FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MRW - 16b GROUND ELEV. OJECT: Pasig-Marikina River Channel Imp. Proj. DEPTH OF WATER: 1.55 (MLLW = Zero Datum) _ + 11.531 23 Jan. 2001 DATE MEASURED: __ CATION: Right Side Offshore, Libis, Quezon City STATION NO .: 9 + 000TIME MEASURED: 4:00 PM WEATHER: FAIR NO: BMRW-16 DATE DRILLED: 22 - 23 January 2001 COORDINATES: 1616623.500 508305.100 ATTERBERG SIEVE ANALYSIS % PASSING SIEVE UNCONFINED CLASSIFICATION TOTAL UNIT WEIGHT, gicc LIQUID LIMIT, % PLASTICITY INDEX, % SYMBOL STANDARD SAMPLE NO RECOVERY PENETRATION TEST DESCRIPTION SAMPL STRENGTH kg/cm² STRAIN A, % 15 cm (SPT) 10 40 200 507 (N-VALUE) 10 11 39 71 42 2.60 100 99 98* 89 SS-21 10 12 89 SS-22 Silty CLAY; brown; 98-99% high plasticity day; VERY STIFF. 6 9 SS-23 89 12 12 73 51 100 99 89 SS-24 9 11 14 89 SS-25 Sandy CLAY; gray; 18% fine sand; 11 13 17 SS-26 89 81% high plasticity clay; HARD To VERY STIFF. 10 10 18 31 51 29 2.61 100 99 81 SS-27 89 Sandy CLAY; gray; contains some fine sand; high plasticity clay; HARD. 78 13 17 19 SS-28 19 SS-29 78 Silty SAND; gray; 23% medium sand and 35% fine sand; 42% non-22 SM plastic silt; VERY DENSE 5 SS-30 56 28 26 2.63 100 77 42 **End of Borehole** (29.90 m)

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

MACHINE: ACKER ACE J. MADERA DRILLER: LUENGAS M. ESTAURA SUPERVISOR: M. VILLAFUERTE LEGEND: •

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

SHEET 2 OF 2

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MRW-16b

O IECT	Г: Р	asi	g-M	larikina River Channel Imp	. Pro	oj.		GI (N	ROUND ELE MLLW = Zero	V. Datu	m) 1	11.5	531				VATE					
USES	. R	iahi	Sic	de Offshore, Libis, Quezon	Cit	у		S	ON NOITATE		9 -	- 000)	- 1			SURE		2	:00 l		71
CATION	20/ 1/	e n	ATE	DRILLED: 22 - 23 January	200	01	-		VEATHER: OORDINATI			A I R 6166				VIEAS		0830				E
INO: BMF	7	Z		a b/ 1 M has been her 1	TE	BLC	L		OOKDINATI	_0.		T	T	ATT	ERBERG		UNCON	NFINED	SIE	VE AN		SIS
SAMPLE NO. RECOVERY (%)	LOG SYMBOL	CLASSIFICATION	RQD	DESCRIPTION	15	1	PT)	15		TION PT) ALUE	TEST	NATURAL MOIST.	TOTAL UNIT	WEIGHT, g/cc	PLASTICITY STINDEX %	SPECIFIC	T	STRAIN % . %	% P/	10	40	Γ
1 SS-21 89 2 SS-22 89 3 SS-23 89 SS-24 89				Silty CLAY; brown; 98-99% high plasticity day; VERY STIFF.	h 6	1	10 6	9				3	5	7:	3 51	2.60				100	99	
5 SS-25 89		ан				9	11	14				-		+	-							
96 SS-26 89 27 SS-27 89				Sandy CLAY; gray; 18% fine sand 81% high plasticity clay; HARD To VERY STIFF.	o -			17				3	31	5	1 29	2.6	1			100	99	8
28 SS-28 78				Sandy CLAY; gray; contains som fine sand; high plasticity clay; HARD	D.			19				-	-						-			+
29 SS-29 78 30 SS-30 56	MIH	SM	1	Silty SAND; gray; 23% mediur sand and 35% fine sand; 42% nor plastic silt; VERY DENSE. End of Borehole (29.90 m)	m D-			22/5					26	+		2.6	3			100	77	+
32 33																						
34																				,		
36																						
38																	8					
40	2	IAN nd	IAG Floo	EMENT CORPORATION or Prudential Bank Building,	MAC DRIL	L	EF	₹:	J.	MA LUE M.	ER A	JRA		LE	EGEND X I	:	WS - UDS - CR - 0	SPLIT S WASH - UNDI CORE YDROM	SAMP	PLE RBED S PLE	SAMP	LE

