Republic of the Philippines
Office of the President

BCDA
Bases Conversion and Development Authority

Consulting Services for the Detailed Engineering Design of the Proposed Airport-CGC Access Road, MacArthur-CGC Access Road, MacArthur-SCTEX Access Road and Olympic Village Access Road

APPENDICES
Test Pits
(Airport - CGC Access Road)

URBAN INTEGRATED CONSULTANTS, INC.
Engineers • Project Managers • Planners • Environmentalists • Economists
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TEST PITS

CGC TO AIRPORT ACCESS ROAD (ROAD 1)

OPINION AND INTERPRETATION

TABLE OF CONTENTS

1.0 INTRODUCTION

This Geotechnical Engineering report was prepared in accordance with the request of the client, ***Bases Conversion and Development Authority (BCDA)***, in order to determine the underlying road subgrade conditions at the proposed site located at Road 1

The Consultant has commissioned the services of A.M. Geoconsult & Associates in the performance of the Geotechnical Investigation works with the assistance of the Consultant's Geotechnical Engineers.

The Soil Exploration program is intended to characterize the underlying road subgrade condition in order to arrive at a suitable solution.

Thirty Eight (38) test pits were conducted to serve as a guide for the proposed road. The objective of this report is to provide geotechnical assessments based on the results of laboratory tests of soil samples obtained from the site. A design CBR is provided to serve as a basis for the strength of subgrade.

2.0 SCOPE OF WORK SUMMARY

A total of thirty eight (38) test pits (TP) were conducted at specified locations. These are burrowed to a depth of 1.50 meters, ensuring that samples are taken from the subgrade level.

The specimens from test pits and auger holes are subjected to routine laboratory tests and are classified using the American Association of State Highway and Transportation Officials (AASHTO) standards. Bulk samples are used for Moisture Density Relation (MDR) and California Bearing Ratio (CBR) Tests, which yield engineering properties particular for road design.

3.0 METHODOLOGY OF THE INVESTIGATION

The following field and laboratory tests are performed in accordance with internationally accepted standards. Appropriate procedures are referenced for the soil tests discussed in the following sections:

3.1 FIELD SAMPLING & TESTING

Test Pit

A sampling process wherein a 1x1 meter square is manually excavated using shovels and iron bars to expose the succession of strata for easy visual examination up to 1.50 meter depth. Soil samples are taken for every prominent layer encountered and are subjected to

routine laboratory testing. Bulk soil samples are obtained from subgrade level and are used for specialized laboratory tests such as the Moisture Density Relation and California Bearing Ratio Tests.

3.2 DETAILS OF LABORATORY WORKS

a) Natural Moisture Content (ASTM-D2216)

This test is also known as water content. It is the ratio expressed as a percentage of the weight of water in a given mass of soil to the weight of the solid particles.

b) Grain Size Analysis of Soils (ASTM-D422)

A process wherein the proportion of each grain size present in a given soil sample (grain-size distribution) is determined. The grain- size distribution of coarse –grained soils is determined directly by sieve analysis, while that of fine-grained soils is determined indirectly by hydrometer analysis. The grain-size distribution of mixed soils is determined by combined sieve and hydrometer analyses.

c) Atterberg Limits of Soils (ASTM-D4318)

A procedure that consists of several parameters that are primarily water contents which define the limits of various stages of consistency for fine-grained soils. The liquid limit (LL) and the plastic limit (PL) define the upper and lower limits, respectively, of the plastic range of a soil; the numerical difference between these two limits expresses the plasticity of a soil and is termed the plasticity index (PI).

d) Classification of Soils for Engineering Purposes

For road projects, soils are classified using the American Association of State Highway and Transportation Officials (AASHTO) standards. Soils may be designated into one of seven basic groups; from A-1 to A-7. The engineering properties associated with this type of classification are used specifically for road design.

e) California Bearing Ratio (T 193)

This test evaluates the strength of sub-grade soil materials excavated from the test pits having maximum particle sizes less than 19 mm. This involves the determination of the CBR of soil materials at optimum water content or a range of water content from a specified compaction test and a specified dry unit weight. A plot is drawn of force/ penetration, and the forces corresponding to a penetration of 2.5 and 5.0 mm read off.

f) Moisture Density Relation (T 180)

This test consists of placing the soil in a 150 mm diameter mold in five equal layers, each of which is subject to 56 uniform blows of a 4.5 kg hammer dropped from a height of 305 mm. After which, the density is measured. The process is repeated with increasing water content. From the varying values of bulk density and water content obtained, the maximum dry density is derived. The water content at the state of maximum dry density is correspondingly the optimum water content.

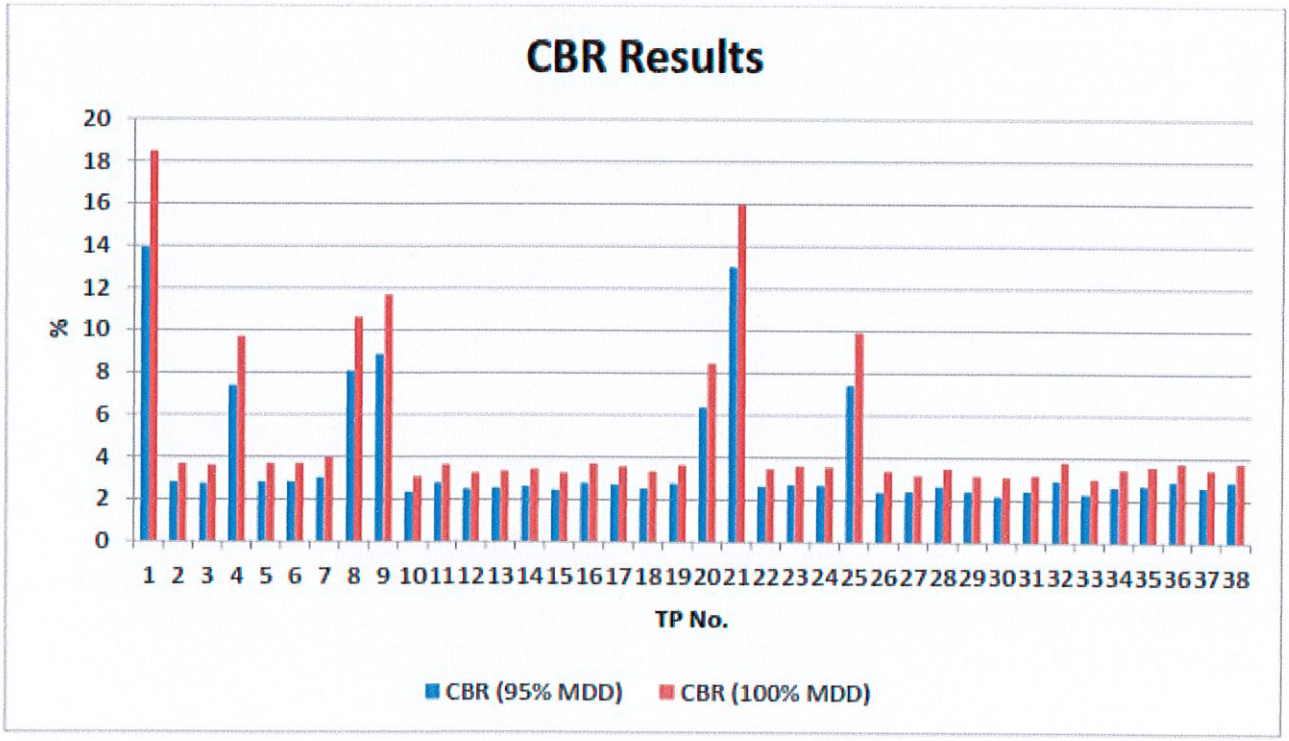
4.0 RESULTS OF THE INVESTIGATION

Results of our findings from laboratory California Bearing Ratio (CBR), Moisture Density Relations (MDD) / Compaction and AASHTO classifications for thirty eight (38) test pits are appended to this report.

TP NO.	AASHTO CLASSIFICATION	DESCRIPTION	MDD (g/cc)	OMC (%)	CBR (95% MDD)	CBR (100% MDD)
TP – 1	A-1-b	Stone fragments, gravel, sand	1.83	8.30	13.91	18.48
TP – 2	A-6	Clayey soils	1.55	14.60	2.80	3.68
TP – 3	A-7-6	Clayey soils	1.52	15.40	2.75	3.61
TP – 4	A-2-4	Silty or clayey gravel and sand	1.72	10.20	7.39	9.70
TP – 5	A-6	Clayey soils	1.55	14.80	2.82	3.70
TP – 6	A-4	Silty soils	1.63	12.50	2.83	3.70
TP – 7	A-4	Silty soils	1.65	12.30	3.03	3.97
TP – 8	A-2-4	Silty or clayey gravel and sand	1.78	10.44	8.06	10.61
TP – 9	A-2-4	Silty or clayey gravel and sand	1.71	8.30	8.85	11.68
TP – 10	A-6	Clayey soils	1.55	16.50	2.35	3.07
TP – 11	A-7-6	Clayey soils	1.56	15.00	2.78	3.64
TP – 12	A-6	Clayey soils	1.51	19.00	2.49	3.26
TP – 13	A-6	Clayey soils	1.54	14.70	2.55	3.34
TP – 14	A-6	Clayey soils	1.53	12.00	2.61	3.44
TP – 15	A-4	Silty soils	1.69	12.20	2.45	3.26
TP – 16	A-6	Clayey soils	1.54	14.40	2.77	3.70
TP – 17	A-6	Clayey soils	1.50	14.50	2.70	3.56
TP – 18	A-6	Clayey soils	1.50	19.00	2.52	3.33
TP – 19	A-6	Clayey soils	1.53	15.35	2.76	3.62
TP – 20	A-2-4	Silty or clayey gravel and sand	1.76	10.20	6.36	8.45
TP – 21	A-2-6	Silty or clayey gravel and sand	2.00	9.80	13.01	15.96
TP – 22	A-6	Clayey soils	1.54	12.74	2.64	3.47
TP – 23	A-6	Clayey soils	1.50	17.00	2.73	3.60

TP NO.	AASHTO CLASSIFICATION	DESCRIPTION	MDD (g/cc)	OMC (%)	CBR (95% MDD)	CBR (100% MDD)
TP – 24	A-6	Clayey soils	1.54	17.70	2.69	3.55
TP – 25	A-2-4	Silty or clayey gravel and sand	1.73	10.60	7.42	9.91
TP – 26	A-6	Clayey soils	1.50	18.50	2.37	3.36
TP – 27	A-7-5	Clayey soils	1.50	14.30	2.41	3.16
TP – 28	A-6	Clayey soils	1.50	14.00	2.65	3.49
TP – 29	A-6	Clayey soils	1.53	13.80	2.41	3.14
TP – 30	A-7-6	Clayey soils	1.50	18.20	2.18	3.09
TP – 31	A-6	Clayey soils	1.51	17.40	2.43	3.17
TP – 32	A-7-6	Clayey soils	1.50	18.20	2.91	3.80
TP – 33	A-4	Silty soils	1.63	14.60	2.28	3.01
TP – 34	A-6	Clayey soils	1.52	17.00	2.63	3.47
TP – 35	A-6	Clayey soils	1.54	15.00	2.69	3.58
TP – 36	A-4	Silty soils	1.67	15.00	2.89	3.77
TP – 37	A-6	Clayey soils	1.50	14.00	2.62	3.45
TP – 38	A-7-6	Clayey soils	1.60	14.70	2.87	3.77

Table 1. Test Pit Results Summary

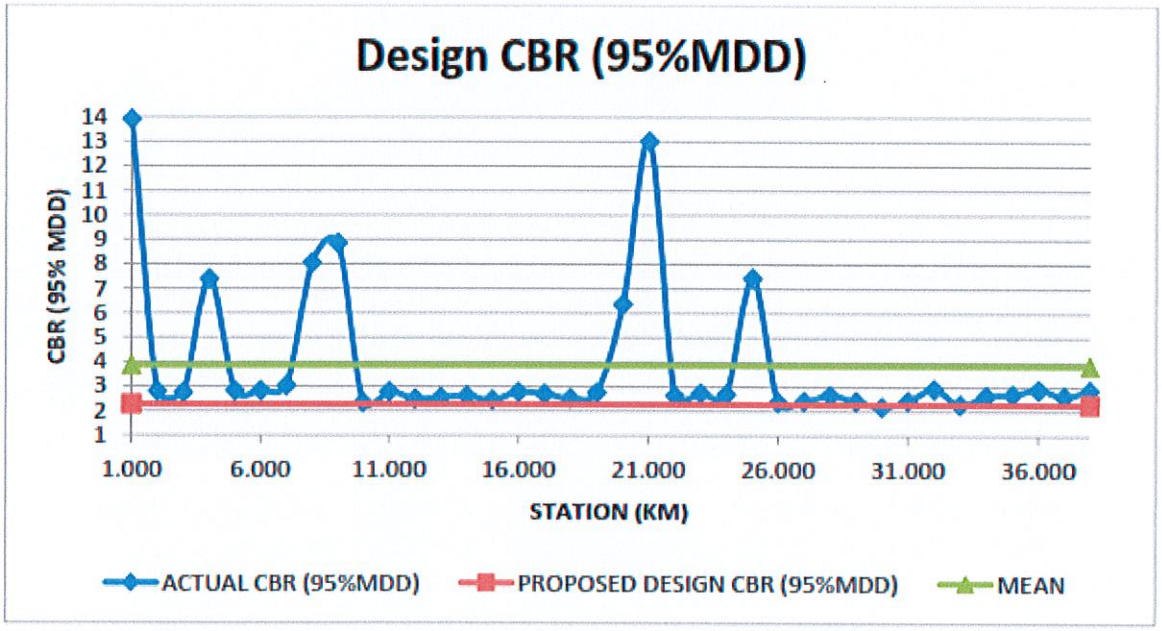


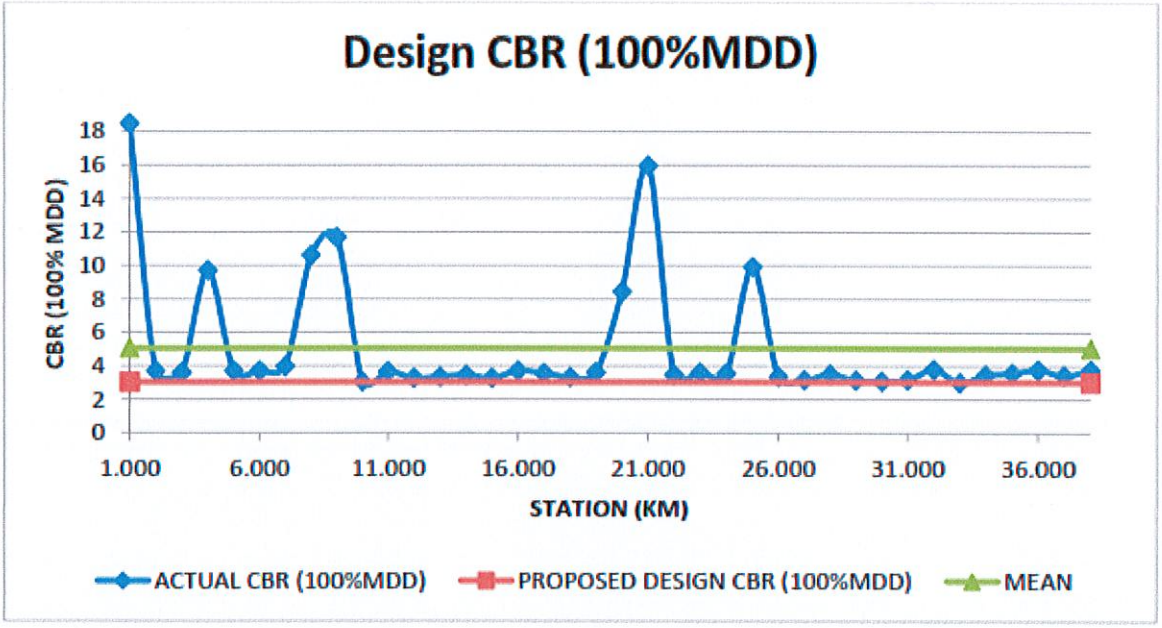
5.0 PAVEMENT DESIGN CONSIDERATIONS

Wide variation of laboratory California Bearing Ratio (CBR) was obtained from thirty eight (38) test pits. In summary, the following table presents the results obtained in the laboratory. Details of these results including photographs are appended to this report.

Because of the inherent variability of subgrade materials as revealed from the laboratory California Bearing Ratio (CBR) of samples obtained from the test pits, it is recommended to use a mean value of design CBR for pavement design. The proposed design values for CBR at 95%MDD and 100%MDD are both presented, however it is recommended to adopt the CBR at 95%MDD since this would be more practical and more suitable to represent the site condition. For design purposes, a new road pavement can be designed based on the results from the laboratory California Bearing Ratio (CBR). A value of **CBR=2.27** can be considered for pavement design.

CBR (95% MDD)			CBR (100% MDD)		
Mean	Standard Deviation	Proposed Design Value	Mean	Standard Deviation	Proposed Design Value
3.86	2.88	2.27	5.07	3.71	3.03





In the absence of some important pavement design requirements, design criterions were assumed considering the anticipated pavement conditions. For roads and streets, the design traffic to be used in designing a flexible pavement for the usual pneumatic-tired road vehicles was used in selecting the pavement thickness. In this case, a design index of 1.0 was used and giving a corresponding thickness of 6.50 inches of flexible pavement. On the other hand, as a general rule for rigid pavement design, the minimum allowable thickness of rigid pavement is 6.0 inches. In the design of parking areas, design-index values for Category I traffic is also normally used. The condition of the base and subbase courses shall likewise influence the thickness selection for pavement. In designing the road, it is recommended that efficient drainage should be provided in both road sides.

6.0 LIMITATIONS

The conclusions and recommendations submitted in this report are based in part upon the data obtained from a limited number of soil samples obtained from widely spaced subsurface soil explorations. The nature and extent of variations between explorations may not become evident until construction or further investigation. If variations or other latent conditions do become evident, it will be necessary to re-evaluate the recommendations of this report.

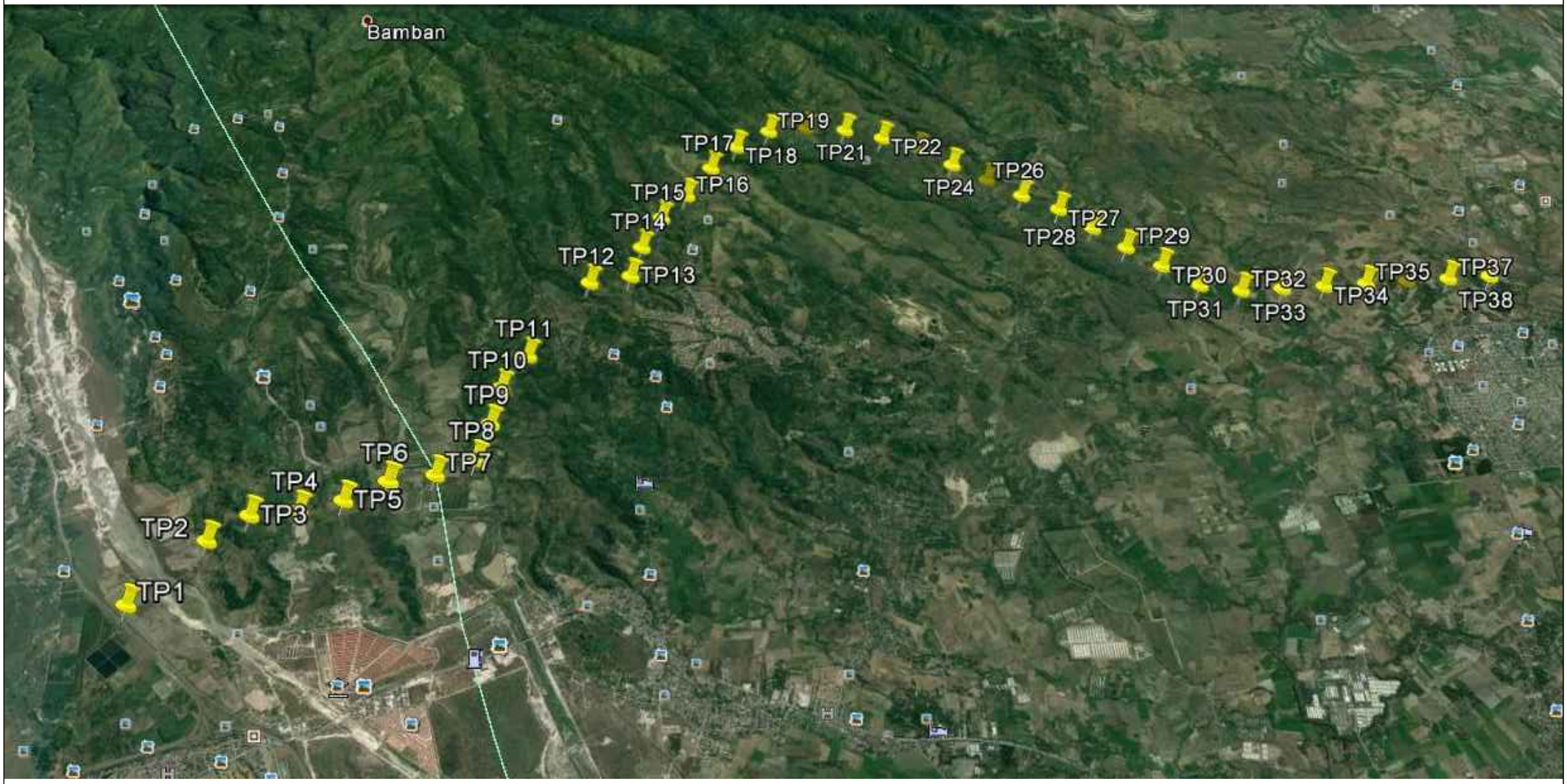
In the event that conclusions or recommendations on the data contained in this report are made by others, such conclusions or recommendations are not the responsibility of the consultant. In addition, this report has been prepared to aid the Civil and Structural Design Engineers in the design of the specific project. Its scope is limited to this project and location described herein and represents our understanding of the significant aspects relevant to the soil and foundation considerations as occurred in this study.

If there are any differences in location and/or design features as we understand them and as are defined by the test borings, the consultant should be informed through this office so that modifications or revision of the conclusions and recommendations can be made.

In preparing this report, the professional services have been performed, findings obtained and recommendations have been prepared by the undersigned in accordance with generally accepted Engineering Principles and Practices.

If you require additional comment or clarification pertaining to the findings and recommendations, the consultant through this office will be pleased to comply.

APPENDIX A: LOCATION PLAN



LOCATION PLAN

NOT TO SCALE

PREPARED BY:	CLIENT / CONSULTANT:	PROJECT TITLE:	SKETCHED BY:	CHECKED BY:	DRAWING NO:
A.M. GEOCONSULT #12 South Zuzuarregui Street, Old Balara, Quezon City Philippines 1119 Email: engineering@amgeoconsult.com TELEFAX: +63(2) 931-8883 : +63(2) 932-9585	URBAN INTEGRATED CONSULTANTS, INC 8 LANDS, VASRA, DILIMAN, QUEZON CITY	**GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS** CGC TO AIRPORT ACCESS ROAD (ROAD 1) SHEET TITLE: LOCATION PLAN	RANEL FLORES Field Supervisor APPROVED BY: REMEDIOS O. SOLDAO Head of Engineering Department	ELLAINE RAMIREZ Office Engineer	LP-01 LP-01 REFERENCE NO.: 1705UIC1_RLPTP_TP1-TP38_0

APPENDIX B: SOIL PROFILE

TP NO.		TP–1	TP–2	TP–3	TP–4	TP–5
SITE TOPOGRAPHY		FLAT	FLAT	FLAT	SLOPE	FLAT
COORDINATES	N	1683735.821 N	1684423.994 N	1684826.646 N	1685322.38 N	1685800.266 N
	E	452089.657 E	451364.1 E	451077.861 E	451028.032 E	450962.727 E
LOCATION		CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD
WEATHER CONDITION		SUNNY	SUNNY	SUNNY	SUNNY	SUNNY
DEPTH (m.)		Gray, gravelly SAND with traces silt A-1-b(0)	Grayish Brown, sandy lean CLAY A-6(7)	Gray, sandy elastic CLAY with gravel A-7-6(8)	Gray, silty SAND with gravel A-2-4(0)	Dark Gray, sandy lean CLAY A-6(2)
0.10 – 1.50		1.50	1.50	1.50	1.50	1.50
		CBR @ 95% =13.91 CBR @ 100% =18.48	CBR @ 95% =2.80 CBR @ 100% =3.68	CBR @ 95% =2.75 CBR @ 100% =3.61	CBR @ 95% =7.39 CBR @ 100% =9.70	CBR @ 95% =2.82 CBR @ 100% =3.70

TP NO.		TP–6	TP–7	TP–8	TP–9	TP–10
SITE TOPOGRAPHY		FLAT	FLAT	FLAT	SLOPE	FLAT
COORDINATES	N	1686231.699 N	1686719.907 N	1687148.043 N	1687275.494 N	1687369.042 N
	E	450713.893 E	450661.102 E	450491.548 E	450008.067 E	449529.092 E
LOCATION		CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD
WEATHER CONDITION		SUNNY	SUNNY	SUNNY	SUNNY	SUNNY
DEPTH (m.)		Grayish Brown, sandy SILT with traces gravel A-4(7)	Gray, sandy SILT with gravel A-4(5)	Dark Gray, silty SAND A-2-4(0)	Dark Gray, silty SAND A-2-4(0)	Yellowish Brown, gravelly lean CLAY with traces sand A-6(4)
0.10 – 1.50		1.50	1.50	1.50	1.50	1.50
		CBR @ 95% =2.83 CBR @ 100% =3.70	CBR @ 95% =3.03 CBR @ 100% =3.97	CBR @ 95% =8.06 CBR @ 100% =10.61	CBR @ 95% =8.85 CBR @ 100% =11.68	CBR @ 95% =2.35 CBR @ 100% =3.07

TEST PIT SOIL PROFILE

NOT TO SCALE

LEGEND

- INFERRED WATER LEVEL
- SPT – N VALUE > 50
- CLAY
- SILT
- SAND
- GRAVEL
- ROCK/HARD STRATA

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GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS
CGC TO AIRPORT ACCESS ROAD (ROAD 1)

SHEET TITLE:

SOIL PROFILE

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Head of Engineering Department

DRAWING NO:

SP-01
SP-04

REFERENCE NO.:

1705UIC1_RSPTP_TP_0

TP NO.		TP–11	TP–12	TP–13	TP–14	TP–15
SITE TOPOGRAPHY		FLAT	FLAT	FLAT	SLOPE	FLAT
COORDINATES	N	1687658.311 N	1688343.811 N	1688819.925 N	1688951.764 N	1689194.206 N
	E	449121.267 E	448069.601 E	447961.529 E	447494.001 E	447059.296 E
LOCATION		CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD
WEATHER CONDITION		SUNNY	SUNNY	SUNNY	SUNNY	SUNNY
DEPTH (m.)		0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50				
		Yellowish Brown, gravelly elastic CLAY with sand A-7-6(10)	Brown, sandy lean CLAY with gravel A-6(9)	Brown, sandy lean CLAY with traces gravel A-6(7)	Brown, sandy lean CLAY with traces gravel A-6(6)	Brown, sandy SILT with traces gravel A-4(1)
		1.50	1.50	1.50	1.50	1.50
		CBR @ 95% =2.78 CBR @ 100% =3.64	CBR @ 95% =2.49 CBR @ 100% =3.26	CBR @ 95% =2.55 CBR @ 100% =3.34	CBR @ 95% =2.61 CBR @ 100% =3.44	CBR @ 95% =2.45 CBR @ 100% =3.26

TP NO.		TP–16	TP–17	TP–18	TP–19	TP–20
SITE TOPOGRAPHY		FLAT	FLAT	FLAT	SLOPE	FLAT
COORDINATES	N	1689507.641 N	1689822.811 N	1690153.898 N	1690577.494 N	1691063.259 N
	E	446669.789 E	446281.63 E	445907.959 E	445646.693 E	445538.405 E
LOCATION		CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD
WEATHER CONDITION		SUNNY	SUNNY	SUNNY	SUNNY	SUNNY
DEPTH (m.)		0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50				
		Brown, sandy SILT sandy lean CLAY A-6(11)	Brown, lean CLAY with sand A-6(12)	Brown, lean CLAY with sand A-6(3)	Gray, sandy lean CLAY A-6(8)	Gray, silty SAND A-2-4(0)
		1.50	1.50	1.50	1.50	1.50
		CBR @ 95% =2.77 CBR @ 100% =3.70	CBR @ 95% =2.70 CBR @ 100% =3.56	CBR @ 95% =2.52 CBR @ 100% =3.33	CBR @ 95% =2.76 CBR @ 100% =3.62	CBR @ 95% =6.36 CBR @ 100% =8.45

LEGEND

- INFERRED WATER LEVEL
- SPT – N VALUE > 50
- CLAY
- SILT
- SAND
- GRAVEL
- ROCK/HARD STRATA

TEST PIT SOIL PROFILE

NOT TO SCALE

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SHEET TITLE:

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DRAWING NO:

SP-02
SP-04

REFERENCE NO.:

1705UIC1_RSPTP_TP_0

TP NO.		TP–21	TP–22	TP–23	TP–24	TP–25
SITE TOPOGRAPHY		FLAT	FLAT	FLAT	SLOPE	FLAT
COORDINATES	N	1691557.717 N	1692023.284 N	1692458.562 N	1692861.171 N	1693264.689 N
	E	445595.018 E	445776.023 E	446021.861 E	446318.176 E	446612.642 E
LOCATION		CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD
WEATHER CONDITION		SUNNY	SUNNY	SUNNY	SUNNY	SUNNY
DEPTH (m.)		0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50				
		Brown, clayey GRAVEL with sand A-2-6(1)	Dark Brown, sandy lean CLAY A-6(8)	Brown, lean CLAY with sand A-6(11)	Brown, sandy lean CLAY with gravel A-6(8)	Light Brown, silty SAND with gravel A-2-4(0)
		1.50	1.50	1.50	1.50	1.50
		CBR @ 95% =13.01 CBR @ 100% =15.96	CBR @ 95% =2.64 CBR @ 100% =3.47	CBR @ 95% =2..73 CBR @ 100% =3.60	CBR @ 95% =2.69 CBR @ 100% =3.55	CBR @ 95% =7.42 CBR @ 100% =9.91

TP NO.		TP–26	TP–27	TP–28	TP–29	TP–30
SITE TOPOGRAPHY		FLAT	FLAT	FLAT	SLOPE	FLAT
COORDINATES	N	1693663.896 N	1694088.819 N	1694447.817 N	1694797.808 N	1695171.276 N
	E	446912.708 E	447173.253 E	447519.913 E	447876.322 E	448208.77 E
LOCATION		CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD
WEATHER CONDITION		SUNNY	SUNNY	SUNNY	SUNNY	SUNNY
DEPTH (m.)		0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50				
		Brown, lean CLAY with sand A-6(13)	Black, elastic CLAY with sand A-7-5(19)	Gray, lean CLAY with sand A-6(10)	Gray, sandy lean CLAY A-6(5)	Gray, elastic CLAY with sand A-7-6(17)
		1.50	1.50	1.50	1.50	1.50
		CBR @ 95% =2.37 CBR @ 100% =3.36	CBR @ 95% =2.41 CBR @ 100% =3.16	CBR @ 95% =2.65 CBR @ 100% =3.49	CBR @ 95% =2.41 CBR @ 100% =3.14	CBR @ 95% =2.18 CBR @ 100% =3.09

TEST PIT SOIL PROFILE

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APPROVED BY:

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Head of Engineering Department

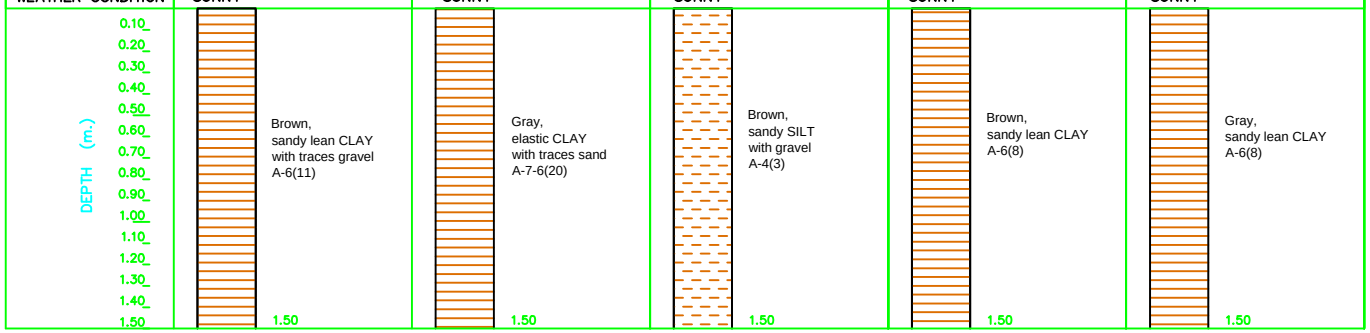
DRAWING NO:

SP-03
SP-04

REFERENCE NO.:

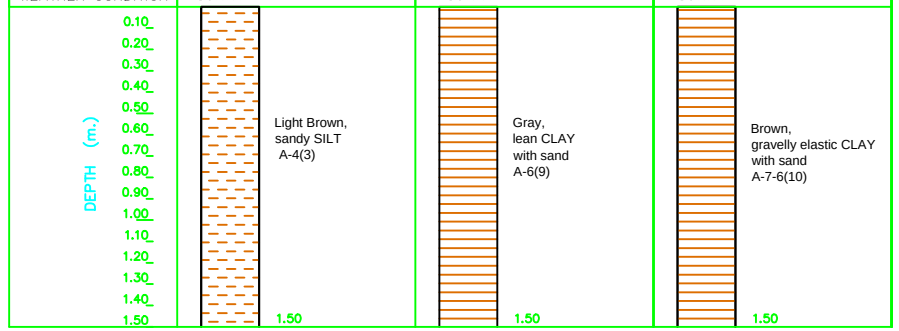
1705UIC1_RSPTP_TP_0

TP NO.		TP–31	TP–32	TP–33	TP–34	TP–35
SITE TOPOGRAPHY		FLAT	FLAT	FLAT	SLOPE	FLAT
COORDINATES	N	1695546.177 N	1696020.361 N	1696512.278 N	1697020.361 N	1697520.36 N
	E	448539.511 E	448658.651 E	448658.623 E	448658.593 E	448658.564 E
LOCATION		CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD
WEATHER CONDITION		SUNNY	SUNNY	SUNNY	SUNNY	SUNNY



		CBR @ 95% =2.43 CBR @ 100% =3.17	CBR @ 95% =2.91 CBR @ 100% =3.80	CBR @ 95% =2.28 CBR @ 100% =3.01	CBR @ 95% =2.63 CBR @ 100% =3.47	CBR @ 95% =2.69 CBR @ 100% =3.58

TP NO.		TP–36	TP–37	TP–38
SITE TOPOGRAPHY		FLAT	FLAT	FLAT
COORDINATES	N	1698020.36 N	1698520.36 N	1699020.36 N
	E	448658.535 E	448658.506 E	448658.477 E
LOCATION		CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD	CGC TO AIRPORT ACCESS ROAD
WEATHER CONDITION		SUNNY	SUNNY	SUNNY



CBR @ 95% =2.89 CBR @ 100% =3.77	CBR @ 95% =2.62 CBR @ 100% =3.45	CBR @ 95% =2.87 CBR @ 100% =3.77

TEST PIT SOIL PROFILE

NOT TO SCALE

LEGEND

- INFERRED WATER LEVEL
- SPT – N VALUE > 50
- CLAY
- SILT
- SAND
- GRAVEL
- ROCK/HARD STRATA

PREPARED BY:

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CLIENT / CONSULTANT:

URBAN INTEGRATED CONSULTANTS, INC
8 LANDS, VASRA, DILIMAN, QUEZON CITY

PROJECT TITLE:

GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS
CGC TO AIRPORT ACCESS ROAD (ROAD 1)

SHEET TITLE:

SOIL PROFILE

SKETCHED BY:

RANEL FLORES
Field Supervisor

CHECKED BY:

ELLAINE RAMIREZ
Office Engineer

APPROVED BY:

REMEDIOS O. SOLDAO
Head of Engineering Department

DRAWING NO:

SP-04
SP-04

REFERENCE NO.:

1705UIC1_RSPTP_TP_0

APPENDIX C: SUMMARY OF TEST RESULTS AND PARTICLE SIZE ANALYSIS & ATTERBERG LIMITS TEST REPORTS

A.M. GEOCONSULT AND ASSOCIATES, INC.

SUMMARY OF TEST PIT TEST RESULTS

Project Name: GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS
Project Location: CGC TO AIRPORT ACCESS ROAD (ROAD 1)
Client's Address: 8 LANDS, VASRA, DILIMAN, QUEZON CITY

Project Reference #: 1705UIC1
Client: URBAN INTEGRATED CONSULTANTS, INC
Consultant: -
Contact Number: -

STATION	TP NO.	SAMPLE ID	SAMPLE DEPTH (m)	AASHTO CLASS	ATTERBERG LIMITS		MOISTURE CONTENT (%)	PARTICLE SIZE GRADING (CUMULATIVE % PASSING)										HYDROMETER PERFORMED?	G_s	*MDR		*CBR	
					LL (%)	PI (%)		2 1/2" (50.00 mm)	1 1/2" (37.50 mm)	1" (25.00 mm)	3/4" (19.00 mm)	3/8" (9.50 mm)	#4 (4.75 mm)	#10 (2.00 mm)	#40 (0.425 mm)	#100 (0.150 mm)	#200 (0.075 mm)			MDD (g/cc)	OMC (%)	95% MDD	100% MDD
Sampling Procedure: *AASHTO R13-03 (2007),* ***Sampling Location:*** *CGC TO AIRPORT ACCESS ROAD* ***Date of Sampling:*** *5/27/17-7/3/17*																							
	TP-1	SS1	0.00-1.50	A-1-b(0)	NL	NP	14.6				100	95	90	81	49	17	9	NO	-	1.83	8.30	13.91	18.48
	TP-2	SS1	0.00-1.50	A-6(7)	30	12	25.5					100	97	95	90	71	63	NO	-	1.55	14.60	2.80	3.68
	TP-3	SS1	0.00-1.50	A-7-6(8)	45	23	22.7			100	86	81	80	79	74	58	52	NO	-	1.52	15.40	2.75	3.61
	TP-4	SS1	0.00-1.50	A-2-4(0)	NL	NP	13.3				100	81	73	66	53	37	26	NO	-	1.72	10.20	7.39	9.70
	TP-5	SS1	0.00-1.50	A-6(2)	34	15	15.3						100	96	73	48	38	NO	-	1.55	14.80	2.82	3.70
	TP-6	SS1	0.00-1.50	A-4(7)	30	10	15.9						100	94	81	74	69	NO	-	1.63	12.50	2.83	3.70
	TP-7	SS1	0.00-1.50	A-4(5)	23	8	15.3				100	92	87	83	70	64	59	NO	-	1.65	12.30	3.03	3.97
	TP-8	SS1	0.00-1.50	A-2-4(0)	NL	NP	8.4						100	99	75	43	27	NO	-	1.78	10.44	8.06	10.61
	TP-9	SS1	0.00-1.50	A-2-4(0)	NL	NP	11.3							100	74	44	24	NO	-	1.71	8.30	8.85	11.68
	TP-10	SS1	0.00-1.50	A-6(4)	39	15	35.4			100	92	71	65	60	56	49	47	NO	-	1.55	16.50	2.35	3.07
	TP-11	SS1	0.00-1.50	A-7-6(10)	43	17	29.8				100	97	87	80	74	65	62	NO	-	1.56	15.00	2.78	3.64
	TP-12	SS1	0.00-1.50	A-6(9)	36	16	24.6			100	92	89	86	84	81	71	66	NO	-	1.51	19.00	2.49	3.26
	TP-13	SS1	0.00-1.50	A-6(7)	39	18	23.4					100	98	91	73	56	52	NO	-	1.54	14.70	2.55	3.34
	TP-14	SS1	0.00-1.50	A-6(6)	29	14	21.5			100	90	90	90	90	81	63	57	NO	-	1.53	12.00	2.61	3.44

*Test/s are not ISO/IEC 17025:2008 Accredited

Encoded by: ELLAINE RAMIREZ
Office Engineer

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

SUMMARY OF TEST PIT TEST RESULTS

Project Name: GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS
Project Location: CGC TO AIRPORT ACCESS ROAD (ROAD 1)
Client's Address: 8 LANDS, VASRA, DILIMAN, QUEZON CITY

Project Reference #: 1705UIC1
Client: URBAN INTEGRATED CONSULTANTS, INC
Consultant: -
Contact Number: -

STATION	TP NO.	SAMPLE ID	SAMPLE DEPTH (m)	AASHTO CLASS	ATTERBERG LIMITS		MOISTURE CONTENT (%)	PARTICLE SIZE GRADING (CUMULATIVE % PASSING)										HYDROMETER PERFORMED?	G_s	*MDR		*CBR	
					LL (%)	PI (%)		2 1/2" (50.00 mm)	1 1/2" (37.50 mm)	1" (25.00 mm)	3/4" (19.00 mm)	3/8" (9.50 mm)	#4 (4.75 mm)	#10 (2.00 mm)	#40 (0.425 mm)	#100 (0.150 mm)	#200 (0.075 mm)			MDD (g/cc)	OMC (%)	95% MDD	100% MDD
Sampling Procedure: *AASHTO R13-03 (2007),* ***Sampling Location:*** *CGC TO AIRPORT ACCESS ROAD* ***Date of Sampling:*** *5/27/17-7/3/17*																							
	TP-15	SS1	0.00-1.50	A-4(1)	33	11	26.6				100	99	98	97	91	77	71	NO	-	1.69	12.20	2.45	3.26
	TP-16	SS1	0.00-1.50	A-6(11)	32	18	25.3							100	95	79	69	NO	-	1.54	14.40	2.77	3.70
	TP-17	SS1	0.00-1.50	A-6(12)	37	15	26.3						100	94	94	82	77	NO	-	1.50	14.50	2.70	3.56
	TP-18	SS1	0.00-1.50	A-6(3)	36	17	24.3							100	95	84	79	NO	-	1.50	19.00	2.52	3.33
	TP-19	SS1	0.00-1.50	A-6(8)	35	17	24.4						100	99	91	69	61	NO	-	1.53	15.35	2.76	3.62
	TP-20	SS1	0.00-1.50	A-2-4(0)	22	8	18.9							100	89	50	35	NO	-	1.76	10.20	6.36	8.45
	TP-21	SS1	0.00-1.50	A-2-6(1)	32	16	17.5			100	89	71	62	60	52	38	33	NO	-	2.00	9.80	13.01	15.96
	TP-22	SS1	0.00-1.50	A-6(8)	33	14	18.6							100	89	69	63	NO	-	1.54	12.74	2.64	3.47
	TP-23	SS1	0.00-1.50	A-6(11)	34	13	19.3					100	98	96	79	79	79	NO	-	1.50	17.00	2.73	3.60
	TP-24	SS1	0.00-1.50	A-6(8)	37	20	27.7			100	91	86	85	83	75	59	54	NO	-	1.54	17.70	2.69	3.55
	TP-25	SS1	0.00-1.50	A-2-4(0)	41	8	22.9				100	94	78	70	55	38	31	NO	-	1.73	10.60	7.42	9.91
	TP-26	SS1	0.00-1.50	A-6(13)	37	15	20.7							100	97	85	80	NO	-	1.50	18.50	2.37	3.36
	TP-27	SS1	0.00-1.50	A-7-5(19)	51	21	24.0								100	87	82	NO	-	1.50	14.30	2.41	3.16
	TP-28	SS1	0.00-1.50	A-6(10)	34	15	23.0				100	98	98	97	91	76	70	NO	-	1.50	14.00	2.65	3.49

*Test/s are not ISO/IEC 17025:2008 Accredited

Encoded by: ELLAINE RAMIREZ
Office Engineer

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

SUMMARY OF TEST PIT TEST RESULTS

Project Name: GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS
Project Location: CGC TO AIRPORT ACCESS ROAD (ROAD 1)
Client's Address: 8 LANDS, VASRA, DILIMAN, QUEZON CITY

Project Reference #: 1705UIC1
Client: URBAN INTEGRATED CONSULTANTS, INC
Consultant: -
Contact Number: -

STATION	TP NO.	SAMPLE ID	SAMPLE DEPTH (m)	AASHTO CLASS	ATTERBERG LIMITS		MOISTURE CONTENT (%)	PARTICLE SIZE GRADING (CUMULATIVE % PASSING)										HYDROMETER PERFORMED?	G_s	*MDR		*CBR	
					LL (%)	PI (%)		2 1/2" (50.00 mm)	1 1/2" (37.50 mm)	1" (25.00 mm)	3/4" (19.00 mm)	3/8" (9.50 mm)	#4 (4.75 mm)	#10 (2.00 mm)	#40 (0.425 mm)	#100 (0.150 mm)	#200 (0.075 mm)			MDD (g/cc)	OMC (%)	95% MDD	100% MDD
Sampling Procedure: *AASHTO R13-03 (2007),* ***Sampling Location:*** *CGC TO AIRPORT ACCESS ROAD* ***Date of Sampling:*** *5/27/17-7/3/17*																							
	TP-29	SS1	0.00-1.50	A-6(5)	32	12	26.7					100	99	98	84	67	58	NO	-	1.53	13.80	2.41	3.14
	TP-30	SS1	0.00-1.50	A-7-6(17)	45	23	23.2						100	98	93	81	75	NO	-	1.50	18.20	2.18	3.09
	TP-31	SS1	0.00-1.50	A-6(11)	34	18	18.5				100	95	95	94	91	76	69	NO	-	1.51	17.40	2.43	3.17
	TP-32	SS1	0.00-1.50	A-7-6(20)	44	20	22.7						100	99	96	93	90	NO	-	1.50	18.20	2.91	3.80
	TP-33	SS1	0.00-1.50	A-4(3)	37	6	32.6				100	98	93	82	66	54	49	NO	-	1.63	14.60	2.28	3.01
	TP-34	SS1	0.00-1.50	A-6(8)	31	13	13.7						100	99	90	73	67	NO	-	1.52	17.00	2.63	3.47
	TP-35	SS1	0.00-1.50	A-6(8)	36	13	19.0						100	99	91	74	68	NO	-	1.54	15.00	2.69	3.58
	TP-36	SS1	0.00-1.50	A-4(3)	32	9	15.4							100	98	61	48	NO	-	1.67	15.00	2.89	3.77
	TP-37	SS1	0.00-1.50	A-6(9)	36	14	14.4							100	96	80	71	NO	-	1.50	14.00	2.62	3.45
	TP-38	SS1	0.00-1.50	A-7-6(10)	42	19	14.9			100	81	81	81	80	78	69	65	NO	-	1.60	14.70	2.87	3.77

*Test/s are not ISO/IEC 17025:2008 Accredited

Encoded by: ELLAINE RAMIREZ
Office Engineer

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

A.M. GEOCONSULT AND ASSOCIATES, INC.

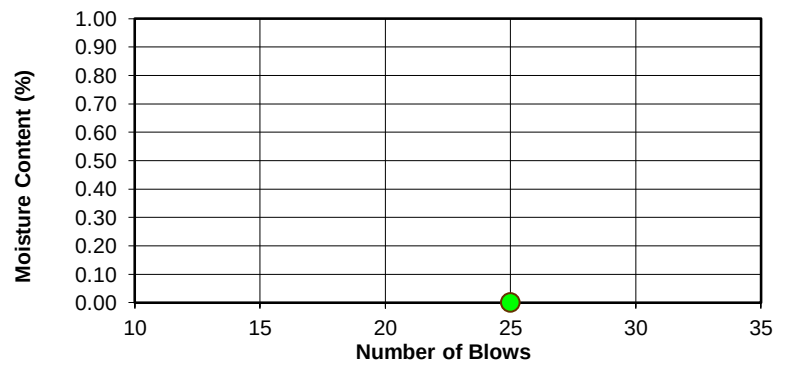
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 7/1/17	**TP/AH/BS Number:**	TP-1
Coordinates:	1683735.821 N ;452089.657 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.0-1.50
Date of Testing:	07/03/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**0**	**0**	**0**	**0**	
Wet Soil + Can (g)	0.00	0.00	0.00	0.00	
Dry Soil + Can (g)	0.00	0.00	0.00	0.00	
Mass of Can (g)	0.00	0.00	0.00	0.00	
Moisture Loss (g)	0.00	0.00	0.00	0.00	
Mass of Dry Soil (g)	0.00	0.00	0.00	0.00	
Moisture Content (%)	0.00	0.00	0.00	0.00	
Number of Blows	0	0	0	**PL (%):**	**NP**
Liquid Limit (%)	**NL**				
Plasticity Index (%)	**NP**				

Figure 1. Flow Curve

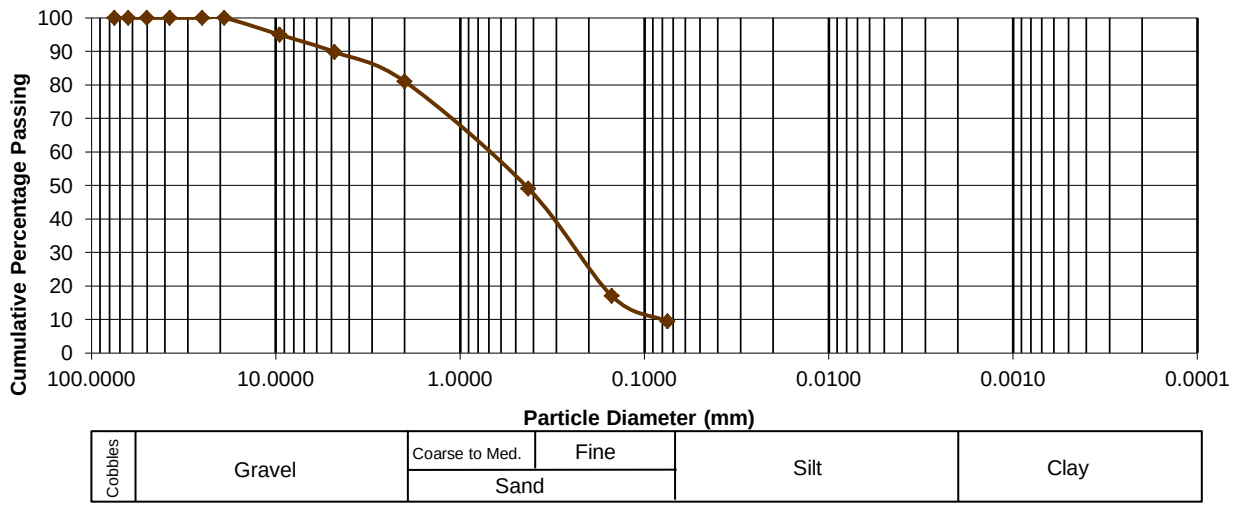


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	7.61	5.04	94.96	±0.01	1.96	-	-
#4	4.750	15.37	10.18	89.82	±0.08	1.96		
#10	2.000	28.63	18.96	81.04	±0.11	1.96		
#40	0.425	76.96	50.97	49.03	±0.75	1.96		
#100	0.150	125.40	83.05	16.95	±1.07	1.96		
#200	0.075	136.86	90.64	9.36	±1.3	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	193.36
Dry Soil + Can (g):	171.31
Mass of Can (g):	20.32
Moisture Loss (g):	22.05
Original Dry Mass (g):	150.99
Moisture Content (%):	**14.6**

SUMMARY OF TEST RESULTS

Moisture Content (%):		**14.6**
	U_{95}	±0.01
	k	1.96
Liquid Limit (%):		**NL**
	U_{95}	-
	k	-
Plastic Limit (%):		**NP**
	U_{95}	-
	k	-
Plasticity Index (%):		**NP**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report		-
AASHTO Symbol:		**A-1-b(0)**

Soil Description:

Gray, gravelly SAND with traces silt

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

A.M. GEOCONSULT AND ASSOCIATES, INC.

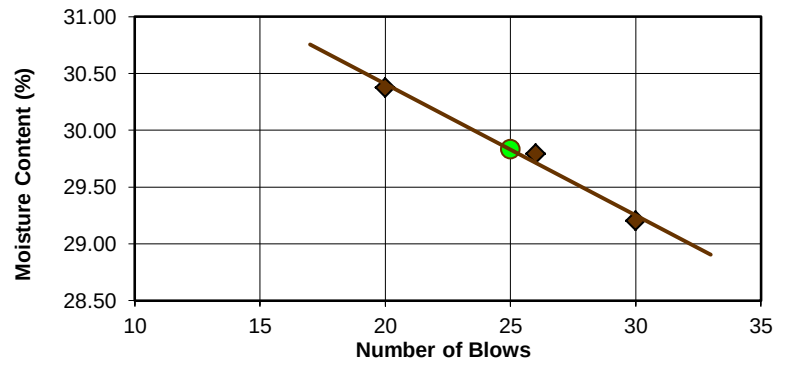
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 7/1/17	**TP/AH/BS Number:**	TP-2
Coordinates:	1684423.994 N ;451364.1 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.0-1.50
Date of Testing:	07/03/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**DK**	**DW**	**ES**	**A3**	
Wet Soil + Can (g)	20.72	19.19	20.44	38.91	
Dry Soil + Can (g)	17.56	16.30	17.22	34.33	
Mass of Can (g)	6.74	6.60	6.62	8.82	
Moisture Loss (g)	3.16	2.89	3.22	4.58	
Mass of Dry Soil (g)	10.82	9.70	10.60	25.51	
Moisture Content (%)	29.21	29.79	30.38	17.95	
Number of Blows	30	26	20	**PL (%):**	**18**
Liquid Limit (%)	**30**				
Plasticity Index (%)	**12**				

Figure 1. Flow Curve

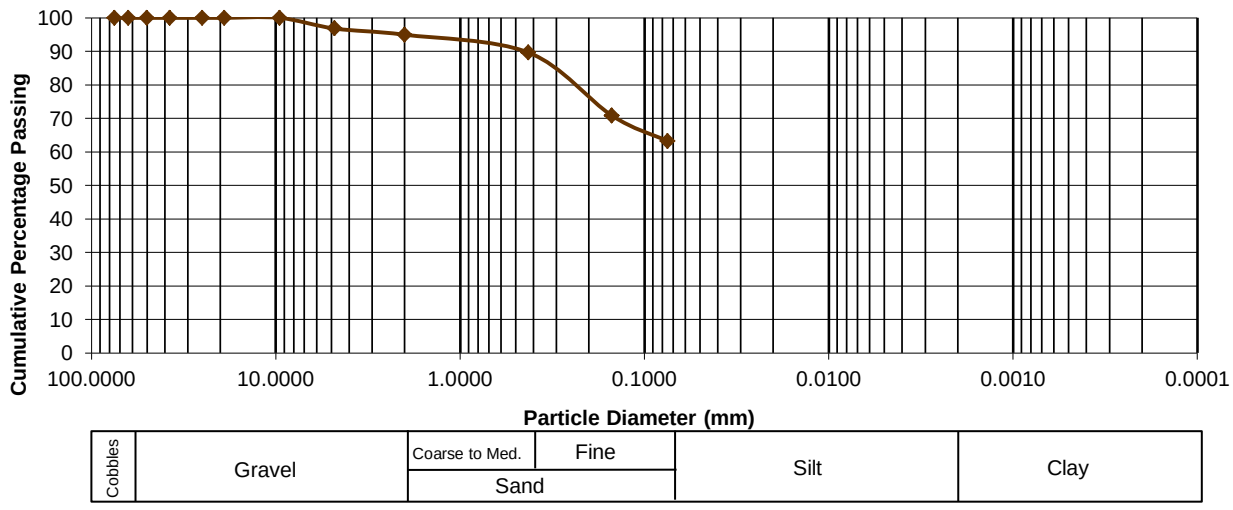


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	4.49	3.18	96.82	±0.08	1.96		
#10	2.000	7.09	5.02	94.98	±0.11	1.96		
#40	0.425	14.64	10.36	89.64	±0.81	1.96		
#100	0.150	41.22	29.17	70.83	±1.14	1.96		
#200	0.075	51.95	36.77	63.23	±1.39	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	200.22
Dry Soil + Can (g):	164.12
Mass of Can (g):	22.82
Moisture Loss (g):	36.10
Original Dry Mass (g):	141.30
Moisture Content (%):	**25.5**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**25.5**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**30**
U_{95}	±0.15
k	1.96
Plastic Limit (%):	**18**
U_{95}	±0.08
k	1.96
Plasticity Index (%):	**12**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(7)**

Soil Description:

Grayish Brown, sandy lean CLAY

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-2_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

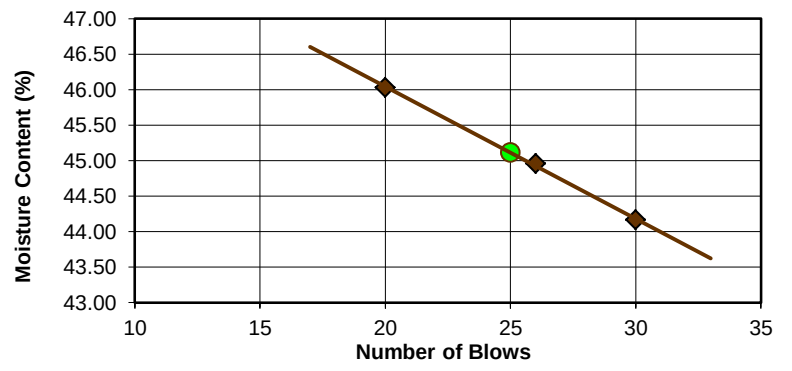
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 7/1/17	**TP/AH/BS Number:**	TP-3
Coordinates:	1684826.646 N ;451077.861 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.0-1.50
Date of Testing:	07/03/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**EG**	**HY**	**KU**	**A32**	
Wet Soil + Can (g)	20.68	19.85	20.26	49.58	
Dry Soil + Can (g)	17.50	17.04	17.30	42.05	
Mass of Can (g)	10.30	10.79	10.87	8.60	
Moisture Loss (g)	3.18	2.81	2.96	7.53	
Mass of Dry Soil (g)	7.20	6.25	6.43	33.45	
Moisture Content (%)	44.17	44.96	46.03	22.51	
Number of Blows	30	26	20	**PL (%):**	**23**
Liquid Limit (%)	**45**				
Plasticity Index (%)	**23**				

Figure 1. Flow Curve

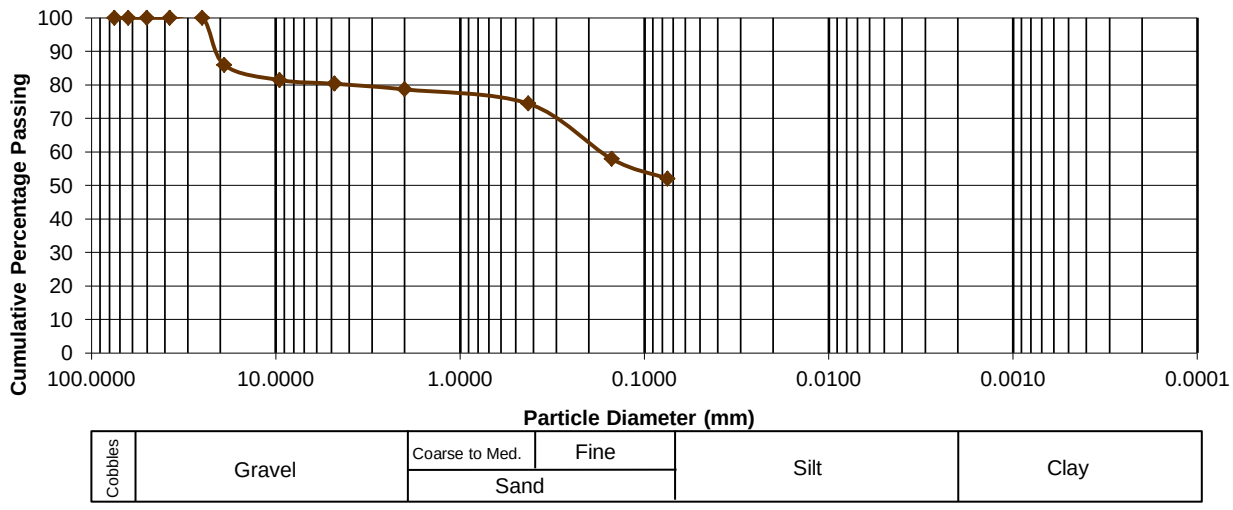


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	22.50	14.08	85.92	±0.01	1.96	-	-
3/8"	9.500	29.66	18.56	81.44	±0.01	1.96	-	-
#4	4.750	31.42	19.67	80.33	±0.07	1.96		
#10	2.000	34.10	21.34	78.66	±0.1	1.96		
#40	0.425	40.91	25.61	74.39	±0.71	1.96		
#100	0.150	67.34	42.15	57.85	±1.01	1.96		
#200	0.075	76.66	47.98	52.02	±1.23	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	217.70
Dry Soil + Can (g):	181.37
Mass of Can (g):	21.60
Moisture Loss (g):	36.33
Original Dry Mass (g):	159.77
Moisture Content (%):	**22.7**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**22.7**
U_{95}	±0.01
k	1.96
Liquid Limit (%):	**45**
U_{95}	±0.25
k	1.96
Plastic Limit (%):	**23**
U_{95}	±0.07
k	1.96
Plasticity Index (%):	**23**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-7-6(8)**

Soil Description:

Gray, sandy elastic CLAY with gravel

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

A.M. GEOCONSULT AND ASSOCIATES, INC.

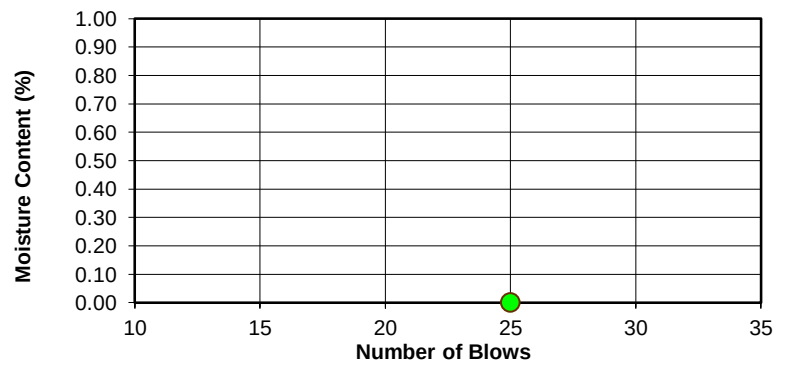
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 7/1/17	**TP/AH/BS Number:**	TP-4
Coordinates:	1685322.38 N ;451028.032 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.0-1.50
Date of Testing:	07/03/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**0**	**0**	**0**	**0**	
Wet Soil + Can (g)	0.00	0.00	0.00	0.00	
Dry Soil + Can (g)	0.00	0.00	0.00	0.00	
Mass of Can (g)	0.00	0.00	0.00	0.00	
Moisture Loss (g)	0.00	0.00	0.00	0.00	
Mass of Dry Soil (g)	0.00	0.00	0.00	0.00	
Moisture Content (%)	0.00	0.00	0.00	0.00	
Number of Blows	0	0	0	**PL (%):**	**NP**
Liquid Limit (%)	**NL**				
Plasticity Index (%)	**NP**				

Figure 1. Flow Curve

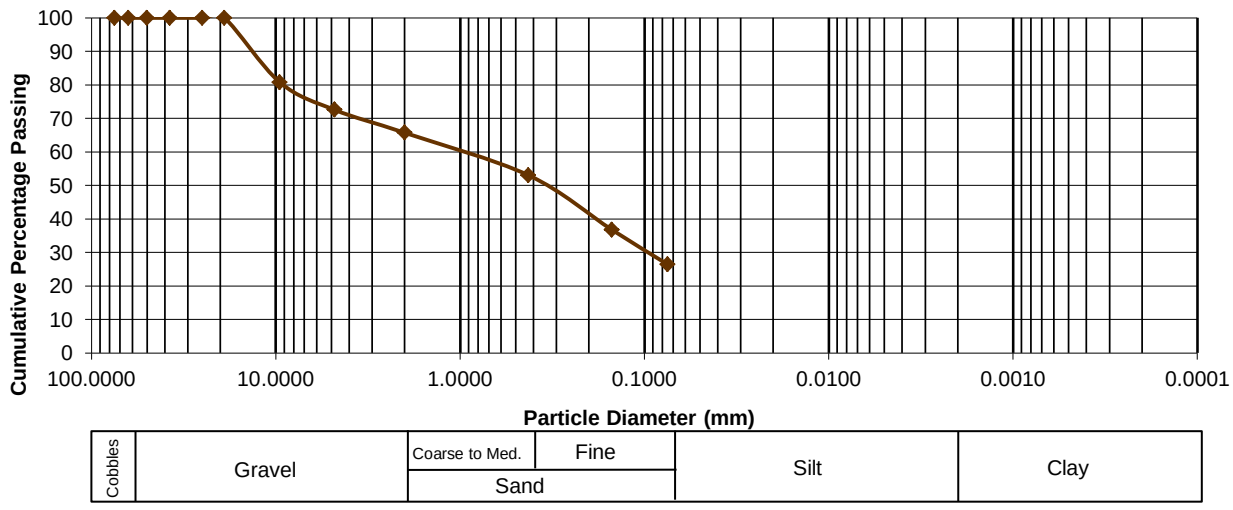


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	34.87	19.26	80.74	±0.01	1.96	-	-
#4	4.750	49.68	27.44	72.56	±0.06	1.96		
#10	2.000	62.07	34.29	65.71	±0.09	1.96		
#40	0.425	85.05	46.98	53.02	±0.63	1.96		
#100	0.150	114.52	63.26	36.74	±0.89	1.96		
#200	0.075	133.15	73.55	26.45	±1.09	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	228.36
Dry Soil + Can (g):	204.33
Mass of Can (g):	23.29
Moisture Loss (g):	24.03
Original Dry Mass (g):	181.04
Moisture Content (%):	**13.3**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**13.3**
U_{95}	±0.01
k	1.96
Liquid Limit (%):	**NL**
U_{95}	-
k	-
Plastic Limit (%):	**NP**
U_{95}	-
k	-
Plasticity Index (%):	**NP**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-2-4(0)**

Soil Description:

Gray, silty SAND with gravel

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-4_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

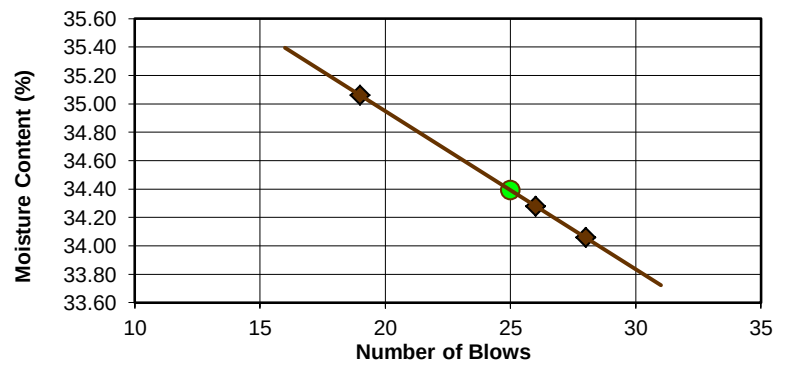
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 7/1/17	**TP/AH/BS Number:**	TP-5
Coordinates:	1685800.266 N ;450962.727 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.0-1.50
Date of Testing:	07/03/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**DS**	**VF**	**CD**	**SW**	
Wet Soil + Can (g)	22.58	22.01	20.61	46.57	
Dry Soil + Can (g)	19.45	19.11	18.04	40.50	
Mass of Can (g)	10.26	10.65	10.71	8.56	
Moisture Loss (g)	3.13	2.90	2.57	6.07	
Mass of Dry Soil (g)	9.19	8.46	7.33	31.94	
Moisture Content (%)	34.06	34.28	35.06	19.00	
Number of Blows	28	26	19	**PL (%):**	**19**
Liquid Limit (%)	**34**				
Plasticity Index (%)	**15**				

Figure 1. Flow Curve

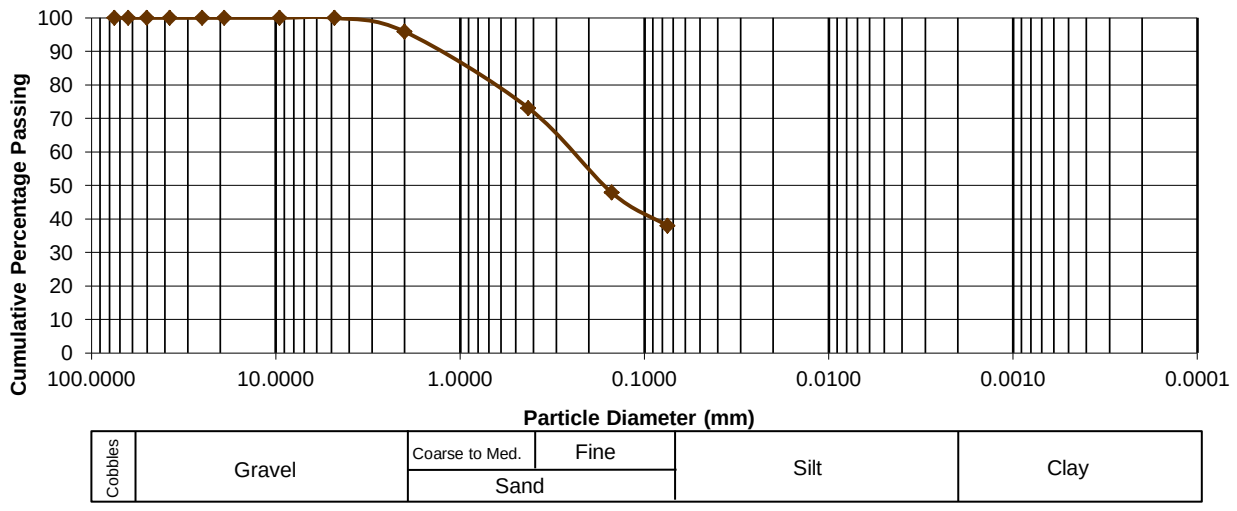


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	8.49	4.11	95.89	±0.06	1.96		
#40	0.425	55.63	26.95	73.05	±0.55	1.96		
#100	0.150	107.78	52.22	47.78	±0.78	1.96		
#200	0.075	128.06	62.05	37.95	±0.95	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	260.92
Dry Soil + Can (g):	229.25
Mass of Can (g):	22.86
Moisture Loss (g):	31.67
Original Dry Mass (g):	206.39
Moisture Content (%):	**15.3**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**15.3**
U_{95}	±0.01
k	1.96
Liquid Limit (%):	**34**
U_{95}	±0.18
k	1.96
Plastic Limit (%):	**19**
U_{95}	±0.07
k	1.96
Plasticity Index (%):	**15**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(2)**

Soil Description:

Dark Gray, sandy lean CLAY

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-5_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

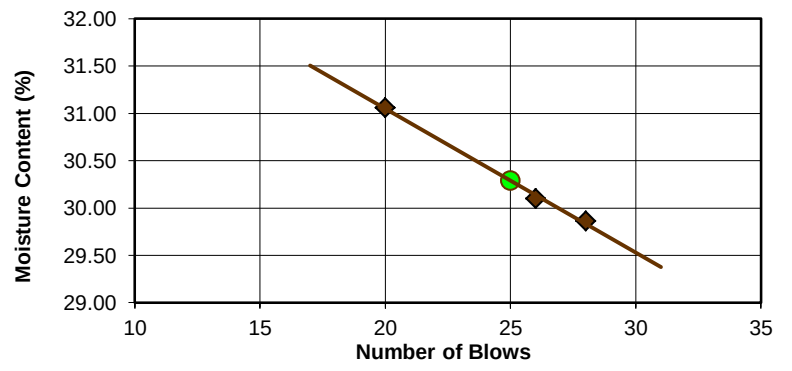
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 7/1/17	**TP/AH/BS Number:**	TP-6
Coordinates:	1686231.699 N ;450713.893 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.0-1.50
Date of Testing:	07/03/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**F**	**D**	**S**	**A30**	
Wet Soil + Can (g)	20.00	19.91	20.39	45.14	
Dry Soil + Can (g)	17.82	17.77	18.07	38.97	
Mass of Can (g)	10.52	10.66	10.60	8.62	
Moisture Loss (g)	2.18	2.14	2.32	6.17	
Mass of Dry Soil (g)	7.30	7.11	7.47	30.35	
Moisture Content (%)	29.86	30.10	31.06	20.33	
Number of Blows	28	26	20	**PL (%):**	**20**
Liquid Limit (%)	**30**				
Plasticity Index (%)	**10**				

Figure 1. Flow Curve

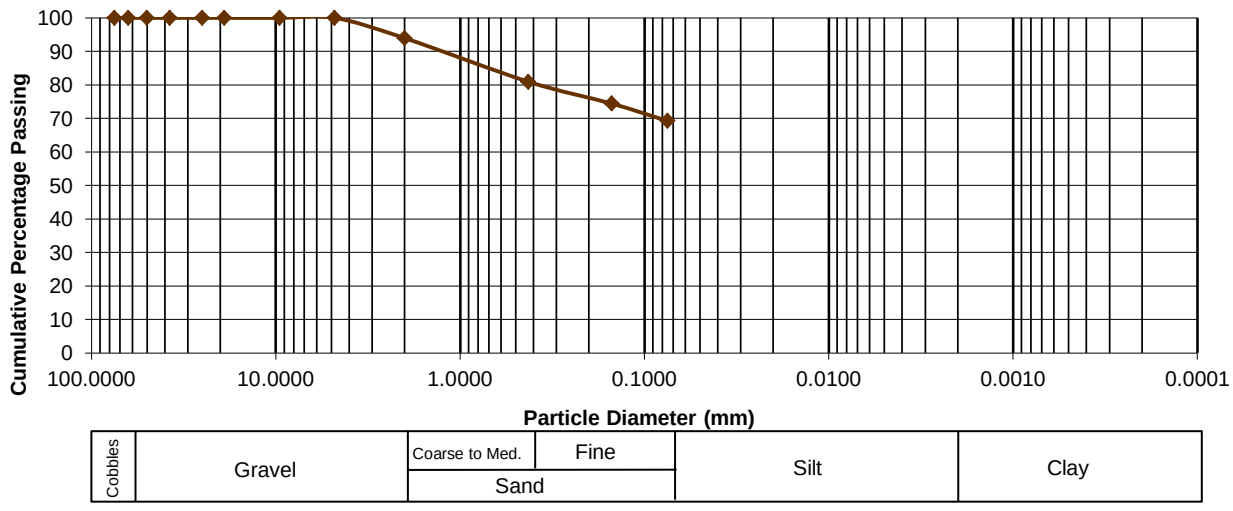


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	7.85	6.04	93.96	±0.09	1.96		
#40	0.425	24.81	19.08	80.92	±0.87	1.96		
#100	0.150	33.30	25.61	74.39	±1.23	1.96		
#200	0.075	39.99	30.75	69.25	±1.51	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	174.10
Dry Soil + Can (g):	153.36
Mass of Can (g):	23.32
Moisture Loss (g):	20.74
Original Dry Mass (g):	130.04
Moisture Content (%):	**15.9**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**15.9**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**30**
U_{95}	±0.21
k	1.96
Plastic Limit (%):	**20**
U_{95}	±0.07
k	1.96
Plasticity Index (%):	**10**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-4(7)**

Soil Description:

Grayish Brown, sandy SILT with traces gravel

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

A.M. GEOCONSULT AND ASSOCIATES, INC.

