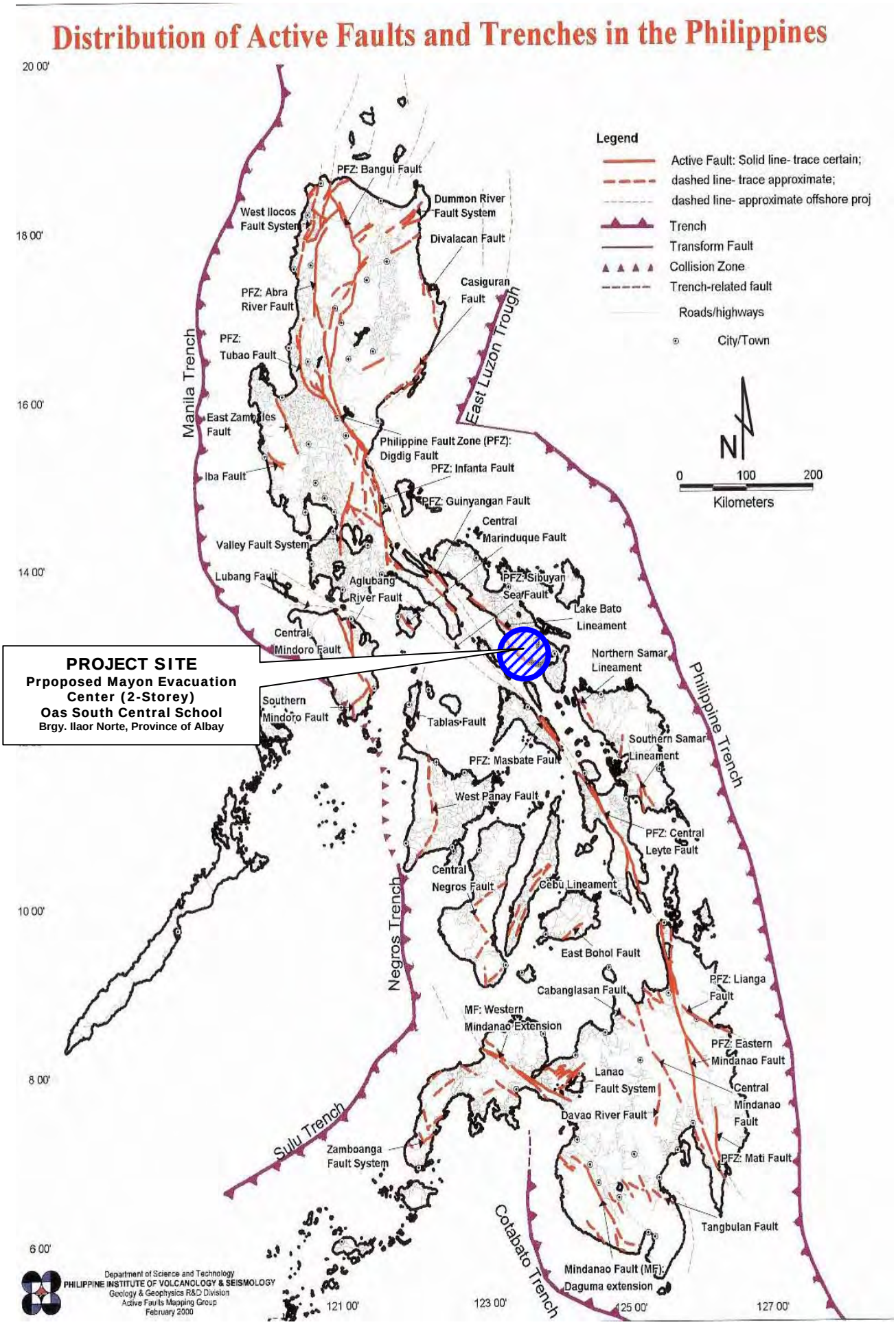
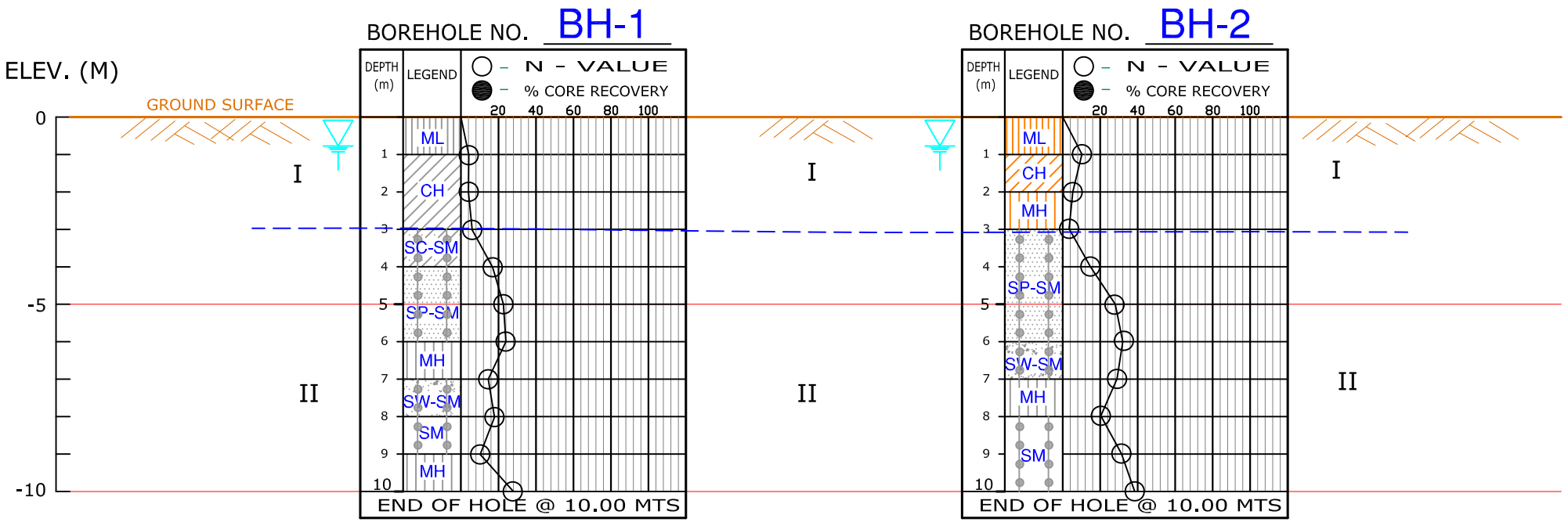
APPENDICES

Distribution of Active Faults and Trenches in the Philippines



VICINITY MAP

CONTRACTOR **GEOTECHNICS PHILIPPINES, INC.** 119 SAUYO ROAD, NOVALICHES, QUEZON CITY	PROJECT TITLE **Proposed Mayon Evacuation Center (Oas Central School)** Brgy. Ilaor Norte, Province of Albay	SCALE NTS	SHEET CONTENTS **LOCATION PLAN/VICINITY MAP** CLIENT **MOHRI, ARCHITECT & ASSOCIATES, INC.**	JOB NO. **2209-10.R1** SHEET NO. 1/1



SECTION A - A

L E G E N D :

- CH - Silty C L A Y
- CL - Sandy C L A Y
- MH - Clayey S I L T
- ML - Sandy S I L T
- SC - Clayey S A N D
- SM - Silty S A N D
- GM - Silty G R A V E L
- SC-SM - Clayey silty S A N D
- SP - Poorly graded SAND
- SW - Well graded SAND
- SP-SM - Poorly graded SAND w/ silt
- SW-SM - Well graded SAND w/ silt
- GP - Poorly graded GRAVEL
- GW - Well graded GRAVEL
- GP-GM - Poorly graded GRAVEL w/ silt
- GW-GM - Well graded GRAVEL w/ silt
- SD - SANDSTONE
- GC-GM - Clayey silty GRAVEL
- COBBLES
- GVL - GRAVEL
- SILTSTONE
- TST - Silty TUFF
- TSD - Sandy TUFF
- SHL - SHALE

I - N-VALUE<10 (LIQUEFIABLE ZONE)
II - N-VALUE>10
III - REFUSAL (WEATHERED ZONE)
IV - CORING / HARD FORMATION

CONTRACTOR
GEOTECHNICS PHILIPPINES, INC.
119 SAUYO ROAD, NOVALICHES, QUEZON CITY

PROJECT TITLE:
Proposed Mayon Evacuation Center (Oas South Central School)
Brgy. Ilaor Norte, Province of Albay

SHEET CONTENTS:
S O I L P R O F I L E
SCALE : N. T. S.

CLIENT:
MOHRI, ARCHITECT & ASSOCIATES, INC.

DRAWN BY:
MARIA ANTONIETTE P. CUNAHAP

CHECKED BY:
A. B. A. / M. R. R.

CERTIFIED BY:
AUTHORIZED SIGNATORY

JOB NO.
2209-10.R1

SHEET NO.
1/1

GEOTECHNICS PHILIPPINES, INCORPORATED

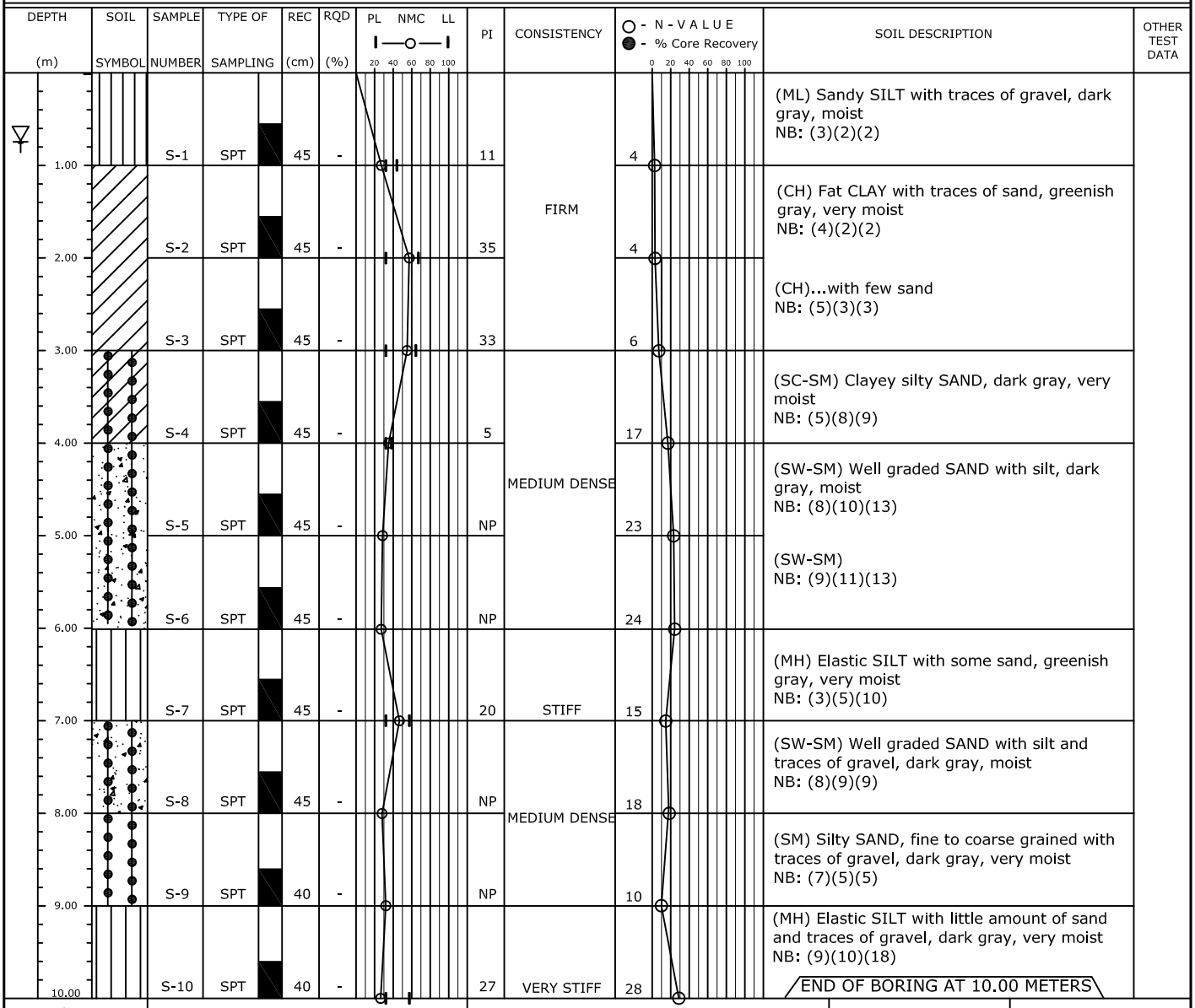
SOILS AND MATERIALS TESTING LABORATORY

119 SAUYO ROAD, NOVALICHES, QUEZON CITY
TEL. NO. 938-2124 \ 456-1140 \ 930-6555

DPWH-BRS Accredited

CLIENT	**MOHRI, ARCHITECT & ASSOCIATES, INC.**		BOREHOLE NO. **BH- 1**
PROJECT	**Proposed Mayon Evacuation Center (Oas South Central School)**		JOB NO. 2209-10.R1-FBL-01
LOCATION	Brgy. Ilaor Norte, Province of Albay	DRILLED R. POLIDAN	SHEET 1 of 1
RIG	KSK SMALL	LOGGED R. POLIDAN	0.00 to 10.00 meters
	Hammer Weight 63.50 Kg.	DATE STARTED Oct. 18, 2010	GROUND LEVEL - m.
	Fall Height 76.20 cm.	DATE COMPLETED Oct. 18, 2010	WATER LEVEL 0.75 m.
METHOD	WASH BORING	NORTHING -	EASTING -

FINAL BORING LOG



Type of Sampling

- STANDARD PENETRATION TEST (SPT)
- UNDISTURBED SAMPLING (UDS)
- CORING (CRG)

Type of Soil

- Silty CLAY
- Clayey SILT
- Clayey SAND
- Silty SAND
- Clayey silty SAND
- SAND
- Silty GRAVEL
- Well graded GRAVEL with silt
- GRAVEL
- SILTSTONE
- TUFF
- Tuffeceous SILTSTONE

CONSISTENCY

COHESIVE SOILS			COHENSIONLESS SOILS	
N-VALUE		CONSISTENCY	N-VALUE	CONSISTENCY
0 - 2	–	VERY SOFT	0 - 4	– VERY LOOSE
2 - 4	–	SOFT	4 - 10	– LOOSE
4 - 8	–	FIRM	10 - 30	– MEDIUM DENSE
8 - 15	–	STIFF	30 - 50	– DENSE
15 - 30	–	VERY STIFF	> 50	– VERY DENSE
> 30	–	HARD		

MOISTURE

MOISTURE CONTENT		
RANGES		VALUES
0 - 10	–	DRY
10 - 30	–	MOIST
30 - 70	–	VERY MOIST
70 - 100	–	WET
> 100	–	SATURATED

PERCENTAGE

% of SAND and GRAVEL		
RANGES		VALUES
0 - 5	–	TRACES
6 - 10	–	FEW
11 - 25	–	LITTLE
26 - 35	–	SOME
36 - 45	–	WITH

REMARKS: Rec = Recovery in Centimeters NB = No. of Blows HW = Hammer Weight

Reference Joint Spacing: #1 >30cm. 10 cm. >#3>3cm. #5 <1cm.

30 cm.>#2>10cm. 3 cm. >#4>1cm.

RQD = Rock Quality Designation SCR = Solid Core Recovery

Description of Strata is according to Unified Soil Classification System

Prepared by : **R. T. LUSTRE**

Checked by : **A.B.A. / M.R.R.**

Certified by :

AUTHORIZED SIGNATORY

Date Issued :

GEOTECHNICS PHILIPPINES, INCORPORATED

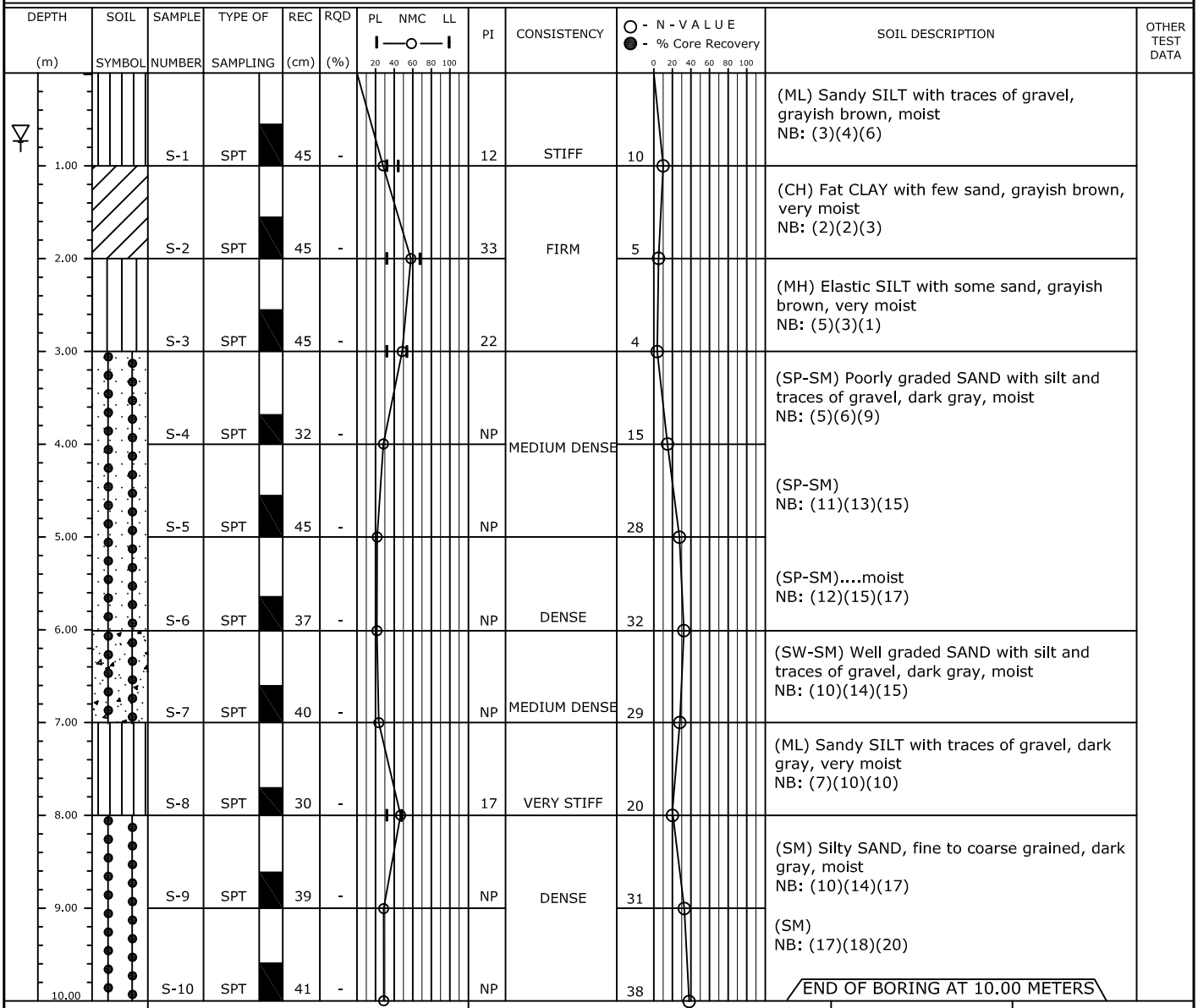
SOILS AND MATERIALS TESTING LABORATORY

119 SAUYO ROAD, NOVALICHES, QUEZON CITY
TEL. NO. 938-2124 \ 456-1140 \ 930-6555

DPWH-BRS Accredited

CLIENT	**MOHRI, ARCHITECT & ASSOCIATES, INC.**		BOREHOLE NO. **BH- 2**
PROJECT	**Proposed Mayon Evacuation Center (Oas South Central School)**		JOB NO. 2209-10.R1-FBL-02
LOCATION	Brgy. Ilaor Norte, Province of Albay	DRILLED R. POLIDAN	SHEET 1 of 1
RIG	KSK SMALL	LOGGED R. POLIDAN	0.00 to 10.00 meters
	Hammer Weight 63.50 Kg.	DATE STARTED Oct. 19, 2010	GROUND LEVEL - m.
	Fall Height 76.20 cm.	DATE COMPLETED Oct. 19, 2010	WATER LEVEL 0.71 m.
METHOD	WASH BORING	NORTHING -	EASTING -

FINAL BORING LOG



Type of Sampling

- STANDARD PENETRATION TEST (SPT)
- UNDISTURBED SAMPLING (UDS)
- CORING (CRG)

Type of Soil

- Silty CLAY
- Clayey SILT
- Clayey SAND
- Silty SAND
- Clayey silty SAND
- SAND
- Silty GRAVEL
- Well graded GRAVEL with silt
- GRAVEL
- SILTSTONE
- TUFF
- Tuffeceous SILTSTONE

CONSISTENCY

COHESIVE SOILS N-VALUE	CONSISTENCY	COHENSIONLESS SOILS N-VALUE	CONSISTENCY
0 - 2	VERY SOFT	0 - 4	VERY LOOSE
2 - 4	SOFT	4 - 10	LOOSE
4 - 8	FIRM	10 - 30	MEDIUM DENSE
8 - 15	STIFF	30 - 50	DENSE
15 - 30	VERY STIFF	> 50	VERY DENSE
> 30	HARD		

MOISTURE

MOISTURE CONTENT RANGES	VALUES
0 - 10	DRY
10 - 30	MOIST
30 - 70	VERY MOIST
70 - 100	WET
> 100	SATURATED

PERCENTAGE

% of SAND and GRAVEL RANGES	VALUES
0 - 5	TRACES
6 - 10	FEW
11 - 25	LITTLE
26 - 35	SOME
36 - 45	WITH

REMARKS: Rec = Recovery in Centimeters NB = No. of Blows HW = Hammer Weight

Reference Joint Spacing: #1 >30cm. 10 cm. >#3>3cm. #5 <1cm.