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MRW - 17

GROUND ELEV. Pasig-Marikina River Channel Imp. Proj. DEPTH OF WATER: +10.075(MLLW = Zero Datum) 20 Jan. 2001 DATE MEASURED: STATION NO .: 9 + 500Right Side Offshore, Santolan, Pasig CATION: TIME MEASURED: 8:30 AM WEATHER: FAIR NO: BMRW-17 DATE DRILLED: 20 - 21 January 2001 508620.500 1617023.500 COORDINATES: SIEVE ANALYSIS UNCONFINED BLOWS (SPT) ATTERBERG CLASSIFICATION % PASSING SIEVE LIMITS SYMBOL % STANDARD COVERY PENETRATION TEST ROD DESCRIPTION STRENGT kg/cm² (SPT) STRAIN A. % SAMPLE 15 cm 15 200 10 40 RECOV (N-VALUE) Gravelly SAND; brownish gray to gray; 12-19% sub-angular to angular 61 16 2.64 81 33 5 5 gravel;19-20% coarse sand; 45-52% medium sand, 7-9% non-plastic silty 89 SS-1 fines; MEDIUM DENSE. 69 17 2.64 88 27 5 SM 89 SS-2 Silty SAND; brownish gray to gray; SW 38% medium sand; 44% fine sand; 17% non-plastic; FIRM. 99 61 17 2.63 100 34 6 6 SS-3 Gravelly Silty SAND; brownish gray; 10% sub-rounded gravel; 13% coarse sand; 18% medium sand; 22% fine sand; 37% non-plastic, 90 77 59 2.63 10 10 11 44 SS-4 MEDIUM DENSE. 4 5 SS-5 89 100 99 98 93 41 2.60 36 67 6 8 Silty CLAY; grayish brown; 7% of 89 SS-6 sand; 93%high plasticity clay; with traces of fine sand; STIFF. 6 SS-7 89 6 8 89 SS-8 94 40 2.60 98 4 12 12 33 Sandy CLAY; grayish brown; 10% SS-9 89 sand with very little amount of gravel; 88% high plasticity clay; VERY STIFF. 9 9 SS-10 89 100 97 90 10 14 43 56 35 2.60 8 SS-11 89 89 78 99 95 31 2.61 50 SS-12 10 18 32 89 -12 Sandy CLAY; light brown to brown; 11% fine sand;10% medium to CL coarse sand; 78% medium 10 SS-13 -13 89 plasticity clay; VERY STIFF. 12 13 SS-14 100 Gravelly Sandy CLAY; brown; contains 82 78 72 5 SS-15 35 53 30 | 2.61 100 18% sub-rounded gravel; 24% fine to 19 19 25 CH coarse sand; 58% high plasticity clay; HARD. SS-16 15 15 89 Sandy CLAY; grayish brown; 23% fine sand; 76% medium SS-17 89 9 9 15 CL plasticity clayl; VERY STIFF. SS-18 100 99 7 33 49 28 2.61 8 12 13 Sandy SILT; brown; traces of fine SS-19 67 sand; non-plastic silty fines; 13 14 ML DENSE. End of Borehole (20.00 m) LEGEND: BASIC TECHNOLOGY AND ACKER ACE MACHINE: SS - SPLIT SPOON SAMPLE J. MADERA MANAGEMENT CORPORATION X WS - WASH SAMPLE DRILLER: LUENGAS 2nd Floor Prudential Bank Building UDS - UNDISTURBED SAMPLE ESTAURA

SUPERVISOR:

M. VILLAFUERTE

1377 A. Mabini St., Ermita, Manila

CR - CORE SAMPLE

W/ HYDROMETER ANALYSIS

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MRW-18

103	EC	; T	: F	asi	g-M	arikina River Channel Ir	np. F	rc	oj.	(MLL	UND W = Z	Zero	Datu					1				R:			2000	m.
CAT	10	N:	R	. Si	de C	Offshore, Marikina River, S	Santo	ola	n	1		THE		.:		0 + (1				D: <u>12</u> D:		137/01/m 1763	See House Co	_
NO	B	ИR	W-1	8 C	ATE	DRILLED: 10 - 12 Decem	nber	20	00	-		RDIN	-	S:				9.75		N			0868				E
T				NOIL				B	LOW				TAN	DARE	,		NST.	Sylcc gylcc	ATTER			COMP	IFINED TEST		VE AN		
SAMPLE NO.	RECOVERY (SAMPLE	LOG SYMBOL	CLASSIFICATION	RaD	DESCRIPTION		15 cm	t5 cm	15 cm		PENE	TRA (SI (N-V/	TUE)	TEST		NATURAL MOIST.	TOTAL UNIT WEIGHT, 9/00	LIMIT, %	PLASTICITY INDEX, %	SPECIFIC	STRENGTH kg/cm²	STRAIN A, %	4	10	40	200
ss-1		X		GM		Silty Sandy GRAVEL; bro 17% coarse sand; 15% med sand w/ traces of fine sand non-plastic silt; 52% sub-rour gravel; MEDIUM DENSE.	dium and	5	9				\				11				2.64			48	31	16	8
SS-2		X				Gravelly CLAY; brown; 42% sub-rou gravel with little amount of fine 53% high plasticity clay; VERY STI	sand;		7	9							35		65	34	2.64			58	57	56	53
ss-4		X				Sandy CLAY; brown; plasticity silty clay with consider amount of sand; STIFF.	high rable	4	5	7																	_
SS-5	88	9						3	5	8								_									-
ss-6	88	9 X		СН		Sandy CLAY; grayish brown; high plasticity silty clay with	86% 13%	5	8	10							29		66	37	2.61			99	90	87	86
SS-7	8	9				coarse to fine sand; STIF VERY STIFF.		7	9	13																	
ss-t	8 8	9						9	12	18	1		\				-	-					-	-	_	-	-
ss-s	9 10	00				Sandy CLAY; brown; 11% angular gravel; 14% fine sand appreciable amount of coars	with se to	22	30	/	1			7	\ /		24		51	30	2.63			89	84	78	64
0 SS-1						medium sand; 64% high plas clay; HARD.	sticity		12				(
2 SS-1						Silty SAND; dark brown;			10				/				30				2.63		-	99	99	81	23
3 SS-1	3 7	8		SM		non-plastic silt; 18% me sand; 58% fine sand; MED DENSE.		11	9	9		1											-				-
4 SS-1	4 7	8			-			8	6	9							_					-	-		_		_
5 SS-1	5 8	9						3	7	9		11					30	-	54	32	2.62	2	-	_	100	98	73
6 SS-1	6 9	0						13	3 30					*				-	_		-		-		-	_	-
7 SS-1	17 9	3		СН		Sandy CLAY; brown to gr brown; 25-26% fine sand; high plasticity clay; VERY S to HARD.	73%	19	23	1	3						-	-	_		-	-	-	-	\vdash	-	-
8 85-1	18 7	1				to thice.		20	24	26	2						28	-	54	31	2.61	-	-	-	100	99	73
20 55.		35						20	24	1/	1						-		-		-		-	-	-	-	
1	W S	4		1	10:	End of Borehole (19.92 n	r -		32	-	7		Ļ				<u>_</u>	1	LEGE	ND:	_	_	<u></u>	_	<u></u>	<u></u>	<u>_</u>
)]	N	IAN	AGE	FECHNOLOGY AND EMENT CORPORATION	MA								ER /			-		×			PLIT SI VASH S			PLE	
	1	17	1:	nd 1 377	Floor A. I	Prudential Bank Building, Mabini St., Ermita, Manila	SUI				OF				STA		RA.			*	(CR - C	UNDIS ORE S	AMPI	LE		E