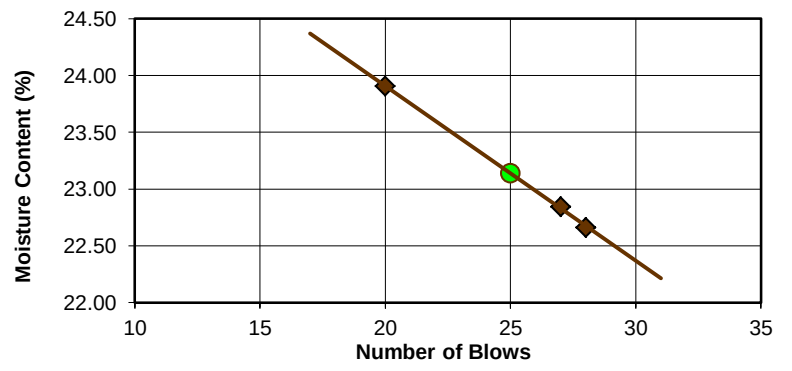
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 7/1/17	**TP/AH/BS Number:**	TP-7
Coordinates:	1686719.907 N ;450661.102 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.0-1.50
Date of Testing:	07/03/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**CE**	**FG**	**DC**	**A41**	
Wet Soil + Can (g)	17.33	17.45	17.55	53.56	
Dry Soil + Can (g)	15.39	15.41	15.42	47.80	
Mass of Can (g)	6.83	6.48	6.51	8.75	
Moisture Loss (g)	1.94	2.04	2.13	5.76	
Mass of Dry Soil (g)	8.56	8.93	8.91	39.05	
Moisture Content (%)	22.66	22.84	23.91	14.75	
Number of Blows	28	27	20	**PL (%):**	**15**
Liquid Limit (%)	**23**				
Plasticity Index (%)	**8**				

Figure 1. Flow Curve

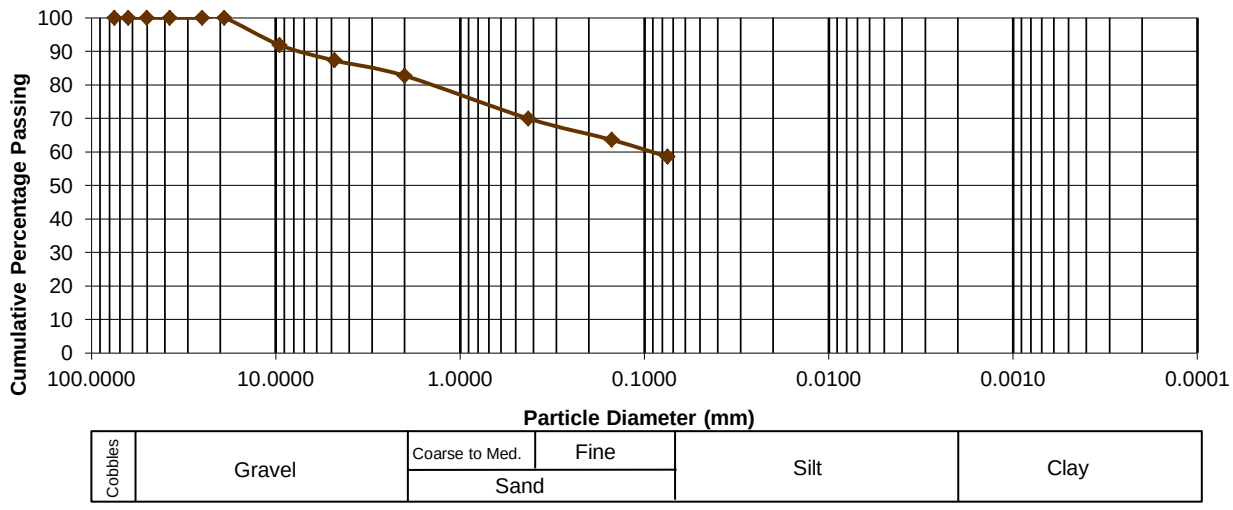


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	11.61	8.13	91.87	±0.01	1.96	-	-
#4	4.750	18.16	12.72	87.28	±0.08	1.96		
#10	2.000	24.67	17.27	82.73	±0.11	1.96		
#40	0.425	42.93	30.06	69.94	±0.8	1.96		
#100	0.150	52.02	36.42	63.58	±1.13	1.96		
#200	0.075	59.16	41.42	58.58	±1.38	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	185.30
Dry Soil + Can (g):	163.40
Mass of Can (g):	20.58
Moisture Loss (g):	21.90
Original Dry Mass (g):	142.82
Moisture Content (%):	**15.3**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**15.3**
U_{95}	±0.01
k	1.96
Liquid Limit (%):	**23**
U_{95}	±0.18
k	1.96
Plastic Limit (%):	**15**
U_{95}	±0.05
k	1.96
Plasticity Index (%):	**8**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-4(5)**

Soil Description:

Gray, sandy SILT with gravel

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-7_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

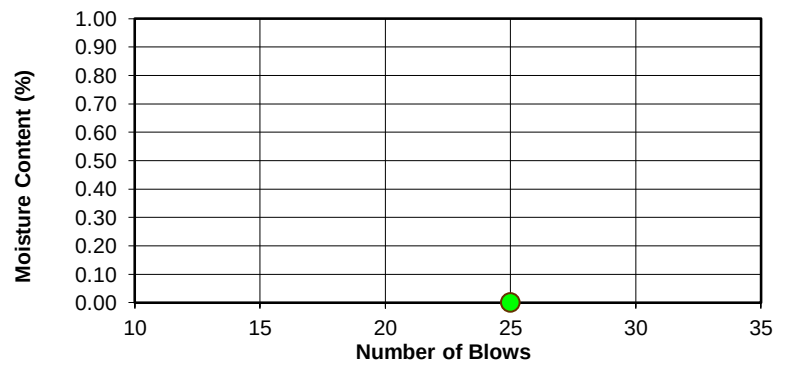
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 7/1/17	**TP/AH/BS Number:**	TP-8
Coordinates:	1687148.043 N ;450491.548 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.0-1.50
Date of Testing:	07/03/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**0**	**0**	**0**	**0**	
Wet Soil + Can (g)	0.00	0.00	0.00	0.00	
Dry Soil + Can (g)	0.00	0.00	0.00	0.00	
Mass of Can (g)	0.00	0.00	0.00	0.00	
Moisture Loss (g)	0.00	0.00	0.00	0.00	
Mass of Dry Soil (g)	0.00	0.00	0.00	0.00	
Moisture Content (%)	0.00	0.00	0.00	0.00	
Number of Blows	0	0	0	**PL (%):**	**NP**
Liquid Limit (%)	**NL**				
Plasticity Index (%)	**NP**				

Figure 1. Flow Curve

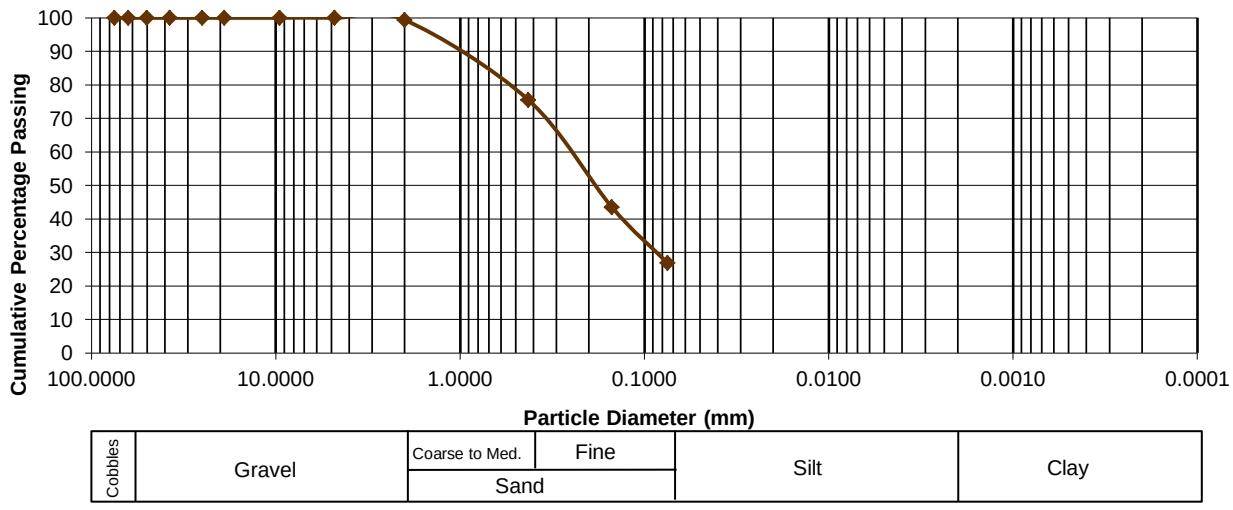


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	1.10	0.64	99.36	±0.07	1.96		
#40	0.425	42.17	24.56	75.44	±0.66	1.96		
#100	0.150	97.08	56.53	43.47	±0.93	1.96		
#200	0.075	125.60	73.14	26.86	±1.14	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	204.08
Dry Soil + Can (g):	189.71
Mass of Can (g):	17.98
Moisture Loss (g):	14.37
Original Dry Mass (g):	171.73
Moisture Content (%):	**8.4**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**8.4**
U_{95}	±0.01
k	1.96
Liquid Limit (%):	**NL**
U_{95}	-
k	-
Plastic Limit (%):	**NP**
U_{95}	-
k	-
Plasticity Index (%):	**NP**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-2-4(0)**

Soil Description:

Dark Gray, silty sand

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

A.M. GEOCONSULT AND ASSOCIATES, INC.

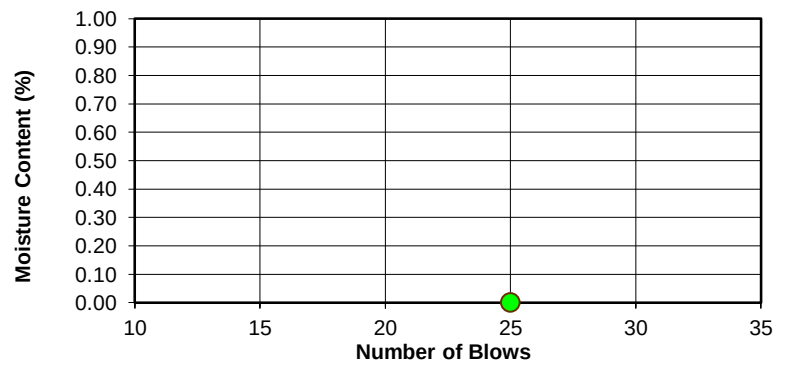
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 7/1/17	**TP/AH/BS Number:**	TP-9
Coordinates:	1687275.494 N ;450008.067 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.0-1.50
Date of Testing:	07/03/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**0**	**0**	**0**	**0**	
Wet Soil + Can (g)	0.00	0.00	0.00	0.00	
Dry Soil + Can (g)	0.00	0.00	0.00	0.00	
Mass of Can (g)	0.00	0.00	0.00	0.00	
Moisture Loss (g)	0.00	0.00	0.00	0.00	
Mass of Dry Soil (g)	0.00	0.00	0.00	0.00	
Moisture Content (%)	0.00	0.00	0.00	0.00	
Number of Blows	0	0	0	**PL (%):**	**NP**
Liquid Limit (%)	**NL**				
Plasticity Index (%)	**NP**				

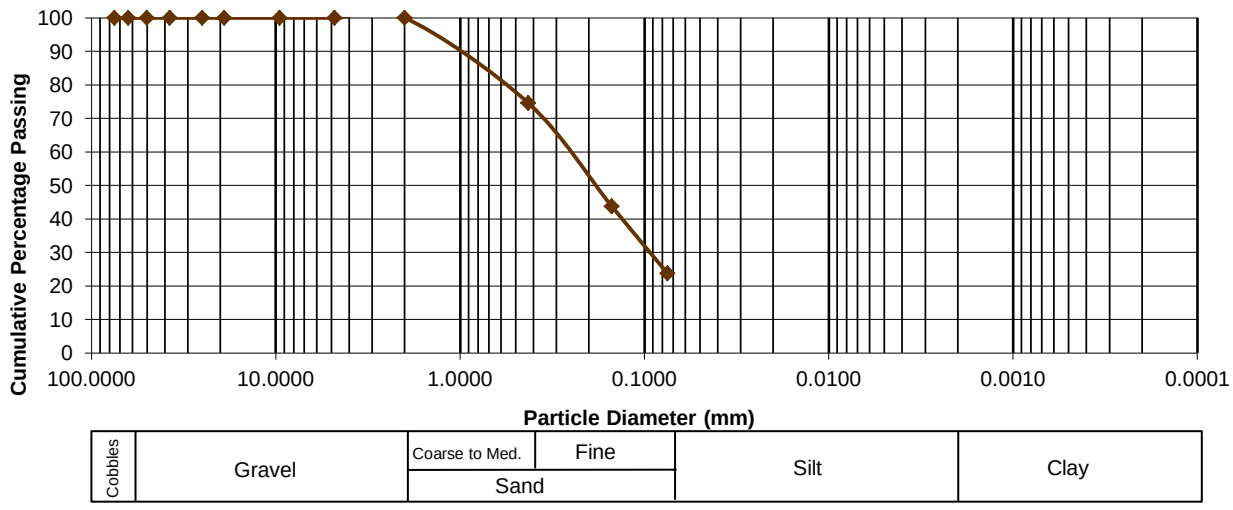
Figure 1. Flow Curve



PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-	*for uncertainty values, refer to attached Hydrometer Test Report	
#10	2.000	0.00	0.00	100.00	-	-		
#40	0.425	40.85	25.51	74.49	±0.71	1.96		
#100	0.150	90.20	56.33	43.67	±1	1.96		
#200	0.075	122.10	76.25	23.75	±1.22	1.96		

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	198.38
Dry Soil + Can (g):	180.22
Mass of Can (g):	20.08
Moisture Loss (g):	18.16
Original Dry Mass (g):	160.14
Moisture Content (%):	**11.3**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**11.3**
U_{95}	±0.01
k	1.96
Liquid Limit (%):	**NL**
U_{95}	-
k	-
Plastic Limit (%):	**NP**
U_{95}	-
k	-
Plasticity Index (%):	**NP**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-2-4(0)**

Soil Description:

Dark Gray, silty SAND

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-9_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

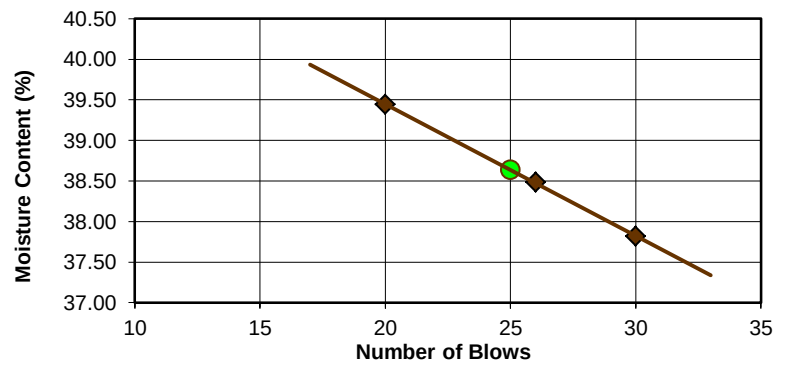
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 7/1/17	**TP/AH/BS Number:**	TP-10
Coordinates:	1687369.042 N ;449529.092 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.0-1.50
Date of Testing:	07/03/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**X11**	**BG**	**VF**	**A71**	
Wet Soil + Can (g)	20.00	19.96	18.76	39.93	
Dry Soil + Can (g)	16.29	16.30	15.36	33.92	
Mass of Can (g)	6.48	6.79	6.74	8.60	
Moisture Loss (g)	3.71	3.66	3.40	6.01	
Mass of Dry Soil (g)	9.81	9.51	8.62	25.32	
Moisture Content (%)	37.82	38.49	39.44	23.74	
Number of Blows	30	26	20	**PL (%):**	**24**
Liquid Limit (%)	**39**				
Plasticity Index (%)	**15**				

Figure 1. Flow Curve

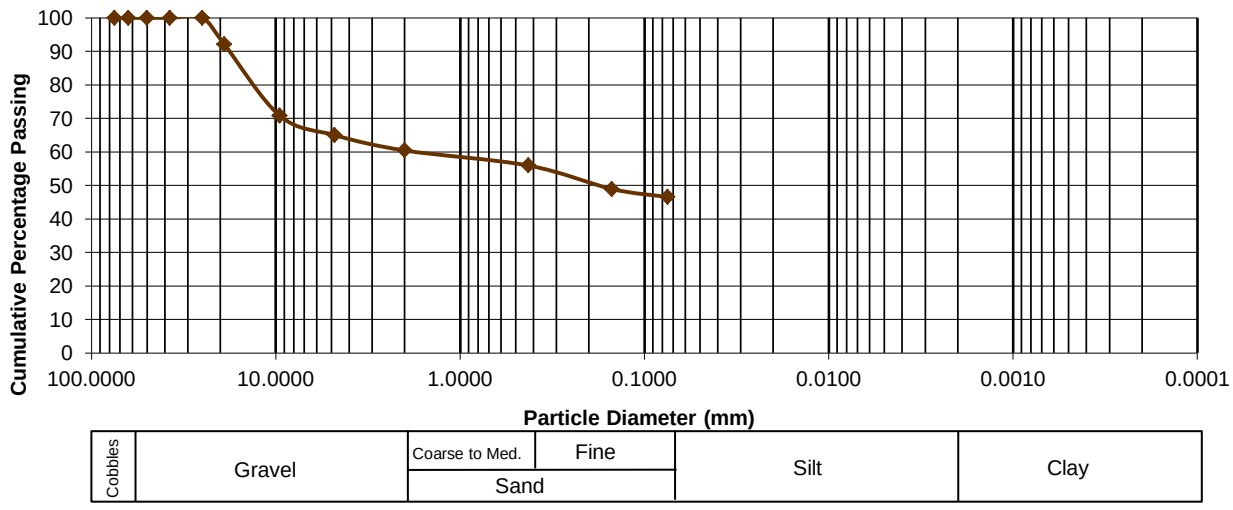


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	9.59	7.92	92.08	±0.01	1.96	-	-
3/8"	9.500	35.38	29.24	70.76	±0.02	1.96	-	-
#4	4.750	42.34	34.99	65.01	±0.1	1.96		
#10	2.000	47.88	39.57	60.43	±0.13	1.96		
#40	0.425	53.33	44.07	55.93	±0.94	1.96		
#100	0.150	61.80	51.07	48.93	±1.33	1.96		
#200	0.075	64.70	53.47	46.53	±1.63	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	186.66
Dry Soil + Can (g):	143.79
Mass of Can (g):	22.78
Moisture Loss (g):	42.87
Original Dry Mass (g):	121.01
Moisture Content (%):	**35.4**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**35.4**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**39**
U_{95}	±0.19
k	1.96
Plastic Limit (%):	**24**
U_{95}	±0.09
k	1.96
Plasticity Index (%):	**15**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(4)**

Soil Description:

Yellowish Brown, gravelly lean CLAY with traces sand

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-10_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

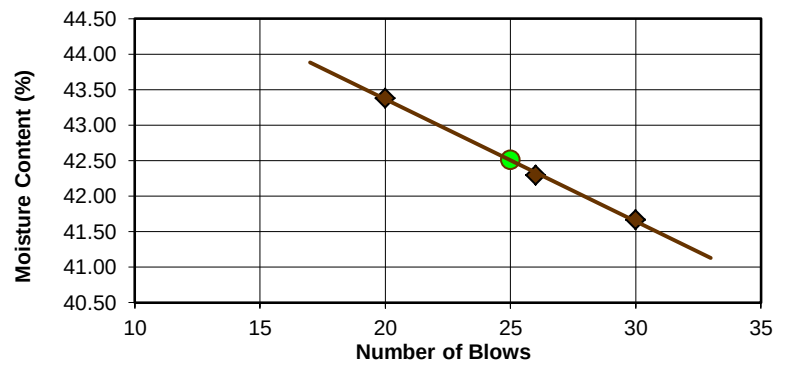
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 7/1/17	**TP/AH/BS Number:**	TP-11
Coordinates:	1687658.311 N ;449121.267 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.0-1.50
Date of Testing:	07/03/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**EJ**	**GB**	**VF**	**9B**	
Wet Soil + Can (g)	14.36	13.03	12.66	47.44	
Dry Soil + Can (g)	12.06	11.19	10.89	39.61	
Mass of Can (g)	6.54	6.84	6.81	8.58	
Moisture Loss (g)	2.30	1.84	1.77	7.83	
Mass of Dry Soil (g)	5.52	4.35	4.08	31.03	
Moisture Content (%)	41.67	42.30	43.38	25.23	
Number of Blows	30	26	20	**PL (%):**	**25**
Liquid Limit (%)	**43**				
Plasticity Index (%)	**17**				

Figure 1. Flow Curve

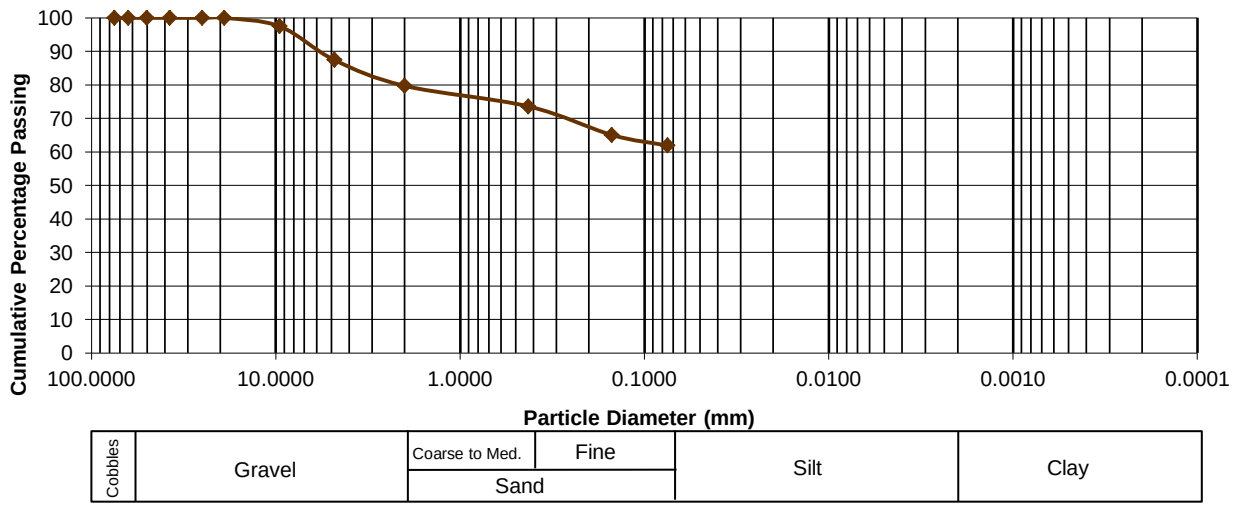


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	2.97	2.54	97.46	±0.01	1.96	-	-
#4	4.750	14.73	12.60	87.40	±0.1	1.96		
#10	2.000	23.71	20.29	79.71	±0.14	1.96		
#40	0.425	30.88	26.42	73.58	±0.97	1.96		
#100	0.150	40.85	34.95	65.05	±1.38	1.96		
#200	0.075	44.54	38.11	61.89	±1.68	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	173.30
Dry Soil + Can (g):	138.51
Mass of Can (g):	21.64
Moisture Loss (g):	34.79
Original Dry Mass (g):	116.87
Moisture Content (%):	**29.8**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**29.8**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**43**
U_{95}	±0.34
k	1.96
Plastic Limit (%):	**25**
U_{95}	±0.07
k	1.96
Plasticity Index (%):	**17**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-7-6(10)**

Soil Description:

Yellowish Brown, gravelly elastic CLAY with sand

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-11_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

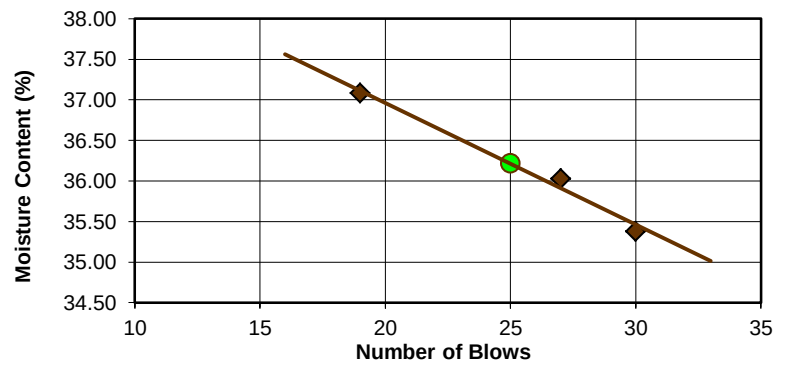
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/29/17	**TP/AH/BS Number:**	TP-12
Coordinates:	1688343.811 N ; 448069.601 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.0-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**JE**	**SW**	**QA**	**15B**	
Wet Soil + Can (g)	18.53	17.46	16.95	43.33	
Dry Soil + Can (g)	15.42	14.61	14.18	37.40	
Mass of Can (g)	6.63	6.70	6.71	8.66	
Moisture Loss (g)	3.11	2.85	2.77	5.93	
Mass of Dry Soil (g)	8.79	7.91	7.47	28.74	
Moisture Content (%)	35.38	36.03	37.08	20.63	
Number of Blows	30	27	19	**PL (%):**	**21**
Liquid Limit (%)	**36**				
Plasticity Index (%)	**16**				

Figure 1. Flow Curve

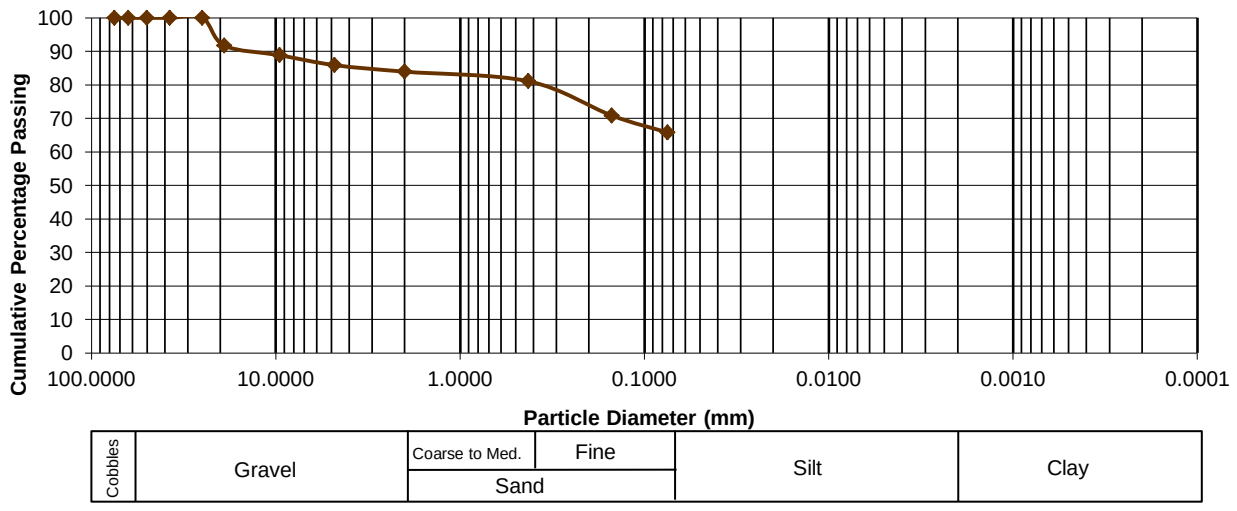


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	12.83	8.28	91.72	±0.01	1.96	-	-
3/8"	9.500	17.29	11.16	88.84	±0.01	1.96	-	-
#4	4.750	21.85	14.10	85.90	±0.07	1.96		
#10	2.000	24.87	16.05	83.95	±0.1	1.96		
#40	0.425	29.31	18.91	81.09	±0.73	1.96		
#100	0.150	45.20	29.17	70.83	±1.04	1.96		
#200	0.075	53.01	34.21	65.79	±1.27	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	216.12
Dry Soil + Can (g):	177.98
Mass of Can (g):	23.01
Moisture Loss (g):	38.14
Original Dry Mass (g):	154.97
Moisture Content (%):	**24.6**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**24.6**
U_{95}	±0.01
k	1.96
Liquid Limit (%):	**36**
U_{95}	±0.2
k	1.96
Plastic Limit (%):	**21**
U_{95}	±0.08
k	1.96
Plasticity Index (%):	**16**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(9)**

Soil Description:

Brown, sandy lean CLAY with gravel

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-12_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

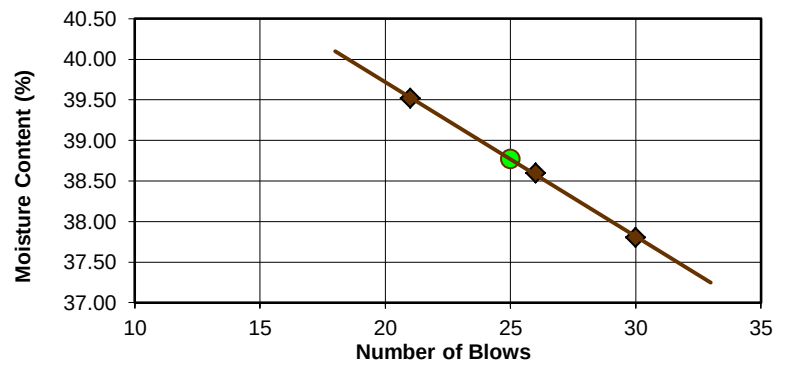
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/29/17	**TP/AH/BS Number:**	TP-13
Coordinates:	1688819.925 N ; 447961.529 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**EL**	**CS**	**SD**	**SB**	
Wet Soil + Can (g)	20.64	21.36	21.89	33.48	
Dry Soil + Can (g)	16.78	17.28	17.61	29.27	
Mass of Can (g)	6.57	6.71	6.78	8.71	
Moisture Loss (g)	3.86	4.08	4.28	4.21	
Mass of Dry Soil (g)	10.21	10.57	10.83	20.56	
Moisture Content (%)	37.81	38.60	39.52	20.48	
Number of Blows	30	26	21	**PL (%):**	**20**
Liquid Limit (%)	**39**				
Plasticity Index (%)	**18**				

Figure 1. Flow Curve

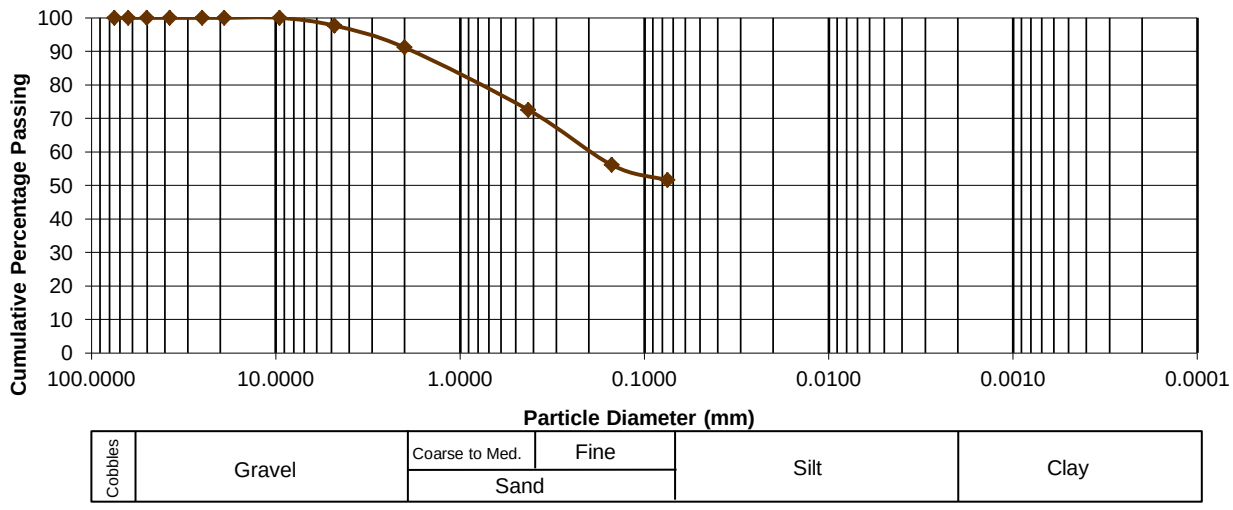


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	3.26	2.33	97.67	±0.08	1.96		
#10	2.000	12.40	8.85	91.15	±0.12	1.96		
#40	0.425	38.53	27.50	72.50	±0.81	1.96		
#100	0.150	61.53	43.92	56.08	±1.15	1.96		
#200	0.075	67.92	48.48	51.52	±1.4	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	193.12
Dry Soil + Can (g):	160.36
Mass of Can (g):	20.26
Moisture Loss (g):	32.76
Original Dry Mass (g):	140.10
Moisture Content (%):	**23.4**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**23.4**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**39**
U_{95}	±0.19
k	1.96
Plastic Limit (%):	**20**
U_{95}	±0.11
k	1.96
Plasticity Index (%):	**18**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(7)**

Soil Description:

Brown, sandy lean CLAY with traces gravel

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

A.M. GEOCONSULT AND ASSOCIATES, INC.

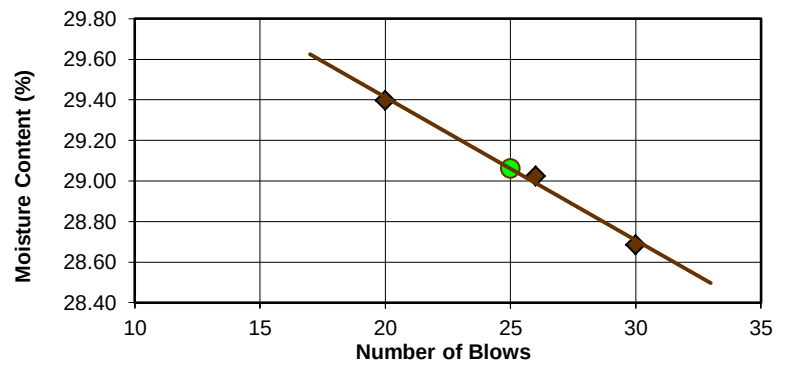
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/29/17	**TP/AH/BS Number:**	TP-14
Coordinates:	1688951.764 N ; 447494.001 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**OO**	**CV**	**CX**	**A85**	
Wet Soil + Can (g)	19.57	18.71	17.59	37.54	
Dry Soil + Can (g)	16.71	15.97	15.10	33.73	
Mass of Can (g)	6.74	6.53	6.63	8.74	
Moisture Loss (g)	2.86	2.74	2.49	3.81	
Mass of Dry Soil (g)	9.97	9.44	8.47	24.99	
Moisture Content (%)	28.69	29.03	29.40	15.25	
Number of Blows	30	26	20	**PL (%):**	**15**
Liquid Limit (%)	**29**				
Plasticity Index (%)	**14**				

Figure 1. Flow Curve

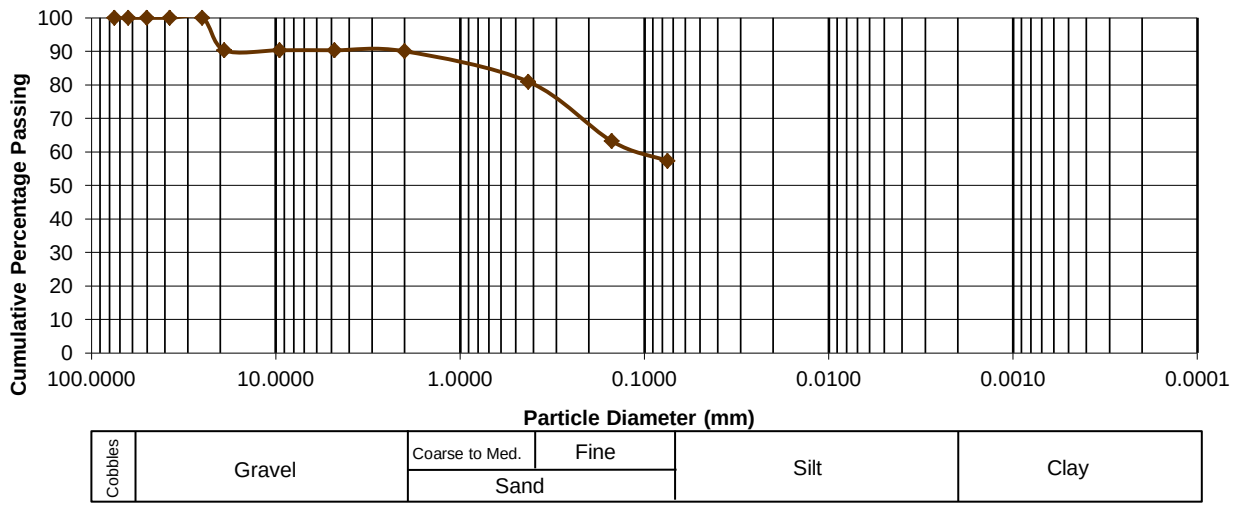


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	14.09	9.65	90.35	±0.01	1.96	-	-
3/8"	9.500	14.09	9.65	90.35	±0.01	1.96	-	-
#4	4.750	14.09	9.65	90.35	±0.01	1.96		
#10	2.000	14.54	9.96	90.04	±0.08	1.96		
#40	0.425	27.85	19.08	80.92	±0.78	1.96		
#100	0.150	53.77	36.83	63.17	±1.1	1.96		
#200	0.075	62.33	42.69	57.31	±1.35	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	200.40
Dry Soil + Can (g):	169.07
Mass of Can (g):	23.08
Moisture Loss (g):	31.33
Original Dry Mass (g):	145.99
Moisture Content (%):	**21.5**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**21.5**
U_{95}	±0.01
k	1.96
Liquid Limit (%):	**29**
U_{95}	±0.15
k	1.96
Plastic Limit (%):	**15**
U_{95}	±0.08
k	1.96
Plasticity Index (%):	**14**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(6)**

Soil Description:

Brown, sandy lean CLAY with traces gravel

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-14_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

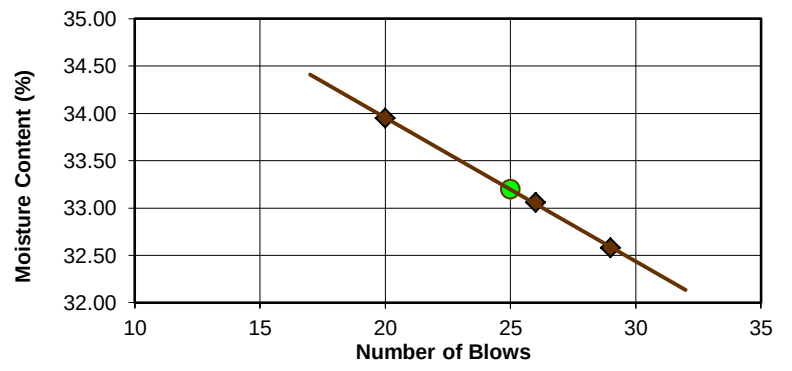
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/29/17	**TP/AH/BS Number:**	TP-15
Coordinates:	1689194.206 N ; 447059.296 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**LT**	**BG**	**TR**	**A28**	
Wet Soil + Can (g)	20.29	19.69	19.65	37.17	
Dry Soil + Can (g)	16.97	16.47	16.35	31.92	
Mass of Can (g)	6.78	6.73	6.63	8.63	
Moisture Loss (g)	3.32	3.22	3.30	5.25	
Mass of Dry Soil (g)	10.19	9.74	9.72	23.29	
Moisture Content (%)	32.58	33.06	33.95	22.54	
Number of Blows	29	26	20	**PL (%):**	**23**
Liquid Limit (%)	**33**				
Plasticity Index (%)	**11**				

Figure 1. Flow Curve

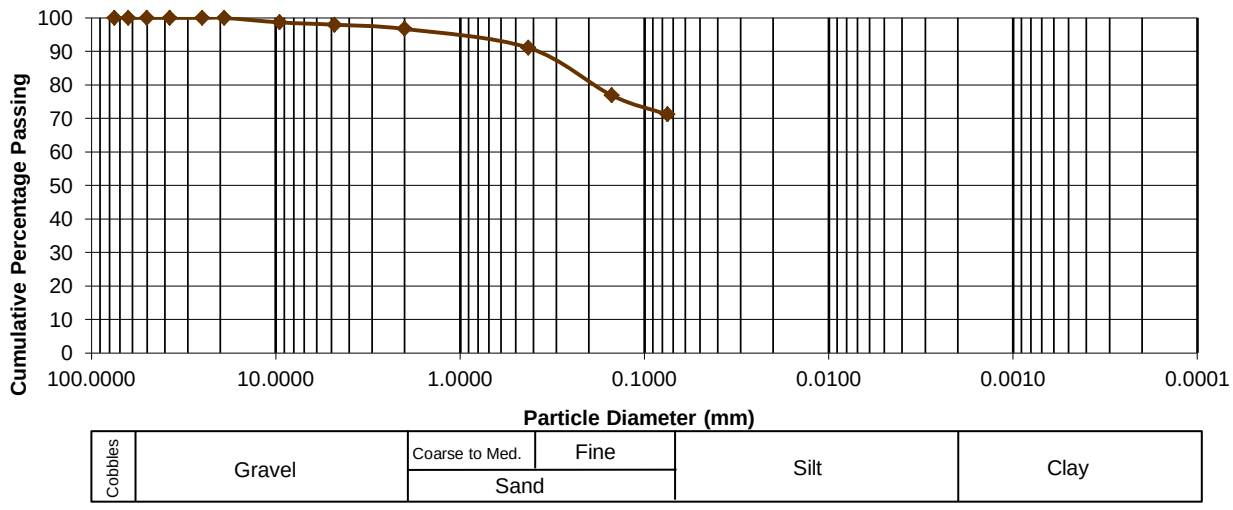


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	1.44	1.35	98.65	±0.01	1.96	-	-
#4	4.750	2.18	2.04	97.96	±0.11	1.96		
#10	2.000	3.53	3.30	96.70	±0.15	1.96		
#40	0.425	9.55	8.93	91.07	±1.06	1.96		
#100	0.150	24.78	23.16	76.84	±1.5	1.96		
#200	0.075	30.88	28.86	71.14	±1.84	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	156.62
Dry Soil + Can (g):	128.20
Mass of Can (g):	21.20
Moisture Loss (g):	28.42
Original Dry Mass (g):	107.00
Moisture Content (%):	**26.6**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**26.6**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**33**
U_{95}	±0.17
k	1.96
Plastic Limit (%):	**23**
U_{95}	±0.09
k	1.96
Plasticity Index (%):	**11**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-4(1)**

Soil Description:

Brown, sandy SILT with traces gravel

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-15_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

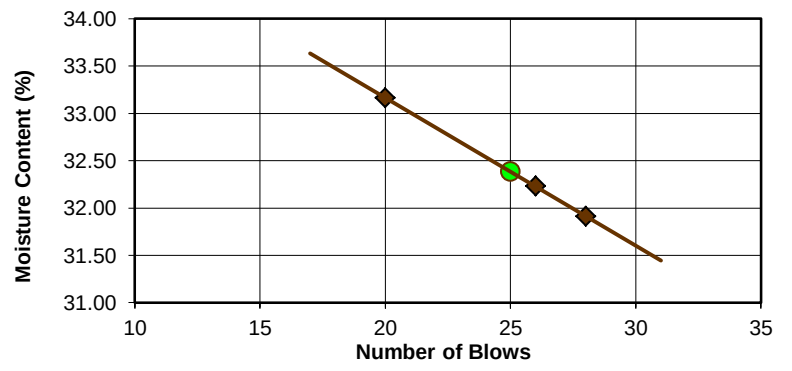
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/29/17	**TP/AH/BS Number:**	TP-16
Coordinates:	1689507.641 N ; 446669.789 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**L**	**H**	**J**	**A52**	
Wet Soil + Can (g)	19.41	17.73	17.25	44.46	
Dry Soil + Can (g)	16.34	15.00	14.62	39.90	
Mass of Can (g)	6.72	6.53	6.69	8.55	
Moisture Loss (g)	3.07	2.73	2.63	4.56	
Mass of Dry Soil (g)	9.62	8.47	7.93	31.35	
Moisture Content (%)	31.91	32.23	33.17	14.55	
Number of Blows	28	26	20	**PL (%):**	**15**
Liquid Limit (%)	**32**				
Plasticity Index (%)	**18**				

Figure 1. Flow Curve

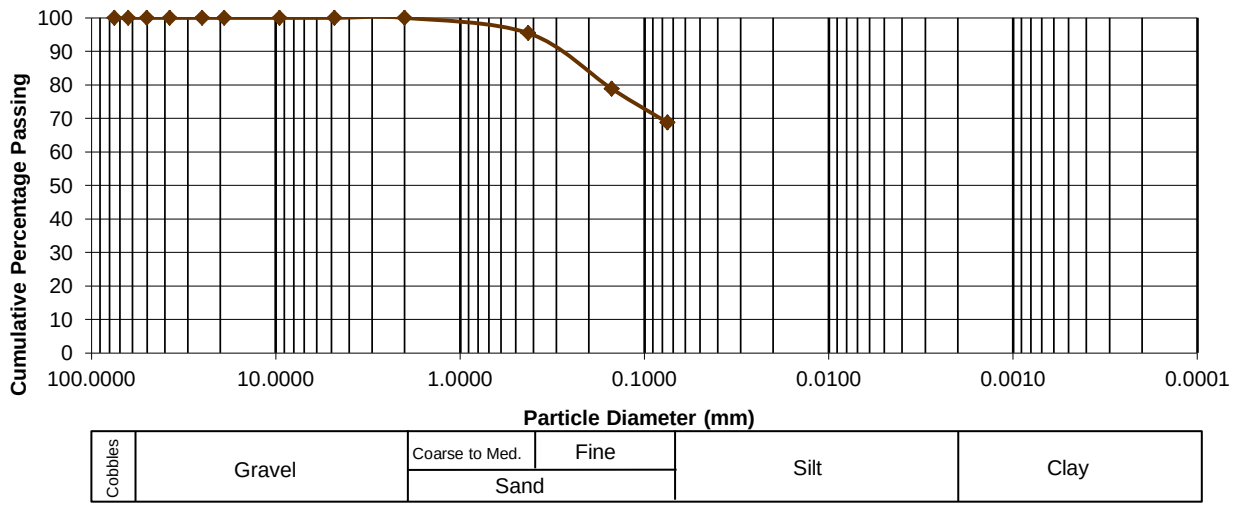


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	0.00	0.00	100.00	-	-		
#40	0.425	6.71	4.58	95.42	±0.77	1.96		
#100	0.150	31.07	21.21	78.79	±1.09	1.96		
#200	0.075	45.78	31.25	68.75	±1.34	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	201.62
Dry Soil + Can (g):	164.51
Mass of Can (g):	18.01
Moisture Loss (g):	37.11
Original Dry Mass (g):	146.50
Moisture Content (%):	**25.3**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**25.3**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**32**
U_{95}	±0.19
k	1.96
Plastic Limit (%):	**15**
U_{95}	±0.07
k	1.96
Plasticity Index (%):	**18**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(11)**

Soil Description:

Brown, sandy lean CLAY

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-16_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

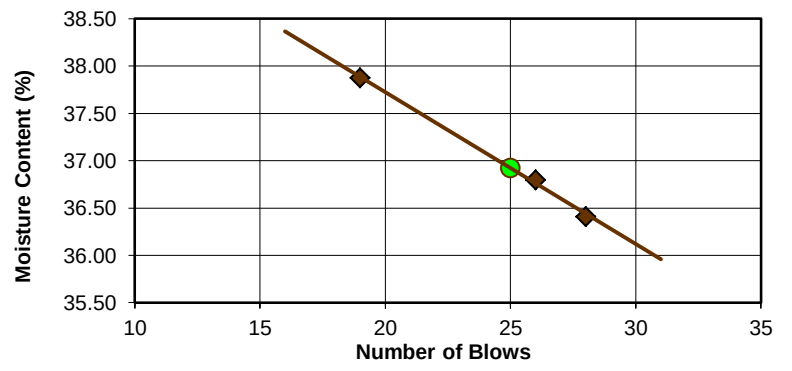
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/28/17	**TP/AH/BS Number:**	TP-17
Coordinates:	1689822.811 N ; 446281.63 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**NAS**	**BV**	**NB**	**A66**	
Wet Soil + Can (g)	17.63	18.45	18.66	32.90	
Dry Soil + Can (g)	14.67	15.30	15.38	28.53	
Mass of Can (g)	6.54	6.74	6.72	8.70	
Moisture Loss (g)	2.96	3.15	3.28	4.37	
Mass of Dry Soil (g)	8.13	8.56	8.66	19.83	
Moisture Content (%)	36.41	36.80	37.88	22.04	
Number of Blows	28	26	19	**PL (%):**	**22**
Liquid Limit (%)	**37**				
Plasticity Index (%)	**15**				

Figure 1. Flow Curve

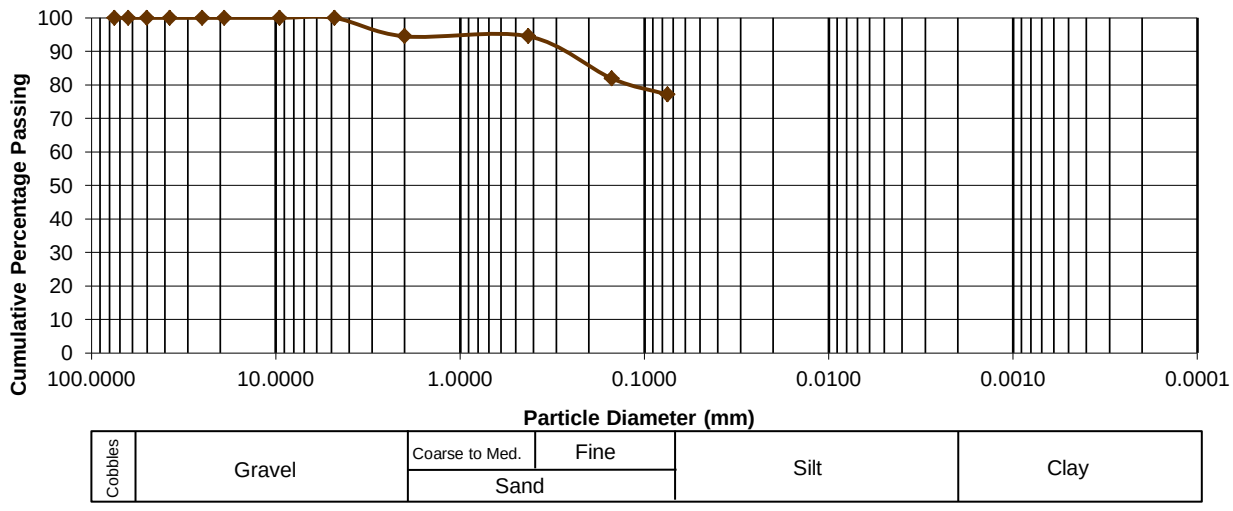


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	5.94	5.51	94.49	±0.11	1.96		
#40	0.425	5.94	5.51	94.49	±0.11	1.96		
#100	0.150	19.50	18.10	81.90	±1.06	1.96		
#200	0.075	24.65	22.88	77.12	±1.49	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	156.50
Dry Soil + Can (g):	128.19
Mass of Can (g):	20.46
Moisture Loss (g):	28.31
Original Dry Mass (g):	107.73
Moisture Content (%):	**26.3**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**26.3**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**37**
U_{95}	±0.2
k	1.96
Plastic Limit (%):	**22**
U_{95}	±0.11
k	1.96
Plasticity Index (%):	**15**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(12)**

Soil Description:

Brown, lean CLAY with sand

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-17_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

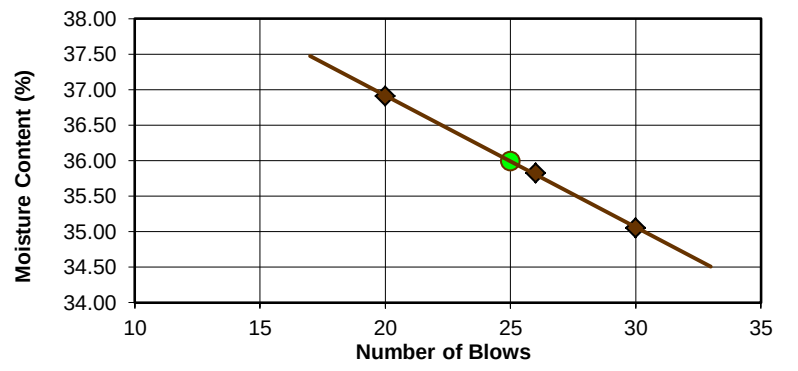
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/28/17	**TP/AH/BS Number:**	TP-18
Coordinates:	1690153.898 N ; 445907.959 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**XD3**	**VN**	**MJ**	**A29**	
Wet Soil + Can (g)	17.77	16.30	16.93	42.41	
Dry Soil + Can (g)	14.85	13.76	14.18	36.90	
Mass of Can (g)	6.52	6.67	6.73	8.63	
Moisture Loss (g)	2.92	2.54	2.75	5.51	
Mass of Dry Soil (g)	8.33	7.09	7.45	28.27	
Moisture Content (%)	35.05	35.83	36.91	19.49	
Number of Blows	30	26	20	**PL (%):**	**19**
Liquid Limit (%)	**36**				
Plasticity Index (%)	**17**				

Figure 1. Flow Curve

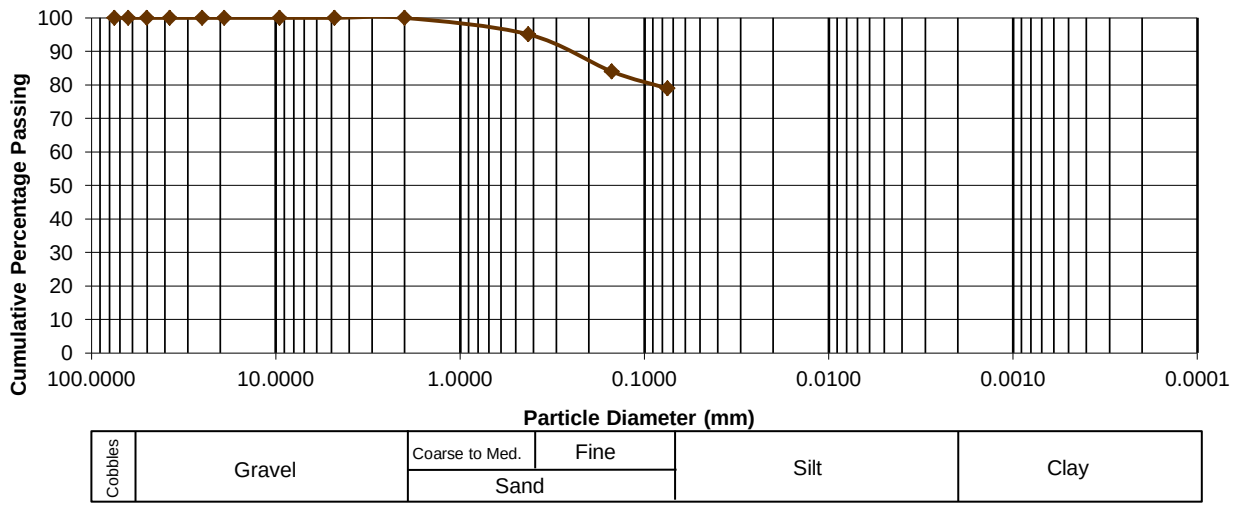


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	0.00	0.00	100.00	-	-		
#40	0.425	5.86	4.94	95.06	±0.95	1.96		
#100	0.150	19.03	16.03	83.97	±1.35	1.96		
#200	0.075	25.02	21.07	78.93	±1.65	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	170.54
Dry Soil + Can (g):	141.64
Mass of Can (g):	22.90
Moisture Loss (g):	28.90
Original Dry Mass (g):	118.74
Moisture Content (%):	**24.3**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**24.3**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**36**
U_{95}	±0.22
k	1.96
Plastic Limit (%):	**19**
U_{95}	±0.08
k	1.96
Plasticity Index (%):	**17**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(3)**

Soil Description:

Brown, lean CLAY with sand

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-18_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

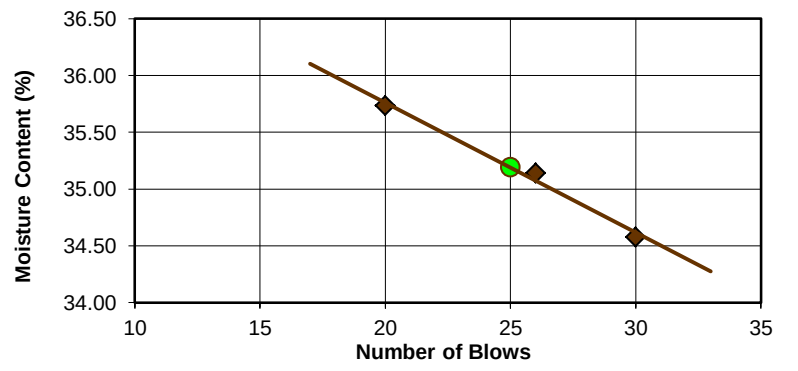
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/28/17	**TP/AH/BS Number:**	TP-19
Coordinates:	1690577.494 N ; 445646.693 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**A7**	**F8**	**D5**	**A10**	
Wet Soil + Can (g)	21.66	21.10	21.03	41.36	
Dry Soil + Can (g)	17.68	17.34	17.26	36.23	
Mass of Can (g)	6.17	6.64	6.71	8.62	
Moisture Loss (g)	3.98	3.76	3.77	5.13	
Mass of Dry Soil (g)	11.51	10.70	10.55	27.61	
Moisture Content (%)	34.58	35.14	35.73	18.58	
Number of Blows	30	26	20	**PL (%):**	**19**
Liquid Limit (%)	**35**				
Plasticity Index (%)	**17**				

Figure 1. Flow Curve

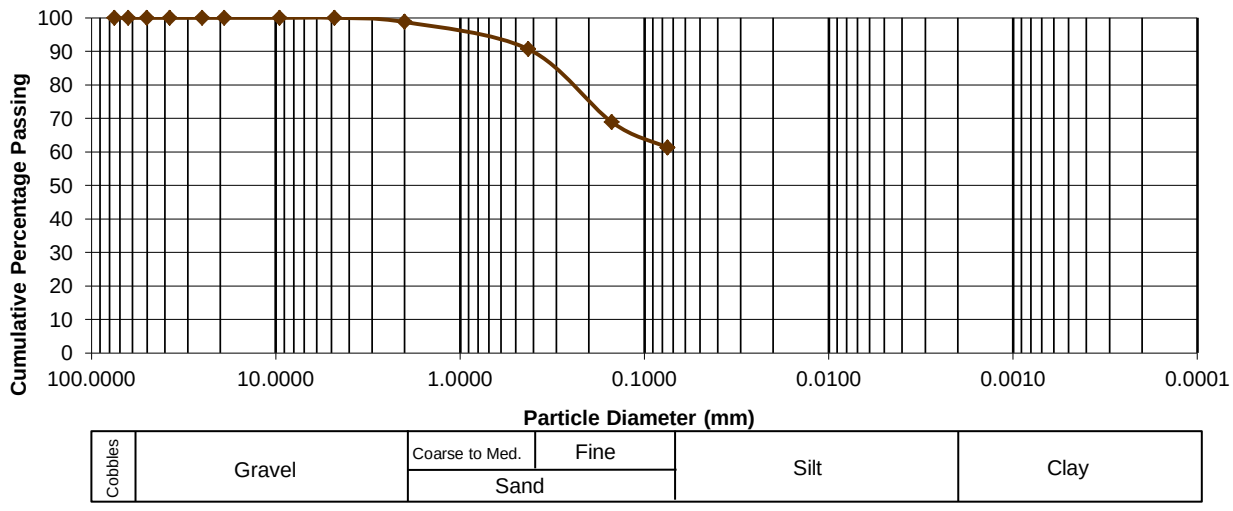


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	1.70	1.24	98.76	±0.08	1.96		
#40	0.425	12.81	9.38	90.63	±0.83	1.96		
#100	0.150	42.56	31.15	68.85	±1.17	1.96		
#200	0.075	52.92	38.73	61.27	±1.44	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	192.76
Dry Soil + Can (g):	159.36
Mass of Can (g):	22.72
Moisture Loss (g):	33.40
Original Dry Mass (g):	136.64
Moisture Content (%):	**24.4**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**24.4**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**35**
U_{95}	±0.15
k	1.96
Plastic Limit (%):	**19**
U_{95}	±0.08
k	1.96
Plasticity Index (%):	**17**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(8)**

Soil Description:

Gray, sandy lean CLAY

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-19_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

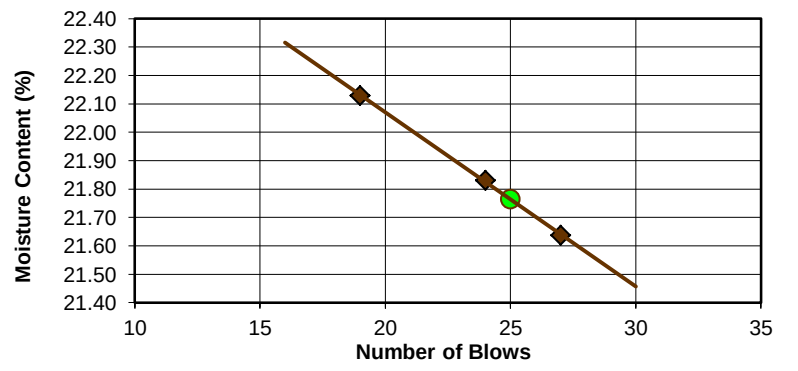
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/28/17	**TP/AH/BS Number:**	TP-20
Coordinates:	1691063.259 N ; 445538.405 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**GG**	**BT**	**GR**	**A20**	
Wet Soil + Can (g)	19.12	18.04	18.20	41.08	
Dry Soil + Can (g)	16.90	15.97	16.08	37.12	
Mass of Can (g)	6.64	6.46	6.50	8.62	
Moisture Loss (g)	2.22	2.08	2.12	3.96	
Mass of Dry Soil (g)	10.26	9.51	9.58	28.50	
Moisture Content (%)	21.64	21.83	22.13	13.89	
Number of Blows	27	24	19	**PL (%):**	**14**
Liquid Limit (%)	**22**				
Plasticity Index (%)	**8**				

Figure 1. Flow Curve

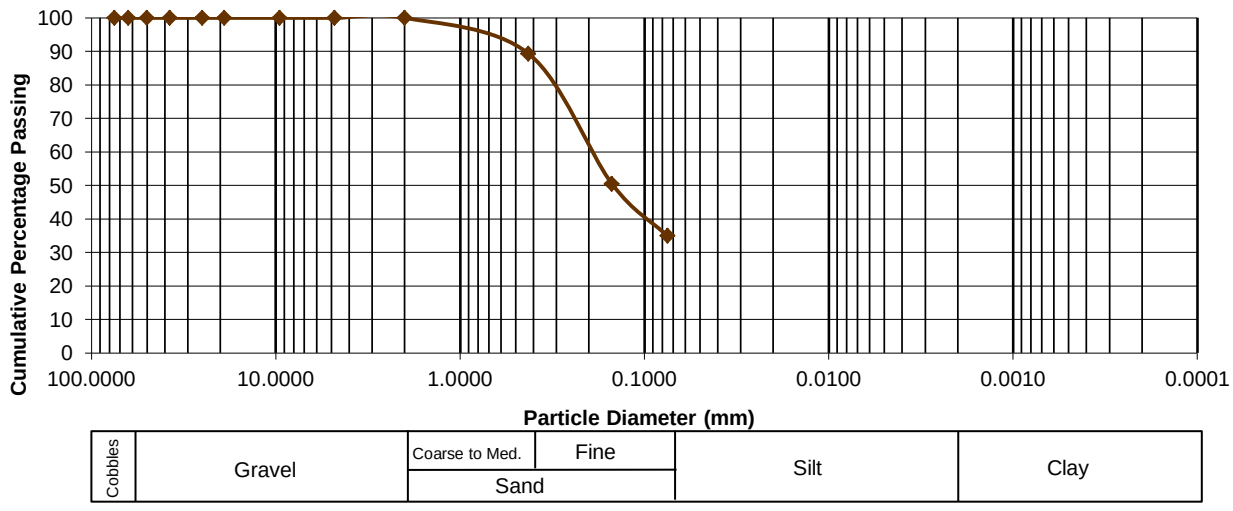


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	0.00	0.00	100.00	-	-		
#40	0.425	14.42	10.70	89.30	±0.84	1.96		
#100	0.150	66.75	49.54	50.46	±1.19	1.96		
#200	0.075	87.69	65.08	34.92	±1.45	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	183.36
Dry Soil + Can (g):	157.84
Mass of Can (g):	23.10
Moisture Loss (g):	25.52
Original Dry Mass (g):	134.74
Moisture Content (%):	**18.9**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**18.9**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**22**
U_{95}	±0.15
k	1.96
Plastic Limit (%):	**14**
U_{95}	±0.07
k	1.96
Plasticity Index (%):	**8**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-2-4(0)**

Soil Description:

Gray, silty SAND

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-20_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

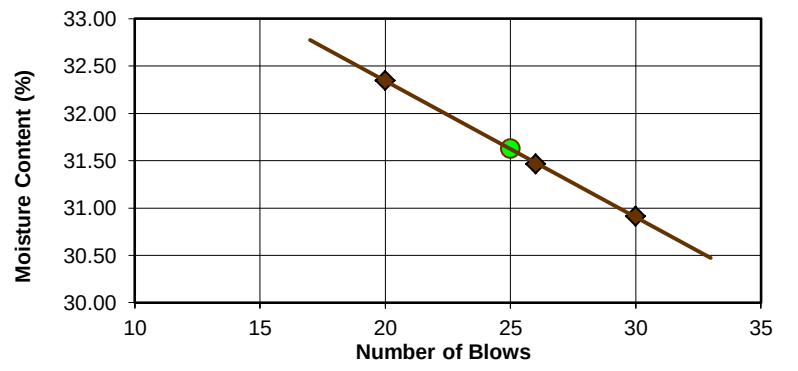
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/28/17	**TP/AH/BS Number:**	TP-21
Coordinates:	1691557.717 N ; 445595.018 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**X17**	**VF**	**DE**	**7B**	
Wet Soil + Can (g)	18.59	17.13	17.44	41.69	
Dry Soil + Can (g)	15.74	14.60	14.81	37.15	
Mass of Can (g)	6.52	6.56	6.68	8.74	
Moisture Loss (g)	2.85	2.53	2.63	4.54	
Mass of Dry Soil (g)	9.22	8.04	8.13	28.41	
Moisture Content (%)	30.91	31.47	32.35	15.98	
Number of Blows	30	26	20	**PL (%):**	**16**
Liquid Limit (%)	**32**				
Plasticity Index (%)	**16**				

Figure 1. Flow Curve

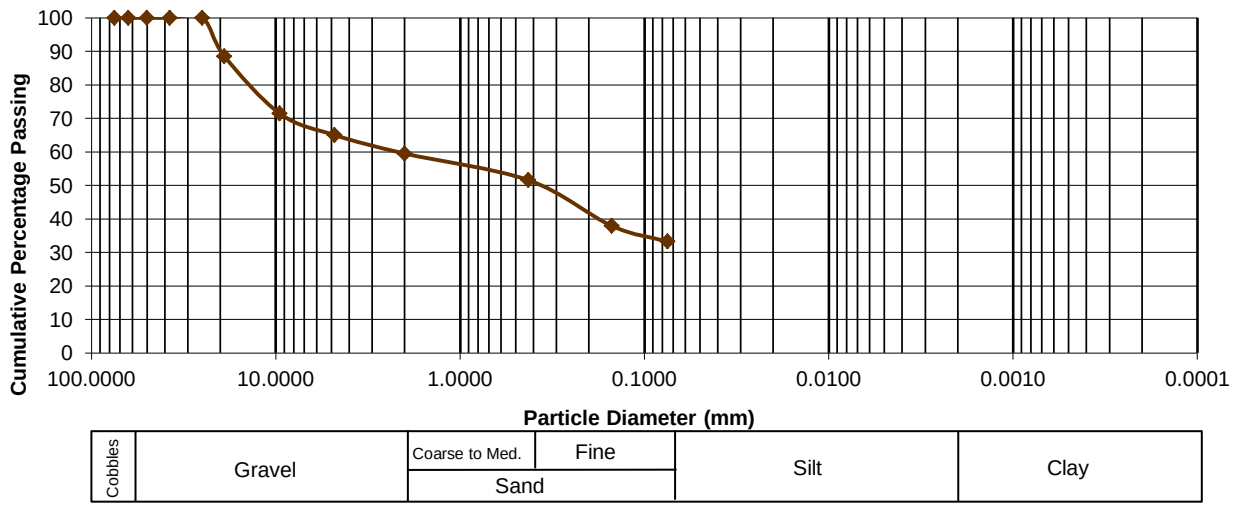


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	21.32	11.45	88.55	±0.01	1.96	-	-
3/8"	9.500	53.22	28.59	71.41	±0.01	1.96	-	-
#4	4.750	65.10	34.97	65.03	±0.06	1.96		
#10	2.000	75.37	40.48	59.52	±0.09	1.96		
#40	0.425	90.19	48.44	51.56	±0.61	1.96		
#100	0.150	115.64	62.12	37.88	±0.86	1.96		
#200	0.075	124.28	66.76	33.24	±1.06	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	241.24
Dry Soil + Can (g):	208.65
Mass of Can (g):	22.48
Moisture Loss (g):	32.59
Original Dry Mass (g):	186.17
Moisture Content (%):	**17.5**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**17.5**
U_{95}	±0.01
k	1.96
Liquid Limit (%):	**32**
U_{95}	±0.19
k	1.96
Plastic Limit (%):	**16**
U_{95}	±0.07
k	1.96
Plasticity Index (%):	**16**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-2-6(1)**

Soil Description:

Brown, clayey GRAVEL with sand

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-21_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

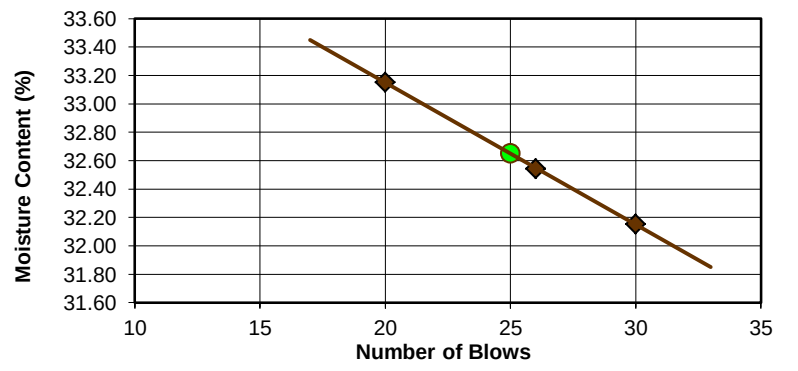
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/28/17	**TP/AH/BS Number:**	TP-22
Coordinates:	1692023.284 N ; 445776.023 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**X6**	**S6**	**A8**	**10B**	
Wet Soil + Can (g)	23.32	23.98	23.78	39.95	
Dry Soil + Can (g)	19.23	19.72	19.52	35.01	
Mass of Can (g)	6.51	6.63	6.67	8.58	
Moisture Loss (g)	4.09	4.26	4.26	4.94	
Mass of Dry Soil (g)	12.72	13.09	12.85	26.43	
Moisture Content (%)	32.15	32.54	33.15	18.69	
Number of Blows	30	26	20	**PL (%):**	**19**
Liquid Limit (%)	**33**				
Plasticity Index (%)	**14**				

Figure 1. Flow Curve

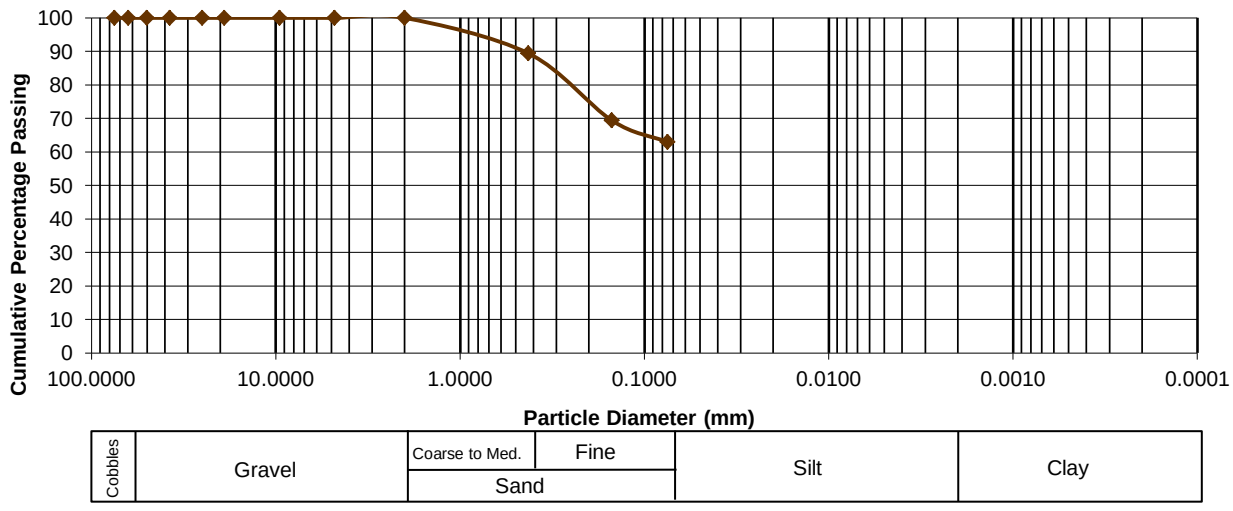


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	0.00	0.00	100.00	-	-		
#40	0.425	13.37	10.63	89.37	±0.9	1.96		
#100	0.150	38.55	30.64	69.36	±1.27	1.96		
#200	0.075	46.61	37.04	62.96	±1.56	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	169.36
Dry Soil + Can (g):	145.97
Mass of Can (g):	20.14
Moisture Loss (g):	23.39
Original Dry Mass (g):	125.83
Moisture Content (%):	**18.6**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**18.6**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**33**
U_{95}	±0.12
k	1.96
Plastic Limit (%):	**19**
U_{95}	±0.08
k	1.96
Plasticity Index (%):	**14**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(8)**

Soil Description:

Dark Brown, sandy lean CLAY

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

A.M. GEOCONSULT AND ASSOCIATES, INC.

