con. into shale	XXXX	"	20.00	"			E.O.B (20.0)

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. M-Kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan										
PROJECT: Up-gradation & Improvement of National Highway B/VV Karara-Wad Section N-25										
LOCATION: NHIA # B 2391 (CH: 17+384) Station 54			SHEET # 02							
Cant. Sheet # 2/2										
DEPTH (m)	STARTING DEPTH (m)	USE SYSTEM	SOIL DESCRIPTION	SOIL SYMBOLS	TYPE OF SAMPLE	DEPTH (m)	TEST VALUE (kg/cm ²)	C.R. %	M.O.R. %	REMARKS
21	21.00	SP-SM	Brownish grey very dense silty CPT SAND converting into sandstone	XXXX	Run CPT	20.00-21.00				
22	22.00		Grey hard calcareous SHALE	XXXX	Run CPT	21.00-22.00				
			End of Borehole # B3 at the depth of 22.00 m		CUT	22.00				

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. M-Kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG						
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan								
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25								
LOCATION: NHA # B-242/2 (C1): 20*612 Station 68								
BOREHOLE LOCATION: 2.0 m from Ridge 2.0 m from SW-01		TYPE OF BORING: Rotary	BORING NO.: 01					
G.M.L.: Not Encountered		DIA OF CASING: 125mm (Ø125)	DATE COMMENCED: 09/02/2005					
SCALE: 1:100		DIA OF BORING: 100mm	DATE COMPLETED: 09/02/2005					
SUPERVISOR: GEOL. M. ASHRAF/INTLIZ								
DEPTH (m)	SOIL SAMPLE NO.	SOIL DESCRIPTION	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (mm)	C.P. %	Q.D.R. %	REMARKS
1		Brownish grey medium dense to dense fine to coarse SAND some fine gravels	SPT	1.00	14			DS: 0.0-1.0 m
2			"	2.00	16			
3			"	3.00	19			
4			"	4.00	20			
5		ditto - but grey	"	5.00	30			
6			"	6.00	34			
7			"	7.00	37			
8			"	8.00	41			
9			"	9.00	37			
10		Brownish grey dense to very dense coarse to fine GRAVELS and coarse to fine SAND	"	10.00	41			
11			"	11.00	42			
12			"	12.00	49			
13			"	13.00	R			
14			"	14.00	"			
15			"	15.00	48			
16			"	16.00	46			
17			"	17.00	14			
18		Grey very dense gravelly fine to coarse SAND	"	18.00	"			
19			"	19.00	"			
20			"	20.00	"			

M/s SOILMAT ENGINEERS		BORING LOG						
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan								
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25								
LOCATION: NHA # B-242/2 (C1): 20*731 Station 69								
BOREHOLE LOCATION: 3.5 m from P-1 3.5 from P-2		TYPE OF BORING: Rotary	BORING NO.: 01					
G.M.L.: Not Encountered		DIA OF CASING: 125mm (Ø125)	DATE COMMENCED: 09/02/2005					
SCALE: 1:100		DIA OF BORING: 100mm	DATE COMPLETED: 09/02/2005					
SUPERVISOR: GEOL. M. ASHRAF/INTLIZ								
DEPTH (m)	SOIL SAMPLE NO.	SOIL DESCRIPTION	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (mm)	C.P. %	Q.D.R. %	REMARKS
1		Brownish grey silty fine to med. coarse SAND with fine gravels	SPT	1.00	22			DS: 0.0-1.0 m
2			"	2.00	29			
3		Brownish grey medium dense to dense fine to coarse SAND some fine gravels	"	3.00	31			
4			"	4.00	33			
5			"	5.00	35			
6			"	6.00	37			
7			"	7.00	36			
8			"	8.00	40			
9			"	9.00	38			
10			"	10.00	42			
11			"	11.00	44			
12		ditto - but very dense	"	12.00	R			
13			"	13.00	48			
14			"	14.00	49			
15			"	15.00	R			
16			"	16.00	"			
17			"	17.00	"			
18			"	18.00	"			
19			"	19.00	"			
20		End of Borehole # 01 at the depth of 19.00 m						

Prepared by: Geol. M. Ashraf Ishayq
Checked by: Geotech Engr. Al-Kazim Mansour

M/s SOILMAT ENGINEERS		BORING LOG						
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan								
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25								
LOCATION: NHA # B-242/2 (C1): 20*612 Station 68								
BOREHOLE LOCATION: 2.0 m from Ridge 2.0 m from SW-01		TYPE OF BORING: Rotary	BORING NO.: 01					
G.M.L.: Not Encountered		DIA OF CASING: 125mm (Ø125)	DATE COMMENCED: 09/02/2005					
SCALE: 1:100		DIA OF BORING: 100mm	DATE COMPLETED: 09/02/2005					
SUPERVISOR: GEOL. M. ASHRAF/INTLIZ								
DEPTH (m)	SOIL SAMPLE NO.	SOIL DESCRIPTION	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (mm)	C.P. %	Q.D.R. %	REMARKS
21		Grey very dense gravelly fine to coarse SAND	SPT	21.00	R			Cont. Sheet # 2/2
		End of Borehole # 01 at the depth of 21.00 m						

Prepared by: Geol. M. Ashraf Ishayq
Checked by: Geotech Engr. Al-Kazim Mansour

M/s SOILMAT ENGINEERS		BORING LOG						
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan								
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25								
LOCATION: NHA # B-242/2 (C1): 20*731 Station 69								
BOREHOLE LOCATION: 3.5 m from P-3		TYPE OF BORING: Rotary	BORING NO.: 02					
G.M.L.: Not Encountered		DIA OF CASING: 125mm (Ø125)	DATE COMMENCED: 09/02/2005					
SCALE: 1:100		DIA OF BORING: 100mm	DATE COMPLETED: 09/02/2005					
SUPERVISOR: GEOL. M. ASHRAF/INTLIZ								
DEPTH (m)	SOIL SAMPLE NO.	SOIL DESCRIPTION	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (mm)	C.P. %	Q.D.R. %	REMARKS
1		Brownish grey silty fine to med. coarse SAND with fine gravels	SPT	1.00	22			DS: 0.0-1.0 m
2			"	2.00	25			
3		Brownish grey medium dense to dense fine to coarse SAND some fine gravels	"	3.00	32			
4			"	4.00	31			
5			"	5.00	35			
6			"	6.00	36			
7		Grey dense fine to coarse SAND little fine gravels	"	7.00	34			
8			"	8.00	37			
9			"	9.00	36			
10			"	10.00	39			
11			"	11.00	42			
12			"	12.00	49			
13			"	13.00	R			
14			"	14.00	"			
15			"	15.00	47			
16		ditto - but very dense	"	16.00	R			
17			"	17.00	"			
18			"	18.00	"			
19			"	19.00	"			
20		End of Borehole # 02 at the depth of 20.00 m						