30 cm.>#2>10cm. 3 cm. >#4>1cm.

RQD = Rock Quality Designation SCR = Solid Core Recovery

Description of Strata is according to Unified Soil Classification System

Prepared by : **R. T. LUSTRE**

Checked by : **A.B.A. / M.R.R.**

Certified by :

AUTHORIZED SIGNATORY

Date Issued :

GEOTECHNICS PHILIPPINES, INC.
SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

CLIENT..... **MOHRI, ARCHITECT & ASSOCIATES, INC.** JOB NUMBER..... 2209-10.R1-SUM-1
PROJECT..... **Proposed Mayon Evacuation Center (Oas South Central School)** DATE OF RECIEPT.... October 27, 2010
LOCATION.... Brgy. Ilaor Norte, Province of Albay DATE OF TEST..... Oct. 27-Nov. 2, 2010

SUMMARY OF LABORATORY TESTS

SAMPLE NUMBER	DEPTH (m)	NMC (%)	ATTERBERG LIMIT, (%)			USCS Class.	SIEVE ANALYSIS (% FINER) PASSING SIEVE NO.										Remarks
			LL	PL	PI		1	3/4	3/8	4	10	20	40	60	140	200	
BH-1																	
1	0.55 - 1.00	28	44	33	11	ML			100	98	96	88	76	68	53	50	-
2	1.55 - 2.00	57	68	33	35	CH						100	99	98	96	95	-
3	2.55 - 3.00	55	65	32	33	CH				100	99	98	96	95	92	91	-
4	3.55 - 4.00	35	38	33	5	SC-SM				100	98	89	72	57	41	39	-
5	4.55 - 5.00	29	-	NP	-	SW-SM				100	95	77	51	31	12	10	-
6	5.55 - 6.00	27	-	NP	-	SW-SM				100	96	82	56	36	15	12	-
7	6.55 - 7.00	47	52	32	20	MH				100	99	96	90	83	69	64	-
8	7.55 - 8.00	28	-	NP	-	SW-SM			100	99	93	65	34	23	14	12	-
9	8.55 - 9.00	32	-	NP	-	SM			100	96	87	67	45	32	20	17	-
10	9.55 - 10.00	48	59	32	27	MH			100	97	95	93	92	89	85	82	-
BH-2																	
1	0.55 - 1.00	28	45	33	12	ML			100	98	94	85	73	64	52	50	-
2	1.55 - 2.00	56	65	32	33	CH					100	99	98	97	95	92	-
3	2.55 - 3.00	49	54	32	22	MH				100	97	92	84	80	75	72	-
4	3.55 - 4.00	28	-	NP	-	SP-SM			100	96	89	76	54	30	12	10	-
5	4.55 - 5.00	23	-	NP	-	SP-SM			100	96	88	74	50	27	10	8	-
6	5.55 - 6.00	22	-	NP	-	SP-SM			100	99	92	77	52	26	8	6	-
7	6.55 - 7.00	24	-	NP	-	SW-SM		100	98	95	83	63	40	21	10	8	-
8	7.55 - 8.00	46	49	32	17	ML			100	95	89	82	73	65	56	54	-
9	8.55 - 9.00	29	-	NP	-	SM				100	99	89	65	45	25	21	-
10	9.55 - 10.00	29	-	NP	-	SM				100	99	86	60	36	19	16	-

SAMPLE SUBMITTED BY :

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

REMARKS: * with hydrometer

COMPUTER PRINT-OUT
By: *MARIA ANTONIETTE P. CUNAHAP*
Encoder

Data Chkd by: ABA / MRR
Quality Assurance

Date Issued _____

CERTIFIED BY:

AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.
SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-NMC-01-1
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 27-28, 2010

TEST REPORT FOR LABORATORY DETERMINATION OF WATER (MOISTURE) CONTENT OF SOIL & ROCK BY MASS

ASTM D 2216 - 05

Test Method ☑ A ☐ B

BOREHOLE NO...BH-1

SAMPLE NUMBER	DEPTH (m)	WET SOIL DISH (g)	DRY SOIL DISH (g)	WATER (g)	DISH MASS (g)	DRY SOIL (g)	WATER CONTENT (%)	REMARKS
NATURAL MOISTURE CONTENT								
1	0.55-1.00	99.00	79.40	19.60	9.67	69.73	28	
2	1.55-2.00	92.00	62.19	29.81	9.77	52.42	57	
3	2.55-3.00	113.54	76.74	36.80	9.79	66.95	55	
4	3.55-4.00	116.15	88.45	27.70	9.48	78.97	35	
5	4.55-5.00	96.80	77.09	19.71	9.64	67.45	29	
6	5.55-6.00	98.30	79.41	18.89	9.65	69.76	27	

TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

ASTM Designation : D 4318 - 05, Method B

SAMPLE NUMBER	DEPTH (m)	BLOWS	WET SOIL DISH (g)	DRY SOIL DISH (g)	WATER (g)	DISH MASS (g)	DRY SOIL (g)	% Retained on 0.425 mm	ATTERBERG LIMIT		REMARKS
									LL	PL	
LIQUID LIMIT											
4	3.55-4.00	20 20	38.10 38.24	30.41 30.44	7.69 7.80	10.67 10.36	19.74 20.08		38 38		38
PLASTIC LIMIT											
4	3.55-4.00	P P	22.70 22.74	19.42 19.48	3.28 3.26	9.56 9.55	9.86 9.93			33 33	33

Uncertainty Results: Water Content (%) = ± 0.0419 Liquid Limit = ± 0.0947 Plastic Limit = ± 0.2042

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:NMC-10-504

SAMPLE SUBMITTED BY :

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

REMARKS: _____

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued: _____

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY : _____
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-NMC-01-2
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 27-28, 2010

TEST REPORT FOR LABORATORY DETERMINATION OF WATER (MOISTURE) CONTENT OF SOIL & ROCK BY MASS

ASTM D 2216 - 05

Test Method ☑ A ☐ B

BOREHOLE NO...BH-1

SAMPLE NUMBER	DEPTH (m)	WET SOIL DISH (g)	DRY SOIL DISH (g)	WATER (g)	DISH MASS (g)	DRY SOIL (g)	WATER CONTENT (%)	REMARKS
NATURAL MOISTURE CONTENT								
7	6.55-7.00	96.15	68.54	27.61	9.65	58.89	47	
8	7.55-8.00	106.10	85.25	20.85	9.59	75.66	28	
9	8.55-9.00	114.70	89.43	25.27	9.56	79.87	32	
10	9.55-10.00	89.02	63.15	25.87	9.49	53.66	48	

TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

ASTM Designation : D 4318 - 05, Method B

SAMPLE NUMBER	DEPTH (m)	BLOWS	WET SOIL DISH (g)	DRY SOIL DISH (g)	WATER (g)	DISH MASS (g)	DRY SOIL (g)	% Retained on 0.425 mm	ATTERBERG LIMIT		REMARKS
									LL	PL	
LIQUID LIMIT											
PLASTIC LIMIT											

Uncertainty Results: Water Content (%) = ± 0.0395 Liquid Limit = --- Plastic Limit = ---

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:NMC-10-504

SAMPLE SUBMITTED BY :

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

REMARKS: _____

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued: _____

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY : _____
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-NMC-02-1
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 27-28, 2010

TEST REPORT FOR LABORATORY DETERMINATION OF WATER (MOISTURE) CONTENT OF SOIL & ROCK BY MASS

ASTM D 2216 - 05

Test Method ☑ A ☐ B

BOREHOLE NO...BH-2

SAMPLE NUMBER	DEPTH (m)	WET SOIL DISH (g)	DRY SOIL DISH (g)	WATER (g)	DISH MASS (g)	DRY SOIL (g)	WATER CONTENT (%)	REMARKS
NATURAL MOISTURE CONTENT								
1	0.55-1.00	124.50	99.58	24.92	9.47	90.11	28	
2	1.55-2.00	99.08	66.99	32.09	9.63	57.36	56	
3	2.55-3.00	110.10	77.16	32.94	10.16	67.00	49	
4	3.55-4.00	101.60	81.62	19.98	9.63	71.99	28	
5	4.55-5.00	101.50	84.16	17.34	9.81	74.35	23	
6	5.55-6.00	108.60	91.03	17.57	9.94	81.09	22	

TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

ASTM Designation : D 4318 - 05, Method B

SAMPLE NUMBER	DEPTH (m)	BLOWS	WET SOIL DISH (g)	DRY SOIL DISH (g)	WATER (g)	DISH MASS (g)	DRY SOIL (g)	% Retained on 0.425 mm	ATTERBERG LIMIT		REMARKS
									LL	PL	
LIQUID LIMIT											
PLASTIC LIMIT											

Uncertainty Results: Water Content (%) = ± 0.0382 Liquid Limit = --- Plastic Limit = ---

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:NMC-10-505

SAMPLE SUBMITTED BY :

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

REMARKS: _____

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued: _____

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY : _____
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
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LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-NMC-02-2
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 27-28, 2010

TEST REPORT FOR LABORATORY DETERMINATION OF WATER (MOISTURE) CONTENT OF SOIL & ROCK BY MASS

ASTM D 2216 - 05

Test Method ☑ A ☐ B

BOREHOLE NO...BH-2

SAMPLE NUMBER	DEPTH (m)	WET SOIL DISH (g)	DRY SOIL DISH (g)	WATER (g)	DISH MASS (g)	DRY SOIL (g)	WATER CONTENT (%)	REMARKS
NATURAL MOISTURE CONTENT								
7	6.55-7.00	114.10	93.85	20.25	9.74	84.11	24	
8	7.55-8.00	94.10	67.59	26.51	9.65	57.94	46	
9	8.55-9.00	114.60	91.14	23.46	9.75	81.39	29	
10	9.55-10.00	117.30	93.25	24.05	9.72	83.53	29	

TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

ASTM Designation : D 4318 - 05, Method B

SAMPLE NUMBER	DEPTH (m)	BLOWS	WET SOIL DISH (g)	DRY SOIL DISH (g)	WATER (g)	DISH MASS (g)	DRY SOIL (g)	% Retained on 0.425 mm	ATTERBERG LIMIT		REMARKS
									LL	PL	
LIQUID LIMIT											
PLASTIC LIMIT											

Uncertainty Results: Water Content (%) = ± 0.0363 Liquid Limit = --- Plastic Limit = ---

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:NMC-10-505

SAMPLE SUBMITTED BY :

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

REMARKS: _____

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued: _____

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY : _____
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-AL-01-1
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location.... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 29-30, 2010

TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

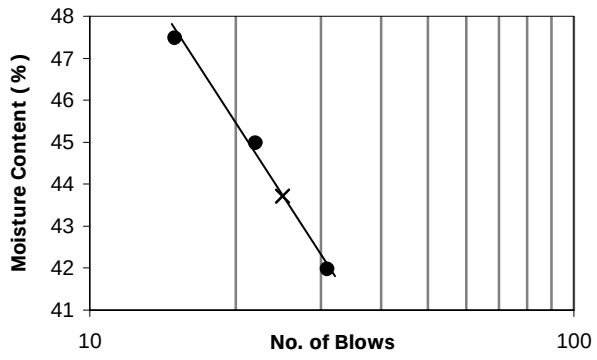
ASTM D 4318 - 05

Method : A ☑ Wet Preparation ☐ Dry Preparation

BOREHOLE NO..... **BH-1** DEPTH (m)..... 0.55-1.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-1 USCS CLASS..... ML Sandy SILT

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	A33	A8	A80	B30	B76
WET SOIL + DISH (g)	32.70	35.42	38.22	22.67	22.70
DRY SOIL + DISH (g)	25.87	27.44	29.07	19.44	19.46
WATER (g)	6.83	7.98	9.15	3.23	3.24
DISH MASS (g)	9.60	9.70	9.80	9.57	9.58
DRY SOIL (g)	16.27	17.74	19.27	9.87	9.88
MOISTURE CONTENT	41.98	44.98	47.48	32.73	32.79
NUMBER OF BLOWS	31	22	15	33	

% RETAINED ON 0.425mm 23.85

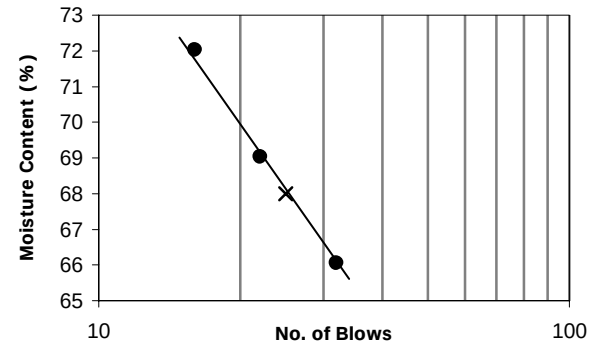


LL = 44 PL = 33 PI = 11

BOREHOLE NO..... **BH-1** DEPTH (m)..... 1.55-2.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-2 USCS CLASS..... CH Fat CLAY

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	B62	B7	B86	C5	C97
WET SOIL + DISH (g)	32.47	35.22	38.49	22.64	22.66
DRY SOIL + DISH (g)	23.38	24.79	26.46	19.34	19.35
WATER (g)	9.09	10.43	12.03	3.30	3.31
DISH MASS (g)	9.62	9.68	9.76	9.31	9.32
DRY SOIL (g)	13.76	15.11	16.70	10.03	10.03
MOISTURE CONTENT	66.06	69.03	72.04	32.90	33.00
NUMBER OF BLOWS	32	22	16	33	

% RETAINED ON 0.425mm 0.95



LL = 68 PL = 33 PI = 35

Uncertainty Results: I Liquid Limit = ± 0.1222 Plastic Limit = ± 0.2037
II Liquid Limit = ± 0.1445 Plastic Limit = ± 0.2005

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:AL-10-653

SAMPLE SUBMITTED BY :
☐ Walk-in Clients ☑ GPI Field Operator
R. POLIDAN

REMARKS:

COMPUTER PRINT-OUT
By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA / MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-AL-01-2
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location.... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 29-30, 2010

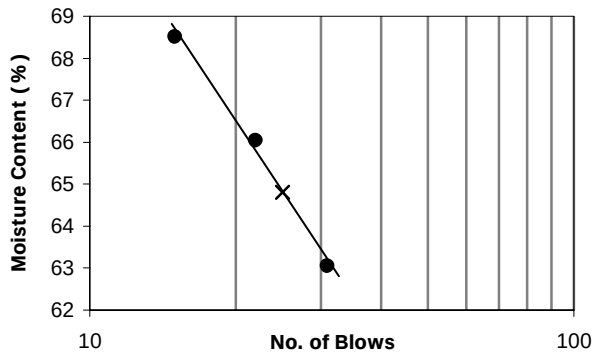
TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

ASTM D 4318 - 05

Method : A ☑ Wet Preparation ☐ Dry Preparation

BOREHOLE NO..... **BH-1** DEPTH (m)..... 2.55-3.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-3 USCS CLASS..... ML Sandy SILT

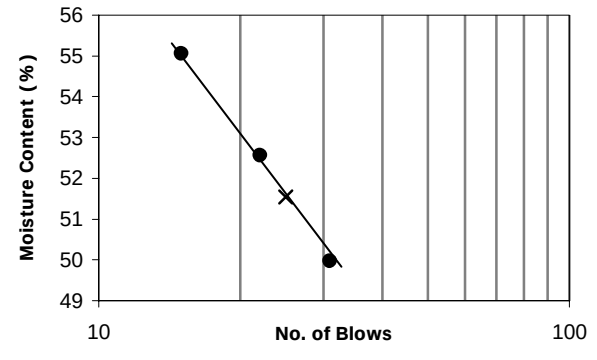
MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	A100	A90	A12	B2	B51
WET SOIL + DISH (g)	32.28	35.18	37.94	22.69	22.72
DRY SOIL + DISH (g)	23.51	25.05	26.52	19.50	19.50
WATER (g)	8.77	10.13	11.42	3.19	3.22
DISH MASS (g)	9.60	9.71	9.85	9.49	9.51
DRY SOIL (g)	13.91	15.34	16.67	10.01	9.99
MOISTURE CONTENT	63.05	66.04	68.51	31.87	32.23
NUMBER OF BLOWS	31	22	15	32	
% RETAINED ON 0.425mm					4.20



LL = 65 PL = 32 PI = 33

BOREHOLE NO..... **BH-1** DEPTH (m)..... 6.55-7.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-7 USCS CLASS..... MH Elastic SILT

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	A29	A16	A21	C54	C92
WET SOIL + DISH (g)	32.67	35.38	38.24	22.69	22.73
DRY SOIL + DISH (g)	25.00	26.55	28.16	19.51	19.53
WATER (g)	7.67	8.83	10.08	3.18	3.20
DISH MASS (g)	9.65	9.75	9.85	9.52	9.56
DRY SOIL (g)	15.35	16.80	18.31	9.99	9.97
MOISTURE CONTENT	49.97	52.56	55.05	31.83	32.10
NUMBER OF BLOWS	31	22	15	32	
% RETAINED ON 0.425mm					10.44



LL = 52 PL = 32 PI = 20

Uncertainty Results: I Liquid Limit = ± 0.1424 Plastic Limit = ± 0.2003
II Liquid Limit = ± 0.1293 Plastic Limit = ± 0.2007

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:AL-10-654

SAMPLE SUBMITTED BY :
☐ Walk-in Clients ☑ GPI Field Operator
R. POLIDAN

REMARKS:

COMPUTER PRINT-OUT
By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA / MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.
SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-AL-01-3
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location.... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 29-30, 2010

TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

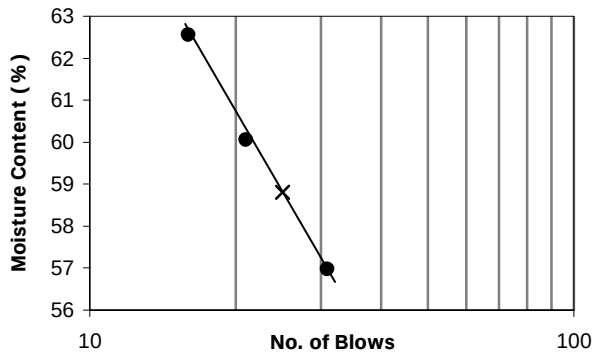
ASTM D 4318 - 05

Method : A ☑ Wet Preparation ☐ Dry Preparation

BOREHOLE NO..... **BH-1** DEPTH (m)..... 9.55-10.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-10 USCS CLASS..... MH Elastic SILT

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	B100	B66	B39	D68	D41
WET SOIL + DISH (g)	32.46	35.24	37.98	22.78	22.69
DRY SOIL + DISH (g)	24.17	25.65	27.14	19.62	19.50
WATER (g)	8.29	9.59	10.84	3.16	3.19
DISH MASS (g)	9.62	9.68	9.81	9.64	9.55
DRY SOIL (g)	14.55	15.97	17.33	9.98	9.95
MOISTURE CONTENT	56.98	60.05	62.55	31.66	32.06
NUMBER OF BLOWS	31	21	16	32	

% RETAINED ON 0.425mm 8.50

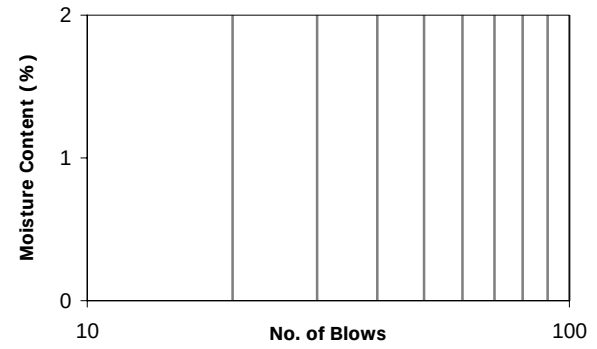


LL = 59 PL = 32 PI = 27

BOREHOLE NO..... DEPTH (m)..... SOIL DESCRIPTION.....
SAMPLE NO..... USCS CLASS.....

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER					
WET SOIL + DISH (g)					
DRY SOIL + DISH (g)					
WATER (g)					
DISH MASS (g)					
DRY SOIL (g)					
MOISTURE CONTENT					
NUMBER OF BLOWS					

% RETAINED ON 0.425mm .....