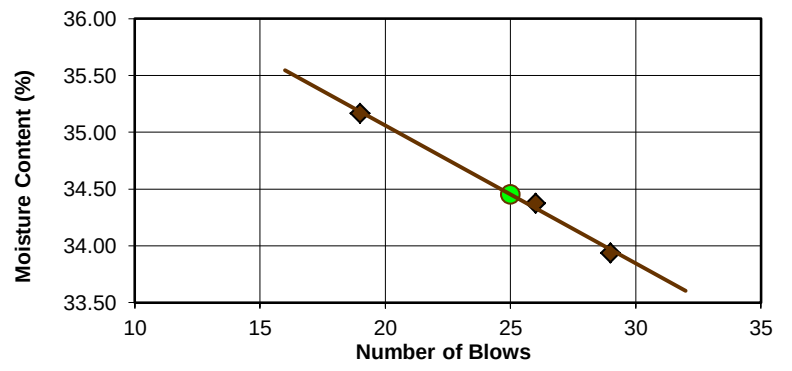
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/26/17	**TP/AH/BS Number:**	TP-23
Coordinates:	1692458.562 N ; 446021.861 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**BM**	**RE**	**FD**	**A80**	
Wet Soil + Can (g)	18.26	17.03	16.75	38.16	
Dry Soil + Can (g)	15.26	14.39	14.13	32.94	
Mass of Can (g)	6.42	6.71	6.68	8.85	
Moisture Loss (g)	3.00	2.64	2.62	5.22	
Mass of Dry Soil (g)	8.84	7.68	7.45	24.09	
Moisture Content (%)	33.94	34.38	35.17	21.67	
Number of Blows	29	26	19	**PL (%):**	**22**
Liquid Limit (%)	**34**				
Plasticity Index (%)	**13**				

Figure 1. Flow Curve

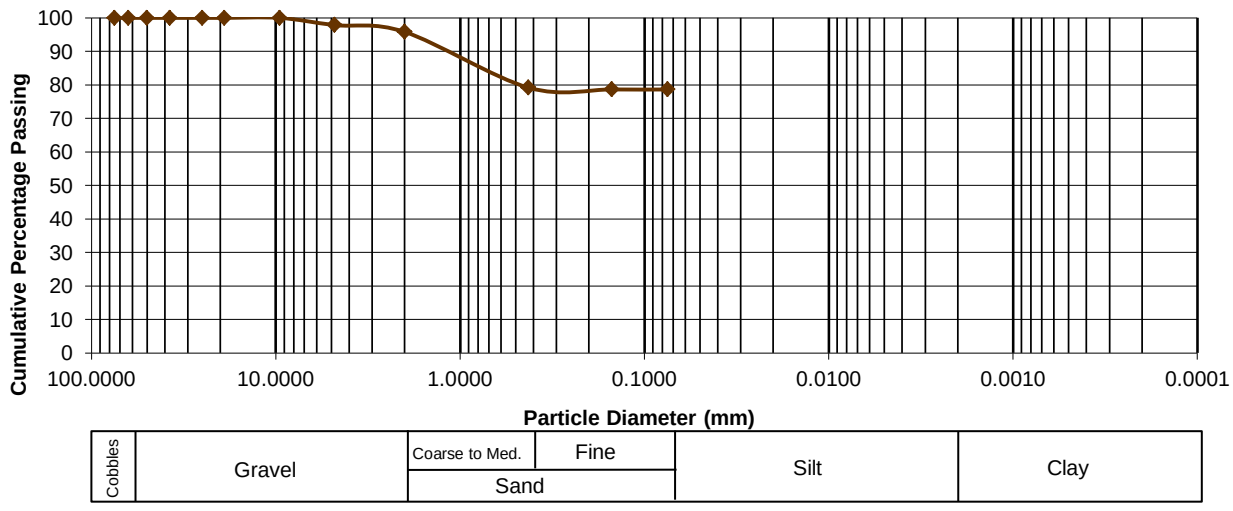


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	2.09	2.15	97.85	±0.12	1.96		
#10	2.000	4.08	4.19	95.81	±0.17	1.96		
#40	0.425	20.30	20.84	79.16	±1.17	1.96		
#100	0.150	20.80	21.35	78.65	±1.65	1.96		
#200	0.075	20.81	21.36	78.64	±2.02	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	138.10
Dry Soil + Can (g):	119.25
Mass of Can (g):	21.82
Moisture Loss (g):	18.85
Original Dry Mass (g):	97.43
Moisture Content (%):	**19.3**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**19.3**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**34**
U_{95}	±0.19
k	1.96
Plastic Limit (%):	**22**
U_{95}	±0.09
k	1.96
Plasticity Index (%):	**13**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(11)**

Soil Description:

Brown, lean CLAY with sand

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-23_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

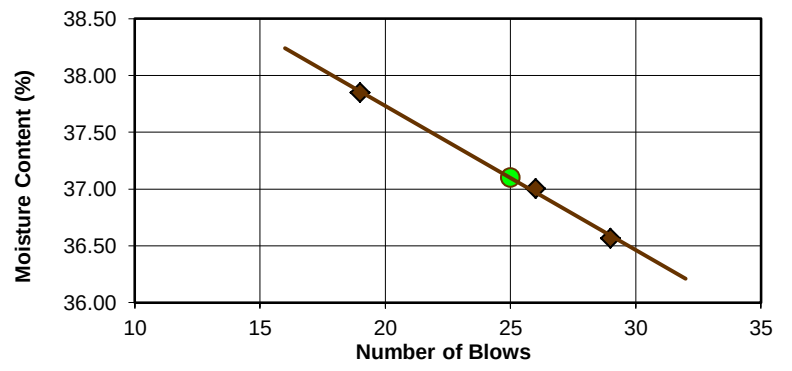
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/26/17	**TP/AH/BS Number:**	TP-24
Coordinates:	1692861.171 N ; 446318.176 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**X18**	**E5**	**W5**	**A61**	
Wet Soil + Can (g)	21.71	20.06	19.59	40.28	
Dry Soil + Can (g)	17.64	16.43	16.07	35.64	
Mass of Can (g)	6.51	6.62	6.77	8.76	
Moisture Loss (g)	4.07	3.63	3.52	4.64	
Mass of Dry Soil (g)	11.13	9.81	9.30	26.88	
Moisture Content (%)	36.57	37.00	37.85	17.26	
Number of Blows	29	26	19	**PL (%):**	**17**
Liquid Limit (%)	**37**				
Plasticity Index (%)	**20**				

Figure 1. Flow Curve

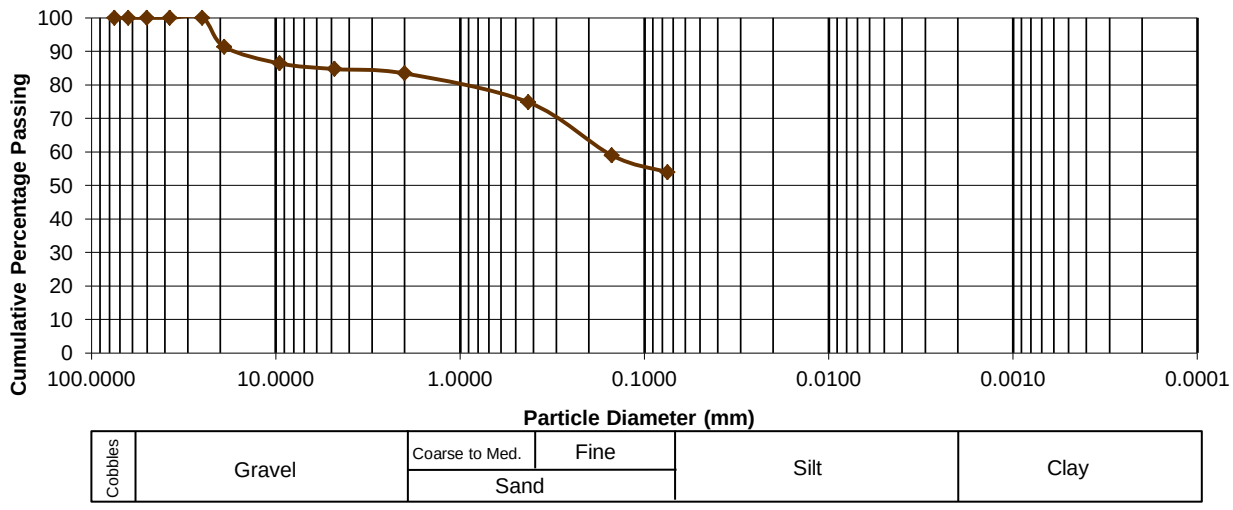


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	10.10	8.64	91.36	±0.01	1.96	-	-
3/8"	9.500	15.91	13.61	86.39	±0.02	1.96	-	-
#4	4.750	17.85	15.27	84.73	±0.1	1.96		
#10	2.000	19.38	16.58	83.42	±0.14	1.96		
#40	0.425	29.48	25.22	74.78	±0.97	1.96		
#100	0.150	47.99	41.05	58.95	±1.38	1.96		
#200	0.075	53.91	46.11	53.89	±1.68	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	169.60
Dry Soil + Can (g):	137.27
Mass of Can (g):	20.36
Moisture Loss (g):	32.33
Original Dry Mass (g):	116.91
Moisture Content (%):	**27.7**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**27.7**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**37**
U_{95}	±0.16
k	1.96
Plastic Limit (%):	**17**
U_{95}	±0.08
k	1.96
Plasticity Index (%):	**20**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(8)**

Soil Description:

Brown, sandy lean CLAY with gravel

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-24_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

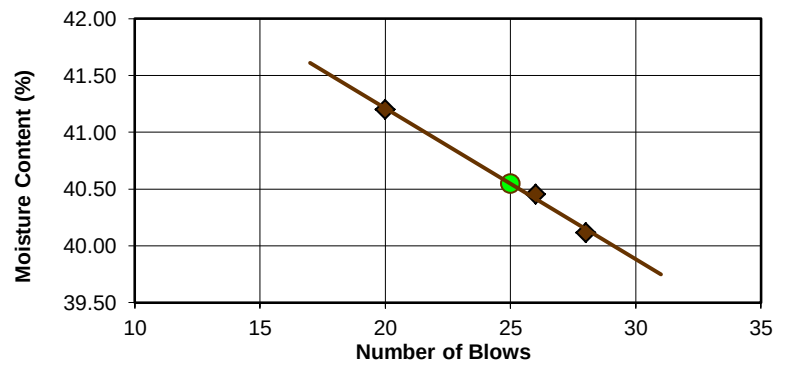
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/26/17	**TP/AH/BS Number:**	TP-25
Coordinates:	1693264.689 N ; 446612.642 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**X19**	**RE**	**WD**	**A75**	
Wet Soil + Can (g)	21.04	22.40	21.57	42.86	
Dry Soil + Can (g)	16.90	17.97	17.52	34.49	
Mass of Can (g)	6.58	7.02	7.69	8.77	
Moisture Loss (g)	4.14	4.43	4.05	8.37	
Mass of Dry Soil (g)	10.32	10.95	9.83	25.72	
Moisture Content (%)	40.12	40.46	41.20	32.54	
Number of Blows	28	26	20	**PL (%):**	**33**
Liquid Limit (%)	**41**				
Plasticity Index (%)	**8**				

Figure 1. Flow Curve

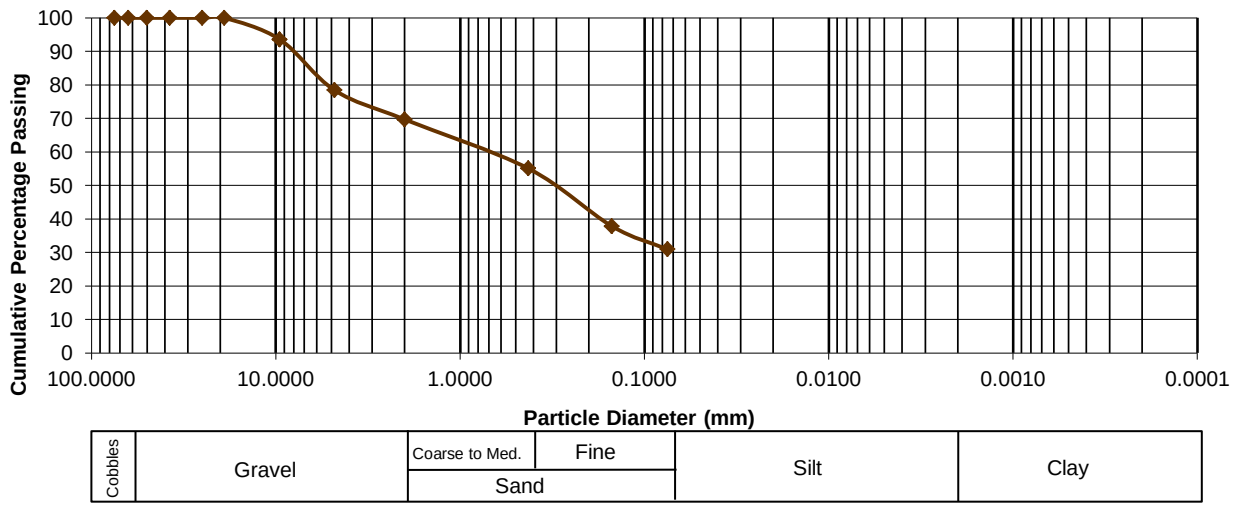


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	6.14	6.46	93.54	±0.02	1.96	-	-
#4	4.750	20.54	21.59	78.41	±0.12	1.96		
#10	2.000	28.83	30.31	69.69	±0.17	1.96		
#40	0.425	42.79	44.99	55.01	±1.2	1.96		
#100	0.150	59.15	62.18	37.82	±1.69	1.96		
#200	0.075	65.71	69.08	30.92	±2.07	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	136.26
Dry Soil + Can (g):	114.52
Mass of Can (g):	19.40
Moisture Loss (g):	21.74
Original Dry Mass (g):	95.12
Moisture Content (%):	**22.9**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**22.9**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**41**
U_{95}	±0.16
k	1.96
Plastic Limit (%):	**33**
U_{95}	±0.09
k	1.96
Plasticity Index (%):	**8**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-2-4(0)**

Soil Description:

Light Brown, silty SAND with gravel

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

A.M. GEOCONSULT AND ASSOCIATES, INC.

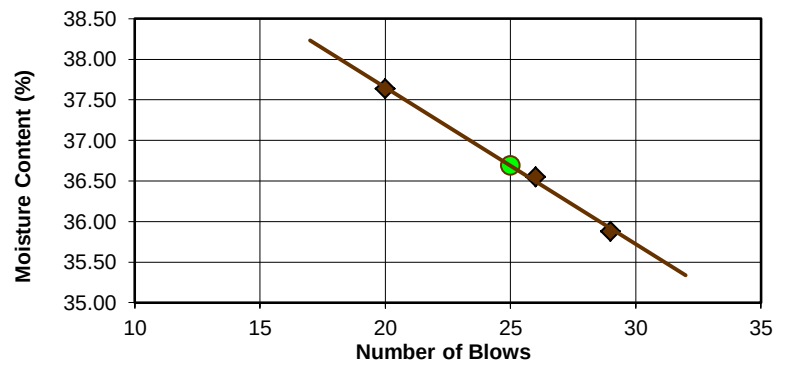
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/26/17	**TP/AH/BS Number:**	TP-26
Coordinates:	1693663.896 N ; 446912.708 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**CT**	**FG**	**HG**	**A25**	
Wet Soil + Can (g)	19.43	18.59	18.03	38.44	
Dry Soil + Can (g)	16.05	15.41	14.94	33.22	
Mass of Can (g)	6.63	6.71	6.73	8.62	
Moisture Loss (g)	3.38	3.18	3.09	5.22	
Mass of Dry Soil (g)	9.42	8.70	8.21	24.60	
Moisture Content (%)	35.88	36.55	37.64	21.22	
Number of Blows	29	26	20	**PL (%):**	**21**
Liquid Limit (%)	**37**				
Plasticity Index (%)	**15**				

Figure 1. Flow Curve

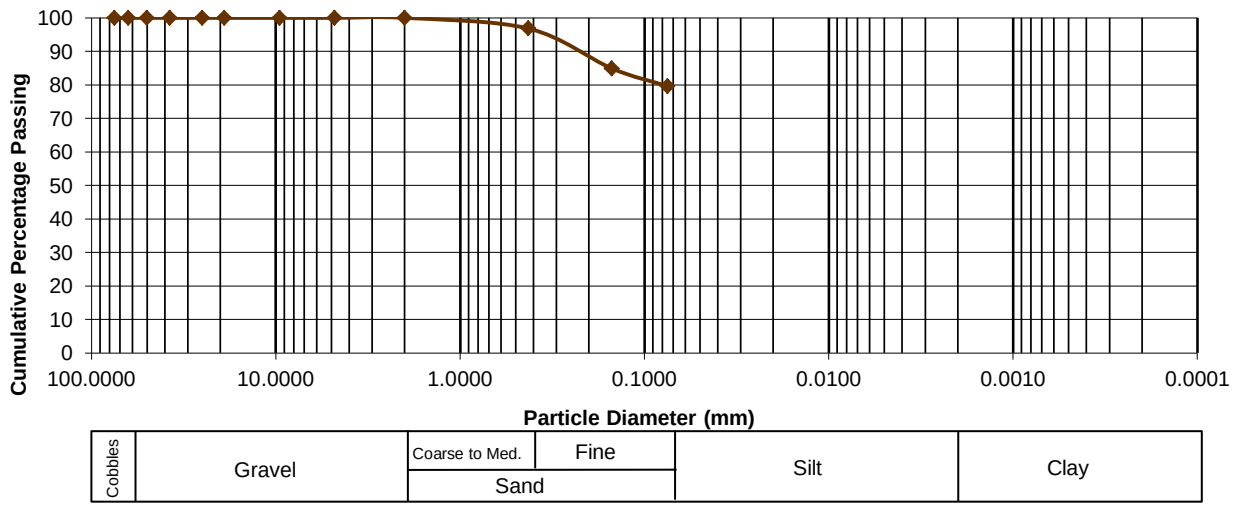


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	0.00	0.00	100.00	-	-		
#40	0.425	3.97	3.18	96.82	±0.91	1.96		
#100	0.150	18.85	15.11	84.89	±1.28	1.96		
#200	0.075	25.43	20.38	79.62	±1.57	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	171.72
Dry Soil + Can (g):	145.87
Mass of Can (g):	21.08
Moisture Loss (g):	25.85
Original Dry Mass (g):	124.79
Moisture Content (%):	**20.7**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**20.7**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**37**
U_{95}	±0.2
k	1.96
Plastic Limit (%):	**21**
U_{95}	±0.09
k	1.96
Plasticity Index (%):	**15**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(13)**

Soil Description:

Brown, lean CLAY with sand

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-26_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

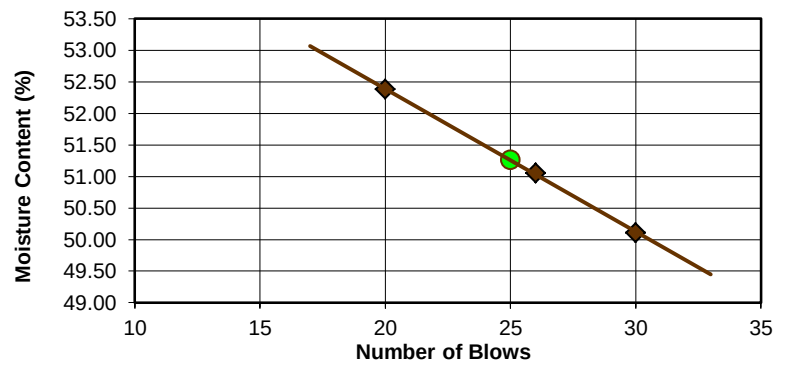
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/26/17	**TP/AH/BS Number:**	TP-27
Coordinates:	1694088.819 N ; 447173.253 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**A**	**F**	**G**	**A43**	
Wet Soil + Can (g)	23.57	23.20	23.44	40.42	
Dry Soil + Can (g)	19.12	19.08	19.48	33.06	
Mass of Can (g)	10.24	11.01	11.92	8.67	
Moisture Loss (g)	4.45	4.12	3.96	7.36	
Mass of Dry Soil (g)	8.88	8.07	7.56	24.39	
Moisture Content (%)	50.11	51.05	52.38	30.18	
Number of Blows	30	26	20	**PL (%):**	**30**
Liquid Limit (%)	**51**				
Plasticity Index (%)	**21**				

Figure 1. Flow Curve

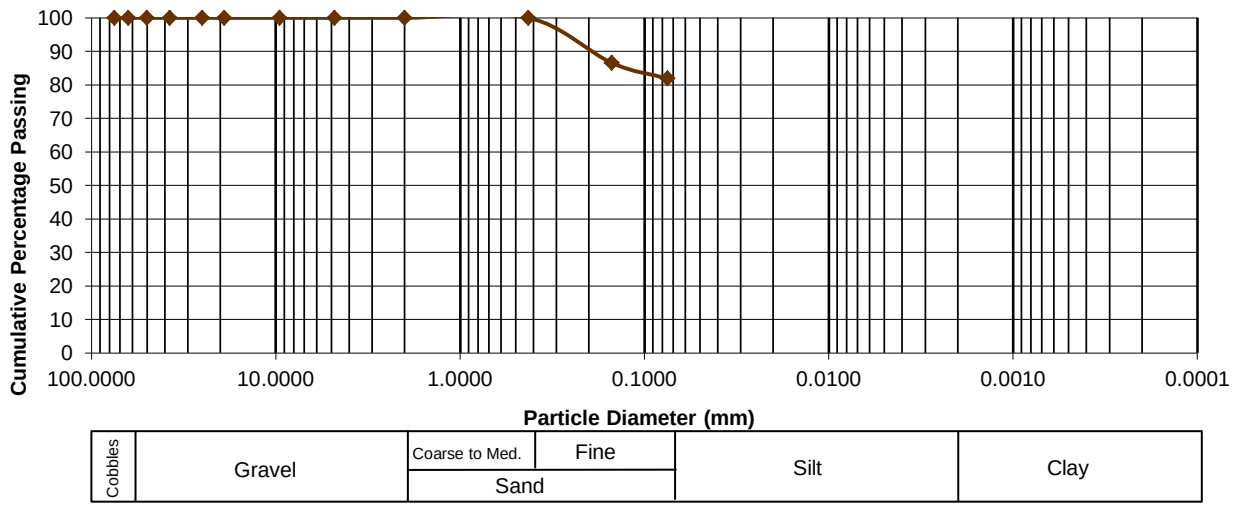


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	0.00	0.00	100.00	-	-		
#40	0.425	0.00	0.00	100.00	-	-		
#100	0.150	16.83	13.47	86.53	±0.91	1.96		
#200	0.075	22.61	18.09	81.91	±1.28	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	177.38
Dry Soil + Can (g):	147.42
Mass of Can (g):	22.46
Moisture Loss (g):	29.96
Original Dry Mass (g):	124.96
Moisture Content (%):	**24.0**

SUMMARY OF TEST RESULTS

Moisture Content (%):		**24.0**
	U_{95}	±0.02
	k	1.96
Liquid Limit (%):		**51**
	U_{95}	±0.24
	k	1.96
Plastic Limit (%):		**30**
	U_{95}	±0.09
	k	1.96
Plasticity Index (%):		**21**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report		-
AASHTO Symbol:		**A-7-5(19)**

Soil Description:

Black, elastic CLAY with sand

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-27_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

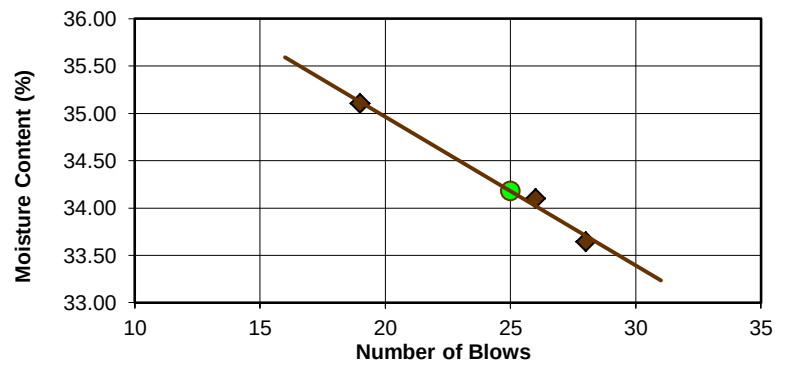
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/26/17	**TP/AH/BS Number:**	TP-28
Coordinates:	1694447.817 N ; 447519.913 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**CY**	**BY**	**TR**	**A71**	
Wet Soil + Can (g)	19.62	18.29	19.16	40.59	
Dry Soil + Can (g)	16.37	15.33	15.92	35.46	
Mass of Can (g)	6.71	6.65	6.69	8.57	
Moisture Loss (g)	3.25	2.96	3.24	5.13	
Mass of Dry Soil (g)	9.66	8.68	9.23	26.89	
Moisture Content (%)	33.64	34.10	35.10	19.08	
Number of Blows	28	26	19	**PL (%):**	**19**
Liquid Limit (%)	**34**				
Plasticity Index (%)	**15**				

Figure 1. Flow Curve

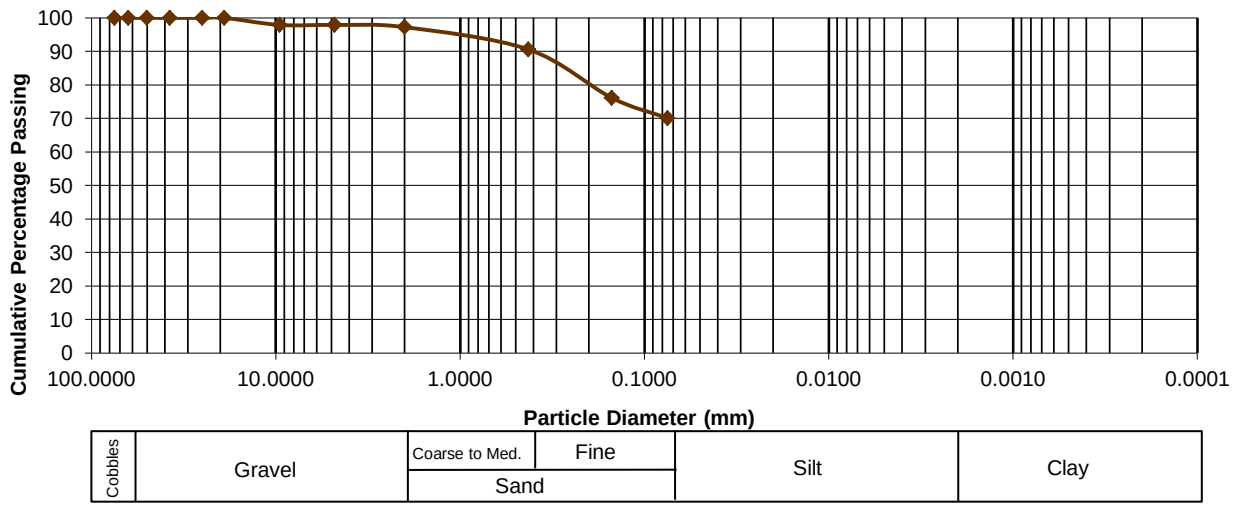


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	2.91	2.11	97.89	±0.01	1.96	-	-
#4	4.750	2.91	2.11	97.89	±0.01	1.96		
#10	2.000	3.81	2.76	97.24	±0.08	1.96		
#40	0.425	13.00	9.43	90.57	±0.82	1.96		
#100	0.150	32.96	23.90	76.10	±1.16	1.96		
#200	0.075	41.25	29.91	70.09	±1.42	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	192.80
Dry Soil + Can (g):	161.13
Mass of Can (g):	23.22
Moisture Loss (g):	31.67
Original Dry Mass (g):	137.91
Moisture Content (%):	**23.0**

SUMMARY OF TEST RESULTS

Moisture Content (%):		**23.0**
	U_{95}	±0.02
	k	1.96
Liquid Limit (%):		**34**
	U_{95}	±0.18
	k	1.96
Plastic Limit (%):		**19**
	U_{95}	±0.08
	k	1.96
Plasticity Index (%):		**15**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report		-
AASHTO Symbol:		**A-6(10)**

Soil Description:

Gray, lean CLAY with sand

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

A.M. GEOCONSULT AND ASSOCIATES, INC.

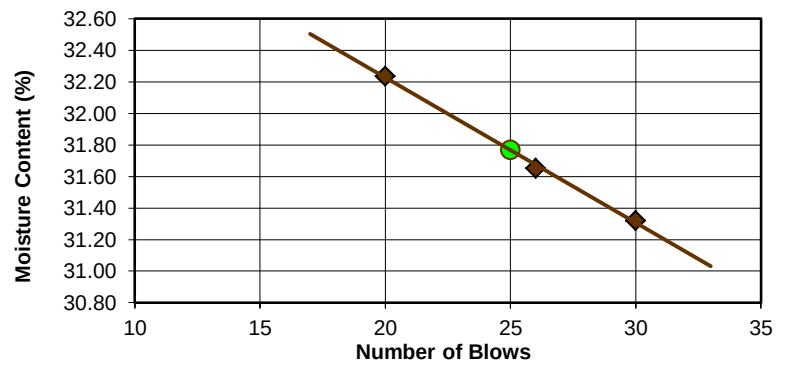
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/25/17	**TP/AH/BS Number:**	TP-29
Coordinates:	1694797.808 N ; 447876.322 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**X24**	**RF2**	**HG5**	**17B**	
Wet Soil + Can (g)	19.54	19.71	19.48	42.38	
Dry Soil + Can (g)	16.43	16.57	16.35	36.82	
Mass of Can (g)	6.50	6.65	6.64	8.63	
Moisture Loss (g)	3.11	3.14	3.13	5.56	
Mass of Dry Soil (g)	9.93	9.92	9.71	28.19	
Moisture Content (%)	31.32	31.65	32.23	19.72	
Number of Blows	30	26	20	**PL (%):**	**20**
Liquid Limit (%)	**32**				
Plasticity Index (%)	**12**				

Figure 1. Flow Curve

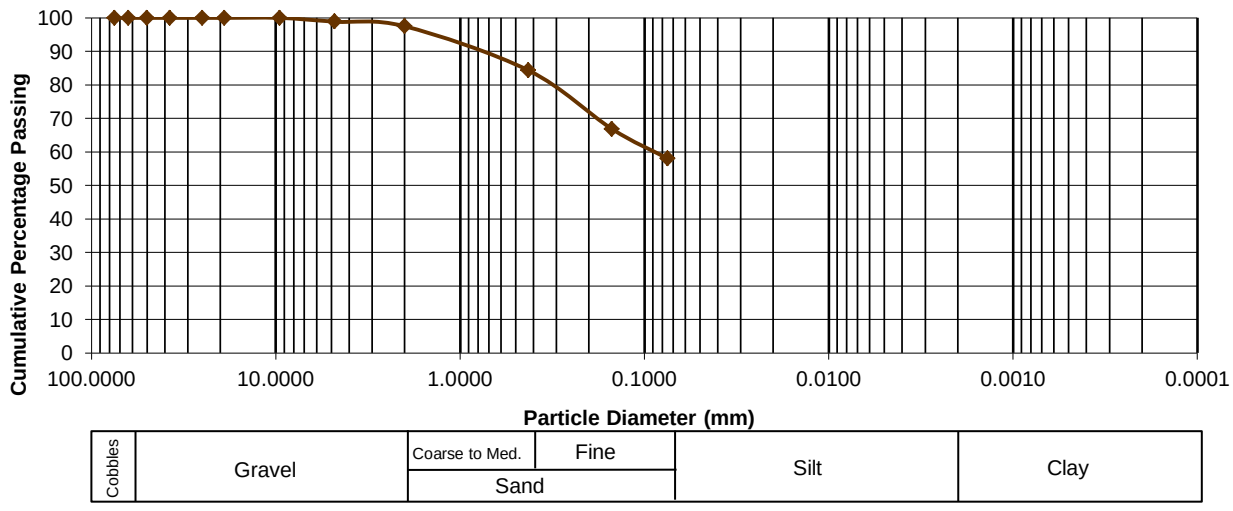


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	2.06	1.13	98.87	±0.06	1.96		
#10	2.000	4.57	2.50	97.50	±0.09	1.96		
#40	0.425	28.66	15.69	84.31	±0.62	1.96		
#100	0.150	60.57	33.16	66.84	±0.88	1.96		
#200	0.075	76.61	41.94	58.06	±1.08	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	254.64
Dry Soil + Can (g):	205.89
Mass of Can (g):	23.22
Moisture Loss (g):	48.75
Original Dry Mass (g):	182.67
Moisture Content (%):	**26.7**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**26.7**
U_{95}	±0.01
k	1.96
Liquid Limit (%):	**32**
U_{95}	±0.15
k	1.96
Plastic Limit (%):	**20**
U_{95}	±0.08
k	1.96
Plasticity Index (%):	**12**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(5)**

Soil Description:

Gray, sandy lean CLAY

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-29_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

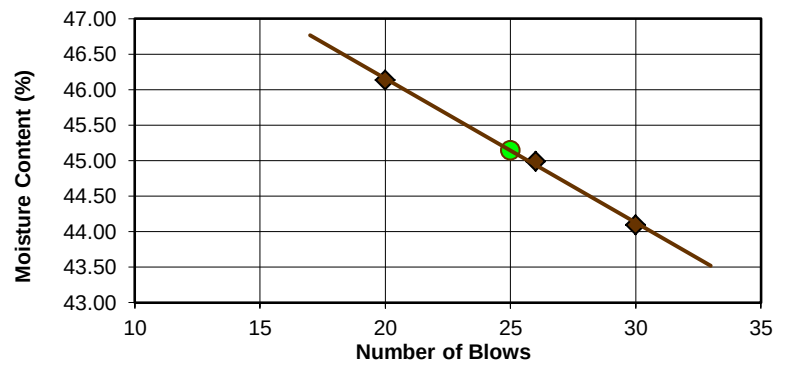
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/25/17	**TP/AH/BS Number:**	TP-30
Coordinates:	1695171.276 N ; 448208.77 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**LO**	**TR**	**EW**	**16B**	
Wet Soil + Can (g)	19.83	17.64	18.41	36.81	
Dry Soil + Can (g)	15.76	14.27	14.77	31.70	
Mass of Can (g)	6.53	6.78	6.88	8.71	
Moisture Loss (g)	4.07	3.37	3.64	5.11	
Mass of Dry Soil (g)	9.23	7.49	7.89	22.99	
Moisture Content (%)	44.10	44.99	46.13	22.23	
Number of Blows	30	26	20	**PL (%):**	**22**
Liquid Limit (%)	**45**				
Plasticity Index (%)	**23**				

Figure 1. Flow Curve

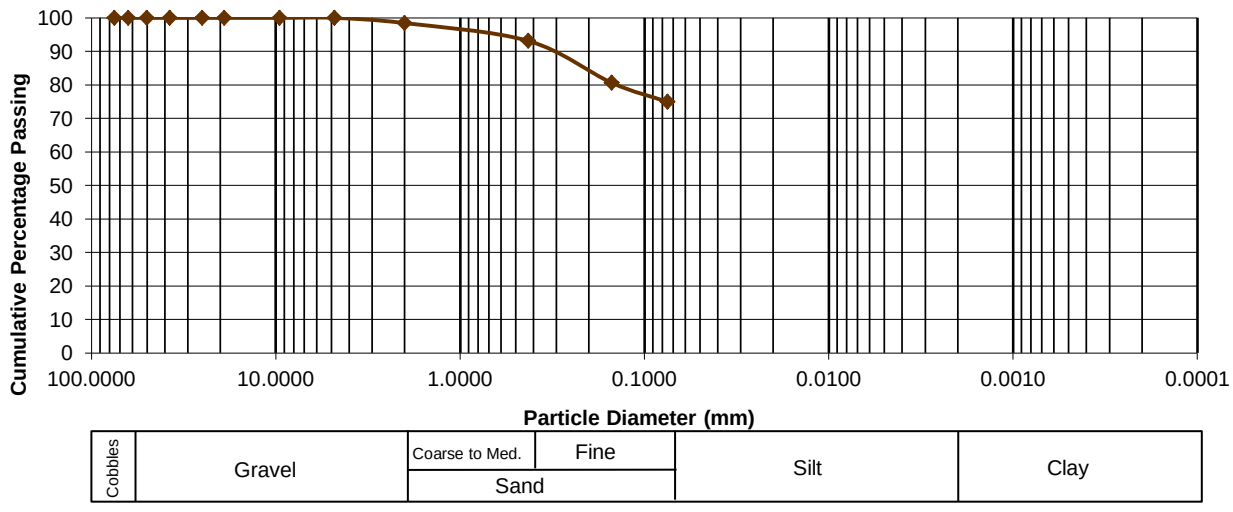


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	2.67	1.55	98.45	±0.07	1.96		
#40	0.425	11.87	6.90	93.10	±0.66	1.96		
#100	0.150	33.40	19.42	80.58	±0.93	1.96		
#200	0.075	43.09	25.05	74.95	±1.14	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	234.50
Dry Soil + Can (g):	194.57
Mass of Can (g):	22.56
Moisture Loss (g):	39.93
Original Dry Mass (g):	172.01
Moisture Content (%):	**23.2**

SUMMARY OF TEST RESULTS

Moisture Content (%):		**23.2**
	U_{95}	±0.01
	k	1.96
Liquid Limit (%):		**45**
	U_{95}	±0.22
	k	1.96
Plastic Limit (%):		**22**
	U_{95}	±0.1
	k	1.96
Plasticity Index (%):		**23**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report		-
AASHTO Symbol:		**A-7-6(17)**

Soil Description:

Gray, elastic CLAY with sand

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

A.M. GEOCONSULT AND ASSOCIATES, INC.

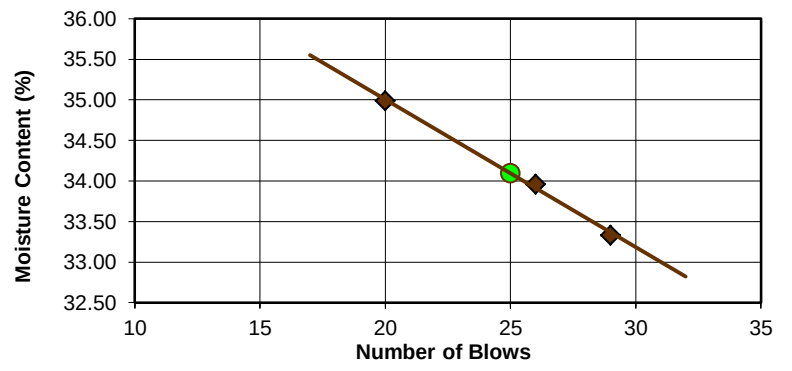
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/25/17	**TP/AH/BS Number:**	TP-31
Coordinates:	1695546.177 N ; 448539.511 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**X**	**F**	**G**	**A31**	
Wet Soil + Can (g)	18.33	16.56	16.78	43.28	
Dry Soil + Can (g)	15.36	14.03	14.17	38.36	
Mass of Can (g)	6.45	6.58	6.71	8.57	
Moisture Loss (g)	2.97	2.53	2.61	4.92	
Mass of Dry Soil (g)	8.91	7.45	7.46	29.79	
Moisture Content (%)	33.33	33.96	34.99	16.52	
Number of Blows	29	26	20	**PL (%):**	**17**
Liquid Limit (%)	**34**				
Plasticity Index (%)	**18**				

Figure 1. Flow Curve

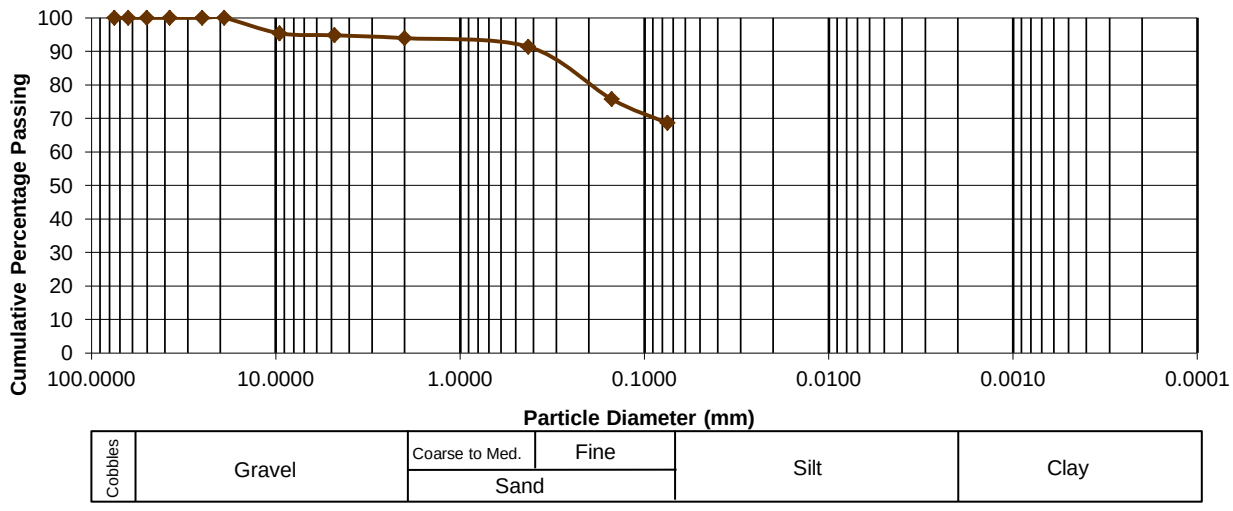


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	7.03	4.62	95.38	±0.01	1.96	-	-
#4	4.750	7.91	5.20	94.80	±0.08	1.96		
#10	2.000	9.19	6.04	93.96	±0.11	1.96		
#40	0.425	13.15	8.64	91.36	±0.75	1.96		
#100	0.150	37.01	24.32	75.68	±1.06	1.96		
#200	0.075	47.80	31.40	68.60	±1.29	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	200.30
Dry Soil + Can (g):	172.09
Mass of Can (g):	19.88
Moisture Loss (g):	28.21
Original Dry Mass (g):	152.21
Moisture Content (%):	**18.5**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**18.5**
U_{95}	±0.01
k	1.96
Liquid Limit (%):	**34**
U_{95}	±0.21
k	1.96
Plastic Limit (%):	**17**
U_{95}	±0.07
k	1.96
Plasticity Index (%):	**18**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(11)**

Soil Description:

Gray, sandy lean CLAY with traces gravel

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-31_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

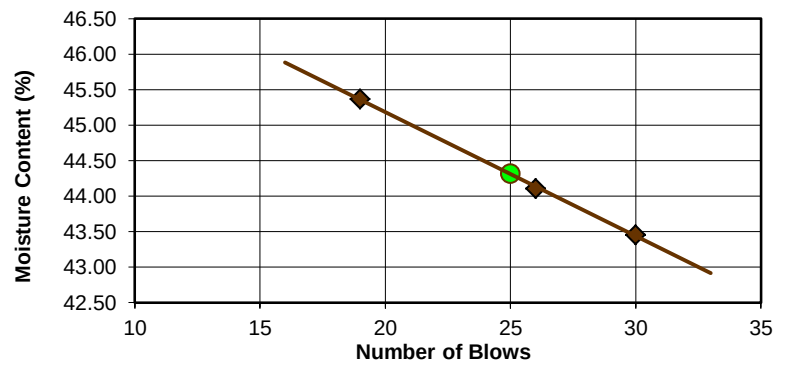
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/26/17	**TP/AH/BS Number:**	TP-32
Coordinates:	1696020.361 N ; 448658.651 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**JR**	**WS**	**QA**	**2B**	
Wet Soil + Can (g)	23.94	24.44	24.11	37.39	
Dry Soil + Can (g)	18.66	19.05	18.72	31.76	
Mass of Can (g)	6.51	6.83	6.84	8.65	
Moisture Loss (g)	5.28	5.39	5.39	5.63	
Mass of Dry Soil (g)	12.15	12.22	11.88	23.11	
Moisture Content (%)	43.46	44.11	45.37	24.36	
Number of Blows	30	26	19	**PL (%):**	**24**
Liquid Limit (%)	**44**				
Plasticity Index (%)	**20**				

Figure 1. Flow Curve

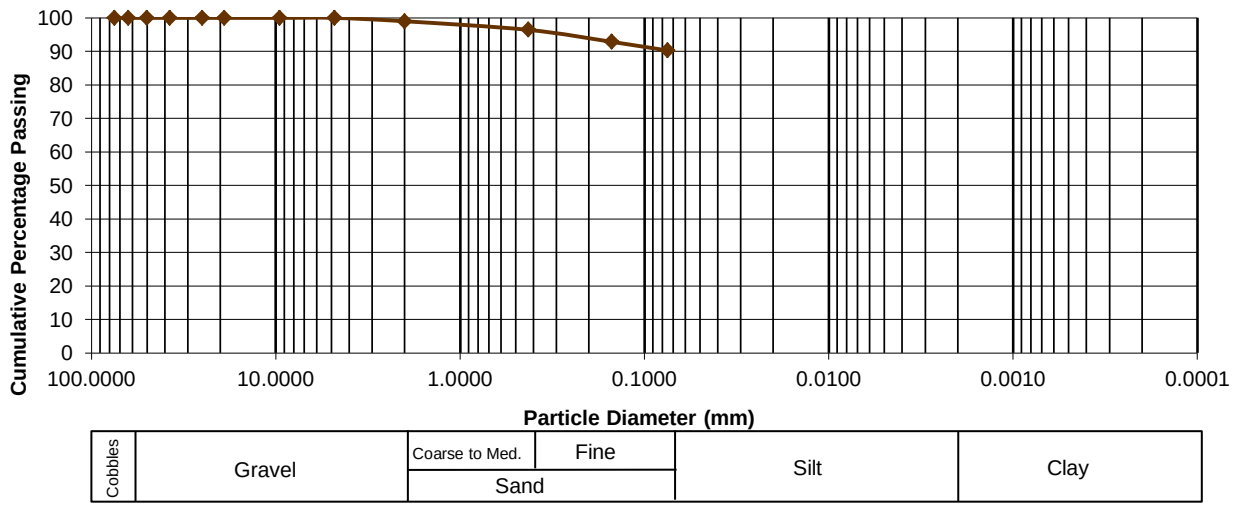


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	1.45	1.01	98.99	±0.08	1.96		
#40	0.425	5.16	3.58	96.42	±0.79	1.96		
#100	0.150	10.33	7.16	92.84	±1.11	1.96		
#200	0.075	14.04	9.73	90.27	±1.36	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	196.68
Dry Soil + Can (g):	163.93
Mass of Can (g):	19.70
Moisture Loss (g):	32.75
Original Dry Mass (g):	144.23
Moisture Content (%):	**22.7**

SUMMARY OF TEST RESULTS

Moisture Content (%):		**22.7**
	U_{95}	±0.02
	k	1.96
Liquid Limit (%):		**44**
	U_{95}	±0.16
	k	1.96
Plastic Limit (%):		**24**
	U_{95}	±0.1
	k	1.96
Plasticity Index (%):		**20**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report		-
AASHTO Symbol:		**A-7-6(20)**

Soil Description:

Gray, elastic CLAY with traces sand

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-32_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

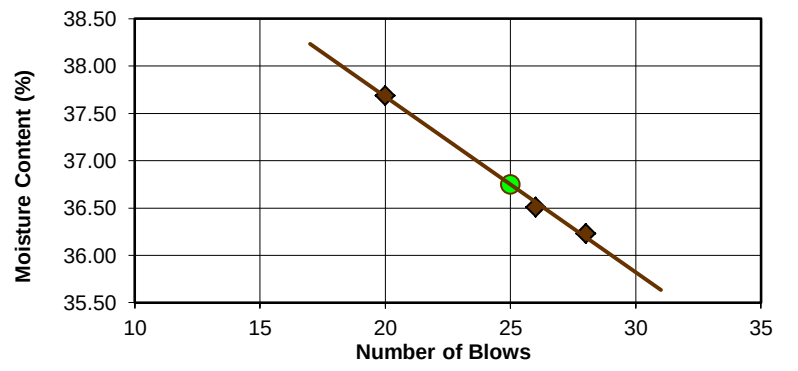
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/27/17	**TP/AH/BS Number:**	TP-33
Coordinates:	1696512.278 N ; 448658.623 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**B**	**K**	**I**	**2B**	
Wet Soil + Can (g)	18.83	17.99	16.64	37.81	
Dry Soil + Can (g)	15.62	15.04	13.90	30.93	
Mass of Can (g)	6.76	6.96	6.63	8.65	
Moisture Loss (g)	3.21	2.95	2.74	6.88	
Mass of Dry Soil (g)	8.86	8.08	7.27	22.28	
Moisture Content (%)	36.23	36.51	37.69	30.88	
Number of Blows	28	26	20	**PL (%):**	**31**
Liquid Limit (%)	**37**				
Plasticity Index (%)	**6**				

Figure 1. Flow Curve

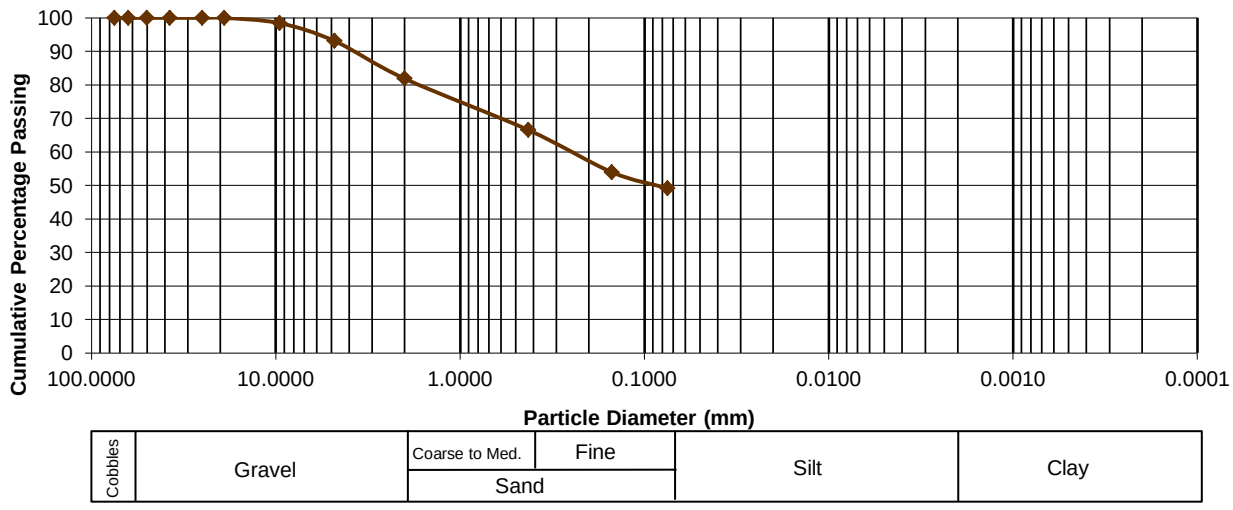


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	1.53	1.59	98.41	±0.02	1.96	-	-
#4	4.750	6.66	6.92	93.08	±0.12	1.96		
#10	2.000	17.47	18.14	81.86	±0.17	1.96		
#40	0.425	32.27	33.51	66.49	±1.18	1.96		
#100	0.150	44.36	46.06	53.94	±1.67	1.96		
#200	0.075	48.97	50.85	49.15	±2.04	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	148.12
Dry Soil + Can (g):	116.71
Mass of Can (g):	20.40
Moisture Loss (g):	31.41
Original Dry Mass (g):	96.31
Moisture Content (%):	**32.6**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**32.6**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**37**
U_{95}	±0.21
k	1.96
Plastic Limit (%):	**31**
U_{95}	±0.1
k	1.96
Plasticity Index (%):	**6**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-4(3)**

Soil Description:

Brown, sandy SILT with gravel

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-33_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

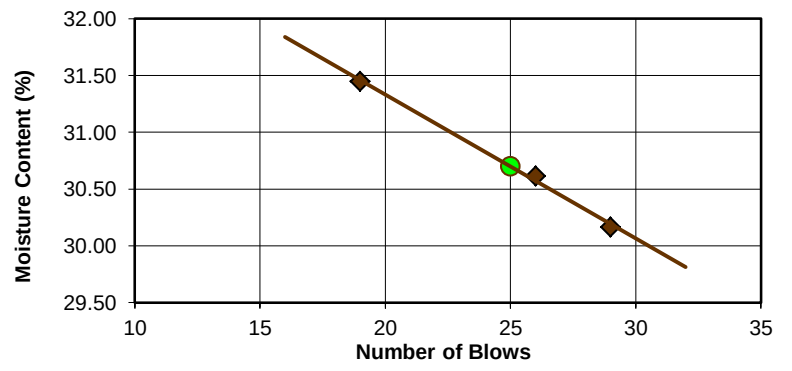
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/27/17	**TP/AH/BS Number:**	TP-34
Coordinates:	1697020.361 N ; 448658.593 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**EG1**	**WS**	**AD**	**A71**	
Wet Soil + Can (g)	21.76	22.31	21.98	44.25	
Dry Soil + Can (g)	18.27	18.63	18.31	38.78	
Mass of Can (g)	6.70	6.61	6.64	8.58	
Moisture Loss (g)	3.49	3.68	3.67	5.47	
Mass of Dry Soil (g)	11.57	12.02	11.67	30.20	
Moisture Content (%)	30.16	30.62	31.45	18.11	
Number of Blows	29	26	19	**PL (%):**	**18**
Liquid Limit (%)	**31**				
Plasticity Index (%)	**13**				

Figure 1. Flow Curve

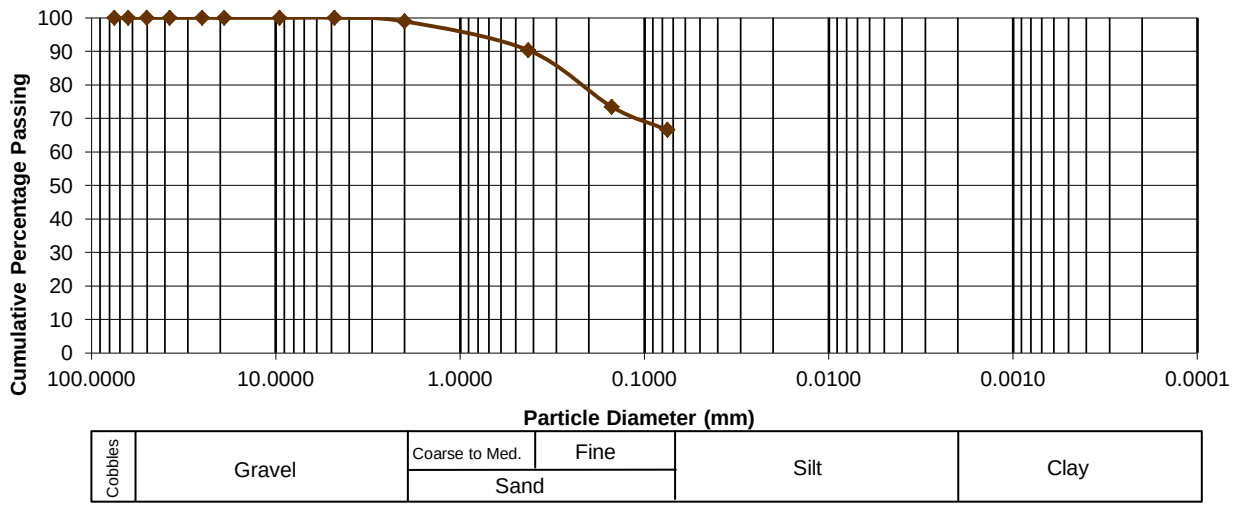


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	1.20	1.06	98.94	±0.1	1.96		
#40	0.425	10.97	9.68	90.32	±1	1.96		
#100	0.150	30.10	26.56	73.44	±1.42	1.96		
#200	0.075	37.91	33.45	66.55	±1.73	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	148.90
Dry Soil + Can (g):	133.38
Mass of Can (g):	20.06
Moisture Loss (g):	15.52
Original Dry Mass (g):	113.32
Moisture Content (%):	**13.7**

SUMMARY OF TEST RESULTS

Moisture Content (%):		**13.7**
	U_{95}	±0.02
	k	1.96
Liquid Limit (%):		**31**
	U_{95}	±0.14
	k	1.96
Plastic Limit (%):		**18**
	U_{95}	±0.07
	k	1.96
Plasticity Index (%):		**13**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report		-
AASHTO Symbol:		**A-6(8)**

Soil Description:

Brown, sandy lean CLAY

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-34_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

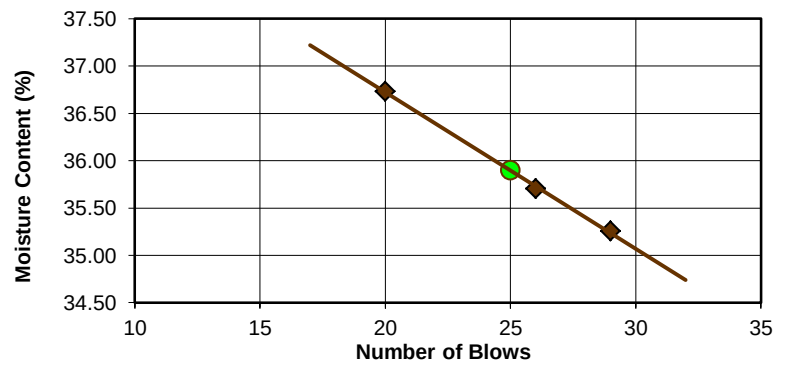
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/27/17	**TP/AH/BS Number:**	TP-35
Coordinates:	1697520.36 N ; 448658.564 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**P4**	**WQ**	**FG**	**A12**	
Wet Soil + Can (g)	22.77	23.33	22.75	34.16	
Dry Soil + Can (g)	19.53	20.02	19.51	29.45	
Mass of Can (g)	10.34	10.75	10.69	8.84	
Moisture Loss (g)	3.24	3.31	3.24	4.71	
Mass of Dry Soil (g)	9.19	9.27	8.82	20.61	
Moisture Content (%)	35.26	35.71	36.73	22.85	
Number of Blows	29	26	20	**PL (%):**	**23**
Liquid Limit (%)	**36**				
Plasticity Index (%)	**13**				

Figure 1. Flow Curve

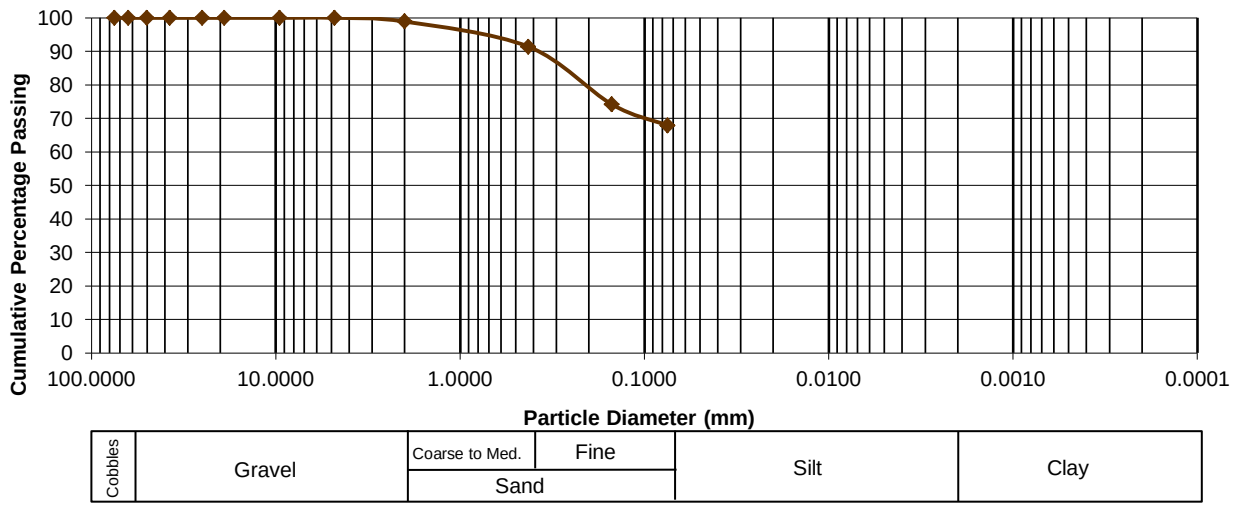


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	1.29	1.10	98.90	±0.1	1.96		
#40	0.425	10.15	8.62	91.38	±0.97	1.96		
#100	0.150	30.43	25.84	74.16	±1.36	1.96		
#200	0.075	37.81	32.10	67.90	±1.67	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	163.44
Dry Soil + Can (g):	141.12
Mass of Can (g):	23.34
Moisture Loss (g):	22.32
Original Dry Mass (g):	117.78
Moisture Content (%):	**19.0**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**19.0**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**36**
U_{95}	±0.19
k	1.96
Plastic Limit (%):	**23**
U_{95}	±0.11
k	1.96
Plasticity Index (%):	**13**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(8)**