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MRW - 19a

JE	CT	: P	asi	g-M	larikina River Channel Imp.	Pro	›j.	(1	GROUND MLLW = 2	Zero	Datu				5				VATER					m.)
_	aN:	F	S	ide	Offshore, Pasig-Marikina Ri	ver		1	STATION WEATHE).: _		6 + :			1			URED					-
2	aMR'	W-19	D	ATE	E DRILLED: 12 - 13 December	20	00	С	OORDIN		ES:				2.75	0	N	,	50	0882	0.10	00		E
-		7	NO			DL	LOW	· ·				-		ST.		AFTER	ITS		UNCON COMP.			VE AN		
SAMPLE NO.	RECOVERY (%) SAMPLE	LOG SYMBOL	CLASSIFICATION	RaD	DESCRIPTION	15	15	15	PENE	TRAT (SI	PT) ALUE)	TEST		NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/cc	LIMIT, %		SPECIFIC	_	STRAIN %	4	10	40	200
S-1	44		ML		Gravelly Sendy SILT; light gray, 13% sub-angular gravel; 15% coarse sand; 14% medium sand with traces of fine sand; VERY SOFT.	1	0	1						43				2.63			87	72	58	50
S-1	67					5	6	10		/											-		_	
;S-3	100 X		сн		Silty CLAY; brown to brown gray; 97% high plasticity silty clay with little amount of sand; STIFF to VERY STIFF.		36					>		91		76	48	2.60			1	100	99	97
is-4	78				VEIXI OTHER		30	20,		<		_												
IS-5 IS-6	100				Silty SAND; brown; 39% non-	50, 14								31				2,63			100	97	82	39
35-7	96		SM		plastic silt; 58% fine to medium sand; contains little amount of coarse sand; VERY DENSE.	31 50	1	1						_										
\$8-8	71		ST		Tuffaceous SANDSTONE; light brown; contains pumiceous materials; moderately weathered; broken; Moderately SOFT.																		,	
CR-1 SS-9 SS-10	73		SM	1	Silty SAND; dark brown;19% non- plastic silt; 42% medium sand; 30% fine sand w/ traces of coarse sand; contains little amount of gravel; HARD. (11.34m)	18	50 RI 50 2 14	18/5	5					36				2.64			97	91	49	19
	67		ML		Sandy SILT; yellowish brown; 19% coarse to medium sand; 27% fine sand; 54% non-plastic silt; HARD.	e 50	4 1							47				2.62	2		100	96	81	54
		Δ	ST	_	Tuffaceous SANDSTONE; grayish brown; coarse-grained; moderately weathered; slightly broken; Moderately HARD.	i;																		
CR-2	86	Δ.ο.	Tf	f 70	Fine TUFF; brown; moderately wea-thered; slightly broken; Moderately SOFT.		COR	ING	3					34	1.67		-	-	46.36	6 1.610	-			
CR-3	87			73	r.	C	COR	HNC	3					45	1,44	-	_	+	37.89	1.770	,	_		
CR-4	4 57		ST	13	Tuffaceous SANDSTONE brown; contains pumice clasts and other volcanic lithics; moderately weathered; slightly broken; SOFT	y C	COR	UNC	3					33	1.49	<u>, </u>			22.95	56 1.379	,	_		
CR-5	5 20			0		2	COR	RING	3					-	_	-		-	_	-		-	-	-
		21	nd F	IAGI Floo	EMENT CORPORATION DF	ACH RILI UPE	LE	R:		E	. R	IEZ	AC ZA TAUI			LEG	END:		SS - SI WS - V UDS - CR - C	VASH UNDIS	SAMP STURE SAMPI	PLE BED SA LE	AMPL	

SHEET 2 OF 2

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MRW-19b

-	CT	; F	asi	g-M	arikina River Channel Im	ıp. Pr	oj.		GROU (MLLV	IND V = Z	ELEV ero D	'. atum)	+ 9.	545	5					R:		200	- 9
			2 6	ide	Offshore, Pasig-Marikina	Rive	Γ	1	STAT	ION	NO.:		10	+ 5	00		1				D:	90. 2 00 P		-
:ATI	ON:	_1	4. 5	att	DRILLED: 12 - 13 Decem	ber 2	000		WEA			·		617		75				URED	0882	 	IVI	E
VO:	BMR	W-1	9 D	AIE	DRILLED. 12 10 Dogs.		BLOV	NS	COOF	DIN	AIES	·		T	T	T		BERG	,	UNCON		 VE AN	IALYS	-
SAMPLE NO.	RECOVERY (%)	LOG SYMBOL	CLASSIFICATION	RQD	DESCRIPTION	15	(SP	15		ENE.	TAND/ TRATIC (SPT	ON TE) UE)		TSION INGITAIN	CONTENT, %	EN S	LIM	ITS	SPECIFIC	COMP.	TEST	10	G SIE	
O	K.	-	_		Tuffaceous SANDSTONE; brow	wn.	OR.	1110		7	30	1	7	\dashv				_						
CR-6	23		ST	0	End of Borehole (20.50 m)			140																
64 65 65 65 65 65 65 65 65 65 65 65 65 65																								
	100																							
	-	1	700			F	Ц	لــ									LEC	SEND				 		
	7		inc and	SIC	TECHNOLOGY AND	MAC								ACE	= -	_					SPLITS		MPLE	
	111		nd	Floo	EMENT CORPORATION or Prudential Bank Building,	DRI	LLE	ER	:			RII						X			WASH - UNDIS		SAMP	LE
	4		377	Α.	Mahini St. Frmita Manila	SUF	FF	RVI	ISOF	₹:	M.	ES	STA	AUF	RA.						CORE			