LL = PL = PI =

Uncertainty Results: I Liquid Limit = ± 0.1363 Plastic Limit = ± 0.2008
II Liquid Limit = --- Plastic Limit = ---

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:AL-10-654

SAMPLE SUBMITTED BY :
☐ Walk-in Clients ☑ GPI Field Operator
R. POLIDAN

REMARKS:

COMPUTER PRINT-OUT
By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA / MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-AL-02-1
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location.... Brgy. Ilaor Norte, Province of Albay	Date of Test..... Oct. 30-Nov. 2, 2010

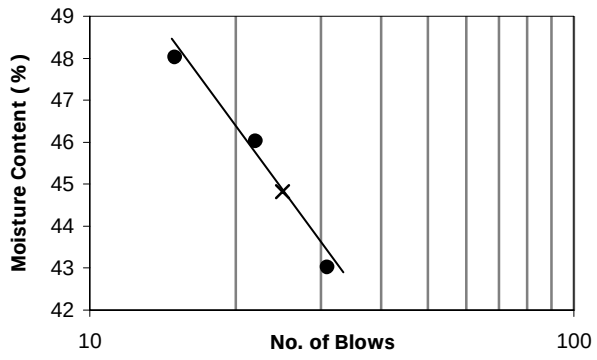
TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

ASTM D 4318 - 05

Method : A ☑ Wet Preparation ☐ Dry Preparation

BOREHOLE NO..... **BH-2** DEPTH (m)..... 0.55-1.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-1 USCS CLASS..... ML Sandy SILT

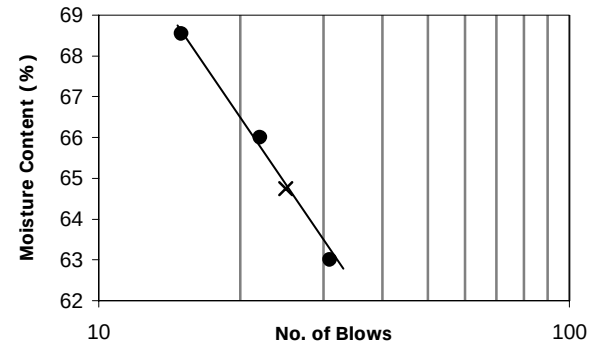
MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	C55	C26	C99	D49	D33
WET SOIL + DISH (g)	32.77	35.44	38.28	22.69	22.70
DRY SOIL + DISH (g)	25.81	27.32	29.04	19.44	19.42
WATER (g)	6.96	8.12	9.24	3.25	3.28
DISH MASS (g)	9.63	9.68	9.80	9.49	9.46
DRY SOIL (g)	16.18	17.64	19.24	9.95	9.96
MOISTURE CONTENT	43.02	46.03	48.02	32.66	32.93
NUMBER OF BLOWS	31	22	15	33	
% RETAINED ON 0.425mm					27.01



LL = 45 PL = 33 PI = 12

BOREHOLE NO..... **BH-2** DEPTH (m)..... 1.55-2.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-2 USCS CLASS..... CH Fat CLAY

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	D52	D31	D37	C95	C69
WET SOIL + DISH (g)	32.49	35.27	38.19	22.64	22.66
DRY SOIL + DISH (g)	23.65	25.12	26.66	19.45	19.46
WATER (g)	8.84	10.15	11.53	3.19	3.20
DISH MASS (g)	9.62	9.74	9.84	9.42	9.45
DRY SOIL (g)	14.03	15.38	16.82	10.03	10.01
MOISTURE CONTENT	63.01	65.99	68.55	31.80	31.97
NUMBER OF BLOWS	31	22	15	32	
% RETAINED ON 0.425mm					1.67



LL = 65 PL = 32 PI = 33

Uncertainty Results: I Liquid Limit = ± 0.1229 Plastic Limit = ± 0.2020
II Liquid Limit = ± 0.1412 Plastic Limit = ± 0.1999

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:AL-10-655

SAMPLE SUBMITTED BY :
☐ Walk-in Clients ☑ GPI Field Operator
R. POLIDAN

REMARKS:

COMPUTER PRINT-OUT
By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA / MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.
SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI & PA ASSOCIATES, INC.**	Job Number..... 2209-10-AL-02-2
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location.... Brgy. Ilaor Norte, Province of Albay	Date of Test..... Oct. 30-Nov. 2, 2010

TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

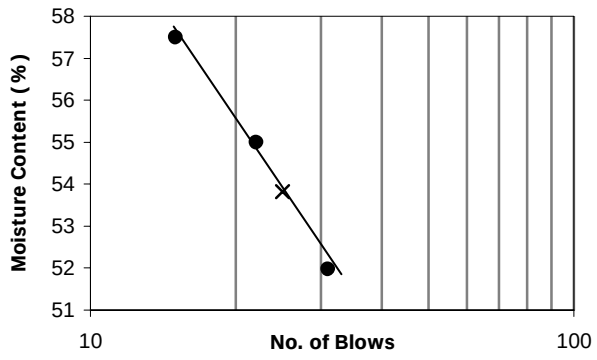
ASTM D 4318 - 05

Method : A ☑ Wet Preparation ☐ Dry Preparation

BOREHOLE NO..... **BH-2** DEPTH (m)..... 2.55-3.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-3 USCS CLASS..... MH Elastic SILT

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	C33	C71	C38	D5	D38
WET SOIL + DISH (g)	33.10	35.48	38.28	22.67	22.70
DRY SOIL + DISH (g)	25.08	26.34	27.92	19.43	19.47
WATER (g)	8.02	9.14	10.36	3.24	3.23
DISH MASS (g)	9.65	9.72	9.90	9.45	9.47
DRY SOIL (g)	15.43	16.62	18.02	9.98	10.00
MOISTURE CONTENT	51.98	54.99	57.49	32.46	32.30
NUMBER OF BLOWS	31	22	15	32	

% RETAINED ON 0.425mm 15.64

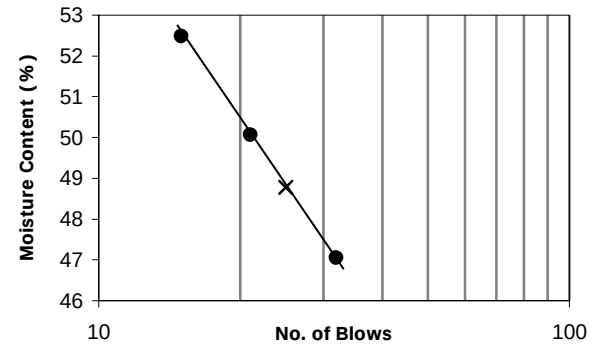


LL = 54 PL = 32 PI = 22

BOREHOLE NO..... **BH-2** DEPTH (m)..... 7.55-8.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-8 USCS CLASS..... ML Sandy SILT

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	D72	D51	D42	C87	C45
WET SOIL + DISH (g)	33.08	35.27	37.98	22.71	22.74
DRY SOIL + DISH (g)	25.57	26.74	28.28	19.53	19.54
WATER (g)	7.51	8.53	9.70	3.18	3.20
DISH MASS (g)	9.61	9.70	9.80	9.58	9.56
DRY SOIL (g)	15.96	17.04	18.48	9.95	9.98
MOISTURE CONTENT	47.06	50.06	52.49	31.96	32.06
NUMBER OF BLOWS	32	21	15	32	

% RETAINED ON 0.425mm 26.65



LL = 49 PL = 32 PI = 17

Uncertainty Results: I Liquid Limit = ± 0.1287 Plastic Limit = ± 0.2013
II Liquid Limit = ± 0.1250 Plastic Limit = ± 0.2016

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:AL-10-656

SAMPLE SUBMITTED BY :
☐ Walk-in Clients ☑ GPI Field Operator
R. POLIDAN

REMARKS:

COMPUTER PRINT-OUT
By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA / MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

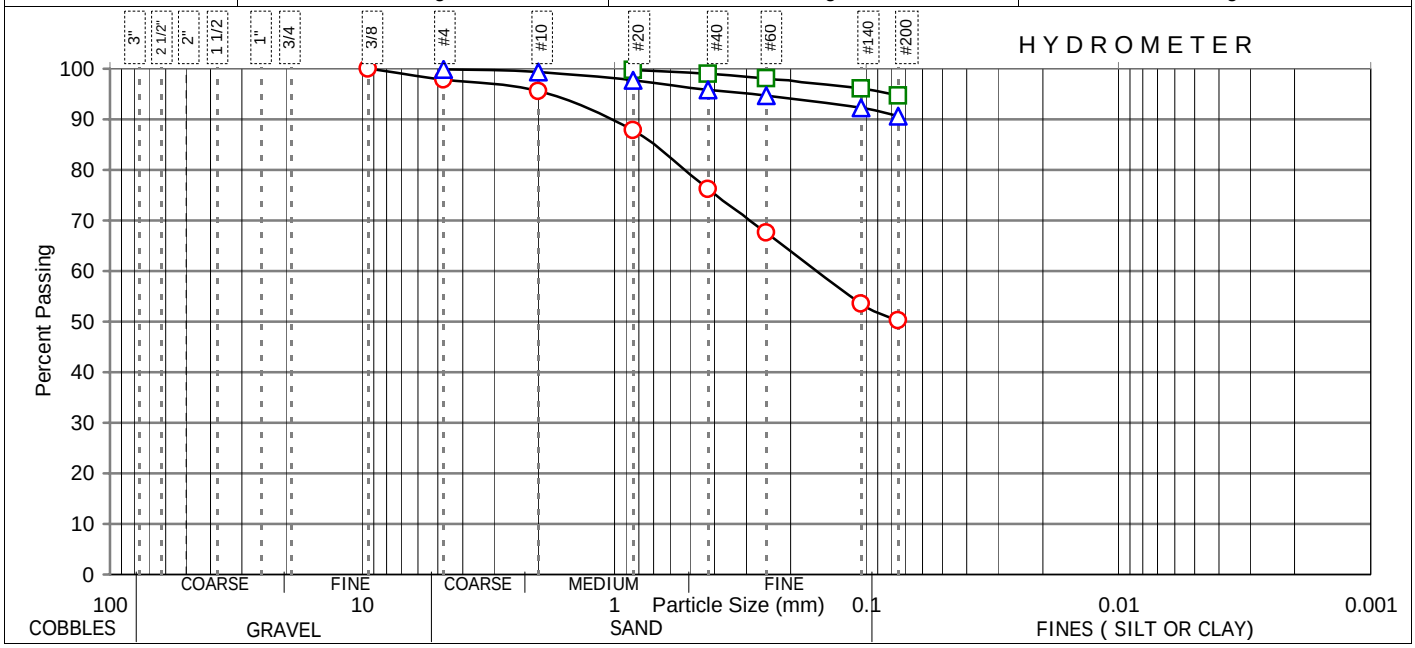
Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-GSA-01-1
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 28, 2010

TEST REPORT FOR GRAIN SIZE ANALYSIS

ASTM D 422 - 63 (Re-approved 2007)

BH / SAMPLE NO.....	**BH-1**	○ 1	□ 2	△ 3
DEPTH (m).....		0.55-1.00	1.55-2.00	2.55-3.00
SOIL DESCRIPTION.....		Sandy SILT	Fat CLAY	Fat CLAY

SIEVE SIZE		Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent
inches	mm	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer
2 1/2	62.5									
2	50.0									
1 1/2	37.5									
1	25.0									
3/4	19.0									
3/8	9.5			100						
4	4.75	1.54	2.21	98				0.10	0.15	100
10	2.0	3.08	4.42	96				0.43	0.64	99
20	0.8	8.45	12.12	88	0.12	0.23	100	1.54	2.30	98
40	0.425	16.63	23.85	76	0.50	0.95	99	2.81	4.20	96
60	0.25	22.62	32.44	68	1.02	1.95	98	3.54	5.29	95
140	0.105	32.43	46.51	53	2.08	3.97	96	5.18	7.74	92
200	0.075	34.67	49.72	50	2.80	5.34	95	6.27	9.37	91
OVEN DRIED MASS			69.73 gms			52.42 gms			66.95 gms	



* - with Hydrometer

REMARKS :

SAMPLE SUBMITTED BY:

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

Uncertainty Results: % Finer = ± 0.0469 LAB.FILE NO.:GSA-10-406

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

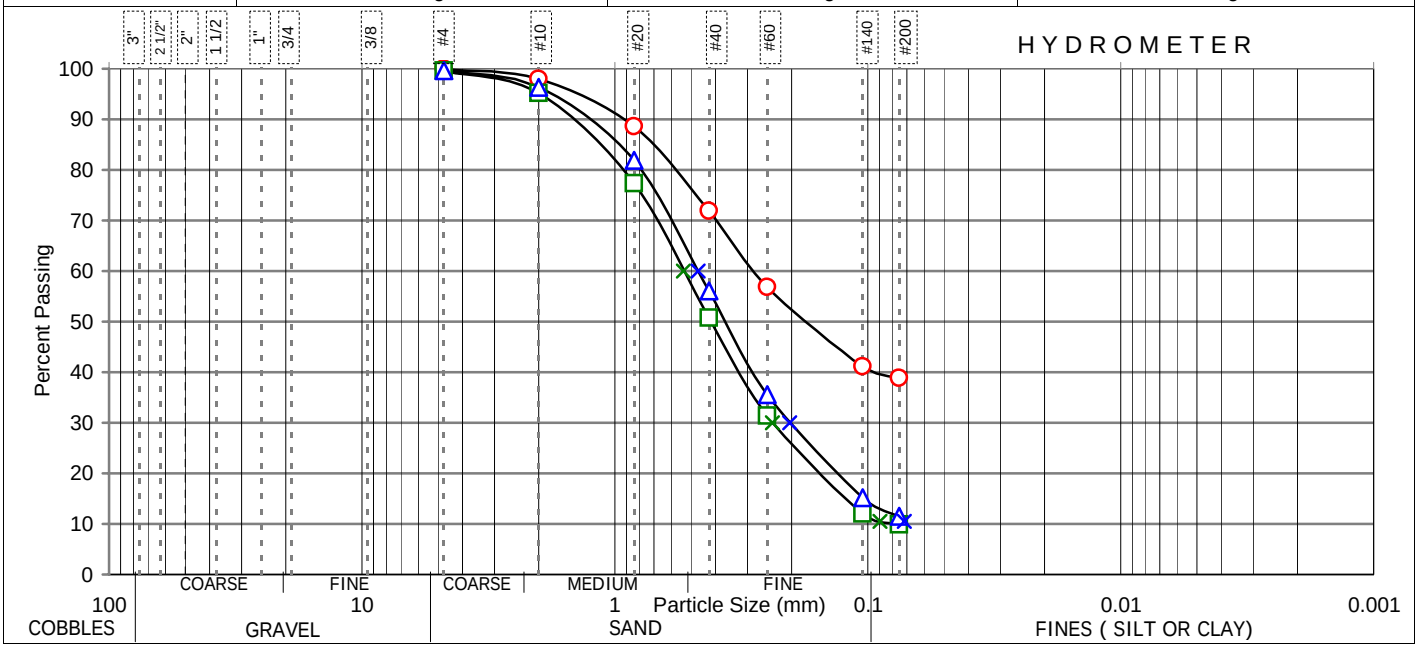
Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-GSA-01-2
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 28, 2010

TEST REPORT FOR GRAIN SIZE ANALYSIS

ASTM D 422 - 63 (Re-approved 2007)

BH / SAMPLE NO.....	**BH-1**	○ 4		□ 5			△ 6	
DEPTH (m).....		3.55-4.00		4.55-5.00			5.55-6.00	
SOIL DESCRIPTION.....		Clayey silty SAND		Well graded SAND with silt			Well graded SAND with silt	

SIEVE SIZE		Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent
inches	mm	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer
2 1/2	62.5									
2	50.0									
1 1/2	37.5									
1	25.0									
3/4	19.0									
3/8	9.5									
4	4.75			100	0.26	0.39	100	0.27	0.39	100
10	2.0	1.57	1.99	98	3.27	4.85	95	2.56	3.67	96
20	0.8	8.99	11.38	89	15.29	22.67	77	12.67	18.16	82
40	0.425	22.18	28.09	72	33.22	49.25	51	30.65	43.94	56
60	0.25	34.09	43.17	57	46.28	68.61	31	44.94	64.42	36
140	0.105	46.47	58.85	41	59.30	87.92	12	59.15	84.79	15
200	0.075	48.33	61.20	39	60.78	90.11	10	61.72	88.47	12
OVEN DRIED MASS			78.97 gms			67.45 gms			69.76 gms	



* - with Hydrometer

REMARKS : S-5: Cu = 6.00 Cc = 1.19
S-6: Cu = 6.52 Cc = 1.24

SAMPLE SUBMITTED BY:
☐ Walk-in Clients ☑ GPI Field Operator
R. POLIDAN

COMPUTER PRINT-OUT
By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued: _____

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY : _____
AUTHORIZED SIGNATORY

Uncertainty Results: % Finer = ± 0.0490 LAB.FILE NO.:GSA-10-406

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

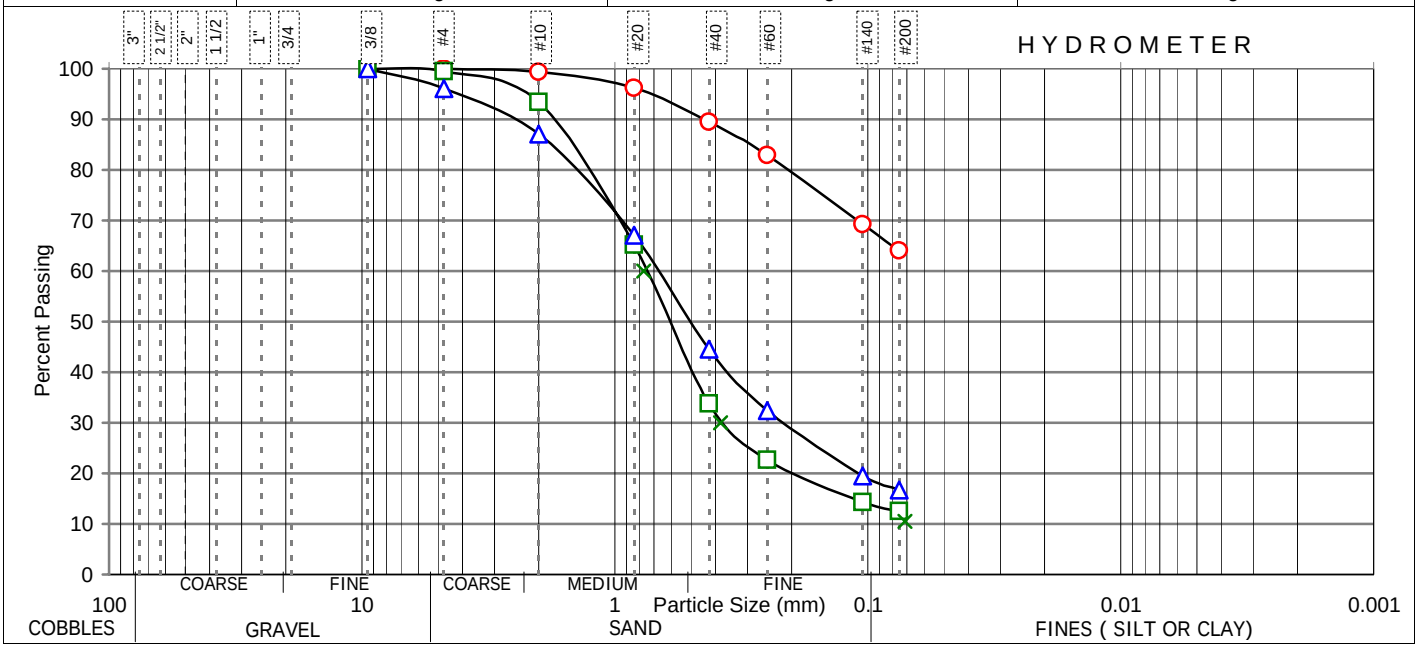
Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-GSA-01-3
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 28, 2010

TEST REPORT FOR GRAIN SIZE ANALYSIS

ASTM D 422 - 63 (Re-approved 2007)

BH / SAMPLE NO.....	**BH-1**	○ 7		□ 8			△ 9	
DEPTH (m).....		6.55-7.00		7.55-8.00			8.55-9.00	
SOIL DESCRIPTION.....		Elastic SILT		Well graded SAND with silt			Silty SAND	

SIEVE SIZE		Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent
inches	mm	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer
2 1/2	62.5									
2	50.0									
1 1/2	37.5									
1	25.0									
3/4	19.0									
3/8	9.5						100			100
4	4.75			100	0.40	0.53	99	3.16	3.96	96
10	2.0	0.34	0.58	99	4.94	6.53	93	10.36	12.97	87
20	0.8	2.25	3.82	96	26.37	34.85	65	26.31	32.94	67
40	0.425	6.15	10.44	90	50.13	66.26	34	44.29	55.45	45
60	0.25	10.07	17.10	83	58.49	77.31	23	53.95	67.55	32
140	0.105	18.14	30.80	69	64.80	85.65	14	64.26	80.46	20
200	0.075	21.16	35.93	64	66.21	87.51	12	66.56	83.34	17
OVEN DRIED MASS			58.89 gms			75.66 gms			79.87 gms	



* - with Hydrometer

REMARKS : S-7: Cu = 10.79 Cc = 2.67

SAMPLE SUBMITTED BY:

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued: _____

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY : _____
AUTHORIZED SIGNATORY

Uncertainty Results: % Finer = ± 0.0443 LAB.FILE NO.:GSA-10-406

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

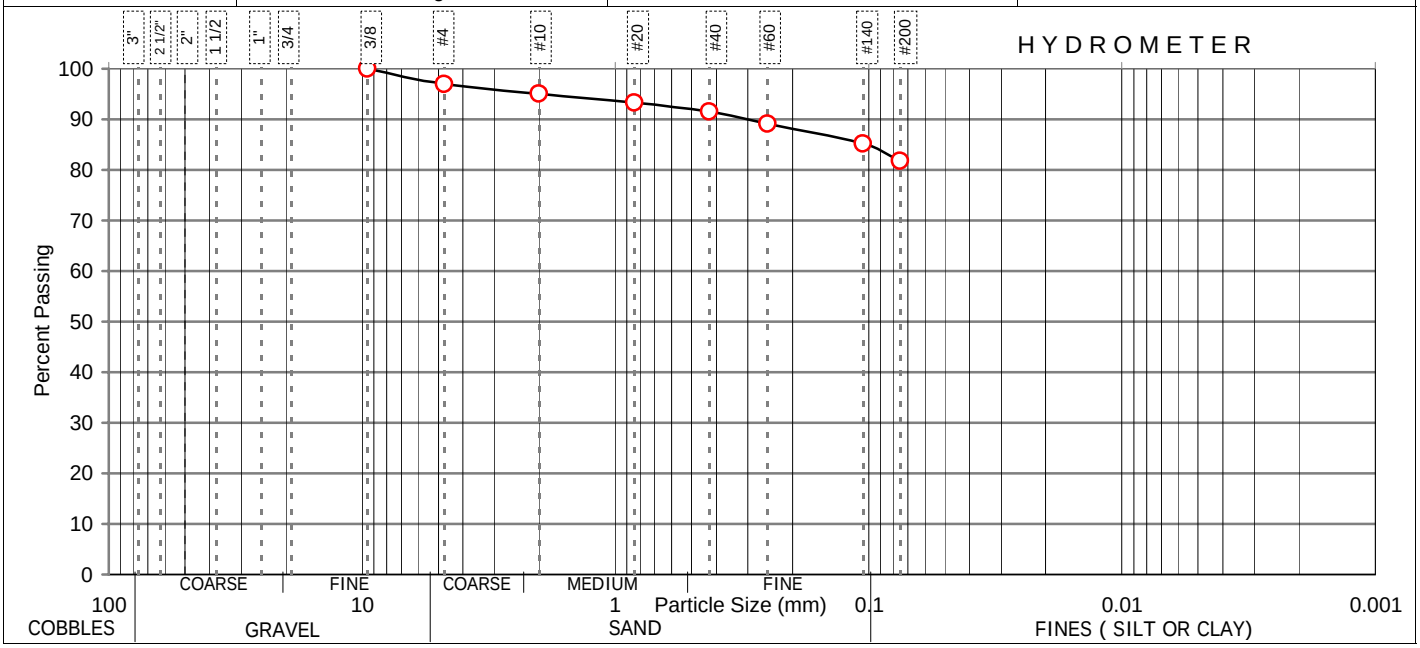
Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-GSA-01-4
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 28, 2010