Soil Description:

Gray, sandy lean CLAY

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-35_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

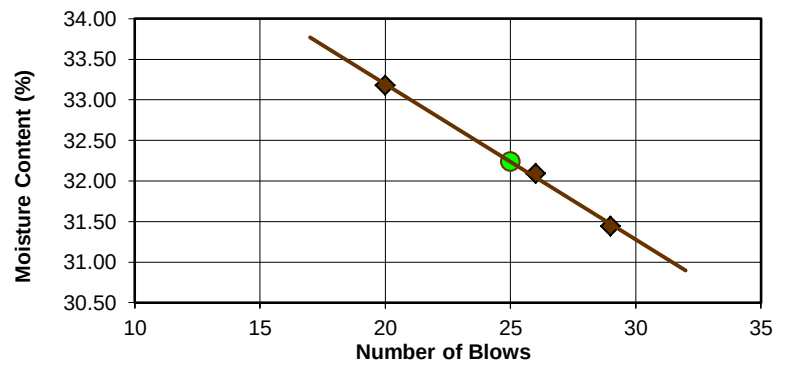
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/27/17	**TP/AH/BS Number:**	TP-36
Coordinates:	1698020.36 N ; 448658.535 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**KL**	**HY**	**GT**	**A28**	
Wet Soil + Can (g)	19.36	18.89	19.32	42.77	
Dry Soil + Can (g)	17.20	16.91	17.15	36.31	
Mass of Can (g)	10.33	10.74	10.61	8.64	
Moisture Loss (g)	2.16	1.98	2.17	6.46	
Mass of Dry Soil (g)	6.87	6.17	6.54	27.67	
Moisture Content (%)	31.44	32.09	33.18	23.35	
Number of Blows	29	26	20	**PL (%):**	**23**
Liquid Limit (%)	**32**				
Plasticity Index (%)	**9**				

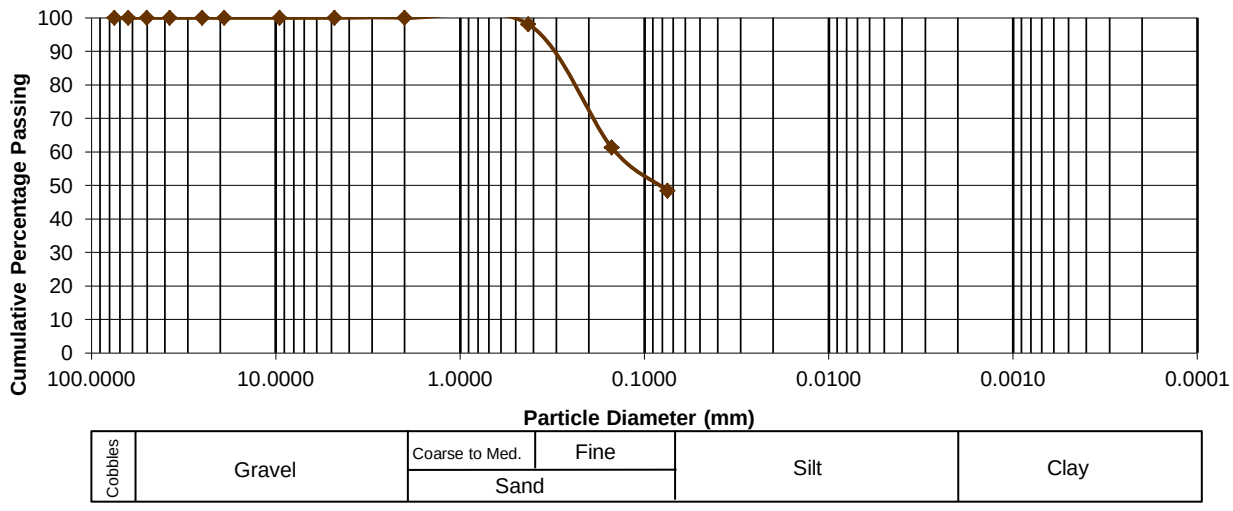
Figure 1. Flow Curve



PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-	*for uncertainty values, refer to attached Hydrometer Test Report	
#10	2.000	0.00	0.00	100.00	-	-		
#40	0.425	2.07	1.93	98.07	±1.05	1.96		
#100	0.150	41.64	38.80	61.20	±1.49	1.96		
#200	0.075	55.38	51.60	48.40	±1.83	1.96		

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	143.98
Dry Soil + Can (g):	127.40
Mass of Can (g):	20.08
Moisture Loss (g):	16.58
Original Dry Mass (g):	107.32
Moisture Content (%):	**15.4**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**15.4**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**32**
U_{95}	±0.24
k	1.96
Plastic Limit (%):	**23**
U_{95}	±0.08
k	1.96
Plasticity Index (%):	**9**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-4(3)**

Soil Description:

Light Brown, sandy SILT

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-36_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

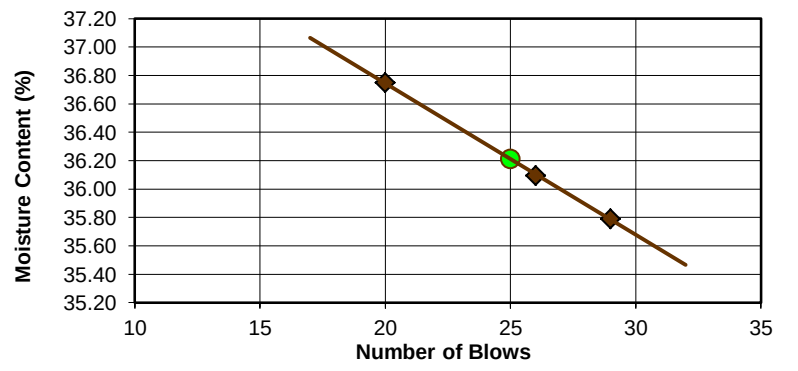
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/27/17	**TP/AH/BS Number:**	TP-37
Coordinates:	1698520.36 N ; 448658.506 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**HP**	**DH**	**GF**	**A78**	
Wet Soil + Can (g)	19.24	18.23	18.98	33.00	
Dry Soil + Can (g)	15.94	15.18	15.68	28.62	
Mass of Can (g)	6.72	6.73	6.70	8.53	
Moisture Loss (g)	3.30	3.05	3.30	4.38	
Mass of Dry Soil (g)	9.22	8.45	8.98	20.09	
Moisture Content (%)	35.79	36.09	36.75	21.80	
Number of Blows	29	26	20	**PL (%):**	**22**
Liquid Limit (%)	**36**				
Plasticity Index (%)	**14**				

Figure 1. Flow Curve

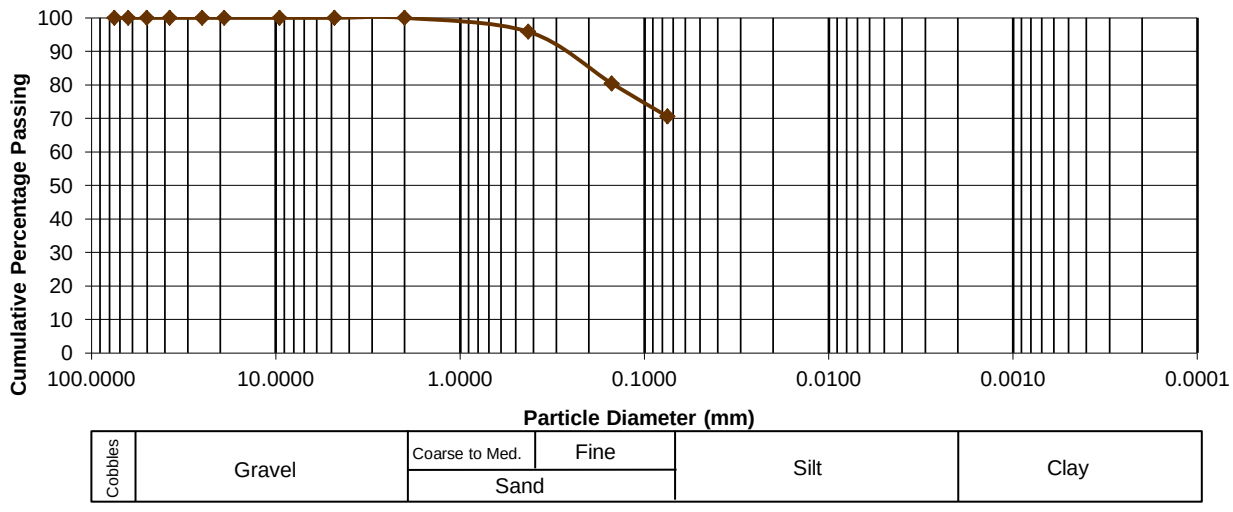


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	0.00	0.00	100.00	-	-	-	-
3/8"	9.500	0.00	0.00	100.00	-	-	-	-
#4	4.750	0.00	0.00	100.00	-	-		
#10	2.000	0.00	0.00	100.00	-	-		
#40	0.425	6.71	4.15	95.85	±0.7	1.96		
#100	0.150	31.72	19.61	80.39	±0.99	1.96		
#200	0.075	47.58	29.42	70.58	±1.21	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	207.90
Dry Soil + Can (g):	184.68
Mass of Can (g):	22.96
Moisture Loss (g):	23.22
Original Dry Mass (g):	161.72
Moisture Content (%):	**14.4**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**14.4**
U_{95}	±0.01
k	1.96
Liquid Limit (%):	**36**
U_{95}	±0.17
k	1.96
Plastic Limit (%):	**22**
U_{95}	±0.11
k	1.96
Plasticity Index (%):	**14**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-6(9)**

Soil Description:

Gray, lean CLAY with sand

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-37_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

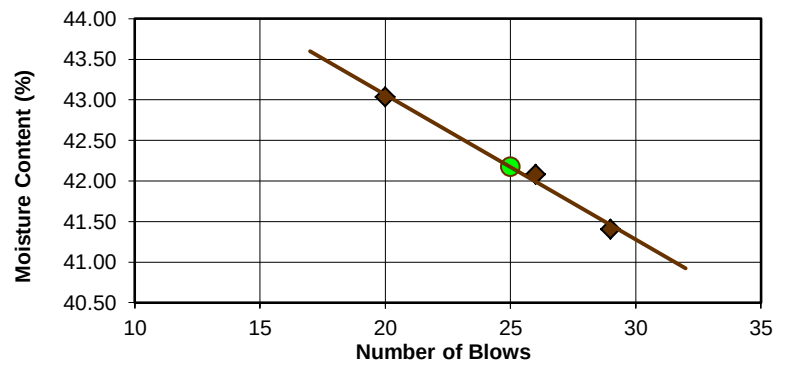
PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (AASHTO) TEST REPORT

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Sampling Procedure/Date:	AASHTO R13-03 (2007), 5/27/17	**TP/AH/BS Number:**	TP-38
Coordinates:	1699020.36 N ; 448658.477 E	**Sample ID:**	SS-1
Station:	-	**Sample Depth (m):**	0.00-1.50
Date of Testing:	06/05/17		

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS - AASHTO T89-02 (2006), AASHTO T90-00 (2008)

	Multipoint Liquid Limit			Plastic Limit	
Trial Number	**1**	**2**	**3**	**1**	
Can Number	**BM**	**BU**	**JH**	**3B**	
Wet Soil + Can (g)	20.63	19.09	19.33	39.12	
Dry Soil + Can (g)	16.56	15.45	15.56	33.31	
Mass of Can (g)	6.73	6.80	6.80	8.75	
Moisture Loss (g)	4.07	3.64	3.77	5.81	
Mass of Dry Soil (g)	9.83	8.65	8.76	24.56	
Moisture Content (%)	41.40	42.08	43.04	23.66	
Number of Blows	29	26	20	**PL (%):**	**24**
Liquid Limit (%)	**42**				
Plasticity Index (%)	**19**				

Figure 1. Flow Curve

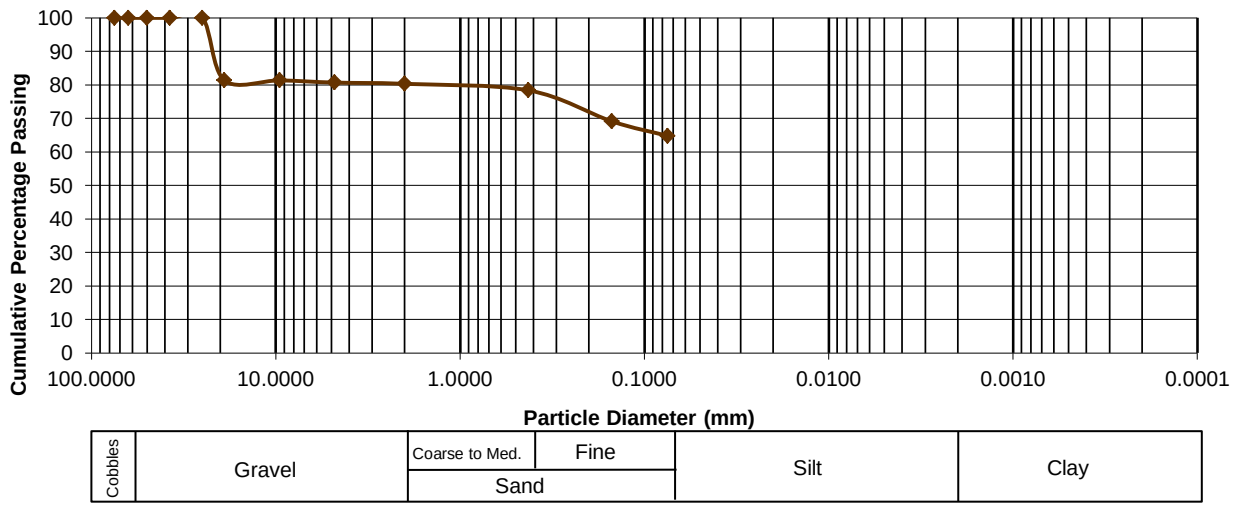


PARTICLE SIZE ANALYSIS OF SOILS - AASHTO T88-00 (2008)

Mechanical Method							Hydrometer Method	
Sieve #	**Particle Diam. (mm)**	**Cum. Mass Ret. (g)**	**Cum. % Retained**	**Cum. % Passing**	**U95**	**Coverage Factor (k)**	**Particle Diam. (mm)**	**Percent Finer (%)**
3"	75.000	0.00	0.00	100.00	-	-	-	-
2 1/2"	63.000	0.00	0.00	100.00	-	-	-	-
2"	50.000	0.00	0.00	100.00	-	-	-	-
1 1/2"	37.500	0.00	0.00	100.00	-	-	-	-
1"	25.000	0.00	0.00	100.00	-	-	-	-
3/4"	19.000	23.48	18.65	81.35	±0.01	1.96	-	-
3/8"	9.500	23.48	18.65	81.35	±0.02	1.96	-	-
#4	4.750	24.31	19.31	80.69	±0.09	1.96		
#10	2.000	24.78	19.68	80.32	±0.13	1.96		
#40	0.425	27.24	21.63	78.37	±0.9	1.96		
#100	0.150	38.90	30.90	69.10	±1.28	1.96		
#200	0.075	44.32	35.20	64.80	±1.56	1.96		

*for uncertainty values, refer to attached Hydrometer Test Report

Figure 2. Particle Size Distribution Curve



MOISTURE CONTENT OF SOILS - AASHTO T265-93 (2004)

Wet Soil + Can (g):	164.10
Dry Soil + Can (g):	145.31
Mass of Can (g):	19.40
Moisture Loss (g):	18.79
Original Dry Mass (g):	125.91
Moisture Content (%):	**14.9**

SUMMARY OF TEST RESULTS

Moisture Content (%):	**14.9**
U_{95}	±0.02
k	1.96
Liquid Limit (%):	**42**
U_{95}	±0.2
k	1.96
Plastic Limit (%):	**24**
U_{95}	±0.09
k	1.96
Plasticity Index (%):	**19**
Specific Gravity: * for uncertainty value, refer to attached Specific Gravity of Soils Test Report	-
AASHTO Symbol:	**A-7-6(10)**

Soil Description:

Brown, gravelly elastic CLAY with sand

Peformed by: DANILO DELAN
Senior Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

1705UIC1_RPATA_TP-38_0

APPENDIX D: MOISTURE DENSITY RELATION & CALIFORNIA BEARING RATIO TEST REPORTS

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	07/01/17	**TP/BS Number:**	TP-1
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1683735.821 N ;452089.657 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	07/13/17

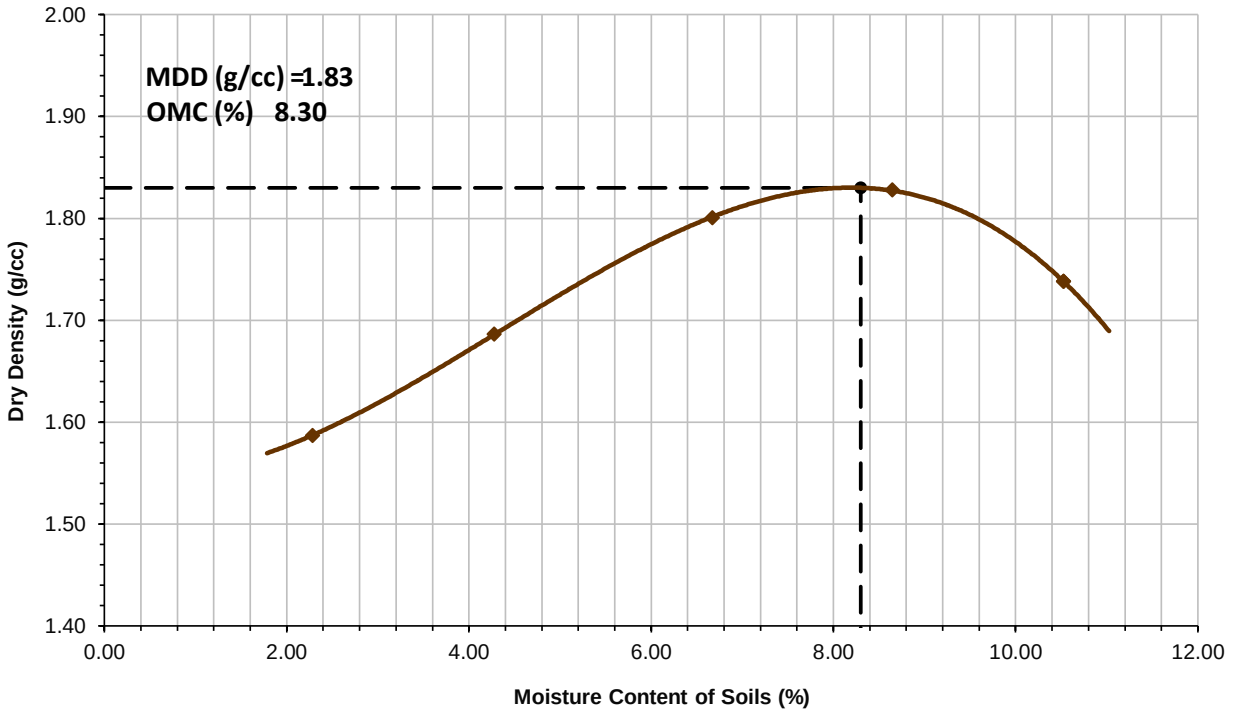
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**AA6**	**DD3**	**GG1**	**CC5**	**A1**	**0-154**	**CC10**	**FF6**	**1E**	**0-147**	**-**	**-**
Wet Soil + Can (g)	161.30	163.56	180.21	184.10	182.40	183.85	186.48	181.73	163.31	166.56	-	-
Dry Soil + Can (g)	157.87	160.71	173.68	177.52	172.90	173.35	173.35	169.09	149.34	153.19	-	-
Mass of Can (g)	22.51	20.40	22.00	22.68	23.83	22.83	22.37	22.14	20.16	22.59	-	-
Moisture Loss (g)	3.43	2.85	6.53	6.58	9.50	10.50	13.13	12.64	13.97	13.37	-	-
Mass of Dry Soil (g)	135.36	140.31	151.68	154.84	149.07	150.52	150.98	146.95	129.18	130.60	-	-
Moisture Content (%)	2.53	2.03	4.31	4.25	6.37	6.98	8.70	8.60	10.81	10.24	-	-
Average Moisture (%)	**2.28**		**4.28**		**6.67**		**8.65**		**10.53**		**-**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**-**
Wet Soil + Mold (g)	4,555.00	4,680.00	4,830.00	4,890.00	4,830.00	-
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	-
Mass of Wet Soil (g)	1,500.00	1,625.00	1,775.00	1,835.00	1,775.00	-
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	-
Wet Density (g/cc)	**1.62**	**1.76**	**1.92**	**1.99**	**1.92**	**-**
Dry Density (g/cc)	**1.59**	**1.69**	**1.80**	**1.83**	**1.74**	**-**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.83**
Opt. Moisture Content (%):	**8.30**

Performed by: DANILO DELAN
Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

1705UIC1_RMDRT_TP-1_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-1
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1683735.821 N ;452089.657 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**FD**	**VC**	**BBG**	**GF**	**8H**	**3B**
Wet Soil + Can (g)	160.99	162.77	147.27	156.33	151.68	162.93
Dry Soil + Can (g)	149.80	152.02	137.08	145.94	141.32	152.02
Mass of Can (g)	16.77	19.69	17.13	17.70	18.03	18.06
Moisture Loss (g)	11.19	10.75	10.19	10.39	10.36	10.91
Mass of Dry Soil (g)	133.03	132.33	119.95	128.24	123.29	133.96
Moisture Content (%)	8.41	8.12	8.49	8.10	8.40	8.14
Average Moisture (%)	**8.27**		**8.30**		**8.27**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-24**	**CBR-36**	**CBR-15**
Wet Soil + Mold (g)	10550.00	10500.00	10690.00
Mass of Mold (g)	6360.00	6240.00	6115.00
Mass of Wet Soil (g)	4190.00	4260.00	4575.00
Volume of Mold (cc)	2245.00	2197.00	2257.00
Wet Density (g/cc)	**1.87**	**1.94**	**2.03**
Dry Density (g/cc)	**1.72**	**1.79**	**1.87**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.65	1.4	1.22
Reading After Soaking ($x10^{-1}$ mm)	2.52	2.15	1.87
Swell (%)	**0.75**	**0.64**	**0.56**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows		
	10	30	65	10	30	65
0.64	68.36	85.46	106.82	3.52	4.40	5.51
1.27	114.41	143.01	178.76	5.90	7.37	9.21
1.91	153.47	191.84	239.80	7.91	9.89	12.36
2.54	179.98	224.98	281.22	9.28	11.60	14.50
3.81	217.65	272.06	340.08	11.22	14.02	17.53
5.08	244.16	305.20	381.50	12.59	15.73	19.66
7.62	267.88	334.85	418.56	13.81	17.26	21.58
10.16	272.06	340.08	425.10	14.02	17.53	21.91
12.70	277.64	347.06	433.82	14.31	17.89	22.36

CBR (%) Blows		
10	30	65
13.19	**16.49**	**20.61**
11.99	**14.98**	**18.73**

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

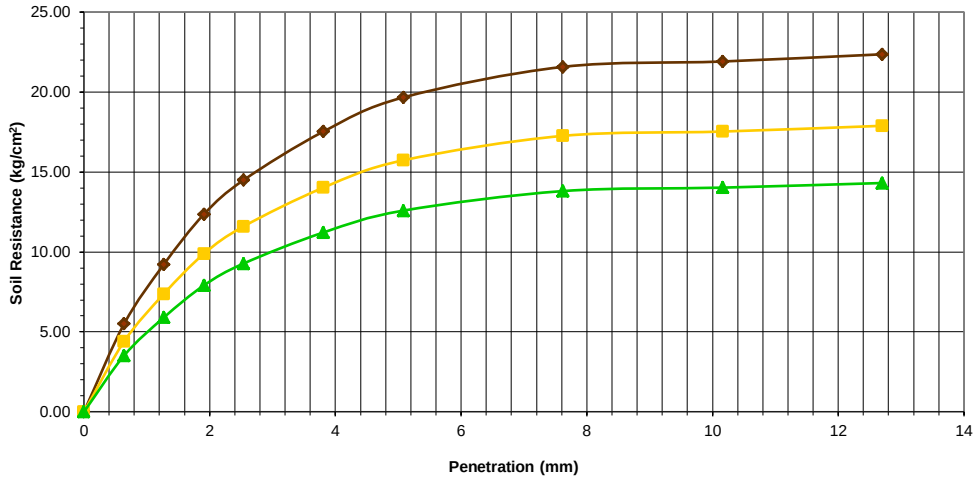
1705UIC1_RCBRT_TP-1_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

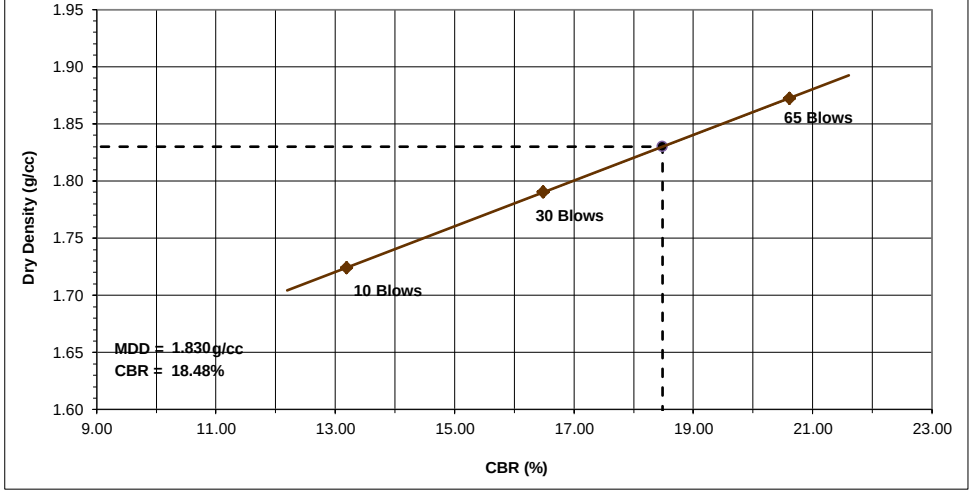
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-1
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1683735.821 N ;452089.657 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.866	11.99
30	1.939	14.98
65	2.027	18.73

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.830	18.48
95	1.739	13.91

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-1_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	07/01/17	**TP/BS Number:**	TP-2
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1684423.994 N ;451364.1 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	07/13/17

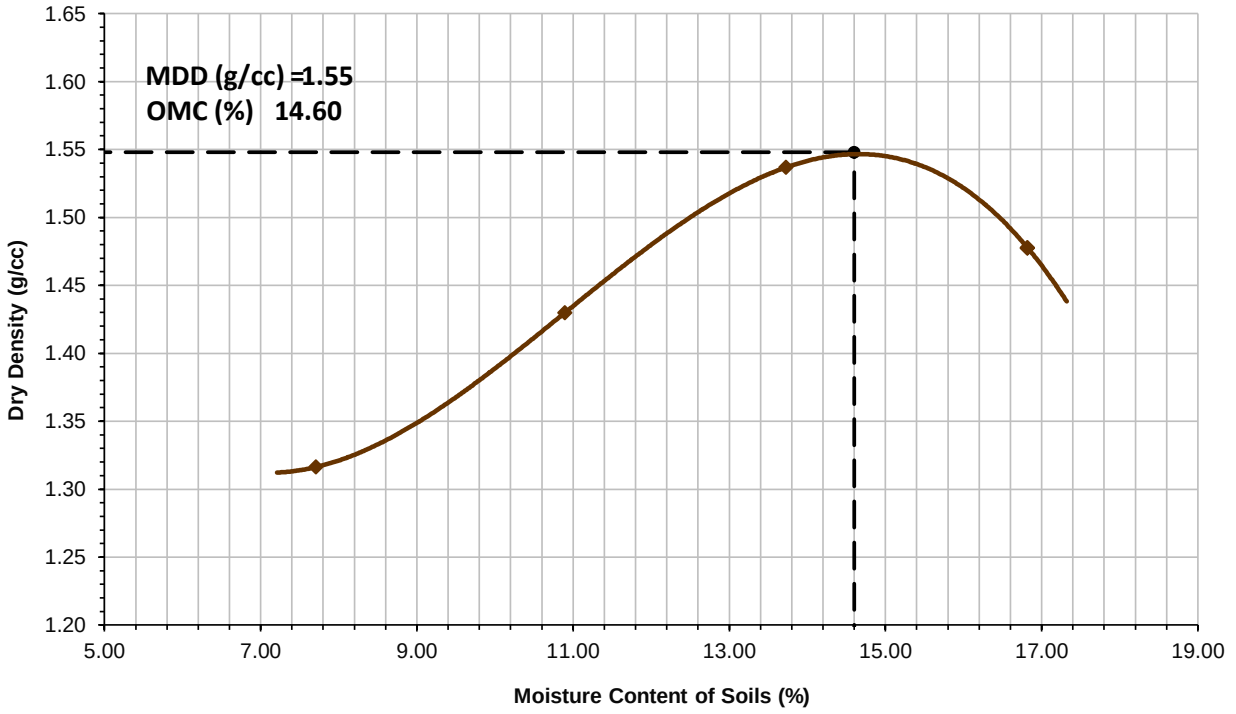
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**10-460**	**0-287**	**0-164**	**EE3**	**0-58**	**0-159**	**7A**	**0-94**	**-**	**-**	**-**	**-**
Wet Soil + Can (g)	169.35	154.06	153.44	162.86	175.72	169.41	182.80	188.68	-	-	-	-
Dry Soil + Can (g)	158.98	144.18	140.32	149.04	157.21	151.46	159.02	164.76	-	-	-	-
Mass of Can (g)	20.21	19.80	19.92	22.12	22.70	20.39	17.81	22.37	-	-	-	-
Moisture Loss (g)	10.37	9.88	13.12	13.82	18.51	17.95	23.78	23.92	-	-	-	-
Mass of Dry Soil (g)	138.77	124.38	120.40	126.92	134.51	131.07	141.21	142.39	-	-	-	-
Moisture Content (%)	7.47	7.94	10.90	10.89	13.76	13.69	16.84	16.80	-	-	-	-
Average Moisture (%)	**7.71**		**10.89**		**13.73**		**16.82**		**-**		**-**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**-**	**-**
Wet Soil + Mold (g)	4,400.00	4,555.00	4,705.00	4,685.00	-	-
Mass of Mold (g)	3,090.00	3,090.00	3,090.00	3,090.00	-	-
Mass of Wet Soil (g)	1,310.00	1,465.00	1,615.00	1,595.00	-	-
Volume of Mold (cc)	924.00	924.00	924.00	924.00	-	-
Wet Density (g/cc)	**1.42**	**1.59**	**1.75**	**1.73**	**-**	**-**
Dry Density (g/cc)	**1.32**	**1.43**	**1.54**	**1.48**	**-**	**-**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.55**
Opt. Moisture Content (%):	**14.60**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-2_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-2
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1684423.994 N ;451364.1 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**JY**	**HT**	**GRT**	**RF**	**10-80**	**10-82**
Wet Soil + Can (g)	167.55	181.98	171.26	166.18	167.87	175.05
Dry Soil + Can (g)	148.68	161.69	151.65	147.70	148.68	155.47
Mass of Can (g)	20.29	19.71	20.29	19.71	19.32	18.08
Moisture Loss (g)	18.87	20.29	19.61	18.48	19.19	19.58
Mass of Dry Soil (g)	128.39	141.98	131.37	127.99	129.36	137.39
Moisture Content (%)	14.70	14.29	14.92	14.44	14.83	14.25
Average Moisture (%)	**14.49**		**14.68**		**14.54**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-85**	**CBR-76**	**CBR-62**
Wet Soil + Mold (g)	11410.00	11010.00	11420.00
Mass of Mold (g)	7660.00	7220.00	7365.00
Mass of Wet Soil (g)	3750.00	3790.00	4055.00
Volume of Mold (cc)	2245.00	2171.00	2230.00
Wet Density (g/cc)	**1.67**	**1.75**	**1.82**
Dry Density (g/cc)	**1.46**	**1.52**	**1.59**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	2.56	2.18	1.9
Reading After Soaking ($x10^{-1}$ mm)	3.79	3.23	2.81
Swell (%)	**1.06**	**0.90**	**0.78**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	12.56	15.70	19.62	0.65	0.81	1.01			
1.27	20.93	26.16	32.70	1.08	1.35	1.69			
1.91	29.30	36.62	45.78	1.51	1.89	2.36			
2.54	36.28	45.34	56.68	1.87	2.34	2.92	**2.66**	**3.32**	**4.15**
3.81	46.04	57.55	71.94	2.37	2.97	3.71			
5.08	51.62	64.53	80.66	2.66	3.33	4.16	**2.53**	**3.17**	**3.96**
7.62	57.20	71.50	89.38	2.95	3.69	4.61			
10.16	59.99	74.99	93.74	3.09	3.87	4.83			
12.70	62.78	78.48	98.10	3.24	4.05	5.06			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

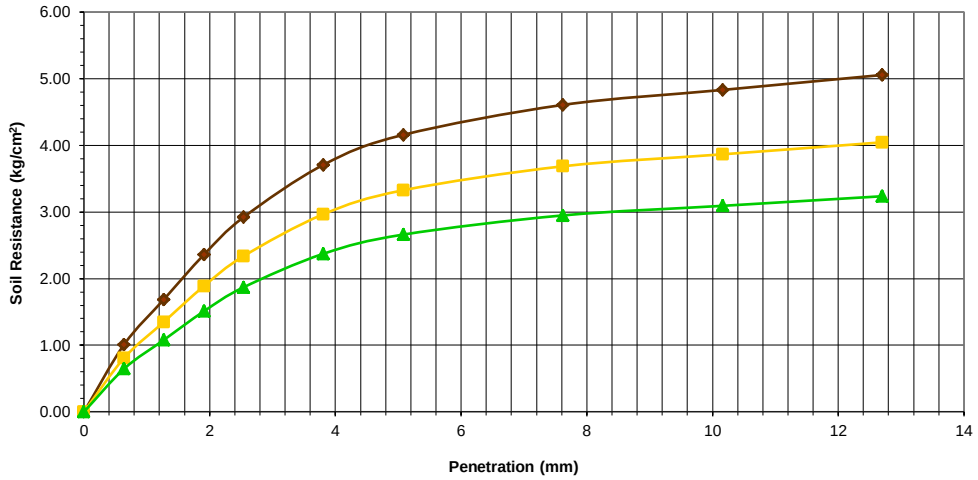
1705UIC1_RCBRT_TP-2_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

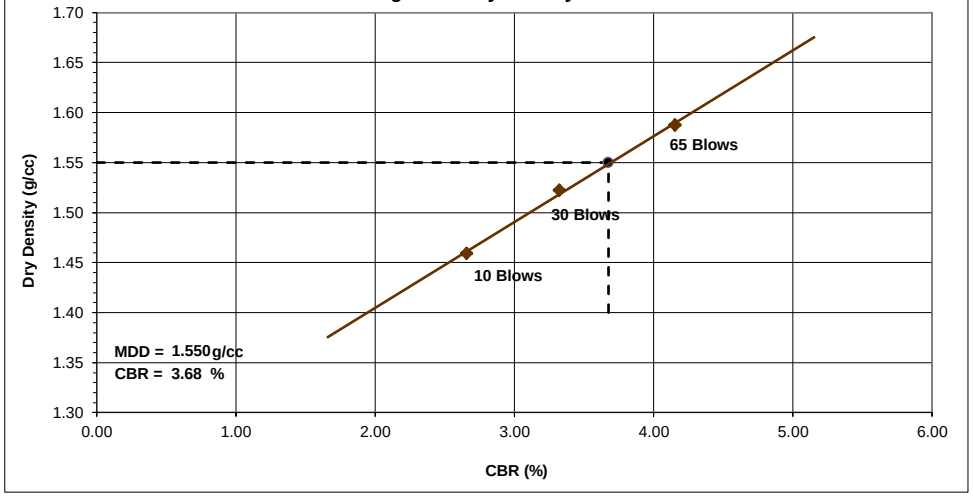
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-2
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1684423.994 N ;451364.1 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.670	2.53
30	1.746	3.17
65	1.818	3.96

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.550	3.68
95	1.473	2.80

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-2_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	07/01/17	**TP/BS Number:**	TP-3
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1684826.646 N ;451077.861 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	07/11/17

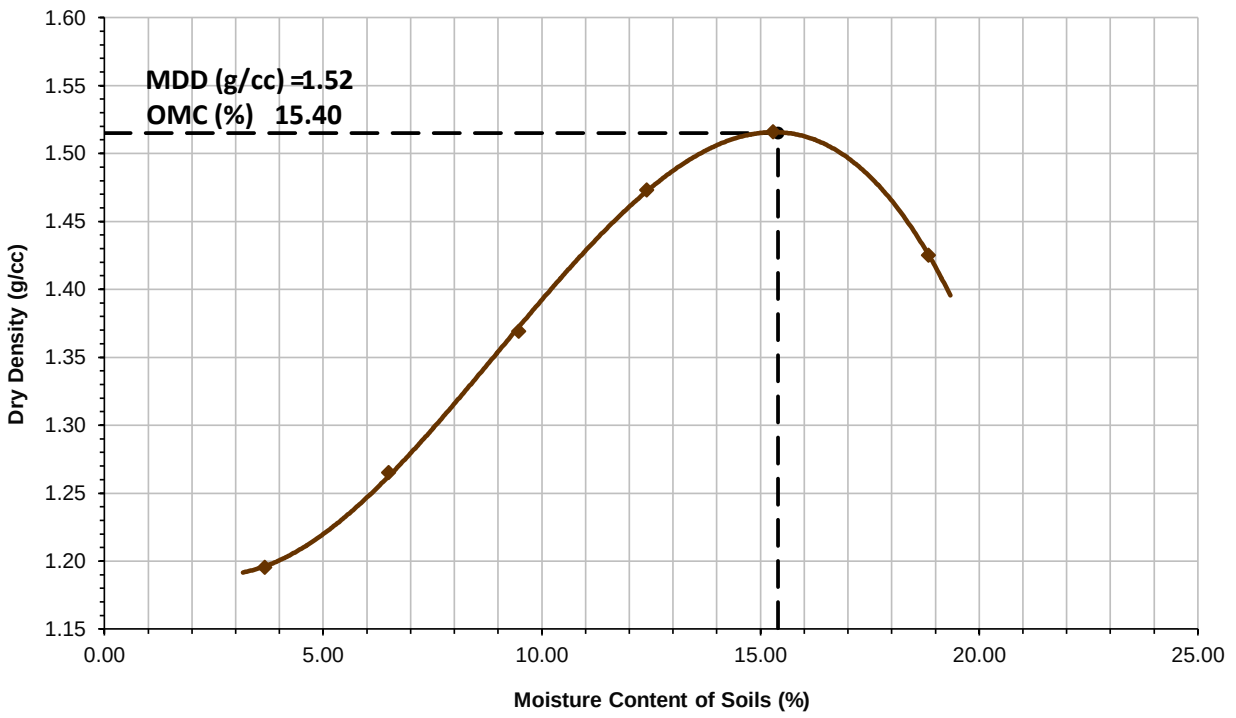
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**KK8**	**10-432**	**GH2**	**10-132**	**A8**	**CC10**	**AZ4**	**5C**	**0-64**	**KK3**	**9E**	**N**
Wet Soil + Can (g)	180.42	165.21	167.48	167.23	174.65	168.25	170.89	162.28	173.48	170.48	157.30	157.08
Dry Soil + Can (g)	175.22	159.70	158.68	158.14	161.58	155.44	154.56	146.46	153.10	151.10	135.46	135.74
Mass of Can (g)	21.78	19.88	21.59	19.95	21.34	22.45	24.19	17.45	22.08	22.08	20.31	21.74
Moisture Loss (g)	5.20	5.51	8.80	9.09	13.07	12.81	16.33	15.82	20.38	19.38	21.84	21.34
Mass of Dry Soil (g)	153.44	139.82	137.09	138.19	140.24	132.99	130.37	129.01	131.02	129.02	115.15	114.00
Moisture Content (%)	3.39	3.94	6.42	6.58	9.32	9.63	12.53	12.26	15.55	15.02	18.97	18.72
Average Moisture (%)	**3.66**		**6.50**		**9.48**		**12.39**		**15.29**		**18.84**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,200.00	4,300.00	4,440.00	4,585.00	4,670.00	4,620.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,145.00	1,245.00	1,385.00	1,530.00	1,615.00	1,565.00
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	924.00
Wet Density (g/cc)	**1.24**	**1.35**	**1.50**	**1.66**	**1.75**	**1.69**
Dry Density (g/cc)	**1.20**	**1.27**	**1.37**	**1.47**	**1.52**	**1.43**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.52**
Opt. Moisture Content (%):	**15.40**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-3_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-3
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1684826.646 N ;451077.861 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**NH**	**BG**	**VF**	**TR**	**9H**	**GG1**
Wet Soil + Can (g)	162.87	153.25	168.62	169.89	175.44	161.46
Dry Soil + Can (g)	143.41	136.02	148.03	150.34	154.20	143.18
Mass of Can (g)	18.72	21.83	17.48	21.17	17.66	22.28
Moisture Loss (g)	19.46	17.23	20.59	19.55	21.24	18.28
Mass of Dry Soil (g)	124.69	114.19	130.55	129.17	136.54	120.90
Moisture Content (%)	15.61	15.09	15.77	15.14	15.56	15.12
Average Moisture (%)	**15.35**		**15.45**		**15.34**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-53**	**CBR-72**	**CBR-88**
Wet Soil + Mold (g)	9780.00	9960.00	10210.00
Mass of Mold (g)	6090.00	6210.00	6210.00
Mass of Wet Soil (g)	3690.00	3750.00	4000.00
Volume of Mold (cc)	2245.00	2183.00	2238.00
Wet Density (g/cc)	**1.64**	**1.72**	**1.79**
Dry Density (g/cc)	**1.42**	**1.49**	**1.55**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	3.06	2.61	2.27
Reading After Soaking ($x10^{-1}$ mm)	3.7	3.15	2.74
Swell (%)	**0.55**	**0.46**	**0.40**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	15.35	19.18	23.98	0.79	0.99	1.24			
1.27	24.42	30.52	38.15	1.26	1.57	1.97			
1.91	30.69	38.37	47.96	1.58	1.98	2.47			
2.54	34.88	43.60	54.50	1.80	2.25	2.81	**2.56**	**3.20**	**3.99**
3.81	40.46	50.58	63.22	2.09	2.61	3.26			
5.08	43.25	54.06	67.58	2.23	2.79	3.48	**2.12**	**2.65**	**3.32**
7.62	47.44	59.30	74.12	2.45	3.06	3.82			
10.16	50.23	62.78	78.48	2.59	3.24	4.05			
12.70	51.62	64.53	80.66	2.66	3.33	4.16			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

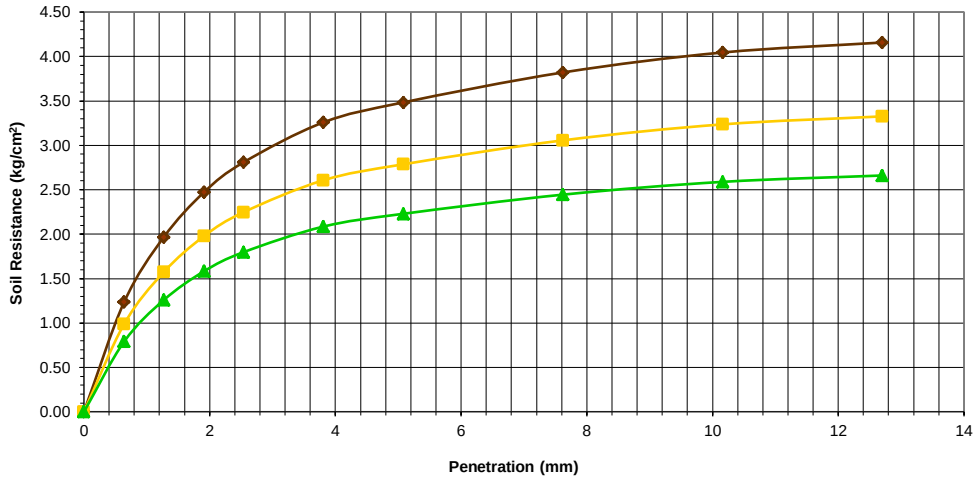
1705UIC1_RCBRT_TP-3_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

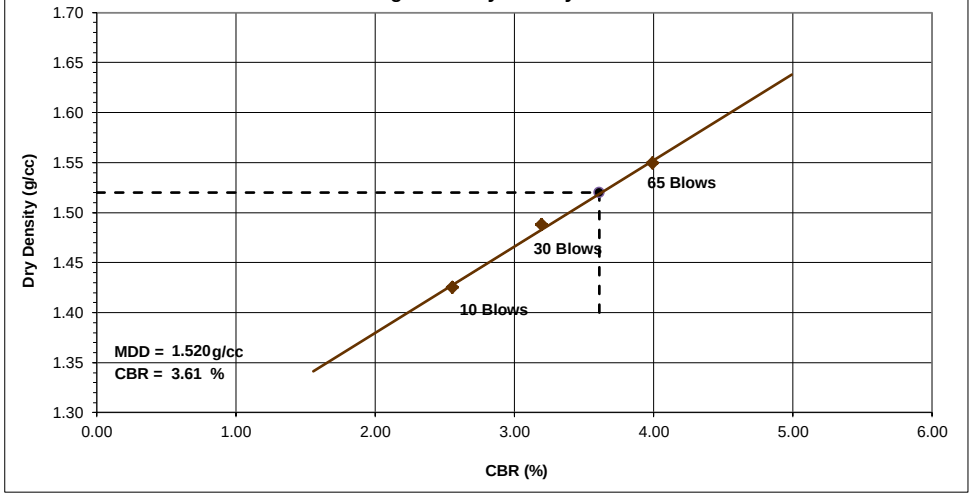
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-3
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1684826.646 N ;451077.861 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.644	2.12
30	1.718	2.65
65	1.787	3.32

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.520	3.61
95	1.444	2.75

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-3_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	07/01/17	**TP/BS Number:**	TP-4
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1685322.38 N ;451028.032 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	07/13/17

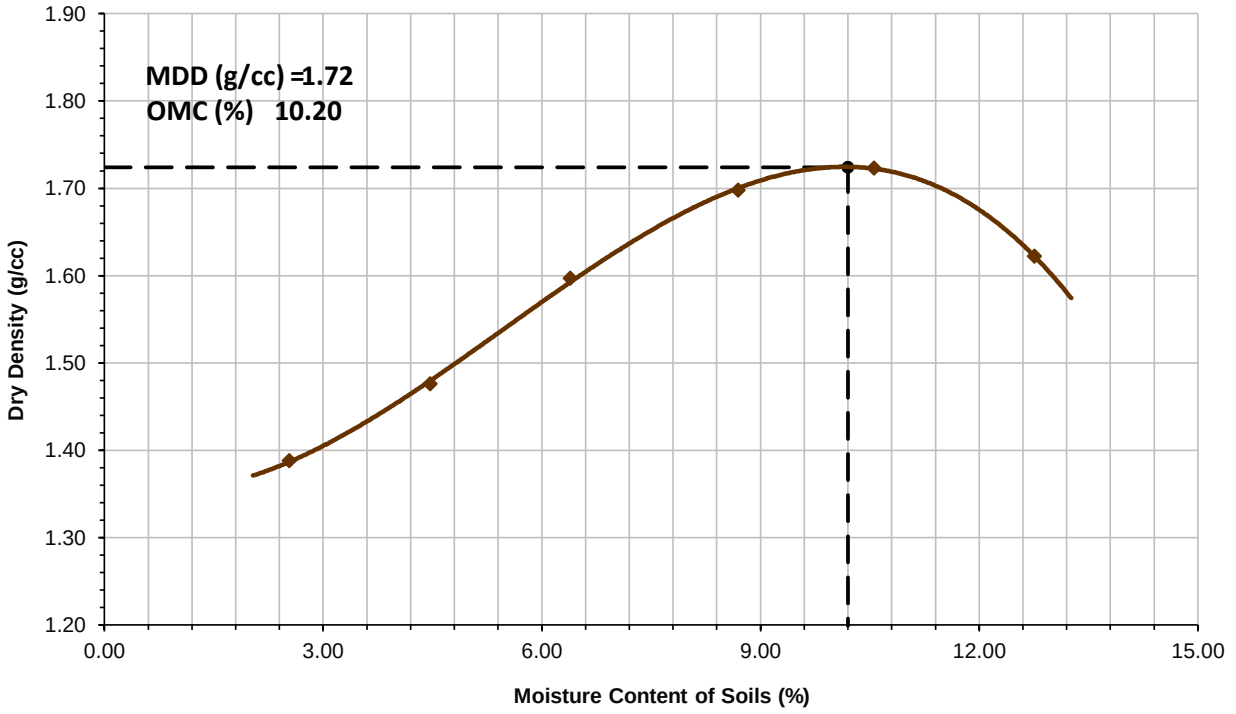
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**0-116**	**0-8**	**1M**	**0-295**	**0-295**	**0-347**	**0-69**	**0-461**	**4B**	**0-122**	**NN10**	**10-429**
Wet Soil + Can (g)	191.67	195.23	166.91	154.24	154.24	180.83	173.93	192.34	178.83	184.45	183.85	184.10
Dry Soil + Can (g)	187.49	190.83	160.52	148.50	146.50	170.77	161.17	178.99	163.69	168.69	165.29	165.83
Mass of Can (g)	22.66	17.67	17.42	20.20	20.20	19.57	19.11	20.05	17.59	22.11	22.34	20.13
Moisture Loss (g)	4.18	4.40	6.39	5.74	7.74	10.06	12.76	13.35	15.14	15.76	18.56	18.27
Mass of Dry Soil (g)	164.83	173.16	143.10	128.30	126.30	151.20	142.06	158.94	146.10	146.58	142.95	145.70
Moisture Content (%)	2.54	2.54	4.47	4.47	6.13	6.65	8.98	8.40	10.36	10.75	12.98	12.54
Average Moisture (%)	**2.54**		**4.47**		**6.39**		**8.69**		**10.56**		**12.76**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,370.00	4,480.00	4,625.00	4,760.00	4,815.00	4,745.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,315.00	1,425.00	1,570.00	1,705.00	1,760.00	1,690.00
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	924.00
Wet Density (g/cc)	**1.42**	**1.54**	**1.70**	**1.85**	**1.90**	**1.83**
Dry Density (g/cc)	**1.39**	**1.48**	**1.60**	**1.70**	**1.72**	**1.62**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.72**
Opt. Moisture Content (%):	**10.20**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-4_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-4
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1685322.38 N ;451028.032 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**KJ**	**HU**	**YT**	**GV**	**AA6**	**9E**
Wet Soil + Can (g)	188.48	144.21	190.01	145.61	182.84	150.07
Dry Soil + Can (g)	172.88	132.75	174.55	134.13	167.84	138.28
Mass of Can (g)	22.25	18.62	25.23	20.48	22.94	20.69
Moisture Loss (g)	15.61	11.46	15.46	11.48	15.00	11.79
Mass of Dry Soil (g)	150.62	114.13	149.32	113.65	144.90	117.59
Moisture Content (%)	10.36	10.04	10.35	10.10	10.35	10.03
Average Moisture (%)	**10.20**		**10.23**		**10.19**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-96**	**CBR-84**	**CBR-76**
Wet Soil + Mold (g)	10870.00	10710.00	11060.00
Mass of Mold (g)	7030.00	6690.00	6760.00
Mass of Wet Soil (g)	3840.00	4020.00	4300.00
Volume of Mold (cc)	2161.00	2170.00	2225.00
Wet Density (g/cc)	**1.78**	**1.85**	**1.93**
Dry Density (g/cc)	**1.61**	**1.68**	**1.75**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.73	1.47	1.28
Reading After Soaking ($x10^{-1}$ mm)	2.07	1.76	1.53
Swell (%)	**0.29**	**0.25**	**0.21**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows		
	10	30	65	10	30	65
0.64	37.67	47.09	58.86	1.94	2.43	3.03
1.27	62.78	78.48	98.10	3.24	4.05	5.06
1.91	80.92	101.15	126.44	4.17	5.21	6.52
2.54	93.48	116.85	146.06	4.82	6.02	7.53
3.81	111.62	139.52	174.40	5.75	7.19	8.99
5.08	122.78	153.47	191.84	6.33	7.91	9.89
7.62	131.15	163.94	204.92	6.76	8.45	10.56
10.16	133.94	167.42	209.28	6.90	8.63	10.79
12.70	138.12	172.66	215.82	7.12	8.90	11.12

CBR (%) Blows		
10	30	65
6.85	**8.56**	**10.70**
6.03	**7.53**	**9.42**

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

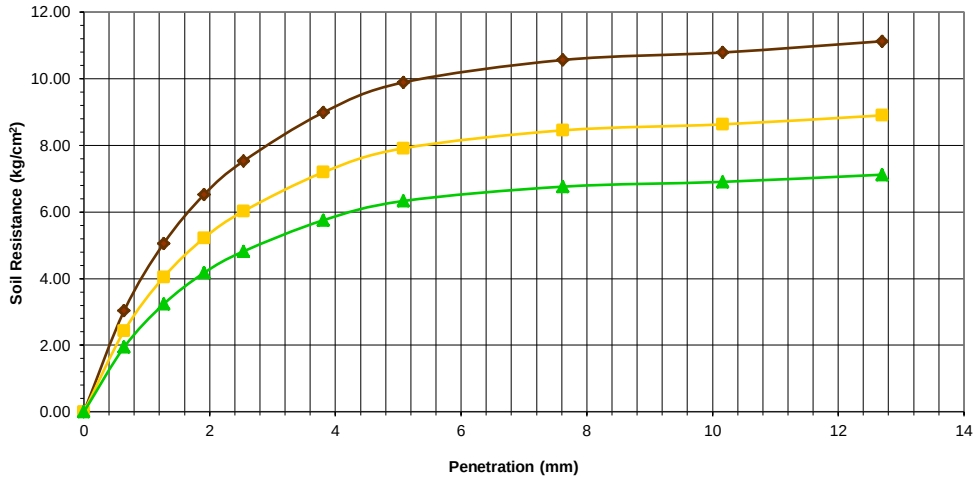
1705UIC1_RCBRT_TP-4_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

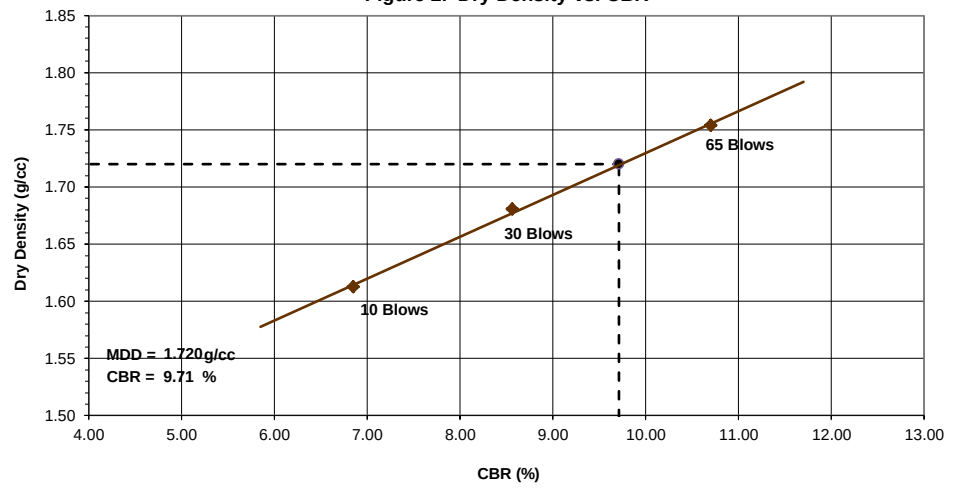
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-4
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1685322.38 N ;451028.032 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.777	6.03
30	1.853	7.53
65	1.933	9.42

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.720	9.71
95	1.634	7.39

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-4_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	07/01/17	**TP/BS Number:**	TP-5
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1685800.266 N ;450962.727 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	07/11/17

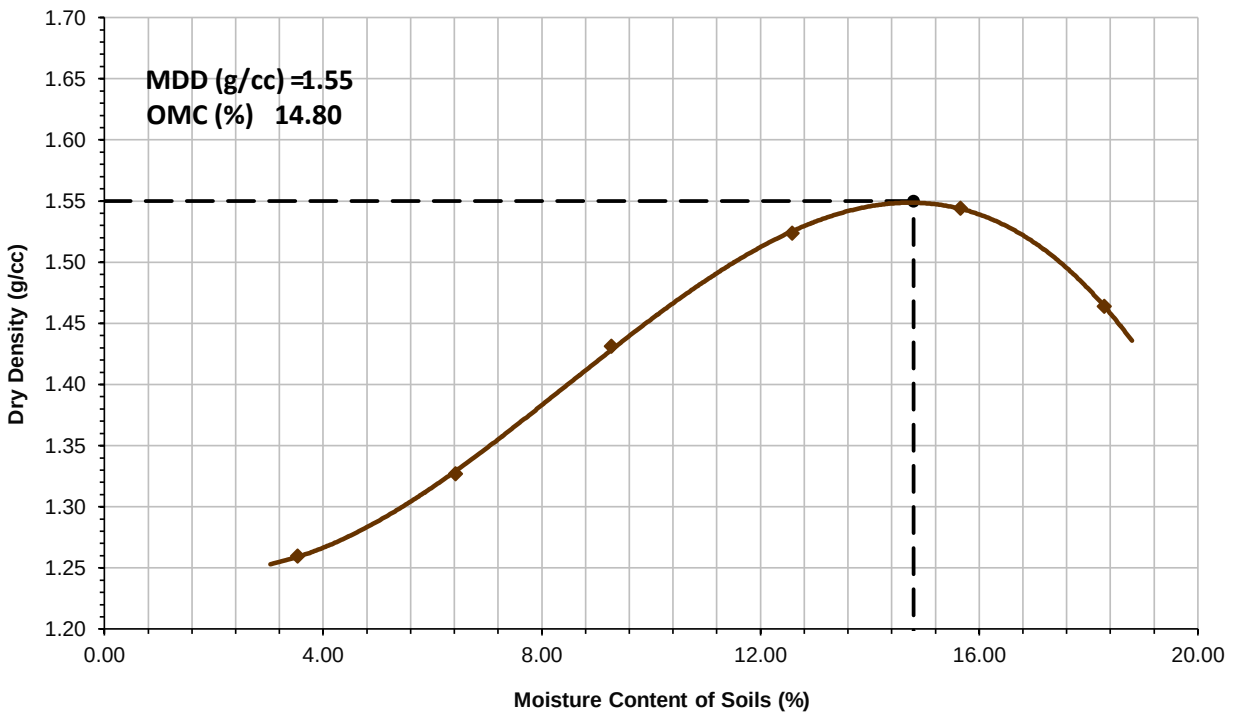
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**0-247**	**10-434**	**0-68**	**NN6**	**CC5**	**6H**	**10-18**	**0-353**	**0-151**	**HH7**	**10-140**	**10-94**
Wet Soil + Can (g)	164.07	177.11	180.19	170.46	185.13	179.32	185.63	177.48	175.83	165.76	180.76	161.86
Dry Soil + Can (g)	159.60	171.26	170.60	161.62	171.70	165.00	166.88	159.86	155.06	146.32	155.96	139.96
Mass of Can (g)	20.08	19.76	22.54	22.94	22.67	14.69	17.76	19.91	22.79	21.79	20.14	20.45
Moisture Loss (g)	4.47	5.85	9.59	8.84	13.43	14.32	18.75	17.62	20.77	19.44	24.80	21.90
Mass of Dry Soil (g)	139.52	151.50	148.06	138.68	149.03	150.31	149.12	139.95	132.27	124.53	135.82	119.51
Moisture Content (%)	3.20	3.86	6.48	6.37	9.01	9.53	12.57	12.59	15.70	15.61	18.26	18.32
Average Moisture (%)	**3.53**		**6.43**		**9.27**		**12.58**		**15.66**		**18.29**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,260.00	4,360.00	4,500.00	4,640.00	4,705.00	4,655.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,205.00	1,305.00	1,445.00	1,585.00	1,650.00	1,600.00
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	924.00
Wet Density (g/cc)	**1.30**	**1.41**	**1.56**	**1.72**	**1.79**	**1.73**
Dry Density (g/cc)	**1.26**	**1.33**	**1.43**	**1.52**	**1.54**	**1.46**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.55**
Opt. Moisture Content (%):	**14.80**

Performed by: DANILO DELAN
Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

1705UIC1_RMDRT_TP-5_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-5
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1685800.266 N ;450962.727 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**VB**	**GF**	**BT**	**EW**	**BB3**	**N**
Wet Soil + Can (g)	189.52	184.45	180.98	182.63	175.35	177.49
Dry Soil + Can (g)	167.80	163.86	160.03	162.29	155.37	157.56
Mass of Can (g)	23.05	22.21	21.92	21.57	22.60	21.15
Moisture Loss (g)	21.72	20.59	20.95	20.34	19.98	19.93
Mass of Dry Soil (g)	144.75	141.65	138.11	140.71	132.77	136.41
Moisture Content (%)	15.00	14.54	15.17	14.46	15.05	14.61
Average Moisture (%)	**14.77**		**14.81**		**14.83**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-82**	**CBR-59**	**CBR-69**
Wet Soil + Mold (g)	10360.00	10660.00	10850.00
Mass of Mold (g)	6760.00	6890.00	6755.00
Mass of Wet Soil (g)	3600.00	3770.00	4095.00
Volume of Mold (cc)	2152.00	2159.00	2250.00
Wet Density (g/cc)	**1.67**	**1.75**	**1.82**
Dry Density (g/cc)	**1.46**	**1.52**	**1.58**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	2.08	1.77	1.54
Reading After Soaking ($x10^{-1}$ mm)	4.02	3.43	2.98
Swell (%)	**1.67**	**1.43**	**1.24**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows		
	10	30	65	10	30	65
0.64	13.95	17.44	21.80	0.72	0.90	1.12
1.27	23.72	29.65	37.06	1.22	1.53	1.91
1.91	30.69	38.37	47.96	1.58	1.98	2.47
2.54	36.28	45.34	56.68	1.87	2.34	2.92
3.81	43.25	54.06	67.58	2.23	2.79	3.48
5.08	48.83	61.04	76.30	2.52	3.15	3.93
7.62	55.81	69.76	87.20	2.88	3.60	4.49
10.16	59.99	74.99	93.74	3.09	3.87	4.83
12.70	64.18	80.22	100.28	3.31	4.14	5.17

CBR (%) Blows		
10	30	65
2.66	**3.32**	**4.15**
2.40	**3.00**	**3.75**

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

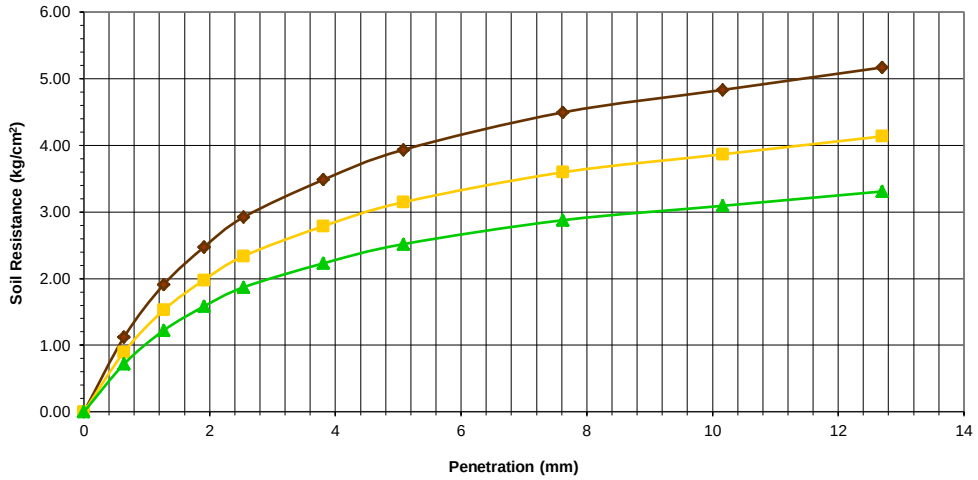
1705UIC1_RCBRT_TP-5_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

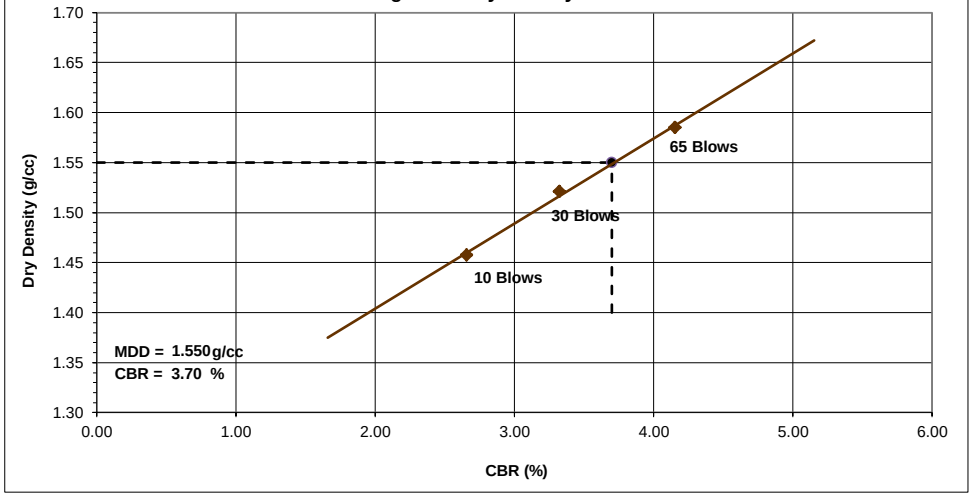
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-5
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1685800.266 N ;450962.727 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.673	2.40
30	1.746	3.00
65	1.820	3.75

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.550	3.70
95	1.473	2.82

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-5_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	07/01/17	**TP/BS Number:**	TP-6
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1686231.699 N ;450713.893 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	07/13/17

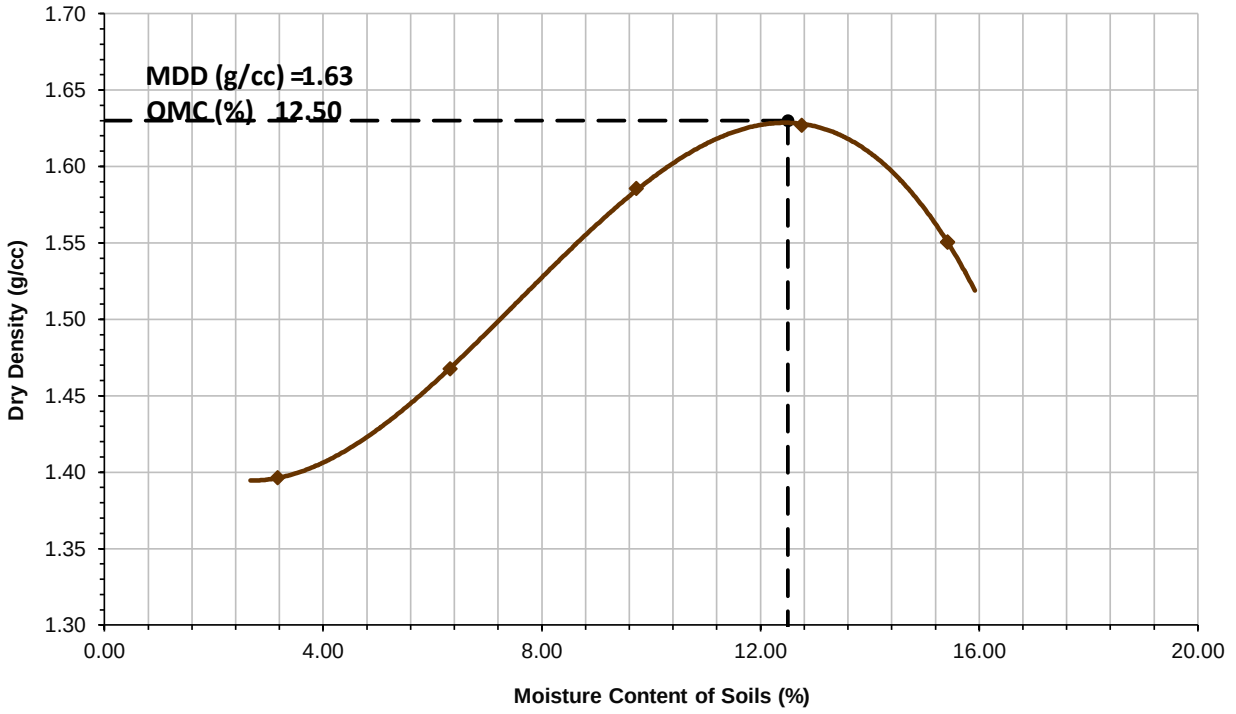
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**10-133**	**II5**	**0-178**	**9H**	**N**	**KK3**	**OD8**	**9E**	**8H**	**FF2**	**-**	**-**
Wet Soil + Can (g)	180.81	171.37	167.93	165.60	175.70	173.92	173.25	165.93	178.16	178.87	-	-
Dry Soil + Can (g)	175.86	166.78	159.46	156.46	161.95	160.47	156.13	149.40	156.44	158.27	-	-
Mass of Can (g)	19.83	21.70	20.17	17.37	20.76	22.05	21.33	20.38	17.68	22.69	-	-
Moisture Loss (g)	4.95	4.59	8.47	9.14	13.75	13.45	17.12	16.53	21.72	20.60	-	-
Mass of Dry Soil (g)	156.03	145.08	139.29	139.09	141.19	138.42	134.80	129.02	138.76	135.58	-	-
Moisture Content (%)	3.17	3.16	6.08	6.57	9.74	9.72	12.70	12.81	15.65	15.19	-	-
Average Moisture (%)	**3.17**		**6.33**		**9.73**		**12.76**		**15.42**		**-**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-5**	**NMDR-5**	**NMDR-5**	**NMDR-5**	**NMDR-5**	**-**
Wet Soil + Mold (g)	4,505.00	4,625.00	4,805.00	4,900.00	4,855.00	-
Mass of Mold (g)	3,060.00	3,060.00	3,060.00	3,060.00	3,060.00	-
Mass of Wet Soil (g)	1,445.00	1,565.00	1,745.00	1,840.00	1,795.00	-
Volume of Mold (cc)	1003.00	1003.00	1003.00	1003.00	1003.00	-
Wet Density (g/cc)	**1.44**	**1.56**	**1.74**	**1.83**	**1.79**	**-**
Dry Density (g/cc)	**1.40**	**1.47**	**1.59**	**1.63**	**1.55**	**-**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.63**
Opt. Moisture Content (%):	**12.50**