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MRW-20

·F.C.T	. p:	sic	ı-Ma	arikina River Channel Imp	. Pr	oj.	T	GROU	JND V = 2	ELE Zero l	V. Datun	n)	+ 1	1.82	25_					R: D: _20				m.
	-	cid	e 0	iffshore, Marikina River, Sar	ntola	an		STAT	NOI	NO.		11	+ (000		1			URE			30 A		_
ATION:	N. 20	D	ATE	DRILLED: 18 - 20 December	er 20	000	2 0	COOF			S: _				9.85	J	N			0921	19.7	50		E
	7	N	T			SLO\ (SP						,		IST.	. 8	ATTER LIM	TS		UNCON			VE AN		
SAMPLE NO. RECOVERY (%) SAMPLE	LOG SYMBOI	CLASSIFICATION	RaD	DESCRIPTION	15 cm	15	15	5	PENE	(SP	ION T T)			NATURAL MOIS	TOTAL UNIT WEIGHT, g/cc	LIQUID LIMIT, %	PLASTICITY INDEX, %	SPECIFIC	STRENGTH kg/cm²	STRAIN M. %	4	10	40	200
;S-1 89		10			2	3	5	1						36		70	49	2.60			99	99	97	93*
3S-2 89 X					3	3	4																	
5S-3 89 X				Silty CLAY; dark gray to ligh	ht	3 1	1 1	1		>				46		71	43	2.60			99	99	98	93*
SS-4 89				brown; 93-97% high plasticity sill clay with little amount of fine sand FIRM to VERY STIFF.	d;		5 7																	
SS-5 89		СН					1 1 B !							27		72	48	2.60				100	99	97
SS-6 89 SS-7 89							10 1		'												_	_		_
SS-8 89						8 1	13	15						_	_					_		_	_	-
SS-9 89				Sandy Gravelly CLAY; light brow 10% sub-angular gravel; 83% hig		8	14	15						32	_	67	46	2.6	1	-	90	88	86	83
SS-10 89				plasticity clay with little amount coarse to finesand; VERY STIF to HARD.	of	11	18	21						-		-	-			-			-	+
SS-11 89					-	8	13	17						-	+	-			-	+	+	-	-	
SS-12 89					-	9	13	21						32	!	49	29	2.6	1	-	100	0 96	94	4 5
SS-13 89		CL		Sandy CLAY; brown to dark gra 22-37% fine sand; 57-73% media plasticity clay with little coarse	um	9	14	18														+	+	+
SS-14 89 SS-15 100				medium sand; HARD.			17							28		51	23	3 2.6	1	-	-	10	0 9:	5
SS-16 89							18							2				2.0						
SS-17 100								18,										-				-	-	+
SS-18 98	<u>X</u>	МІ		Sandy SILT; brown to dark gr 37% fine sand; 62% non-plastic:	ray; silt.	12	24	26 11						2	7		_	2.6	31	_		10	ю 9	9
SS-19 95	<u>A</u>			HARD.		15	24	26 12						-	-	-	+	-	-	-	_		-	+
SS-20 49				End of Borehole (19.96 m)		21	30	20																
	N	AN	AG	TECHNOLOGY AND	MAC						CK			E	_	LEC	END		ws -	SPLIT : WASH	SAM	IPLE		
	13	377	Α.	Mabini St., Ermita, Manila Figure 5-3-3 (187/2)	SUF						1. E						*			CORE			ALYSI	S

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MRW - 21a

JEC	T:	P	asi	g-M	arikina River Char	nel Imp. F	ro	j.	(N	ROUND ILLW = 2	Zero	Datu				5					R: D: _25		50 ec. 2		m.
		R	Si	de	Offshore, Calumpa	ng, Mariki	na	_ }		TATION /EATHE				FA									00 N		
RA RA	ıRV	V-21	D	ATE	DRILLED: 22 - 26	December 20	000	_	CC	ORDIN	IATE	S: _		161	747	1.50	0	_N	,	5	0954	2.4	00		E
		1	NOL				Br	OW: SPT)		,	NATE	DARD			SIST.	± %	LIMI	BERG TS		COMP	TEST		VE AN		
RECOVERY (%)	SAMPLE	LOG SYMBOL	CLASSIFICATION	RaD	DESCRIPT	ION		f5 cm	15 cm	PENE	TRA (S	TION T PT) ALUE)	TEST		NATURAL MOIST.	TOTAL UNIT WEIGHT, g/cc	LIMIT, %	PLASTICITY INDEX, %	SPECIFIC	STRENGTH kg/cm²	STRAIN M, %	4	10	40	200
-1 67	X		SM		Silty SAND; brownish graded with 67% fine non-plastic silt; VERY	sand; 32%	1	0	1						38				2.63				100	99	32
-2 6	X		SM SW		Sity Gravelly SAND; brown graded sand; 28% angular gra to fine sand; and 24% non-pla	vet, 48% coarse	3	3							20				2.64			72	64	34	24
3-4 7	В				Silty CLAY; grayish bro contains little amount of s angular to sub-rounded plasticity clay; STIFF to	sand and sub- I gravel; high	6	5																	
S-5 8 S-6 8 S-7 8	X		GC		Gravelly CLAY; gray brown; with little amou coarse sand; 10% s gravel; 84% high pla VERY STIFF To HAR	unt of fine to sub-rounded asticity clay;		10							22		58	29	2.60			90	88	86	84
	39				VERY STIFF TO FIAN		15	16	22						_	-					_				_
S-9	39 X					40 000/ F	9	13	16						20	-	56	32	2.61	-	-	93	92	91	81
5-10	78 X				Sandy CLAY; brown to coarse sand; wi gravel; 72-81% high p VERY STIFF To HAF	th traces of plasticity clay;	6	12	12							-					-				
	78 X						7	12	13						33		56	33	2.6			98	96	95	7
	93							1 22	28																-
S-14	68		CH	1			10	0 18	32	1 1					-					-		-	-	-	+
S-15	100				Sandy CLAY; gray; 1	4% fine sand:		0 14	24	1		(25	5	57	33	2.6	0	-	+		100	3 0
	89				85-86% high plasticit STIFF To HARD.	y clay; VERY	14	4 20								-	+	+	+	+	+	1		-	+
S-18	78 89							5 10				/	1		3	4	59	32	2 2.6	60		10	0 99	98	9 :
S-19	89							1																	1
S-20	89		1				8	3 1:	2 1	4															
	口口	2	nd	Flor	TECHNOLOGY EMENT CORPORA Pr Prudential Bank Bo Mabini St., Ermita, M	TION DF	ACI RILI	HIN	IE:		E	CK R M.	IEZ ES1	ZA	RA	_	LEG	END:		WS - UDS CR -	WASH - UNDI CORE	SAMI STUR SAMF	BED S	AMP	LE