TEST REPORT FOR GRAIN SIZE ANALYSIS

ASTM D 422 - 63 (Re-approved 2007)

BH / SAMPLE NO..... **BH-1** ○10 □ △
DEPTH (m)..... 9.55-10.00
SOIL DESCRIPTION..... Elastic SILT

SIEVE SIZE inches	SIEVE SIZE mm	Cumm.Mass Retained (g)	Cumm.% Retained	Percent Finer	Cumm.Mass Retained (g)	Cumm.% Retained	Percent Finer	Cumm.Mass Retained (g)	Cumm.% Retained	Percent Finer
2 1/2	62.5									
2	50.0									
1 1/2	37.5									
1	25.0									
3/4	19.0									
3/8	9.5			100						
4	4.75	1.60	2.98	97						
10	2.0	2.65	4.94	95						
20	0.8	3.59	6.69	93						
40	0.425	4.56	8.50	92						
60	0.25	5.83	10.86	89						
140	0.105	7.98	14.87	85						
200	0.075	9.80	18.26	82						
OVEN DRIED MASS			53.66 gms							



* - with Hydrometer

REMARKS :

SAMPLE SUBMITTED BY:
☐ Walk-in Clients ☑ GPI Field Operator
R. POLIDAN

COMPUTER PRINT-OUT
By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

Uncertainty Results: % Finer = ± 0.0466 LAB.FILE NO.:GSA-10-406

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

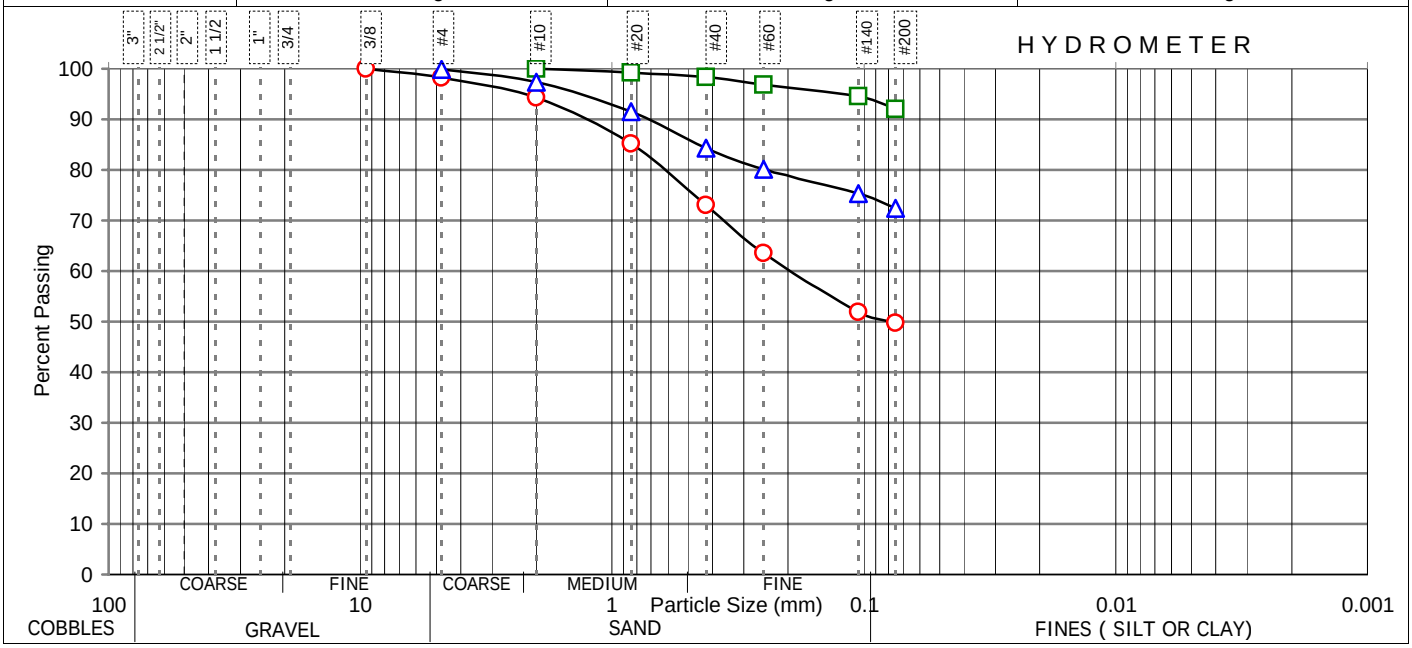
Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-GSA-02-1
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 28, 2010

TEST REPORT FOR GRAIN SIZE ANALYSIS

ASTM D 422 - 63 (Re-approved 2007)

BH / SAMPLE NO.....	**BH-2**	○ 1	□ 2	△ 3
DEPTH (m).....		0.55-1.00	1.55-2.00	2.55-3.00
SOIL DESCRIPTION.....		Sandy SILT	Fat CLAY	Elastic SILT

SIEVE SIZE		Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent
inches	mm	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer
2 1/2	62.5									
2	50.0									
1 1/2	37.5									
1	25.0									
3/4	19.0									
3/8	9.5			100						
4	4.75	1.60	1.78	98				0.10	0.15	100
10	2.0	5.15	5.72	94			100	1.75	2.61	97
20	0.8	13.30	14.76	85	0.47	0.82	99	5.65	8.43	92
40	0.425	24.34	27.01	73	0.96	1.67	98	10.48	15.64	84
60	0.25	32.89	36.50	64	1.80	3.14	97	13.31	19.87	80
140	0.105	43.40	48.16	52	3.10	5.40	95	16.50	24.63	75
200	0.075	45.33	50.31	50	4.60	8.02	92	18.48	27.58	72
OVEN DRIED MASS			90.11 gms			57.36 gms			67.00 gms	



* - with Hydrometer

REMARKS :

SAMPLE SUBMITTED BY:

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

Uncertainty Results: % Finer = ± 0.0430 LAB.FILE NO.:GSA-10-407

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

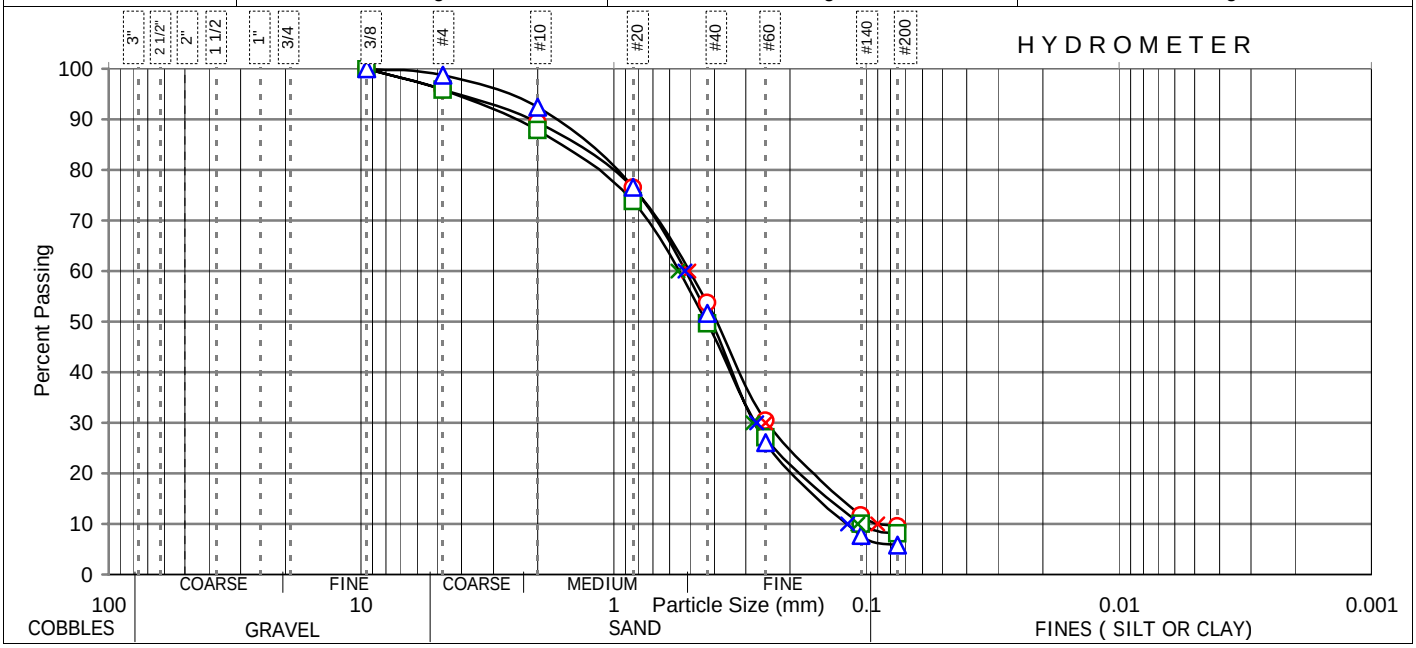
Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-GSA-02-2
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 28, 2010

TEST REPORT FOR GRAIN SIZE ANALYSIS

ASTM D 422 - 63 (Re-approved 2007)

BH / SAMPLE NO.....	**BH-2**	○ 4	□ 5	△ 6
DEPTH (m).....		3.55-4.00	4.55-5.00	5.55-6.00
SOIL DESCRIPTION.....		Poorly graded SAND with silt	Poorly graded SAND with silt	Poorly graded SAND with silt

SIEVE SIZE		Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent
inches	mm	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer
2 1/2	62.5									
2	50.0									
1 1/2	37.5									
1	25.0									
3/4	19.0									
3/8	9.5			100			100			100
4	4.75	3.02	4.20	96	3.13	4.21	96	1.02	1.26	99
10	2.0	7.64	10.61	89	9.03	12.15	88	6.20	7.65	92
20	0.8	16.96	23.56	76	19.48	26.20	74	19.02	23.46	77
40	0.425	33.32	46.28	54	37.44	50.36	50	39.20	48.34	52
60	0.25	50.14	69.65	30	54.24	72.95	27	59.90	73.87	26
140	0.105	63.60	88.35	12	66.95	90.05	10	74.78	92.22	8
200	0.075	65.14	90.48	10	68.31	91.88	8	76.36	94.17	6
OVEN DRIED MASS			71.99 gms			74.35 gms			81.09 gms	



* - with Hydrometer

SAMPLE SUBMITTED BY:

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

REMARKS :

S-4:	Cu =	5.58	Cc =	1.38
S-5:	Cu =	5.14	Cc =	1.32
S-6:	Cu =	4.39	Cc =	1.19

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued:

Uncertainty Results: % Finer = ± 0.0460 LAB.FILE NO.:GSA-10-407

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

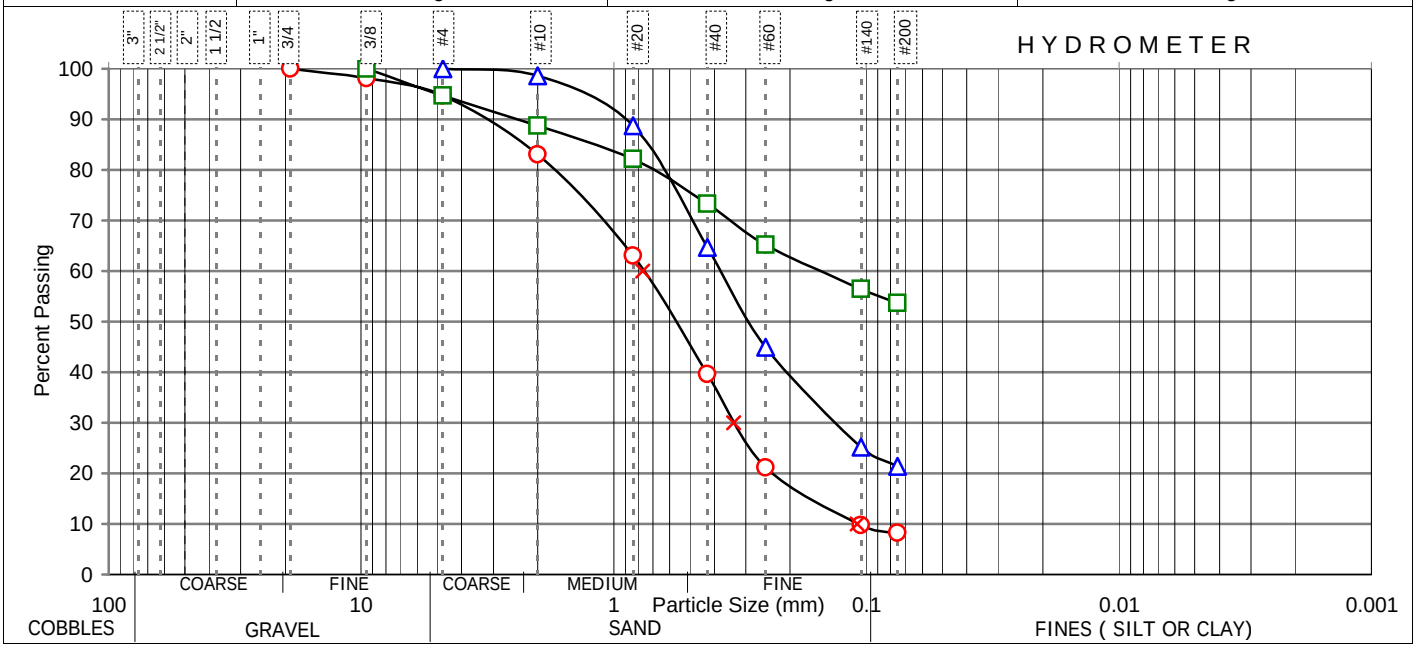
Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-GSA-02-3
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 28, 2010

TEST REPORT FOR GRAIN SIZE ANALYSIS

ASTM D 422 - 63 (Re-approved 2007)

BH / SAMPLE NO.....	**BH-2**	○ 7	□ 8	△ 9
DEPTH (m).....		6.55-7.00	7.55-8.00	8.55-9.00
SOIL DESCRIPTION.....		Well graded SAND with silt	Sandy SILT	Silty SAND

SIEVE SIZE		Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent
inches	mm	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer
2 1/2	62.5									
2	50.0									
1 1/2	37.5									
1	25.0									
3/4	19.0			100						
3/8	9.5	1.64	1.95	98			100			
4	4.75	4.42	5.26	95	3.10	5.35	95			100
10	2.0	14.24	16.93	83	6.55	11.30	89	1.10	1.35	99
20	0.8	31.06	36.93	63	10.34	17.85	82	9.20	11.30	89
40	0.425	50.76	60.35	40	15.44	26.65	73	28.76	35.34	65
60	0.25	66.36	78.90	21	20.14	34.76	65	44.80	55.04	45
140	0.105	75.95	90.30	10	25.25	43.58	56	60.85	74.76	25
200	0.075	77.24	91.83	8	26.84	46.32	54	64.02	78.66	21
OVEN DRIED MASS			84.11 gms			57.94 gms			81.39 gms	



* - with Hydrometer

REMARKS : S-7: Cu = 7.08 Cc = 1.36

SAMPLE SUBMITTED BY:

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued: _____

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY : _____
AUTHORIZED SIGNATORY

Uncertainty Results: % Finer = ± 0.0467 LAB.FILE NO.:GSA-10-407

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

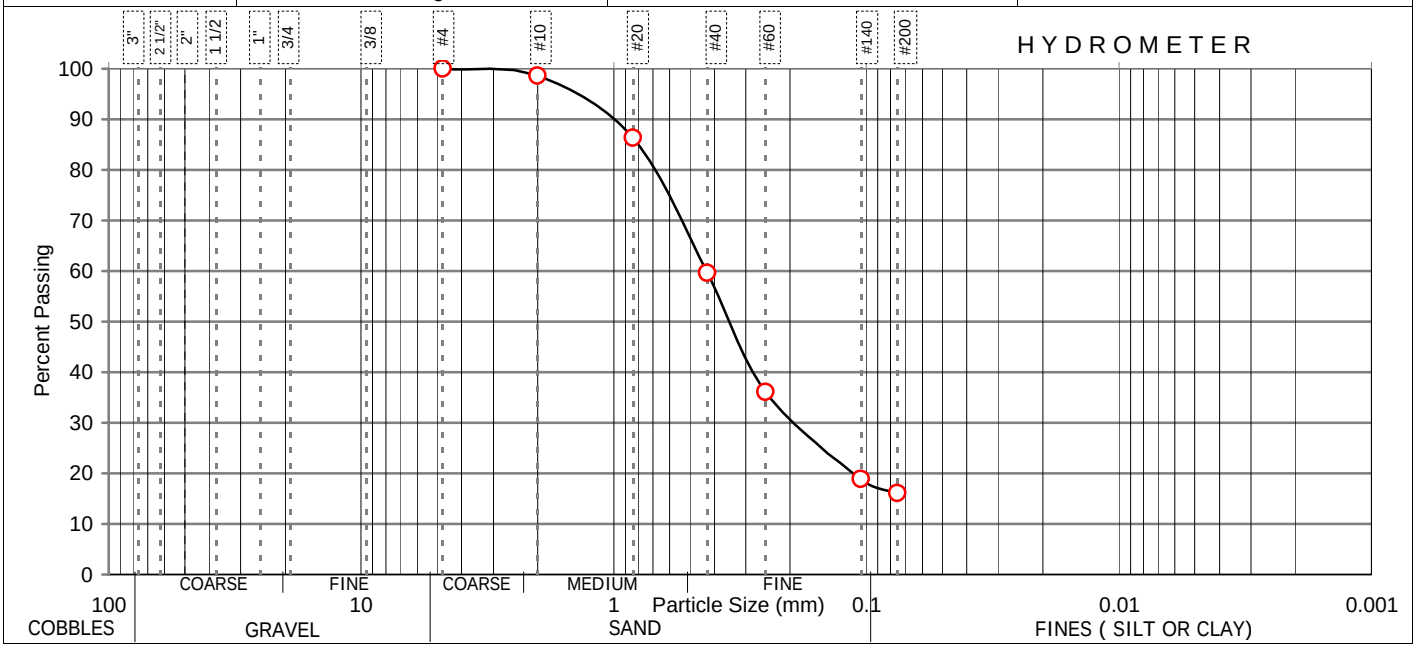
Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-GSA-02-4
Project..... **Proposed Mayon Evacuation Center (Oas South Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Ilaor Norte, Province of Albay	Date of Test..... October 28, 2010

TEST REPORT FOR GRAIN SIZE ANALYSIS

ASTM D 422 - 63 (Re-approved 2007)

BH / SAMPLE NO.....	**BH-2**	○10	□	△
DEPTH (m).....		9.55-10.00		
SOIL DESCRIPTION.....		Silty SAND		

SIEVE SIZE		Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent
inches	mm	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer
2 1/2	62.5									
2	50.0									
1 1/2	37.5									
1	25.0									
3/4	19.0									
3/8	9.5									
4	4.75			100						
10	2.0	1.18	1.41	99						
20	0.8	11.41	13.66	86						
40	0.425	33.76	40.42	60						
60	0.25	53.37	63.89	36						
140	0.105	67.81	81.18	19						
200	0.075	70.10	83.92	16						
OVEN DRIED MASS			83.53 gms							



* - with Hydrometer

REMARKS :

SAMPLE SUBMITTED BY:

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

Uncertainty Results: % Finer = ± 0.0384 LAB.FILE NO.:GSA-10-407

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

FINAL REPORT

SUBSURFACE INVESTIGATION

PROPOSED MAYON EVACUATION CENTER (2-STOREY)

MANITO CENTRAL SCHOOL
BRGY.MANITO, PROVINCE OF ALBAY

MOHRI, ARCHITECT & ASSOCIATES, INC.

OCTOBER 2010
JOB NO. 2209-10.R1

GEOTECHNICS PHILIPPINES, INC.
GEOTECHNICAL & FOUNDATION CONSULTANTS

DPWH-BRS Accredited

FINAL REPORT

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APPENDICES

GEOTECHNICS PHILIPPINES, INC.
Geotechnical Contractor

119 Sauyo Road, Novaliches
Quezon City, Philippines

Business development : 9306555
Customer Service : 9382124/9353730
Fax : 4561140
Homepage : www.geophil.com
Email : jmcgpi@gmail.com

FINAL REPORT

SUB-SURFACE INVESTIGATION FOR THE PROPOSED MAYON EVACUATION CENTER (2-STOREY) LOCATED AT MANITO CENTRAL SCHOOL, BRGY. MANITO, PROVINCE OF ALBAY

1.0 INTRODUCTION

Geotechnics Philippines, Incorporated (GPI) completed the subsurface soil investigation for the proposed Mayon Evacuation Center. The proposed site explored is located at Manito Central School, Brgy. Manito, Province of Albay.

Two (2) boreholes were drilled at the proposed site from October 23 to October 24, 2010. Borings were undertaken down to 8.45m and 8.00 m respectively for both BH-1 and BH-2 below existing natural ground line. Borehole locations are as indicated on the accompanying Boring Plan and Soil Profile Sheets.

The subsurface soil exploration was undertaken upon the request of Mohri, Architect & Associates, Inc. in order to gain information on the subsurface conditions and bearing characteristics of the underlying soils at site.

The undersigned was tasked to evaluate the results of the completed subsurface soil exploration and to recommend a suitable foundation solution for the proposed structure.

This report embodies the undersigned's engineering analysis and recommendations based mainly on the results of the geotechnical soil borings and pertinent laboratory tests performed on extracted samples.

The results of geotechnical soil borings and laboratory tests can be referred to in the Attachments accompanying this report.