Performed by: DANILO DELAN
Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

1705UIC1_RMDRT_TP-6_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-6
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1686231.699 N ;450713.893 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**NH**	**DS**	**VT**	**RF**	**CC10**	**4FF**
Wet Soil + Can (g)	157.82	142.15	181.10	149.50	172.14	146.71
Dry Soil + Can (g)	142.81	128.91	162.99	135.56	155.23	132.90
Mass of Can (g)	24.36	21.15	21.40	21.15	22.77	20.74
Moisture Loss (g)	15.00	13.24	18.11	13.94	16.91	13.81
Mass of Dry Soil (g)	118.45	107.76	141.59	114.40	132.46	112.16
Moisture Content (%)	12.67	12.29	12.79	12.19	12.77	12.31
Average Moisture (%)	**12.48**		**12.49**		**12.54**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-55**	**CBR-73**	**CBR-87**
Wet Soil + Mold (g)	10760.00	10940.00	10890.00
Mass of Mold (g)	6960.00	6960.00	6695.00
Mass of Wet Soil (g)	3800.00	3980.00	4195.00
Volume of Mold (cc)	2224.00	2227.00	2254.00
Wet Density (g/cc)	**1.71**	**1.79**	**1.86**
Dry Density (g/cc)	**1.52**	**1.59**	**1.65**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.51	1.29	1.12
Reading After Soaking ($x10^{-1}$ mm)	2.52	2.15	1.87
Swell (%)	**0.87**	**0.74**	**0.64**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	13.95	17.44	21.80	0.72	0.90	1.12			
1.27	23.72	29.65	37.06	1.22	1.53	1.91			
1.91	30.69	38.37	47.96	1.58	1.98	2.47			
2.54	34.88	43.60	54.50	1.80	2.25	2.81	**2.56**	**3.20**	**3.99**
3.81	40.46	50.58	63.22	2.09	2.61	3.26			
5.08	44.65	55.81	69.76	2.30	2.88	3.60	**2.19**	**2.74**	**3.42**
7.62	50.23	62.78	78.48	2.59	3.24	4.05			
10.16	54.41	68.02	85.02	2.80	3.51	4.38			
12.70	57.20	71.50	89.38	2.95	3.69	4.61			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

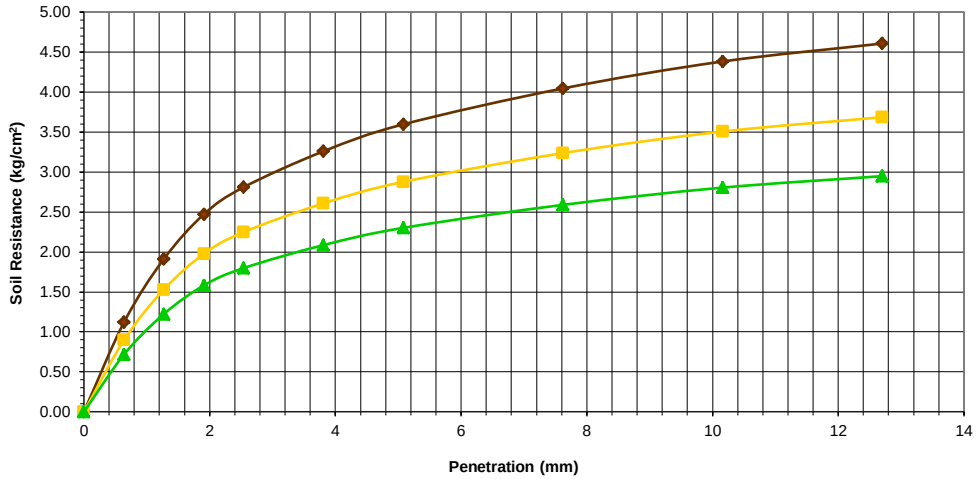
1705UIC1_RCBRT_TP-6_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

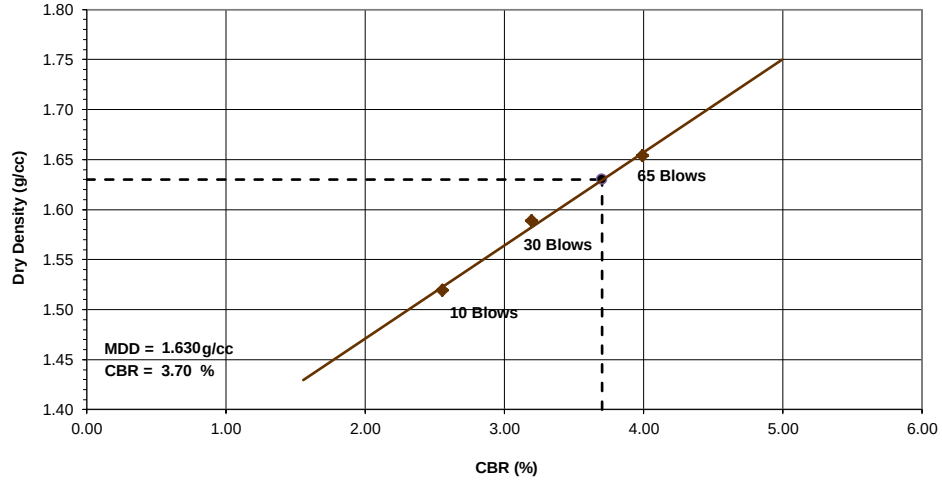
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-6
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1686231.699 N ;450713.893 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.709	2.19
30	1.787	2.74
65	1.861	3.42

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.630	3.70
95	1.549	2.83

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-6_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	07/01/17	**TP/BS Number:**	TP-7
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1686719.907 N ;450661.102 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	07/13/17

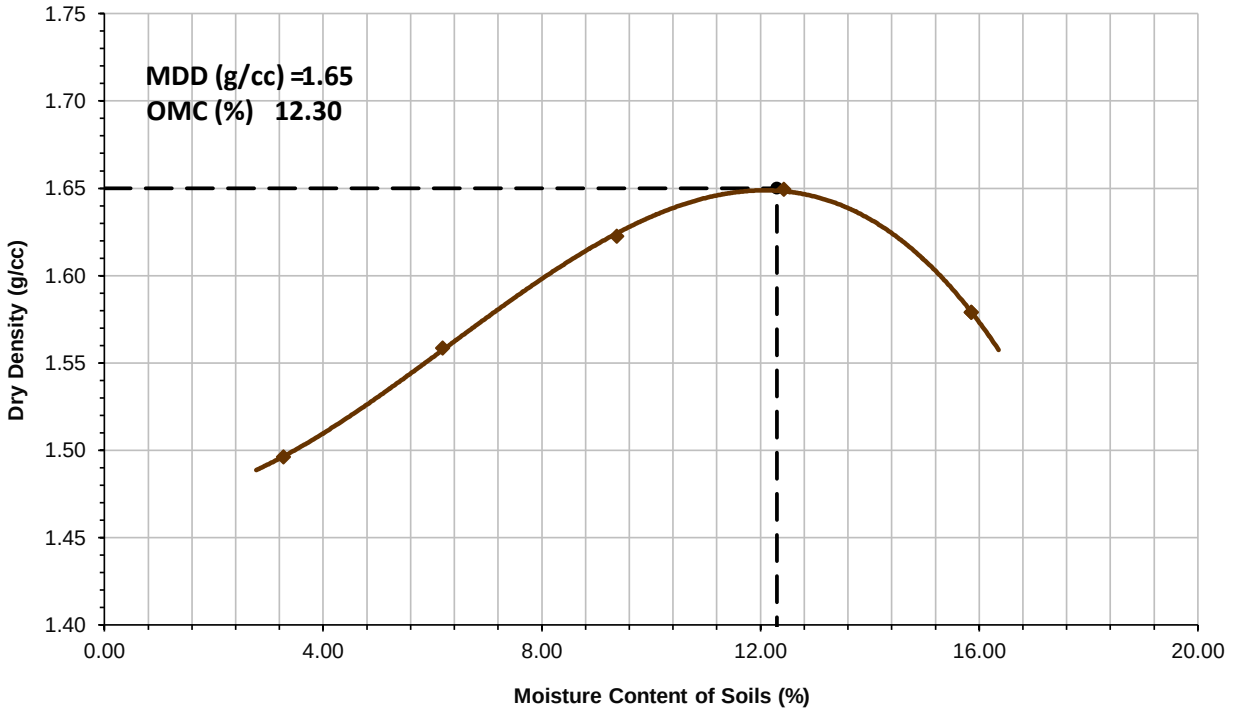
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**0-212**	**0-433**	**10-115**	**10-273**	**0-167**	**0-351**	**10-397**	**10-436**	**0-331**	**10-207**	**-**	**-**
Wet Soil + Can (g)	164.57	176.90	156.41	150.38	176.81	169.79	163.85	163.87	158.45	158.75	-	-
Dry Soil + Can (g)	159.70	172.25	148.62	142.67	163.48	157.12	148.35	147.61	139.50	139.90	-	-
Mass of Can (g)	20.30	20.46	20.20	20.38	22.80	20.52	20.10	20.30	20.50	20.52	-	-
Moisture Loss (g)	4.87	4.65	7.79	7.71	13.33	12.67	15.50	16.26	18.95	18.85	-	-
Mass of Dry Soil (g)	139.40	151.79	128.42	122.29	140.68	136.60	128.25	127.31	119.00	119.38	-	-
Moisture Content (%)	3.49	3.06	6.07	6.30	9.48	9.28	12.09	12.77	15.92	15.79	-	-
Average Moisture (%)	**3.28**		**6.19**		**9.38**		**12.43**		**15.86**		**-**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**-**
Wet Soil + Mold (g)	4,610.00	4,720.00	4,840.00	4,920.00	4,895.00	-
Mass of Mold (g)	3,060.00	3,060.00	3,060.00	3,060.00	3,060.00	-
Mass of Wet Soil (g)	1,550.00	1,660.00	1,780.00	1,860.00	1,835.00	-
Volume of Mold (cc)	1003.00	1003.00	1003.00	1003.00	1003.00	-
Wet Density (g/cc)	**1.55**	**1.66**	**1.77**	**1.85**	**1.83**	**-**
Dry Density (g/cc)	**1.50**	**1.56**	**1.62**	**1.65**	**1.58**	**-**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.65**
Opt. Moisture Content (%):	**12.30**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-7_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-7
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1686719.907 N ;450661.102 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**BV**	**CX**	**DF**	**VF**	**CC5**	**CC3**
Wet Soil + Can (g)	165.08	173.70	179.10	166.48	175.49	173.51
Dry Soil + Can (g)	149.10	157.24	161.79	150.95	158.62	157.24
Mass of Can (g)	21.15	20.74	24.37	22.99	22.99	22.54
Moisture Loss (g)	15.98	16.46	17.31	15.53	16.87	16.27
Mass of Dry Soil (g)	127.95	136.50	137.42	127.96	135.63	134.70
Moisture Content (%)	12.49	12.06	12.59	12.14	12.44	12.08
Average Moisture (%)	**12.27**		**12.37**		**12.26**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-81**	**CBR-100**	**CBR-94**
Wet Soil + Mold (g)	10290.00	10480.00	11010.00
Mass of Mold (g)	6490.00	6430.00	6765.00
Mass of Wet Soil (g)	3800.00	4050.00	4245.00
Volume of Mold (cc)	2182.00	2222.00	2242.00
Wet Density (g/cc)	**1.74**	**1.82**	**1.89**
Dry Density (g/cc)	**1.55**	**1.62**	**1.69**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	5.37	4.58	3.98
Reading After Soaking ($x10^{-1}$ mm)	5.52	4.7	4.09
Swell (%)	**0.13**	**0.10**	**0.09**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	15.35	19.18	23.98	0.79	0.99	1.24			
1.27	25.11	31.39	39.24	1.29	1.62	2.02			
1.91	32.79	40.98	51.23	1.69	2.11	2.64			
2.54	39.07	48.83	61.04	2.01	2.52	3.15	**2.86**	**3.58**	**4.47**
3.81	47.44	59.30	74.12	2.45	3.06	3.82			
5.08	51.62	64.53	80.66	2.66	3.33	4.16	**2.53**	**3.17**	**3.96**
7.62	57.20	71.50	89.38	2.95	3.69	4.61			
10.16	59.99	74.99	93.74	3.09	3.87	4.83			
12.70	62.78	78.48	98.10	3.24	4.05	5.06			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

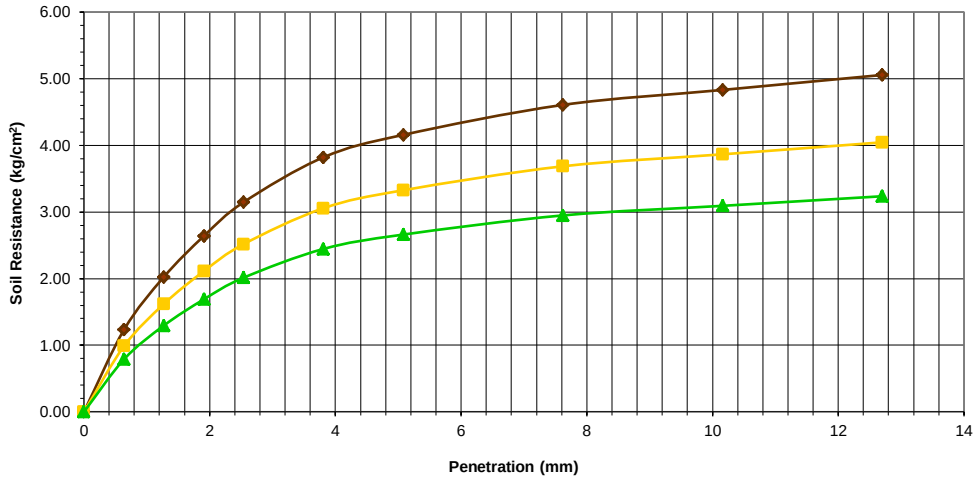
1705UIC1_RCBRT_TP-7_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

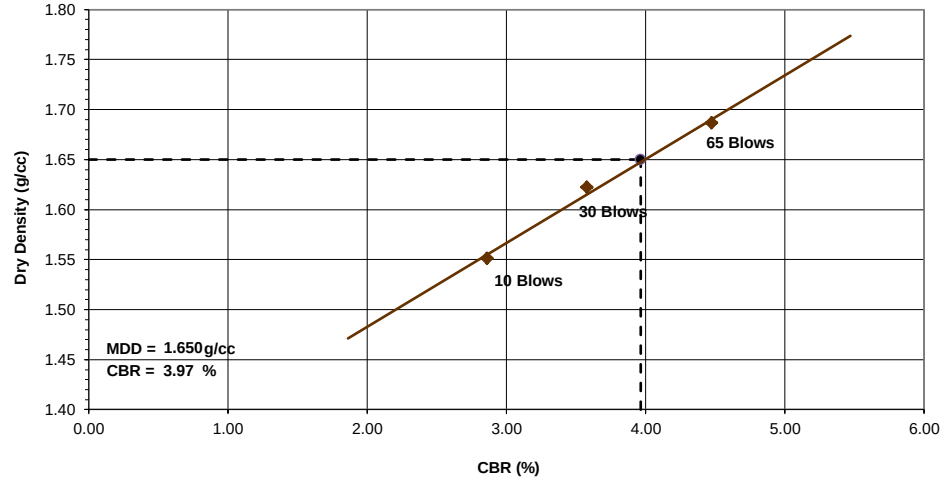
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-7
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1686719.907 N ;450661.102 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.742	2.53
30	1.823	3.17
65	1.893	3.96

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.650	3.97
95	1.568	3.03

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-7_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	07/01/17	**TP/BS Number:**	TP-8
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1687148.043 N ;450491.548 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	07/12/17

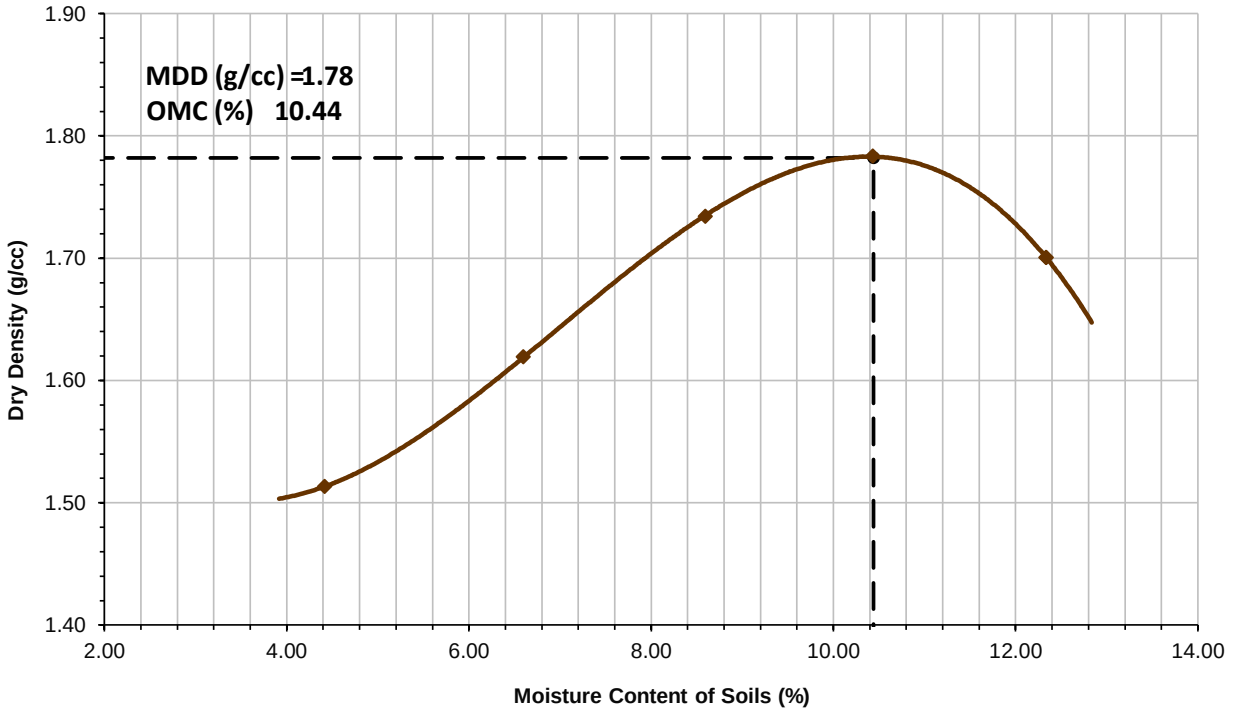
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**0-454**	**NN2**	**0-110**	**9F**	**II9**	**0-136**	**0-257**	**10-406**	**10-386**	**0-181**	**-**	**-**
Wet Soil + Can (g)	146.62	179.01	188.12	180.78	171.26	171.91	190.80	194.88	169.28	173.56	-	-
Dry Soil + Can (g)	140.82	172.93	177.97	170.80	159.76	159.79	174.53	178.45	153.01	156.58	-	-
Mass of Can (g)	20.27	21.88	23.02	20.59	21.91	22.75	19.71	19.84	19.95	20.14	-	-
Moisture Loss (g)	5.80	6.08	10.15	9.98	11.50	12.12	16.27	16.43	16.27	16.98	-	-
Mass of Dry Soil (g)	120.55	151.05	154.95	150.21	137.85	137.04	154.82	158.61	133.06	136.44	-	-
Moisture Content (%)	4.81	4.03	6.55	6.64	8.34	8.84	10.51	10.36	12.23	12.45	-	-
Average Moisture (%)	**4.42**		**6.60**		**8.59**		**10.43**		**12.34**		**-**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**-**
Wet Soil + Mold (g)	4,515.00	4,650.00	4,795.00	4,875.00	4,820.00	-
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	-
Mass of Wet Soil (g)	1,460.00	1,595.00	1,740.00	1,820.00	1,765.00	-
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	-
Wet Density (g/cc)	**1.58**	**1.73**	**1.88**	**1.97**	**1.91**	**-**
Dry Density (g/cc)	**1.51**	**1.62**	**1.73**	**1.78**	**1.70**	**-**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.78**
Opt. Moisture Content (%):	**10.44**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-8_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-8
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1687148.043 N ;450491.548 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**QA**	**SA**	**FD**	**BG**	**GG2**	**AA3**
Wet Soil + Can (g)	168.48	173.71	179.66	163.90	175.65	165.54
Dry Soil + Can (g)	154.60	159.92	164.26	150.78	161.04	152.30
Mass of Can (g)	23.58	23.99	20.21	22.65	22.46	22.21
Moisture Loss (g)	13.88	13.80	15.40	13.12	14.61	13.24
Mass of Dry Soil (g)	131.02	135.93	144.05	128.12	138.58	130.09
Moisture Content (%)	10.59	10.15	10.69	10.24	10.54	10.18
Average Moisture (%)	**10.37**		**10.47**		**10.36**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-16**	**CBR-10**	**CBR-06**
Wet Soil + Mold (g)	10590.00	10550.00	10690.00
Mass of Mold (g)	6430.00	6310.00	6185.00
Mass of Wet Soil (g)	4160.00	4240.00	4505.00
Volume of Mold (cc)	2248.00	2196.00	2239.00
Wet Density (g/cc)	**1.85**	**1.93**	**2.01**
Dry Density (g/cc)	**1.68**	**1.75**	**1.82**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	6.14	5.23	4.55
Reading After Soaking ($x10^{-1}$ mm)	6.47	5.51	4.79
Swell (%)	**0.28**	**0.24**	**0.21**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	33.48	41.86	52.32	1.73	2.16	2.70			
1.27	66.97	83.71	104.64	3.45	4.32	5.39			
1.91	90.69	113.36	141.70	4.67	5.84	7.30			
2.54	104.64	130.80	163.50	5.39	6.74	8.43	**7.67**	**9.59**	**11.98**
3.81	124.17	155.22	194.02	6.40	8.00	10.00			
5.08	135.33	169.17	211.46	6.98	8.72	10.90	**6.64**	**8.31**	**10.38**
7.62	142.31	177.89	222.36	7.34	9.17	11.46			
10.16	149.29	186.61	233.26	7.70	9.62	12.02			
12.70	153.47	191.84	239.80	7.91	9.89	12.36			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

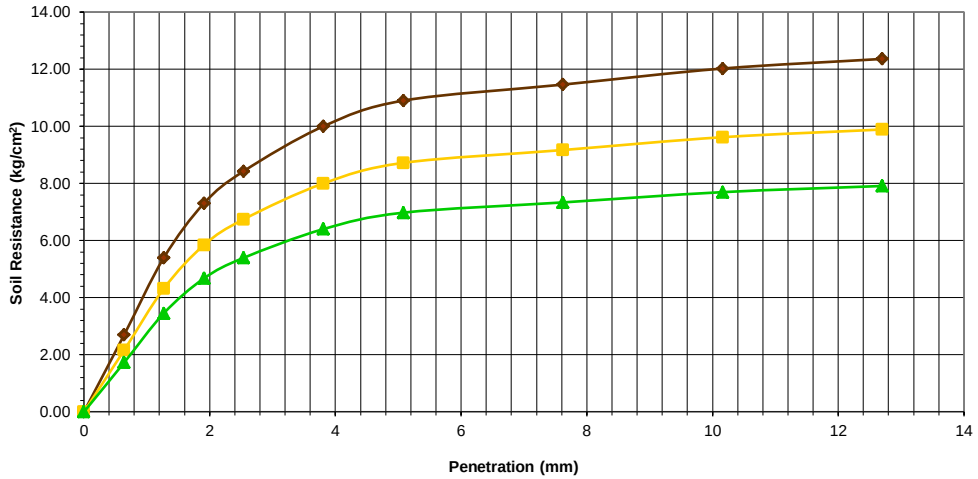
1705UIC1_RCBRT_TP-8_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

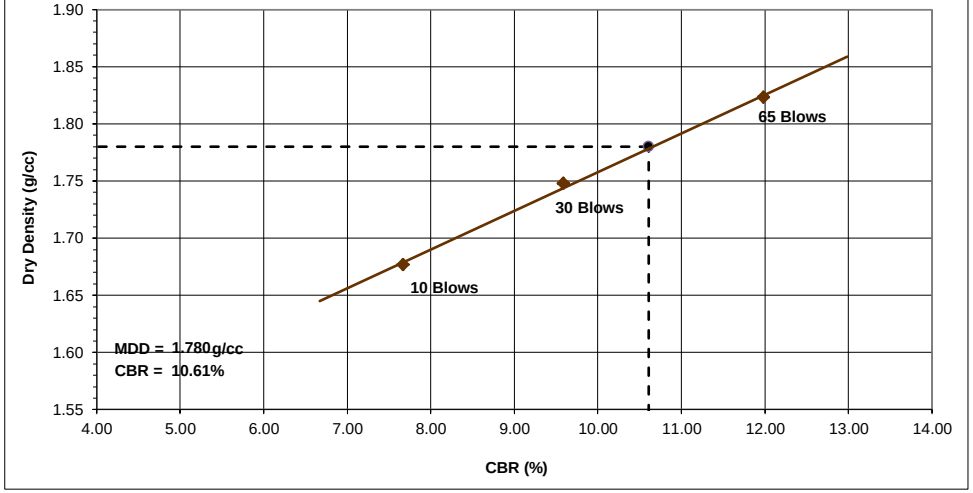
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-8
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1687148.043 N ;450491.548 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.851	6.64
30	1.931	8.31
65	2.012	10.38

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.780	10.61
95	1.691	8.06

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-8_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	07/01/17	**TP/BS Number:**	TP-9
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1687275.494 N ;450008.067 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	07/13/17

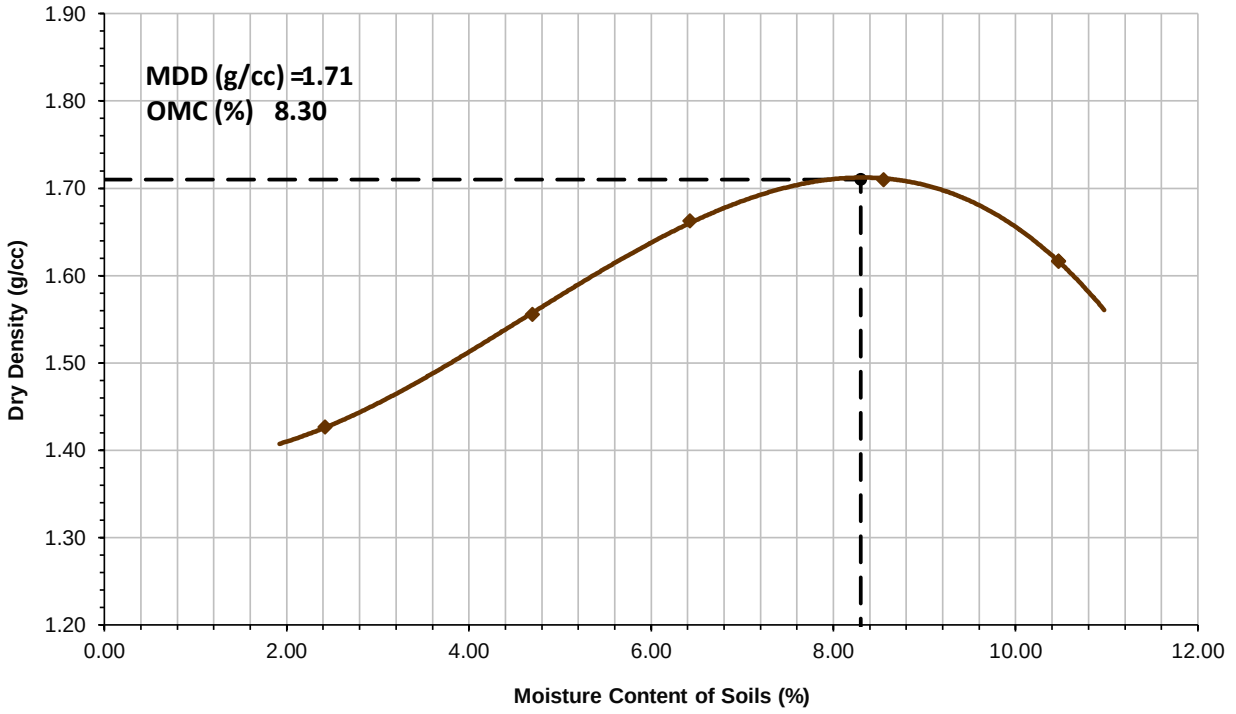
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**0-353**	**A17**	**0-41**	**AA3**	**0-118**	**0-100**	**10-419**	**10-352**	**10-205**	**10-280**	**-**	**-**
Wet Soil + Can (g)	191.51	193.54	188.41	180.70	180.33	185.78	193.39	188.55	185.98	183.43	-	-
Dry Soil + Can (g)	187.70	189.28	180.68	173.85	170.46	176.14	179.54	175.45	170.33	167.85	-	-
Mass of Can (g)	19.95	23.79	22.26	21.98	20.09	22.77	19.63	20.19	19.67	20.26	-	-
Moisture Loss (g)	3.81	4.26	7.73	6.85	9.87	9.64	13.85	13.10	15.65	15.58	-	-
Mass of Dry Soil (g)	167.75	165.49	158.42	151.87	150.37	153.37	159.91	155.26	150.66	147.59	-	-
Moisture Content (%)	2.27	2.57	4.88	4.51	6.56	6.29	8.66	8.44	10.39	10.56	-	-
Average Moisture (%)	**2.42**		**4.69**		**6.42**		**8.55**		**10.47**		**-**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**-**
Wet Soil + Mold (g)	4,405.00	4,560.00	4,690.00	4,770.00	4,705.00	-
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	-
Mass of Wet Soil (g)	1,350.00	1,505.00	1,635.00	1,715.00	1,650.00	-
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	-
Wet Density (g/cc)	**1.46**	**1.63**	**1.77**	**1.86**	**1.79**	**-**
Dry Density (g/cc)	**1.43**	**1.56**	**1.66**	**1.71**	**1.62**	**-**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.71**
Opt. Moisture Content (%):	**8.30**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-9_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-9
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1687275.494 N ;450008.067 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**HY**	**GT**	**HG**	**FDF**	**0-70**	**10-280**
Wet Soil + Can (g)	167.19	183.28	162.16	183.49	165.40	183.36
Dry Soil + Can (g)	155.86	171.08	151.23	171.08	154.32	171.08
Mass of Can (g)	21.09	22.06	22.72	19.59	23.18	20.62
Moisture Loss (g)	11.33	12.20	10.93	12.41	11.08	12.28
Mass of Dry Soil (g)	134.77	149.02	128.52	151.49	131.14	150.46
Moisture Content (%)	8.41	8.18	8.50	8.19	8.45	8.16
Average Moisture (%)	**8.30**		**8.35**		**8.31**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-54**	**CBR-61**	**CBR-67**
Wet Soil + Mold (g)	10350.00	10260.00	10530.00
Mass of Mold (g)	6500.00	6190.00	6315.00
Mass of Wet Soil (g)	3850.00	4070.00	4215.00
Volume of Mold (cc)	2209.00	2239.00	2226.00
Wet Density (g/cc)	**1.74**	**1.82**	**1.89**
Dry Density (g/cc)	**1.61**	**1.68**	**1.75**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	2.46	2.09	1.82
Reading After Soaking ($x10^{-1}$ mm)	3.27	2.78	2.42
Swell (%)	**0.70**	**0.59**	**0.52**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	30.69	38.37	47.96	1.58	1.98	2.47			
1.27	62.78	78.48	98.10	3.24	4.05	5.06			
1.91	89.29	111.62	139.52	4.60	5.75	7.19			
2.54	114.41	143.01	178.76	5.90	7.37	9.21	**8.38**	**10.48**	**13.10**
3.81	145.10	181.38	226.72	7.48	9.35	11.69			
5.08	164.63	205.79	257.24	8.49	10.61	13.26	**8.08**	**10.10**	**12.63**
7.62	177.19	221.49	276.86	9.13	11.42	14.27			
10.16	185.56	231.95	289.94	9.57	11.96	14.95			
12.70	193.93	242.42	303.02	10.00	12.50	15.62			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

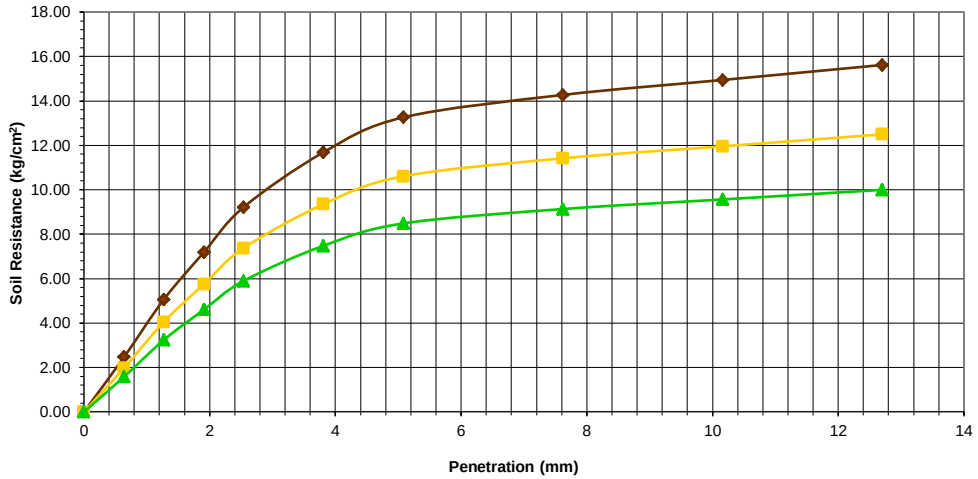
1705UIC1_RCBRT_TP-9_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

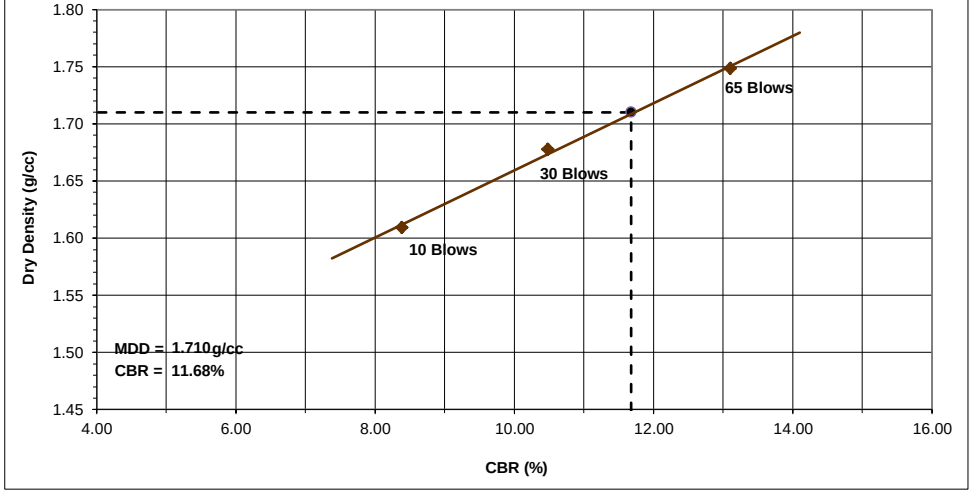
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-9
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1687275.494 N ;450008.067 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.743	8.08
30	1.818	10.10
65	1.894	12.63

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.710	11.68
95	1.625	8.85

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-9_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	07/01/17	**TP/BS Number:**	TP-10
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1687369.042 N ;449529.092 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	07/11/17

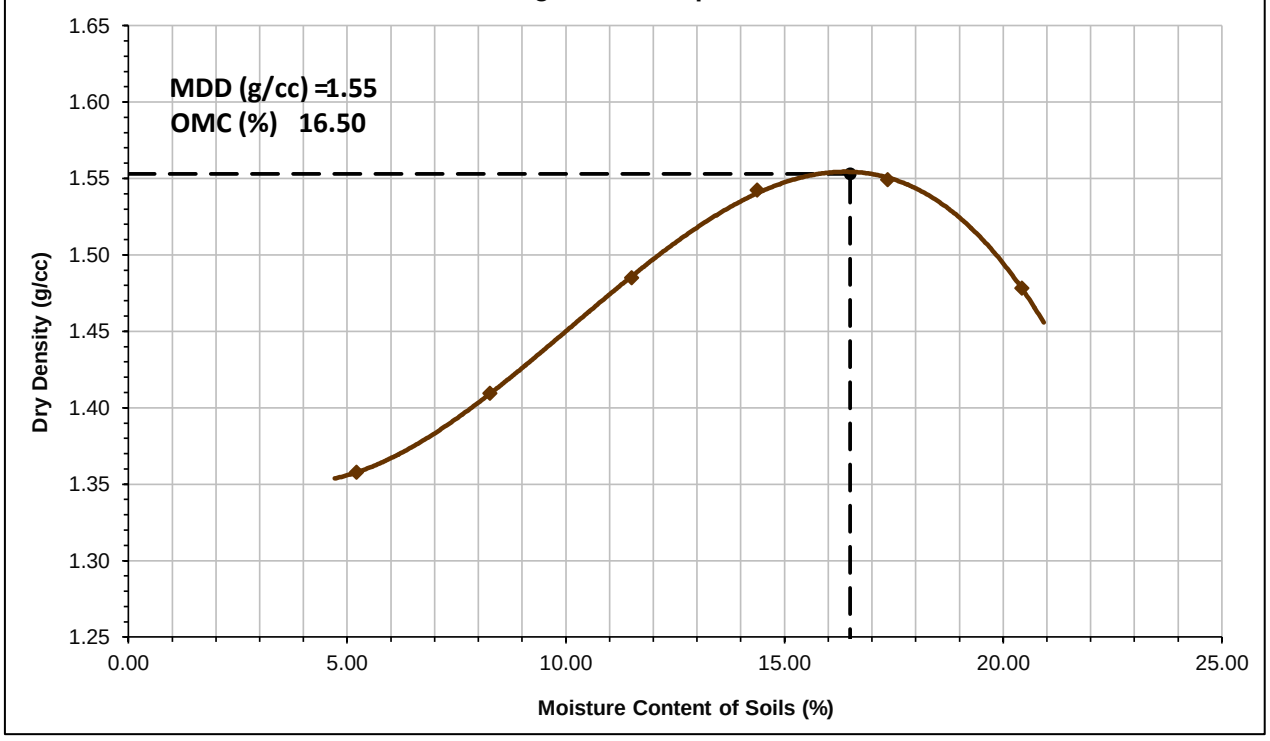
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**GG1**	**A1Z**	**A1**	**EE9**	**GG9**	**AA3**	**8H**	**10-12**	**NN10**	**OO8**	**R8**	**AA6**
Wet Soil + Can (g)	152.45	158.75	178.48	182.40	163.28	163.79	153.26	154.26	152.31	151.13	153.16	156.17
Dry Soil + Can (g)	146.12	151.92	166.84	169.94	148.72	149.14	136.06	137.26	132.94	131.94	130.18	133.48
Mass of Can (g)	21.98	23.76	23.77	21.66	22.10	21.97	17.78	17.63	21.40	21.40	17.59	22.51
Moisture Loss (g)	6.33	6.83	11.64	12.46	14.56	14.65	17.20	17.00	19.37	19.19	22.98	22.69
Mass of Dry Soil (g)	124.14	128.16	143.07	148.28	126.62	127.17	118.28	119.63	111.54	110.54	112.59	110.97
Moisture Content (%)	5.10	5.33	8.14	8.40	11.50	11.52	14.54	14.21	17.37	17.36	20.41	20.45
Average Moisture (%)	**5.21**		**8.27**		**11.51**		**14.38**		**17.36**		**20.43**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,375.00	4,465.00	4,585.00	4,685.00	4,735.00	4,700.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,320.00	1,410.00	1,530.00	1,630.00	1,680.00	1,645.00
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	924.00
Wet Density (g/cc)	**1.43**	**1.53**	**1.66**	**1.76**	**1.82**	**1.78**
Dry Density (g/cc)	**1.36**	**1.41**	**1.48**	**1.54**	**1.55**	**1.48**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.55**
Opt. Moisture Content (%):	**16.50**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-10_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-10
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1687369.042 N ;449529.092 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**HN**	**JK**	**KI**	**LO**	**6H**	**NN6**
Wet Soil + Can (g)	178.02	155.59	187.46	145.31	187.76	148.32
Dry Soil + Can (g)	155.08	137.45	163.24	128.28	163.24	130.90
Mass of Can (g)	19.41	25.40	19.59	23.30	17.97	23.30
Moisture Loss (g)	22.95	18.14	24.22	17.03	24.52	17.42
Mass of Dry Soil (g)	135.67	112.05	143.65	104.98	145.27	107.60
Moisture Content (%)	16.91	16.19	16.86	16.22	16.88	16.19
Average Moisture (%)	**16.55**		**16.54**		**16.53**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-20**	**CBR-42**	**CBR-57**
Wet Soil + Mold (g)	11140.00	10980.00	11330.00
Mass of Mold (g)	7370.00	7010.00	7230.00
Mass of Wet Soil (g)	3770.00	3970.00	4100.00
Volume of Mold (cc)	2236.00	2249.00	2232.00
Wet Density (g/cc)	**1.69**	**1.77**	**1.84**
Dry Density (g/cc)	**1.45**	**1.51**	**1.58**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	2.09	1.78	1.55
Reading After Soaking ($x10^{-1}$ mm)	3.35	2.85	2.48
Swell (%)	**1.08**	**0.92**	**0.80**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	12.56	15.70	19.62	0.65	0.81	1.01			
1.27	19.53	24.42	30.52	1.01	1.26	1.57			
1.91	25.11	31.39	39.24	1.29	1.62	2.02			
2.54	29.30	36.62	45.78	1.51	1.89	2.36	**2.15**	**2.68**	**3.36**
3.81	34.88	43.60	54.50	1.80	2.25	2.81			
5.08	37.67	47.09	58.86	1.94	2.43	3.03	**1.85**	**2.31**	**2.89**
7.62	41.86	52.32	65.40	2.16	2.70	3.37			
10.16	44.65	55.81	69.76	2.30	2.88	3.60			
12.70	46.04	57.55	71.94	2.37	2.97	3.71			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

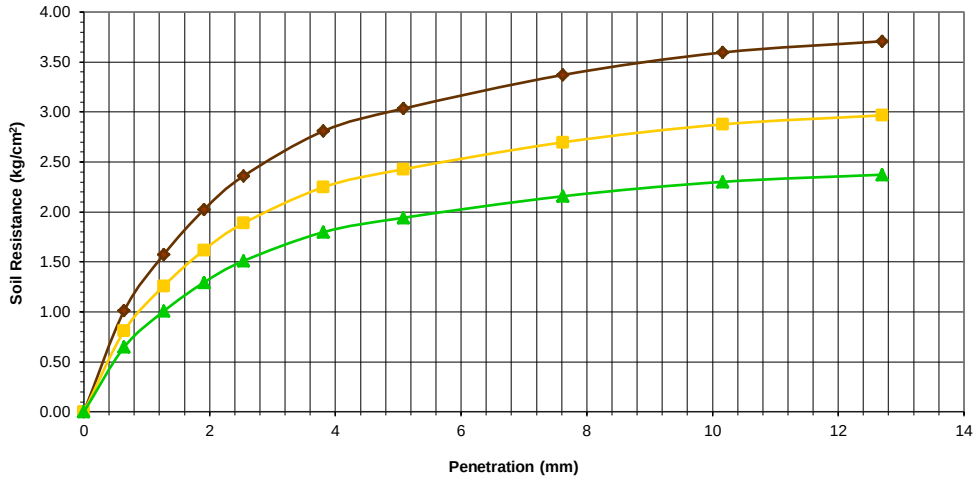
1705UIC1_RCBRT_TP-10_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

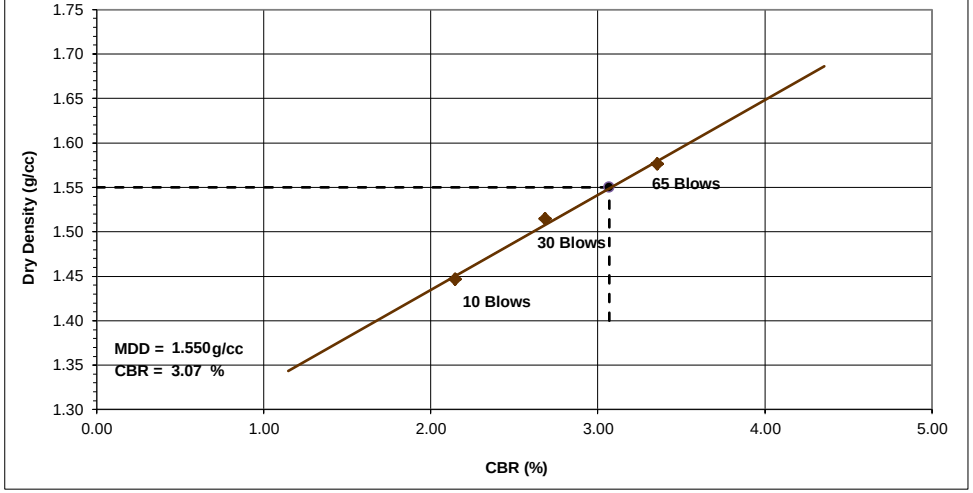
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-10
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1687369.042 N ;449529.092 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.686	1.85
30	1.765	2.31
65	1.837	2.89

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.550	3.07
95	1.473	2.35

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-10_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	07/01/17	**TP/BS Number:**	TP-11
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1687658.311 N ;449121.267 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	07/12/17

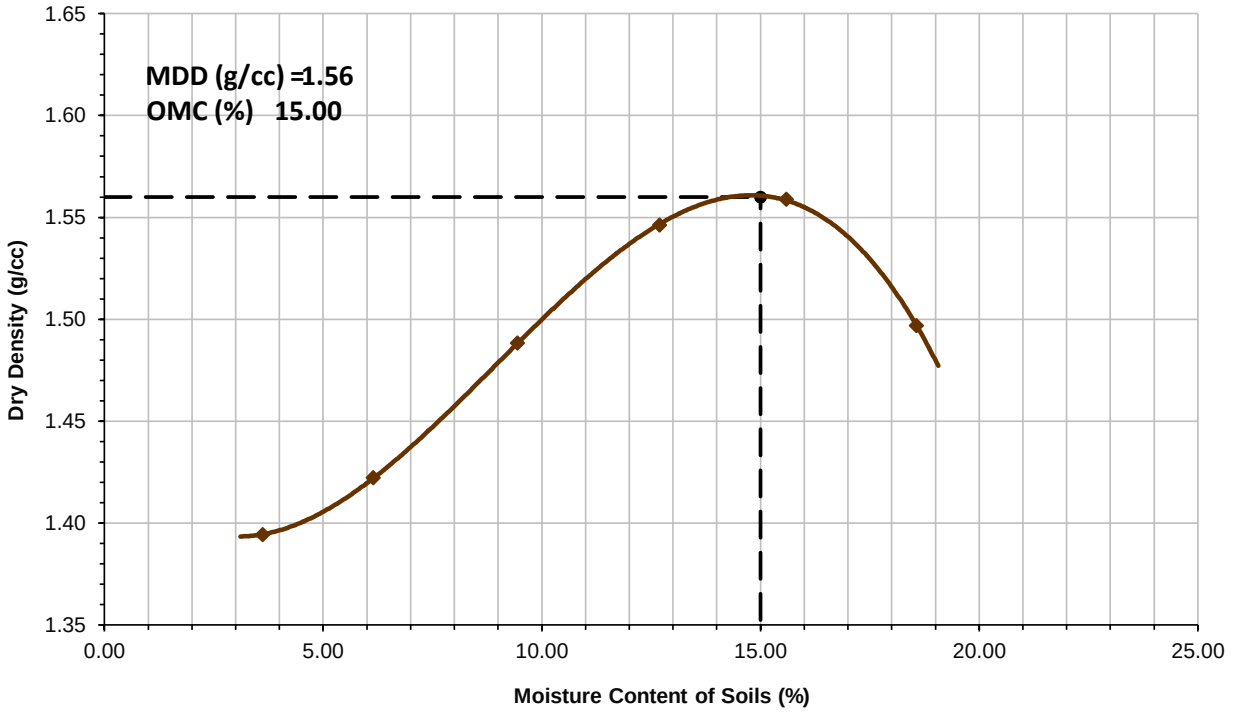
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**0-333**	**0-250**	**EE3**	**JJ5**	**AX1**	**10-69**	**1B**	**DD1**	**KL9**	**OO7**	**DD2**	**5H**
Wet Soil + Can (g)	180.85	178.82	186.16	188.56	189.71	186.11	180.06	181.72	184.65	186.79	181.50	180.90
Dry Soil + Can (g)	175.55	172.98	176.74	178.82	175.22	171.53	161.55	163.90	162.85	164.40	156.34	155.54
Mass of Can (g)	19.80	20.27	22.11	21.85	20.19	18.70	17.40	21.80	21.45	22.47	21.89	17.82
Moisture Loss (g)	5.30	5.84	9.42	9.74	14.49	14.58	18.51	17.82	21.80	22.39	25.16	25.36
Mass of Dry Soil (g)	155.75	152.71	154.63	156.97	155.03	152.83	144.15	142.10	141.40	141.93	134.45	137.72
Moisture Content (%)	3.40	3.82	6.09	6.21	9.35	9.54	12.84	12.54	15.42	15.78	18.71	18.41
Average Moisture (%)	**3.61**		**6.15**		**9.44**		**12.69**		**15.60**		**18.56**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,390.00	4,450.00	4,560.00	4,665.00	4,720.00	4,695.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,335.00	1,395.00	1,505.00	1,610.00	1,665.00	1,640.00
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	924.00
Wet Density (g/cc)	**1.44**	**1.51**	**1.63**	**1.74**	**1.80**	**1.77**
Dry Density (g/cc)	**1.39**	**1.42**	**1.49**	**1.55**	**1.56**	**1.50**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.56**
Opt. Moisture Content (%):	**15.00**

Performed by: DANILO DELAN
Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

1705UIC1_RMDRT_TP-11_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-11
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1687658.311 N ;449121.267 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**JD**	**ES**	**CX**	**ZS**	**KK8**	**4B**
Wet Soil + Can (g)	147.41	180.44	153.54	180.56	157.02	176.98
Dry Soil + Can (g)	130.74	159.69	136.30	159.69	139.08	156.56
Mass of Can (g)	22.81	19.53	23.26	19.00	22.15	17.92
Moisture Loss (g)	16.67	20.75	17.24	20.87	17.94	20.42
Mass of Dry Soil (g)	107.92	140.16	113.04	140.70	116.93	138.64
Moisture Content (%)	15.45	14.80	15.25	14.83	15.34	14.73
Average Moisture (%)	**15.13**		**15.04**		**15.04**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-19**	**CBR-12**	**CBR-04**
Wet Soil + Mold (g)	10580.00	10620.00	10940.00
Mass of Mold (g)	6880.00	6670.00	6875.00
Mass of Wet Soil (g)	3700.00	3950.00	4065.00
Volume of Mold (cc)	2203.00	2250.00	2227.00
Wet Density (g/cc)	**1.68**	**1.76**	**1.83**
Dry Density (g/cc)	**1.46**	**1.53**	**1.59**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	3.67	3.13	2.72
Reading After Soaking ($x10^{-1}$ mm)	5.08	4.32	3.76
Swell (%)	**1.21**	**1.02**	**0.89**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	12.56	15.70	19.62	0.65	0.81	1.01			
1.27	22.32	27.90	34.88	1.15	1.44	1.80			
1.91	29.30	36.62	45.78	1.51	1.89	2.36			
2.54	34.88	43.60	54.50	1.80	2.25	2.81	**2.56**	**3.20**	**3.99**
3.81	41.86	52.32	65.40	2.16	2.70	3.37			
5.08	44.65	55.81	69.76	2.30	2.88	3.60	**2.19**	**2.74**	**3.42**
7.62	48.13	60.17	75.21	2.48	3.10	3.88			
10.16	50.23	62.78	78.48	2.59	3.24	4.05			
12.70	51.62	64.53	80.66	2.66	3.33	4.16			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

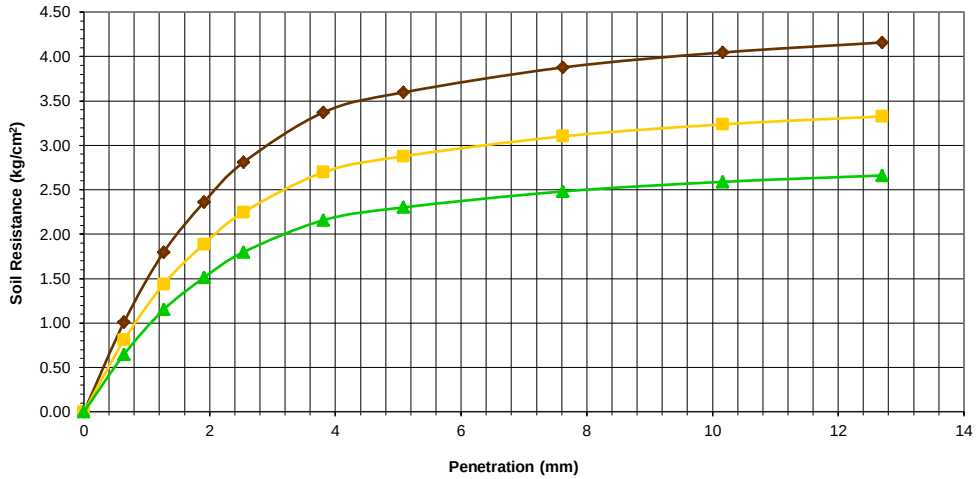
1705UIC1_RCBRT_TP-11_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

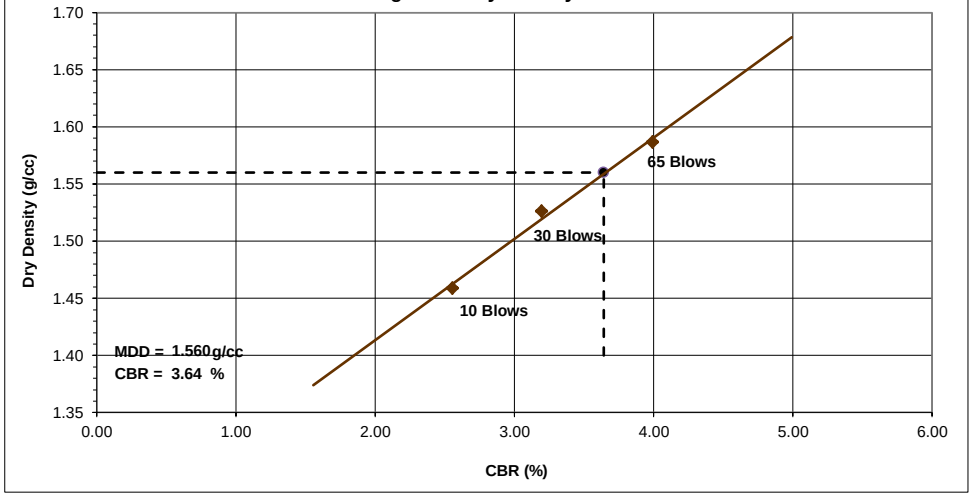
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-11
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1687658.311 N ;449121.267 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	07/01/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	07/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.680	2.19
30	1.756	2.74
65	1.825	3.42

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.560	3.64
95	1.482	2.78

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-11_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	5/29/17	**TP/BS Number:**	TP-12
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1688343.811 N ; 448069.601 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/07/17

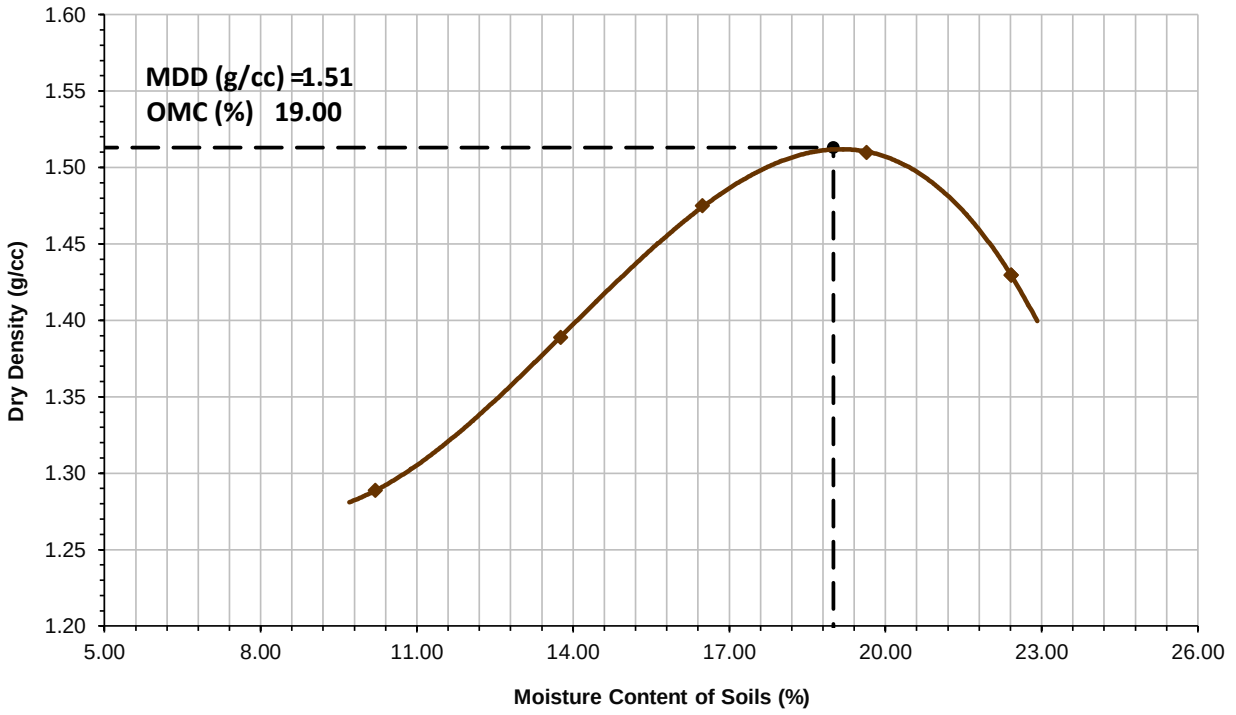
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**0-61**	**OO9**	**0-355**	**BB10**	**HH2**	**0-74**	**0-404**	**0-165**	**0-347**	**0-8**	**-**	**-**
Wet Soil + Can (g)	170.37	168.15	171.45	171.24	166.23	174.42	169.83	165.30	170.93	164.38	-	-
Dry Soil + Can (g)	156.60	152.92	153.08	153.24	145.90	152.88	145.44	141.68	143.10	138.54	-	-
Mass of Can (g)	22.58	2.60	19.68	22.33	21.86	22.98	19.62	22.91	19.65	22.57	-	-
Moisture Loss (g)	13.77	15.23	18.37	18.00	20.33	21.54	24.39	23.62	27.83	25.84	-	-
Mass of Dry Soil (g)	134.02	150.32	133.40	130.91	124.04	129.90	125.82	118.77	123.45	115.97	-	-
Moisture Content (%)	10.27	10.13	13.77	13.75	16.39	16.58	19.38	19.89	22.54	22.28	-	-
Average Moisture (%)	**10.20**		**13.76**		**16.49**		**19.64**		**22.41**		**-**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**MLD-1**	**MLD-1**	**MLD-1**	**MLD-1**	**MLD-1**	**-**
Wet Soil + Mold (g)	4,625.00	4,775.00	4,905.00	4,988.00	4,935.00	-
Mass of Mold (g)	3,290.00	3,290.00	3,290.00	3,290.00	3,290.00	-
Mass of Wet Soil (g)	1,335.00	1,485.00	1,615.00	1,698.00	1,645.00	-
Volume of Mold (cc)	940.00	940.00	940.00	940.00	940.00	-
Wet Density (g/cc)	**1.42**	**1.58**	**1.72**	**1.81**	**1.75**	**-**
Dry Density (g/cc)	**1.29**	**1.39**	**1.47**	**1.51**	**1.43**	**-**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.51**
Opt. Moisture Content (%):	**19.00**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-12_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-12
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1688343.811 N ; 448069.601 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	5/29/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**VT**	**RE**	**0-165**	**0-79**	**7B**	**DD3**
Wet Soil + Can (g)	142.85	162.06	152.80	158.84	153.96	166.80
Dry Soil + Can (g)	122.67	139.54	131.24	137.44	131.90	143.86
Mass of Can (g)	17.52	18.37	19.66	22.39	17.18	20.41
Moisture Loss (g)	20.18	22.51	21.56	21.40	22.06	22.94
Mass of Dry Soil (g)	105.14	121.18	111.58	115.05	114.72	123.45
Moisture Content (%)	19.19	18.58	19.32	18.60	19.23	18.58
Average Moisture (%)	**18.89**		**18.96**		**18.91**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-19**	**CBR-43**	**CBR-85**
Wet Soil + Mold (g)	10820.00	10350.00	10860.00
Mass of Mold (g)	7060.00	6400.00	6725.00
Mass of Wet Soil (g)	3760.00	3950.00	4135.00
Volume of Mold (cc)	2226.00	2242.00	2247.00
Wet Density (g/cc)	**1.69**	**1.76**	**1.84**
Dry Density (g/cc)	**1.42**	**1.48**	**1.55**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.67	1.6	1.24
Reading After Soaking ($x10^{-1}$ mm)	2.31	2.22	1.71
Swell (%)	**0.55**	**0.53**	**0.40**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	12.56	15.70	19.62	0.65	0.81	1.01			
1.27	20.93	26.16	32.70	1.08	1.35	1.69			
1.91	27.90	34.88	43.60	1.44	1.80	2.25			
2.54	32.09	40.11	50.14	1.65	2.07	2.58	**2.35**	**2.94**	**3.67**
3.81	37.67	47.09	58.86	1.94	2.43	3.03			
5.08	40.46	50.58	63.22	2.09	2.61	3.26	**1.99**	**2.48**	**3.10**
7.62	44.65	55.81	69.76	2.30	2.88	3.60			
10.16	47.44	59.30	74.12	2.45	3.06	3.82			
12.70	48.83	61.04	76.30	2.52	3.15	3.93			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

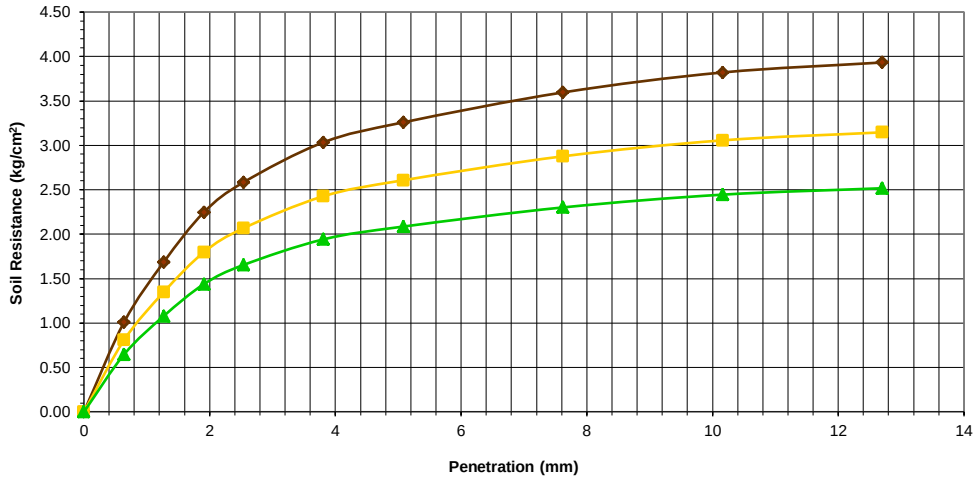
1705UIC1_RCBRT_TP-12_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

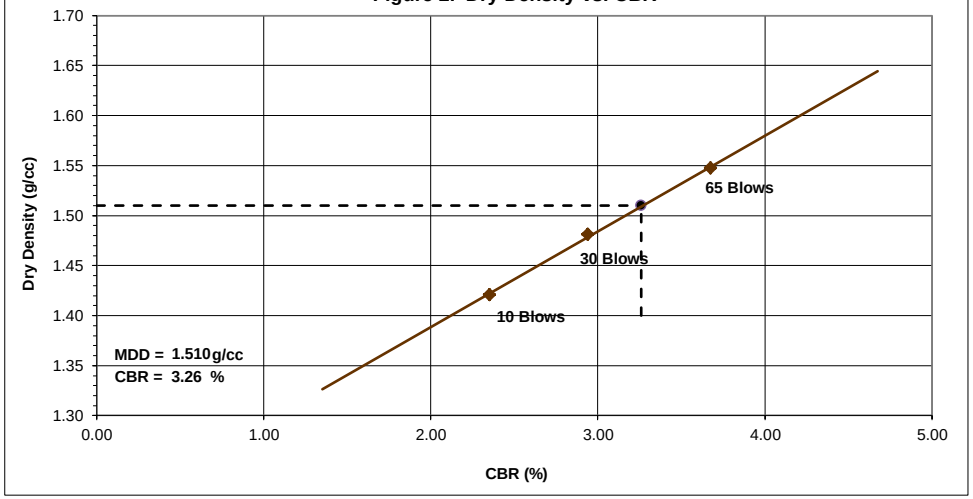
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-12
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1688343.811 N ; 448069.601 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	5/29/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.689	1.99
30	1.762	2.48
65	1.840	3.10

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.510	3.26
95	1.435	2.49

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-12_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	5/29/17	**TP/BS Number:**	TP-13
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1688819.925 N ; 447961.529 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/08/17

