-	01	FC1	r: P	asi	g-N	larikina River Channel I	mp. I	Pro	j.	(I	SROL MLLV	JND N = 3	ELE Zero	EV. Datı	um)+	14	.90	9_					R:				
		ON			1	Bank, Santolan, Pasio	3		- }	S	TAT	ION	NO		9 -	+ 14	10		1				D:				
LO	JAI	BMI	L-26	3 D	ATE	DRILLED: 04 - 05 Janu	uary 2	200	1		NEA OOF			ES:		A I 616		2.50		N			0843			1101	=
BH	NO:	100	T	NO				DL	OVV.	s						T			ATTER	DEDC		UNCO	NFINED	SIE	VE AN		
DEPTH, m	SAMPLE NO.	RECOVERY (%)	LOG SYMBOL	CLASSIFICATION	RaD	DESCRIPTION	-	15	15 cm	15		PENE	(SI (N-V/	TION PT) ALUE	TEST		CONTENT, %	TOTAL UNIT WEIGHT, g/cc	LIQUID LIMIT, %	PLASTICITY SI	SPECIFIC		STRAIN % . %	4	10	40	T
muhandanda	ss-1	56		СН		Sandy CLAY; brown; 22% sand; 75% high plasticity of VERY SOFT to SOFT.			0/15							-	30		58	37	2.61			99	99	97	
3	SS-2 SS-3	100		SP SM		Silty Gravelly SAND; bro 26% sub-angular gravel; coarse sand; 36% medium s 13% fine sand with 11% r	14% and; non-	1	2	7		1					13				2.64			74	60	24	
4	SS-4 SS-5					plastic silt; LOOSE To VI DENSE.	ERT	15 50 7	15	12			1		1												1
5 6	\$\$-5 \$\$-6					Sandy CLAY; grayish brow light brown; 16% fine to co	arse	7	7	7		1					19		57	27	2.61			94	90	84	-
1 7	SS-7	100				sand with traces of sub-rour gravel; 78% high plasticity FIRM To VERY STIFF.		2	4	3	(_								-
8	SS-8	100				Silty CLAY; grayish brown;	01%	6	8	8		1												_		_	-
9	SS-9	100				high plasticity clay with trace fine sand; VERY STIFF.	es of	7	7	12		\					22		62	42	2.60			100	99	98	-
10	SS-10	100				Silty CLAY; brown; high plas clay with sub-angular gra HARD.		13	19	31				1													
ահասեստե	SS-11	100		СН			,	10	10	15				/													
12	SS-12	100				Sandy CLAY; brown; 26% sand; 73% high plasticity VERY STIFF.		7	9	12							25		55	34	2.61	-	-	100	99	99	
13	SS-13	100						6	8	8										-		_	-	-	_		
14	SS-14	100				-		6	7	8								_	-	-	-	-	-	-	_	-	_
15	SS-15	100				Silty CLAY; brown; 94% plasticity clay with little am of fine to medium sand; V	ount	7	7	9							24		69	34	2.60	-	-	-	100	96	3
16	SS-16	100				STIFF.		6	9	8								_	-	-	_	-	_	_		-	_
17	SS-17	100 100 100				Silty CLAY; brown; 96%		8	9	11									_	-	-	-	-	-	_	-	_
18	SS-18	100				plasticity clay with little am of coarse sand. VERY S To HARD.	ount TIFF	8	10	13	-						58	_	68	48	2.60	-		100	96	96	3
19	SS-19	100	VIII	-	_	Clayey SILT; gray with trace	es of	14	14	16	-		\					_	-	-	-	-	-	-	-	-	_
20	SS-20	100		ML		fine sand; slight plasticity; HA End of Borehole (20.00 r	ARD. n)		19									_	LEGI	ENID							_
F						FECHNOLOGY AND EMENT CORPORATION	MA								ER A	CE		-					PLIT SI			PLE	
L	1	\mathbb{U}	2n	d F	loor	Prudential Bank Building,	DR						D.	BA	STAL	IRA	_	-		X I	ι	JDS -	VASH S	TURB	BED S	AMPI	LE
	祖州县	120	13	77	A. 1	Mabini St., Ermita, Manila	SU	PE	RV	IS	OR	:			LAFU			_		*			ORE S			YSIS	

MLL - 27

-	-	=C1	: F	asi	g-N	larikina River Channel Imp.	Pro	oj.	(GROUND MLLW = 2	ELE'	V. Datum)	+ 1	16.7	71_					R:				
						Bank, Santolan, Pasig				STATION			9+	375		1				D:				1
LOC	AT	ION:	-	7 [ATE	EDRILLED: 05 - 06 January 2	001		1	WEATHE		C.	F A	I R 1688	1 50	1				0: 0859			/M	=
BHN	0:			Z		Ditherap	В	LOW	-	OORDIN	MIE	S	10	1		ATTER	RBERG	l, _		NFINED		VE AN	NALY:	56
DEPTH, m	SAMPLE NO.	RECOVERY (%) SAMPLE	LOG SYMBOL	CLASSIFICATION	RaD	DESCRIPTION	15	15 cm	15	PENE	(SP (N-VAI	ION TES		NATURAL MOIST.	TOTAL UNIT WEIGHT, g/cc	LIM		۷۲	COMP.	TEST	% P/	10		-
_ 1 S		100		sc		Clayey SAND; brown; 47% high plasticity clay; 52% fine sand; LOOSE.		2	3					34		57	36	2.62				100	99	
	S-2 S-3	100				Sandy CLAY; brown; 22% fine	2	1	1					36		65	43	2.61				100	99	
	s-4	89		CH		sand; 77% high plasticity clay; SOFT to STIFF.	3	7	5							-								
	S-5 S-6	89		SP SM		Gravelly SAND; brownish gray; 16% angular gravel; 12% coarse sand; 66% fine to medium sand; traces of non-plastic silt; LOOSE.		2						15				2.64			84	72	32	
_ ₇ s	S-7	89				Silty Sandy GRAVEL; gray; 21% coarse sand; 15% medium		11																
-	S-8 S-9	89		GM		sand with traces of fine sand; 43% sub-angular gravel; 15% non-plastic silt; MEDIUM DENSE to DENSE.	7	9	22					13				2,66			57,	36	21	
10 S	S-10	100					18	14	17					-							+-			
-11 S	S-11 S-12							11						41		74	50	2.60			100	99	98	
-	S-13	89		СН		Silty CLAY; grayish brown to brown; 88 - 94% high plasticity silty clay with traces of fine sand;		12																
_	S-14	89				Generally VERY STIFF.	11	14	18			,		_										
-	S-15 S-16	89						10						33		67	44	2.60			99	98	97	
	S-17	94		ML		Clayey SILT; brown; traces of fine sand; slight plasticity; HARD.	T	43	7															
17 SS		ti ta				End of Borehole (16.87 m)		75																
			M. 2n	AN/	AGE	MENT CORPORATION Prudential Bank Building,	L CH ILL PEI	EF	₹:	 OR:	R. I. L	KER ANDO UENGO EST	AS AUR	Ą			ND:	V	WS - W JDS - U CR - CO	PLIT SE VASH S UNDIST	SAMPL TURB AMPL	.E ED S/ E	AMPL	