2.0 OBJECTIVES

The geotechnical investigation aims to determine the following:

- Soil Profile
- Engineering properties of the Soil Strata
- Bearing Capacities and Foundation Types
- Settlement conditions of critical areas
- Comment on ground stability and liquefaction potential of the site
- Recommend ground improvement when necessary
- Provide Excavation and Fill Guidelines

In addition to the above mentioned items, matters on implementation and construction shall be given as required.

3.0 FIELD EXPLORATION AND INVESTIGATION

The field exploration implored continuous was boring as the Standard Penetration Test (SPT) was performed at the last 45cm of every change strata or 1.0 meter intervals. The blow counts (N value or NB) were recorded as disturbed samples from the split spoon sampler were retrieved for laboratory testing. The recovered samples were described semi qualitative in terms of extracted length. The extracted soil samples were wrapped in double plastiv bags for moisture and sample protection and were transported to the laboratory for further testing of engineering properties.
Advancing through the hard strata, the same technique was implored. Hard strata are defined over a series of high blow count layers of more than 50 blows or the inability of driving the hammer to penetrate at high blow counts termed as refusal.

3.1 Standard Penetration Test

The Standard Penetration Test (SPT) is a field test used in determining the shear strength of soils from an established correlation. The SPT requires the count of the number of blows that it would take a standard split spoon sampler to penetrate its last 30.5cm (12inches) of the sampler. The standard mass is 63.5 kilograms and the height of the drop is 76.2cm specified as a free drop.

3.2 Hard Strata and Soft Strata Sampling

Hard strata are defined as a consecutive ground resistance of refusal to the standard penetration test of blow counts of 50 with a penetration less than or equal to 25.4mm. This is in accordance to the American Standard for Testing Materials (ASTM) Designated D 1586. Coring techniques were not conducted in the investigation. Sampling of undisturbed samples for soft cohesive soils was not conducted via pressing the sampler.

3.3 Ground Water Table

The ground water table (GWT) elevation was observed at least 4 hours from the completion of the borehole up to demobilization.

4.0 LABORATORY INVESTIGATION

The retrieved samples were brought to the laboratory in Sauyo Road, Novaliches, Quezon City. Various tests were conducted on all extracted samples with test procedures conforming to the American Standards for Testing Materials (ASTM). The following are the laboratory tests conducted on the soil samples.

Type of Test	ASTM Designation	Description of Test
Soil Classification for Engineering Purposes – Unified Soil Classification System	ASTM D 2487-05	• Standard in classifying the type of soil based on composition and physical properties • These were classified in accordance to grain size, composition, percentage of size in the distribution

Particle Size Distribution – Sieve Analysis	ASTM D 422-63 (Reapproved 2002)	• The test allows the dried or wet soil to pass through a series of sieves in order to determine the distribution of grain sizes. • The distributions of the particles are graphed on a semi log scale • This test aids the previous test in classification
Moisture Content	ASTM D 2216-05	• The test aims to determine the natural content of water in the soil • This is taken as the ratio of water to the ratio of the soil particles • The test uses a weighing scale measuring the initial weight of the soil and the final weight of the soil after drying it in the oven
Atterberg Limits Liquid Limit, Plastic Limit and Plasticity Index	ASTM D4318-05	• Tests determining the limits of cohesive soils in behaving as a plastic or a flowing medium by incrementally changing the water content • The plastic limit is determined by rolling a clay sample to around 1/8 of an inch or 3mm • The liquid limit uses the liquid limit device and determines the number of blows it would take for the slit to close • Correlative values can be used for settlement relations

The results of the laboratory investigation are appended.

5.0 BOREHOLE STATIGRAPHY

Two (2) boreholes were driven to investigate the subsurface. The following are the findings:

5.1 Borehole BH-1

Borehole BH-1 extends 8.45 meters obtaining the following stratification: Very stiff elastic silt with sand at 0-2 meters, very dense clayey silty sand at 2-2.7 meters, very dense gravel to cobbles at 2.7-3.2 meters, dense clayey sand at 3.2-3.65 meters, very stiff elastic silt at 3.65-4.65 meters, very stiff fat clay at 4.65-5.65 meters, medium very dense poorly graded sand at 5.65-6.35 meters, very dense gravel to cobbles at 6.35-8.45 meters, the extent of the borehole.

The ground water was detected at 3.0 meters from the existing grade.

5.2 Borehole BH-2

Borehole BH-2 extends 8 meters obtaining the following subsurface stratification: Hard fat clay with few sand at 0-2 meter, hard elastic silt at 2-7 meters, hard gravel to cobble at 7-8 meters, the extent of the borehole.

The ground water table was detected at 3.0 meters from the existing grade.

6.0 SOIL PROPERTIES

The following are the adapted soil properties for the investigated strata:

Soil Parameters			
Gravels, Sands, Silty Sands and Clayey Sands (Non-cohesive)			
Sands	c	φ	γ (kcf)
Very Loose	0	26	0.085
Loose	0	28	0.100
Medium Dense	0	30	0.110
Dense	0	32	0.120
Very Dense	0	35	0.130
Silts and Clays (Cohesive)			
Silts and Clays	c	φ	γ (kcf)
Very Soft	=(N*10)/2 from Braja Das	0	0.100
Soft		0	0.105
Firm		0	0.115
Stiff		0	0.120
Very Stiff		0	0.125
Hard		0	0.130

7.0 LIQUEFACTION POTENTIAL

The two (2) boreholes showed no potential for liquefaction due to dense and stiff layer underneath.

8.0 BEARING CAPACITY AND FOUNDATION TYPE

Shallow Foundations have good bearing capacities. The following are the allowable net bearing capacities based on Terzaghi's Bearing Capacity Equation:

BH-1:

Depth	Bearing Capacity (kPa)
0.5	144
1.0	192

BH-2:

Depth	Bearing Capacity (kPa)
0.5	144
1.0	192

The associated settlement on the other hand is within the tolerable engineering settlement of 25mm. Although the soil bearing capacity is competent, the structural tie beam proved to be efficient during major earthquake.

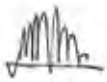
9.0 EXCAVATION AND FILL

Fill for the excavation for footings may utilize the same materials. On the other hand, grade and subgrade materials should be sandy frictional materials.

Fill should be compacted at 95% its maximum dry density. Should the amount of soil be inept, sandy fill may be utilized and should be compacted in the same degree.

Borehole Conclusions and Recommendations

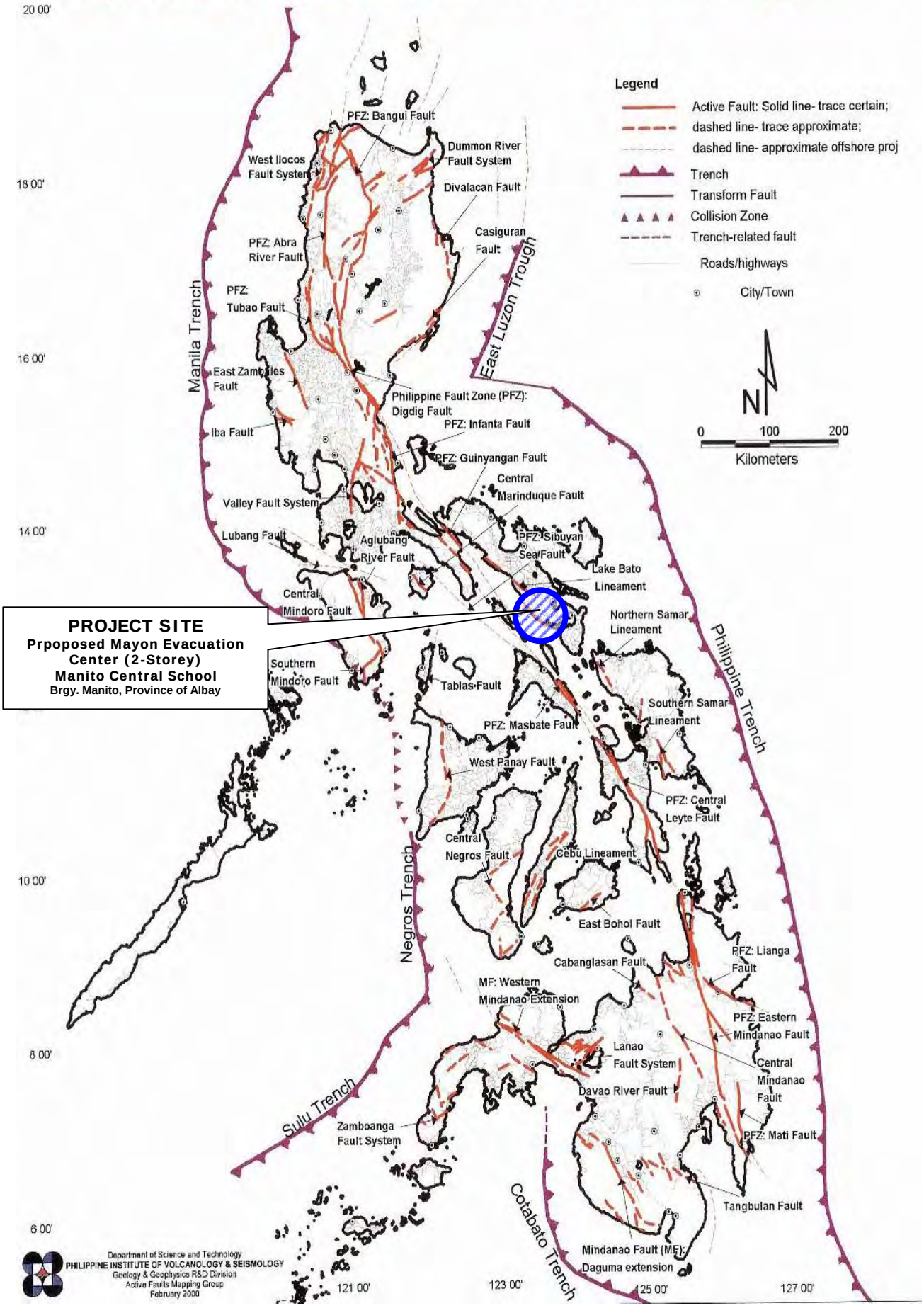
The conclusions and recommendations are based on the data of two (2) boreholes and the geologic map. Deviations from these are expected and should be minimal as the boreholes are typical of an alluvial formation. Should there be any major deviation in the substrata be detected during the excavation phase, may the undersigned through Geotechnics Philippines Inc (02-930-6555) be approached immediately for proper reassessment.

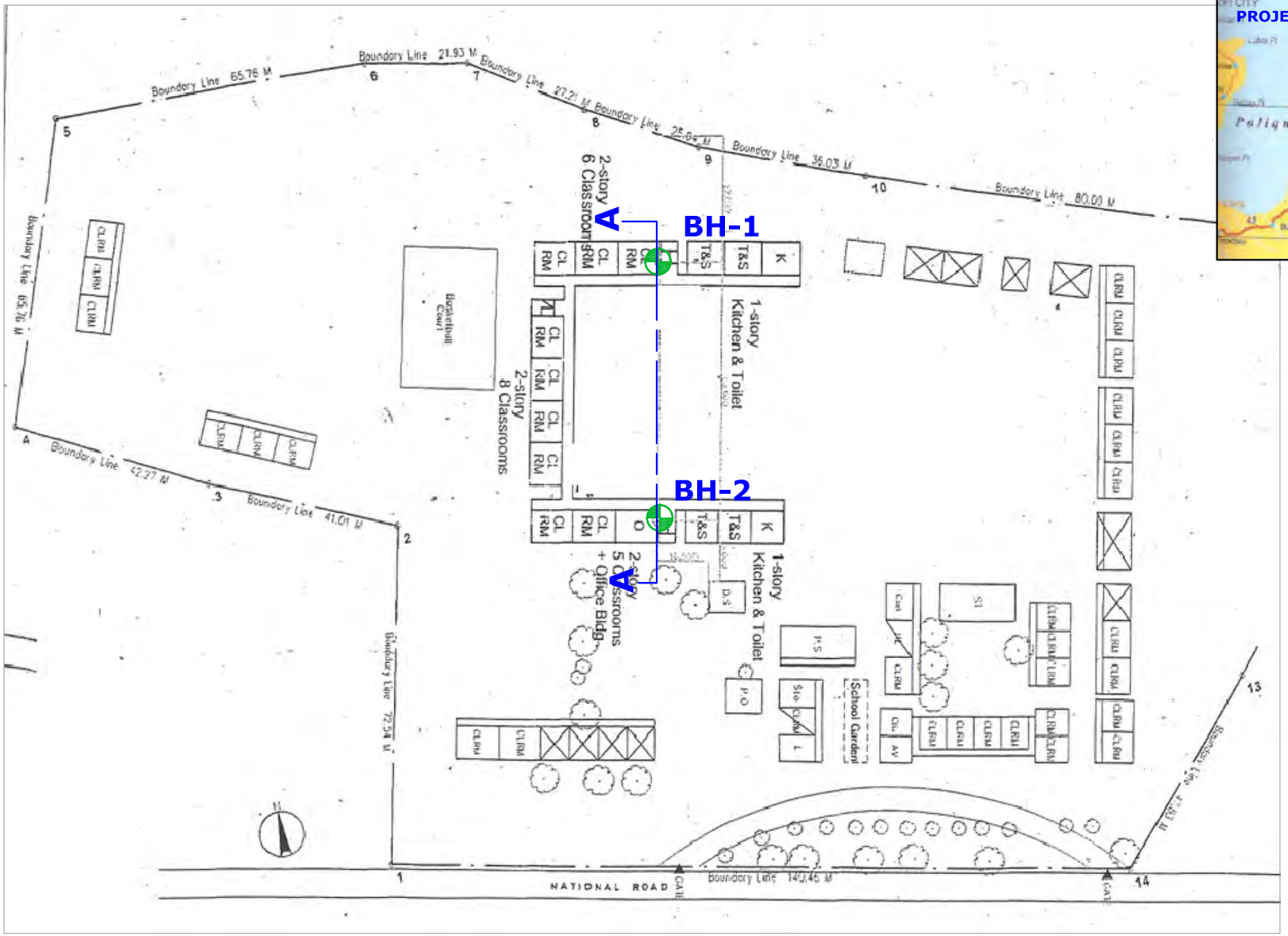


DIOSDADO A. UREÑA
CE REG No. 053884
PTR No. 3228274
Issued on January 8, 2010
Issued at Quezon City

APPENDICES

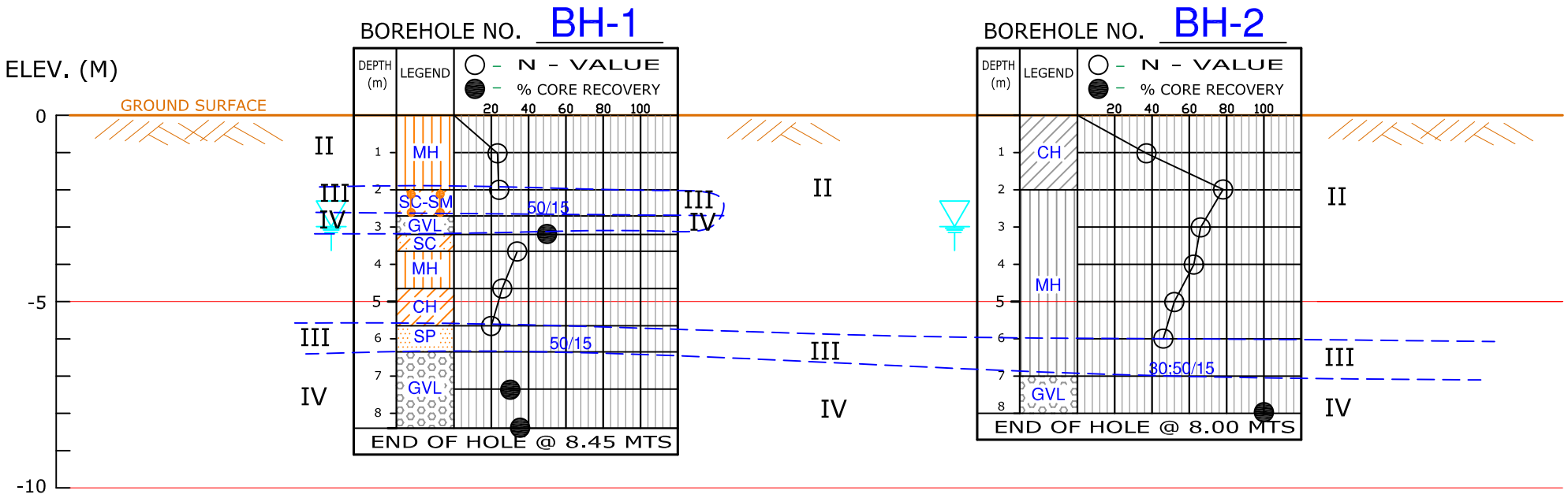
Distribution of Active Faults and Trenches in the Philippines





VICINITY MAP

CONTRACTOR **GEOTECHNICS PHILIPPINES, INC.** 119 SAUYO ROAD, NOVALICHES, QUEZON CITY	PROJECT TITLE **Proposed Mayon Evacuation Center (Manito Central School)** Brgy. Manito, Province of Albay	SCALE NTS	SHEET CONTENTS **LOCATION PLAN/VICINITY MAP**	JOB NO. **2209-10.R1**
			CLIENT **MOHRI, ARCHITECT & ASSOCIATES, INC.**	SHEET NO. 1/1



SECTION A - A

L E G E N D :

CH - Silty C L A Y	SC - Clayey S A N D	SP - Poorly graded SAND	GP - Poorly graded GRAVEL	SD - SANDSTONE	STI - SILTSTONE	I - N-VALUE<10 (LIQUEFIABLE ZONE)	
CL - Sandy C L A Y	SM - Silty S A N D	SW - Well graded SAND	GW - Well graded GRAVEL	GC-GM - Clayey silty GRAVEL	VTST - Silty TUFF	II - N-VALUE>10	
MH - Clayey S I L T	GM - Silty G R A V E L	SP-SM - Poorly graded SAND w/ silt	GP-GM - Poorly graded GRAVEL w/ silt	COBBLES	VTSD - Sandy TUFF	III - REFUSAL (WEATHERED ZONE)	
ML - Sandy S I L T	SC-SM - Clayey silty S A N D	SW-SM - Well graded SAND w/ silt	GW-GM - Well graded GRAVEL w/ silt	GRAVEL	SHL - SHALE	IV - CORING / HARD FORMATION	

CONTRACTOR

GEOTECHNICS PHILIPPINES, INC.
119 SAUYO ROAD, NOVALICHES, QUEZON CITY

PROJECT TITLE:
Proposed Mayon Evacuation Center (Manito Central School)
Brgy. Manito, Province of Albay

SHEET CONTENTS:
S O I L P R O F I L E
SCALE : N. T. S.

CLIENT:
MOHRI, ARCHITECT & ASSOCIATES, INC.

DRAWN BY:
MARIA ANTONIETTE P. CUNAHAP

CHECKED BY:
A. B. A. / M. R. R.

CERTIFIED BY:
AUTHORIZED SIGNATORY

JOB NO.
2209-10.R1

SHEET NO.
1/1

GEOTECHNICS PHILIPPINES, INCORPORATED

SOILS AND MATERIALS TESTING LABORATORY

119 SAUYO ROAD, NOVALICHES, QUEZON CITY
TEL. NO. 938-2124 \ 456-1140 \ 930-6555

DPWH-BRS Accredited

CLIENT	**MOHRI, ARCHITECT & ASSOCIATES, INC.**		BOREHOLE NO. **BH- 1**
PROJECT	**Proposed Mayon Evacuation Center (Manito Central School)**		JOB NO. 2209-10.R1-FBL-01
LOCATION	Brgy. Manito, Province of Albay	DRILLED R. POLIDAN	SHEET 1 of 1
RIG	KSK SMALL	LOGGED R. POLIDAN	0.00 to 8.45 meters
	Hammer Weight 63.50 Kg.	DATE STARTED Oct. 23, 2010	GROUND LEVEL - m.
	Fall Height 76.20 cm.	DATE COMPLETED Oct. 23, 2010	WATER LEVEL 3.00 m.
METHOD	WASH BORING	NORTHING -	EASTING -

FINAL BORING LOG

DEPTH (m)	SOIL SYMBOL	SAMPLE NUMBER	TYPE OF SAMPLING	REC (cm)	RQD (%)	PL NMC LL (20 40 60 80 100)	PI	CONSISTENCY	N-VALUE / % Core Recovery (0 20 40 60 80 100)	SOIL DESCRIPTION	OTHER TEST DATA
1.00		S-1	SPT	45	-		31	VERY STIFF	23	(MH) Elastic SILT with little amount of sand, grayish brown, very moist NB: (10)(10)(13)	
2.00		S-2	SPT	45	-		26		24	(MH)...with few sand NB: (9)(10)(14)	
		S-3	SPT	15	-		-	VERY DENSE	50/15	Clayey silty SAND with some gravel, light brown, moist NB: (50/15)	
3.00		C-1	CRG	25	0		-		50	GRAVEL to COBBLES, Ahigh strength, andesitic rock fragments, ranges: 2.2cm-20.3cm with iron oxide and silt on rough surfaces, brown to dark gray	
		S-4	SPT	45	-		8	DENSE	34	(SC) Clayey SAND with little samount of gravel, light brown, very moist NB: (12)(15)(19)	
4.00		S-5	SPT	40	-		24	VERY STIFF	26	(MH) Elastic SILT with some sand and traces of gravel, light brown, very moist NB: (18)(15)(11)	
5.00		S-6	SPT	40	-		33		20	(CH) Fat CLAY with few sand, light brown, very moist NB: (13)(10)(10)	
6.00		S-7	CRG	15	-		NP	VERY DENSE	50/15	(SP) Poorly graded SANDwith gravel, light brown, moist NB: (50/15)	
7.00		C-2	CRG	30	0		-		30	GRAVEL to COBBLES, Ahigh strength, andesitic rock fragments, ranges: 2.3cm-5.0cm with iron oxide and silt on rough surfaces, brown to dark gray	
8.00		C-3	CRG	35	0		-		35	...core ranges: 3.1cm-11.5cm	
9.00										END OF BORING AT 8.45 METERS	
10.00											

Type of Sampling

- STANDARD PENETRATION TEST (SPT)
- UNDISTURBED SAMPLING (UDS)
- CORING (CRG)

Type of Soil

- Silty CLAY
- Clayey SILT
- Clayey SAND
- Silty SAND
- Clayey silty SAND
- SAND
- Silty GRAVEL
- Well graded GRAVEL with silt
- GRAVEL
- SILTSTONE
- TUFF
- Tuffeceous SILTSTONE

CONSISTENCY

COHESIVE SOILS			COHENSIONLESS SOILS	
N-VALUE		CONSISTENCY	N-VALUE	CONSISTENCY
0 - 2	–	VERY SOFT	0 - 4	– VERY LOOSE
2 - 4	–	SOFT	4 - 10	– LOOSE
4 - 8	–	FIRM	10 - 30	– MEDIUM DENSE
8 - 15	–	STIFF	30 - 50	– DENSE
15 - 30	–	VERY STIFF	> 50	– VERY DENSE
> 30	–	HARD		

MOISTURE

MOISTURE CONTENT		
RANGES		VALUES
0 - 10	–	DRY
10 - 30	–	MOIST
30 - 70	–	VERY MOIST
70 - 100	–	WET
> 100	–	SATURATED

PERCENTAGE

% of SAND and GRAVEL		
RANGES		VALUES
0 - 5	–	TRACES
6 - 10	–	FEW
11 - 25	–	LITTLE
26 - 35	–	SOME
36 - 45	–	WITH

REMARKS: Rec = Recovery in Centimeters NB = No. of Blows HW = Hammer Weight

Reference Joint Spacing: #1 >30cm. 10 cm. >#3>3cm. #5 <1cm.