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MRW - 21b

L			aci	a-N	larikina River Channel Im	p. Pro	oj.	0	ROUI	ND = 7	ELE\	V. Datun	n) .	+ 1	1.05	55	100000			VATE					
J	ECI		000	ida	Offshore, Calumpang, Ma	arikina	3	1	STATIO	ON	NO.:		11	+ 5	500					URE					2
AT	ION:	1	1.0	ATI	E DDILLED: 22 - 26 December	ber 20	 000	1	VEAT			o.		- A I		1.50		***	-	UREI	0: 0954			NIN	E
0	BMF	W-2	1 L	AII	E DRILLED: 22 - 26 December	1	SLOV	vs	OORI	אווע	AIE	S: _					ATTER	N BERG	<u>, </u>	UNCO	IFINED			VALYS	-
SAMPLE NO.	RECOVERY (%)	LOG SYMBOL	CLASSIFICATION	ROD	DESCRIPTION	15	(SP1	Γ		ENE	(SP	ION TI			NATURAL MOIST. CONTENT, %	TOTAL UNIT WEIGHT, g/∞	LIQUID %	PLASTICITY SI	SPECIFIC	STRENGTH ON ON WORLD	STRAIN % . M	% P	ASSIN 10	IG SIE	200
5-21			U			4									21		73	52	2.60					100	99
S-22	89		ан		Silty CLAY; gray; 98-99% hi plasticity day; VERY STIFF.	igh 5		10													-				
S-23	89							10							36		72	42	2.60				100	99	98
S-2						8	9	11																	
\$-2					End of Borehole (25.00 m)																				
			BAS	SIC	TECHNOLOGY AND	MAC	HI	NE			A	CKE	ER.	AC	E		LEG	END		SS - S	SPLIT S	SPOO	N SAI	MPLE	
			MAN Photographic	Floo	SEMENT CORPORATION or Prudential Bank Building, Mabini St., Ermita, Manila	DRIL	LE	R:			E.	RI M. E	EZ ST/	AUR	A	_		×		WS - UDS CR -	WASH WASH UNDI CORE YDROI	SAM STUR SAME	PLE BED PLE	SAMP	

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MRW - 22a

	FINA	AL BORE	HOLE LOC	3 A	ND) 5	SUN	/MA	RY	OF	TE	ES	F	ES	UL	.TS		IR	N-	22	a
TOT: Po	-		er Channel Im	THE RESERVE AND ADDRESS OF THE PERSON NAMED IN	CATHOLICA STREET	A COLUMN	POLL	ND EL	FV					EPTI	1 OF	WAT	ER:				
JEC I. Pa	Side C	Offshore, C	alumpang, Ma	arikin	а	1	TAT	ION NO	o.: _	12		0	1,				ED: <u>2</u> ED:				_
TION: K.	DATE	DRILLED:	27 - 28 Decemb	er 20	00	-		THER:			6175				Ν,		5099				E
	5				BLO\ (SP						ST	* _		RBERG		CON	ONFINED AP. TEST	SIE % P/	VE AN	ALYS 3 SIE	IS VE
SAMPLE NO. SAMPLE LOG SYMBOL	CLASSIFICATION RQD	DESC	CRIPTION		5 15 m cm	15		PENETR (SPT) VALUE	TEST	NATURAL MOIST.	CONTENT,	WEIGHT, g/cc	PLASTICITY	SPECIFIC	STRENGTH	STRAIN %	4	10	40	200
	AL	Clayey SIL1 brown; 98% sand; SOFT	f; grayish brown non-plastic silt; 2	2%	1 2						_3	31			2.6	53			100	99	98
S-2 78		Silty CLAY; clay with 4%	brown; high plastics sand; FIRM.	city	3 3						3	30	7	0 39	2.	60		100	99	98	96
5-3 78 S-4 78					9 1	1 13	3				-	_	-	-	-	-		-			
S-5 100		Silty CLAY;	brown; high plast	icity	9 1	4 2	2				-	-	-	-	+	-		-			-
S-6 89		clay with 3% to HARD.	6 sand; VERY ST		6	8 1	0				-	35	-	0 4	1 2	.60		-	100	98	97
S-7 89					7 1	10 1	4				-			-	-			-		-	
S-8 89					8	12 1	4							+		-					
S-9 89		Sandy CL	AY; brown; 17% high plasticity o	fine	5	8 1	11					34	1	61 3	30 2	2,61		1		100	0 83
5-10 89	СН	VERY STIF	F.			13 1															
S-11 89						12						30		58	35	2.60				10	00 80
S-12 89 S-13 100		gray: 14°	AY; brown to brow % fine sand; ay; HARD.	vnish high		18 2	24					30				2.00					
S-14 89						12													_	_	
SS-15 89						8						38		71	43	2.60	-	10	00 99	9 9	9 9
SS-16 89		Silty CLA\ clay with 3	Y; gray; high plas % sand; VERY S	sticity TIFF.	7	9	16						-	-	-		-	-	_	+	+
SS-17 89					7	9	17										-	-	+	+	+
SS-18 89		eit. of a	V. grave high pla	eticity	8	12			1			28	-	73	38	2.60	+	+	10	90 9	9 9
SS-19 91		clay with 3	Y; gray; high pla 9% fine sand; HA	RD.	15	24	14					-	-		-		-	+	-	+	+
SS-20 89 B	ASIC	TECHNO	LOGY AND	MA		23 IIN			ACI	KER	ACE	L		EGE	ND:	99	S - SPLI	SPO	ON SA	MPLE	
M 2r	IANAG	EMENT CO	ORPORATION Bank Building, Ermita, Manila	DR	ILL	ER	: _	R: _	E.	RIEZ	ALIRA	Α	_		×	U	S - WAS DS - UN R - COR	H SAM DISTU E SAM	MPLE RBED MPLE	SAMI	PLE