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MLL - 28 GROUND ELEV. PROJECT: Pasig-Marikina River Channel Imp. Proj. 0.75 DEPTH OF WATER: + 14.560 (MLLW = Zero Datum) 19 Dec. 200 DATE MEASURED: STATION NO .: 9 + 650L. Bank, Santolan, Pasig LOCATION: TIME MEASURED: 5:00 PM WEATHER: FAIR BH NO: BMLL-28 DATE DRILLED: 18 - 19 December 2000 COORDINATES: 1617140.650 508741.650 BLOWS (SPT) ATTERBERG UNCONFINED SIEVE ANALYS SYMBOL STANDARD CLASSIFICATI RECOVERY (* SAMPLE ROD PENETRATION TEST DESCRIPTION SPECI PLASTICITY INDEX, % SAMPLE DEPTH, STRENGT kg/cm² 15 cm (SPT) LIQUID LIMIT, % STRAIN A, % 4 10 40 (N-VALUE) 20 30 Sandy CLAY; brown; 10% fine sand with traces of coarse to medium sand and gravel; 76% high plasticity clay; SOFT. 2 45 72 49 2.61 91 89 86 100 **SS-1** 2 2 100 SS-2 CH Sandy CLAY; gray to dark gray; 2 100 traces of fine sand; 91% high 2 46 68 44 2.60 SS-3 89 plasticity silty clay; SOFT. 100 SS-4 2 100 SS-5 Sandy CLAY; light gray to light brown; 16% coarse to medium 2.61 76 68 sand; 10% fine sand with 16% 5 9 41 84 89 SS-6 CL sub-angular gravel; 58% low plasticity clay; STIFF to VERY 4 6 22 89 SS-7 5 7 100 SS-8 8 9 79 50 2.60 100 99 SS-9 100 33 Silty CLAY; light gray to light brown; 91-98% high plasticity silty clay; STIFF to HARD. SS-10 100 7 7 11 SS-11 100 10 12 12 SS-12 100 100 13 15 15 25 38 2.60 59 SS-13 100 15 16 20 SS-14 100 11 15 17 SS-15 100 13 18 14 39 68 100 99 47 2.60 Sandy CLAY; brown; 12-14% fine sand; 85-87% high plasticity clay; HARD To VERY STIFF. SS-16 100 9 5 6 SS-17 100 6 8 8 SS-18 100 7 10 11 100 99 50 66 46 2.61 Silty SAND; brown; fine sand; SS-19 100 non-plastic silty fines; MEDIUM 10 10 12 SM DENSE to DENSE. SS-20 100 End of Borehole (20.00 m) BASIC TECHNOLOGY AND LEGEND: ACKER ACE MACHINE: MANAGEMENT CORPORATION SS - SPLIT SPOON SAMPLE

Figure 5-3-3 (63/221) BORING LOGS (PHASEI)

DRILLER:

SUPERVISOR:

2nd Floor Prudential Bank Building,

1377 A. Mabini St., Ermita, Manila

WS - WASH SAMPLE

CR - CORE SAMPLE W/ HYDROMETER ANALYSIS

UDS - UNDISTURBED SAMPLE

X

J. MADERA

M. ESTAURA

	L BOREHOLL LOG			GR	OUND	ELE	V.				DE	РТН	OF W	ATER	R:	3.	70	
PROJECT: Pasig-Mai	rikina River Channel Imp	. Pro	<u>J</u> .					n) <u>+ ´</u> 9 + °		05_	DA	TE I	MEAS	URE	D: <u>1</u>	5 De	ec, 2	200
I Rar	ok Santolan, Pasig Rivel	ı			EATH			FA	IR			ME N	MEAS):			M
BH NO: BMLL-29 DATE	DRILLED: 14 - 15 Decembe	er 20	Lows		ORDI	NATE	S: _	16	1742 T	0.75		N BERG			0875		VE AN	ALYS
BOL ATION			(SPT)		PEN	STAND		EST	MOIST.	UNIT 9/cc							ASSING	
SAMPLE NO. RECOVERY (%) SAMPLE LOG SYMBOL CLASSIFICATION RQD	DESCRIPTION		15 1 cm c	15 :m		(SP (N-VA 20 30	T) LUE)		NATURAL MOIST.	TOTAL	LIQUID LIMIT, %	PLASTICIT INDEX, %	SPECIFIC GRAVITY	STRENGTH kg/cm²	STRAIN ∑, %	4	10	40
SS-1 100		1	2	2					36				2.63				100	99
SM	Silty SAND; brown; 23-27% non-plastic silt; 72-76% fine sand; VERY LOOSE.	6 1	1	2					-									
3 SS-3 100		2	1	2					37				2.63				100	99
SS-4 100 SP SS-6 100 GP SS-7 66	SAND; dark gray; 25% mediur sand; 71% fine sand with littl amount of non-plastic sil LOOSE.	m le 2																
SS-6 100 GP	Sandy GRAVEL; dark gray; fir sand with traces of non-plastic si sub-angular gravel; VERY DENSI	ne ilt:		25			~		_33				2.63			100	99	74
8 SS-8 100 9 SS-9 100 SS-10 100	Silty CLAY; grayish brown light brown; 97% high plastic clay; STIFF to VERY STIFF	to ity F.	7 8	5					31		73	51	2.60			10	100	99
SS-11 100 CH	Sandy CLAY; light brown; 20 fine sand; 79% high plastic clay; VERY STIFF.	0% sity	8 10	12					3:	2	76	3 49	2.6				100	98
13 SS-13 100 CH 14 SS-14 100 15 SS-15 100 16 SS-16 100	Silty CLAY; light brown; 9 high plasticity clay; HARD.	7%	10 19	9 22	2				2	6	56	33	3 2.6	0			100	9:
18 SS-18 100 SS-19 100	Sandy CLAY; brown; 25% sand; 74% high plasticity contact HARD.	fine lay;	8 1	5 1	8				3	96	5	8 3	2 2.6	51			100	0 9
= 20 SS-20 100	End of Borehole (20.00 m)	13 1	15 2	0				\perp		1						_	\perp
MANAG	TECHNOLOGY AND EMENT CORPORATION		CHII ILLE					ER A			LEC	SEND	:	ws -	SPLIT S WASH	SAME	PLE	
1377 A.	or Prudential Bank Building, Mabini St., Ermita, Manila	SU	PER	VIS	SOR:		M. I	ESTA	JRA			*	THE REAL PROPERTY.	CR-	CORE	SAMP	LE	
	Figure 5-3-3 (64/221)	B	JKTI	NG	LO) CL	rHZ	ASEI)										