Prepared by: Geol. M. Ashraf Ishayq
Checked by: Geotech Engr. Al-Kazim Mansour

M/s SOILMAT ENGINEERS		BORING LOG							
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan									
PROJECT: Up-gradation & Improvement of National Highway B/V Karara-Wad Section N-25									
LOCATION: NH# B 2471 (C.T: 25+788) Station 78			SHEET # 12						
COORDINATES New Road Side 5.0 m from V.M: 01 2.0 m from Road		TYPE OF BORING: Rotary	BORING NO.: 01						
G.W.T. Not Encountered		DATE COMMENCED: 14/02/2005	DATE COMPLETED: 16/02/2005						
SCALE: 1:100		SUPERVISOR: GEOL. INTILAZ							
DEPTH (m)	SOIL SYMBOLS	SOIL DESCRIPTION	SOIL SYMBOLS	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (m)	C.K. %	LIQ. %	REMARKS
1	SW	Brownish grey medium dense fine to coarse SAND some fine gravels	S X X	SPT	1.00	20			DS: 0.0-1.0 m
2					2.00	19			
3					3.00	25			
4					4.00	30			
5		ditto - but dense			5.00	32			
6					6.00	33			
7					7.00	35			
8					8.00	38			
9					9.00	40			
10		ditto - but grey			10.00	39			
11					11.00	30			
12					12.00	33			Bed Level 9.00 m from Borehole
13		ditto - but medium to fine gravels			13.00	36			
14					14.00	40			
15					15.00	45			
16		ditto - but very dense			16.00	R			
17					17.00	47			
18					18.00	49			
19					19.00	R			
20					20.00				

Continue

M/s SOILMAT ENGINEERS		BORING LOG							
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan									
PROJECT: Up-gradation & Improvement of National Highway B/V Karara-Wad Section N-25									
LOCATION: NH# B 2626 (C.T: 41+002) Station 137			SHEET # 12						
BOREHOLE LOCATION In the center of Sht. 01 & 02 3.0 m from Bridge		TYPE OF BORING: Rotary	BORING NO.: 01						
G.W.T. Not Encountered		DATE COMMENCED: 13/02/2005	DATE COMPLETED: 13/02/2005						
SCALE: 1:100		SUPERVISOR: GEOL. M. AMIRAF/INTILAZ							
DEPTH (m)	SOIL SYMBOLS	SOIL DESCRIPTION	SOIL SYMBOLS	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (m)	C.K. %	LIQ. %	REMARKS
1		Greyish medium dense coarse SAND traces of silty fine gravels	S X X	SPT	1.00	23			DS: 0.0-1.0 m
2					2.00	25			
3					3.00	25			
4					4.00	18			
5		ditto - but dense			5.00	30			
6					6.00	33			
7					7.00	35			
8					8.00	38			
9					9.00	41			
10					10.00	40			
11					11.00	42			
12					12.00	45			
13		ditto - but very dense			13.00	48			
14					14.00	R			
15					15.00				
16					16.00	46			
17					17.00	R			
18					18.00				
19					19.00				
20					20.00				

Continue

M/s SOILMAT ENGINEERS		BORING LOG							
CLIENT: M/s Construction Project Consultants Inc. (CPC)									
PROJECT: Up-gradation & Improvement of National Highway B/V Karara-Wad Section N-25									
LOCATION: NH# B 2471 (C.T: 25+788) Station 78			Cont. Sheet # 2/2						
COORDINATES		TYPE OF BORING: Rotary	BORING NO.: 01						
G.W.T. Not Encountered		DATE COMMENCED: 14/02/2005	DATE COMPLETED: 16/02/2005						
SCALE: 1:100		SUPERVISOR: GEOL. INTILAZ							
DEPTH (m)	SOIL SYMBOLS	SOIL DESCRIPTION	SOIL SYMBOLS	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (m)	C.K. %	LIQ. %	REMARKS
21		Grey very dense sandy GRAVELS with cobbles pebbles, boulders traces of clay	S X X	SPT	21.00	R			
22					22.00				
23					23.00				
		End of Borehole # 01 at the depth of 23.00 m							

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG							
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan									
PROJECT: Up-gradation & Improvement of National Highway B/V Karara-Wad Section N-25									
LOCATION: NH# B 2626 (C.T: 41+002) Station 137			Cont. Sheet # 2/2						
COORDINATES		TYPE OF BORING: Rotary	BORING NO.: 01						
G.W.T. Not Encountered		DATE COMMENCED: 13/02/2005	DATE COMPLETED: 13/02/2005						
SCALE: 1:100		SUPERVISOR: GEOL. M. AMIRAF/INTILAZ							
DEPTH (m)	SOIL SYMBOLS	SOIL DESCRIPTION	SOIL SYMBOLS	TYPE OF SAMPLE	DEPTH (m)	WATER VALUE (m)	C.K. %	LIQ. %	REMARKS
21		ditto		SPT	21.00				
		End of Borehole # 01 at the depth of 21.00 m							

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG							
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan									
PROJECT: Up-gradation & Improvement of National Highway (NH) Karara-Wad Section N-25									
LOCATION: NHA # B 26/26 (C.I: 414002) Station 137									
BOREHOLE LOCATION: In the Centre of Abt: #1 & #2 3.0 m from Bridge		TYPE OF BORING: Rotary	BORING NO.: 01						
DIA OF CASING: 125mm (Ø 125)		DATE COMMENCED: 14/02/2005							
DIA OF BORING: 100mm		DATE COMPLETED: 14/02/2005							
G.W.L.: Not Encountered		SUPERVISOR: GEOL. M. ASHRAF/INTILAZ							
S.M.A.E.: 1:100									
DEPTH (m)	SOIL SYSTEM	SOIL DESCRIPTION	SOIL SYMBOL	TYPE OF SAMPLE	DEPTH (m)	CS VALUE (kg/cm ²)	C.R. %	R.Q.D. %	REMARKS
1	SP	Greyish medium dense coarse SAND traces of silty fine gravels	1:1:1	SPT	1.00	23			DS: 0.0-1.0 m
2			1:1:1	"	2.00	25			
3			1:1:1	"	3.00	25			
4		ditto - but dense	1:1:1	"	4.00	28			
5			1:1:1	"	5.00	30			
6			1:1:1	"	6.00	33			
7			1:1:1	"	7.00	35			
8			1:1:1	"	8.00	38			
9			1:1:1	"	9.00	41			
10	SW		1:1:1	"	10.00	46			
11			1:1:1	"	11.00	42			
12			1:1:1	"	12.00	45			
13		ditto - but very dense	1:1:1	"	13.00	48			
14			1:1:1	"	14.00	R			
15			1:1:1	"	15.00	-			
16			1:1:1	"	16.00	46			
17			1:1:1	"	17.00	R			
18	SP		1:1:1	"	18.00	-			
19			1:1:1	"	19.00	-			
20			1:1:1	"	20.00	-			