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MRW-22b

-	T.	P	asi	a-N	larikina River Channel In	np. Pr	oj.	1	GRO MLI	UND W =	ELE	V. Datur	m)	+ 1	3.0	56					R:				
JEC	. 1 .	-		ide	Offshore, Calumpang, M	larikin	a	1	STA	TION	NO	.:	1	2+	000						D: _2				0_
ITIO	N:	-	. 0	ATI	E DPILLED: 27 28 Decem	hor 2	200	1		ATHE		-0:		FA		1.50					0:			AIA	E
D: BN	1RV	V-2	2 1	AII	DRILLED: 27 - 28 Decem	ibei Z	BLO	ws.	100	RDIN	MAIL	:5: _		101			ATTER	BERG	_	LINCON	NFINED		VE AN	IALYS	-
RECOVERY (%)		LOG SYMBOL	CLASSIFICATION	RQD	DESCRIPTION	11	(SP	T) 15		PENE	ETRAT (SF (N-V/	DARD FION T PT) NLUE) 0 40	EST		NATURAL MOIST.	TOTAL UNIT WEIGHT, g/cc	LIQUID LIMIT, %	PLASTICITY SI	SPECIFIC	STRENGTH OO Kg/cm²	. TEST		10	G SIE	
1-21 91 1-22 85	XXX		ан		Silty CLAY; gray; 98% high plasti clay; HARD.	icity 1	2 10	28 14 5 25 5 24				.			27		73	38						100	98
5.23 4.4					End of Borehole (23.00 m)												LEG	END							
7	1	B	AS	IC	TECHNOLOGY AND	MAC	HI	NE	: _			CKE			Ε.	_	LEG	END:			SPLIT S			IPLE	
1	1	1	nd	Floo	EMENT CORPORATION or Prudential Bank Building,	DRII	LLE	R:	_			RI M. E			A			X		UDS -	WASH - UNDI:	STUR	BED S	AMP	Æ
		1:	377	A.	Mabini St., Ermita, Manila	SUP	EF	N	SO	R: _	M.	VIL	LA	UE	RTE			=			CORE			LYSIS	

SHEET 1 OF 1

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MRW - 23

DJECT: Pasig-Marikina River Channel Imp. Proj. GROUND ELEV. 2 10 DEPTH OF WATER: +10.855(MLLW = Zero Datum) _ DATE MEASURED: 08 Jan. 2001 STATION NO.: ___ ATION: R. Side Offshore, Butiki Park, Marikina 12 + 5008:00 AM TIME MEASURED: WEATHER: FAIR NO: BMRW-23 DATE DRILLED: 05 - 08 January 2001 509961.750 1618034.250 E COORDINATES: N SIEVE ANALYSIS ATTERBERG UNCONFINED CLASSIFICATION % PASSING SIEVE LIMITS COMP. TEST (SPT) SYMBOI STANDARD Щ RECOVERY SAMPLE PENETRATION TEST LIQUID
LIMIT, %
PLASTICITY GRAVIT STRENGTH kg/cm² SPECIF DESCRIPTION STRAIN A. % (SPT) 15 cm 15 200 40 4 10 Log (N-VALUE) 20 30 99 99 100 62 33 2.61 2 2 100 Sandy CLAY; gray; 21-26% fine sand; 73-79% high plasticity clay; 3 100 CH FIRM to STIFF. 100 79* 39 63 43 2.61 3 5 100 6 6 100 Silty SAND; gray; fine sand; 60% sand; 37% non-plastic silty fines; MEDIUM SM 94 73 37 97 2.63 29 12 12 100 Medium To Fine SAND; gray; 98 87 25 11% coarse sand; 62% medium 9 17 2.63 9 6 44 SP SS-6 sand; 24% fine sand; MEDIUM DENSE. 9 14 56 Gravelly SAND; gray; 50% coarse to fine sand; 49% sub-rounded gravel; contains very little SP 51 22 10 amount of non-plastic silt; MEDIUM DENSE. 9 2.65 13 12 78 Silty SAND; gray; 5% medium sand; 60% fine sand; 34% non-plastic silty SM 94 34 99 100 fines; MEDIUM DENSE. 30 2.63 10 12 14 78 SS-9 Sandy GRAVEL; gray; 28% coarse sand; 8% medium to fine 16 12 11 SS-10 56 GP sand: 63% sub-rounded to subangular gravel; MEDIUM DENSE. 2.65 37 9 3 16 12 14 5 SS-11 89 Gravelly Silty SAND; gray; 24% sub-rounded SW to sub-angular gravel; 54% well-graded sand; SM 61 40 22 76 22% non-plastic sitty fines; MEDIUM DENSE. 15 2.64 14 15 10 SS-12 89 18 15 2.66 SS-13 19 14 12 56 38 16 2.65 51 13 13 17 SS-14 56 Silty Sandy GRAVEL; gray to light gray; 45-82% sub-rounded to sub-15 GP SS-15 angular gravel; 16-46% coarse to fine sand; 2-9% non-plastic silty 16 2.65 27 57 35 5 GM fines; MEDIUM DENSE to VERY DENSE. SS-16 22 12 2.66 32 57 9 29 5 SS-17 55 44 22 9 12 2.65 74 40 12 SS-18 26 21 112 5 ⁻5 71 22 26 Silty Gravelly SAND; gray, 57 % coarse to fine sand; 62% sub-rounded to angular gravel; SW SM SS-15 62 40 16 5% non-plastic silty fines; VERY DENSE. 10 2.65 71 Sandy GRAVEL; gray; 25% coarse to fine sand; 33% sub-rounded angular gravel; 8 % non-GF plastic silt; VERY DENSE. 25 16 8 2.66 33 End of Borehole (19.88 m) LEGEND: ACKER ACE BASIC TECHNOLOGY AND MACHINE: SS - SPLIT SPOON SAMPLE