-	Q.I	ECT	: F	asi	g-N	larikina River Channel In	np. F	ro	j.	G (I	SRO! MLL	UND W = 2	ELI Zero	EV. Datı	ım) _	+ 1	5.8	36					R:				m.
		· IAO			1	Bank, Santolan, Pasig			}	r		THE).: _		0 +			l				D: D:				0
LO	CAL	PAAL	1-3	0 0	ATE	DRILLED: 13 - 14 Decem	ber	200	00	-		RDIN		ES:		F A 161		27.2	-	N			08,7			141	<u> </u>
BH	NO:	DIVIL		NO			-		.OW SPT)	s									ATTER	acna		UNCO	(FINED	SIE	VE AN		SIS
DEPTH, m	SAMPLE NO.	RECOVERY (%) SAMPLE	LOG SYMBO	CLASSIFICATION	RaD	DESCRIPTION		15	15 cm	15		PENE	TRA (SI	PT) NLUE)	TEST)	NATURAL MOIS	TOTAL UNIT WEIGHT, g/∞	LIMIT, %	PLASTICITY INDEX, %	SPECIFIC	STRENGTH Kg/cm²		4	10		200
1	SS-1	100		SM		Silty SAND; brown; 27-46 non-plastic silt; 49-69% fi sand; LOOSE to MEDIU	ine		2		1						31				2.63			99	99	96	27
_ 2	\$\$-2 \$\$-3	X				DENSE.			3		\						32				2.63			98	97	95	46
		X	::: :::	GP		Sandy GRAVEL; gray; fine medium sand; angular grav non-plastic; MEDIUM DENS	vel;	9	10	10															_		
_ 4	SS-4 SS-5	X						12	12	13																	
6	SS-6	100		СН		Silty CLAY; light; 92% hi plasticity silty clay with lit amount of fine sand; STIFF VERY STIFF.	ttle	4	5	8							27		58	30	2.61			100	99	97	92
7	SS-7	100						7	9	10										_							_
8	SS-8	100 X			_	Clayey GRAVEL; light gray	, to	6	8	10																	
9	SS-9	100		GC		light brown; 8% fine to coa sand; 41% high plasticity cl 51% angular gravel; MEDII DENSE to VERY DENSE.	irse lay; UM	11	12	14							36		56	25	2.64			49	47	43	41
10	SS-10	98		le				15	22	14																	
	SS-11 SS-12	100				Silty SAND; brown; 30% n plastic silt; 12% medium sa	ion-		20	20							29				2.63				100	88	30
-13		100		SM		58% fine sand; DENSE VERY DENSE.	to		29	21											2.03				100		
-14	SS-14	100		C.		Silty SAND; brown; 37% n	ion-	22	24	25																	
-15	SS-15	79				plastic silt; 61% fine sar VERY DENSE. End of Borehole	nd:	13	15	35 8							30				2.63			100	99	98	37
-16 - -17						(14.92 m)																					
- -18																											
-19 - 20	End of Borehole (14.92 m)																										
P																											
	BASIC TECHNOLOGY AND MACHINE: ACKER ACE LEGEND: MANAGEMENT CORPORATION MACHINE: ACKER ACE SS-SPLIT SPOON SAMPLE																										
-			13	77	A. N	Frudential Bank Building,	SUP				OR:		٨	1. E	STA	URA JER		-	1		C	DS - L R - CC	NDIS1	TURBI AMPLI	ED SA E		1
9				-	-	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-01				- 1 1		TAI -	VIL	-00	1		- [*	V	// HYD	ROME	TER	ANALY	YSIS	