30 cm.>#2>10cm. 3 cm. >#4>1cm.

RQD = Rock Quality Designation SCR = Solid Core Recovery

Description of Strata is according to Unified Soil Classification System

Prepared by : **R. T. LUSTRE**

Checked by : **A.B.A. / M.R.R.**

Certified by :

AUTHORIZED SIGNATORY

Date Issued :

GEOTECHNICS PHILIPPINES, INCORPORATED

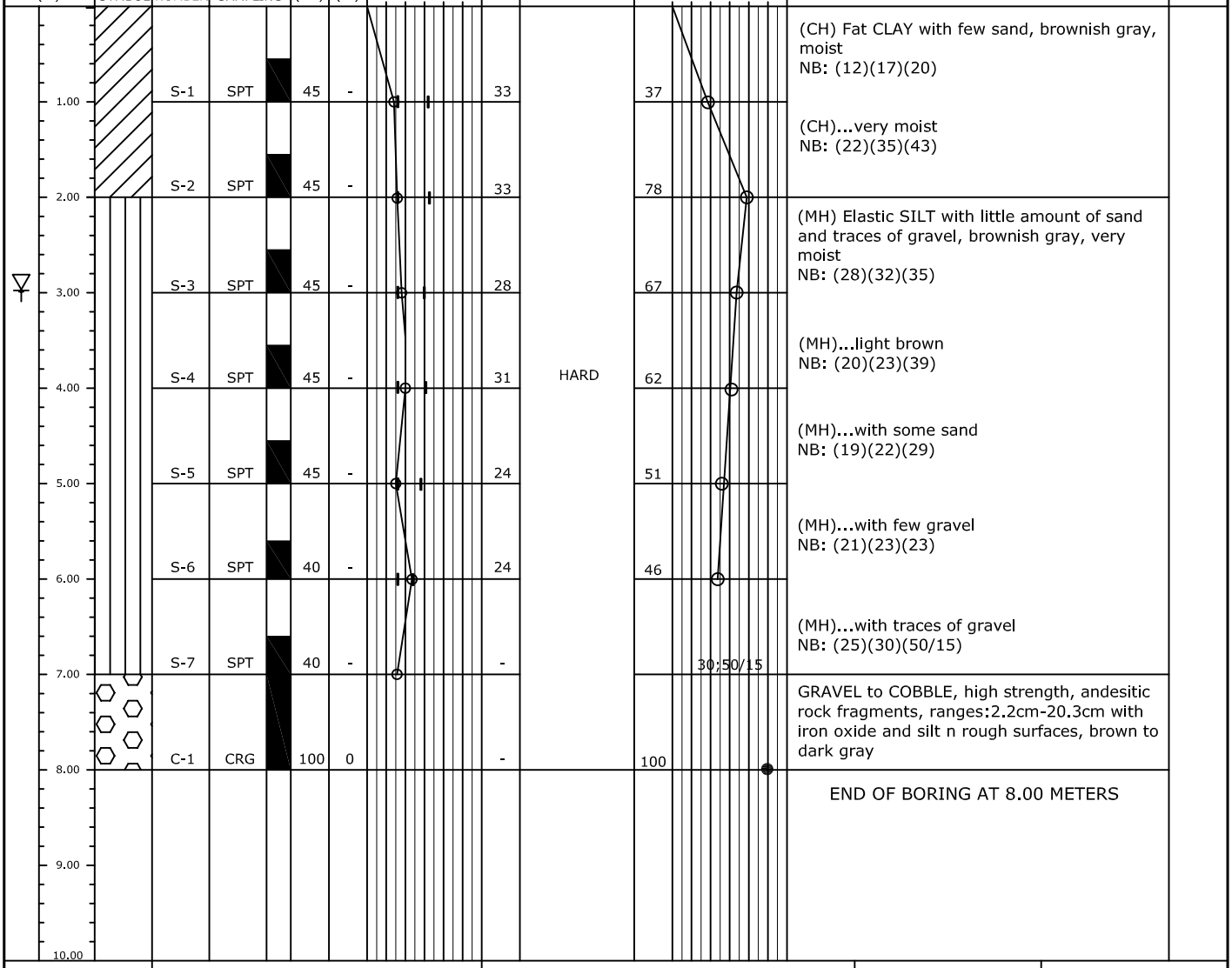
SOILS AND MATERIALS TESTING LABORATORY

119 SAUYO ROAD, NOVALICHES, QUEZON CITY
TEL. NO. 938-2124 \ 456-1140 \ 930-6555

DPWH-BRS Accredited

CLIENT	**MOHRI, ARCHITECT & ASSOCIATES, INC.**		BOREHOLE NO. **BH- 2**
PROJECT	**Proposed Mayon Evacuation Center (Manito Central School)**		JOB NO. 2209-10.R1-FBL-02
LOCATION	Brgy. Manito, Province of Albay	DRILLED R. POLIDAN	SHEET 1 of 1
RIG	KSK SMALL	LOGGED R. POLIDAN	0.00 to 8.00 meters
	Hammer Weight 63.50 Kg.	DATE STARTED Oct. 24, 2010	GROUND LEVEL - m.
	Fall Height 76.20 cm.	DATE COMPLETED Oct. 24, 2010	WATER LEVEL 3.00 m.
METHOD	WASH BORING	NORTHING -	EASTING -

FINAL BORING LOG



Type of Sampling

- STANDARD PENETRATION TEST (SPT)
- UNDISTURBED SAMPLING (UDS)
- CORING (CRG)

Type of Soil

- Silty CLAY
- Clayey SILT
- Clayey SAND
- Silty SAND
- Clayey silty SAND
- SAND
- Silty GRAVEL
- Well graded GRAVEL with silt
- GRAVEL
- SILTSTONE
- TUFF
- Tuffeceous SILTSTONE

CONSISTENCY

COHESIVE SOILS N-VALUE	CONSISTENCY	COHENSIONLESS SOILS N-VALUE	CONSISTENCY
0 - 2	VERY SOFT	0 - 4	VERY LOOSE
2 - 4	SOFT	4 - 10	LOOSE
4 - 8	FIRM	10 - 30	MEDIUM DENSE
8 - 15	STIFF	30 - 50	DENSE
15 - 30	VERY STIFF	> 50	VERY DENSE
> 30	HARD		

MOISTURE

MOISTURE CONTENT RANGES	VALUES
0 - 10	DRY
10 - 30	MOIST
30 - 70	VERY MOIST
70 - 100	WET
> 100	SATURATED

PERCENTAGE

% of SAND and GRAVEL RANGES	VALUES
0 - 5	TRACES
6 - 10	FEW
11 - 25	LITTLE
26 - 35	SOME
36 - 45	WITH

REMARKS: Rec = Recovery in Centimeters NB = No. of Blows HW = Hammer Weight

Reference Joint Spacing: #1 >30cm. 10 cm. >#3>3cm. #5 <1cm.

30 cm.>#2>10cm. 3 cm. >#4>1cm.

RQD = Rock Quality Designation SCR = Solid Core Recovery

Description of Strata is according to Unified Soil Classification System

Prepared by : **R. T. LUSTRE**

Checked by : **A.B.A. / M.R.R.**

Certified by :

AUTHORIZED SIGNATORY

Date Issued :

GEOTECHNICS PHILIPPINES, INC.
SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

CLIENT..... **MOHRI, ARCHITECT & ASSOCIATES, INC.** JOB NUMBER..... 2209-10.R1-SUM-1
PROJECT..... **Proposed Mayon Evacuation Center (Manito Central School)** DATE OF RECIEPT.... October 27, 2010
LOCATION.... Brgy. Manito, Province of Albay DATE OF TEST..... Oct. 27-Nov. 3, 2010

SUMMARY OF LABORATORY TESTS

SAMPLE NUMBER	DEPTH (m)	NMC (%)	ATTERBERG LIMIT, (%)			USCS Class.	SIEVE ANALYSIS (% FINER) PASSING SIEVE NO.										Remarks
			LL	PL	PI		1	3/4	3/8	4	10	20	40	60	140	200	
BH-1																	
1	0.55 - 1.00	44	63	32	31	MH					100	98	96	93	89	88	-
2	1.55 - 2.00	32	58	32	26	MH		100	96	92	87	84	81	79	75	74	-
3	2.55 - 2.70	26	INSUFFICIENT SAMPLE				100	85	77	71	60	52	46	42	36	35	-
4	3.20 - 3.65	31	41	33	8	SC		100	87	80	72	64	58	53	47	46	-
5	4.20 - 4.65	34	56	32	24	MH			100	95	85	80	76	72	67	65	-
6	5.20 - 5.65	40	65	32	33	CH					100	99	98	95	93	91	-
7	6.20 - 6.35	29	-	NP	-	SP		100	65	59	46	34	18	8	3	2	-
BH-2																	
1	0.55 - 1.00	27	64	31	33	CH				100	99	97	95	93	91	90	-
2	1.55 - 2.00	31	65	32	33	CH					100	98	96	94	92	91	-
3	2.55 - 3.00	35	60	32	28	MH			100	99	96	91	85	82	78	76	-
4	3.55 - 4.00	40	63	32	31	MH			100	99	98	94	88	85	81	80	-
5	4.55 - 5.00	30	56	32	24	MH			100	96	87	81	75	72	68	67	-
6	5.55 - 6.00	30	56	32	24	MH		100	97	93	88	83	79	76	73	72	-
7	6.55 - 7.00	32	INSUFFICIENT SAMPLE						100	97	92	84	78	73	64	61	-

SAMPLE SUBMITTED BY :

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

REMARKS: * with hydrometer

COMPUTER PRINT-OUT
By: *MARIA ANTONIETTE P. CUNAHAP*
Encoder

Data Chkd by: ABA / MRR
Quality Assurance

Date Issued _____

CERTIFIED BY:

AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-NMC-01-1
Project..... **Proposed Mayon Evacuation Center (Manito Central School)**	Date of Receipt..... October 27, 2010
Location.....Brgy. Manito, Province of Albay	Date of Test..... October 27-28, 2010

TEST REPORT FOR LABORATORY DETERMINATION OF WATER (MOISTURE) CONTENT OF SOIL & ROCK BY MASS

ASTM D 2216 - 05

Test Method ☑ A ☐ B

BOREHOLE NO...BH-1

SAMPLE NUMBER	DEPTH (m)	WET SOIL DISH (g)	DRY SOIL DISH (g)	WATER (g)	DISH MASS (g)	DRY SOIL (g)	WATER CONTENT (%)	REMARKS
NATURAL MOISTURE CONTENT								
1	0.55-1.00	96.86	70.39	26.47	10.45	59.94	44	
2	1.55-2.00	100.00	77.94	22.06	9.60	68.34	32	
3	2.55-2.70	109.30	88.84	20.46	9.68	79.16	26	
4	3.20-3.65	113.62	89.13	24.49	9.67	79.46	31	
5	4.20-4.65	116.00	88.91	27.09	9.68	79.23	34	
6	5.20-5.65	111.00	82.09	28.91	9.59	72.50	40	
7	6.20-6.35	59.00	48.11	10.89	10.60	37.51	29	

TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

ASTM Designation : D 4318 - 05, Method B

SAMPLE NUMBER	DEPTH (m)	BLOWS	WET SOIL DISH (g)	DRY SOIL DISH (g)	WATER (g)	DISH MASS (g)	DRY SOIL (g)	% Retained on 0.425 mm	ATTERBERG LIMIT		REMARKS
									LL	PL	
LIQUID LIMIT											
PLASTIC LIMIT											

Uncertainty Results: Water Content (%) = ± 0.0530 Liquid Limit = --- Plastic Limit = ---

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:NMC-10-508

SAMPLE SUBMITTED BY :

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

REMARKS: _____

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued: _____

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY : _____
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-NMC-02-1
Project..... **Proposed Mayon Evacuation Center (Manito Central School)**	Date of Receipt..... October 27, 2010
Location.....Brgy. Manito, Province of Albay	Date of Test..... October 27-28, 2010

TEST REPORT FOR LABORATORY DETERMINATION OF WATER (MOISTURE) CONTENT OF SOIL & ROCK BY MASS

ASTM D 2216 - 05

Test Method ☑ A ☐ B

BOREHOLE NO...BH-2

SAMPLE NUMBER	DEPTH (m)	WET SOIL DISH (g)	DRY SOIL DISH (g)	WATER (g)	DISH MASS (g)	DRY SOIL (g)	WATER CONTENT (%)	REMARKS
NATURAL MOISTURE CONTENT								
1	0.55-1.00	81.94	66.46	15.48	9.56	56.90	27	
2	1.55-2.00	84.39	66.71	17.68	9.70	57.01	31	
3	2.55-3.00	95.10	72.88	22.22	9.69	63.19	35	
4	3.55-4.00	89.40	66.63	22.77	10.02	56.61	40	
5	4.55-5.00	103.10	81.45	21.65	9.67	71.78	30	
6	5.55-6.00	98.30	77.66	20.64	9.92	67.74	30	
7	6.55-7.00	92.80	72.68	20.12	9.64	63.04	32	

TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

ASTM Designation : D 4318 - 05, Method B

SAMPLE NUMBER	DEPTH (m)	BLOWS	WET SOIL DISH (g)	DRY SOIL DISH (g)	WATER (g)	DISH MASS (g)	DRY SOIL (g)	% Retained on 0.425 mm	ATTERBERG LIMIT		REMARKS
									LL	PL	
LIQUID LIMIT											
PLASTIC LIMIT											

Uncertainty Results: Water Content (%) = ± 0.0364 Liquid Limit = --- Plastic Limit = ---

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:NMC-10-509

SAMPLE SUBMITTED BY :

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

REMARKS:

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-AL-01-1
Project..... **Proposed Mayon Evacuation Center (Manito Central School)**	Date of Receipt..... October 27, 2010
Location.... Brgy. Manito, Province of Albay	Date of Test..... October 29-30, 2010

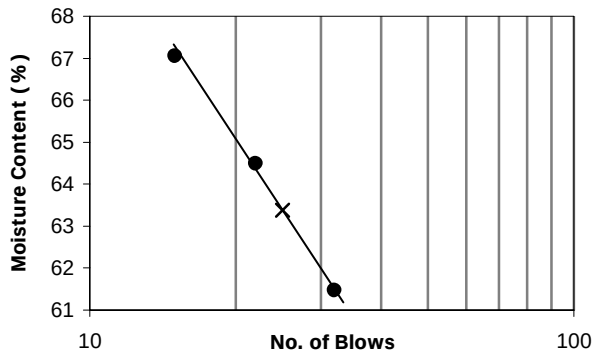
TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

ASTM D 4318 - 05

Method : A ☑ Wet Preparation ☐ Dry Preparation

BOREHOLE NO..... **BH-1** DEPTH (m)..... 0.55-1.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-1 USCS CLASS..... MH Elastic SILT

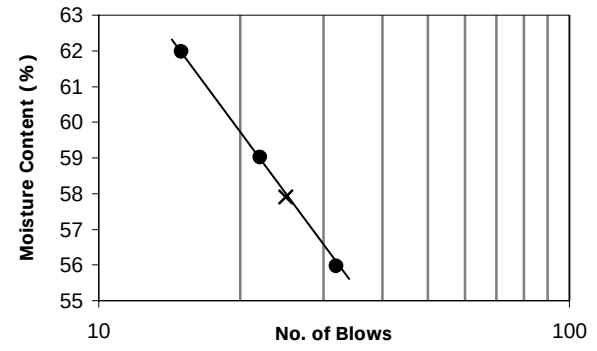
MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	A33	A4	A12	B5	B82
WET SOIL + DISH (g)	32.40	35.26	38.50	22.69	22.67
DRY SOIL + DISH (g)	23.72	25.25	27.00	19.50	19.47
WATER (g)	8.68	10.01	11.50	3.19	3.20
DISH MASS (g)	9.60	9.73	9.85	9.51	9.49
DRY SOIL (g)	14.12	15.52	17.15	9.99	9.98
MOISTURE CONTENT	61.47	64.50	67.06	31.93	32.06
NUMBER OF BLOWS	32	22	15	32	
% RETAINED ON 0.425mm					4.07



LL = 63 PL = 32 PI = 31

BOREHOLE NO..... **BH-1** DEPTH (m)..... 1.55-2.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-2 USCS CLASS..... MH Elastic SILT

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	B17	B7	B56	A32	A91
WET SOIL + DISH (g)	32.65	35.41	37.97	22.70	22.68
DRY SOIL + DISH (g)	24.39	25.86	27.18	19.49	19.45
WATER (g)	8.26	9.55	10.79	3.21	3.23
DISH MASS (g)	9.63	9.68	9.77	9.55	9.50
DRY SOIL (g)	14.76	16.18	17.41	9.94	9.95
MOISTURE CONTENT	55.96	59.02	61.98	32.29	32.46
NUMBER OF BLOWS	32	22	15	32	
% RETAINED ON 0.425mm					19.07



LL = 58 PL = 32 PI = 26

Uncertainty Results:	I	Liquid Limit = ± 0.1409	Plastic Limit = ± 0.2008
	II	Liquid Limit = ± 0.1349	Plastic Limit = ± 0.2020

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:AL-10-657

SAMPLE SUBMITTED BY :
☐ Walk-in Clients ☑ GPI Field Operator
R. POLIDAN

REMARKS:

COMPUTER PRINT-OUT
By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA / MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-AL-01-2
Project..... **Proposed Mayon Evacuation Center (Manito Central School)**	Date of Receipt..... October 27, 2010
Location.... Brgy. Manito, Province of Albay	Date of Test..... October 29-30, 2010

TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

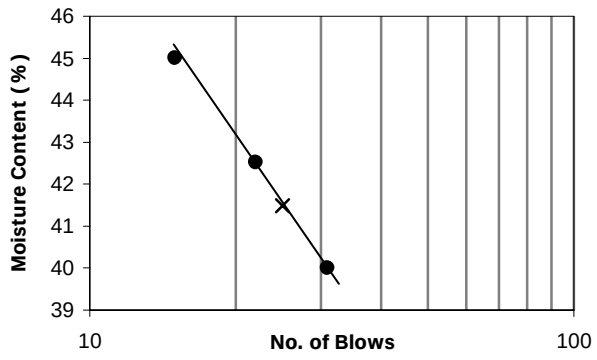
ASTM D 4318 - 05

Method : A ☑ Wet Preparation ☐ Dry Preparation

BOREHOLE NO..... **BH-1** DEPTH (m)..... 3.20-3.65 SOIL DESCRIPTION.....
SAMPLE NO..... S-4 USCS CLASS..... SC Clayey SAND

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	A62	A59	A80	B51	B7
WET SOIL + DISH (g)	32.84	35.64	38.28	22.75	22.78
DRY SOIL + DISH (g)	26.20	27.90	29.44	19.49	19.50
WATER (g)	6.64	7.74	8.84	3.26	3.28
DISH MASS (g)	9.60	9.70	9.80	9.51	9.49
DRY SOIL (g)	16.60	18.20	19.64	9.98	10.01
MOISTURE CONTENT	40.00	42.53	45.01	32.67	32.77
NUMBER OF BLOWS	31	22	15	33	

% RETAINED ON 0.425mm 41.76

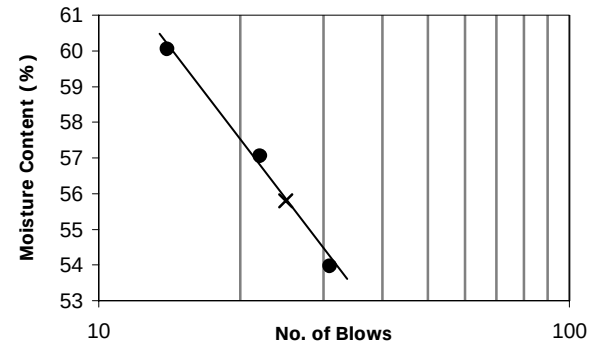


LL = 41 PL = 33 PI = 8

BOREHOLE NO..... **BH-1** DEPTH (m)..... 4.20-4.65 SOIL DESCRIPTION.....
SAMPLE NO..... S-5 USCS CLASS..... MH Elastic SILT