Continues

M/s SOILMAT ENGINEERS		BORING LOG							
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan									
PROJECT: Up-gradation & Improvement of National Highway (NH) Karara-Wad Section N-25									
LOCATION: NHA # B 26/26 (C.I: 414002) Station 150									
BOREHOLE LOCATION: 5.0 m from Abt: #2 2.0 m from Road		TYPE OF BORING: Rotary	BORING NO.: 01						
DIA OF CASING: 125mm (Ø 125)		DATE COMMENCED: 14/02/2005							
DIA OF BORING: 100mm		DATE COMPLETED: 14/02/2005							
G.W.L.: Not Encountered		SUPERVISOR: GEOL. M. ASHRAF/INTILAZ							
S.M.A.E.: 1:100									
21		Plak hard silty clay converting into shale	1:1:1						
22		End of Borehole # 01 at the depth of 22.00 m	1:1:1						
23			1:1:1						
24			1:1:1						
25			1:1:1						
26			1:1:1						
27			1:1:1						
28			1:1:1						
29			1:1:1						
30			1:1:1						
31			1:1:1						
32			1:1:1						
33			1:1:1						
34			1:1:1						
35			1:1:1						
36			1:1:1						
37			1:1:1						
38			1:1:1						
39			1:1:1						
40			1:1:1						
41			1:1:1						
42			1:1:1						
43			1:1:1						
44			1:1:1						
45			1:1:1						
46			1:1:1						
47			1:1:1						
48			1:1:1						
49			1:1:1						
50			1:1:1						

Prepared by: Geol. M. Aslam Ishaq

Checked by: Geotech Engr. M. Kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG							
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan									
PROJECT: Up-gradation & Improvement of National Highway (NH) Karara-Wad Section N-25									
LOCATION: NHA # B 26/24 (C.I: 42495) Station 150									
BOREHOLE LOCATION: Near Abt: #2 3.0 m from Bridge		TYPE OF BORING: Rotary	BORING NO.: 01						
DIA OF CASING: 125mm (Ø 125)		DATE COMMENCED: 14/02/2005							
DIA OF BORING: 100mm		DATE COMPLETED: 14/02/2005							
G.W.L.: Not Encountered		SUPERVISOR: GEOL. M. ASHRAF/INTILAZ							
S.M.A.E.: 1:100									
1		Yellowish brown SAND with clayey silt traces of fine gravels	1:1:1	SPT	1.00	25			DS: 0.0-1.0 m
2		DK med fine to coarse SAND with silty clay & some fine gravels	1:1:1	"	2.00	29			
3		Grey medium dense coarse SAND and fine GRAVELS	1:1:1	"	3.00	27			
4			1:1:1	"	4.00	30			
5	GW	Grey dense fine to coarse fine GRAVELS and coarse to fine SAND	1:1:1	"	5.00	34			
6			1:1:1	"	6.00	35			
7			1:1:1	"	7.00	39			
8	SP	Grey dense to very dense fine to coarse SAND traces of silty fine gravels	1:1:1	"	8.00	36			
9			1:1:1	"	9.00	46			
10			1:1:1	"	10.00	R			
11			1:1:1	"	11.00	46			
12			1:1:1	"	12.00	43			
13			1:1:1	Run	13.0-14.0		80	67	13.25-14.75 Cure Waved
14		Pink hard silty CLAY traces of sand	1:1:1	SPT	14.00	R			
15			1:1:1	"					
16			1:1:1	Run	15.0-16.0		77	66	15.20-15.50 Cure Waved
17			1:1:1	"			78	65	17.40-17.70 Cure Waved
18			1:1:1	"					
19			1:1:1	SPT	18.00				
20		Pink hard silty clay converting into shale	1:1:1	"					
21			1:1:1	"					
22			1:1:1	Run	19.0-20.0		76	69	19.10-19.45 Cure Waved

Continues

M/s SOILMAT ENGINEERS		BORING LOG							
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan									
PROJECT: Up-gradation & Improvement of National Highway (NH) Karara-Wad Section N-25									
LOCATION: NHA # B 26/71 (C.I: 45436) Station 16J									
BOREHOLE LOCATION: 5.0 m from Abt: #2 2.0 m from Road		TYPE OF BORING: Rotary	BORING NO.: 01						
DIA OF CASING: 125mm (Ø 125)		DATE COMMENCED: 14/02/2005							
DIA OF BORING: 100mm		DATE COMPLETED: 14/02/2005							
G.W.L.: Not Encountered		SUPERVISOR: GEOL. M. ASHRAF/INTILAZ							
S.M.A.E.: 1:100									
1		Brownish grey sandy fine GRAVELS with some silty clay	1:1:1	SPT	1.00	14			DS: 0.0-1.0 m
2		Grey medium dense fine to coarse SAND and GRAVELS traces of silty clay	1:1:1	"	2.00	17			
3			1:1:1	"	3.00	18			
4			1:1:1	"	4.00	21			
5	SP		1:1:1	"	5.00	24			
6			1:1:1	"	6.00	27			
7		ditto - but dense	1:1:1	"	7.00	31			
8			1:1:1	"	8.00	33			
9			1:1:1	"	9.00	36			
10			1:1:1	"	10.00	38			
11			1:1:1	"	11.00	35			
12			1:1:1	"	12.00	39			
13			1:1:1	"	13.00	41			
14			1:1:1	"	14.00	43			
15			1:1:1	"	15.00	45			
16			1:1:1	"	16.00	47			
17			1:1:1	"	17.00	R			
18			1:1:1	"	18.00	47			
19	SW	ditto - but very dense some gravels traces of silty clay	1:1:1	"					
20			1:1:1	"	19.00	R			
21			1:1:1	"	20.00	-			