SHEET 1 OF 1 MLL - 31 PROJECT: Pasig-Marikina River Channel Imp. Proj. GROUND ELEV. DEPTH OF WATER: _ 1.20 (MLLW = Zero Datum) + 14.832 DATE MEASURED: 19 Dec. 2000 STATION NO.: ____10 + 460 L. Bank, Santolan, Pasig TIME MEASURED: WEATHER: 5:00 PM FAIR BH NO: BMLL-31 DATE DRILLED: 13 - 14 December 2000 COORDINATES: 1617925.500 508865.500 E **BLOWS** ATTERBERG UNCONFINED SIEVE ANALYSIS (SPT) LIMITS COMP. TEST % PASSING SIEVE STANDARD TOTAL UP WEIGHT, LIQUID LIMIT, % SPECIFIC PENETRATION TEST DESCRIPTION PLASTICITY INDEX, % (SPT) STRENGTH kg/cm² 15 cm 15 15 cm STRAIN A. % 4 10 40 200 (N-VALUE) 10 20 30 40 39 63 34 2.60 100 97 Sandy CLAY; brown to brownish 85 gray; 12-25% fine sand, 73 -85% medium to high plasticity 2 50 30 2.61 100 98 73 Gravelly SAND; brown; subangular gravel; fine to medium sand; LOOSE. 2 4 Silty CLAY; grayish brown; slight to medium plasticity with traces of fine sand; STIFF. 5 5 Silty SAND; brown; 26% medium sand; 39% fine sand; 30% nonplastic silt; DENSE. 14 16 19 25 2.63 97 95 69 30 15 29 32 Sandy CLAY; brown to light brown; 11% fine sand with traces of medium sand; 81% 15 20 35 high plasticity clay; HARD. 13 16 20 37 32 2.61 100 98 92 81 15 20 31 Sandy CLAY; light brown; 15% coarse sand; 13% medium sand with traces of fine sand; 24% 13 27 36 sub-angular gravel; 39% low plasticity clay; HARD. 50 12 42 10 2.63 76 61 48 39 CORING CONGLOMERATE; brownish gray; broken core; HARD. CORING CORING End of Borehole (15.00 m)

BASIC TECHNOLOGY AND MANAGEMENT CORPORATION 2nd Floor Prudential Bank Building, 1377 A. Mabini St., Ermita, Manila

LOCATION:

SAMPLE

SS-1

SS-2 78

SS-3

SS-5 71

SS-6

SS-7 56

SS-9 67

SS-10 67

SS-11 67

SS-12 50

CR-1 8

CR-2 5

CR-3 10 CLASSIFICATION

CH

GW

CL

SM

CH

CL

0

0

0

0: 0

0. CG clay; SOFT.

SYMBOL

LOG

RECOVERY (*

67

89

80 SS-4

56

22 **SS-8**

> MACHINE: ___ ACKER ACE D. ANDOYO DRILLER: SUPERVISOR: M. ESTAURA

LEGEND: X

SS - SPLIT SPOON SAMPLE WS - WASH SAMPLE UDS - UNDISTURBED SAMPLE CR - CORE SAMPLE W/ HYDROMETER ANALYSIS

SHEET 1 OF 1

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MLL - 32 GROUND ELEV. ROJECT: Pasig-Marikina River Channel Imp. Proj. DEPTH OF WATER: 2.00 (MLLW = Zero Datum) __ + 15.345 DATE MEASURED: 27 Dec. 2000 STATION NO.: 10 + 850L. Bank, Calumpang, Marikina TIME MEASURED: DCATION: WEATHER: 5:00 PM FAIR HNO: BMLL-32 DATE DRILLED: 22 - 26 December 2000 COORDINATES: 1617919.500 509067.500 BLOWS UNCONFINED SIEVE ANALYSIS CLASSIFICATION LIMITS COMP. TEST % PASSING SIEVE SYMBOL STANDARD SAMPLE NO PENETRATION TEST TOTAL UN WEIGHT, LIQUID LIMIT, % RECOVERY SAMPLE PLASTICITY INDEX, % STRENGTH kg/cm² STRAIN M, % DESCRIPTION (SPT) 15 15 15 cm 4 10 40 20 LOG (N-VALUE) 10 20 30 40 Silty SAND; brown; 45% Fine sand; 59% fine sand with little 39 amount of gravel and medium 2.62 97 97 94 100 SS-1 sand; 45% non-plastic silt; LOOSE To MEDIUM DENSE. SM 3 5 5 78 Sitty SAND; brown; 12% sub-rounded gravel; 35% non-plastic silt; 16% medium sand and 34% fine sand with little amount of coarse sand; LOOSE. 6 5 1 2.63 88 85 69 67 SS-3 Gravelly CLAY; light brown; 19% sub-rounded gravel with traces of fine sand; 72% high plasticity clay; STIFF to VERY STIFF. 3 6 7 89 CH 9 10 10 SS-5 89 7 13 27 100 62 35 2.61 SS-6 81 80 79 72 11 12 66 SS-7 16 17 100 17 **SS-8** Silty SAND; brown; 46% low SM plasticity silt; 51% fine sand; MEDIUM DENSE to DENSE. 100 10 13 34 2.62 99 99 97 SS-10 100 11 13 15 100 SS-11 8 14 14 SS-12 100 10 15 16 29 50 26 2.61 100 98 78 SS-13 89 14 21 21 Sandy CLAY; brown to gray; 20-34% fine sand, 66-78% high CH SS-14 89 plasticity clay; HARD. 13 18 20 SS-15 44 11 16 22 28 55 33 2.61 100 66* SS-16 78 15 21 32 SS-17 56 16 18 23 End of Borehole (17.00 m) BASIC TECHNOLOGY AND LEGEND: MANAGEMENT CORPORATION MACHINE: __ ACKER ACE SS - SPLIT SPOON SAMPLE 2nd Floor Prudential Bank Building, DRILLER: J. MADERA 1377 A. Mabini St., Ermita, Manila WS - WASH SAMPLE UDS - UNDISTURBED SAMPLE M. ESTAURA M. VILLAFUERTE SUPERVISOR: CR - CORE SAMPLE W/ HYDROMETER ANALYSIS