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	B52	B21	B39	A48	A24
WET SOIL + DISH (g)	32.57	35.22	38.14	22.68	22.70
DRY SOIL + DISH (g)	24.53	25.95	27.51	19.46	19.47
WATER (g)	8.04	9.27	10.63	3.22	3.23
DISH MASS (g)	9.63	9.70	9.81	9.48	9.49
DRY SOIL (g)	14.90	16.25	17.70	9.98	9.98
MOISTURE CONTENT	53.96	57.05	60.06	32.26	32.36
NUMBER OF BLOWS	31	22	14	32	

% RETAINED ON 0.425mm 24.47



LL = 56 PL = 32 PI = 24

Uncertainty Results: I Liquid Limit = ± 0.1198 Plastic Limit = ± 0.2014
II Liquid Limit = ± 0.1331 Plastic Limit = ± 0.2012

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:AL-10-658

SAMPLE SUBMITTED BY :
☐ Walk-in Clients ☑ GPI Field Operator
R. POLIDAN

REMARKS:

COMPUTER PRINT-OUT
By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA / MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-AL-01-3
Project..... **Proposed Mayon Evacuation Center (Manito Central School)**	Date of Receipt..... October 27, 2010
Location.... Brgy. Manito, Province of Albay	Date of Test..... October 29-30, 2010

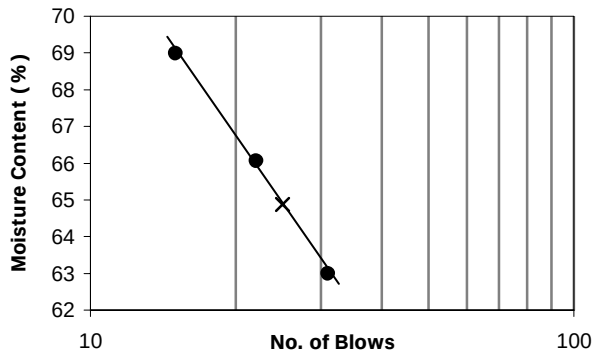
TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

ASTM D 4318 - 05

Method : A ☑ Wet Preparation ☐ Dry Preparation

BOREHOLE NO..... **BH-1** DEPTH (m)..... 5.20-5.65 SOIL DESCRIPTION.....
SAMPLE NO..... S-6 USCS CLASS..... CH Fat CLAY

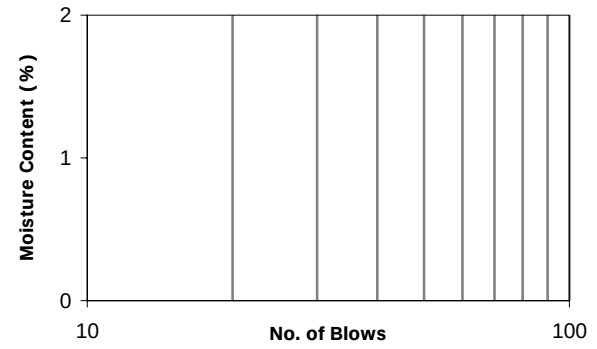
MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	A100	A16	A5	B32	B55
WET SOIL + DISH (g)	32.42	35.34	38.29	22.67	22.71
DRY SOIL + DISH (g)	23.60	25.16	26.70	19.51	19.53
WATER (g)	8.82	10.18	11.59	3.16	3.18
DISH MASS (g)	9.60	9.75	9.90	9.53	9.55
DRY SOIL (g)	14.00	15.41	16.80	9.98	9.98
MOISTURE CONTENT	63.00	66.06	68.99	31.66	31.86
NUMBER OF BLOWS	31	22	15	32	
% RETAINED ON 0.425mm					2.36



LL = 65 PL = 32 PI = 33

BOREHOLE NO..... DEPTH (m)..... SOIL DESCRIPTION.....
SAMPLE NO..... USCS CLASS.....

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER					
WET SOIL + DISH (g)					
DRY SOIL + DISH (g)					
WATER (g)					
DISH MASS (g)					
DRY SOIL (g)					
MOISTURE CONTENT					
NUMBER OF BLOWS					
% RETAINED ON 0.425mm					



LL = PL = PI =

Uncertainty Results: I Liquid Limit = ± 0.1415 Plastic Limit = ± 0.2008
II Liquid Limit = --- Plastic Limit = ---

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:AL-10-658

SAMPLE SUBMITTED BY :
☐ Walk-in Clients ☑ GPI Field Operator
R. POLIDAN

REMARKS:

COMPUTER PRINT-OUT
By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA / MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-AL-02-1
Project..... **Proposed Mayon Evacuation Center (Manito Central School)**	Date of Receipt..... October 27, 2010
Location.... Brgy. Manito, Province of Albay	Date of Test..... October 29-30, 2010

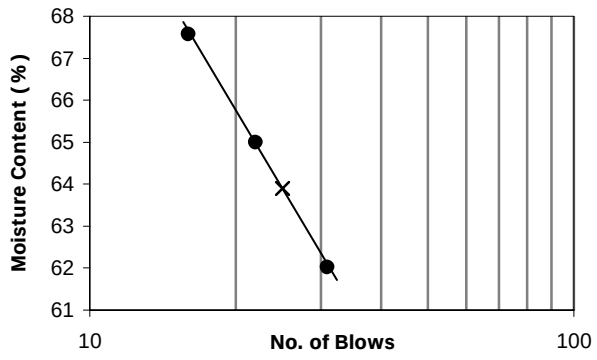
TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

ASTM D 4318 - 05

Method : A ☑ Wet Preparation ☐ Dry Preparation

BOREHOLE NO..... **BH-2** DEPTH (m)..... 0.55-1.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-1 USCS CLASS..... CH Fat CLAY

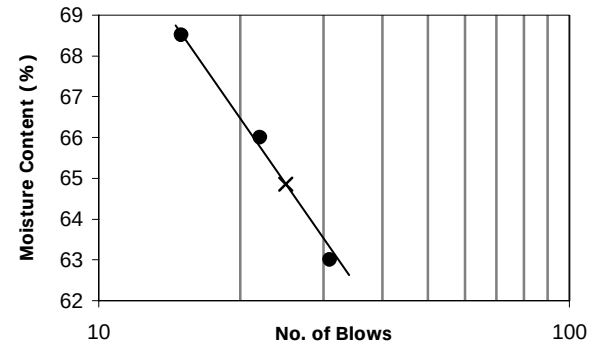
MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	C28	C11	C37	B30	B76
WET SOIL + DISH (g)	33.06	35.41	38.22	22.70	22.72
DRY SOIL + DISH (g)	24.08	25.27	26.74	19.59	19.60
WATER (g)	8.98	10.14	11.48	3.11	3.12
DISH MASS (g)	9.60	9.67	9.75	9.57	9.58
DRY SOIL (g)	14.48	15.60	16.99	10.02	10.02
MOISTURE CONTENT	62.02	65.00	67.57	31.04	31.14
NUMBER OF BLOWS	31	22	16	31	
% RETAINED ON 0.425mm					5.10



LL = 64 PL = 31 PI = 33

BOREHOLE NO..... **BH-2** DEPTH (m)..... 1.55-2.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-2 USCS CLASS..... CH Fat CLAY

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	D64	D1	D42	C23	C73
WET SOIL + DISH (g)	32.57	35.28	38.16	22.68	22.71
DRY SOIL + DISH (g)	23.70	25.11	26.63	19.50	19.51
WATER (g)	8.87	10.17	11.53	3.18	3.20
DISH MASS (g)	9.62	9.70	9.80	9.54	9.55
DRY SOIL (g)	14.08	15.41	16.83	9.96	9.96
MOISTURE CONTENT	63.00	66.00	68.51	31.93	32.13
NUMBER OF BLOWS	31	22	15	32	
% RETAINED ON 0.425mm					4.32



LL = 65 PL = 32 PI = 33

Uncertainty Results: I Liquid Limit = ± 0.1369 Plastic Limit = ± 0.2005
II Liquid Limit = ± 0.1407 Plastic Limit = ± 0.2014

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:AL-10-659

SAMPLE SUBMITTED BY :
☐ Walk-in Clients ☑ GPI Field Operator
R. POLIDAN

REMARKS:

COMPUTER PRINT-OUT
By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA / MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-AL-02-2
Project..... **Proposed Mayon Evacuation Center (Manito Central School)**	Date of Receipt..... October 27, 2010
Location.... Brgy. Manito, Province of Albay	Date of Test..... October 29-30, 2010

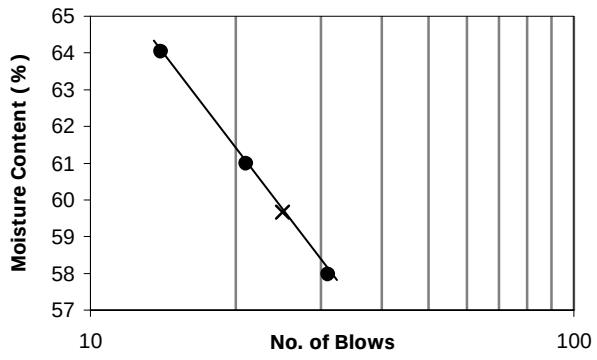
TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

ASTM D 4318 - 05

Method : A ☑ Wet Preparation ☐ Dry Preparation

BOREHOLE NO..... **BH-2** DEPTH (m)..... 2.55-3.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-3 USCS CLASS..... MH Elastic SILT

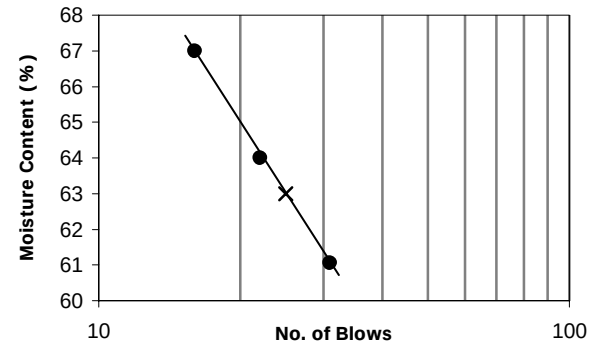
MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	C55	C91	C31	B49	B98
WET SOIL + DISH (g)	32.49	35.26	38.20	22.67	22.73
DRY SOIL + DISH (g)	24.10	25.58	27.12	19.47	19.53
WATER (g)	8.39	9.68	11.08	3.20	3.20
DISH MASS (g)	9.63	9.71	9.82	9.52	9.54
DRY SOIL (g)	14.47	15.87	17.30	9.95	9.99
MOISTURE CONTENT	57.98	61.00	64.05	32.16	32.03
NUMBER OF BLOWS	31	21	14	32	
% RETAINED ON 0.425mm					14.53



LL = 60 PL = 32 PI = 28

BOREHOLE NO..... **BH-2** DEPTH (m)..... 3.55-4.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-4 USCS CLASS..... MH Elastic SILT

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	D60	D31	D3	C40	C87
WET SOIL + DISH (g)	32.50	35.39	38.41	22.68	22.72
DRY SOIL + DISH (g)	23.83	25.38	26.98	19.52	19.54
WATER (g)	8.67	10.01	11.43	3.16	3.18
DISH MASS (g)	9.63	9.74	9.92	9.56	9.58
DRY SOIL (g)	14.20	15.64	17.06	9.96	9.96
MOISTURE CONTENT	61.06	64.00	67.00	31.73	31.93
NUMBER OF BLOWS	31	22	16	32	
% RETAINED ON 0.425mm					11.73



LL = 63 PL = 32 PI = 31

Uncertainty Results: I Liquid Limit = ± 0.1370 Plastic Limit = ± 0.2017
II Liquid Limit = ± 0.1395 Plastic Limit = ± 0.2012

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:AL-10-660

SAMPLE SUBMITTED BY :
☐ Walk-in Clients ☑ GPI Field Operator
R. POLIDAN

REMARKS:

COMPUTER PRINT-OUT
By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA / MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.
SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-AL-02-3
Project..... **Proposed Mayon Evacuation Center (Manito Central School)**	Date of Receipt..... October 27, 2010
Location.... Brgy. Manito, Province of Albay	Date of Test..... October 29-30, 2010

TEST REPORT FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

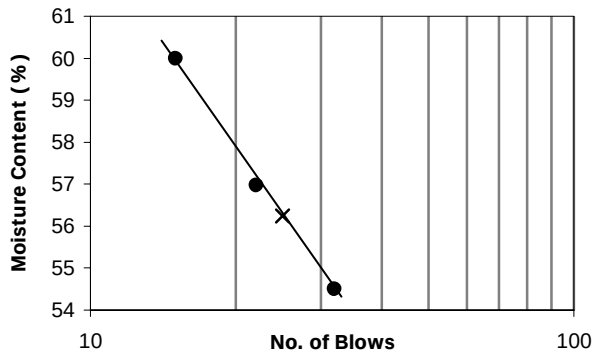
ASTM D 4318 - 05

Method : A ☑ Wet Preparation ☐ Dry Preparation

BOREHOLE NO..... **BH-2** DEPTH (m)..... 4.55-5.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-5 USCS CLASS..... MH Elastic SILT

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	C68	C52	C77	D18	D30
WET SOIL + DISH (g)	33.10	35.22	38.44	22.67	22.70
DRY SOIL + DISH (g)	24.81	25.95	27.70	19.49	19.49
WATER (g)	8.29	9.27	10.74	3.18	3.21
DISH MASS (g)	9.60	9.68	9.80	9.58	9.57
DRY SOIL (g)	15.21	16.27	17.90	9.91	9.92
MOISTURE CONTENT	54.50	56.98	60.00	32.09	32.36
NUMBER OF BLOWS	32	22	15	32	

% RETAINED ON 0.425mm 24.52

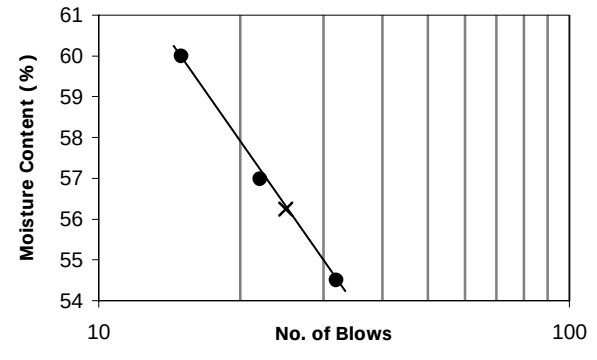


LL = 56 PL = 32 PI = 24

BOREHOLE NO..... **BH-2** DEPTH (m)..... 5.55-6.00 SOIL DESCRIPTION.....
SAMPLE NO..... S-6 USCS CLASS..... MH Elastic SILT

MOISTURE CONTENT DETERMINATION	LIQUID LIMIT TRIAL 1	LIQUID LIMIT TRIAL 2	LIQUID LIMIT TRIAL 3	PLASTIC LIMIT TRIAL 1	PLASTIC LIMIT TRIAL 2
DISH NUMBER	C68	C52	C77	D18	D30
WET SOIL + DISH (g)	33.10	35.22	38.44	22.67	22.70
DRY SOIL + DISH (g)	24.81	25.95	27.70	19.49	19.49
WATER (g)	8.29	9.27	10.74	3.18	3.21
DISH MASS (g)	9.60	9.68	9.80	9.58	9.57
DRY SOIL (g)	15.21	16.27	17.90	9.91	9.92
MOISTURE CONTENT	54.50	56.98	60.00	32.09	32.36
NUMBER OF BLOWS	32	22	15	32	

% RETAINED ON 0.425mm 20.81



LL = 56 PL = 32 PI = 24

Uncertainty Results:	I	Liquid Limit = ± 0.1310	Plastic Limit = ± 0.2025
	II	Liquid Limit = ± 0.1310	Plastic Limit = ± 0.2025

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

LAB.FILE NO.:AL-10-660

SAMPLE SUBMITTED BY :
☐ Walk-in Clients ☑ GPI Field Operator
R. POLIDAN

REMARKS:

COMPUTER PRINT-OUT
By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA / MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

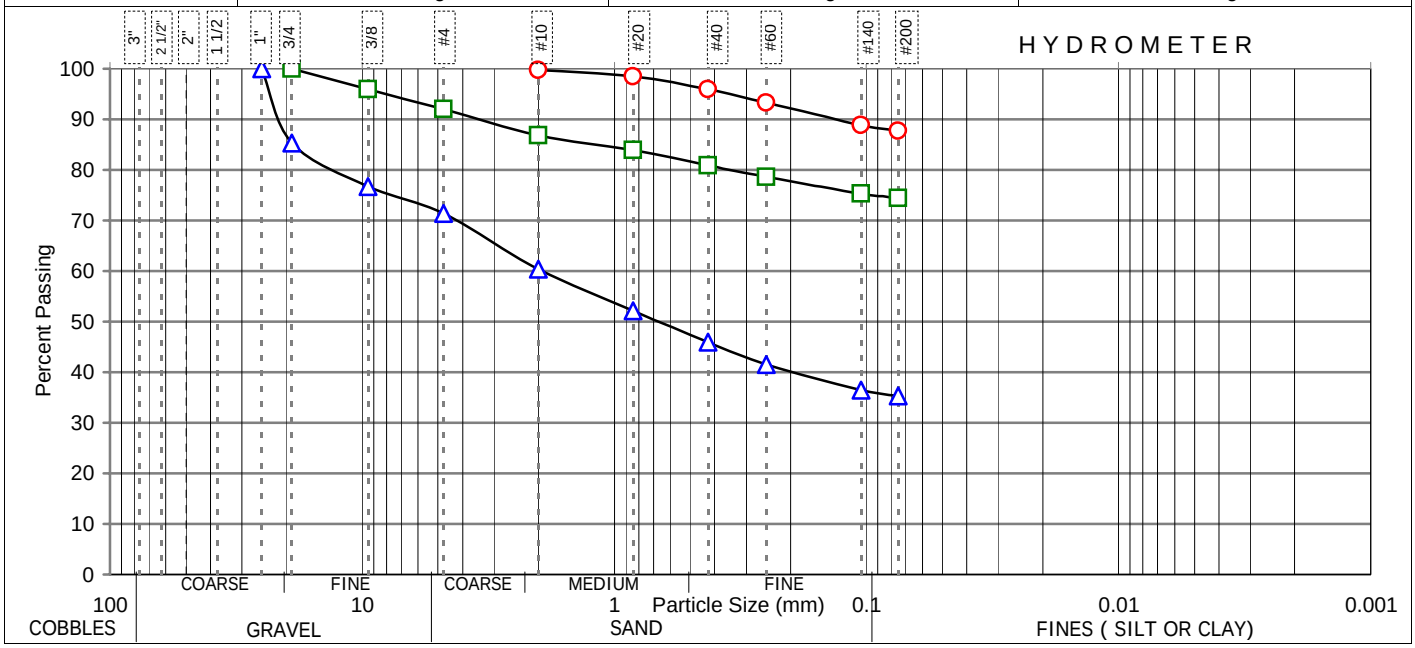
Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-GSA-01-1
Project..... **Proposed Mayon Evacuation Center (Manito Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Manito, Province of Albay	Date of Test..... October 28, 2010

TEST REPORT FOR GRAIN SIZE ANALYSIS

ASTM D 422 - 63 (Re-approved 2007)

BH / SAMPLE NO.....	**BH-1**	○ 1	□ 2	△ 3
DEPTH (m).....		0.55-1.00	1.55-2.00	2.55-3.00
SOIL DESCRIPTION.....		Elastic SILT	Elastic SILT	Clayey silty SAND

SIEVE SIZE		Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent
inches	mm	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer
2 1/2	62.5									
2	50.0									
1 1/2	37.5									
1	25.0									100
3/4	19.0						100	11.60	14.65	85
3/8	9.5				2.76	4.04	96	18.39	23.23	77
4	4.75				5.48	8.02	92	22.66	28.63	71
10	2.0	0.15	0.25	100	8.96	13.11	87	31.34	39.59	60
20	0.8	0.92	1.53	98	11.00	16.10	84	37.86	47.83	52
40	0.425	2.44	4.07	96	13.03	19.07	81	42.80	54.07	46
60	0.25	4.02	6.71	93	14.66	21.45	79	46.30	58.49	42
140	0.105	6.65	11.09	89	16.90	24.73	75	50.30	63.54	36
200	0.075	7.34	12.25	88	17.46	25.55	74	51.16	64.63	35
OVEN DRIED MASS			59.94 gms			68.34 gms			79.16 gms	



* - with Hydrometer

REMARKS :

SAMPLE SUBMITTED BY:

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

Uncertainty Results: % Finer = ± 0.0413 LAB.FILE NO.:GSA-10-409

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

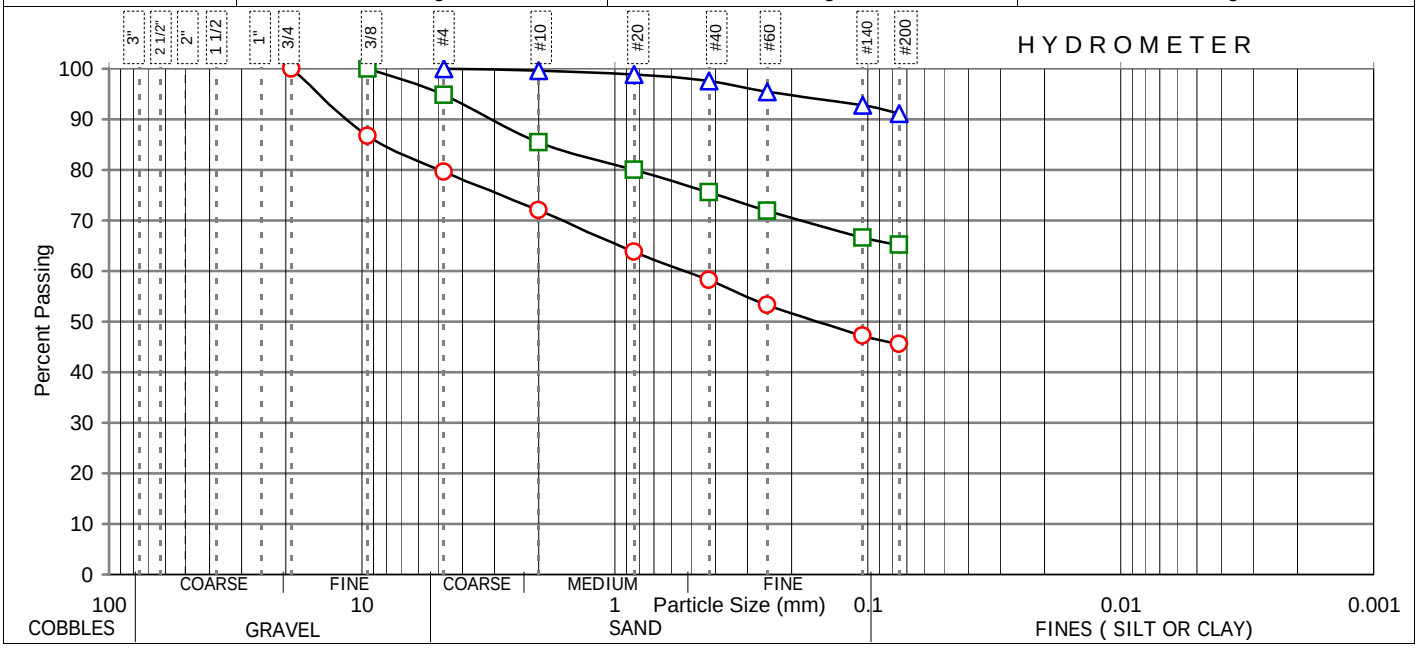
DPWH-BRS Accredited

Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-GSA-01-2
Project..... **Proposed Mayon Evacuation Center (Manito Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Manito, Province of Albay	Date of Test..... October 28, 2010