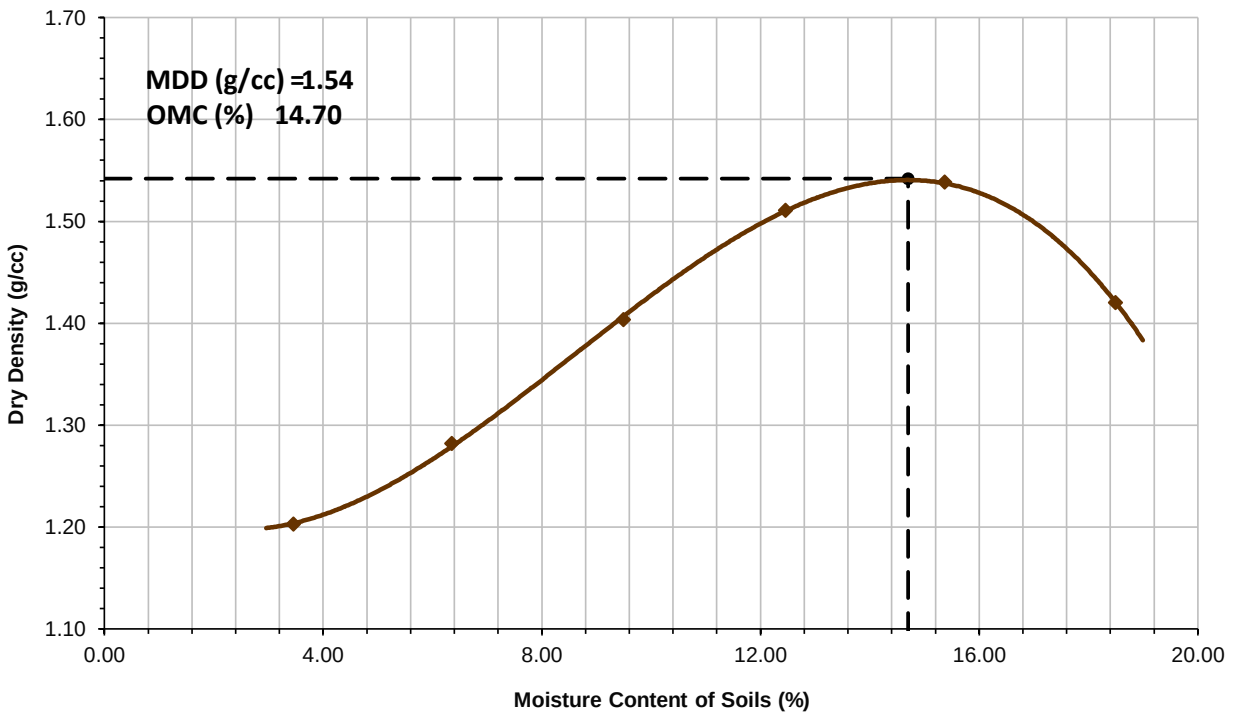
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**IO-94**	**0.236**	**0-418**	**0-116**	**IO-IO**	**0-123**	**IO-79**	**0-2**	**10-280**	**0-413**	**10-217**	**10-442**
Wet Soil + Can (g)	173.54	171.39	186.17	187.05	191.00	190.60	183.86	186.31	188.07	187.39	176.51	175.24
Dry Soil + Can (g)	167.82	166.92	176.66	176.80	176.74	175.38	165.24	168.48	165.66	165.12	151.96	151.10
Mass of Can (g)	20.13	20.25	19.65	22.71	18.97	22.29	18.72	22.43	20.19	19.94	19.71	20.07
Moisture Loss (g)	5.72	4.47	9.51	10.25	14.26	15.22	18.62	17.83	22.41	22.27	24.55	24.14
Mass of Dry Soil (g)	147.69	146.67	157.01	154.09	157.77	153.09	146.52	146.05	145.47	145.18	132.25	131.03
Moisture Content (%)	3.87	3.05	6.06	6.65	9.04	9.94	12.71	12.21	15.41	15.34	18.56	18.42
Average Moisture (%)	**3.46**		**6.35**		**9.49**		**12.46**		**15.37**		**18.49**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,205.00	4,315.00	4,475.00	4,625.00	4,695.00	4,610.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,150.00	1,260.00	1,420.00	1,570.00	1,640.00	1,555.00
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	924.00
Wet Density (g/cc)	**1.24**	**1.36**	**1.54**	**1.70**	**1.77**	**1.68**
Dry Density (g/cc)	**1.20**	**1.28**	**1.40**	**1.51**	**1.54**	**1.42**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.54**
Opt. Moisture Content (%):	**14.70**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-13_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-13
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1688819.925 N ; 447961.529 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	5/29/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**BT**	**VR**	**0-418**	**H7**	**0-303**	**0-40**
Wet Soil + Can (g)	147.42	171.92	162.39	167.62	164.09	174.12
Dry Soil + Can (g)	130.90	153.54	143.93	149.04	145.44	155.09
Mass of Can (g)	19.36	24.97	19.69	21.36	20.17	22.70
Moisture Loss (g)	16.52	18.38	18.46	18.58	18.65	19.03
Mass of Dry Soil (g)	111.53	128.57	124.24	127.68	125.27	132.39
Moisture Content (%)	14.82	14.30	14.86	14.55	14.89	14.37
Average Moisture (%)	**14.56**		**14.71**		**14.63**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-5**	**CBR-70**	**CBR-22**
Wet Soil + Mold (g)	10300.00	10150.00	10750.00
Mass of Mold (g)	6630.00	6260.00	6625.00
Mass of Wet Soil (g)	3670.00	3890.00	4125.00
Volume of Mold (cc)	2222.00	2254.00	2292.00
Wet Density (g/cc)	**1.65**	**1.73**	**1.80**
Dry Density (g/cc)	**1.44**	**1.50**	**1.57**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	2.62	1.34	1.94
Reading After Soaking ($x10^{-1}$ mm)	8.88	6.14	6.58
Swell (%)	**5.38**	**4.12**	**3.99**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	15.35	19.18	23.98	0.79	0.99	1.24			
1.27	23.72	29.65	37.06	1.22	1.53	1.91			
1.91	29.30	36.62	45.78	1.51	1.89	2.36			
2.54	32.09	40.11	50.14	1.65	2.07	2.58	**2.35**	**2.94**	**3.67**
3.81	36.28	45.34	56.68	1.87	2.34	2.92			
5.08	39.07	48.83	61.04	2.01	2.52	3.15	**1.92**	**2.40**	**3.00**
7.62	43.25	54.06	67.58	2.23	2.79	3.48			
10.16	46.04	57.55	71.94	2.37	2.97	3.71			
12.70	47.44	59.30	74.12	2.45	3.06	3.82			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

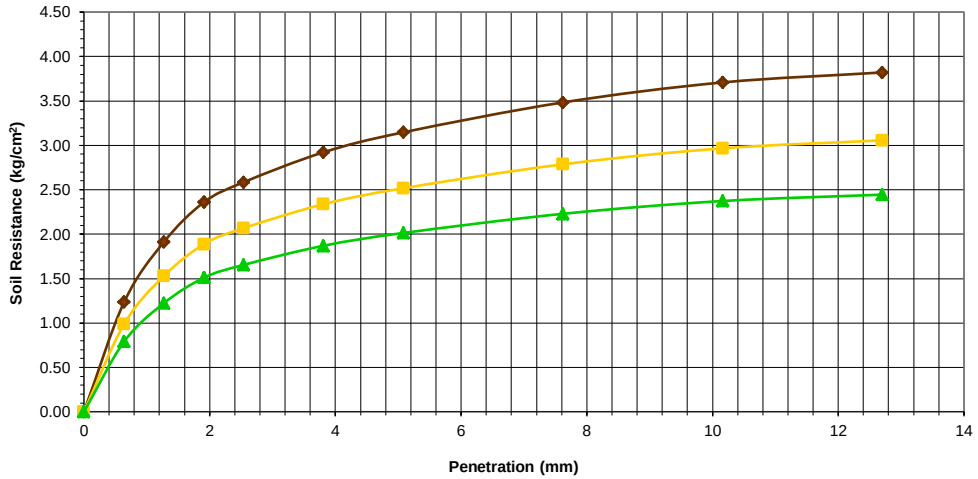
1705UIC1_RCBRT_TP-13_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

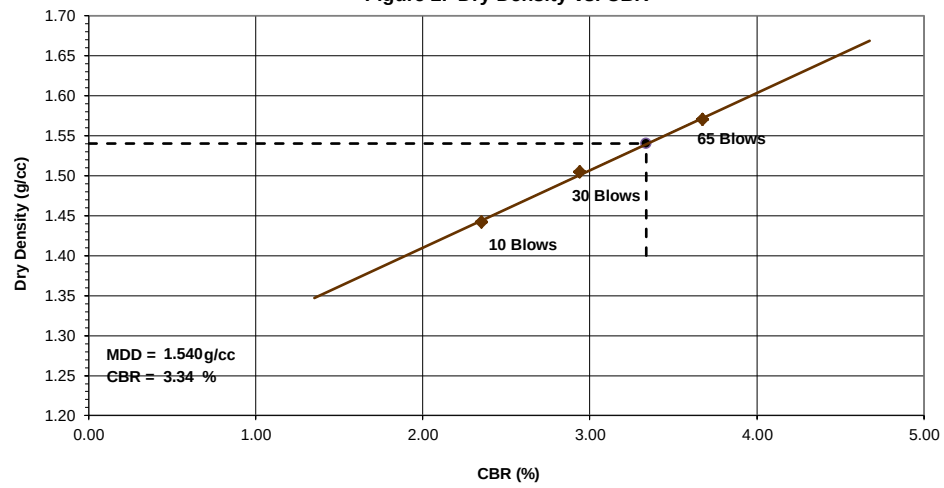
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-13
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1688819.925 N ; 447961.529 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	5/29/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.652	1.92
30	1.726	2.40
65	1.800	3.00

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.540	3.34
95	1.463	2.55

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-13_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/29/17	**TP/BS Number:**	TP-14
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1688951.764 N ; 447494.001 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/06/17

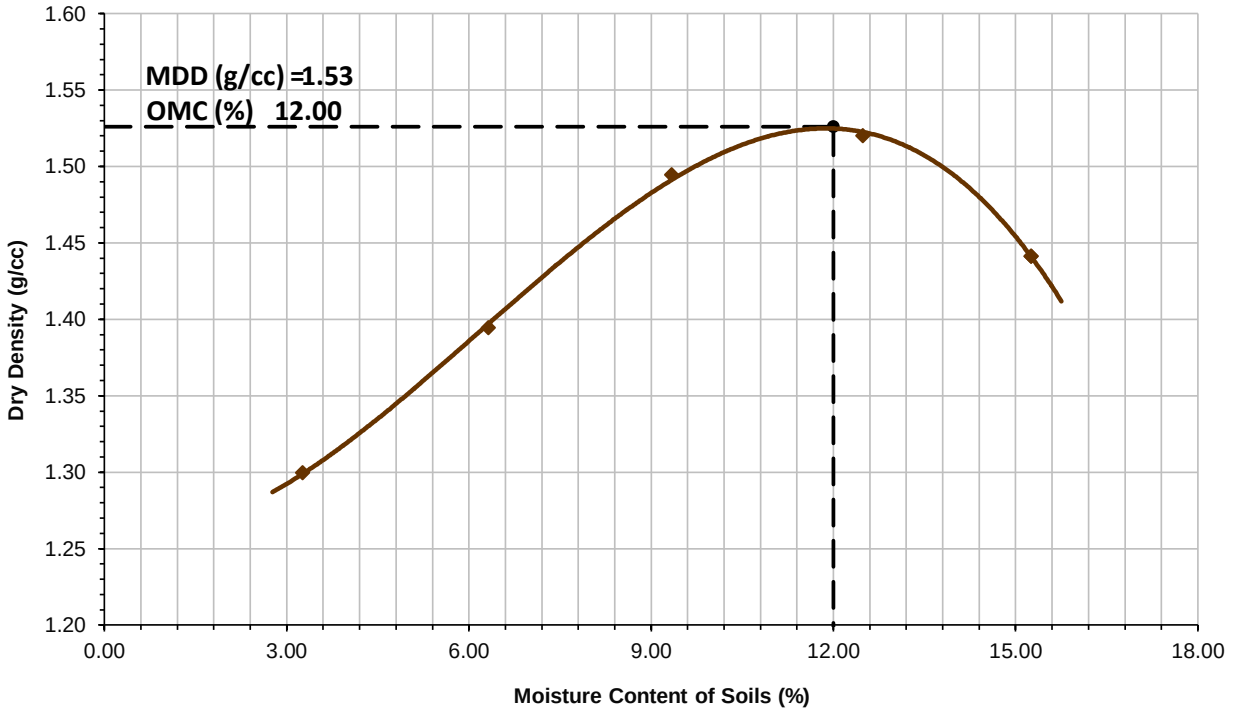
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**0-103**	**IO-68**	**10-115**	**10-133**	**0-173**	**10-205**	**3B**	**6B**	**10-211**	**0-355**	**-**	**-**
Wet Soil + Can (g)	185.76	175.00	165.97	172.55	155.23	160.40	148.26	157.06	154.90	159.85	-	-
Dry Soil + Can (g)	180.38	170.16	156.92	163.86	143.36	148.72	133.48	141.88	136.74	141.55	-	-
Mass of Can (g)	20.09	17.60	19.88	19.76	20.09	19.57	17.74	17.41	19.58	19.64	-	-
Moisture Loss (g)	5.38	4.84	9.05	8.69	11.87	11.68	14.78	15.18	18.16	18.30	-	-
Mass of Dry Soil (g)	160.29	152.56	137.04	144.10	123.27	129.15	115.74	124.47	117.16	121.91	-	-
Moisture Content (%)	3.36	3.17	6.60	6.03	9.63	9.04	12.77	12.20	15.50	15.01	-	-
Average Moisture (%)	**3.26**		**6.32**		**9.34**		**12.48**		**15.26**		**-**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**-**
Wet Soil + Mold (g)	4,295.00	4,425.00	4,565.00	4,635.00	4,590.00	-
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	-
Mass of Wet Soil (g)	1,240.00	1,370.00	1,510.00	1,580.00	1,535.00	-
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	-
Wet Density (g/cc)	**1.34**	**1.48**	**1.63**	**1.71**	**1.66**	**-**
Dry Density (g/cc)	**1.30**	**1.39**	**1.49**	**1.52**	**1.44**	**-**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.53**
Opt. Moisture Content (%):	**12.00**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-14_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-14
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1688951.764 N ; 447494.001 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/29/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**SA**	**DS**	**H5**	**0-353**	**0-462**	**3A**
Wet Soil + Can (g)	151.04	172.14	181.03	177.88	166.22	165.55
Dry Soil + Can (g)	136.79	155.90	163.74	161.12	150.32	149.90
Mass of Can (g)	20.34	18.25	21.38	19.65	19.94	17.22
Moisture Loss (g)	14.25	16.24	17.29	16.76	15.90	15.65
Mass of Dry Soil (g)	116.45	137.64	142.36	141.47	130.38	132.68
Moisture Content (%)	12.24	11.80	12.15	11.85	12.20	11.80
Average Moisture (%)	**12.02**		**12.00**		**12.00**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-81**	**CBR-44**	**CBR-71**
Wet Soil + Mold (g)	10620.00	9820.00	11220.00
Mass of Mold (g)	7150.00	6090.00	7300.00
Mass of Wet Soil (g)	3470.00	3730.00	3920.00
Volume of Mold (cc)	2154.00	2223.00	2238.00
Wet Density (g/cc)	**1.61**	**1.68**	**1.75**
Dry Density (g/cc)	**1.44**	**1.50**	**1.56**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.08	1.09	0.8
Reading After Soaking ($x10^{-1}$ mm)	1.4	1.41	1.04
Swell (%)	**0.27**	**0.27**	**0.21**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	13.95	17.44	21.80	0.72	0.90	1.12			
1.27	23.72	29.65	37.06	1.22	1.53	1.91			
1.91	29.30	36.62	45.78	1.51	1.89	2.36			
2.54	33.48	41.86	52.32	1.73	2.16	2.70	**2.45**	**3.07**	**3.83**
3.81	37.67	47.09	58.86	1.94	2.43	3.03			
5.08	40.46	50.58	63.22	2.09	2.61	3.26	**1.99**	**2.48**	**3.10**
7.62	44.65	55.81	69.76	2.30	2.88	3.60			
10.16	47.44	59.30	74.12	2.45	3.06	3.82			
12.70	50.23	62.78	78.48	2.59	3.24	4.05			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

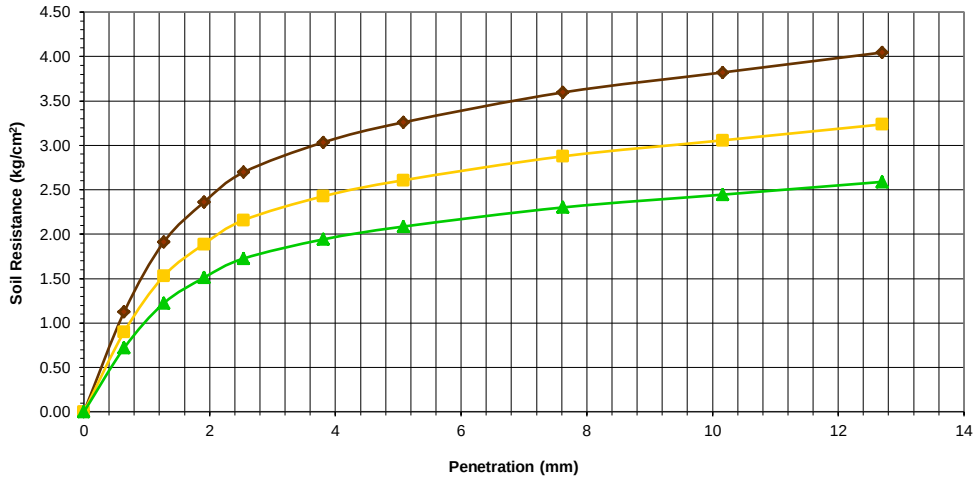
1705UIC1_RCBRT_TP-14_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

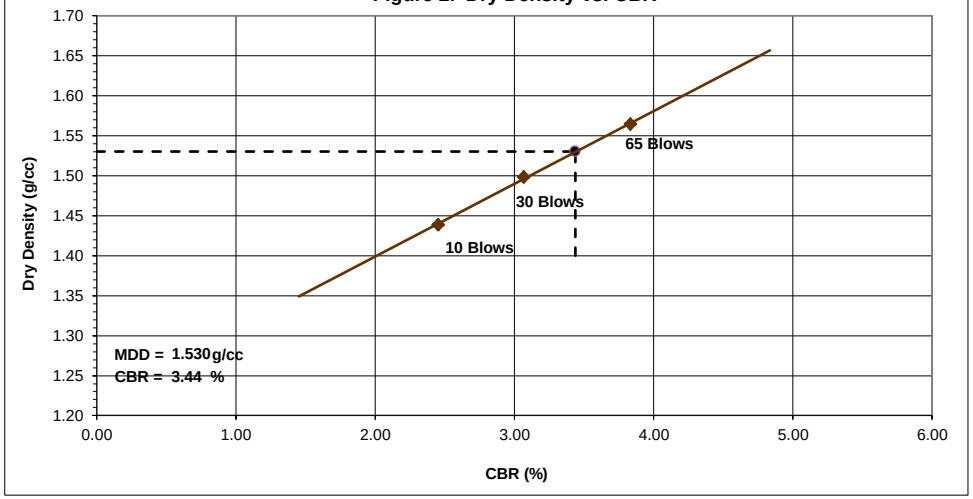
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-14
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1688951.764 N ; 447494.001 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/29/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.611	1.99
30	1.678	2.48
65	1.752	3.10

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.530	3.44
95	1.454	2.61

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/29/17	**TP/BS Number:**	TP-15
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1689194.206 N ; 447059.296 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/07/17

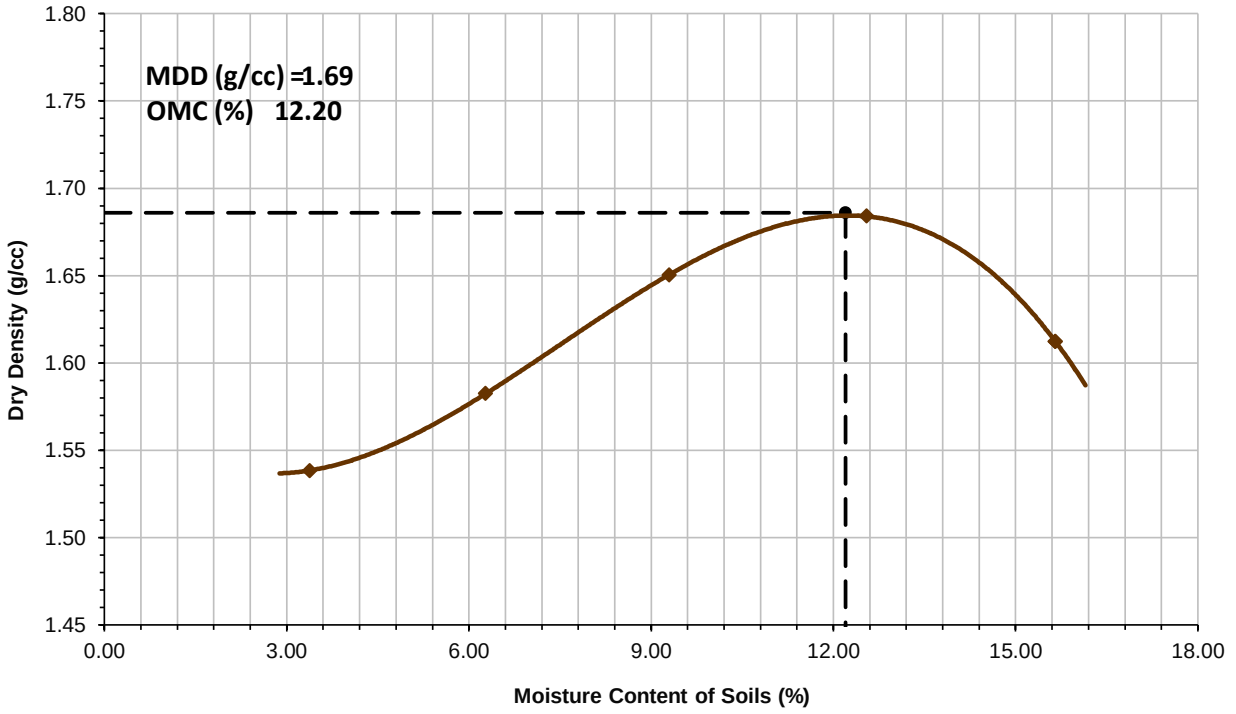
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**0-319**	**0-462**	**10-45**	**0-5**	**10-343**	**gg9**	**0-212**	**0-160**	**0-203**	**5d**	**-**	**-**
Wet Soil + Can (g)	171.68	160.95	160.36	165.81	168.44	183.42	173.72	176.10	158.81	159.70	-	-
Dry Soil + Can (g)	166.96	156.12	151.98	157.38	155.40	170.16	156.36	158.92	140.14	140.24	-	-
Mass of Can (g)	19.67	20.16	18.79	22.67	20.21	22.04	20.01	19.88	19.53	17.26	-	-
Moisture Loss (g)	4.72	4.83	8.38	8.43	13.04	13.26	17.36	17.18	18.67	19.46	-	-
Mass of Dry Soil (g)	147.29	135.96	133.19	134.71	135.19	148.12	136.35	139.04	120.61	122.98	-	-
Moisture Content (%)	3.20	3.55	6.29	6.26	9.65	8.95	12.73	12.36	15.48	15.82	-	-
Average Moisture (%)	**3.38**		**6.27**		**9.30**		**12.54**		**15.65**		**-**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**-**
Wet Soil + Mold (g)	4,855.00	4,945.00	5,065.00	5,155.00	5,125.00	-
Mass of Mold (g)	3,290.00	3,290.00	3,290.00	3,290.00	3,290.00	-
Mass of Wet Soil (g)	1,565.00	1,655.00	1,775.00	1,865.00	1,835.00	-
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	-
Wet Density (g/cc)	**1.59**	**1.68**	**1.80**	**1.90**	**1.86**	**-**
Dry Density (g/cc)	**1.54**	**1.58**	**1.65**	**1.68**	**1.61**	**-**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.69**
Opt. Moisture Content (%):	**12.20**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-15_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-15
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1689194.206 N ; 447059.296 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/29/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**UY**	**TG**	**0-70**	**10-447**	**0-319**	**1M**
Wet Soil + Can (g)	152.36	176.03	151.22	173.80	145.08	169.19
Dry Soil + Can (g)	137.83	158.97	136.76	157.27	131.27	152.86
Mass of Can (g)	19.85	18.10	19.84	19.70	19.65	17.40
Moisture Loss (g)	14.52	17.06	14.46	16.53	13.81	16.33
Mass of Dry Soil (g)	117.99	140.88	116.92	137.57	111.62	135.46
Moisture Content (%)	12.31	12.11	12.37	12.02	12.37	12.06
Average Moisture (%)	**12.21**		**12.19**		**12.21**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-10**	**CBR-61**	**CBR-05**
Wet Soil + Mold (g)	11680.00	12210.00	12350.00
Mass of Mold (g)	7760.00	8015.00	7995.00
Mass of Wet Soil (g)	3920.00	4195.00	4355.00
Volume of Mold (cc)	2190.00	2255.00	2241.00
Wet Density (g/cc)	**1.79**	**1.86**	**1.94**
Dry Density (g/cc)	**1.60**	**1.66**	**1.73**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	2.2	5.15	1.63
Reading After Soaking ($x10^{-1}$ mm)	2.53	5.44	1.65
Swell (%)	**0.28**	**0.25**	**0.02**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows		
	10	30	65	10	30	65
0.64	12.56	15.70	19.62	0.65	0.81	1.01
1.27	20.93	26.16	32.70	1.08	1.35	1.69
1.91	27.90	34.88	43.60	1.44	1.80	2.25
2.54	32.09	40.11	50.14	1.65	2.07	2.58
3.81	36.97	46.22	57.77	1.91	2.38	2.98
5.08	39.07	48.83	61.04	2.01	2.52	3.15
7.62	41.86	52.32	65.40	2.16	2.70	3.37
10.16	44.65	55.81	69.76	2.30	2.88	3.60
12.70	46.04	57.55	71.94	2.37	2.97	3.71

CBR (%) Blows		
10	30	65
2.35	**2.94**	**3.67**
1.92	**2.40**	**3.00**

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

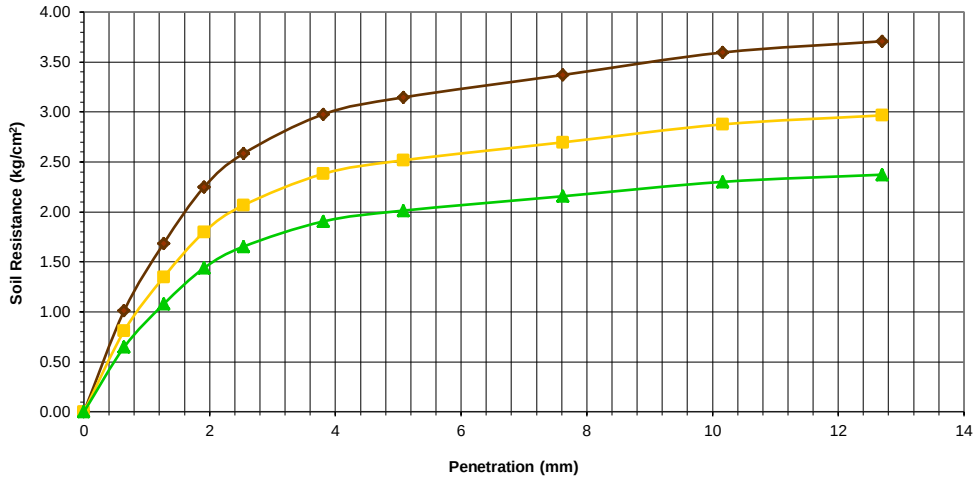
1705UIC1_RCBRT_TP-15_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

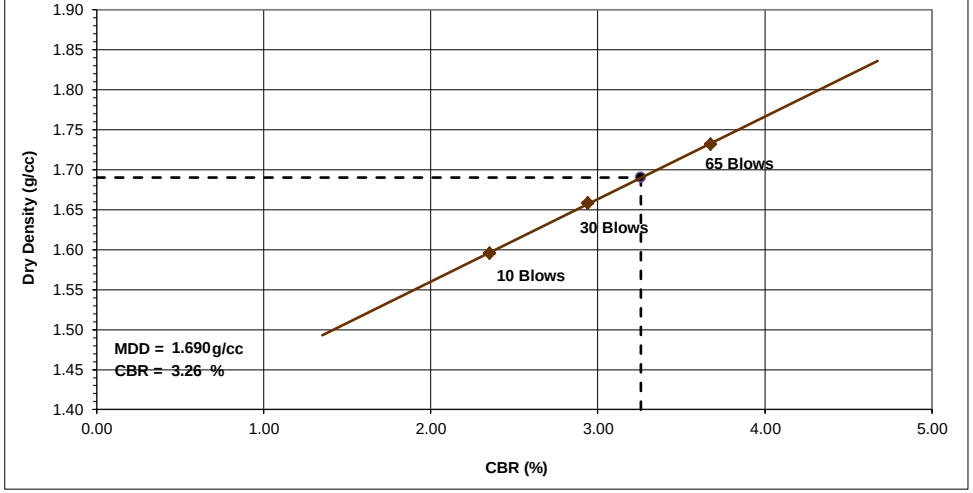
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-15
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1689194.206 N ; 447059.296 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/29/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.790	1.92
30	1.860	2.40
65	1.943	3.00

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.690	3.26
95	1.606	2.45

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-15_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/29/17	**TP/BS Number:**	TP-16
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1689507.641 N ; 446669.789 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	05/31/17

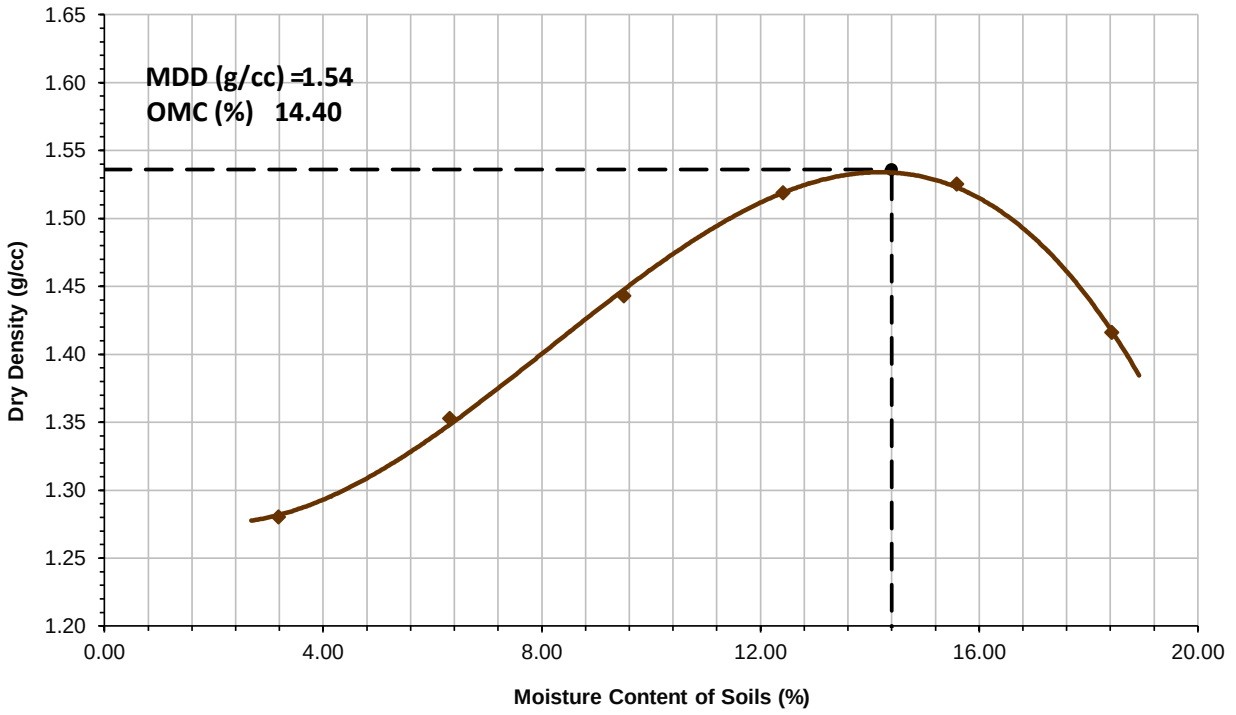
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**II4**	**2E**	**NN4**	**O-160**	**GG5**	**BB9**	**O-303**	**MM5**	**JJ6**	**O-74**	**II3**	**A28**
Wet Soil + Can (g)	182.90	181.26	183.06	184.39	186.37	184.10	168.34	170.06	180.17	182.76	184.20	185.24
Dry Soil + Can (g)	177.79	176.45	173.10	175.20	171.97	170.23	151.74	153.89	158.54	161.46	159.05	159.74
Mass of Can (g)	22.25	20.35	22.06	22.82	22.49	22.27	20.15	21.38	21.81	22.84	20.94	22.95
Moisture Loss (g)	5.11	4.81	9.96	9.19	14.40	13.87	16.60	16.17	21.63	21.30	25.15	25.50
Mass of Dry Soil (g)	155.54	156.10	151.04	152.38	149.48	147.96	131.59	132.51	136.73	138.62	138.11	136.79
Moisture Content (%)	3.29	3.08	6.59	6.03	9.63	9.37	12.61	12.20	15.82	15.37	18.21	18.64
Average Moisture (%)	**3.18**		**6.31**		**9.50**		**12.41**		**15.59**		**18.43**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**
Wet Soil + Mold (g)	4,590.00	4,705.00	4,845.00	4,970.00	5,025.00	4,940.00
Mass of Mold (g)	3,290.00	3,290.00	3,290.00	3,290.00	3,290.00	3,290.00
Mass of Wet Soil (g)	1,300.00	1,415.00	1,555.00	1,680.00	1,735.00	1,650.00
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	984.00
Wet Density (g/cc)	**1.32**	**1.44**	**1.58**	**1.71**	**1.76**	**1.68**
Dry Density (g/cc)	**1.28**	**1.35**	**1.44**	**1.52**	**1.53**	**1.42**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.54**
Opt. Moisture Content (%):	**14.40**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-16_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-16
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1689507.641 N ; 446669.789 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/29/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**VF**	**CD**	**0-203**	**10-343**	**10-207**	**10-350**
Wet Soil + Can (g)	134.91	177.98	154.82	177.39	150.08	169.60
Dry Soil + Can (g)	120.23	158.66	137.57	157.91	133.59	151.10
Mass of Can (g)	18.98	22.11	19.52	20.18	20.19	20.28
Moisture Loss (g)	14.68	19.33	17.25	19.48	16.49	18.50
Mass of Dry Soil (g)	101.25	136.55	118.05	137.73	113.40	130.82
Moisture Content (%)	14.50	14.15	14.61	14.14	14.54	14.14
Average Moisture (%)	**14.33**		**14.38**		**14.34**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-100**	**CBR-46**	**CBR-91**
Wet Soil + Mold (g)	11260.00	10160.00	11410.00
Mass of Mold (g)	7660.00	6295.00	7365.00
Mass of Wet Soil (g)	3600.00	3865.00	4045.00
Volume of Mold (cc)	2166.00	2241.00	2241.00
Wet Density (g/cc)	**1.66**	**1.72**	**1.80**
Dry Density (g/cc)	**1.45**	**1.51**	**1.58**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	2.09	1.3	1.55
Reading After Soaking ($x10^{-1}$ mm)	2.56	1.75	1.9
Swell (%)	**0.40**	**0.39**	**0.30**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	13.95	17.44	21.80	0.72	0.90	1.12			
1.27	25.11	31.39	39.24	1.29	1.62	2.02			
1.91	32.09	40.11	50.14	1.65	2.07	2.58			
2.54	36.28	45.34	56.68	1.87	2.34	2.92	**2.66**	**3.32**	**4.15**
3.81	41.86	52.32	65.40	2.16	2.70	3.37			
5.08	44.65	55.81	69.76	2.30	2.88	3.60	**2.19**	**2.74**	**3.42**
7.62	47.44	59.30	74.12	2.45	3.06	3.82			
10.16	50.23	62.78	78.48	2.59	3.24	4.05			
12.70	53.02	66.27	82.84	2.73	3.42	4.27			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

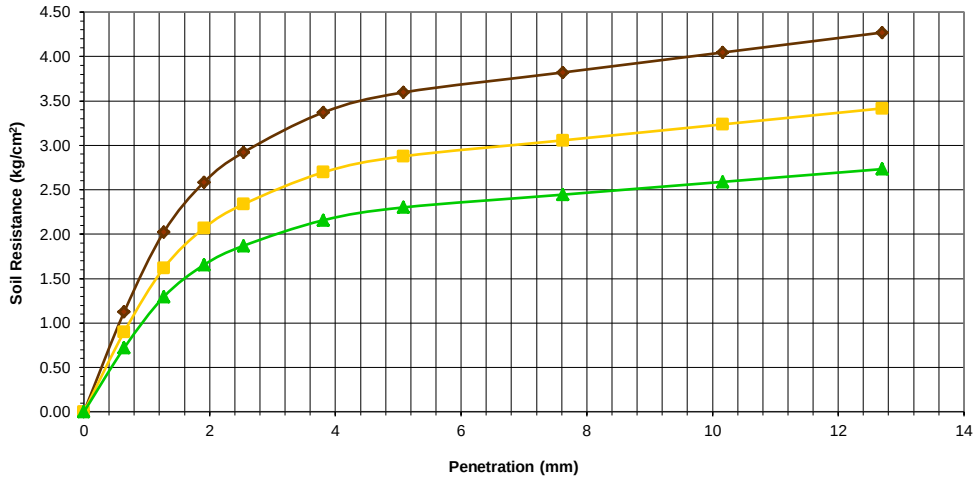
1705UIC1_RCBRT_TP-16_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

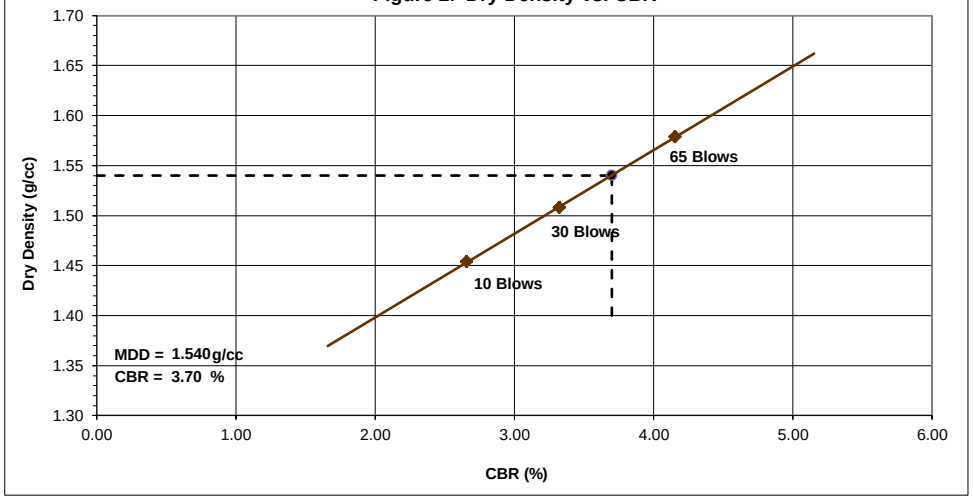
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-16
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1689507.641 N ; 446669.789 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/29/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.662	2.19
30	1.725	2.74
65	1.805	3.42

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.540	3.70
95	1.463	2.77

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-16_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/28/17	**TP/BS Number:**	TP-17
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1689822.811 N ; 446281.63 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/06/17

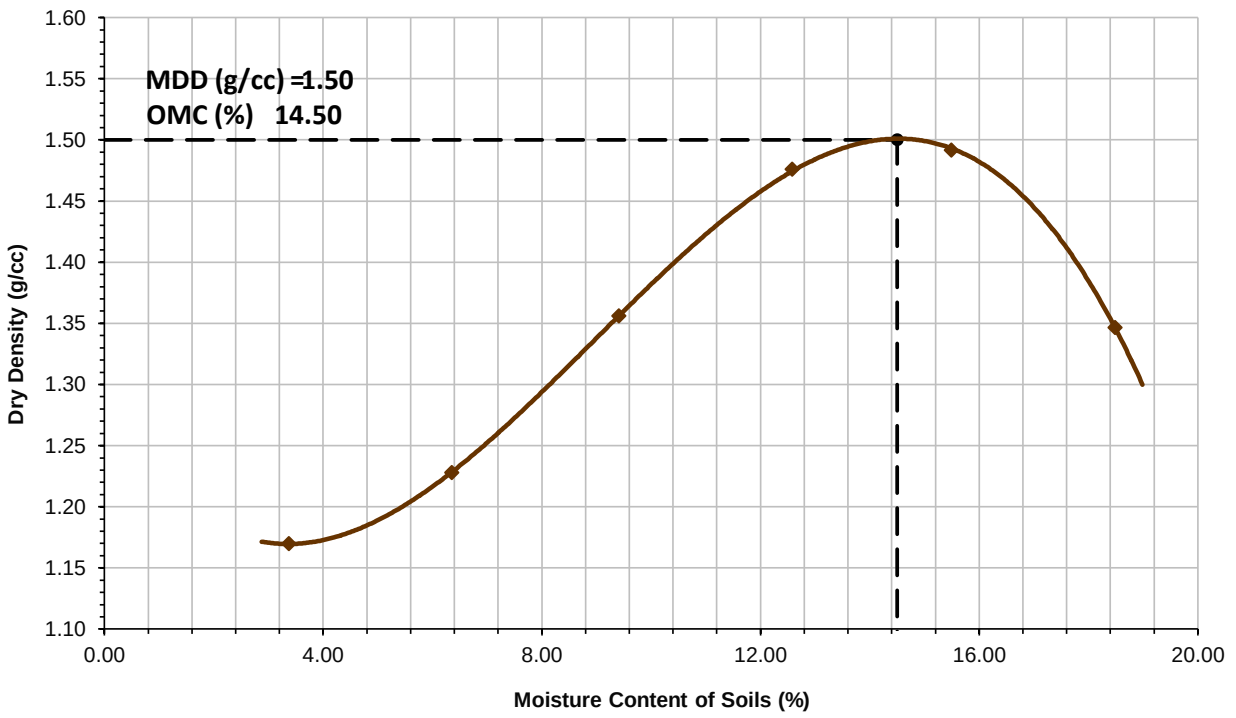
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**10-310**	**10-389**	**0-353**	**0-287**	**0-43**	**0-396**	**0-466**	**CC2**	**IO-423**	**10-288**	**10-460**	**0-203**
Wet Soil + Can (g)	157.20	156.05	185.42	189.14	180.38	173.53	173.93	167.09	158.64	161.69	176.73	169.48
Dry Soil + Can (g)	152.72	151.60	175.94	178.58	166.70	160.42	156.60	151.06	140.38	142.26	152.14	146.24
Mass of Can (g)	20.02	19.60	19.78	19.57	22.43	20.10	20.01	22.50	19.78	19.62	20.20	19.52
Moisture Loss (g)	4.48	4.45	9.48	10.56	13.68	13.11	17.33	16.03	18.26	19.43	24.59	23.24
Mass of Dry Soil (g)	132.70	132.00	156.16	159.01	144.27	140.32	136.59	128.56	120.60	122.64	131.94	126.72
Moisture Content (%)	3.38	3.37	6.07	6.64	9.48	9.34	12.69	12.47	15.14	15.84	18.64	18.34
Average Moisture (%)	**3.37**		**6.36**		**9.41**		**12.58**		**15.49**		**18.49**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**
Wet Soil + Mold (g)	4,480.00	4,575.00	4,750.00	4,925.00	4,985.00	4,860.00
Mass of Mold (g)	3,290.00	3,290.00	3,290.00	3,290.00	3,290.00	3,290.00
Mass of Wet Soil (g)	1,190.00	1,285.00	1,460.00	1,635.00	1,695.00	1,570.00
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	984.00
Wet Density (g/cc)	**1.21**	**1.31**	**1.48**	**1.66**	**1.72**	**1.60**
Dry Density (g/cc)	**1.17**	**1.23**	**1.36**	**1.48**	**1.49**	**1.35**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.50**
Opt. Moisture Content (%):	**14.50**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-17_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-17
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1689822.811 N ; 446281.63 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/28/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**NH**	**GF**	**10-169**	**0-212**	**0-131**	**10-389**
Wet Soil + Can (g)	169.88	187.61	153.83	165.78	162.03	182.04
Dry Soil + Can (g)	151.24	166.73	136.67	147.66	144.04	161.87
Mass of Can (g)	24.19	20.21	20.16	19.91	22.61	19.62
Moisture Loss (g)	18.64	20.88	17.16	18.12	17.99	20.17
Mass of Dry Soil (g)	127.05	146.52	116.51	127.75	121.43	142.25
Moisture Content (%)	14.67	14.25	14.73	14.18	14.82	14.18
Average Moisture (%)	**14.46**		**14.46**		**14.50**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-10**	**CBR-21**	**CBR-XL**
Wet Soil + Mold (g)	10430.00	10010.00	10630.00
Mass of Mold (g)	6830.00	6230.00	6700.00
Mass of Wet Soil (g)	3600.00	3780.00	3930.00
Volume of Mold (cc)	2228.00	2246.00	2236.00
Wet Density (g/cc)	**1.62**	**1.68**	**1.76**
Dry Density (g/cc)	**1.41**	**1.47**	**1.54**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.53	3.84	1.13
Reading After Soaking ($x10^{-1}$ mm)	3.4	5.3	2.52
Swell (%)	**1.61**	**1.25**	**1.19**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	11.16	13.95	17.44	0.58	0.72	0.90			
1.27	22.32	27.90	34.88	1.15	1.44	1.80			
1.91	29.30	36.62	45.78	1.51	1.89	2.36			
2.54	34.88	43.60	54.50	1.80	2.25	2.81	**2.56**	**3.20**	**3.99**
3.81	40.46	50.58	63.22	2.09	2.61	3.26			
5.08	44.65	55.81	69.76	2.30	2.88	3.60	**2.19**	**2.74**	**3.42**
7.62	48.83	61.04	76.30	2.52	3.15	3.93			
10.16	53.02	66.27	82.84	2.73	3.42	4.27			
12.70	57.20	71.50	89.38	2.95	3.69	4.61			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

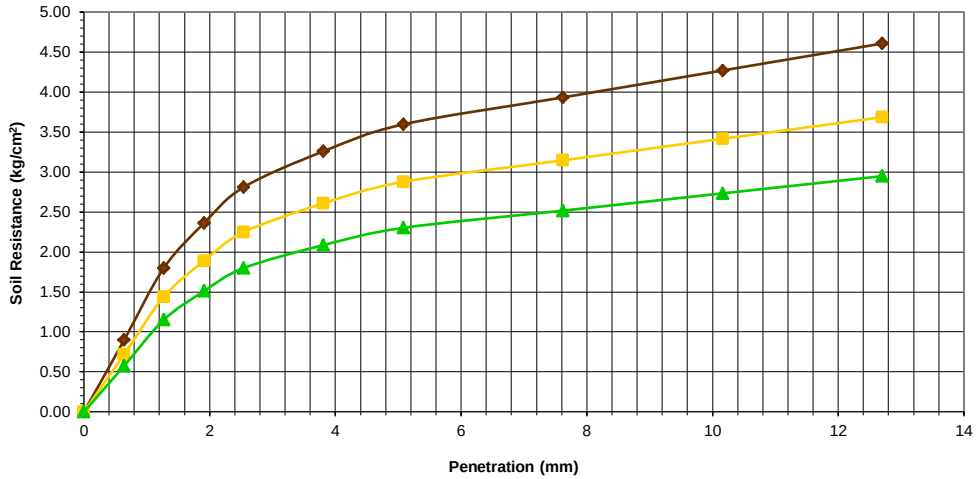
1705UIC1_RCBRT_TP-17_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

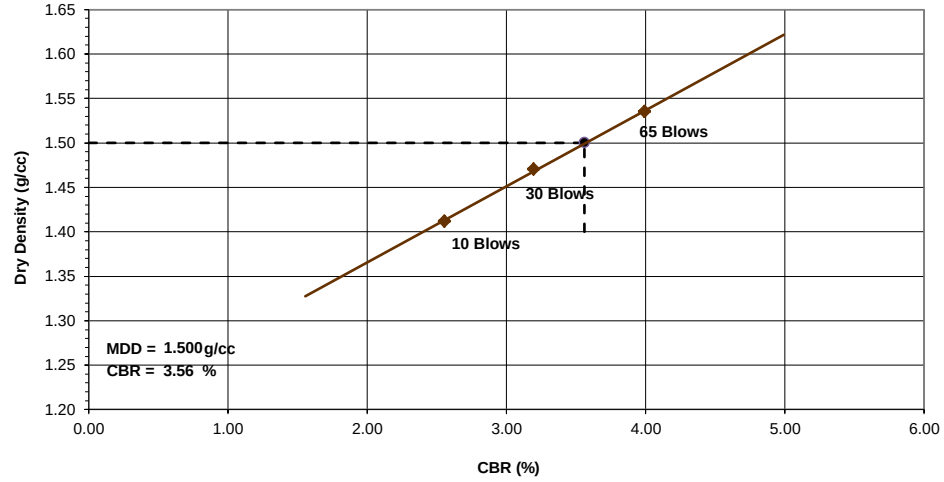
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-17
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1689822.811 N ; 446281.63 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/28/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.616	2.19
30	1.683	2.74
65	1.758	3.42

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.500	3.56
95	1.425	2.70

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-17_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/28/17	**TP/BS Number:**	TP-18
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1690153.898 N ; 445907.959 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	05/31/17

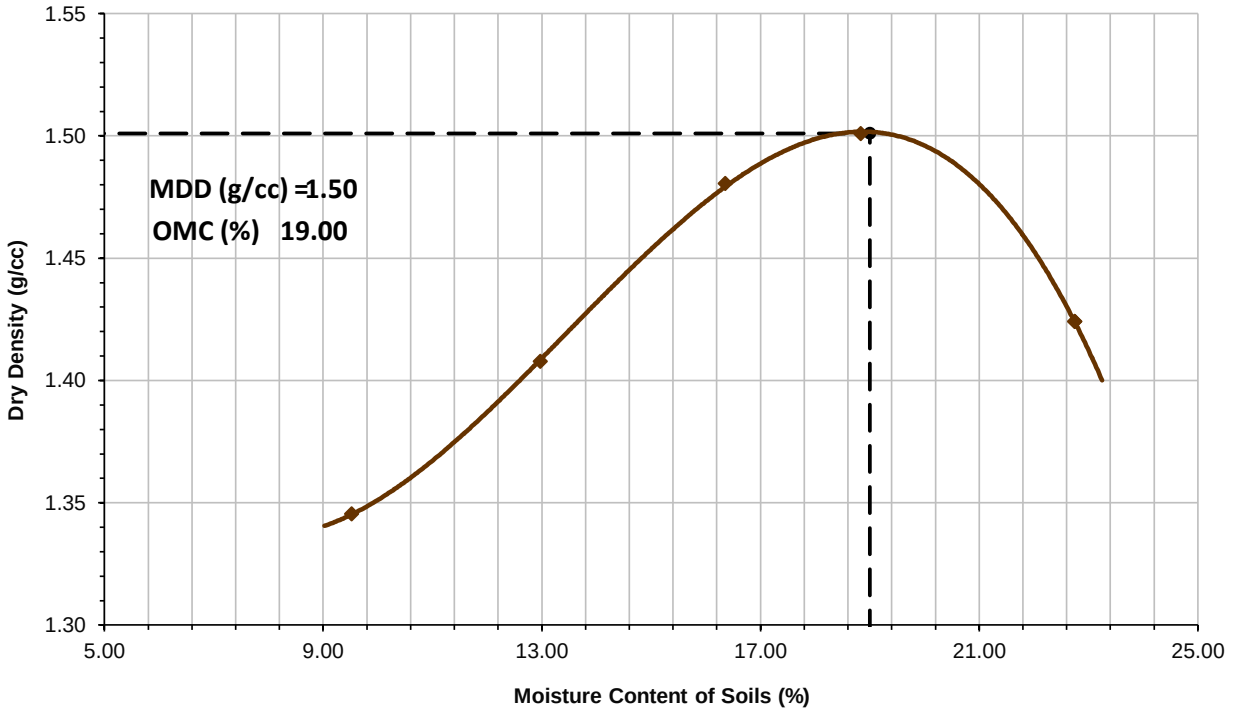
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**IG**	**A-14**	**O-63**	**O-44**	**D-1**	**3-G**	**GG9**	**EE9**	**O-185**	**O-68**	**-**	**-**
Wet Soil + Can (g)	181.24	182.49	189.63	182.48	187.90	185.16	174.51	178.80	184.86	188.25	-	-
Dry Soil + Can (g)	166.20	169.19	170.91	163.02	163.81	162.29	150.84	153.37	154.38	157.47	-	-
Mass of Can (g)	17.50	20.32	19.12	20.07	17.23	21.73	22.03	21.59	20.10	22.44	-	-
Moisture Loss (g)	15.04	13.30	18.72	19.46	24.09	22.87	23.67	25.43	30.48	30.78	-	-
Mass of Dry Soil (g)	148.70	148.87	151.79	142.95	146.58	140.56	128.81	131.78	134.28	135.03	-	-
Moisture Content (%)	10.11	8.93	12.33	13.61	16.43	16.27	18.38	19.30	22.70	22.79	-	-
Average Moisture (%)	**9.52**		**12.97**		**16.35**		**18.84**		**22.75**		**-**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**-**
Wet Soil + Mold (g)	4,740.00	4,855.00	4,985.00	5,045.00	5,010.00	-
Mass of Mold (g)	3,290.00	3,290.00	3,290.00	3,290.00	3,290.00	-
Mass of Wet Soil (g)	1,450.00	1,565.00	1,695.00	1,755.00	1,720.00	-
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	-
Wet Density (g/cc)	**1.47**	**1.59**	**1.72**	**1.78**	**1.75**	**-**
Dry Density (g/cc)	**1.35**	**1.41**	**1.48**	**1.50**	**1.42**	**-**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.50**
Opt. Moisture Content (%):	**19.00**

Performed by: DANILO DELAN
Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

1705UIC1_RMDRT_TP-18_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-18
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1690153.898 N ; 445907.959 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/28/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**BT**	**GF**	**1O-94**	**1O-84**	**10-129**	**10-438**
Wet Soil + Can (g)	144.84	164.10	168.12	178.97	152.53	169.57
Dry Soil + Can (g)	124.46	141.54	144.05	153.54	131.01	145.92
Mass of Can (g)	18.67	21.85	20.21	17.67	19.65	20.05
Moisture Loss (g)	20.38	22.56	24.07	25.43	21.52	23.65
Mass of Dry Soil (g)	105.79	119.69	123.84	135.87	111.36	125.87
Moisture Content (%)	19.26	18.85	19.44	18.72	19.32	18.79
Average Moisture (%)	**19.05**		**19.08**		**19.06**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-75**	**CBR-96**	**CBR-35**
Wet Soil + Mold (g)	10880.00	10560.00	11100.00
Mass of Mold (g)	7230.00	6660.00	7020.00
Mass of Wet Soil (g)	3650.00	3900.00	4080.00
Volume of Mold (cc)	2161.00	2216.00	2222.00
Wet Density (g/cc)	**1.69**	**1.76**	**1.84**
Dry Density (g/cc)	**1.42**	**1.48**	**1.54**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.8	1.76	1.33
Reading After Soaking ($x10^{-1}$ mm)	2.43	2.3	1.8
Swell (%)	**0.54**	**0.46**	**0.40**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	13.95	17.44	21.80	0.72	0.90	1.12			
1.27	22.32	27.90	34.88	1.15	1.44	1.80			
1.91	29.30	36.62	45.78	1.51	1.89	2.36			
2.54	33.48	41.86	52.32	1.73	2.16	2.70	**2.45**	**3.07**	**3.83**
3.81	39.07	48.83	61.04	2.01	2.52	3.15			
5.08	43.25	54.06	67.58	2.23	2.79	3.48	**2.12**	**2.65**	**3.32**
7.62	47.44	59.30	74.12	2.45	3.06	3.82			
10.16	50.23	62.78	78.48	2.59	3.24	4.05			
12.70	53.02	66.27	82.84	2.73	3.42	4.27			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

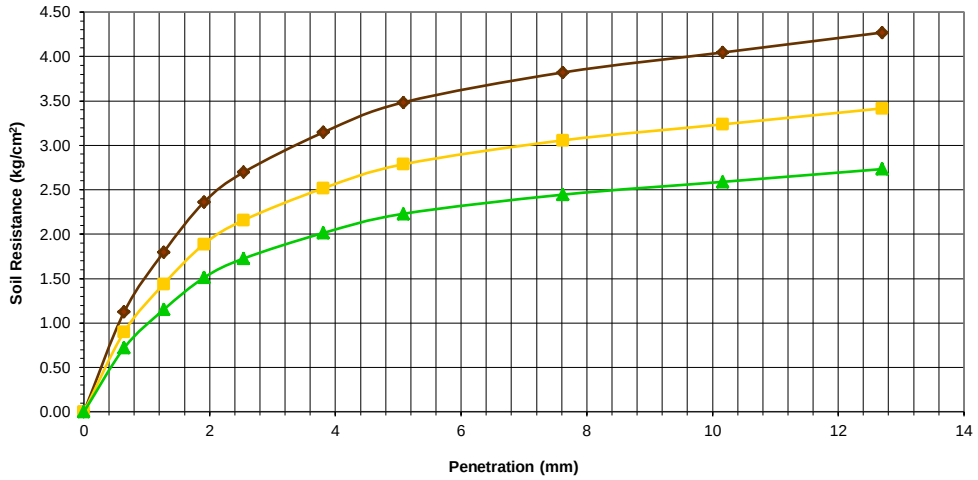
1705UIC1_RCBRT_TP-18_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

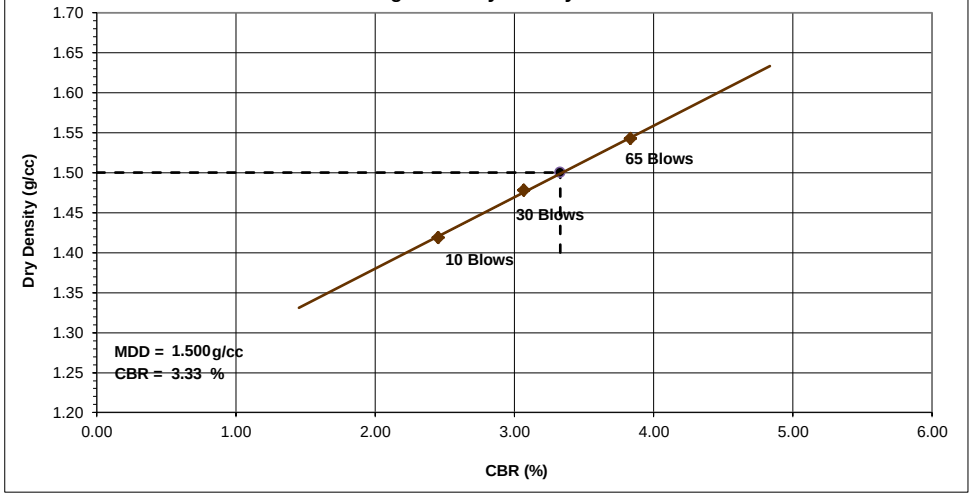
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-18
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1690153.898 N ; 445907.959 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/28/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.689	2.12
30	1.760	2.65
65	1.836	3.32

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.500	3.33
95	1.425	2.52

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-18_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/28/17	**TP/BS Number:**	TP-19
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1690577.494 N ; 445646.693 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/02/17

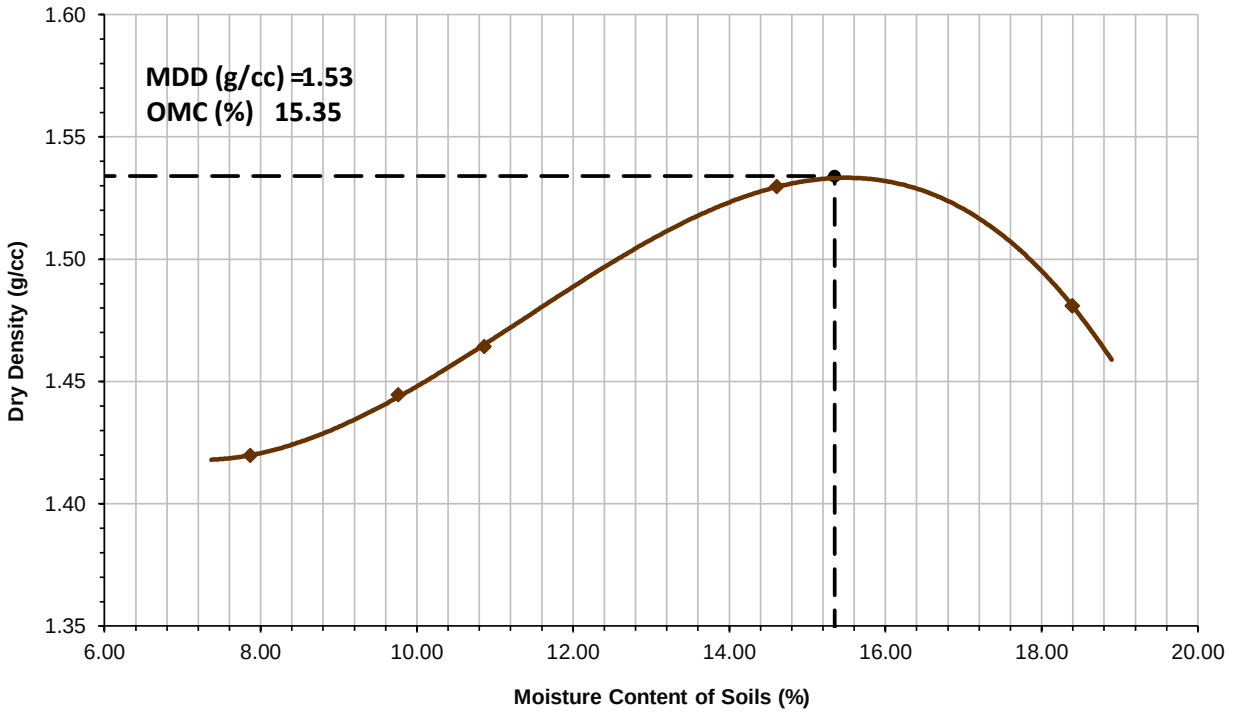
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**1O-238**	**KK3**	**DD6**	**CD3**	**GG7**	**XY6**	**O-134**	**6H**	**1O-132**	**EE10**	**-**	**-**
Wet Soil + Can (g)	170.55	192.50	167.73	156.56	182.54	184.24	182.51	189.68	165.30	170.32	-	-
Dry Soil + Can (g)	159.64	180.00	154.16	144.98	167.73	167.39	162.15	167.72	142.70	147.26	-	-
Mass of Can (g)	20.02	22.25	21.45	20.37	22.24	21.51	22.65	17.59	19.84	21.90	-	-
Moisture Loss (g)	10.91	12.50	13.57	11.58	14.81	16.85	20.36	21.96	22.60	23.06	-	-
Mass of Dry Soil (g)	139.62	157.75	132.71	124.61	145.49	145.88	139.50	150.13	122.86	125.36	-	-
Moisture Content (%)	7.81	7.92	10.23	9.29	10.18	11.55	14.59	14.63	18.39	18.40	-	-
Average Moisture (%)	**7.87**		**9.76**		**10.86**		**14.61**		**18.39**		**-**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**-**
Wet Soil + Mold (g)	4,470.00	4,520.00	4,555.00	4,675.00	4,675.00	-
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	-
Mass of Wet Soil (g)	1,415.00	1,465.00	1,500.00	1,620.00	1,620.00	-
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	-
Wet Density (g/cc)	**1.53**	**1.59**	**1.62**	**1.75**	**1.75**	**-**
Dry Density (g/cc)	**1.42**	**1.44**	**1.46**	**1.53**	**1.48**	**-**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.53**
Opt. Moisture Content (%):	**15.35**

Performed by: DANILO DELAN
Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

1705UIC1_RMDRT_TP-19_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-19
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1690577.494 N ; 445646.693 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/28/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**BV**	**FD**	**10-273**	**10-337**	**0-311**	**NN3**
Wet Soil + Can (g)	171.92	183.76	174.73	192.89	163.88	185.64
Dry Soil + Can (g)	151.71	162.68	153.89	170.33	144.49	164.32
Mass of Can (g)	22.20	22.52	20.03	20.36	20.18	22.30
Moisture Loss (g)	20.20	21.08	20.84	22.56	19.39	21.32
Mass of Dry Soil (g)	129.52	140.15	133.86	149.97	124.31	142.02
Moisture Content (%)	15.60	15.04	15.57	15.04	15.60	15.01
Average Moisture (%)	**15.32**		**15.31**		**15.31**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-12**	**CBR-X5**	**CBR-64**
Wet Soil + Mold (g)	10240.00	9980.00	10670.00
Mass of Mold (g)	6640.00	6110.00	6640.00
Mass of Wet Soil (g)	3600.00	3870.00	4030.00
Volume of Mold (cc)	2179.00	2241.00	2243.00
Wet Density (g/cc)	**1.65**	**1.73**	**1.80**
Dry Density (g/cc)	**1.43**	**1.50**	**1.56**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.76	2.23	1.3
Reading After Soaking ($x10^{-1}$ mm)	2.36	2.73	1.75
Swell (%)	**0.52**	**0.43**	**0.39**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	16.74	20.93	26.16	0.86	1.08	1.35			
1.27	25.11	31.39	39.24	1.29	1.62	2.02			
1.91	30.69	38.37	47.96	1.58	1.98	2.47			
2.54	34.88	43.60	54.50	1.80	2.25	2.81	**2.56**	**3.20**	**3.99**
3.81	40.46	50.58	63.22	2.09	2.61	3.26			
5.08	43.25	54.06	67.58	2.23	2.79	3.48	**2.12**	**2.65**	**3.32**
7.62	47.44	59.30	74.12	2.45	3.06	3.82			
10.16	50.23	62.78	78.48	2.59	3.24	4.05			
12.70	53.02	66.27	82.84	2.73	3.42	4.27			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

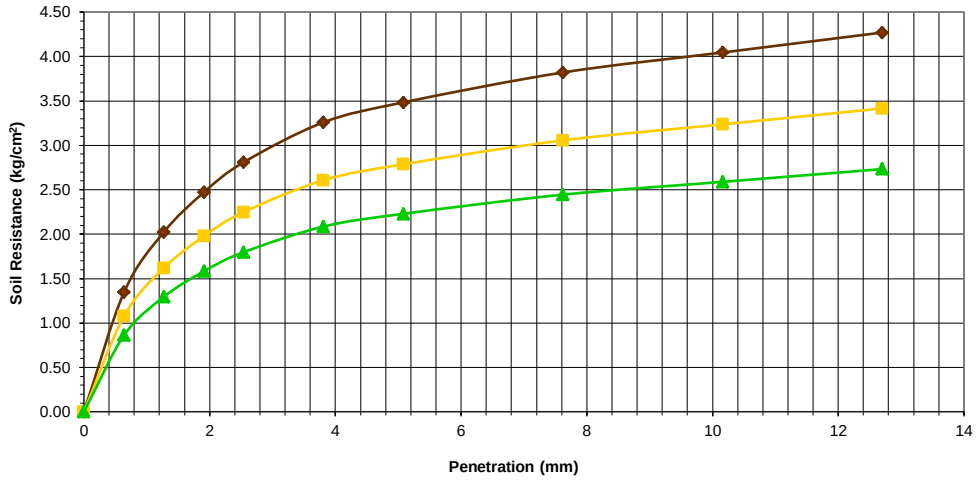
1705UIC1_RCBRT_TP-19_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

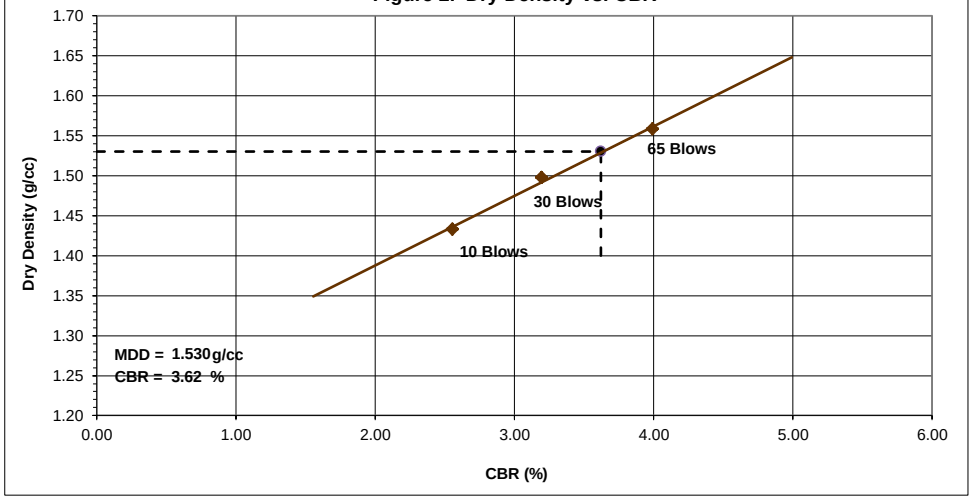
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-19
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1690577.494 N ; 445646.693 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/28/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.652	2.12
30	1.727	2.65
65	1.797	3.32

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.530	3.62
95	1.454	2.76

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-19_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/28/17	**TP/BS Number:**	TP-20
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1691063.259 N ; 445538.405 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/05/17

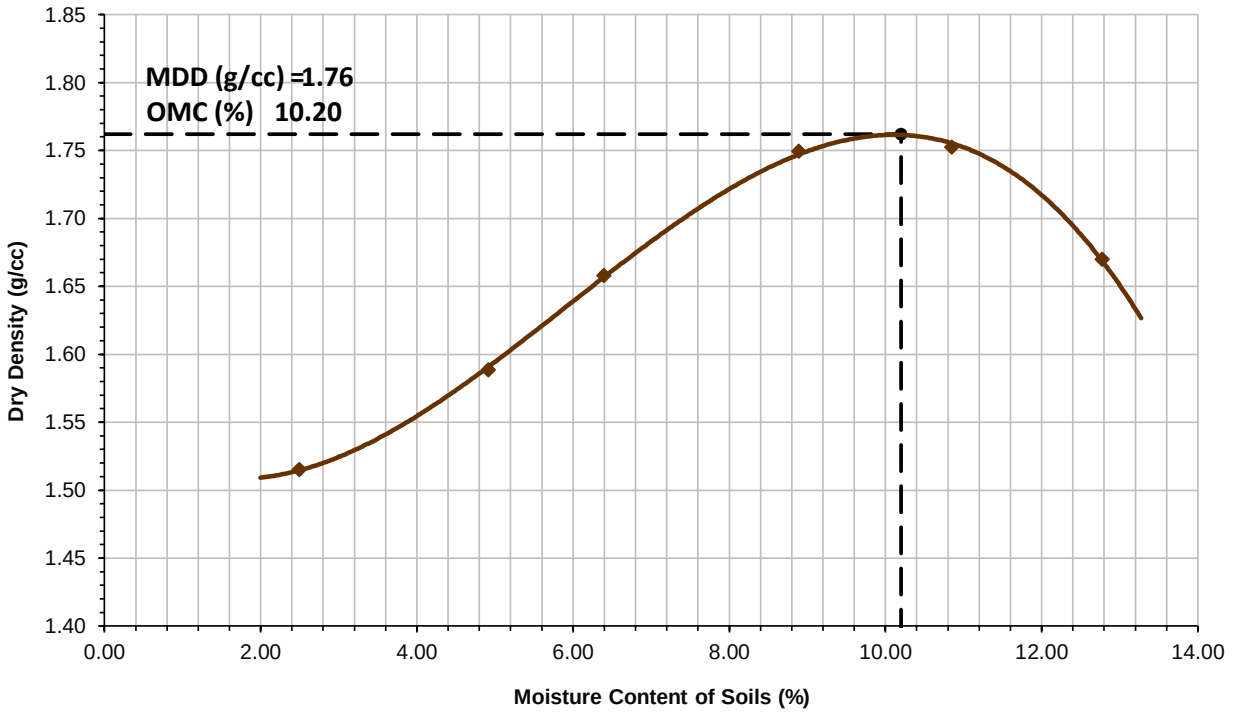
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**R5**	**7E**	**10-308**	**O-296**	**O-141**	**O-219**	**1O-124**	**10-318**	**H5**	**4FF**	**O-124**	**O-201**
Wet Soil + Can (g)	167.53	162.64	170.72	175.68	185.00	172.22	182.24	188.10	178.19	180.05	171.00	179.20
Dry Soil + Can (g)	163.76	159.28	163.60	168.46	175.50	162.70	169.10	174.30	162.76	164.50	154.26	161.12
Mass of Can (g)	17.57	20.13	20.02	20.20	19.82	20.38	20.28	20.11	21.56	20.17	22.76	20.05
Moisture Loss (g)	3.77	3.36	7.12	7.22	9.50	9.52	13.14	13.80	15.43	15.55	16.74	18.08
Mass of Dry Soil (g)	146.19	139.15	143.58	148.26	155.68	142.32	148.82	154.19	141.20	144.33	131.50	141.07
Moisture Content (%)	2.58	2.41	4.96	4.87	6.10	6.69	8.83	8.95	10.93	10.77	12.73	12.82
Average Moisture (%)	**2.50**		**4.91**		**6.40**		**8.89**		**10.85**		**12.77**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,490.00	4,595.00	4,685.00	4,815.00	4,850.00	4,795.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,435.00	1,540.00	1,630.00	1,760.00	1,795.00	1,740.00
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	924.00
Wet Density (g/cc)	**1.55**	**1.67**	**1.76**	**1.90**	**1.94**	**1.88**
Dry Density (g/cc)	**1.52**	**1.59**	**1.66**	**1.75**	**1.75**	**1.67**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.76**
Opt. Moisture Content (%):	**10.20**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-20_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-20
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1691063.259 N ; 445538.405 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/28/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**BT**	**RT**	**0-123**	**1O-1O**	**1O-79**	**10-280**
Wet Soil + Can (g)	167.52	182.67	170.45	184.49	159.30	180.82
Dry Soil + Can (g)	153.41	167.97	156.42	169.42	146.10	166.31
Mass of Can (g)	16.88	21.19	22.25	18.95	18.76	21.19
Moisture Loss (g)	14.11	14.69	14.03	15.07	13.20	14.51
Mass of Dry Soil (g)	136.52	146.78	134.17	150.47	127.34	145.12
Moisture Content (%)	10.34	10.01	10.46	10.02	10.37	10.00
Average Moisture (%)	**10.17**		**10.24**		**10.18**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-25**	**CBR-18**	**CBR-63**
Wet Soil + Mold (g)	12370.00	10540.00	12960.00
Mass of Mold (g)	8420.00	6290.00	8505.00
Mass of Wet Soil (g)	3950.00	4250.00	4455.00
Volume of Mold (cc)	2161.00	2243.00	2241.00
Wet Density (g/cc)	**1.83**	**1.89**	**1.99**
Dry Density (g/cc)	**1.66**	**1.72**	**1.80**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	3.47	1.2	2.57
Reading After Soaking ($x10^{-1}$ mm)	4.29	1.96	3.18
Swell (%)	**0.70**	**0.65**	**0.52**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows		
	10	30	65	10	30	65
0.64	33.48	41.86	52.32	1.73	2.16	2.70
1.27	54.41	68.02	85.02	2.80	3.51	4.38
1.91	71.16	88.94	111.18	3.67	4.58	5.73
2.54	82.32	102.90	128.62	4.24	5.30	6.63
3.81	94.87	118.59	148.24	4.89	6.11	7.64
5.08	104.64	130.80	163.50	5.39	6.74	8.43
7.62	118.59	148.24	185.30	6.11	7.64	9.55
10.16	128.36	160.45	200.56	6.62	8.27	10.34
12.70	133.94	167.42	209.28	6.90	8.63	10.79