BASIC TECHNOLOGY AND MANAGEMENT CORPORATION

2nd Floor Prudential Bank Building 1377 A. Mabini St., Ermita, Manila

MACHINE: DRILLER: J. MADERA I. LUENGAS

M. ESTAURA M. VILLAFUERTE X I

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

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MRW - 24

	FIN	AL BOREHOLE LOG	IA.	ND					0	F	TE	ST					-		<u> </u>	-	
TOT: S	Pasig-M	arikina River Channel Imp	. Pro	oj.	GI (N	ROUI	ND EL	EV. Dati	um) .	+ 1	11.48	35_					R: D: _0				m. 1
	a cide	Offshore, Dela Peña, Mar	ikina	1			ON NO).: _		13 + FA			100				D. <u> </u>				
TION:	A DATE	DRILLED: 06 - 09 January	200	01_			DINAT	ES:				0.75		N			0989			_	E
-	18			(SPT)							ST.	_ 8	ATTER!				NFINED TEST		VE AN		
RECOVERY (%) SAMPLE LOG SYMBOL	CLASSIFICATION	DESCRIPTION		15 h			ENETR	SPT) /ALUE	TES		NATURAL MOIST.	TOTAL UNIT WEIGHT, g/cc	LIQUID LIMIT, %	PLASTICITY INDEX, %	SPECIFIC	STRENGTH OS MAN	STRAIN M. %	4	10	40	20
1 44	СН	Sandy Silty CLAY; gray; 36% fir to medium sand; 62% hig plasticity clay; FIRM.	gh 📑	3							33		54	31	2.61			99	98	83	6
.3 89	SM	Silty CLAY; gray; dominantly fir to very fine sand; 80% hig plasticity; FIRM. Silty SAND; dark gray; fin grained sand; non-plastic silty fine	gh 2	2 3							38		58	38	2.61				100	99	8
89	SIVI	MEDIUM DENSE. Silty CLAY; gray; dominantly fi sand; high plasticity clay; SOF	ne T	2 1																	1
3-5 89 3-6 89	СН	Sandy Silty CLAY; dark gray; 31 fine sand with 6% medium coarse sand; 61% high plastic FIRM.	1% to	2 3							33	3	55	31	2.6	1		98	97	92	2
S-8 67 X S-9 67	SM	Silty SAND; dark gray; 75% f to coarse sand; 6% sub-angu gravel; 19% non-plastic s MEDIUM DENSE.	ine ılar silt;	3 7 9 1	6						2	0			2.6	13		94	1 83	5 5	0
S-10 44 X		Gravelly Sandy SILT; d	ark	6 1											-	+	-			-	
S-11 67 X	ML	grayish brown; 35% fine to coa sand; 7% sub-angular to s rounded gravel; 58% non-pla silty fines; MEDIUM DENSE.	ub- istic	8 1				/			-	10			2.0	52		. 9:	3 8	5 7	70
S-13 56				13							-	-	-	+	+	+	+		+	+	
S-14 71				24 3		/				\.	-	-	+	-	-	+	-	+	-	-	
\$\$-15 79		Silty Sandy GRAVEL; dark to brown; 36-42% fine to co	arse	28								12		+	2.	.66		5	54 4	12	24
SS-16 78 X	GP	sand; 46-58% sub-angula angular gravel; 6-12% non-pl silty fines; VERY DENSI DENSE.	r to astic	19	24															1	_
SS-18 56					24							10			2	2.66	_		42	24	13
SS-19 44		End of Borehole (19.00 m	n)	25	28	22							-	-		-	-	-	+	+	
		Elid of Potetiols (19.00 ft	'/																\perp		
	MANA(TECHNOLOGY AND SEMENT CORPORATION for Prudential Bank Building, Mabini St., Ermita, Manila	MA DR SU	ILLI	ER		R: _	E.	RII	EZA STAL AFU	JRA	E	LE	GENI	4	WS UD CR	- SPLIT 5 - WAS 5 - UNI - COR HYDRO	H SAI DISTU E SAN	MPLE JRBED MPLE	SAM	MPI

SHEET 1 OF 1

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS MRW - 25

GROUND ELEV. JECT: Pasig-Marikina River Channel Imp. Proj. 2.50 DEPTH OF WATER: (MLLW = Zero Datum) _ + 10.811 DATE MEASURED: 09 Jan. 2001 TION: R. Side Offshore, Dela Peña, Marikina STATION NO.: 13 + 525 TIME MEASURED: 3:00 PM WEATHER: FAIR): BMRW-25 DATE DRILLED: 09 - 11 January 2001 1619022.500 509761.100 COORDINATES: E SIEVE ANALYSIS ATTERBERG UNCONFINED % PASSING SIEVE LIMITS CLASSIFICATION (SPT) SYMBOL STANDARD RECOVERY (PENETRATION TEST LIQUID
LIMIT, %
PLASTICITY
INDEX, % SPECIF STRENGTH kg/cm² DESCRIPTION (SPT) STRAIN A, % 16 cm 15 cm 200 4 10 40 Log (N-VALUE) 10 20 30 Sitty Gravelly SAND; brown; 41% sand; 40% sub-angular to sub-rounded gravel & 19% non plastic silty fines; VERY LOOSE 19 60 49 29 18 2.66 56 9 10 22 Silty SAND; gray; 35% medium sand; 31% fine sand with 19% non-50 19 2.63 93 85 18 6 plastic silty fines; poorly graded; 7% gravel; MEDIUM DENSE. 89 SM SW 7 3 89 8 9 Silty Gravelly SAND; gray; 68% fine to coarse sand with 17% sub-83 67 38 15 2.64 14 7 11 rounded to sub-angular gravel; 15% non-plastic silt; MEDIUM 89 5-6 DENSE. 11 8 89 Sandy CLAY; gray; 72% highly plastic clayey fines with 17% fine CH 96 92 89 72* sand; about 4% gravel; STIFF. 36 2.61 31 5 6 89 Silty SAND; gray; 74% fine sand 100 99 96 41 8 12 89 with 22% non-plastic silt; SM MEDIUM DENSE. 9 9 IS-10 78 18 19 16 SS-11 78 3 20 8 41 2.65 67 18 26 20 Sandy GRAVEL; gray to grayish brown; 55-59% sub rounded to sub-angular gravel with 21-22% coarse sand; 17-19% medium to GP SS-13 67 19 24 26 fine sand; 3-4% non-plastic silt; DENSE to VERY DENSE. 67 18 23 27 SS-15 67 23 2.65 45 17 24 26 **End of Borehole** (15.00 m) BASIC TECHNOLOGY AND LEGEND: ACKER ACE MACHINE: _ MANAGEMENT CORPORATION SS - SPLIT SPOON SAMPLE E. RIEZA WS - WASH SAMPLE 2nd Floor Prudential Bank Building DRILLER: UDS - UNDISTURBED SAMPLE M. ESTAURA M. VILLAFUERTE 1377 A. Mabini St., Ermita, Manila CR - CORE SAMPLE SUPERVISOR: W/ HYDROMETER ANALYSIS Figure 5-3-3 (194/221) BORING LOGS (PHASEI)