TEST REPORT FOR GRAIN SIZE ANALYSIS

ASTM D 422 - 63 (Re-approved 2007)

BH / SAMPLE NO.....	**BH-1**	○ 4			□ 5			△ 6	
DEPTH (m).....		3.20-3.65			4.20-4.65			5.20-5.65	
SOIL DESCRIPTION.....		Clayey SAND			Elastic SILT			Fat CLAY	
SIEVE SIZE		Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent
inches	mm	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer
2 1/2	62.5									
2	50.0									
1 1/2	37.5									
1	25.0									
3/4	19.0			100						
3/8	9.5	10.60	13.34	87			100			
4	4.75	16.23	20.43	80	4.07	5.14	95			100
10	2.0	22.19	27.93	72	11.56	14.59	85	0.30	0.41	100
20	0.8	28.78	36.22	64	15.88	20.04	80	0.80	1.10	99
40	0.425	33.18	41.76	58	19.39	24.47	76	1.71	2.36	98
60	0.25	37.16	46.77	53	22.31	28.16	72	3.27	4.51	95
140	0.105	41.90	52.73	47	26.48	33.42	67	5.23	7.21	93
200	0.075	43.23	54.40	46	27.55	34.77	65	6.40	8.83	91
OVEN DRIED MASS			79.46 gms			79.23 gms			72.50 gms	



* - with Hydrometer

REMARKS :

SAMPLE SUBMITTED BY:

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

Uncertainty Results: % Finer = ± 0.0352 LAB.FILE NO.:GSA-10-409

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

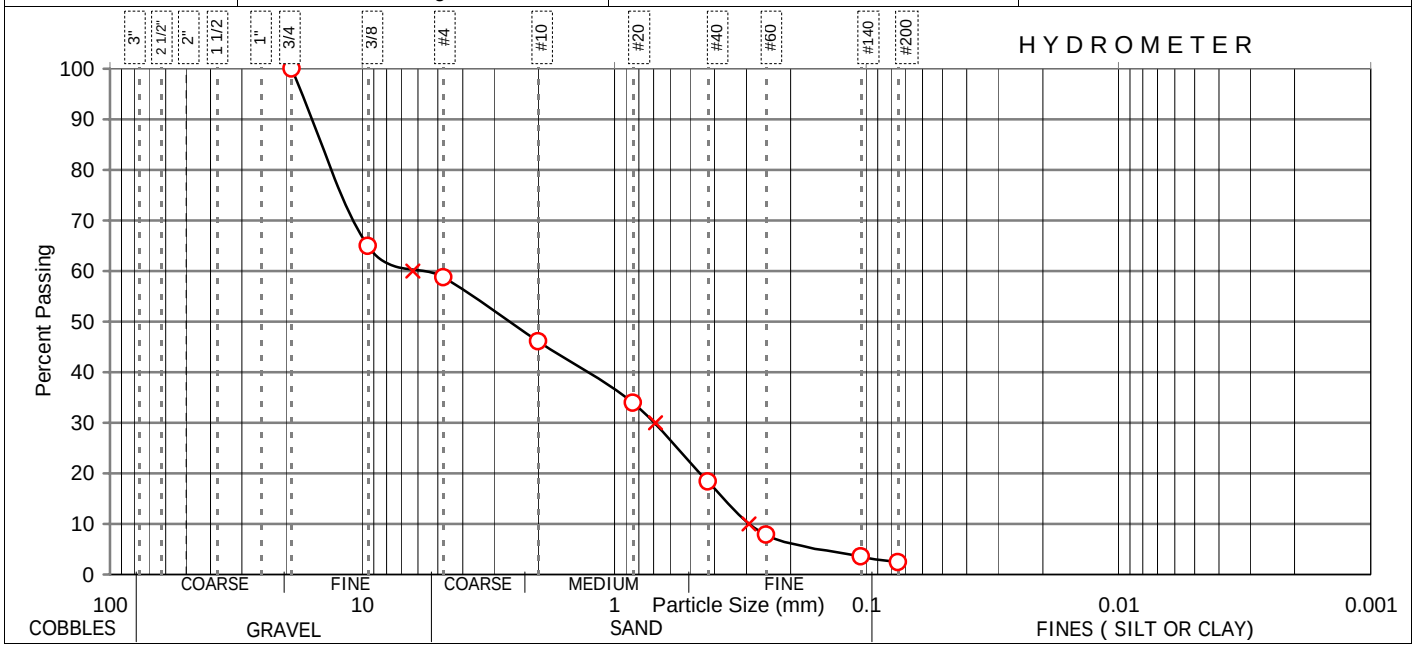
Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-GSA-01-3
Project..... **Proposed Mayon Evacuation Center (Manito Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Manito, Province of Albay	Date of Test..... October 28, 2010

TEST REPORT FOR GRAIN SIZE ANALYSIS

ASTM D 422 - 63 (Re-approved 2007)

BH / SAMPLE NO..... **BH-1** ○ 7 □ △
DEPTH (m)..... 6.20-6.35
SOIL DESCRIPTION..... Poorly graded SAND

SIEVE SIZE		Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent
inches	mm	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer
2 1/2	62.5									
2	50.0									
1 1/2	37.5									
1	25.0									
3/4	19.0			100						
3/8	9.5	13.15	35.06	65						
4	4.75	15.47	41.24	59						
10	2.0	20.25	53.99	46						
20	0.8	24.78	66.06	34						
40	0.425	30.62	81.63	18						
60	0.25	34.56	92.14	8						
140	0.105	36.20	96.51	3						
200	0.075	36.62	97.63	2						
OVEN DRIED MASS			37.51 gms							



* - with Hydrometer

REMARKS : S-7: Cu = 21.53 Cc = 0.26

SAMPLE SUBMITTED BY:
☐ Walk-in Clients ☑ GPI Field Operator
R. POLIDAN

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

COMPUTER PRINT-OUT
By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued:

Uncertainty Results: % Finer = ± 0.0916 LAB.FILE NO.:GSA-10-409

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

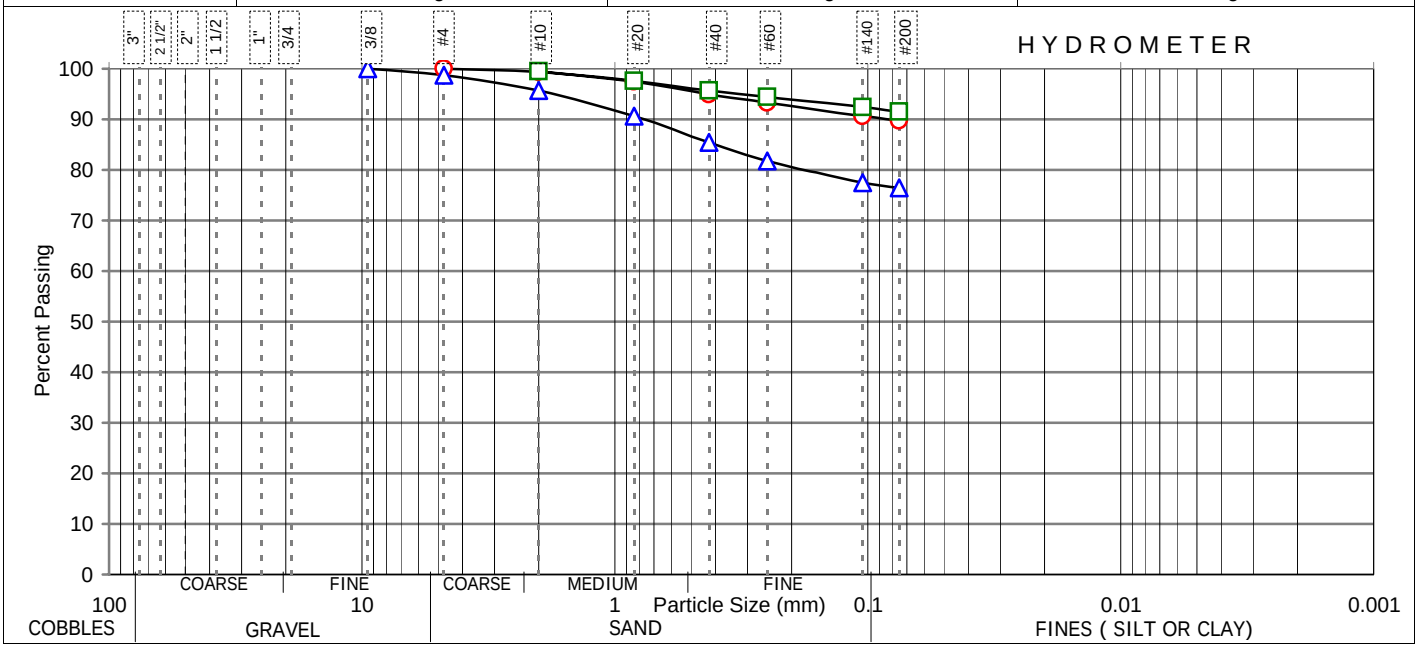
Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-GSA-02-1
Project..... **Proposed Mayon Evacuation Center (Manito Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Manito, Province of Albay	Date of Test..... October 30, 2010

TEST REPORT FOR GRAIN SIZE ANALYSIS

ASTM D 422 - 63 (Re-approved 2007)

BH / SAMPLE NO.....	**BH-2**	○ 1	□ 2	△ 3
DEPTH (m).....		0.55-1.00	1.55-2.00	2.55-3.00
SOIL DESCRIPTION.....		Fat CLAY	Fat CLAY	Elastic SILT

SIEVE SIZE		Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent
inches	mm	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer
2 1/2	62.5									
2	50.0									
1 1/2	37.5									
1	25.0									
3/4	19.0									
3/8	9.5									100
4	4.75			100				0.80	1.27	99
10	2.0	0.34	0.60	99	0.28	0.49	100	2.72	4.30	96
20	0.8	1.45	2.55	97	1.36	2.39	98	5.94	9.40	91
40	0.425	2.90	5.10	95	2.46	4.32	96	9.18	14.53	85
60	0.25	3.85	6.77	93	3.21	5.63	94	11.53	18.25	82
140	0.105	5.31	9.33	91	4.30	7.54	92	14.20	22.47	78
200	0.075	5.82	10.23	90	4.85	8.51	91	14.87	23.53	76
OVEN DRIED MASS			56.90 gms			57.01 gms			63.19 gms	



* - with Hydrometer

REMARKS :

SAMPLE SUBMITTED BY:

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

Uncertainty Results: % Finer = ± 0.0434 LAB.FILE NO.:GSA-10-410

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

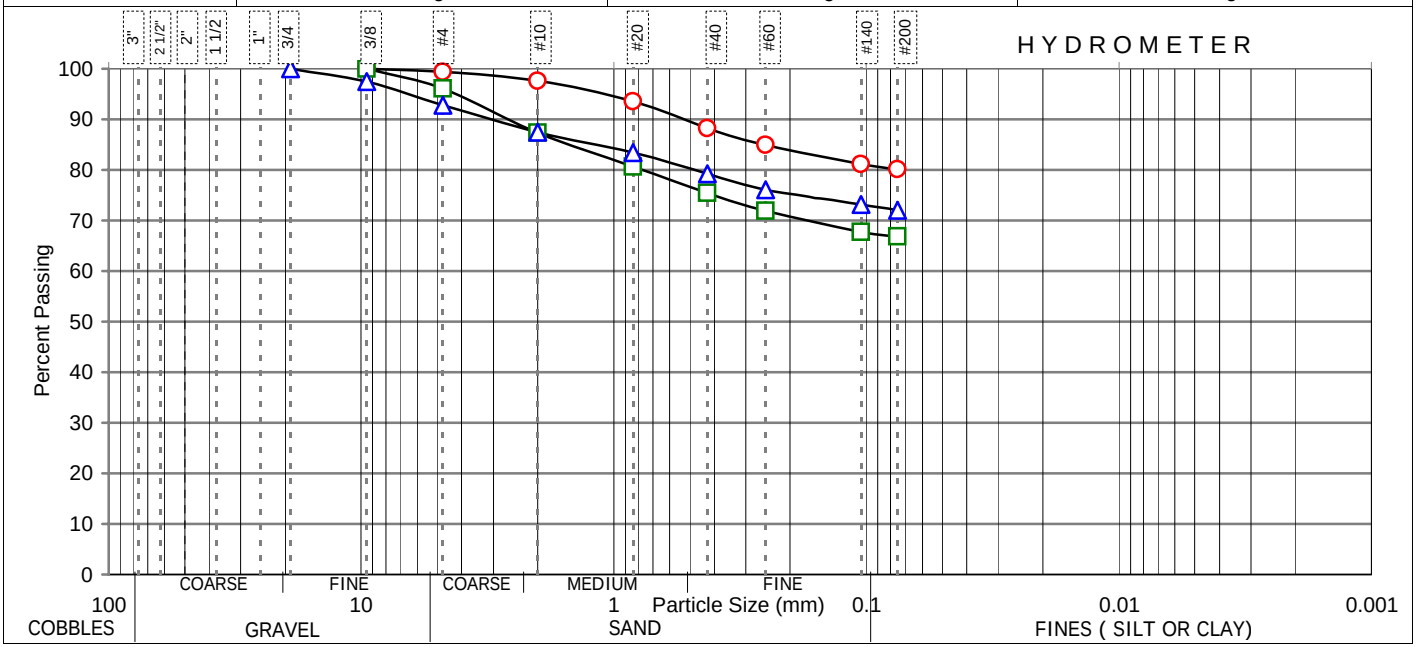
Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-GSA-02-2
Project..... **Proposed Mayon Evacuation Center (Manito Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Manito, Province of Albay	Date of Test..... October 30, 2010

TEST REPORT FOR GRAIN SIZE ANALYSIS

ASTM D 422 - 63 (Re-approved 2007)

BH / SAMPLE NO.....	**BH-2**	○ 4	□ 5	△ 6
DEPTH (m).....		3.55-4.00	4.55-5.00	5.55-6.00
SOIL DESCRIPTION.....		Elastic SILT	Elastic SILT	Elastic SILT

SIEVE SIZE		Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent	Cumm.Mass	Cumm.%	Percent
inches	mm	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer	Retained (g)	Retained	Finer
2 1/2	62.5									
2	50.0									
1 1/2	37.5									
1	25.0									
3/4	19.0									100
3/8	9.5			100			100	1.71	2.52	97
4	4.75	0.36	0.64	99	2.79	3.89	96	4.89	7.22	93
10	2.0	1.34	2.37	98	9.06	12.62	87	8.46	12.49	88
20	0.8	3.64	6.43	94	13.91	19.38	81	11.26	16.62	83
40	0.425	6.64	11.73	88	17.60	24.52	75	14.10	20.81	79
60	0.25	8.54	15.09	85	20.20	28.14	72	16.17	23.87	76
140	0.105	10.70	18.90	81	23.13	32.22	68	18.14	26.78	73
200	0.075	11.25	19.87	80	23.80	33.16	67	18.94	27.96	72
OVEN DRIED MASS			56.61 gms			71.78 gms			67.74 gms	



* - with Hydrometer

REMARKS :

SAMPLE SUBMITTED BY:

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

Uncertainty Results: % Finer = ± 0.0443 LAB.FILE NO.:GSA-10-410

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.

ACCREDITED TESTING LABORATORY
PNS ISO/IEC 17025:2005
LA-2006-097B

GEOTECHNICS PHILIPPINES, INC.

SOILS AND MATERIALS TESTING LABORATORY
119 Sauyo Road, Novaliches, Quezon City

DPWH-BRS Accredited

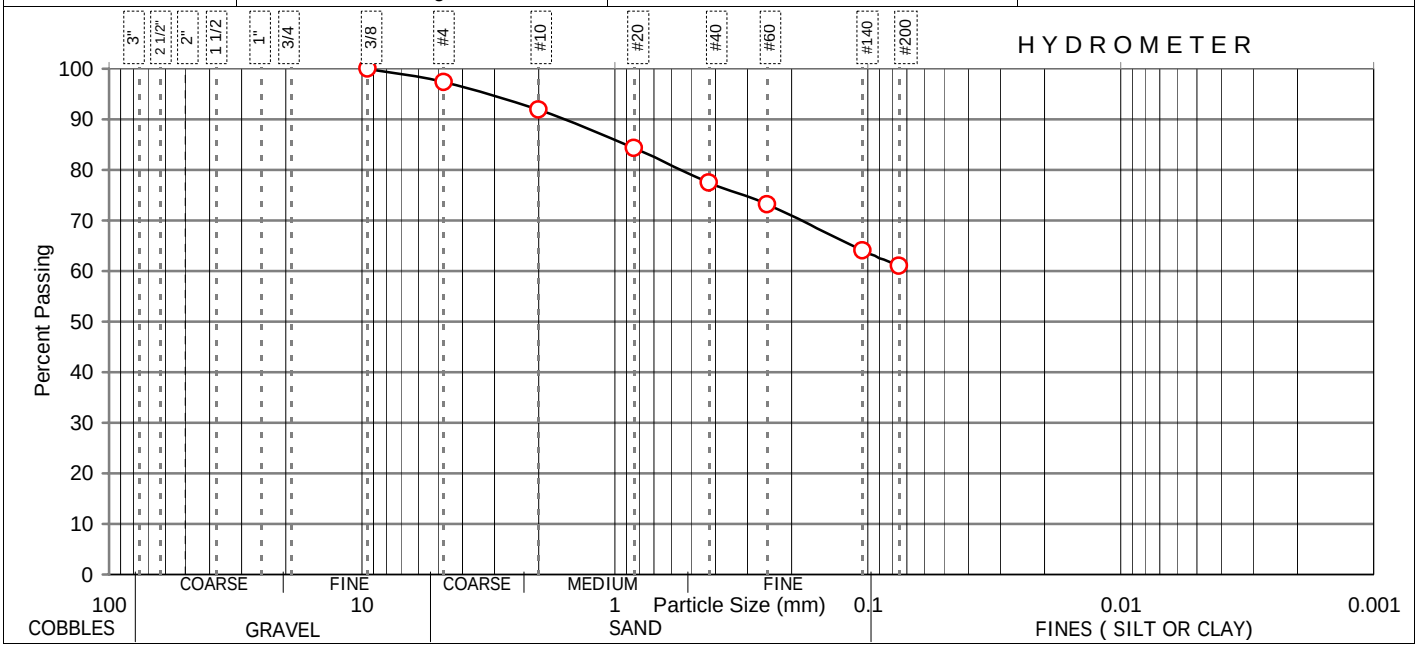
Client..... **MOHRI, ARCHITECT & ASSOCIATES, INC.**	Job Number..... 2209-10.R1-GSA-02-3
Project..... **Proposed Mayon Evacuation Center (Manito Central School)**	Date of Receipt..... October 27, 2010
Location..... Brgy. Manito, Province of Albay	Date of Test..... October 30, 2010

TEST REPORT FOR GRAIN SIZE ANALYSIS

ASTM D 422 - 63 (Re-approved 2007)

BH / SAMPLE NO.....	**BH-2**	○ 7	□	△
DEPTH (m).....		6.55-7.00		
SOIL DESCRIPTION.....		Elastic SILT		

SIEVE SIZE inches	SIEVE SIZE mm	Cumm.Mass Retained (g)	Cumm.% Retained	Percent Finer	Cumm.Mass Retained (g)	Cumm.% Retained	Percent Finer	Cumm.Mass Retained (g)	Cumm.% Retained	Percent Finer
2 1/2	62.5									
2	50.0									
1 1/2	37.5									
1	25.0									
3/4	19.0									
3/8	9.5			100						
4	4.75	1.70	2.70	97						
10	2.0	5.07	8.04	92						
20	0.8	9.90	15.70	84						
40	0.425	14.18	22.49	78						
60	0.25	16.95	26.89	73						
140	0.105	22.70	36.01	64						
200	0.075	24.55	38.94	61						
OVEN DRIED MASS			63.04 gms							



* - with Hydrometer

REMARKS :

SAMPLE SUBMITTED BY:

☐ Walk-in Clients ☑ GPI Field Operator

R. POLIDAN

COMPUTER PRINT-OUT

By: MARIA ANTONIETTE P. CUNAHAP
Encoder

Data Checked by: ABA/MRR
Quality Assurance

Date Issued:

TESTED BY : ARTURO Q. AQUINO
LABORATORY TECHNICIAN

CERTIFIED BY :
AUTHORIZED SIGNATORY

Uncertainty Results: % Finer = ± 0.0418 LAB.FILE NO.:GSA-10-410

Note: The reported expanded uncertainty is based on a combined uncertainty by a coverage factor of k=2, providing a level of confidence of approximately 95%.