SHEET 1 OF 1

_	101	FC	T:	P	as	ig-N	larikina River Channel In	np.	Pro	oj.	(SRC MLL	W =	EL Zero	EV. Dat	tum) _	+ 1	3.2	25					R:	200	1.00		-
						1 F	Bank, Calumpang, Mariki	na).: ₋	1				1				D:(1
LO	CAT	ION		2	2 [DAT	E DRILLED: 03 - 05 Janua	ary 2	200)1	1		RDII		E0:		FA		31.50	1				D:			γM.	_
BH	NO:	BN		-30	Z				В	LOV			KUII	VAI	ES.					ATTE	20500	l, _		NFINED			NALY	_
DEPTH, m	SAMPLE NO.	RECOVERY (%)	DAMPLE	LOG SYMBOL	CLASSIFICATION	RaD	DESCRIPTION		15	15 cm	15		PEN	(S (N-V	TION PT) ALUE	I TEST		NATURAL MOIST.	TOTAL UNIT WEIGHT, g/cc	LIQUID LIMIT, %	PLASTICITY SIINDEX, %	SPECIFIC	COMF	. TEST			NG SI	E
1	SS-1	89	X		CH		Sandy CLAY; brown; 32% fi sand; 67% high plasticity cla SOFT.	ine ay;	3	1	1							49		57	36	2.61				100	99	-
2	SS-2 SS-3	33 67	X				Sandy CLAY; brown; 27% fine sand bittle amount of gravel and coarse to med sand; 63% high plasticity clay; SOFT.		1									38		54	35	2.61			96	94	90	
3	SS-4	22							5	5	5	/													+-	•		
- 5	SS-5	22	AL X		СН		Sandy CLAY; brownish gray brown; 29% fine sand with lit amount of medium sand; 63 high plasticity clay; STIFF.	ttle	5	6	4																	-
6	SS-6	44	X				ingli praesiony stay,		5	6	7							33		55	37	2.61			99	98	92	(
_7 _	SS-7	44	Y.							7																		-
8	SS-8 SS-9	78	X				Silty CLAY; light brown grayish brown; contains lit amount of medium to coar	ttle rse		9	10							39		59	32	2.60			99	97	94	
10	SS-10	78					sand and traces of fine sar 85% high plasticity silty cla VERY STIFF to HARD.		9	14	20			/	1													
- 11	SS-11	80							12	16	23				$ \ $													
-12	SS-12	89	X		ML		Gravelly SILT; brown; 14% su angular gravel with 10% fi sand and traces of medium	ine to	6	7	9		(1				22		51	30	2.61			86	81	77	
13	SS-13	89	A I				coarse sand; 67% mediu plasticity silt; VERY STIFF.		7	11	17)	,														
14		-	X		SM		Silty SAND; brown; 38% no plastic silt; 57% fine sand w little amount of medium sar DENSE to VERY DENSE.	ith	<u>15</u>	20	27																	
15	SS-15	78	1	11			End of Borehole (15.00 m)		17	21	32							28				2.63			99	98	95	1
-17 -18 -19		67																										
F		7		AIL	IAM	GE	MENT CORPORATION	MAC				_				RA			-	EGEN	U.S.	ss	- SPL	IT SPO	эон з	SAMP	LE	_
1					1.1	OOL	Prudential Bank Building.	DRIL				\P		D.	SAY	SON	JRA		-			UE	s - U	SH SA NDISTI RE SA	URBE	DSA	MPLE	:
	1		-	-	-		ot., Ettilita, ivianila	SUP	Ch	(VI	20	M.		M	VILL	AFU	ERI	E_	-		*			COME			212	

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MLL - 34 PROJECT: Pasig-Marikina River Channel Imp. Proj. GROUND ELEV. DEPTH OF WATER: 1.00 (MLLW = Zero Datum) +15.942DATE MEASURED: 28 Dec. 2000 STATION NO .: _ 11 + 450L. Bank, Calumpang, Marikina TIME MEASURED: WEATHER: 7:00 AM FAIR LOCATION: BH NO: BMLL-34 DATE DRILLED: 27 - 28 December 2000 COORDINATES: 1617462.100 509451.100 BLOWS UNCONFINED SIEVE ANALYSIS NATURAL MOIST. CONTENT, % TOTAL UNIT WEIGHT, 9/cc LIQUID LIMIT, % % PASSING SIEV LIMITS COMP. TEST STANDARD SYMBOL CLASSIFICAT RECOVERY (PENETRATION TEST SPECIFI 8 DESCRIPTION PLASTICITY INDEX, % (SPT) STRENGT: kg/cm² 15 15 15 STRAIN SAMPLE DEPTH cm 4 10 40 LOG (N-VALUE) 20 30 40 Sandy CLAY; brown; 20% fine sand; 79% high plasticity clay; 31 57 30 2.61 100 99 99 78 SS-1 CH FIRM To STIFF. 5 6 78 SS-2 Sandy GRAVEL; brown; 14% coarse sand; 17% medium sand 7 8 2.65 41 27 10 with traces of fine sand; 59% 44 SS-3 GM sub-rounded and sub-angular gravel; MEDIUM DENSE. 6 7 56 SS-4 5 6 78 SS-5 - 5 Silty CLAY; light grayish brown; 4 6 30 82 57 2.60 99 5 100 99% high plasticity silty clay; 67 STIFF to VERY STIFF. 5 6 CH 78 SS-7 9 13 SS-8 44 Gravelly CLAY; brown; 22% sub-rounded gravel; 14% fine to coarse sand; 64% high plasticity clay; VERY STIFF To HARD. 12 15 57 35 2.62 70 66 SS-9 100 13 17 SS-10 89 - 10 Sandy CLAY; dark brown to brown; 25% fine sand with little 17 21 19 SS-11 78 CL amount of coarse to medium sand; 67% high plasticity clay; VERY STIFF to HARD. SS-12 67 14 15 15 32 57 36 2.61 99 96 92 6 SS-13 78 -13 14 14 17 SS-14 89 10 14 15 Sandy CLAY; brown to gray; 17-SS-15 29% fine sand; 71-80% high plasticity clay; HARD. CH 89 11 14 16 30 2.61 100 7 SS-16 100 14 17 18 SS-17 89 13 18 18 SS-18 67 15 20 22 29 63 40 2.61 99 98 97 8 Sandy SILT; dark gray; fine SS-19 67 ML 17 27 31 sand; non-plastic silt; HARD. End of Borehole (20.00 m) BASIC TECHNOLOGY AND LEGEND: MACHINE: ACKER ACE MANAGEMENT CORPORATION SS - SPLIT SPOON SAMPLE X 2nd Floor Prudential Bank Building D. ANDOYO DRILLER: WS - WASH SAMPLE UDS - UNDISTURBED SAMPLE 1377 A. Mabini St., Ermita, Manila M. ESTAURA M. VILLAFUERTE SUPERVISOR: CR - CORE SAMPLE W/ HYDROMETER ANALYSIS