CBR (%) Blows		
10	30	65
6.03	**7.54**	**9.43**
5.14	**6.42**	**8.03**

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

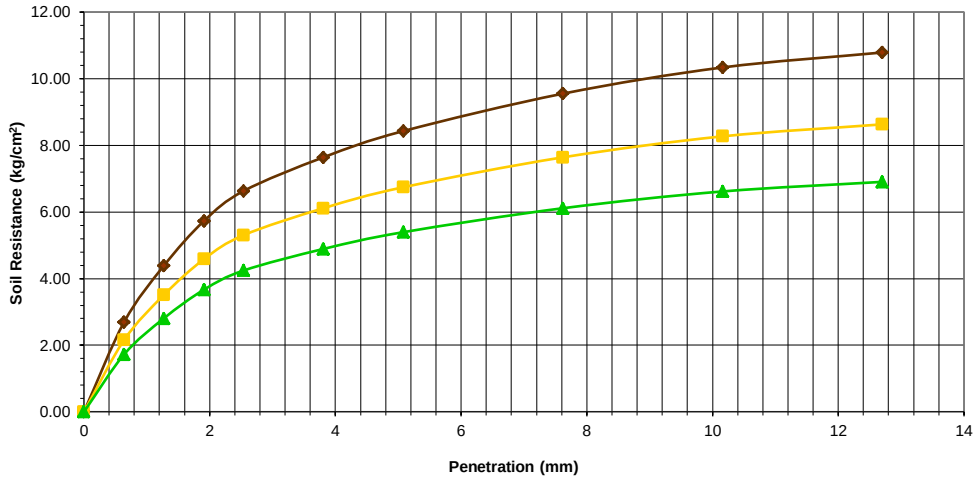
1705UIC1_RCBRT_TP-20_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

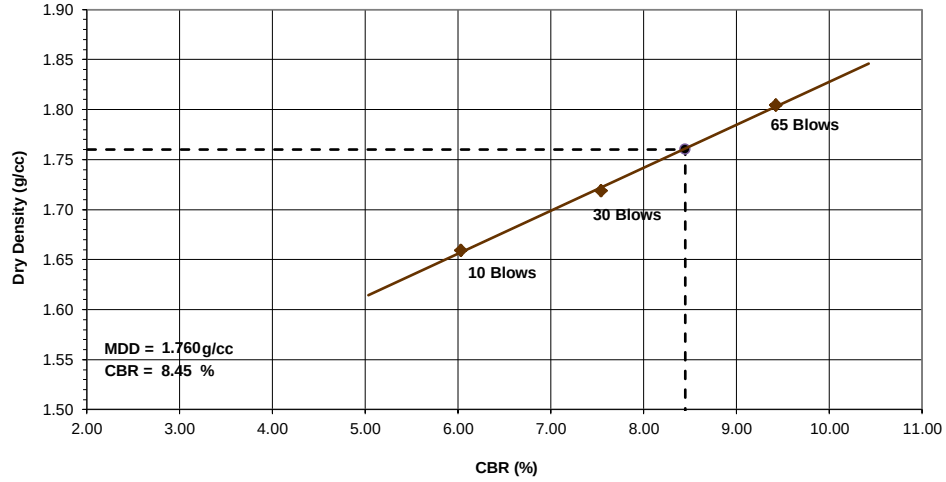
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-20
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1691063.259 N ; 445538.405 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/28/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.828	5.14
30	1.895	6.42
65	1.988	8.03

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.760	8.45
95	1.672	6.36

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-20_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/28/17	**TP/BS Number:**	TP-21
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1691557.717 N ; 445595.018 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/07/17

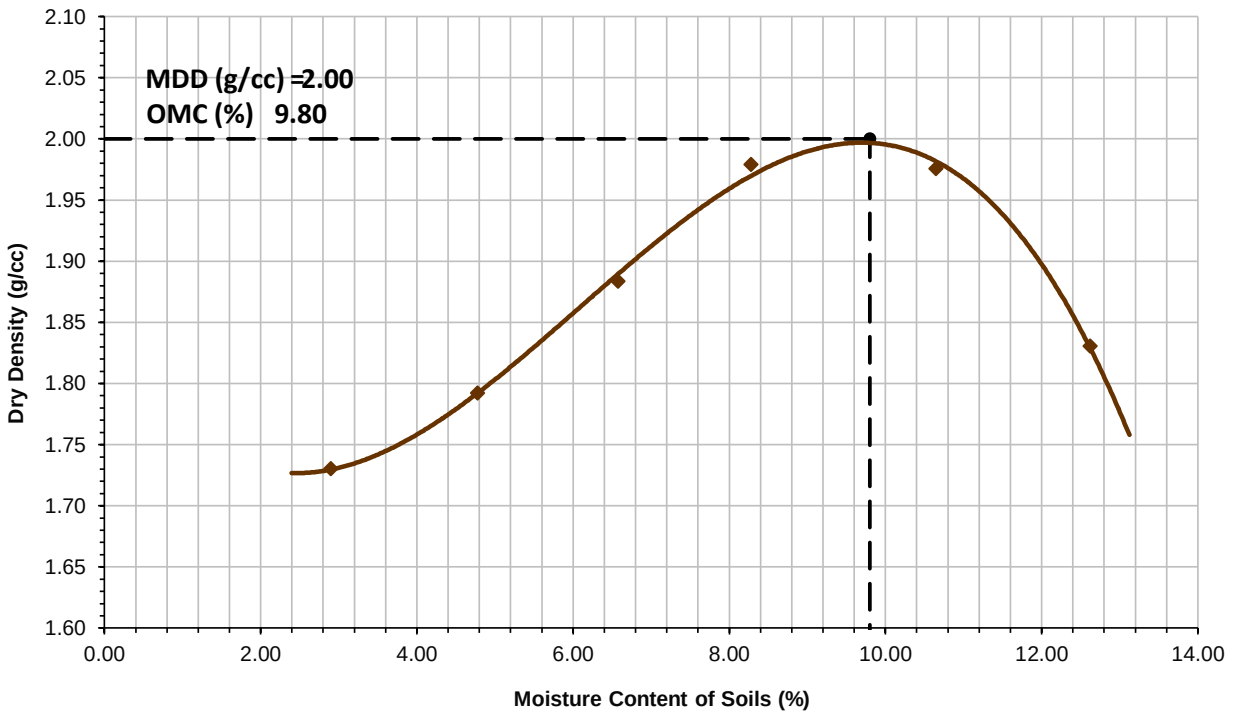
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**N**	**A6**	**0-70**	**IO-49**	**0-138**	**T9**	**0-169**	**A1**	**8H**	**10-447**	**A4**	**FF8**
Wet Soil + Can (g)	174.61	189.91	188.41	179.32	187.80	190.97	176.93	188.87	154.23	156.92	184.30	178.57
Dry Soil + Can (g)	170.38	185.10	180.94	171.78	177.80	180.32	165.08	176.34	140.78	144.02	166.24	161.02
Mass of Can (g)	20.74	23.05	19.83	18.44	22.73	21.37	23.09	23.69	17.64	19.68	23.38	21.77
Moisture Loss (g)	4.23	4.81	7.47	7.54	10.00	10.65	11.85	12.53	13.45	12.90	18.06	17.55
Mass of Dry Soil (g)	149.64	162.05	161.11	153.34	155.07	158.95	141.99	152.65	123.14	124.34	142.86	139.25
Moisture Content (%)	2.83	2.97	4.64	4.92	6.45	6.70	8.35	8.21	10.92	10.37	12.64	12.60
Average Moisture (%)	**2.90**		**4.78**		**6.57**		**8.28**		**10.65**		**12.62**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,700.00	4,790.00	4,910.00	5,035.00	5,075.00	4,960.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,645.00	1,735.00	1,855.00	1,980.00	2,020.00	1,905.00
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	924.00
Wet Density (g/cc)	**1.78**	**1.88**	**2.01**	**2.14**	**2.19**	**2.06**
Dry Density (g/cc)	**1.73**	**1.79**	**1.88**	**1.98**	**1.98**	**1.83**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**2.00**
Opt. Moisture Content (%):	**9.80**

Performed by: DANILO DELAN
Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

1705UIC1_RMDRT_TP-21_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-21
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1691557.717 N ; 445595.018 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/28/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**JY**	**TR**	**10-286**	**0-295**	**0-163**	**0-351**
Wet Soil + Can (g)	157.79	161.12	151.80	160.15	150.35	158.01
Dry Soil + Can (g)	145.47	148.79	139.78	147.81	138.54	145.87
Mass of Can (g)	21.82	21.65	19.92	20.19	20.39	20.23
Moisture Loss (g)	12.33	12.33	12.02	12.34	11.81	12.14
Mass of Dry Soil (g)	123.65	127.14	119.86	127.62	118.15	125.64
Moisture Content (%)	9.97	9.70	10.03	9.67	10.00	9.66
Average Moisture (%)	**9.83**		**9.85**		**9.83**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-91**	**CBR-90**	**CBR-60**
Wet Soil + Mold (g)	12620.00	11100.00	13030.00
Mass of Mold (g)	8060.00	6300.00	7985.00
Mass of Wet Soil (g)	4560.00	4800.00	5045.00
Volume of Mold (cc)	2202.00	2228.00	2242.00
Wet Density (g/cc)	**2.07**	**2.15**	**2.25**
Dry Density (g/cc)	**1.89**	**1.96**	**2.05**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	2.84	2.35	2.1
Reading After Soaking ($x10^{-1}$ mm)	4.97	3.96	3.68
Swell (%)	**1.83**	**1.38**	**1.36**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	58.28	68.56	80.66	3.00	3.53	4.16			
1.27	110.25	129.71	152.60	5.68	6.69	7.87			
1.91	146.48	172.33	202.74	7.55	8.88	10.45			
2.54	171.68	201.98	237.62	8.85	10.41	12.25	**12.58**	**14.80**	**17.41**
3.81	212.63	250.16	294.30	10.96	12.89	15.17			
5.08	239.41	281.66	331.36	12.34	14.52	17.08	**11.75**	**13.83**	**16.27**
7.62	266.18	313.16	368.42	13.72	16.14	18.99			
10.16	281.93	331.69	390.22	14.53	17.10	20.11			
12.70	291.38	342.81	403.30	15.02	17.67	20.79			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

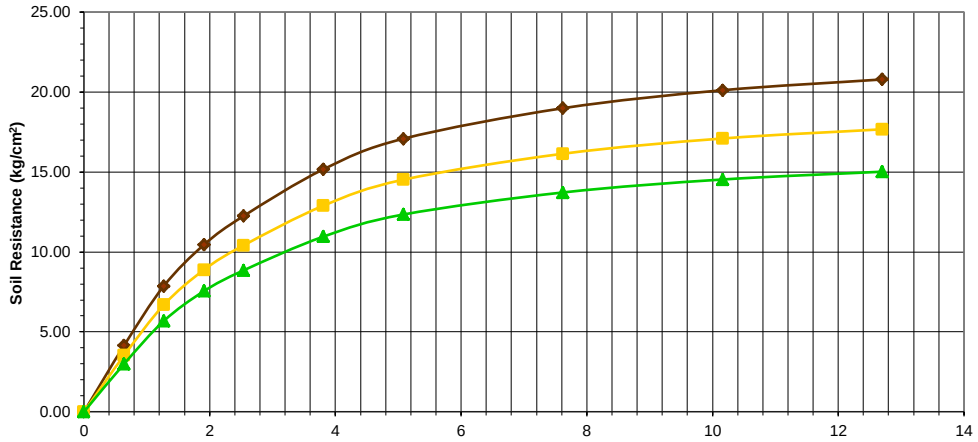
1705UIC1_RCBRT_TP-21_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

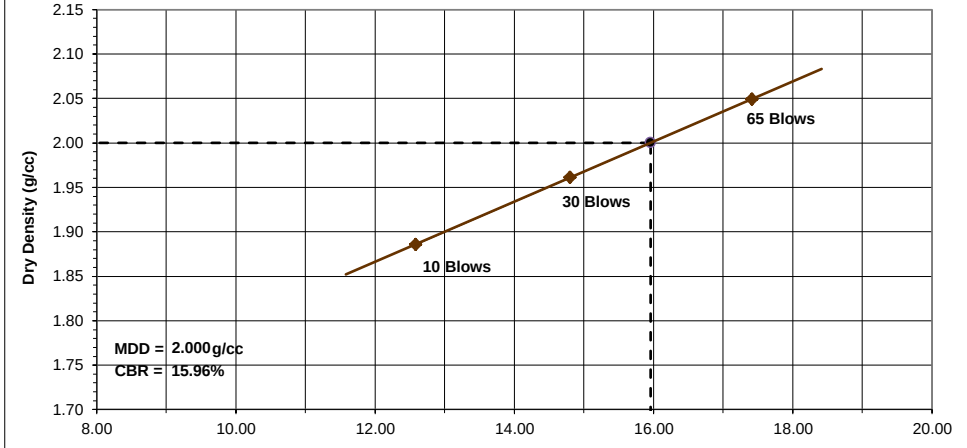
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-21
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1691557.717 N ; 445595.018 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/28/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	2.071	11.75
30	2.154	13.83
65	2.250	16.27

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	2.000	15.96
95	1.900	13.01

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-21_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/28/17	**TP/BS Number:**	TP-22
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1692023.284 N ; 445776.023 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/07/17

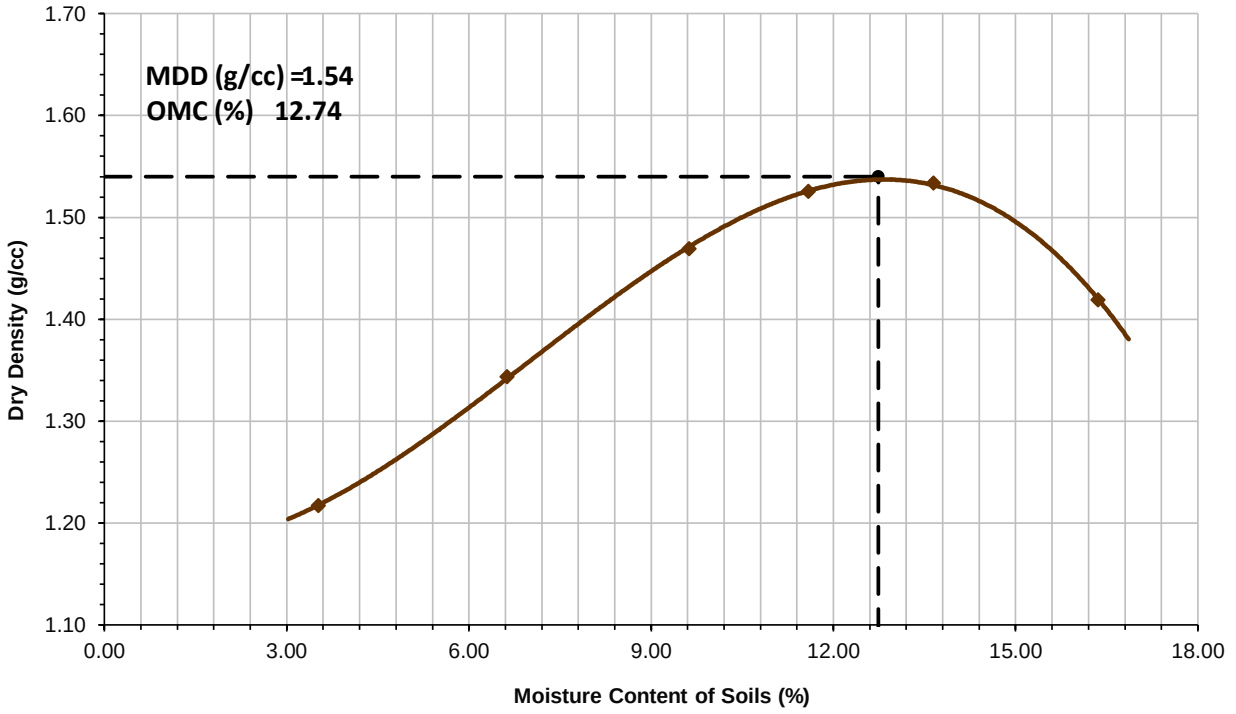
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**KKI**	**HH2**	**II9**	**AA8**	**8H**	**GG9**	**JJ1**	**A1**	**0-74**	**A34**	**0-66**	**0-04**
Wet Soil + Can (g)	169.06	172.50	163.71	157.67	165.77	168.62	169.38	174.42	179.94	177.47	160.15	177.29
Dry Soil + Can (g)	164.12	167.32	154.80	149.32	152.46	156.06	154.24	158.60	161.30	158.82	140.99	155.18
Mass of Can (g)	22.38	21.82	22.01	21.85	17.74	22.09	21.91	23.77	22.94	23.88	22.23	21.87
Moisture Loss (g)	4.94	5.18	8.91	8.35	13.31	12.56	15.14	15.82	18.64	18.65	19.16	22.11
Mass of Dry Soil (g)	141.74	145.50	132.79	127.47	134.72	133.97	132.33	134.83	138.36	134.94	118.76	133.31
Moisture Content (%)	3.49	3.56	6.71	6.55	9.88	9.38	11.44	11.73	13.47	13.82	16.13	16.59
Average Moisture (%)	**3.52**		**6.63**		**9.63**		**11.59**		**13.65**		**16.36**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**
Wet Soil + Mold (g)	4,530.00	4,700.00	4,875.00	4,965.00	5,005.00	4,915.00
Mass of Mold (g)	3,290.00	3,290.00	3,290.00	3,290.00	3,290.00	3,290.00
Mass of Wet Soil (g)	1,240.00	1,410.00	1,585.00	1,675.00	1,715.00	1,625.00
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	984.00
Wet Density (g/cc)	**1.26**	**1.43**	**1.61**	**1.70**	**1.74**	**1.65**
Dry Density (g/cc)	**1.22**	**1.34**	**1.47**	**1.53**	**1.53**	**1.42**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.54**
Opt. Moisture Content (%):	**12.74**

Performed by: DANILO DELAN
Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

1705UIC1_RMDRT_TP-22_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-22
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1692023.284 N ; 445776.023 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/28/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**JU**	**YH**	**7M**	**1O-4**	**R-8**	**0-65**
Wet Soil + Can (g)	153.22	173.25	160.94	173.38	156.43	178.74
Dry Soil + Can (g)	137.64	156.64	144.66	156.64	140.45	161.48
Mass of Can (g)	16.86	22.41	19.14	23.32	17.56	22.64
Moisture Loss (g)	15.58	16.62	16.28	16.74	15.98	17.26
Mass of Dry Soil (g)	120.78	134.22	125.52	133.32	122.89	138.84
Moisture Content (%)	12.90	12.38	12.97	12.56	13.00	12.43
Average Moisture (%)	**12.64**		**12.76**		**12.72**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-41**	**CBR-32**	**CBR-75-X**
Wet Soil + Mold (g)	9570.00	10290.00	10280.00
Mass of Mold (g)	6030.00	6470.00	6280.00
Mass of Wet Soil (g)	3540.00	3820.00	4000.00
Volume of Mold (cc)	2160.00	2231.00	2245.00
Wet Density (g/cc)	**1.64**	**1.71**	**1.78**
Dry Density (g/cc)	**1.46**	**1.52**	**1.58**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.59	1.36	1.18
Reading After Soaking ($x10^{-1}$ mm)	2.65	2.25	1.96
Swell (%)	**0.91**	**0.76**	**0.67**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	9.77	12.21	15.26	0.50	0.63	0.79			
1.27	20.93	26.16	32.70	1.08	1.35	1.69			
1.91	29.30	36.62	45.78	1.51	1.89	2.36			
2.54	34.88	43.60	54.50	1.80	2.25	2.81	**2.56**	**3.20**	**3.99**
3.81	40.46	50.58	63.22	2.09	2.61	3.26			
5.08	44.65	55.81	69.76	2.30	2.88	3.60	**2.19**	**2.74**	**3.42**
7.62	48.83	61.04	76.30	2.52	3.15	3.93			
10.16	51.62	64.53	80.66	2.66	3.33	4.16			
12.70	54.41	68.02	85.02	2.80	3.51	4.38			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

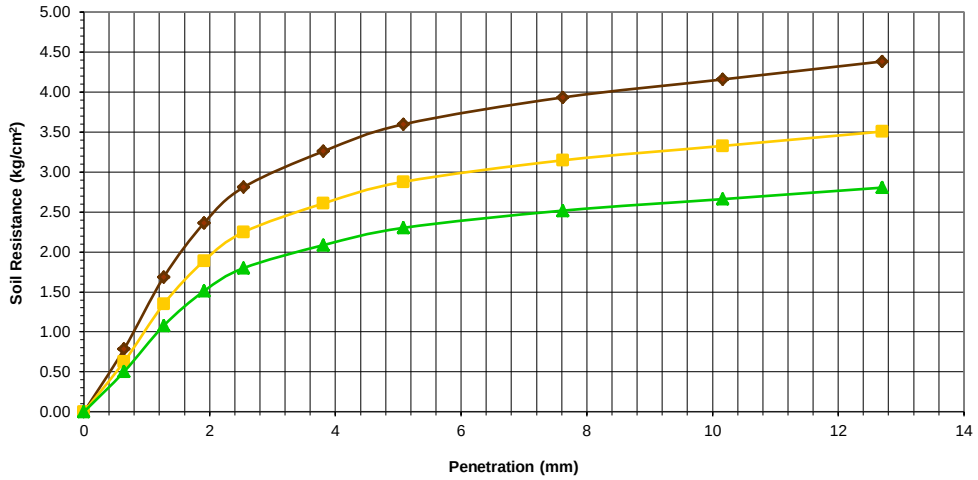
1705UIC1_RCBRT_TP-22_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

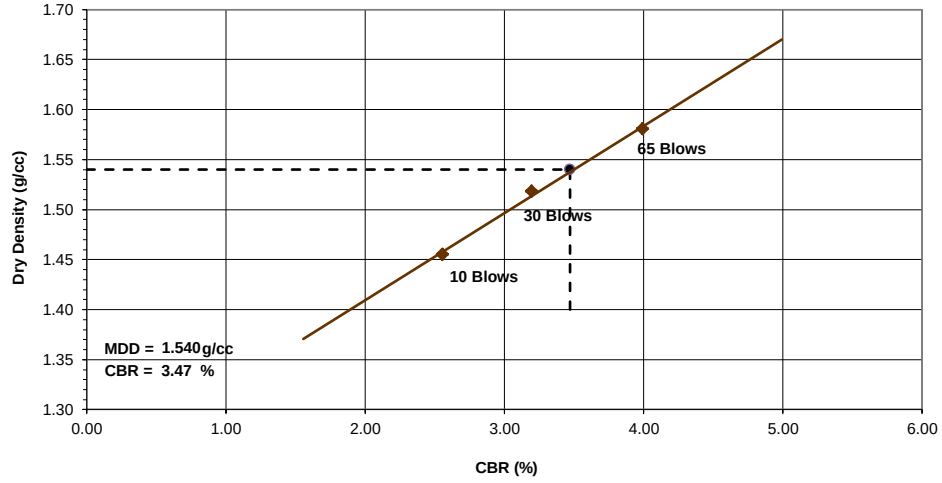
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-22
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1692023.284 N ; 445776.023 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/28/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.639	2.19
30	1.712	2.74
65	1.782	3.42

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.540	3.47
95	1.463	2.64

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-22_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/26/17	**TP/BS Number:**	TP-23
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1692458.562 N ; 446021.861 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/06/17

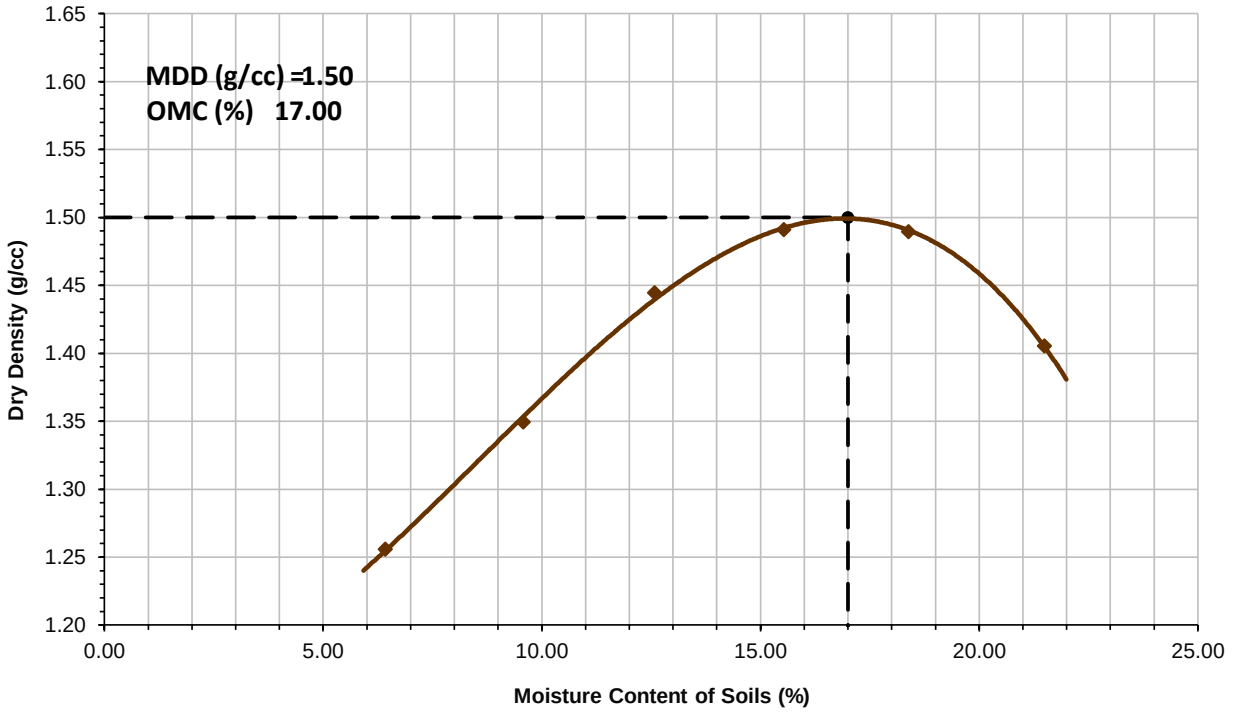
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**0-160**	**10-224**	**10-152**	**10-159**	**0-111**	**0-149**	**5C**	**0-133**	**GG1**	**DD4**	**0-49**	**0-22**
Wet Soil + Can (g)	165.35	156.40	155.67	154.23	188.58	175.64	157.80	156.63	172.38	189.82	175.14	188.13
Dry Soil + Can (g)	156.24	148.64	143.60	142.70	169.70	159.02	138.84	138.74	149.20	163.54	148.38	158.52
Mass of Can (g)	22.83	19.52	19.52	20.36	22.71	23.97	17.44	22.91	21.93	21.86	22.35	22.45
Moisture Loss (g)	9.11	7.76	12.07	11.53	18.88	16.62	18.96	17.89	23.18	26.28	26.76	29.61
Mass of Dry Soil (g)	133.41	129.12	124.08	122.34	146.99	135.05	121.40	115.83	127.27	141.68	126.03	136.07
Moisture Content (%)	6.83	6.01	9.73	9.42	12.84	12.31	15.62	15.45	18.21	18.55	21.23	21.76
Average Moisture (%)	**6.42**		**9.58**		**12.58**		**15.53**		**18.38**		**21.50**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**
Wet Soil + Mold (g)	4,605.00	4,745.00	4,890.00	4,985.00	5,025.00	4,970.00
Mass of Mold (g)	3,290.00	3,290.00	3,290.00	3,290.00	3,290.00	3,290.00
Mass of Wet Soil (g)	1,315.00	1,455.00	1,600.00	1,695.00	1,735.00	1,680.00
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	984.00
Wet Density (g/cc)	**1.34**	**1.48**	**1.63**	**1.72**	**1.76**	**1.71**
Dry Density (g/cc)	**1.26**	**1.35**	**1.44**	**1.49**	**1.49**	**1.41**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.50**
Opt. Moisture Content (%):	**17.00**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-23_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-23
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1692458.562 N ; 446021.861 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/26/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**FR**	**EF**	**10-267**	**0-12**	**0-461**	**10-318**
Wet Soil + Can (g)	171.45	167.75	159.56	170.20	156.90	159.93
Dry Soil + Can (g)	149.14	147.00	139.11	148.99	136.83	140.00
Mass of Can (g)	18.86	21.43	20.10	22.59	20.06	20.03
Moisture Loss (g)	22.31	20.75	20.45	21.21	20.07	19.93
Mass of Dry Soil (g)	130.29	125.57	119.01	126.40	116.77	119.97
Moisture Content (%)	17.12	16.53	17.18	16.78	17.19	16.61
Average Moisture (%)	**16.82**		**16.98**		**16.90**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-26**	**CBR-30**	**CBR-67**
Wet Soil + Mold (g)	9700.00	10120.00	10300.00
Mass of Mold (g)	6060.00	6305.00	6315.00
Mass of Wet Soil (g)	3640.00	3815.00	3985.00
Volume of Mold (cc)	2211.00	2222.00	2226.00
Wet Density (g/cc)	**1.65**	**1.72**	**1.79**
Dry Density (g/cc)	**1.41**	**1.47**	**1.53**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	3.75	2.38	2.78
Reading After Soaking ($x10^{-1}$ mm)	4.68	3.28	3.47
Swell (%)	**0.80**	**0.77**	**0.59**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	11.16	13.95	17.44	0.58	0.72	0.90			
1.27	20.93	26.16	32.70	1.08	1.35	1.69			
1.91	29.30	36.62	45.78	1.51	1.89	2.36			
2.54	34.88	43.60	54.50	1.80	2.25	2.81	**2.56**	**3.20**	**3.99**
3.81	40.46	50.58	63.22	2.09	2.61	3.26			
5.08	44.65	55.81	69.76	2.30	2.88	3.60	**2.19**	**2.74**	**3.42**
7.62	48.83	61.04	76.30	2.52	3.15	3.93			
10.16	51.62	64.53	80.66	2.66	3.33	4.16			
12.70	54.41	68.02	85.02	2.80	3.51	4.38			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

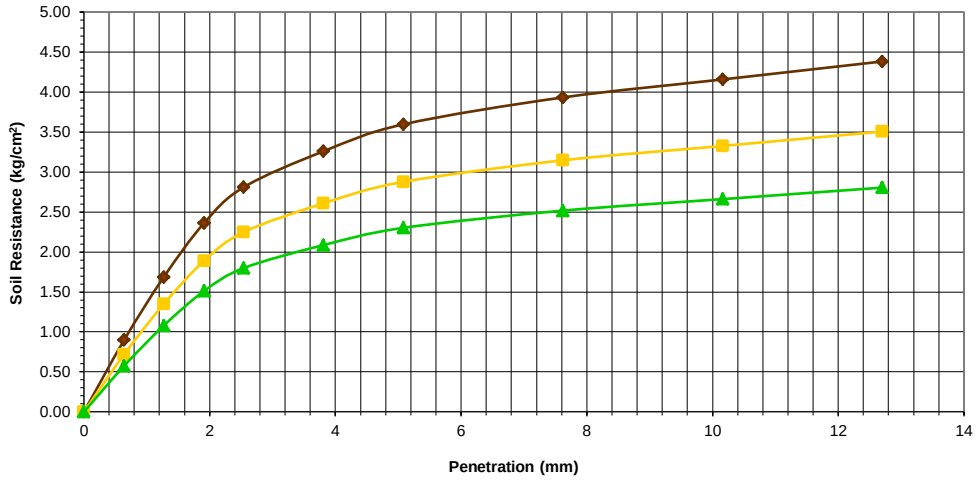
1705UIC1_RCBRT_TP-23_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

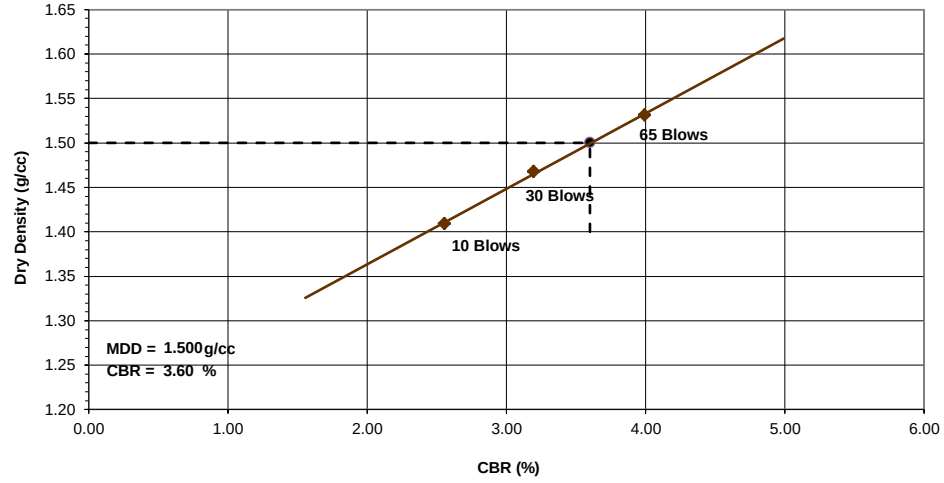
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-23
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1692458.562 N ; 446021.861 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/26/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.646	2.19
30	1.717	2.74
65	1.790	3.42

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.500	3.60
95	1.425	2.73

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-23_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/26/17	**TP/BS Number:**	TP-24
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1692861.171 N ; 446318.176 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/06/17

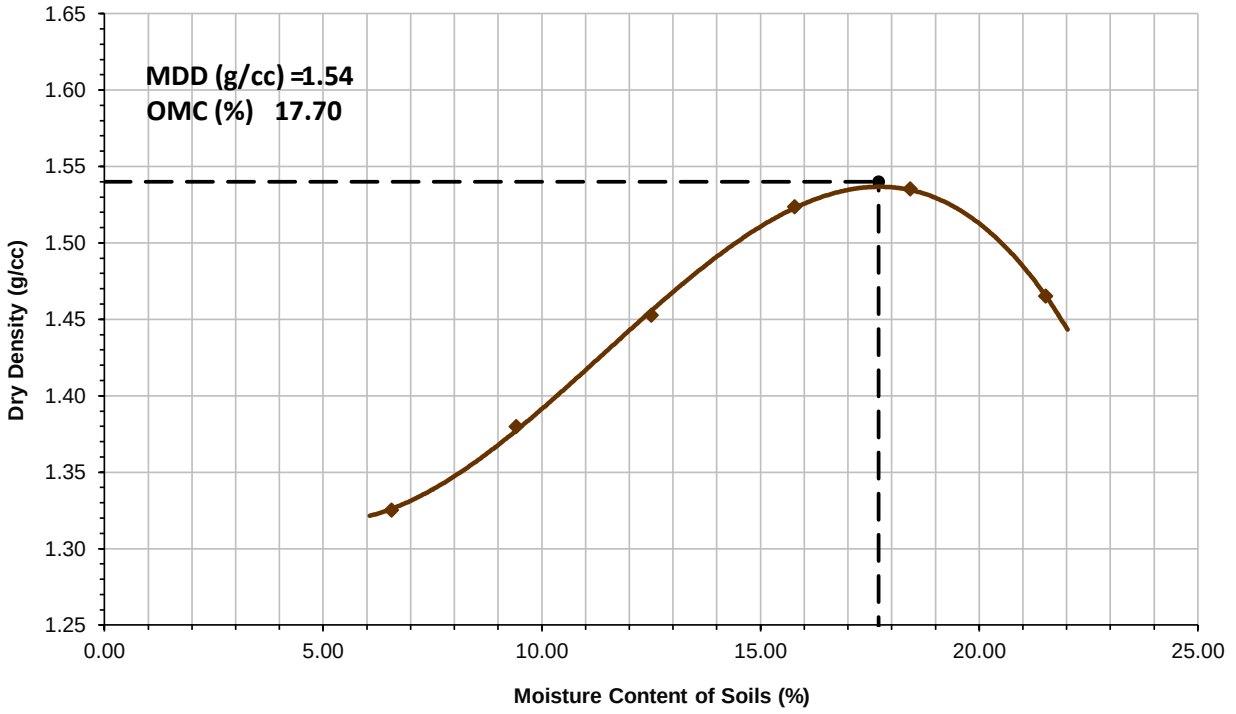
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**0-475**	**JJ1**	**10-145**	**GG6**	**10-286**	**H5**	**6H**	**0-163**	**10-350**	**0-48**	**10-368**	**10-429**
Wet Soil + Can (g)	176.62	179.70	141.60	163.12	180.14	173.73	164.98	170.97	164.63	170.27	153.79	153.09
Dry Soil + Can (g)	167.46	169.44	131.48	150.64	162.28	156.86	144.78	150.82	142.52	146.94	130.04	129.58
Mass of Can (g)	19.41	21.81	19.72	22.92	19.89	21.43	17.61	22.35	20.09	22.73	19.98	20.02
Moisture Loss (g)	9.16	10.26	10.12	12.48	17.86	16.87	20.20	20.15	22.11	23.33	23.75	23.51
Mass of Dry Soil (g)	148.05	147.63	111.76	127.72	142.39	135.43	127.17	128.47	122.43	124.21	110.06	109.56
Moisture Content (%)	6.19	6.95	9.06	9.77	12.54	12.46	15.88	15.68	18.06	18.78	21.58	21.46
Average Moisture (%)	**6.57**		**9.41**		**12.50**		**15.78**		**18.42**		**21.52**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,360.00	4,450.00	4,565.00	4,685.00	4,735.00	4,700.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,305.00	1,395.00	1,510.00	1,630.00	1,680.00	1,645.00
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	924.00
Wet Density (g/cc)	**1.41**	**1.51**	**1.63**	**1.76**	**1.82**	**1.78**
Dry Density (g/cc)	**1.33**	**1.38**	**1.45**	**1.52**	**1.54**	**1.47**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.54**
Opt. Moisture Content (%):	**17.70**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-24_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-24
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1692861.171 N ; 446318.176 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/26/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**EW**	**DW**	**10-431**	**10-168**	**0-381**	**10-442**
Wet Soil + Can (g)	153.09	167.48	151.98	172.56	149.76	159.24
Dry Soil + Can (g)	132.74	145.46	131.84	149.85	130.14	138.53
Mass of Can (g)	19.38	18.67	20.05	18.93	20.40	19.65
Moisture Loss (g)	20.35	22.02	20.14	22.71	19.62	20.71
Mass of Dry Soil (g)	113.36	126.79	111.79	130.92	109.74	118.88
Moisture Content (%)	17.95	17.37	18.02	17.35	17.88	17.42
Average Moisture (%)	**17.66**		**17.68**		**17.65**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-73**	**CBR-78**	**CBR-62**
Wet Soil + Mold (g)	11290.00	10270.00	11510.00
Mass of Mold (g)	7590.00	6280.00	7370.00
Mass of Wet Soil (g)	3700.00	3990.00	4140.00
Volume of Mold (cc)	2167.00	2247.00	2230.00
Wet Density (g/cc)	**1.71**	**1.78**	**1.86**
Dry Density (g/cc)	**1.45**	**1.51**	**1.58**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.13	0.47	0.84
Reading After Soaking ($x10^{-1}$ mm)	6.59	4.63	4.88
Swell (%)	**4.69**	**3.57**	**3.47**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	15.35	19.18	23.98	0.79	0.99	1.24			
1.27	25.11	31.39	39.24	1.29	1.62	2.02			
1.91	30.69	38.37	47.96	1.58	1.98	2.47			
2.54	34.88	43.60	54.50	1.80	2.25	2.81	**2.56**	**3.20**	**3.99**
3.81	39.07	48.83	61.04	2.01	2.52	3.15			
5.08	41.86	52.32	65.40	2.16	2.70	3.37	**2.05**	**2.57**	**3.21**
7.62	46.04	57.55	71.94	2.37	2.97	3.71			
10.16	48.83	61.04	76.30	2.52	3.15	3.93			
12.70	50.23	62.78	78.48	2.59	3.24	4.05			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

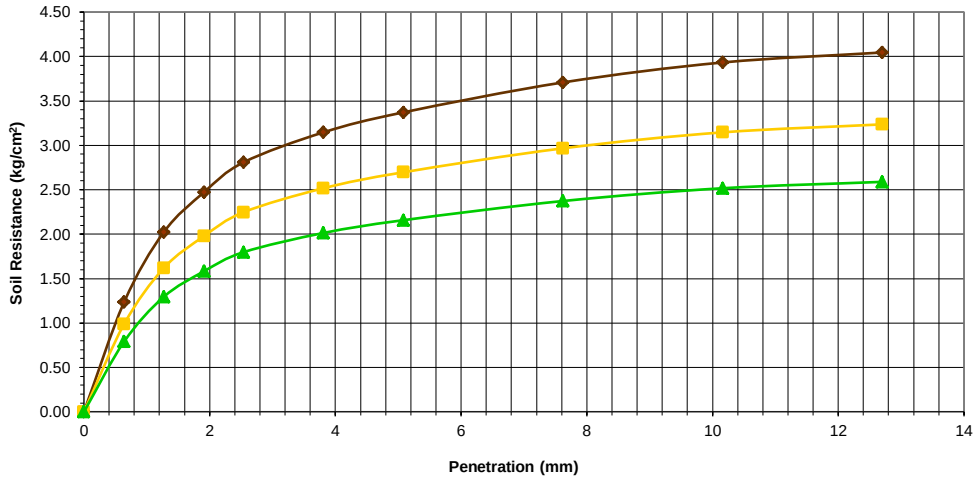
1705UIC1_RCBRT_TP-24_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

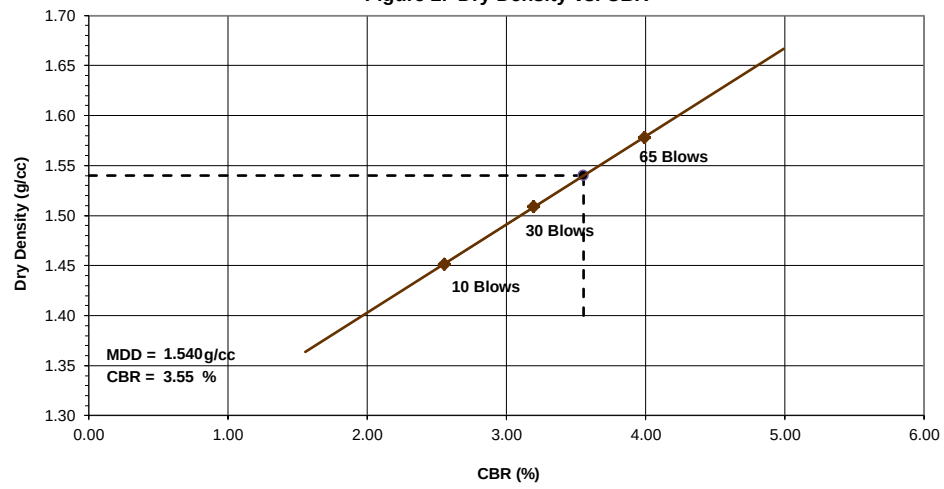
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-24
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1692861.171 N ; 446318.176 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/26/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.707	2.05
30	1.776	2.57
65	1.857	3.21

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.540	3.55
95	1.463	2.69

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-24_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/26/17	**TP/BS Number:**	TP-25
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1693264.689 N ; 446612.642 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/07/17

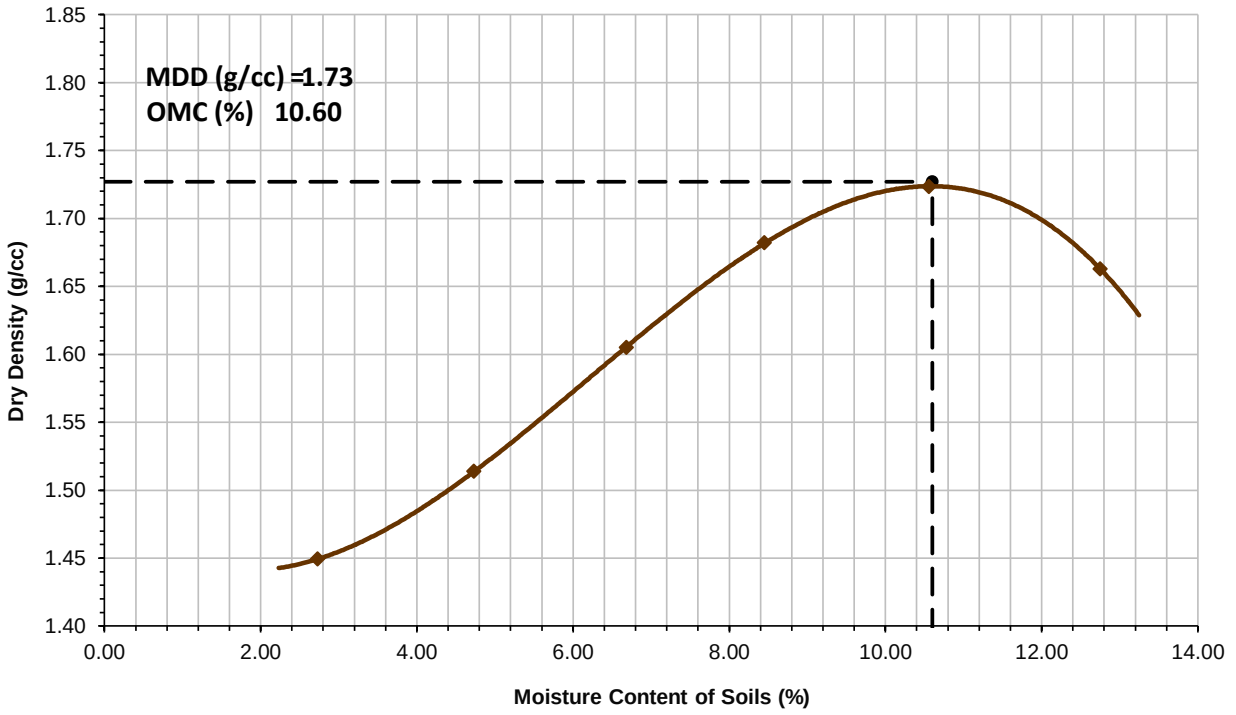
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**10-120**	**6B**	**T5**	**10-215**	**2M**	**GG1**	**3B**	**IO-14**	**9H**	**CC2**	**10-207**	**10-169**
Wet Soil + Can (g)	164.61	162.78	172.15	162.66	151.56	152.85	163.30	160.55	171.99	160.90	175.62	177.16
Dry Soil + Can (g)	161.06	158.62	165.62	155.92	143.44	144.36	151.84	149.52	156.96	147.92	157.84	159.64
Mass of Can (g)	19.70	17.38	21.35	19.28	17.30	21.86	17.69	17.52	17.34	22.53	20.25	20.32
Moisture Loss (g)	3.55	4.16	6.53	6.74	8.12	8.49	11.46	11.03	15.03	12.98	17.78	17.52
Mass of Dry Soil (g)	141.36	141.24	144.27	136.64	126.14	122.50	134.15	132.00	139.62	125.39	137.59	139.32
Moisture Content (%)	2.51	2.95	4.53	4.93	6.44	6.93	8.54	8.36	10.76	10.35	12.92	12.58
Average Moisture (%)	**2.73**		**4.73**		**6.68**		**8.45**		**10.56**		**12.75**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**
Wet Soil + Mold (g)	4,755.00	4,850.00	4,975.00	5,085.00	5,165.00	5,135.00
Mass of Mold (g)	3,290.00	3,290.00	3,290.00	3,290.00	3,290.00	3,290.00
Mass of Wet Soil (g)	1,465.00	1,560.00	1,685.00	1,795.00	1,875.00	1,845.00
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	984.00
Wet Density (g/cc)	**1.49**	**1.59**	**1.71**	**1.82**	**1.91**	**1.88**
Dry Density (g/cc)	**1.45**	**1.51**	**1.61**	**1.68**	**1.72**	**1.66**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.73**
Opt. Moisture Content (%):	**10.60**

Performed by: DANILO DELAN
Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

1705UIC1_RMDRT_TP-25_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-25
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1693264.689 N ; 446612.642 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/26/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**BT**	**RE**	**1O-18**	**0-300**	**AA8**	**0-315**
Wet Soil + Can (g)	141.62	151.77	135.16	145.86	137.58	150.17
Dry Soil + Can (g)	130.14	139.29	123.74	133.94	126.35	137.91
Mass of Can (g)	23.32	19.02	17.74	19.88	21.79	20.02
Moisture Loss (g)	11.48	12.48	11.42	11.92	11.23	12.26
Mass of Dry Soil (g)	106.83	120.27	106.00	114.06	104.56	117.89
Moisture Content (%)	10.75	10.38	10.77	10.45	10.74	10.40
Average Moisture (%)	**10.56**		**10.61**		**10.57**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-46**	**CBR-44**	**CBR-X1**
Wet Soil + Mold (g)	10420.00	10460.00	11200.00
Mass of Mold (g)	6460.00	6245.00	6795.00
Mass of Wet Soil (g)	3960.00	4215.00	4405.00
Volume of Mold (cc)	2195.00	2256.00	2249.00
Wet Density (g/cc)	**1.80**	**1.87**	**1.96**
Dry Density (g/cc)	**1.63**	**1.69**	**1.77**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.36	1.78	1.01
Reading After Soaking ($x10^{-1}$ mm)	1.74	2.1	1.29
Swell (%)	**0.33**	**0.27**	**0.24**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows		
	10	30	65	10	30	65
0.64	30.69	38.37	47.96	1.58	1.98	2.47
1.27	53.02	66.27	82.84	2.73	3.42	4.27
1.91	76.74	95.92	119.90	3.96	4.94	6.18
2.54	96.27	120.34	150.42	4.96	6.20	7.75
3.81	122.78	153.47	191.84	6.33	7.91	9.89
5.08	138.12	172.66	215.82	7.12	8.90	11.12
7.62	150.68	188.35	235.44	7.77	9.71	12.14
10.16	156.26	195.33	244.16	8.05	10.07	12.59
12.70	160.45	200.56	250.70	8.27	10.34	12.92

CBR (%) Blows		
10	30	65
7.06	**8.82**	**11.02**
6.78	**8.48**	**10.60**

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

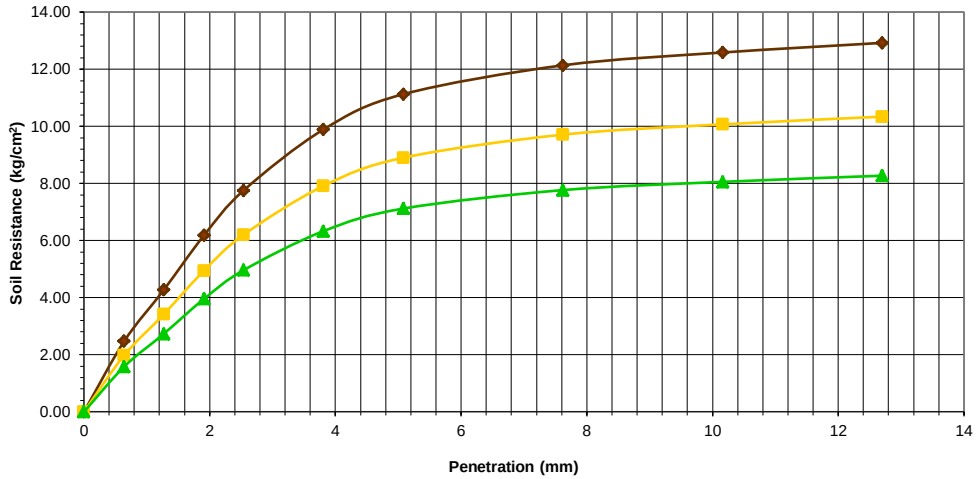
1705UIC1_RCBRT_TP-25_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

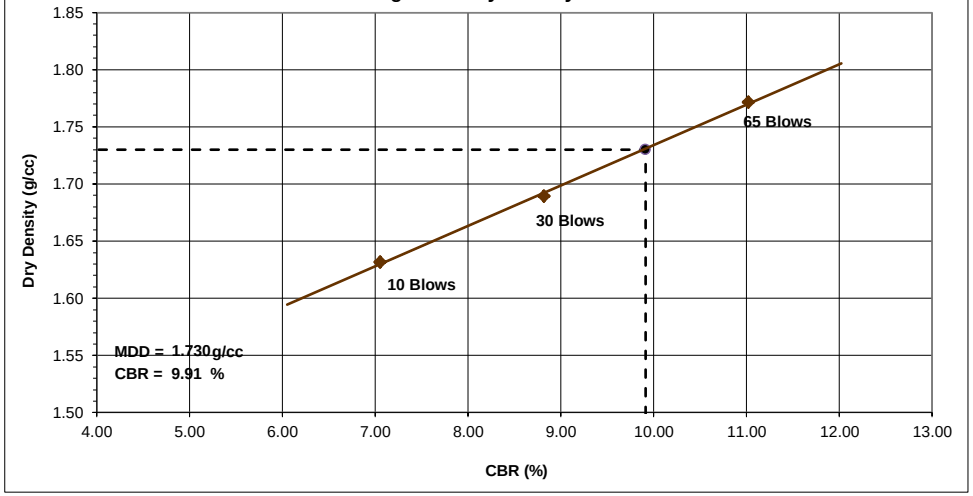
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-25
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1693264.689 N ; 446612.642 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/26/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.804	6.78
30	1.868	8.48
65	1.959	10.60

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.730	9.91
95	1.644	7.42

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-25_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/26/17	**TP/BS Number:**	TP-26
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1693663.896 N ; 446912.708 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/07/17

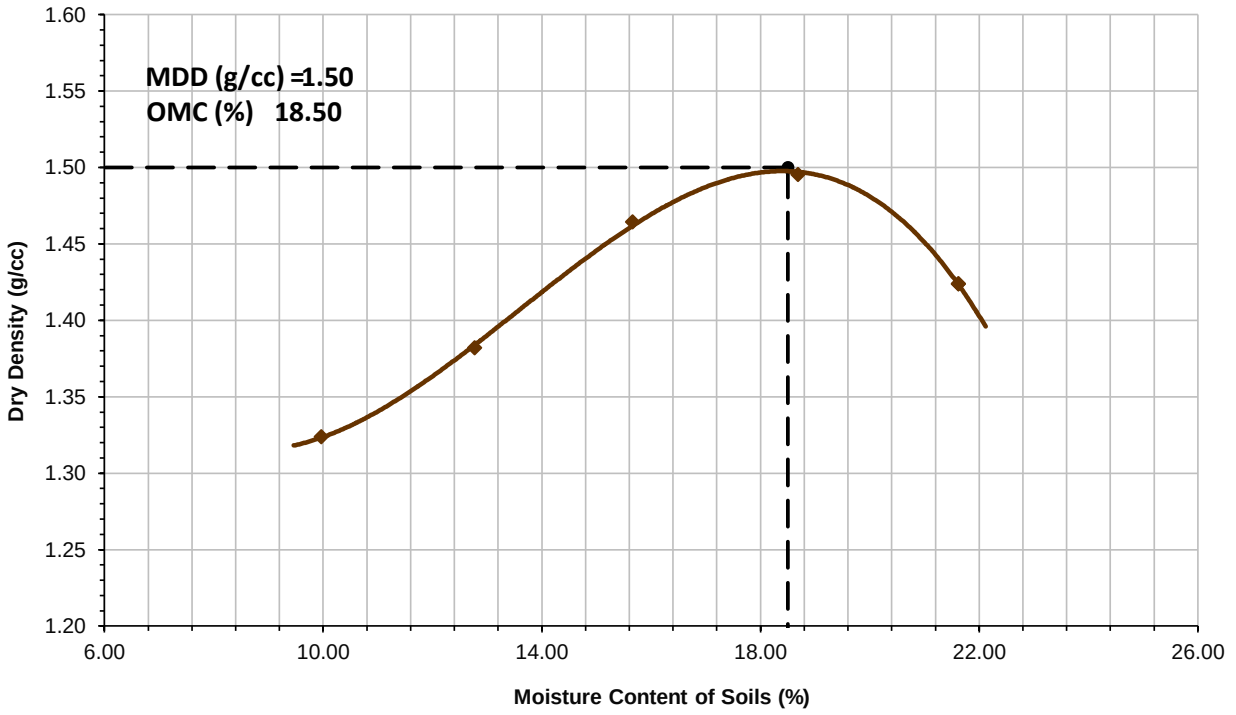
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**1M**	**9A**	**3A**	**0-295**	**DD4**	**0-155**	**10-423**	**5C**	**0-166**	**0-131**	**-**	**-**
Wet Soil + Can (g)	185.40	182.95	189.11	188.21	190.57	189.93	186.71	174.07	189.03	189.96	-	-
Dry Soil + Can (g)	170.20	167.90	169.94	168.94	167.72	167.34	160.50	149.36	159.74	160.02	-	-
Mass of Can (g)	17.48	17.03	17.51	20.26	22.04	22.82	19.90	17.42	23.00	22.77	-	-
Moisture Loss (g)	15.20	15.05	19.17	19.27	22.85	22.59	26.21	24.71	29.29	29.94	-	-
Mass of Dry Soil (g)	152.72	150.87	152.43	148.68	145.68	144.52	140.60	131.94	136.74	137.25	-	-
Moisture Content (%)	9.95	9.98	12.58	12.96	15.69	15.63	18.64	18.73	21.42	21.81	-	-
Average Moisture (%)	**9.96**		**12.77**		**15.66**		**18.68**		**21.62**		**-**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**-**
Wet Soil + Mold (g)	4,400.00	4,495.00	4,620.00	4,695.00	4,655.00	-
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	-
Mass of Wet Soil (g)	1,345.00	1,440.00	1,565.00	1,640.00	1,600.00	-
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	-
Wet Density (g/cc)	**1.46**	**1.56**	**1.69**	**1.77**	**1.73**	**-**
Dry Density (g/cc)	**1.32**	**1.38**	**1.46**	**1.50**	**1.42**	**-**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.50**
Opt. Moisture Content (%):	**18.50**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-26_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-26
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1693663.896 N ; 446912.708 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/26/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**GT**	**FR**	**A5**	**0-116**	**0-185**	**10-188**
Wet Soil + Can (g)	154.75	151.67	161.65	158.28	154.91	159.88
Dry Soil + Can (g)	133.59	131.32	139.49	137.33	133.59	138.23
Mass of Can (g)	19.94	20.44	21.26	22.72	20.14	20.04
Moisture Loss (g)	21.16	20.35	22.16	20.95	21.32	21.65
Mass of Dry Soil (g)	113.65	110.88	118.23	114.61	113.45	118.19
Moisture Content (%)	18.62	18.36	18.74	18.28	18.79	18.32
Average Moisture (%)	**18.49**		**18.51**		**18.56**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-27**	**CBR-25**	**CBR-79**
Wet Soil + Mold (g)	11130.00	10250.00	11610.00
Mass of Mold (g)	7540.00	6325.00	7535.00
Mass of Wet Soil (g)	3590.00	3925.00	4075.00
Volume of Mold (cc)	2155.00	2251.00	2250.00
Wet Density (g/cc)	**1.67**	**1.74**	**1.81**
Dry Density (g/cc)	**1.41**	**1.47**	**1.53**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.59	2.11	1.18
Reading After Soaking ($x10^{-1}$ mm)	1.95	2.23	1.22
Swell (%)	**0.31**	**0.10**	**0.03**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	11.04	14.72	19.62	0.57	0.76	1.01			
1.27	18.39	24.53	32.70	0.95	1.26	1.69			
1.91	24.53	32.70	43.60	1.26	1.69	2.25			
2.54	29.43	39.24	52.32	1.52	2.02	2.70	**2.16**	**2.88**	**3.83**
3.81	34.95	46.60	62.13	1.80	2.40	3.20			
5.08	38.01	50.69	67.58	1.96	2.61	3.48	**1.87**	**2.49**	**3.32**
7.62	41.69	55.59	74.12	2.15	2.87	3.82			
10.16	44.15	58.86	78.48	2.28	3.03	4.05			
12.70	46.60	62.13	82.84	2.40	3.20	4.27			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

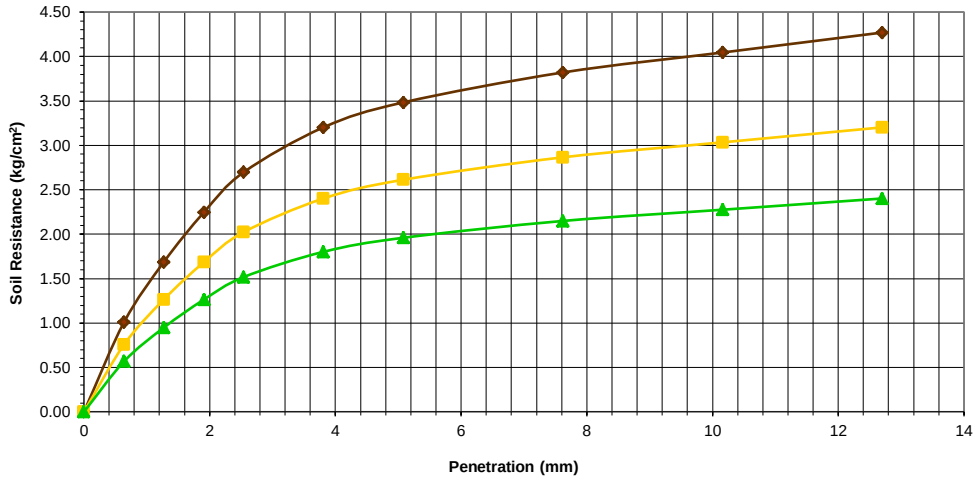
1705UIC1_RCBRT_TP-26_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

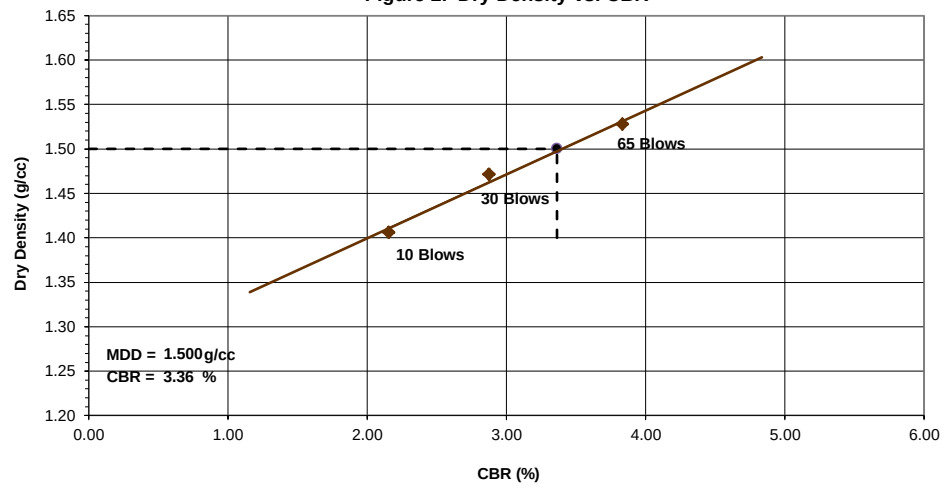
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-26
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1693663.896 N ; 446912.708 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/26/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.666	1.87
30	1.744	2.49
65	1.811	3.32

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.500	3.36
95	1.425	2.37

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-26_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/26/17	**TP/BS Number:**	TP-27
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1694088.819 N ; 447173.253 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/07/17

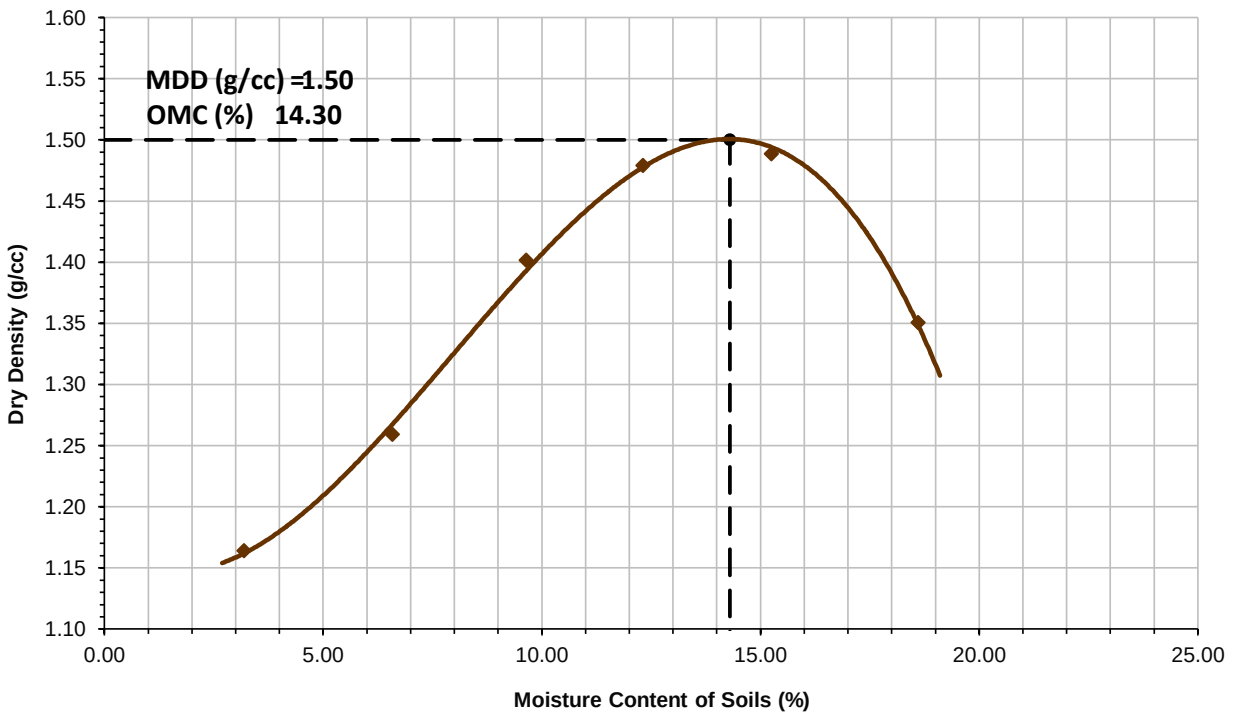
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**7M**	**0-90**	**O-29**	**O-147**	**10-280**	**O-75**	**O-39**	**BB-4**	**EE-6**	**BB-5**	**6C**	**O-123**
Wet Soil + Can (g)	181.26	175.70	170.88	179.76	154.05	176.61	166.33	184.69	163.48	175.96	185.44	163.99
Dry Soil + Can (g)	175.94	171.20	161.81	169.93	142.32	162.99	150.26	166.86	145.02	155.41	158.79	142.06
Mass of Can (g)	17.30	22.40	22.49	22.32	20.15	22.47	20.05	21.64	22.37	22.33	17.68	22.37
Moisture Loss (g)	5.32	4.50	9.07	9.83	11.73	13.62	16.07	17.83	18.46	20.55	26.65	21.93
Mass of Dry Soil (g)	158.64	148.80	139.32	147.61	122.17	140.52	130.21	145.22	122.65	133.08	141.11	119.69
Moisture Content (%)	3.35	3.02	6.51	6.66	9.60	9.69	12.34	12.28	15.05	15.44	18.89	18.32
Average Moisture (%)	**3.19**		**6.58**		**9.65**		**12.31**		**15.25**		**18.60**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,165.00	4,295.00	4,475.00	4,590.00	4,640.00	4,535.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,110.00	1,240.00	1,420.00	1,535.00	1,585.00	1,480.00
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	924.00
Wet Density (g/cc)	**1.20**	**1.34**	**1.54**	**1.66**	**1.72**	**1.60**
Dry Density (g/cc)	**1.16**	**1.26**	**1.40**	**1.48**	**1.49**	**1.35**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.50**
Opt. Moisture Content (%):	**14.30**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-27_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-27
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1694088.819 N ; 447173.253 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/26/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**BH**	**GF**	**D4**	**XY8**	**0-20**	**8G**
Wet Soil + Can (g)	158.42	150.12	164.70	168.44	148.99	153.54
Dry Soil + Can (g)	140.38	134.48	146.57	150.24	132.43	137.22
Mass of Can (g)	16.98	22.02	21.40	21.17	18.87	20.20
Moisture Loss (g)	18.04	15.64	18.13	18.20	16.56	16.32
Mass of Dry Soil (g)	123.39	112.46	125.17	129.07	113.56	117.02
Moisture Content (%)	14.62	13.91	14.48	14.10	14.58	13.95
Average Moisture (%)	**14.27**		**14.29**		**14.26**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-61**	**CBR-93**	**CBR-73**
Wet Soil + Mold (g)	9780.00	9920.00	10210.00
Mass of Mold (g)	6290.00	6155.00	6290.00
Mass of Wet Soil (g)	3490.00	3765.00	3920.00
Volume of Mold (cc)	2170.00	2245.00	2237.00
Wet Density (g/cc)	**1.61**	**1.68**	**1.75**
Dry Density (g/cc)	**1.41**	**1.47**	**1.53**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	2.7	0.8	2
Reading After Soaking ($x10^{-1}$ mm)	8.36	5.97	6.19
Swell (%)	**4.86**	**4.44**	**3.60**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	12.56	15.70	19.62	0.65	0.81	1.01			
1.27	20.93	26.16	32.70	1.08	1.35	1.69			
1.91	26.51	33.14	41.42	1.37	1.71	2.14			
2.54	30.69	38.37	47.96	1.58	1.98	2.47	**2.25**	**2.81**	**3.51**
3.81	34.88	43.60	54.50	1.80	2.25	2.81			
5.08	37.67	47.09	58.86	1.94	2.43	3.03	**1.85**	**2.31**	**2.89**
7.62	41.86	52.32	65.40	2.16	2.70	3.37			
10.16	44.65	55.81	69.76	2.30	2.88	3.60			
12.70	47.44	59.30	74.12	2.45	3.06	3.82			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