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS **MRW - 26**

OJECT: Pasig-Marikina River Channel Imp. Proj. GROUND ELEV. 2.00 DEPTH OF WATER: + 11.085 (MLLW = Zero Datum) _ DATE MEASURED: 12 Jan. 2001 STATION NO.: ___ 13 + 975R. Side Offshore, Sto. Niño, Marikina 9:00 AM CATION: TIME MEASURED: WEATHER: FAIR NO: BMRW-26 DATE DRILLED: 12 - 15 January 2001 509628.100 E 1619464.100 COORDINATES: SIEVE ANALYSIS % PASSING SIEVE ATTERBERG UNCONFINED CLASSIFICATION LIMITS COMP. TEST (SPT) SYMBOL TOTAL UNIT WEIGHT, g/∞ STANDARD NATURAL MO CONTENT, SAMPLENO PENETRATION TEST SPECIFI RECOVERY PLASTICITY INDEX, % STRENGTH kg/cm² LIQUID LIMIT, % DESCRIPTION STRAIN 15 200 40 10 POOT (N-VALUE) 20 30 Sandy SILT; grayish brown; 37% fine sand w/ garbage included; 57% non-0/ 0 ML 99 94 57 100 plastic silt; VERY LOOSE. 15 15 92 2.62 67 55-1 Gravelly Silty SAND; grayish brown; 22-9 0 24% medium sand; 16-26% fine sand; 10-11% coarse sand; 15-19% angular to sub-85 74 50 34 2.64 sw 15 15 29 89 55-2 angular gravel; 23-34% non-plastic silty fines; VERY LOOSE to LOOSE. SM 2.64 81 71 49 23 25 89 Gravelly Sandy SILT; grayish brown; 18% gravel; 40% fine to coarse sand; 42% non-ML 65 42 75 2.64 82 26 plastic silt; STIFF. 6 89 Silty SAND; gray; 58% fine sand; 15% medium sand; 27% non-plastic silty fines; SS-85 27 100 2.63 36 5 MEDIUM DENSE 4 89 SS-5 54 14 96 88 2.63 21 5 Silty SAND; gray, 4% angular to sub-angular gravel; 40% fine sand; 7 89 SS-6 34% medium sand with 8% coarse sand; 14% non-plastic silty fines; 10 9 8 89 SS-7 MEDIUM DENSE. SM SW 9 9 89 SS-8 24 2.65 64 44 Silty Gravelly SAND; brownish 14 25 14 SS-9 89 gray to gray; 36% sub-angular to sub-rounded gravel; 20% coarse sand; 20% medium sand; 12% fine 14 18 24 sand; 12% non-plastic silt; DENSE. 10 14 19 67 Sandy Gravel; gray; 82% sub-angular to sub-rounded gravel; 17% sand with very little amount of silt; VERY DENSE. GW 18 10 4 13 17 33 SS-12 33 Gravelly Clayey SAND; brownish 79 70 49 29 gray; 50% coarse to fine sand; low 47 25 2.64 SS-13 6 10 SW 89 to medium plasticity clay; LOOSE to MEDIUM DENSE. SC 5 SS-14 3 89 Sandy Silty CLAY; brownish gray; 12% fine to medium sand; high plasticity clay; CH 97 100 99 39 2.60 51 89 STIFF 5 6 Sandy Gravelly CLAY; gray, 31% sub-angular to sub-rounded gravel; 27% fine to coarse SS-16 sand; 42% medium plasticity clay; STIFF. 69 60 57 45 25 2.64 31 67 8 CL Sandy Gravelly CLAY; grayish brown; 5% gravel; 46% fine to coarse sand; 49% medium plasticity 85 73 SS-17 42 22 2.63 clay; HARD. 24 89 13 25 50 Silty Gravelly SAND; brownish 38 SS-18 33 /2 73 55 16 2.64 100 gray; 27% sub-rounded to subangular gravel; 47% well-graded sand; 26% non plastic silt; VERY SW SS-19 100 DENSE. SM 13 21 Silty SAND; grayish brown; 40% fine sand with 12% medium sand; 47% 100 99 87 End of Borehole (19.97 m) 100 medium plasticity silt; VERY DENSE. LEGEND: ACKER ACE **BASIC TECHNOLOGY AND** MACHINE: SS - SPLIT SPOON SAMPLE

MANAGEMENT CORPORATION

2nd Floor Prudential Bank Building, 1377 A. Mabini St., Ermita, Manila

E. RIEZA DRILLER: M. ESTAURA

M. VILLAFUERTE

X

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