Continues

M/s SOILMAT ENGINEERS		BORING LOG					
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan			BORING NO.: 01				
PROJECT: Up-gradation & Improvement of National Highway BAV Karara-Wad Section N-25							
LOCATION: NHA # B 2674 (C.I.: 45+350) Station 163			Cont. Sheet # 2/2				
DEPTH (m)	SOIL SYMBOLS	TYPE OF SAMPLE	DEPTH (m)	TYPE OF VALUE	C.R. %	R.Q.D. %	REMARKS
21	dlite -	SPT	21.00	R			
22			22.00				
23			23.00				
End of Borehole # 01 at the depth of 23.00 m							

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG					
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan			BORING NO.: 01				
PROJECT: Up-gradation & Improvement of National Highway BAV Karara-Wad Section N-25							
LOCATION: NHA # B 2684 (C.I.: 46+978) Station 171			Cont. Sheet # 2/2				
DEPTH (m)	SOIL SYMBOLS	TYPE OF SAMPLE	DEPTH (m)	TYPE OF VALUE	C.R. %	R.Q.D. %	REMARKS
21	Pink dense to very dense silty CLAY embedded with fine to coarse sand and traces of fine gravels	SPT	21.00	R			
22			22.00				
23			23.00				
End of Borehole # 01 (th: 01) at the depth of 23.00 m							

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG					
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan			BORING NO.: 01				
PROJECT: Up-gradation & Improvement of National Highway BAV Karara-Wad Section N-25							
LOCATION: NHA # B 2684 (C.I.: 46+978) Station 171			SHEET # 01				
BOREHOLE LOCATION: 5.0 m from Abt. 01 2.0 m from Road		TYPE OF BORING: Rotary	BORING NO.: 01				
DIA OF CASING: 125mm (Ø125)		DATE COMMENCED: 16/02/2005					
DIA OF BORING: 100mm		DATE COMPLETED: 18/02/2005					
DIA OF CURING: Not Encountered		SUPERVISOR: GEOL. AL-ASHRAF					
DEPTH (m)	SOIL SYMBOLS	TYPE OF SAMPLE	DEPTH (m)	TYPE OF VALUE	C.R. %	R.Q.D. %	REMARKS
1	Grey medium dense fine to coarse SAND some coarse to fine gravels	SPT	1.00	16			DS: Ø125 mm
2			2.00	22			
3			3.00	20			
4			4.00	23			
5			5.00	26			
6	dlite - but dense		6.00	33			
7			7.00	35			
8			8.00	40			
9			9.00	42			
10			10.00	45			
11	dlite - but no gravels		11.00	48			
12	dlite - but dense to very dense		12.00	R			Bed Level 4.20 m
13			13.00				
14			14.00	43			
15			15.00	45			
16			16.00	R			
17	Pink dense to very dense silty CLAY embedded with fine to coarse sand and traces of fine gravels		17.00	48			
18			18.00	49			
19	dlite - but dense		19.00	R			
20			20.00				

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-kazim Mansoor

M/s SOILMAT ENGINEERS		BORING LOG					
CLIENT: M/s Construction Project Consultants Inc. (CPC)			BORING NO.: 01				
PROJECT: Up-gradation & Improvement of National Highway BAV Karara-Wad Section N-25							
LOCATION: NHA # B 2704 (C.I.: 48+480) Station 177			SHEET # 01				
BOREHOLE LOCATION: 2.50 m from Abt. 01 2.50 m from Bridge		TYPE OF BORING: Rotary	BORING NO.: 01				
DIA OF CASING: 125mm (Ø125)		DATE COMMENCED: 16/02/2005					
DIA OF BORING: 100mm		DATE COMPLETED: 17/02/2005					
DIA OF CURING: Not Encountered		SUPERVISOR: GEOL. SHAFIQ					
DEPTH (m)	SOIL SYMBOLS	TYPE OF SAMPLE	DEPTH (m)	TYPE OF VALUE	C.R. %	R.Q.D. %	REMARKS
1	Brownish grey medium dense silty fine to coarse SAND with some fine gravels	SPT	1.00	25			DS: Ø125 mm
2			2.00	26			
3			3.00	39			
4	Brownish grey dense coarse to fine SAND and medium to fine GRAVELS with some cobbles traces of clay		4.00	35			
5	Brownish grey dense silty fine to coarse SAND with some fine gravels		5.00	36			
6			6.00	42			
7			7.00	42			
8			8.00	38			
9	Red hard silty CLAY intermix with fine gravels & sand		9.00	47			
10			10.00	49			
11	Reddish grey hard to very hard sandy silty CLAY converting into sandy silt		11.00	49			
12			12.00	R			
13			13.00	45			
14			14.00	48			
15			15.00	R			
16			16.00				
17			17.00				
18			18.00				
19			19.00				
End of Borehole - 01 at the depth of 19.00 m							

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-kazim Mansoor

M/S SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC)										
PROJECT: Up-gradation & Improvement of National Highway BVV Karara-Wad Section N-25										
LOCATION: NHA # B-2701 (C/I: 48+450) Station 177			SHEET # 10							
BOREHOLE LOCATION	3.8 m from Bridge 1.8 m from P-2	TYPE OF BORING: Rotary	BORING NO.: 02							
		DIA OF CASING: 125mm (R.O-2.0)								
		DIA OF BORING: 100mm	DATE COMMENCED: 16/02/2005							
G.W.L.	Not Encountered	DIA OF CORING: NX	DATE COMPLETED: 17/02/2005							
SCALE:	1:100	SUPERVISOR: GEOL. IMTIAZ								
DEPTH (M)	SOIL SAMPLE DEPTH (M)	USC SYSTEM	SOIL DESCRIPTION	SOIL NUMBER	TYPE OF SAMPLE	DEPTH (M)	TYPE VALUE	C.R. %	MO. %	REMARKS
1			Brownish grey medium dense silty fine to coarse SAND with some fine gravels	11111	SPT	1.00	15			DS: 0.0-1.0 m
2	2.00			11112		2.00	40			
3			Brownish dense to very dense coarse to fine SAND and fine GRAVELS traces of clay	11113		3.00	R			DS: 0.0-1.0 m
4		SP		11114	CPT	4.00	45			
5				11115		5.00	46			DS: 0.0-1.0 m
6	6.00			11116	SPT	6.00	39			
7			Brownish grey dense fine to coarse SAND and medium to fine GRAVELS traces of clay	11117		7.00	40			DS: 0.0-1.0 m
8	8.00	SW		11118	CPT	8.00	R			
9			Brownish grey very dense sandy GRAVELS with some cobbles, pebbles (cutting)	11119		9.00	-			DS: 0.0-1.0 m
10	10.00			11120	SPT	10.00	42			
11			Brownish grey dense silty fine to coarse SAND with some medium to fine gravels, traces of clay	11121		11.00	43			DS: 0.0-1.0 m
12	12.00			11122		12.00	35			
13			Red hard silty CLAY interbedded with fine gravels, lenses of fine sand	11123		13.00	38			DS: 0.0-1.0 m
14	14.00	CL		11124	Run	14.00-15.00				
15	15.00		Grey hard BASALT	11125		15.00-16.00				DS: 0.0-1.0 m
16			Reddish grey hard sandy SHALE	11126	SPT	16.00	R			
17				11127		17.00	-			DS: 0.0-1.0 m
18				11128		18.00	-			
19				11129		19.00	-			DS: 0.0-1.0 m
20	20.00			11130		20.00	-			