Figure 5-3-3 (69/221) BORING LOGS (PHASEI)

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MLL - 35 ROJECT: Pasig-Marikina River Channel Imp. Proj. GROUND ELEV. 4.00 DEPTH OF WATER: (MLLW = Zero Datum) _ + 15.103 DATE MEASURED: 29 Dec. 2000 STATION NO .: _ 11 + 750L. Bank, Calumpang, Marikina DCATION: WEATHER: TIME MEASURED: 8:00 AM FAIR H NO: BMLL-35 DATE DRILLED: 22 - 29 December 2000 COORDINATES: 1617345.500 509768.500 BLOWS ATTERBERG LIMITS UNCONFINED COMP. TEST SIEVE ANALYSIS % PASSING SIEVE SYMBOL STANDARD CLASSIFICAT RECOVERY (SAMPLE NO PENETRATION TEST ROD DESCRIPTION PLASTICITY NDEX, % STRENGTH kg/cm² (SPT) LIQUID LIMIT, % SPEC 15 STRAIN A, % 15 cm 10 40 200 (N-VALUE) 20 30 Sandy CLAY; brown; 29% fine 35 2.61 sand; 65% high plasticity clay; CH 89 SS-1 2 SS-2 100 Sandy GRAVEL; grayish brown; 28% medium to coarse sand with traces of fine sand; 46% sub-GM rounded gravel; 18% non-plastic silt, VERY DENSE. 25 25 25 20 2.64 54 39 26 89 SS-3 5 6 89 Silty CLAY; grayish brown; 88% high plasticity silty clay with 11% CH SS-5 89 fine to coarse sand; FIRM to STIFF 3 4 33 39 2.60 99 96 92 88* 89 SS-6 6 6 7 SS-7 89 9 13 15 100 SS-8 Gravelly CLAY; brown; 5% medium sand with traces of fine sand and little amount of coarse 70 65 13 14 17 26 49 24 2.62 73 SS-9 100 CL sand; 27% sub-angular gravel; 57% medium plasticity clay; VERY STIFF to HARD. SS-10 100 16 15 18 SS-11 100 13 13 17 SS-12 89 Sandy CLAY; brown to grayish 11 18 19 28 53 31 2.61 95 94 90 brown; 10% fine sand with little CH amount of medium sand and SS-13 sub-angular gravel; 80% high 100 10 15 18 plasticity clay; HARD. SS-14 89 11 16 20 SS-15 67 14 18 30 27 2.63 100 99 37 Silty SAND; brown; 62% fine sand; 37% non-plastic silt; SS-16 89 DENSE 15 19 31 SS-17 67 SM 9 15 19 SS-18 67 Silty SAND; brown; 53% 8 17 22 97 medium to fine sand with little 27 2.62 93 82 40 amount sub-rounded gravel and coarse sand; 40% non-plastic SS-19 67 silt; DENSE. 14 14 18 0 SS-20 End of Borehole (20.00 m) BASIC TECHNOLOGY AND LEGEND: MACHINE: ACKER ACE MANAGEMENT CORPORATION SS - SPLIT SPOON SAMPLE 2nd Floor Prudential Bank Building R. ANDO WS - WASH SAMPLE DRILLER: UDS - UNDISTURBED SAMPLE M. ESTAURA 1377 A. Mabini St., Ermita, Manila CR - CORE SAMPLE SUPERVISOR: M. VILLAFUERTE W/ HYDROMETER ANALYSIS

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MLL - 36 OJECT: Pasig-Marikina River Channel Imp. Proj. GROUND ELEV. 1.20 DEPTH OF WATER: + 14.634 (MLLW = Zero Datum) DATE MEASURED: 22 Dec. 2000 STATION NO.: 12 + 140.00 L. Bank, Calumpang, Marikina TIME MEASURED: 9:00 AM WEATHER: FAIR CATION: NO: BMLL-36 DATE DRILLED: 21 - 23 December 2000 1617662.500 509999.950 COORDINATES: UNCONFINED COMP. TEST SIEVE ANALYSIS % PASSING SIEVE BLOWS LIMITS TOTAL UNIT WEIGHT, g/cc STANDARD SPECIFIC SYMBC CLASSIFICAT COVERY (PENETRATION TEST PLASTICITY INDEX. % STRENGTH kg/cm² DESCRIPTION (SPT) LIMIT, % 15 SAMPLE 10 40 200 cm cm LOG (N-VALUE) 20 30 40 98 58 35 2.60 32 3 2 Sandy CLAY; brown; 13-15% fine sand; 79-85% high plasticity 67 SS-1 CH clay; FIRM To VERY SOFT. 55-2 67 98 94 99 34 2.61 67 SS-3 Gravelly SAND; grayish brown; sub-rounded gravel; fine to 9 10 12 coarse sand; non-plastic silty SS-SW fines; DENSE. 10 14 14 78 SS-5 99 98 97 9 37 61 36 2.60 4 6 100 **SS-6** 10 12 12 SS-7 100 13 15 100 SS-8 99 98 100 26 63 42 2.60 7 8 13 56 SS-9 8 13 16 SS-10 100 10 12 15 SS-11 67 Silty CLAY; brown to gray; 84 -97 95 93 63 42 2.60 95% high plasticity silty clay; traces of fine sand; STIFF To 30 13 16 SS-12 100 CH 8 12 SS-13 100 5 8 SS-14 100 100 67 39 2.60 SS-15 34 100 6 12 18 SS-16 8 14 17 100 SS-17 100 13 10 20 37 2.60 100 99 65 SS-18 38 100 8 10 14 SS-19 13 18 100 6 End of Borehole (20.00 m) LEGEND: ACKER ACE BASIC TECHNOLOGY AND MACHINE: SS - SPLIT SPOON SAMPLE X MANAGEMENT CORPORATION WS - WASH SAMPLE J. DAWI DRILLER: UDS - UNDISTURBED SAMPLE 2nd Floor Prudential Bank Building M. ESTAURA CR - CORE SAMPLE SUPERVISOR: M. VILLAFUERTE W/ HYDROMETER ANALYSIS 1377 A. Mabini St., Ermita, Manila