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansour

M/S SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC)										
PROJECT: Up-gradation & Improvement of National Highway BVV Karara-Wad Section N-25										
LOCATION: NHA # B-2701 (C/I: 48+450) Station 177			SHEET # 10							
BOREHOLE LOCATION	3.0 m from Abt: 01 3.0 m from Bridge	TYPE OF BORING: Rotary	BORING NO.: 04							
		DIA OF CASING: 125mm (R.O-2.0)								
		DIA OF BORING: 100mm	DATE COMMENCED: 16/02/2005							
G.W.L.	Not Encountered	DIA OF CORING: NX	DATE COMPLETED: 17/02/2005							
SCALE:	1:100	SUPERVISOR: GEOL. IMTIAZ								
DEPTH (M)	SOIL SAMPLE DEPTH (M)	USC SYSTEM	SOIL DESCRIPTION	SOIL NUMBER	TYPE OF SAMPLE	DEPTH (M)	TYPE VALUE	C.R. %	MO. %	REMARKS
1			Brownish grey medium dense to dense silty fine to coarse SAND with some gravels	11131	SPT	1.00	24			DS: 0.0-1.0 m
2	2.00			11132		2.00	22			
3			Brownish grey dense coarse to fine SAND and medium to fine GRAVELS with some cobbles (cuttings) traces of clay	11133		3.00	R			DS: 0.0-1.0 m
4		SP		11134	CPT	4.00	47			
5				11135		5.00	R			DS: 0.0-1.0 m
6	6.00			11136	SPT	6.00	47			
7			Brownish grey dense fine to coarse SAND and medium to fine GRAVELS traces of clay	11137		7.00	44			DS: 0.0-1.0 m
8	8.00	SW		11138	CPT	8.00	44			
9			Red hard silty CLAY interbedded with fine sandy gravels	11139		9.00	43			DS: 0.0-1.0 m
10	10.00			11140	SPT	10.00	40			
11			Reddish grey hard sandy SHALE	11141		11.00	44			DS: 0.0-1.0 m
12	12.00			11142		12.00	48			
13				11143		13.00	R			DS: 0.0-1.0 m
14	14.00			11144		14.00	48			
15				11145		15.00	R			DS: 0.0-1.0 m
16	16.00			11146		16.00	-			
17				11147		17.00	-			DS: 0.0-1.0 m
18				11148		18.00	-			
19				11149		19.00	-			DS: 0.0-1.0 m
20	20.00			11150		20.00	-			

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansour

M/S SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC)										
PROJECT: Up-gradation & Improvement of National Highway BVV Karara-Wad Section N-25										
LOCATION: NHA # B-2701 (C/I: 48+450) Station 177			SHEET # 11							
BOREHOLE LOCATION	3.2 m from Bridge 1.0 m from P-4	TYPE OF BORING: Rotary	BORING NO.: 03							
		DIA OF CASING: 125mm (R.O-2.0)								
		DIA OF BORING: 100mm	DATE COMMENCED: 16/02/2005							
G.W.L.	Not Encountered	DIA OF CORING: NX	DATE COMPLETED: 17/02/2005							
SCALE:	1:100	SUPERVISOR: GEOL. IMTIAZ								
DEPTH (M)	SOIL SAMPLE DEPTH (M)	USC SYSTEM	SOIL DESCRIPTION	SOIL NUMBER	TYPE OF SAMPLE	DEPTH (M)	TYPE VALUE	C.R. %	MO. %	REMARKS
1		SW	Brownish grey medium dense fine to coarse SAND and medium to fine GRAVELS traces of silty clay	11151	SPT	1.00	21			DS: 0.0-1.0 m
2	2.00			11152		2.00	25			
3			Brownish grey dense sandy GRAVELS traces of clay cobbles (cutting)	11153		3.00	R			DS: 0.0-1.0 m
4		SP		11154	CPT	4.00	37			
5				11155		5.00	41			DS: 0.0-1.0 m
6	6.00			11156	SPT	6.00	36			
7			Brownish grey dense silty fine to coarse SAND with some medium to fine gravels traces of clay	11157		7.00	39			DS: 0.0-1.0 m
8	8.00			11158		8.00	45			
9				11159		9.00	43			DS: 0.0-1.0 m
10	10.00			11160		10.00	R			
11			Brownish grey very dense GRAVELS and coarse to fine SAND some cobbles (cutting) traces of clay	11161		11.00	42			DS: 0.0-1.0 m
12	12.00	GW		11162		12.00	R			
13				11163		13.00	39			DS: 0.0-1.0 m
14	14.00			11164		14.00	44			
15			Red hard silty CLAY interbedded with some fine gravels traces of sand	11165		15.00	48			DS: 0.0-1.0 m
16	16.00	CL		11166		16.00	R			
17			Reddish grey hard sandy SHALE	11167		17.00	-			DS: 0.0-1.0 m
18				11168		18.00	-			
19				11169		19.00	-			DS: 0.0-1.0 m
20	20.00			11170		20.00	-			