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INO			- 1	Z				BI	_OW	s	301	COIN	AIL.	· .		T			ATTER	BERG		UNCO	IFINED	slE	VE A	VALYS	
SAMPLE NO.	RECOVERY (%)	SAMPLE	LOG SYMBOL	CLASSIFICATION	RaD	DESCRIPTION		15	15 cm	15		PENE	(SP (N-VA	ION T T) LUE)	TEST		NATURAL MOIST.	TOTAL UNIT WEIGHT, g/cc	LIMIT, %	PLASTICITY SI	SPECIFIC		STRAIN % . %	% P/	10	40	
ss-	1 10	X X		СН		Sandy CLAY; brown; 11% to sand; 88% high plasticity of VERY SOFT.		1		0	/						23		70		2.60			100	99	99	
ss-		37 X		GC		Clayey GRAVEL; brown gray; approximately plasticity clayey fines; s angular gravel; LOOSE MEDIUM DENSE.	low ub-	7	4	3	/																
	-6 1 -7 1	X				Silty CLAY; grayish brown; 8 high plasticity silty clay with 1 fine to coarse sand; VE STIFF to HARD.	11%		8				1	>			18		66	45	2.60			100	97	93	8
	-8 1	100		СН		Sandy CLAY; grayish brow brown; 19% fine sand with amount of medium sand; 7	little 76%		6								18		61	39	2.61			100	99	95	-
10 SS		X				high plasticity clay; VE STIFF.	ERY	6	7 8	14																	-
-13 SS	S-13	86		SP	3	Silty Gravelly SAND; gra brown; 36% sub-angular gra 45% medium to coarse s with traces of fine sand; non-plastic silt; VERY DEN	avel; and 10%	15	31	10				~	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		13				2.65	5		64	42	19	
-	S-15	71 78		CI	1	Sandy CLAY; brown; 12% sand; 87% high plasticity of HARD.	fine clay;	25	5 35	15							23		64	44	2.6	0			100	0 99	,
-17 -18 -19						End of Borehole (16.00 m)																					
			2	nd	Floo	TECHNOLOGY AND EMENT CORPORATION or Prudential Bank Building, Mabini St., Ermita, Manila	MA DR SU	ILI	LEI	R:	_	₹:	J.	D.	ER /				LEG	END:		WS - 1 UDS - CR - 0	PLIT S WASH UNDI: CORE	SAMF STURI	PLE BED :	SAMP	

70.1	ECT	r: F	asi	g-N	larikina River Channel Imp.	Pr	oj.	(RO	UND W = 3	ELE Zero	V. Dati	um) <u>+</u>	14.7	93					R: _ D: _1			2000	. '
	.001			1	Bank, Sta. Elena, Marikina			1		TION ATHE		.: _	12 -	650 1 R)					D:				<u></u>
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SAMPLE NO	RECOVERY (LOG SYMBOL	CLASSIFICATION	RQD	DESCRIPTION	15 cm				PENE	TRA (SF	TION PT)	TEST	NATURAL MOIST.	TOTAL UNIT WEIGHT, g/cc	LIMIT, %	PLASTICITY INDEX, %	SPECIFIC	STRENGTH kg/cm²	STRAIN Z. %	4	10	40	12
- 1 SS-1	100					1	0	1						34		50	31	2,61					100	
SS-2	67				Sandy CLAY; brown to dark gray; 25-36% fine sand; 64-75% high plasticity clay; VERY SOFT.			0						40		61	40	2.61					100	
- 3 SS-3 - 4 SS-4						2	1	1																
- 5 SS-5	100					2	1	1																
-	100		СН			6	3 4			1	1			69		76	49	2.60			100	99	98	-
- - 8 SS-8	100				Silty CLAY; grayish brown to brown; 5-8% fine sand; 89-93% high plasticity silty clay; STIFF	1	13	3 21				>			_									
-	100				to HARD.			13		,				30		73	46	2.60			100	99	98	
-10 SS-10 - -11 SS-11								2 12																
- -12 SS-12	100		_			5	5 5	8 23						9	-	69	49	2.60	,		99	98	97	
-13 SS-13	71				·		8 2 12 18 1	7 12		Comerce	and the same		***	_										
	100		GP GM		Silty Sandy GRAVEL; brown; 47% gravel; 15% coarse sand; 11% medium sand; 17% fine sand; 10% non-plastic silt;	2	5 25	5)			12				2.64			53	38	27	
SS-16 SS-17					VERY DENSE.		8 1	12						-	-					-				
SS-17 SS-18							0 1	2																
- -19 - 20	44				End of Borehole (17.80 m)																			
		B	ASI	C	TECHNOLOGY AND MA	ACI	111	IE.				L	ER AC		1	LEGE	ND:							
13		M	AN	AGE	MENT CORPORATION	RILI			_				AWI	_	-		X	٧	vs - w	PLIT SE VASH S	SAMPL	.E		
	<u> 117</u>	13	a F 77	A. N	Prudential Bank Building,				OR	: _	М	. E	STAU	RA			*	C	CR - CO	UNDIS ORE S OROME	AMPL	E		

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311				NOL			1 0	LOW (SPT				STANI	DARI	,	IST.	1 23	ATTER LIM	BERG		COMP.			VE AN		
DEPTH, m	SAMPLE NO	RECOVERY (%)	LOG SYMBOL	CLASSIFICATION	RQD	DESCRIPTION	15 cm	15 cm	15 cm		PENE	TRAT (SF	TION TION	TEST	NATURAL MOIST. CONTENT, %	TOTAL UNI WEIGHT, 9	LIQUID LIMIT, %	PLASTICITY INDEX, %	SPECIFIC	STRENGTH kg/cm²	STRAIN M. %	4	10	40	
-		67		СН		Sandy CLAY; brown; 15% fine sand with traces of gravel and little amount of coarse to medium sand; 69% high plasticity clay; SOFT.	2	2	2						37		55	33	2.62			93	90	84	
-1	SS-1 SS-2	78		SM		Gravelly Silty SAND; gray; 42% non-plastic silt; 30% coarse to medium sand with traces of fine sand and 12% sub-rounded	10	5	9						-								_		-
- 3	SS-3	78		_		gravel; MEDIUM DENSE To LOOSE.	2	1	3						29			_	2.65			88	73	58	
- 4	SS-4	100					2	2	2														-		
- 5	SS-5	100				Silty CLAY; gray; 87% high plasticity silty clay with traces of grayel and little amount of	2	3	2						-								-		+
- - 6	SS-6	100				coarse sand; STIFF To FIRM.	5	5	9						43		64	31	2.61			93	89	88	-
-7	SS-7	100					2	3	2																
- 8	SS-8	100		СН			2	2	2						-					Cc 0.355	Pc 1.890		-		1
- 9	UDS-1	100					PF	ESS	ΕD						43	1.71	64	42	2.60		1.000			100	1
-10	SS-9	89				Silty CLAY; gray to dark gray; 93-98% high plasticity silty clay	2	2	2						45	-	68	43	2.60	Cc	Pc 1.440	100	99	98	1
- 11 -	UDS-2	100				with little amount of fine sand; FIRM To VERY STIFF.	PF	ESS	ΕD						50	1.71	62	41	2.61			98	97	96	
-12 -	SS-10	100					2	2	3	1					_										-
-13	SS-11	67		1			14	14	12			7			-		_					47			1
	SS-12		X				12	11	8		1				14			-	2.64			76	49	34	-
	SS-13		X			Silty Gravelly SAND; gray to		6			1														1
	SS-14 SS-15		X	GP GM	1	dark gray; 24-28% sub-rounded gravel; 27-39% coarse sand; 15- 21% medium sand; 10-22% fine; 6-12% non-plastic silt;		25										-							-
	SS-16					MEDIUM DENSE To VERY DENSE.		24							13				2.64			72	40	20	-
	SS-17							25																	-
20	SS-18					End of Borehole (20.00 m)		22			,				12				264			76	27	16	-
F		H	В	AS	C T	TECHNOLOGY AND MA	-	118 11N		<u></u>		AC	CKF	ER AC	<u> 13</u>	-	LEGE		2.64						1
		Пζ	M 2n	AN.	AGE	MENT CORPORATION DR	RILL	EF	? :	OR:		J.	D/	AVVI STAUI LAFUE	₹A	_		X L	V	VS - W JDS - U CR - CC	PLIT SP /ASH S JNDIST ORE S/	AMPL TURB	.E ED SA E	AMPL	

-	OJ	EC	T	P	asi	g-M	arikina River Channel Imp.	Pro	j.	(1	MLLV	V = 2	Zero	Datui					11155				R: D: _1	0.0 0.000		2000
а	- 47	101	4.			L. E	Bank, Sta. Elena, Marikina			0)	TAT NEA		NO.	.:		3 + .			1				D: <u></u> D:	SAILES		5513
	NO:	BN	ИL	40	0 0	ATE	DRILLED: 15 - 16 December	20	00	_			IATE	S: _				7.7			I,		5099			
H	NO.	(%)	7	110	NO			BI	LOW				,					O	ATTER	RBERG			NFINED TEST		VE AN	
	SAMPLE NO.	RECOVERY (9	SAMPLE	LOG SYMBOL	CLASSIFICATION	Rab	DESCRIPTION	15	15 cm	15		PENE	STANI ETRAT (SF (N-VA)	TON T	TEST		NATURAL MOIST.	TOTAL UNIT WEIGHT, g/o	LIQUID LIMIT, %	PLASTICITY STINDEX, %	SPECIFIC	STRENGTH kg/cm²		4	10	40
1	SS-1		X					1	3	4	1						25				2.61					100
2	SS-2	100						2	3	4																
3	SS-3	100	, X				Sandy CLAY; dark brown to dark gray; 20-38% fine sand; 62- 79% high plasticity clay; FIRM	3	3	3							28		61	37	2.61				100	99
4	SS-4	100	X				to STIFF.	3									_									
5	SS-5		X		сн			4	5								11		51	28	2.61				100	100
. 6	SS-6 SS-7		M					3																		
- 8	SS-8	100	o V					3	5	3										_						
- 9	SS-9	10	° X				Silty CLAY; dark gray; 97% high- plasticity silty clay with little amount fine sand; FIRM.		2	3	$\left\{ \left\langle \right. \right. \right.$						18		73	55	2.60		-			100
- 10 -	SS-10	10	° X					3	4	3										-	_			,		
- 11	SS-11	10	o V		1-	-		3	3	3	$\parallel \parallel$						-	-	-	-	-	-	-	10	_	-
- -12	SS-12	10	o X		ML		Sandy SILT; dark gray; 32% medium to fine sand with traces of coarse sand and sub-angular gravel; 52% low plasticity silt;	3	3	4							18	_			2.62		-	92	84	64
-13	SS-13	3 10	0	Щ	_	_	LOOSE.	3	3	5	1						_	_	_	-	_	_	_	_	_	_
-14	SS-14	4 10	X		SM		Silty Gravelly SAND; dark gray; 19% coarse sand; 27% medium sand; 10% fine sand; 26% sub-angular gravel with	8	18	20)	1.		- 1						_	-	-	-	-	_	_
-15	SS-15	5 78	8		-	-	18% non-plastic silt, DENSE. End of Borehole		17	23	3	-	-	\ \			10	-	-	-	2.63		-	74	55	28
-16 -17 -18 -19							(15.00 m)																			
				2r	NA Id F	AGE Floor	EMENT CORPORATION DF	ACH RILL JPE	.EF	₹:	_	:_	J.	МО 1. Е	GO STA LAF	L	Α	-		END:	,	WS - V JDS - CR - C	PLIT S VASH : UNDIS ORE S DROM	SAMP STURE SAMPL	LE SED S. LE	AMPI