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansour

M/S SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC)										
PROJECT: Up-gradation & Improvement of National Highway BVV Karara-Wad Section N-25										
LOCATION: NHA # B-2702 (C/I: 48+775) Station 178			SHEET # 11							
BOREHOLE LOCATION	3.0 m from Abt: 01	TYPE OF BORING: Rotary	BORING NO.: 01							
		DIA OF CASING: 125mm (R.O-2.0)								
		DIA OF BORING: 100mm	DATE COMMENCED: 17/02/2005							
G.W.L.	Not Encountered	DIA OF CORING: NX	DATE COMPLETED: 16/02/2005							
SCALE:	1:100	SUPERVISOR: GEOL. M. ASIMAF								
DEPTH (M)	SOIL SAMPLE DEPTH (M)	USC SYSTEM	SOIL DESCRIPTION	SOIL NUMBER	TYPE OF SAMPLE	DEPTH (M)	TYPE VALUE	C.R. %	MO. %	REMARKS
1			Grey medium dense to dense fine to coarse SAND with some fine gravels	11171	SPT	1.00	14			DS: 0.0-1.0 m
2	2.00			11172		2.00	18			
3			Brownish grey dense silty fine to coarse SAND with some fine gravels	11173		3.00	20			DS: 0.0-1.0 m
4		SW		11174		4.00	29			
5				11175		5.00	34			DS: 0.0-1.0 m
6	6.00			11176		6.00	36			
7			Grey dense to very dense fine to coarse SAND little fine gravels	11177		7.00	42			DS: 0.0-1.0 m
8	8.00			11178		8.00	48			
9				11179		9.00	R			DS: 0.0-1.0 m
10	10.00	SW		11180		10.00	-			
11				11181		11.00	-			DS: 0.0-1.0 m
12	12.00			11182		12.00	48			
13				11183		13.00	49			DS: 0.0-1.0 m
14	14.00			11184		14.00	45			
15				11185		15.00	R			DS: 0.0-1.0 m
16	16.00			11186		16.00	-			
17				11187		17.00	-			DS: 0.0-1.0 m
18				11188		18.00	-			
19				11189		19.00	-			DS: 0.0-1.0 m
20	20.00			11190		20.00	-			

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansour

M/s SOILMAT ENGINEERS		BORING LOG					
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan							
PROJECT: Up-gradation & Improvement of National Highway B/W Karara-Wad Section N-25							
LOCATION: NHA # B 282/2 (J-220) (C/I: 60+160) Station 230							
BOREHOLE LOCATION: 2.0 m from Abt: 02 8.8 m from Road		TYPE OF BORING: Rotary	BORING NO.: 01				
G.W.L.: 1.85 m		DIA OF CASING: 125mm (Ø1)	DATE COMPLETED: 10/02/2005				
S.M.E.: 1:100		DIA OF BORING: 100mm	DATE COMPLETED: 10/02/2005				
SUPERVISOR: GEOL. GATLAZ							
DEPTH (m)	SOIL SYSTEM	SOIL DESCRIPTION	SPT	DEPTH (m)	VALUE	C.R. %	REMARKS
1	GW	Brownish grey very dense sandy GRAVELS with cobbles pebbles (oolites) traces of clay	SPT	1.00	R		DS: 0.0-1.0 m
2			"	2.00	R		DS: 1.0-2.0 m
3			"	3.00	38		DS: 2.0-3.0 m
4		Brownish grey dense fine to coarse SAND little fine to medium gravels traces of silty clay	"	4.00	46		DS: 3.0-4.0 m
5	SW		"	5.00	R		DS: 4.0-5.0 m
6			"	6.00	"		DS: 5.0-6.0 m
7			"	7.00	"		DS: 6.0-7.0 m
8		Off-white chalky LIMESTONE		8.00	45		
9		Light grey dense to very dense clayey silty fine SAND at places medium to fine gravels		9.00	49		
10		ditto - at places cobbles & pebbles		10.00	48		
11			SPT	11.00	R		
12			CPT	12.00	"		
13			SPT	13.00	"		
14			CPT	14.00	47		
15		ditto - no gravels, cobbles and pebbles		15.00	45		
16				16.00	49		
17				17.00	47		
18				18.00	H		
19				19.00	"		
20				20.00	"		

Continued

M/s SOILMAT ENGINEERS		BORING LOG					
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan							
PROJECT: Up-gradation & Improvement of National Highway B/W Karara-Wad Section N-25							
LOCATION: NHA # B 282/2 (J-220) (C/I: 60+160) Station 230							
BOREHOLE LOCATION: 11.0 m from Abt: 01 2.30 m from Road		TYPE OF BORING: Rotary	BORING NO.: 02				
G.W.L.: 2.0 m		DIA OF CASING: 125mm (Ø1.0)	DATE COMPLETED: 10/02/2005				
S.M.E.: 1:100		DIA OF BORING: 100mm	DATE COMPLETED: 10/02/2005				
SUPERVISOR: GEOL. GATLAZ							
DEPTH (m)	SOIL SYSTEM	SOIL DESCRIPTION	SPT	DEPTH (m)	VALUE	C.R. %	REMARKS
1		Brownish grey sandy GRAVELS, traces of clay		1.00			DS: 0.0-1.0 m
2				2.00			DS: 1.0-2.0 m
3				3.00			DS: 2.0-3.0 m
4	GW			4.00			DS: 3.0-4.0 m
5		Light grey hard BASALT		5.00			DS: 4.0-5.0 m
6				6.00			DS: 5.0-6.0 m
7			SPT	7.00		R	DS: 6.0-7.0 m
8		Off-white hard to very hard silty CLAY some sand at places boulders cobbles, pebbles (oolites)		8.00		41	
9				9.00		49	
10			CPT	10.00		R	
11			SPT	11.00		"	
12	CL		CPT	12.00		"	
13			SPT	13.00		"	
14		End of Borehole # 02 at the depth of 14.00 m		14.00		"	

Prepared by: Geol. M. Adam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansour

M/s SOILMAT ENGINEERS		BORING LOG					
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan							
PROJECT: Up-gradation & Improvement of National Highway B/W Karara-Wad Section N-15							
LOCATION: NHA # B 282/2 (J-220) (C/I: 60+160) Station 230							
BOREHOLE LOCATION: 11.0 m from Abt: 01 8.8 m from Road		TYPE OF BORING: Rotary	BORING NO.: 01				
G.W.L.: Not Encountered		DIA OF CASING: 125mm (Ø1.0)	DATE COMPLETED: 10/02/2005				
S.M.E.: 1:100		DIA OF BORING: 100mm	DATE COMPLETED: 10/02/2005				
SUPERVISOR: GEOL. M. ASHRAF							
DEPTH (m)	SOIL SYSTEM	SOIL DESCRIPTION	SPT	DEPTH (m)	VALUE	C.R. %	REMARKS
21		ditto -	SPT	21.00		R	
22		End of Borehole # 01 at the depth of 22.00 m		22.00		"	

Prepared by: Geol. M. Adam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansour

M/s SOILMAT ENGINEERS		BORING LOG					
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan							
PROJECT: Up-gradation & Improvement of National Highway B/W Karara-Wad Section N-25							
LOCATION: NHA # None (C/I: 64+158) Station 253							
BOREHOLE LOCATION: 11.0 m from Abt: 01 8.8 m from Road		TYPE OF BORING: Rotary	BORING NO.: 01				
G.W.L.: Not Encountered		DIA OF CASING: 125mm (Ø1.0)	DATE COMPLETED: 10/02/2005				
S.M.E.: 1:100		DIA OF BORING: 100mm	DATE COMPLETED: 10/02/2005				
SUPERVISOR: GEOL. M. ASHRAF							
DEPTH (m)	SOIL SYSTEM	SOIL DESCRIPTION	SPT	DEPTH (m)	VALUE	C.R. %	REMARKS
1		Brown clayey silty fine SAND traces of gravels	SPT	1.00			DS: 0.0-1.0 m
2		Grey fine GRAVELS and fine to coarse SAND traces of silty clay	"	2.00			DS: 1.0-2.0 m
3			"	3.00			DS: 2.0-3.0 m
4			"	4.00			DS: 3.0-4.0 m
5	GP	ditto - but medium dense	"	5.00		16	DS: 4.0-5.0 m
6			"	6.00		17	
7			"	7.00		20	
8			"	8.00		27	
9		ditto - but dense	"	9.00		38	
10			"	10.00		48	
11			"	11.00		49	
12		ditto - but very dense	"	12.00		R	
13			"	13.00		"	
14			"	14.00		"	
15			"	15.00		"	
16			"	16.00		"	
17			"	17.00		"	
18			"	18.00		"	
19			"	19.00		"	
20			"	20.00		"	

Continued

M/s SOILMAT ENGINEERS		BORING LOG						
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan			BORING NO.: 01					
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25								
LOCATION: NHA # Nine (CH: 64+138) Station 253			Cont. Sheet # 2/2					
DEPTH (m)	SOIL SYSTEM	SOIL DESCRIPTION	TYPE OF SAMPLE	DEPTH (m)	TEST VALUE (kg/cm ²)	C.R.N.	R.O.B.N.	REMARKS
21		ditto	SPT	21.00		R		
22			"	22.00		"		
23			"	23.00		"		
24			"	24.00		"		
25	15.00		"	25.00		"		
End of Borehole # 01 at the depth of 25.00 m								

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansour

M/s SOILMAT ENGINEERS		BORING LOG						
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan			BORING NO.: 02					
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25								
LOCATION: NHA # Nine (CH: 64+138) Station 279			SHEET # 01					
BORING HOLE LOCATION	TYPE OF BORING	BORING NO.	DATE COMPLETED					
13.2 m from Ato: 01 13.3 m from P-1	Rotary	02	11/02/2005					
DIA OF CASING: 125mm (R.O-B)		DIA OF BORING: 100mm						
DIA OF BORING: 100mm		DATE COMPLETED: 11/02/2005						
G.W.L. Not Encountered		DIA OF CORING: NX						
SCALE: 1:100		SUPERVISOR: GEOL. M. ASHIRAF						
DEPTH (m)	SOIL SYSTEM	SOIL DESCRIPTION	TYPE OF SAMPLE	DEPTH (m)	TEST VALUE (kg/cm ²)	C.R.N.	R.O.B.N.	REMARKS
1	SP	Brown medium dense SAND & fine GRAVELS traces of silty clay	SPT	1.00				DS: 0.0-1.0 m
2			"	2.00				
3		Grey medium dense to dense SAND traces of silty gravel	"	3.00				
4			"	4.00				
5	5.50		"	5.00		R		
6		Grey fractured and weathered BASALT	CPT	6.50				DS of Run: 5.50-6.50
7			"	7.50				DS of Run: 6.50-7.50
8	8.50		"	8.50				DS of Run: 7.50-8.50
9		White grey friable fractured soft BASALT	SPT	9.50				
10			"	10.50				
11			"	11.50				
12			"	12.50		R		
13	13.50		"	13.50				
14		Grey fractured and weathered BASALT	CPT	14.50				DS of Run: 13.50-14.50
15			"	15.50				DS of Run: 14.50-15.50
16	16.50		"	16.50				DS of Run: 15.50-16.50
End of Borehole # 02 at the depth of 16.50 m								

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansour

M/s SOILMAT ENGINEERS		BORING LOG						
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan			BORING NO.: 01					
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25								
LOCATION: NHA # Nine (CH: 64+138) Station 279			SHEET # 01					
BORING HOLE LOCATION	TYPE OF BORING	BORING NO.	DATE COMPLETED					
13.2 m from Ato: 01 13.3 m from P-2 13.0 m from Bridge	Rotary	01	10/02/2005					
DIA OF CASING: 125mm (R.O-B)		DIA OF BORING: 100mm						
DIA OF BORING: 100mm		DATE COMPLETED: 10/02/2005						
G.W.L. Not Encountered		DIA OF CORING: NX						
SCALE: 1:100		SUPERVISOR: GEOL. M. ASHIRAF						
DEPTH (m)	SOIL SYSTEM	SOIL DESCRIPTION	TYPE OF SAMPLE	DEPTH (m)	TEST VALUE (kg/cm ²)	C.R.N.	R.O.B.N.	REMARKS
1	1.00	Brownish sandy fine GRAVELS with silty clay	SPT	1.00		20		DS: 0.0-1.0 m
2	2.00	Brown medium dense sandy fine GRAVELS traces of silty clay	"	2.00		24		
3		Grey medium dense SAND traces of silty clay and fine gravels	"	3.00		26		
4			"	4.00		31		
5	5.50		"	5.00		R		
6		Grey fractured fissured and weathered BASALT	CPT	6.50				DS of Run: 5.50-6.50
7			"	7.50				DS of Run: 6.50-7.50
8			"	8.50				DS of Run: 7.50-8.50
9		ditto - but white grey dense	SPT	9.50		47		
10			"	10.50		46		
11			"	11.50		49		
12			"	12.50		R		
13		ditto - but very dense	CPT	13.50				
14			"	14.50				DS of Run: 13.50-14.50
15			"	15.50				DS of Run: 14.50-15.50
16	16.50		"	16.50				DS of Run: 15.50-16.50
End of Borehole # 01 at the depth of 16.50 m								

Prepared by: Geol. M. Aslam Ishaq
Checked by: Geotech Engr. Al-Kazim Mansour

M/s SOILMAT ENGINEERS		BORING LOG						
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/Japan			BORING NO.: 01					
PROJECT: Up-gradation & Improvement of National Highway BAY Karara-Wad Section N-25								
LOCATION: NHA # Nine (CH: 64+138) Station 280			SHEET # 01					
BORING HOLE LOCATION	TYPE OF BORING	BORING NO.	DATE COMPLETED					
21.2 m from Ato: 01 22.0 m from Ato: 01 19.0 m from P-1	Rotary	01	10/02/2005					
DIA OF CASING: 125mm (R.O-B)		DIA OF BORING: 100mm						
DIA OF BORING: 100mm		DATE COMPLETED: 10/02/2005						
G.W.L. Not Encountered		DIA OF CORING: NX						
SCALE: 1:100		SUPERVISOR: GEOL. M. ASHIRAF						
DEPTH (m)	SOIL SYSTEM	SOIL DESCRIPTION	TYPE OF SAMPLE	DEPTH (m)	TEST VALUE (kg/cm ²)	C.R.N.	R.O.B.N.	REMARKS
1		Brown medium dense silty coarse to fine SAND & GRAVELS	SPT	1.00		20		DS: 0.0-1.0 m
2	2.00		"	2.00		22		
3		Greyish brown medium dense SAND with brown silty clay	"	3.00		28		
4		Plak medium dense sandy silty CLAY occasional gravels	"	4.50				
5	5.50		"	5.50		R		
6		Cutting pieces of BORTLENS COBBLES & PEBBLES with gravels and sand	CPT	6.50				DS of Run: 5.50-6.50
7	6.50		"	6.50		47		
8		Brownish grey dense sandy fine GRAVELS	SPT	7.50		40		
9	8.00		"	7.50				
10		Cutting pieces of COBBLES PEBBLES with sandy gravels	CPT	9.00				DS of Run: 8.00-9.00
11		Grey weathered BASALT fragments	"	10.00				
12			"	10.50				
13		Grey BASALT	"	11.50				
14	11.00		"	11.00				
End of Borehole # 01 at the depth of 11.00 m								

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Checked by: Geotech Engr. Al-Kazim Mansour

M/s SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan										
PROJECT: Up-gradation & Improvement of National Highway, RVV Kavara-Wadi Section N-25										
LOCATION: NH-6 B-2441 (CH: 22+850) Station 72			SHEET # 11							
BOREHOLE LOCATION: 2.0 m from Ridge 2.0 m from Abc: 01		TYPE OF BORING: Rotary	BORING NO.: 01							
		DIA OF CASING: 125mm (Ø1.25)								
		DIA OF BORING: 100mm	DATE COMMENCED: 16/01/2005							
E.L.: 2.00		DIA OF CORING: 75	DATE COMPLETED: 17/01/2005							
S.M.L.: 11.00		SUPERVISOR: GEOL. M. ASHRAF/INTIAC								
DEPTH (M)	STARTING DEPTH (M)	END DEPTH (M)	SOIL DESCRIPTION	SOIL SYMBOLS	TYPE OF SAMPLE	DEPTH (CM)	WET WEIGHT (g)	WET VOL (cc)	WATER CONTENT (%)	REMARKS
1	1.00	-	Grey fine GRAVELS with silty fine to coarse sand	1:1:1:1	NPT	1.00	12			DN: 0.0-1.0
2		2.00	Grey medium dense fine to coarse SAND little fine gravels	1:1:1:1	"	2.00	13			
3		3.00		1:1:1:1	"	3.00	15			
4		4.00	ditto - traces of gravels	1:1:1:1	"	4.00	16			
5		5.00		1:1:1:1	"	5.00	17			
6		6.00		1:1:1:1	"	6.00	20			
7		7.00		1:1:1:1	"	7.00	21			
8		8.00		1:1:1:1	"	8.00	24			
9		9.00		1:1:1:1	"	9.00	27			
10		10.00	ditto - but dense	1:1:1:1	"	10.00	46			
11	10.00	-		1:1:1:1	"	11.00	49			
12		12.00	Grey very dense fine to coarse SAND traces of silty gravels occasional pebbles and cobbles cuttings	1:1:1:1	"	12.00	R			
13		13.00		1:1:1:1	"	13.00	"			
14		14.00		1:1:1:1	"	14.00	"			
15		15.00		1:1:1:1	"	15.00	"			
16	16.00	-		1:1:1:1	"	16.00	"			
			End of Borehole # 01 at the depth of 16.00 m							

Prepared by: Geol. M. Ashraf
Checked by: Geotech Engr. M-Kazim Mansour

M/s SOILMAT ENGINEERS		BORING LOG								
CLIENT: M/s Construction Project Consultants Inc. (CPC) Tokyo/ Japan										
PROJECT: Up-gradation & Improvement of National Highway, RVV Kavara-Wadi Section N-25										
LOCATION: NH-6 B-2441 (CH: 22+850) Station 72			SHEET # 11							
BOREHOLE LOCATION: 2.0 m from Ridge 2.0 m from Abc: 02		TYPE OF BORING: Rotary	BORING NO.: 02							
		DIA OF CASING: 125mm (Ø1.25)								
		DIA OF BORING: 100mm	DATE COMMENCED: 16/01/2005							
E.L.: 2.00		DIA OF CORING: 75	DATE COMPLETED: 17/01/2005							
S.M.L.: 11.00		SUPERVISOR: GEOL. M. ASHRAF/INTIAC								
DEPTH (M)	STARTING DEPTH (M)	END DEPTH (M)	SOIL DESCRIPTION	SOIL SYMBOLS	TYPE OF SAMPLE	DEPTH (CM)	WET WEIGHT (g)	WET VOL (cc)	WATER CONTENT (%)	REMARKS
1	1.00	-	Grey fine GRAVELS with fine to coarse sand	1:1:1:1	NPT	1.00	9			DN: 0.0-1.0
2		2.00	Grey loose fine to coarse SAND traces of fine gravels and silt	1:1:1:1	"	2.00	10			
3	2.00	-		1:1:1:1	"	3.00	11			
4		4.00	Grey medium dense fine to coarse SAND traces of silt	1:1:1:1	"	4.00	12			
5		5.00		1:1:1:1	"	5.00	16			
6		6.00		1:1:1:1	"	6.00	16			
7		7.00		1:1:1:1	"	7.00	17			
8		8.00		1:1:1:1	"	8.00	26			
9		9.00	ditto - but dense, some gravels	1:1:1:1	"	9.00	40			
10	10.00	-		1:1:1:1	"	10.00	48			
11		11.00	Grey very dense silty fine to coarse SAND occasional gravels pebbles and cobbles (cuttings)	1:1:1:1	"	11.00	R			
12		12.00		1:1:1:1	"	12.00	"			
13		13.00		1:1:1:1	"	13.00	"			
14		14.00		1:1:1:1	"	14.00	"			
15		15.00		1:1:1:1	"	15.00	"			
			End of Borehole # 02 at the depth of 15.00 m							

Prepared by: Geol. M. Ashraf
Checked by: Geotech Engr. M-Kazim Mansour