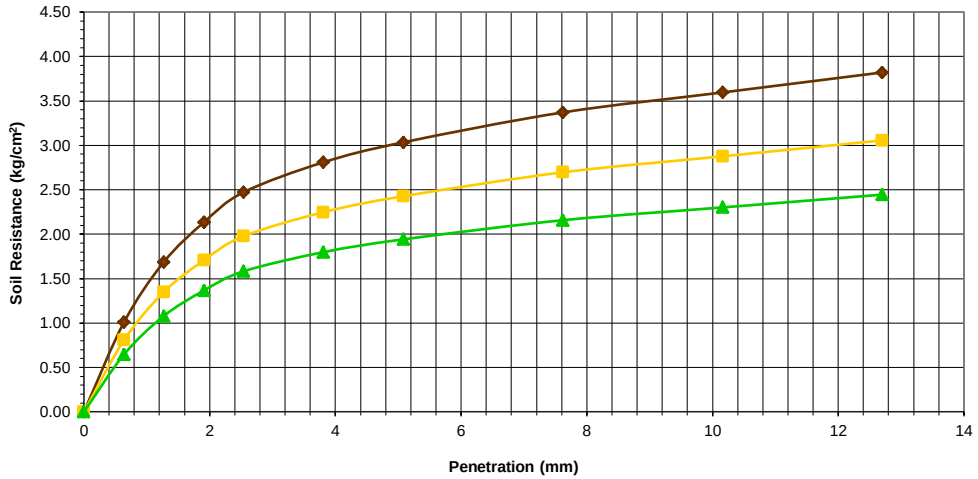
1705UIC1_RCBRT_TP-27_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

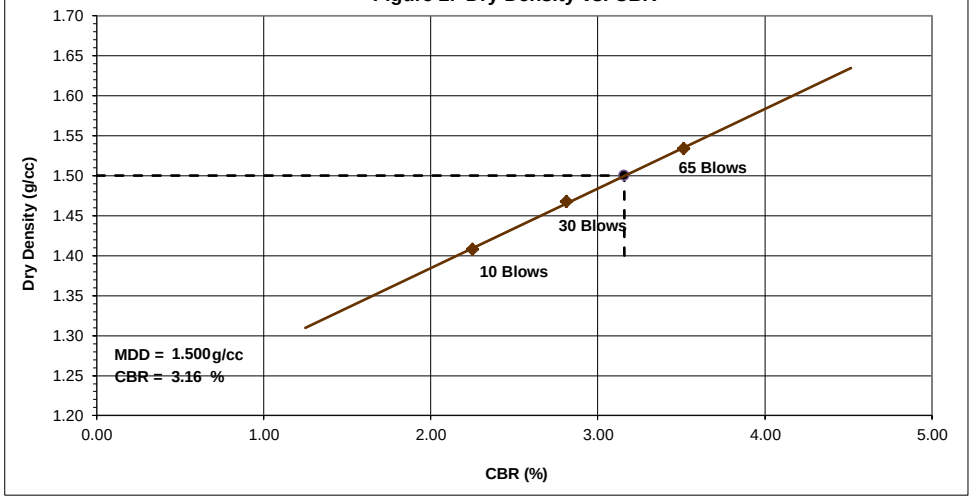
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-27
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1694088.819 N ; 447173.253 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/26/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.608	1.85
30	1.677	2.31
65	1.752	2.89

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.500	3.16
95	1.425	2.41

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-27_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/26/17	**TP/BS Number:**	TP-28
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1694447.817 N ; 447519.913 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/01/17

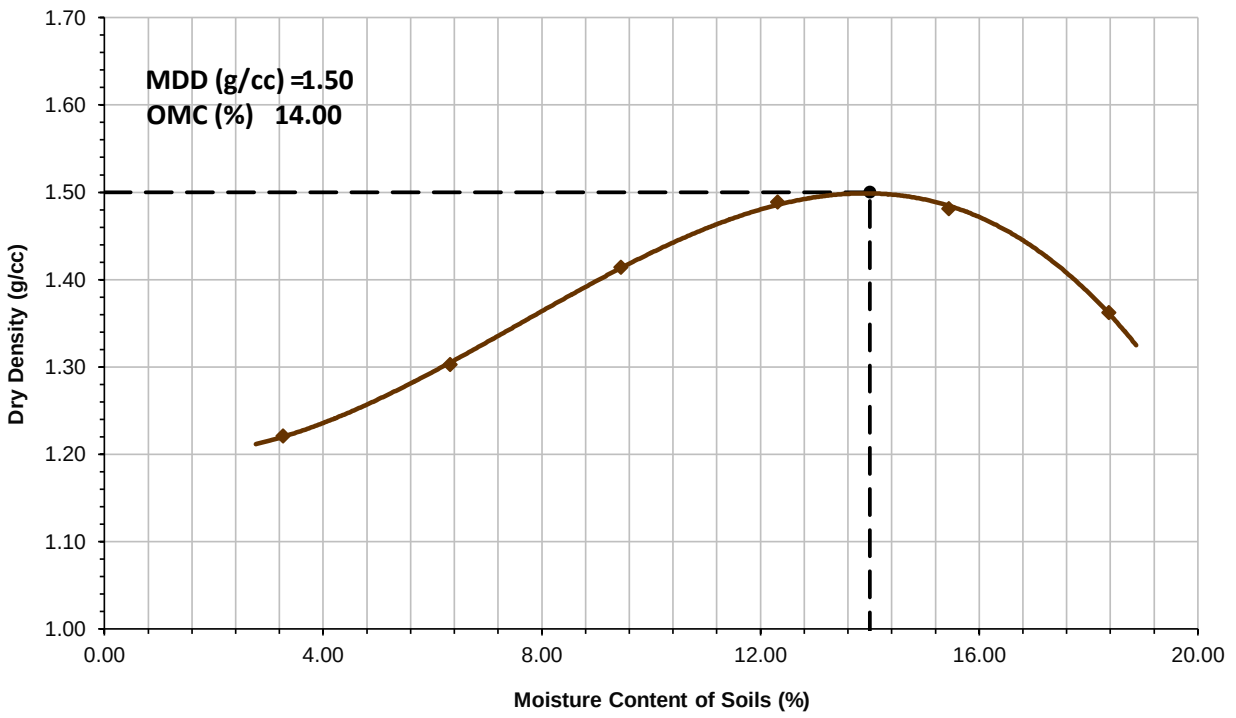
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**1O-91**	**10-363**	**O-142**	**OO8**	**M1**	**O-2**	**O-399**	**C2**	**V5**	**O-84**	**1O-2**	**O-96**
Wet Soil + Can (g)	169.61	173.84	180.73	193.26	185.72	168.45	183.87	189.22	193.87	189.11	181.43	196.35
Dry Soil + Can (g)	164.64	169.18	171.06	183.33	171.41	155.90	165.57	171.13	170.90	166.68	156.21	168.79
Mass of Can (g)	18.59	20.21	22.63	21.31	20.61	22.51	19.83	21.30	21.21	22.45	18.95	18.78
Moisture Loss (g)	4.97	4.66	9.67	9.93	14.31	12.55	18.30	18.09	22.97	22.43	25.22	27.56
Mass of Dry Soil (g)	146.05	148.97	148.43	162.02	150.80	133.39	145.74	149.83	149.69	144.23	137.26	150.01
Moisture Content (%)	3.40	3.13	6.51	6.13	9.49	9.41	12.56	12.07	15.35	15.55	18.37	18.37
Average Moisture (%)	**3.27**		**6.32**		**9.45**		**12.32**		**15.45**		**18.37**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,220.00	4,335.00	4,485.00	4,600.00	4,635.00	4,545.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,165.00	1,280.00	1,430.00	1,545.00	1,580.00	1,490.00
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	924.00
Wet Density (g/cc)	**1.26**	**1.39**	**1.55**	**1.67**	**1.71**	**1.61**
Dry Density (g/cc)	**1.22**	**1.30**	**1.41**	**1.49**	**1.48**	**1.36**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.50**
Opt. Moisture Content (%):	**14.00**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-28_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-28
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1694447.817 N ; 447519.913 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/26/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**WQ**	**SA**	**0-5**	**0-9**	**0-347**	**2M**
Wet Soil + Can (g)	147.04	173.30	168.08	183.43	154.58	168.40
Dry Soil + Can (g)	130.88	154.54	150.01	163.92	137.77	150.04
Mass of Can (g)	18.39	18.40	22.57	22.41	19.56	17.20
Moisture Loss (g)	16.16	18.76	18.07	19.51	16.81	18.36
Mass of Dry Soil (g)	112.50	136.14	127.44	141.51	118.21	132.84
Moisture Content (%)	14.36	13.78	14.18	13.79	14.22	13.82
Average Moisture (%)	**14.07**		**13.98**		**14.02**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-90**	**CBR-27**	**CBR-94**
Wet Soil + Mold (g)	10490.00	10000.00	10670.00
Mass of Mold (g)	6970.00	6270.00	6765.00
Mass of Wet Soil (g)	3520.00	3730.00	3905.00
Volume of Mold (cc)	2196.00	2231.00	2242.00
Wet Density (g/cc)	**1.60**	**1.67**	**1.74**
Dry Density (g/cc)	**1.41**	**1.47**	**1.53**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	3.54	2.89	2.62
Reading After Soaking ($x10^{-1}$ mm)	4.21	3.42	3.12
Swell (%)	**0.58**	**0.46**	**0.43**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	13.95	17.44	21.80	0.72	0.90	1.12			
1.27	22.32	27.90	34.88	1.15	1.44	1.80			
1.91	29.30	36.62	45.78	1.51	1.89	2.36			
2.54	33.48	41.86	52.32	1.73	2.16	2.70	**2.45**	**3.07**	**3.83**
3.81	39.07	48.83	61.04	2.01	2.52	3.15			
5.08	41.86	52.32	65.40	2.16	2.70	3.37	**2.05**	**2.57**	**3.21**
7.62	46.04	57.55	71.94	2.37	2.97	3.71			
10.16	48.83	61.04	76.30	2.52	3.15	3.93			
12.70	51.62	64.53	80.66	2.66	3.33	4.16			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

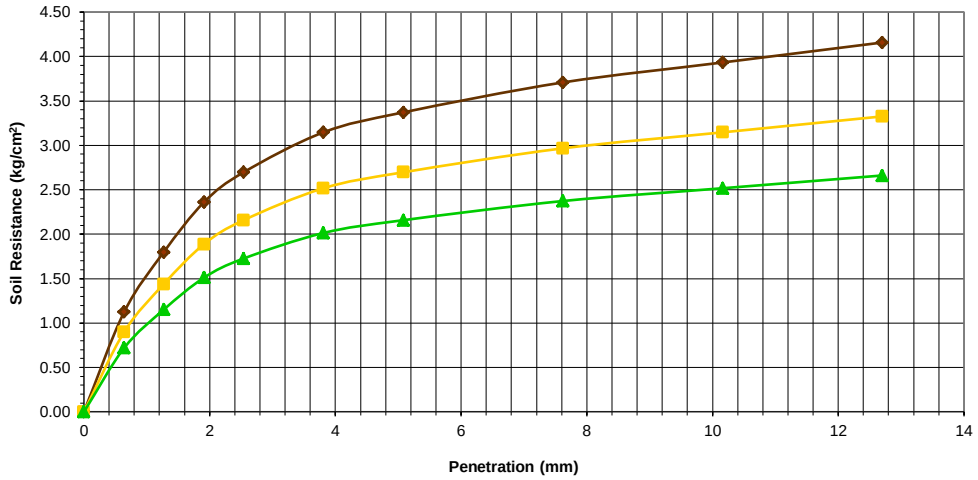
1705UIC1_RCBRT_TP-28_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

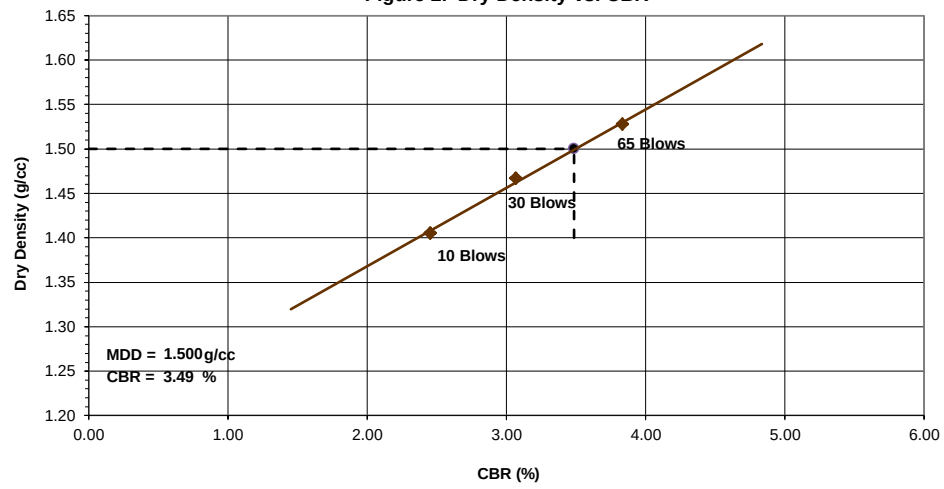
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-28
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1694447.817 N ; 447519.913 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/26/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.603	2.05
30	1.672	2.57
65	1.742	3.21

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.500	3.49
95	1.425	2.65

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-28_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/25/17	**TP/BS Number:**	TP-29
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1694797.808 N ; 447876.322 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/01/17

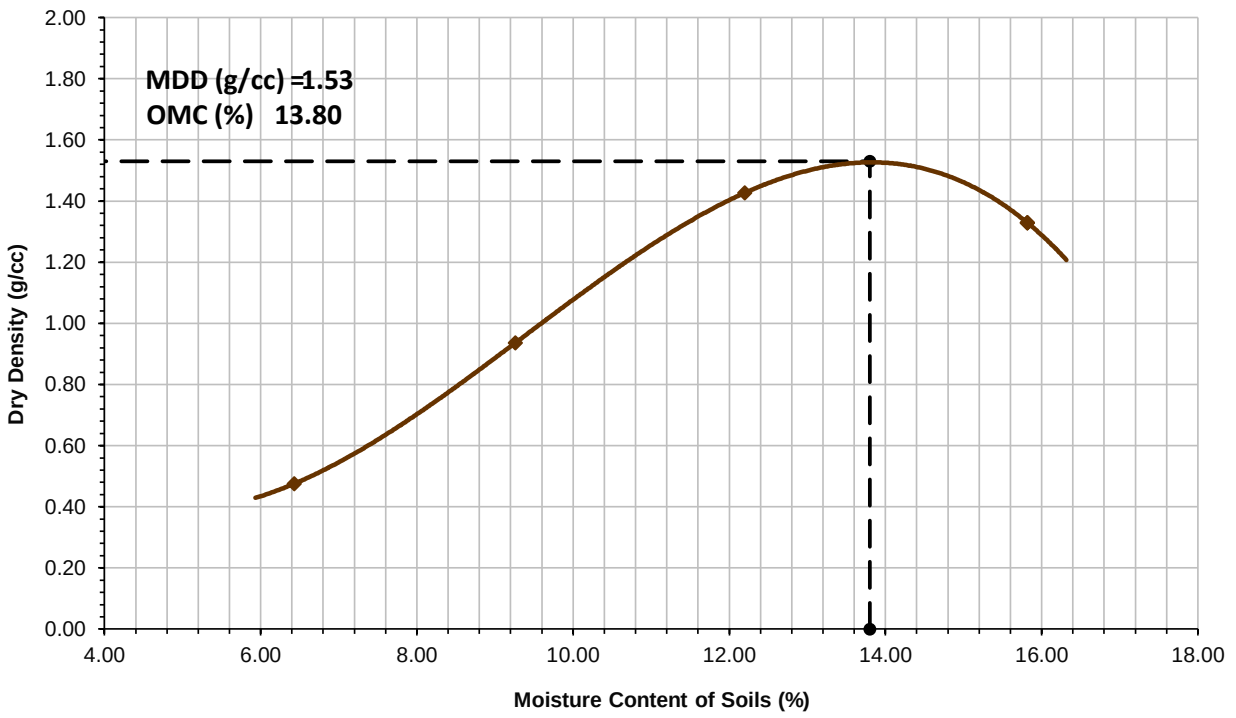
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**G7**	**IO-129**	**O-23**	**O-60**	**RY**	**EE5**	**6B**	**O-14**	**-**	**-**	**-**	**-**
Wet Soil + Can (g)	187.23	187.36	180.18	168.03	165.41	167.93	165.87	182.14	-	-	-	-
Dry Soil + Can (g)	177.41	177.03	166.52	155.75	149.50	152.31	145.72	160.25	-	-	-	-
Mass of Can (g)	21.48	19.68	19.74	22.46	21.06	22.30	17.39	22.86	-	-	-	-
Moisture Loss (g)	9.82	10.33	13.66	12.28	15.91	15.62	20.15	21.89	-	-	-	-
Mass of Dry Soil (g)	155.93	157.35	146.78	133.29	128.44	130.01	128.33	137.39	-	-	-	-
Moisture Content (%)	6.30	6.56	9.31	9.21	12.39	12.01	15.70	15.93	-	-	-	-
Average Moisture (%)	**6.43**		**9.26**		**12.20**		**15.82**		**-**		**-**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-2**	**NMDR-2**	**NMDR-2**	**NMDR-2**	**-**	**-**
Wet Soil + Mold (g)	4,000.00	4,500.00	5,060.00	5,000.00	-	-
Mass of Mold (g)	3,510.00	3,510.00	3,510.00	3,510.00	-	-
Mass of Wet Soil (g)	490.00	990.00	1,550.00	1,490.00	-	-
Volume of Mold (cc)	968.00	968.00	968.00	968.00	-	-
Wet Density (g/cc)	**0.51**	**1.02**	**1.60**	**1.54**	**-**	**-**
Dry Density (g/cc)	**0.48**	**0.94**	**1.43**	**1.33**	**-**	**-**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.53**
Opt. Moisture Content (%):	**13.80**

Performed by: DANILO DELAN
Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

1705UIC1_RMDRT_TP-29_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-29
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1694797.808 N ; 447876.322 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/25/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**BG**	**HG**	**0-178**	**0-95**	**10-132**	**0-56**
Wet Soil + Can (g)	144.06	181.68	170.58	180.80	148.42	181.69
Dry Soil + Can (g)	128.12	162.66	152.02	161.88	132.08	162.66
Mass of Can (g)	13.54	22.14	20.13	22.43	14.88	22.36
Moisture Loss (g)	15.94	19.02	18.56	18.92	16.34	19.03
Mass of Dry Soil (g)	114.58	140.52	131.89	139.45	117.20	140.30
Moisture Content (%)	13.91	13.53	14.07	13.57	13.94	13.56
Average Moisture (%)	**13.72**		**13.82**		**13.75**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-50**	**CBR-47**	**CBR-65**
Wet Soil + Mold (g)	10770.00	12560.00	11060.00
Mass of Mold (g)	7150.00	8675.00	7080.00
Mass of Wet Soil (g)	3620.00	3885.00	3980.00
Volume of Mold (cc)	2200.00	2253.00	2227.00
Wet Density (g/cc)	**1.65**	**1.72**	**1.79**
Dry Density (g/cc)	**1.45**	**1.51**	**1.57**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	2.62	0.22	1.94
Reading After Soaking ($x10^{-1}$ mm)	6.95	3.61	5.15
Swell (%)	**3.72**	**2.91**	**2.76**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	13.95	17.44	21.80	0.72	0.90	1.12			
1.27	22.32	27.90	34.88	1.15	1.44	1.80			
1.91	27.90	34.88	43.60	1.44	1.80	2.25			
2.54	32.09	40.11	50.14	1.65	2.07	2.58	**2.35**	**2.94**	**3.67**
3.81	36.28	45.34	56.68	1.87	2.34	2.92			
5.08	39.07	48.83	61.04	2.01	2.52	3.15	**1.92**	**2.40**	**3.00**
7.62	41.86	52.32	65.40	2.16	2.70	3.37			
10.16	44.65	55.81	69.76	2.30	2.88	3.60			
12.70	46.04	57.55	71.94	2.37	2.97	3.71			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

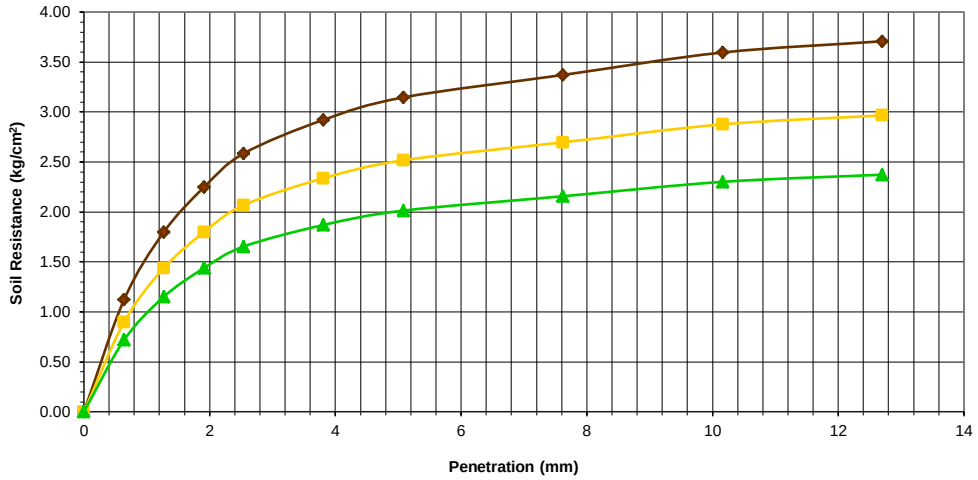
1705UIC1_RCBRT_TP-29_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

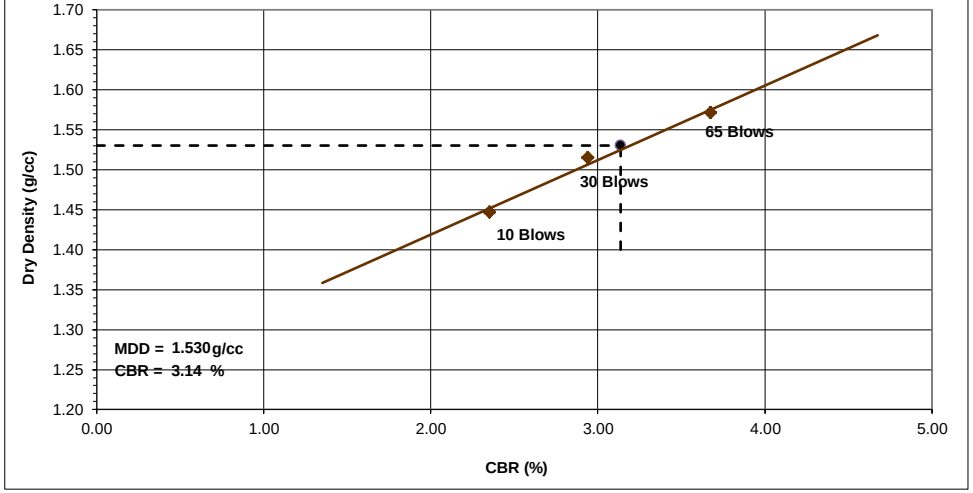
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-29
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1694797.808 N ; 447876.322 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/25/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.645	1.92
30	1.724	2.40
65	1.787	3.00

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.530	3.14
95	1.454	2.41

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/25/17	**TP/BS Number:**	TP-30
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1695171.276 N ; 448208.77 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/09/17

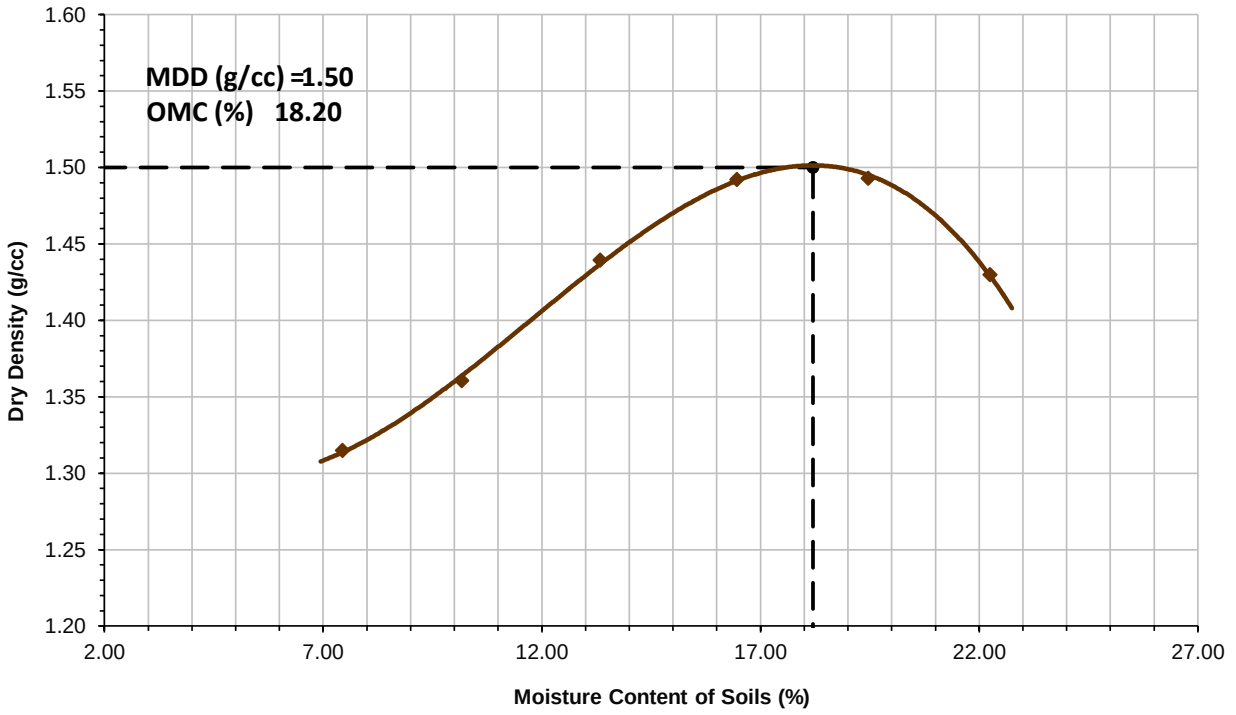
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**10-464**	**10-343**	**0-78**	**0-109**	**10-301**	**EE5**	**0.354**	**10-131**	**0-104**	**9F**	**10-259**	**IO-73**
Wet Soil + Can (g)	183.51	183.73	169.35	175.49	163.41	177.07	161.98	156.87	176.41	152.92	172.82	168.95
Dry Soil + Can (g)	172.78	171.82	155.74	161.45	146.72	158.67	142.22	137.35	151.80	130.97	144.96	141.77
Mass of Can (g)	20.02	20.32	22.61	22.64	20.01	22.26	20.26	20.65	22.55	20.58	20.27	19.12
Moisture Loss (g)	10.73	11.91	13.61	14.04	16.69	18.40	19.76	19.52	24.61	21.95	27.86	27.18
Mass of Dry Soil (g)	152.76	151.50	133.13	138.81	126.71	136.41	121.96	116.70	129.25	110.39	124.69	122.65
Moisture Content (%)	7.02	7.86	10.22	10.11	13.17	13.49	16.20	16.73	19.04	19.88	22.34	22.16
Average Moisture (%)	**7.44**		**10.17**		**13.33**		**16.46**		**19.46**		**22.25**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**
Wet Soil + Mold (g)	4,675.00	4,760.00	4,890.00	4,995.00	5,040.00	5,005.00
Mass of Mold (g)	3,285.00	3,285.00	3,285.00	3,285.00	3,285.00	3,285.00
Mass of Wet Soil (g)	1,390.00	1,475.00	1,605.00	1,710.00	1,755.00	1,720.00
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	984.00
Wet Density (g/cc)	**1.41**	**1.50**	**1.63**	**1.74**	**1.78**	**1.75**
Dry Density (g/cc)	**1.31**	**1.36**	**1.44**	**1.49**	**1.49**	**1.43**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.50**
Opt. Moisture Content (%):	**18.20**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-30_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-30
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1695171.276 N ; 448208.77 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/25/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**VR**	**EW**	**0-268**	**10-197**	**10-217**	**10-309**
Wet Soil + Can (g)	169.50	169.05	159.55	165.90	178.57	176.01
Dry Soil + Can (g)	146.02	146.28	137.85	144.05	153.70	152.38
Mass of Can (g)	21.00	19.14	19.78	20.94	20.00	20.15
Moisture Loss (g)	23.49	22.77	21.70	21.85	24.87	23.63
Mass of Dry Soil (g)	125.02	127.14	118.07	123.11	133.70	132.23
Moisture Content (%)	18.79	17.91	18.38	17.75	18.60	17.87
Average Moisture (%)	**18.35**		**18.06**		**18.24**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-7**	**CBR-12**	**CBR-86**
Wet Soil + Mold (g)	12000.00	10170.00	12270.00
Mass of Mold (g)	8310.00	6260.00	8230.00
Mass of Wet Soil (g)	3690.00	3910.00	4040.00
Volume of Mold (cc)	2226.00	2261.00	2242.00
Wet Density (g/cc)	**1.66**	**1.73**	**1.80**
Dry Density (g/cc)	**1.40**	**1.46**	**1.52**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.38	1.07	1.02
Reading After Soaking ($x10^{-1}$ mm)	7.03	5.4	5.21
Swell (%)	**4.85**	**3.72**	**3.60**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	9.81	13.08	17.44	0.51	0.67	0.90			
1.27	17.17	22.89	30.52	0.88	1.18	1.57			
1.91	22.07	29.43	39.24	1.14	1.52	2.02			
2.54	26.36	35.15	46.87	1.36	1.81	2.42	**1.93**	**2.58**	**3.43**
3.81	31.88	42.51	56.68	1.64	2.19	2.92			
5.08	34.34	45.78	61.04	1.77	2.36	3.15	**1.69**	**2.25**	**3.00**
7.62	38.01	50.69	67.58	1.96	2.61	3.48			
10.16	40.47	53.96	71.94	2.09	2.78	3.71			
12.70	42.92	57.23	76.30	2.21	2.95	3.93			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

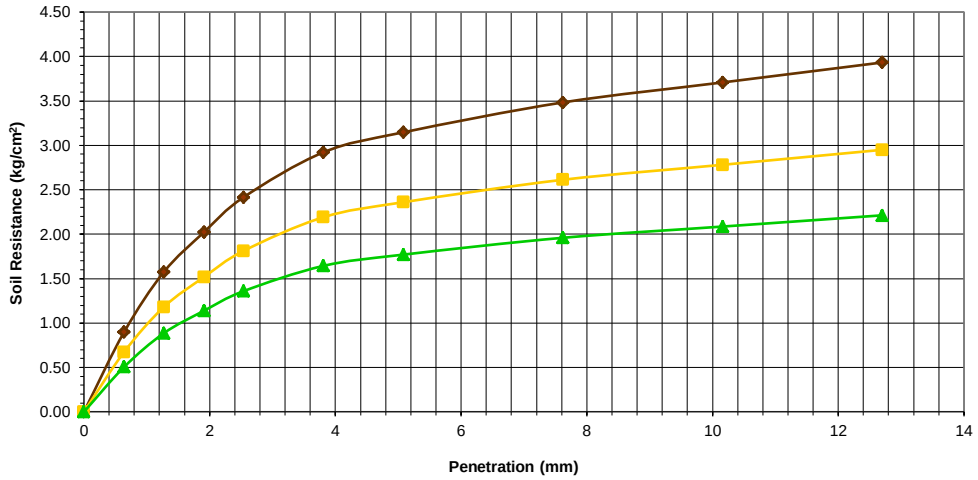
1705UIC1_RCBRT_TP-30_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

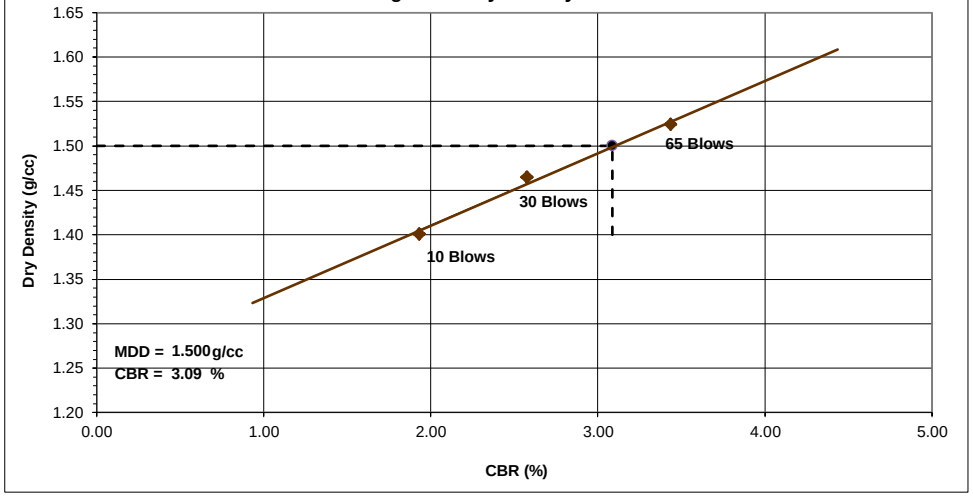
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-30
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1695171.276 N ; 448208.77 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/25/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.658	1.69
30	1.729	2.25
65	1.802	3.00

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.500	3.09
95	1.425	2.18

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-30_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/25/17	**TP/BS Number:**	TP-31
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1695546.177 N ; 448539.511 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/08/17

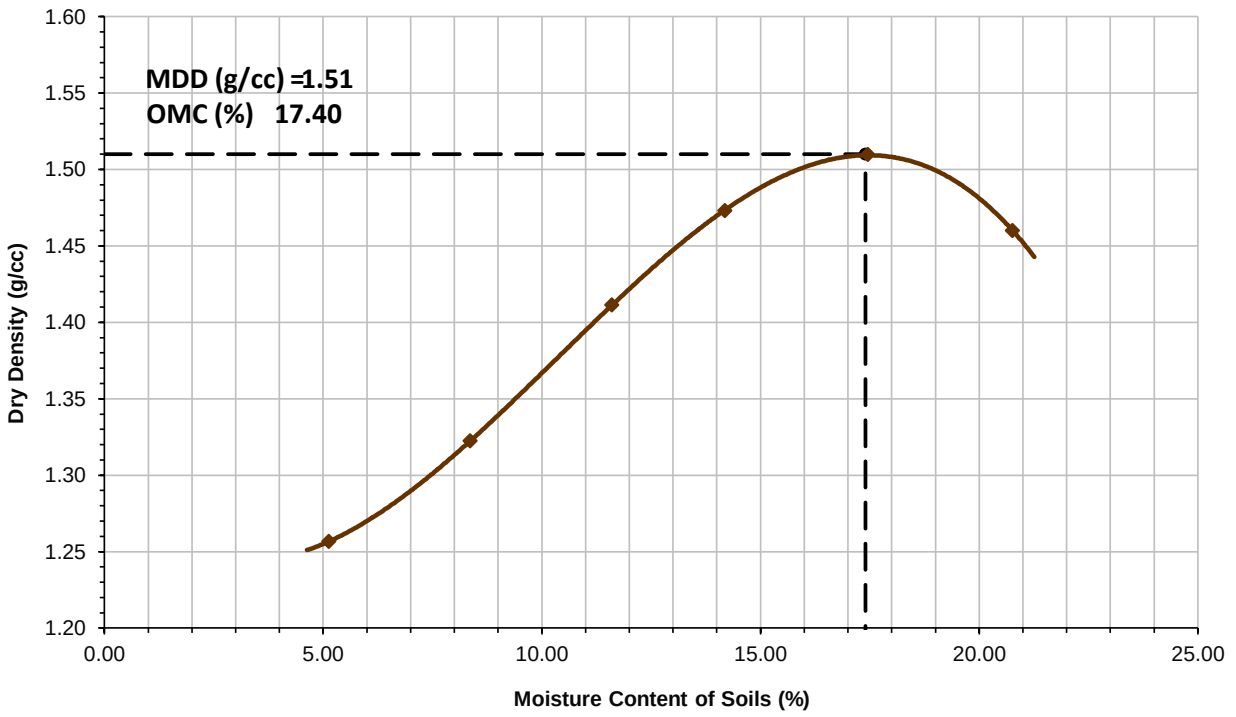
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**0-34**	**H7**	**0-150**	**0-328**	**10-132**	**10-216**	**0-65**	**0-132**	**IO-84**	**0-178**	**KK-8**	**IO-89**
Wet Soil + Can (g)	182.93	165.25	186.20	167.28	183.11	182.08	180.18	180.59	185.54	188.72	170.42	151.64
Dry Soil + Can (g)	175.04	158.08	173.60	155.92	166.10	165.26	160.58	160.98	160.26	163.98	144.76	128.94
Mass of Can (g)	17.99	21.34	22.78	19.99	19.83	20.01	22.68	22.50	17.63	20.07	21.68	19.10
Moisture Loss (g)	7.89	7.17	12.60	11.36	17.01	16.82	19.60	19.61	25.28	24.74	25.66	22.70
Mass of Dry Soil (g)	157.05	136.74	150.82	135.93	146.27	145.25	137.90	138.48	142.63	143.91	123.08	109.84
Moisture Content (%)	5.02	5.24	8.35	8.36	11.63	11.58	14.21	14.16	17.72	17.19	20.85	20.67
Average Moisture (%)	**5.13**		**8.36**		**11.60**		**14.19**		**17.46**		**20.76**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,355.00	4,465.00	4,605.00	4,710.00	4,800.00	4,790.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,300.00	1,410.00	1,550.00	1,655.00	1,745.00	1,735.00
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	984.00
Wet Density (g/cc)	**1.32**	**1.43**	**1.58**	**1.68**	**1.77**	**1.76**
Dry Density (g/cc)	**1.26**	**1.32**	**1.41**	**1.47**	**1.51**	**1.46**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.51**
Opt. Moisture Content (%):	**17.40**

Performed by: DANILO DELAN
Laboratory Technician

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

1705UIC1_RMDRT_TP-31_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-31
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1695546.177 N ; 448539.511 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/25/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**JY**	**TG**	**0-68**	**0-150**	**0-84**	**0-236**
Wet Soil + Can (g)	185.11	184.29	155.71	176.77	171.00	184.48
Dry Soil + Can (g)	160.50	160.43	135.64	154.36	148.61	160.43
Mass of Can (g)	21.09	19.62	22.43	22.68	22.44	20.23
Moisture Loss (g)	24.62	23.86	20.07	22.41	22.39	24.05
Mass of Dry Soil (g)	139.41	140.81	113.21	131.68	126.17	140.20
Moisture Content (%)	17.66	16.94	17.73	17.02	17.75	17.15
Average Moisture (%)	**17.30**		**17.37**		**17.45**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-66**	**CBR-45**	**CBR-88**
Wet Soil + Mold (g)	9540.00	10700.00	10260.00
Mass of Mold (g)	5900.00	6780.00	6215.00
Mass of Wet Soil (g)	3640.00	3920.00	4045.00
Volume of Mold (cc)	2196.00	2257.00	2238.00
Wet Density (g/cc)	**1.66**	**1.74**	**1.81**
Dry Density (g/cc)	**1.41**	**1.48**	**1.54**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.78	5.26	1.32
Reading After Soaking ($x10^{-1}$ mm)	2.71	6.1	2.01
Swell (%)	**0.80**	**0.72**	**0.59**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	11.16	13.95	17.44	0.58	0.72	0.90			
1.27	19.53	24.42	30.52	1.01	1.26	1.57			
1.91	26.51	33.14	41.42	1.37	1.71	2.14			
2.54	30.69	38.37	47.96	1.58	1.98	2.47	**2.25**	**2.81**	**3.51**
3.81	36.28	45.34	56.68	1.87	2.34	2.92			
5.08	39.07	48.83	61.04	2.01	2.52	3.15	**1.92**	**2.40**	**3.00**
7.62	43.25	54.06	67.58	2.23	2.79	3.48			
10.16	46.04	57.55	71.94	2.37	2.97	3.71			
12.70	48.83	61.04	76.30	2.52	3.15	3.93			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN — *Senior Laboratory Technician*

Approved by: REMEDIOS SOLDAO — *Head of Engineering Department*

DPWH-BRS ACCREDITED TESTING LABORATORY

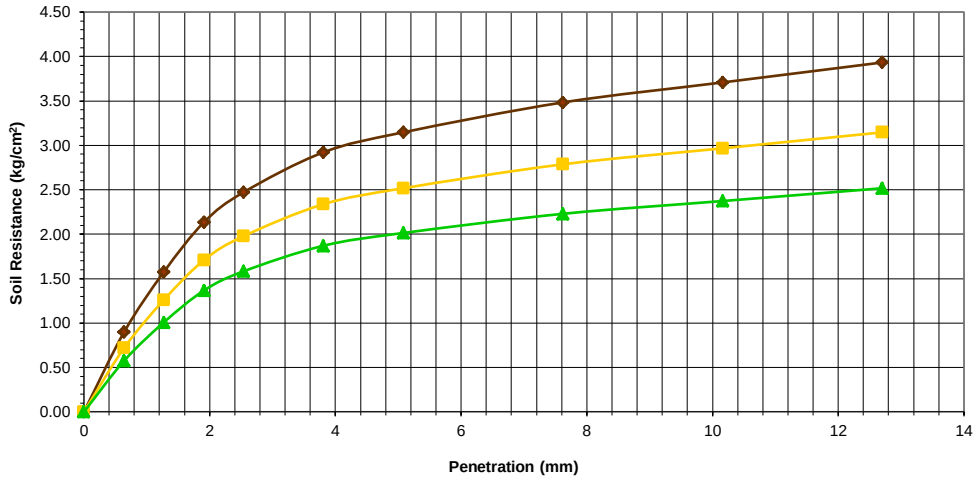
1705UIC1_RCBRT_TP-31_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

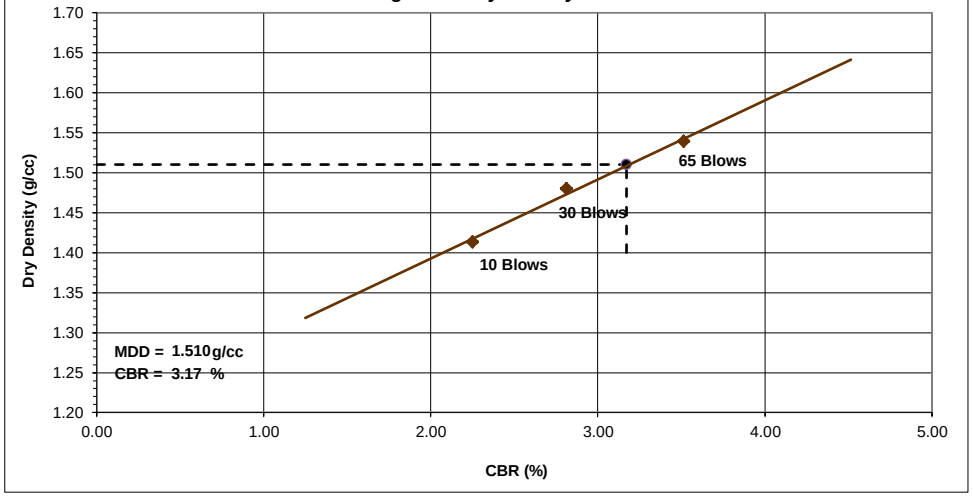
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-31
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1695546.177 N ; 448539.511 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/25/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.658	1.92
30	1.737	2.40
65	1.807	3.00

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.510	3.17
95	1.435	2.43

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/26/17	**TP/BS Number:**	TP-32
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1696020.361 N ; 448658.651 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/09/17

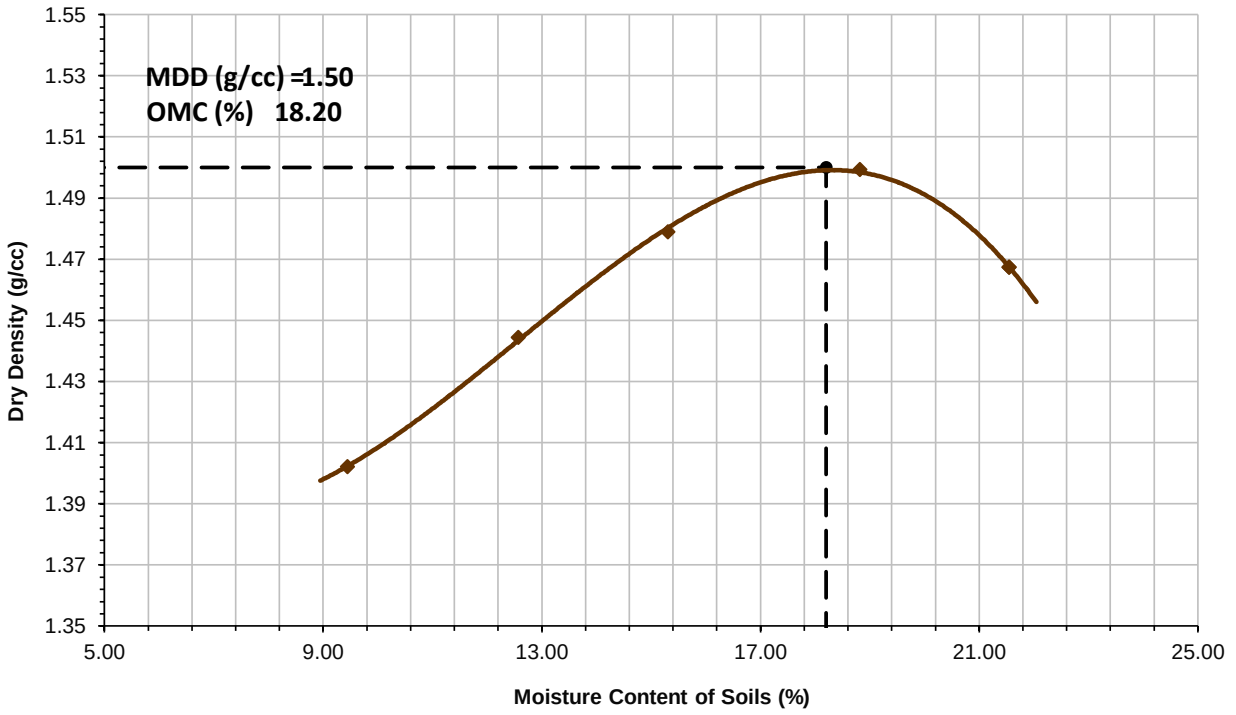
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**IO-2**	**0-38**	**0-395**	**10-228**	**0-81**	**0-32**	**0-90**	**0-25**	**0-312**	**0-29**	**-**	**-**
Wet Soil + Can (g)	173.72	176.24	162.15	156.74	160.97	178.69	169.20	173.81	172.92	185.54	-	-
Dry Soil + Can (g)	160.75	162.61	146.70	141.09	142.11	157.81	145.87	149.99	145.74	156.71	-	-
Mass of Can (g)	19.02	22.71	20.05	20.15	17.63	22.81	22.63	22.68	19.91	22.56	-	-
Moisture Loss (g)	12.97	13.63	15.45	15.65	18.86	20.88	23.33	23.82	27.18	28.83	-	-
Mass of Dry Soil (g)	141.73	139.90	126.65	120.94	124.48	135.00	123.24	127.31	125.83	134.15	-	-
Moisture Content (%)	9.15	9.74	12.20	12.94	15.15	15.47	18.93	18.71	21.60	21.49	-	-
Average Moisture (%)	**9.45**		**12.57**		**15.31**		**18.82**		**21.55**		**-**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**-**
Wet Soil + Mold (g)	4,565.00	4,655.00	4,733.00	4,808.00	4,810.00	-
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	-
Mass of Wet Soil (g)	1,510.00	1,600.00	1,678.00	1,753.00	1,755.00	-
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	-
Wet Density (g/cc)	**1.53**	**1.63**	**1.71**	**1.78**	**1.78**	**-**
Dry Density (g/cc)	**1.40**	**1.44**	**1.48**	**1.50**	**1.47**	**-**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.50**
Opt. Moisture Content (%):	**18.20**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-32_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-32
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1696020.361 N ; 448658.651 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/26/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**BT**	**VR**	**1O-7**	**10-216**	**0-148**	**10-317**
Wet Soil + Can (g)	185.20	175.78	147.42	166.63	174.83	179.77
Dry Soil + Can (g)	159.58	152.50	127.57	144.37	150.55	155.61
Mass of Can (g)	21.44	22.06	20.02	19.92	20.04	20.43
Moisture Loss (g)	25.62	23.29	19.85	22.26	24.28	24.16
Mass of Dry Soil (g)	138.14	130.43	107.55	124.45	130.51	135.18
Moisture Content (%)	18.54	17.85	18.46	17.89	18.60	17.87
Average Moisture (%)	**18.20**		**18.17**		**18.24**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-32**	**CBR-37**	**CBR-68**
Wet Soil + Mold (g)	11340.00	10260.00	11420.00
Mass of Mold (g)	7660.00	6365.00	7365.00
Mass of Wet Soil (g)	3680.00	3895.00	4055.00
Volume of Mold (cc)	2223.00	2249.00	2248.00
Wet Density (g/cc)	**1.66**	**1.73**	**1.80**
Dry Density (g/cc)	**1.40**	**1.47**	**1.53**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.35	3.45	1
Reading After Soaking ($x10^{-1}$ mm)	4.93	6.85	3.5
Swell (%)	**3.07**	**2.92**	**2.15**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	15.35	19.18	23.98	0.79	0.99	1.24			
1.27	25.11	31.39	39.24	1.29	1.62	2.02			
1.91	32.09	40.11	50.14	1.65	2.07	2.58			
2.54	36.28	45.34	56.68	1.87	2.34	2.92	**2.66**	**3.32**	**4.15**
3.81	41.86	52.32	65.40	2.16	2.70	3.37			
5.08	44.65	55.81	69.76	2.30	2.88	3.60	**2.19**	**2.74**	**3.42**
7.62	48.83	61.04	76.30	2.52	3.15	3.93			
10.16	51.62	64.53	80.66	2.66	3.33	4.16			
12.70	54.41	68.02	85.02	2.80	3.51	4.38			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

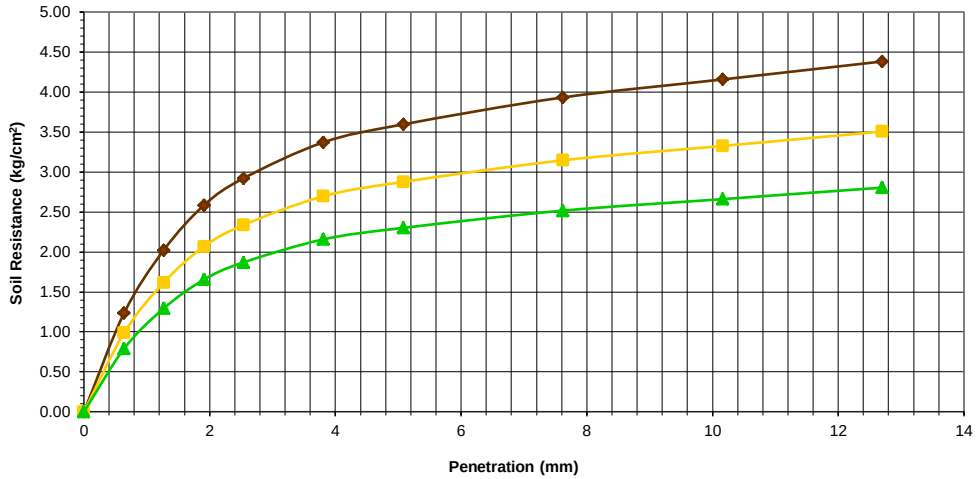
1705UIC1_RCBRT_TP-32_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

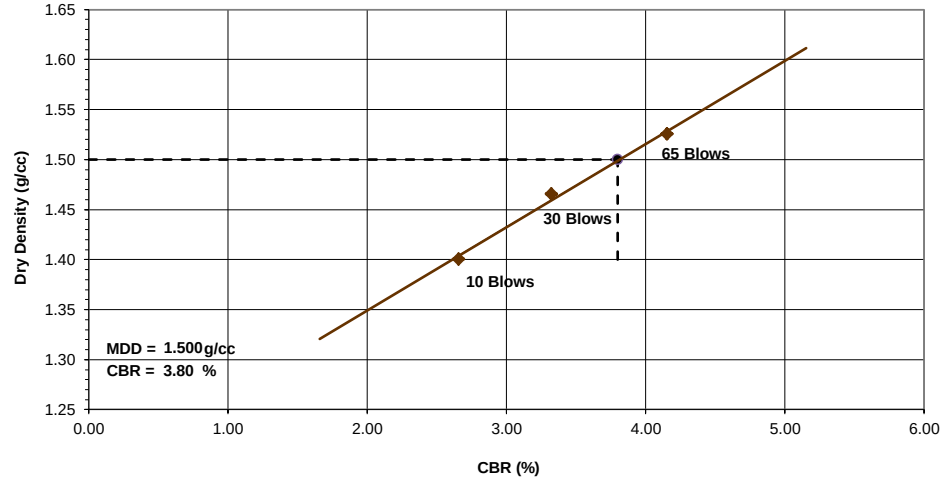
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-32
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1696020.361 N ; 448658.651 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/26/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.655	2.19
30	1.732	2.74
65	1.804	3.42

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.500	3.80
95	1.425	2.91

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-32_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/27/17	**TP/BS Number:**	TP-33
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1696512.278 N ; 448658.623 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/06/17

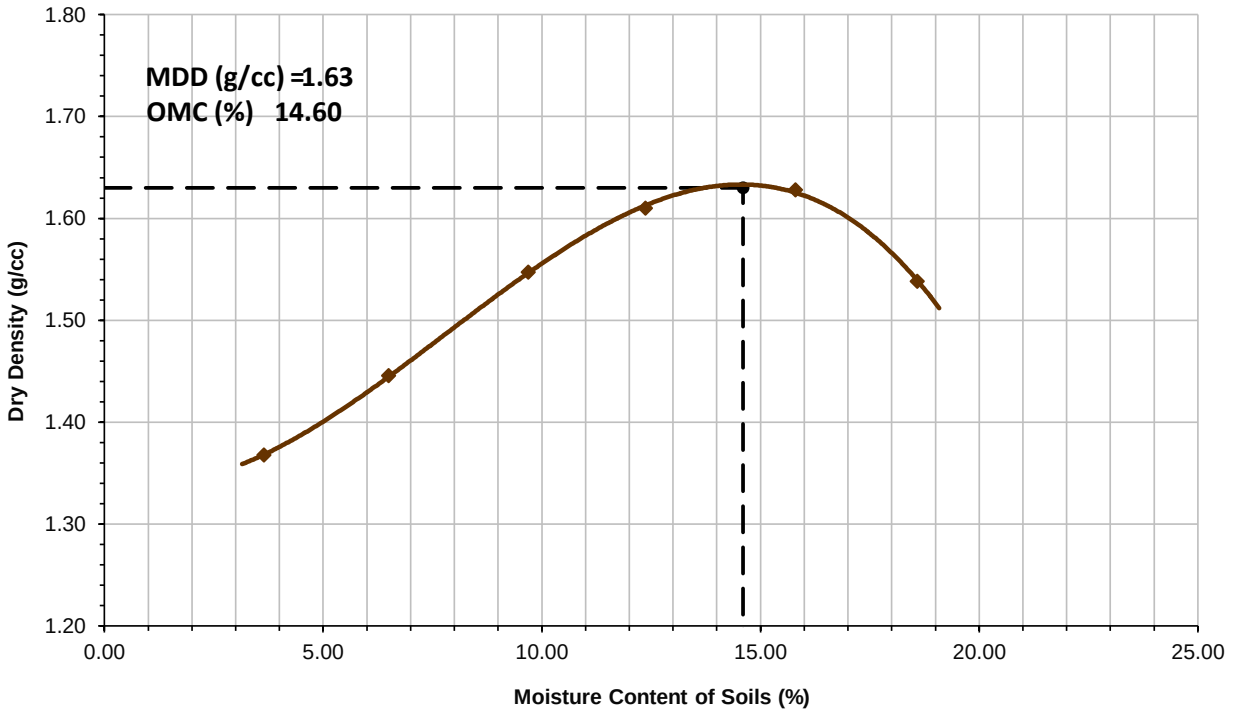
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**10-145**	**10-101**	**10-286**	**A14**	**2E**	**10-170**	**0-430**	**EE3**	**10-221**	**NN4**	**10-137**	**0-91**
Wet Soil + Can (g)	149.44	147.13	141.66	138.71	154.38	162.49	160.79	152.96	164.38	161.30	188.59	183.47
Dry Soil + Can (g)	144.82	142.70	134.16	131.56	142.82	149.64	145.50	138.38	144.62	142.36	162.16	158.30
Mass of Can (g)	19.68	19.71	19.87	20.40	20.38	20.35	20.22	22.06	20.08	22.06	20.27	22.58
Moisture Loss (g)	4.62	4.43	7.50	7.15	11.56	12.85	15.29	14.58	19.76	18.94	26.43	25.17
Mass of Dry Soil (g)	125.14	122.99	114.29	111.16	122.44	129.29	125.28	116.32	124.54	120.30	141.89	135.72
Moisture Content (%)	3.69	3.60	6.56	6.43	9.44	9.94	12.20	12.53	15.87	15.74	18.63	18.55
Average Moisture (%)	**3.65**		**6.50**		**9.69**		**12.37**		**15.81**		**18.59**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,450.00	4,570.00	4,725.00	4,835.00	4,910.00	4,850.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,395.00	1,515.00	1,670.00	1,780.00	1,855.00	1,795.00
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	984.00
Wet Density (g/cc)	**1.42**	**1.54**	**1.70**	**1.81**	**1.89**	**1.82**
Dry Density (g/cc)	**1.37**	**1.45**	**1.55**	**1.61**	**1.63**	**1.54**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.63**
Opt. Moisture Content (%):	**14.60**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-33_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-33
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1696512.278 N ; 448658.623 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/27/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/14/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**WD**	**SC**	**0-160**	**0-138**	**A1**	**0-287**
Wet Soil + Can (g)	147.32	150.24	135.61	158.12	137.54	145.89
Dry Soil + Can (g)	131.39	133.94	120.56	141.20	122.79	130.04
Mass of Can (g)	23.81	21.00	19.82	22.73	23.57	19.63
Moisture Loss (g)	15.93	16.30	15.05	16.92	14.75	15.85
Mass of Dry Soil (g)	107.58	112.94	100.74	118.47	99.22	110.41
Moisture Content (%)	14.81	14.43	14.94	14.28	14.87	14.36
Average Moisture (%)	**14.62**		**14.61**		**14.61**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-8**	**CBR-13**	**CBR-29**
Wet Soil + Mold (g)	9630.00	10580.00	10400.00
Mass of Mold (g)	5800.00	6450.00	6100.00
Mass of Wet Soil (g)	3830.00	4130.00	4300.00
Volume of Mold (cc)	2180.00	2258.00	2251.00
Wet Density (g/cc)	**1.76**	**1.83**	**1.91**
Dry Density (g/cc)	**1.53**	**1.60**	**1.67**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.74	3.1	1.29
Reading After Soaking ($x10^{-1}$ mm)	2.36	3.62	1.75
Swell (%)	**0.53**	**0.45**	**0.40**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	12.56	15.70	19.62	0.65	0.81	1.01			
1.27	20.93	26.16	32.70	1.08	1.35	1.69			
1.91	25.81	32.26	40.33	1.33	1.66	2.08			
2.54	29.30	36.62	45.78	1.51	1.89	2.36	**2.15**	**2.68**	**3.36**
3.81	32.79	40.98	51.23	1.69	2.11	2.64			
5.08	34.88	43.60	54.50	1.80	2.25	2.81	**1.71**	**2.14**	**2.68**
7.62	37.67	47.09	58.86	1.94	2.43	3.03			
10.16	39.76	49.70	62.13	2.05	2.56	3.20			
12.70	41.86	52.32	65.40	2.16	2.70	3.37			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

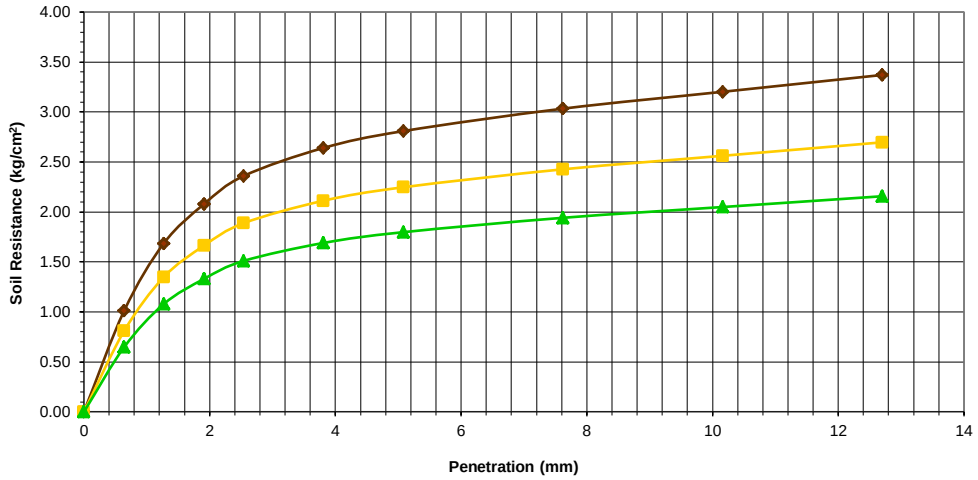
1705UIC1_RCBRT_TP-33_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

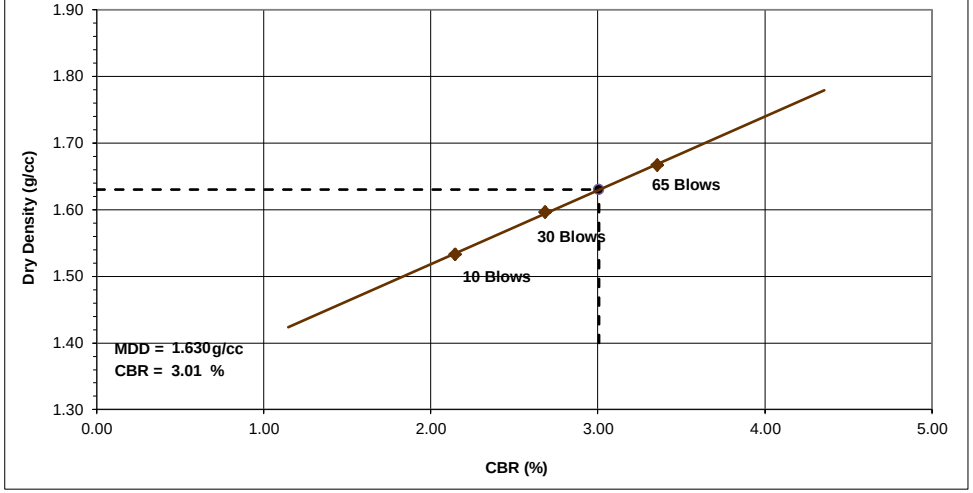
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-33
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1696512.278 N ; 448658.623 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/27/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/14/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.757	1.71
30	1.829	2.14
65	1.910	2.68

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.630	3.01
95	1.549	2.28

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-33_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/27/17	**TP/BS Number:**	TP-34
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1697020.361 N ; 448658.593 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/06/17

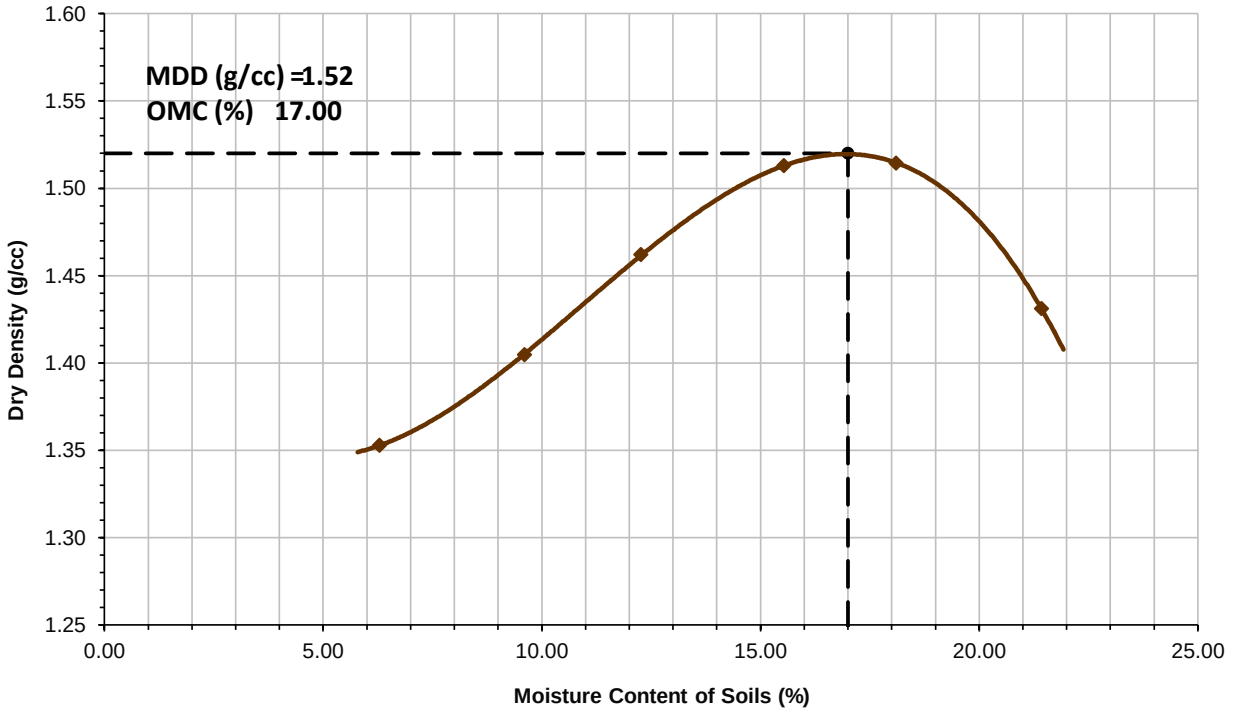
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**0-61**	**43030**	**10-375**	**10-120**	**5D**	**0-261**	**0-155**	**10-292**	**T-5**	**0-295**	**0-116**	**0-8**
Wet Soil + Can (g)	182.55	186.65	158.12	176.57	174.99	165.08	170.75	180.80	177.50	159.97	166.38	168.15
Dry Soil + Can (g)	173.14	176.58	146.35	162.40	157.92	149.12	151.09	158.88	153.46	138.64	140.76	143.12
Mass of Can (g)	22.43	17.63	19.54	19.67	17.20	20.34	22.67	19.83	21.37	20.16	22.95	24.49
Moisture Loss (g)	9.41	10.07	11.77	14.17	17.07	15.96	19.66	21.92	24.04	21.33	25.62	25.03
Mass of Dry Soil (g)	150.71	158.95	126.81	142.73	140.72	128.78	128.42	139.05	132.09	118.48	117.81	118.63
Moisture Content (%)	6.24	6.34	9.28	9.93	12.13	12.39	15.31	15.76	18.20	18.00	21.75	21.10
Average Moisture (%)	**6.29**		**9.60**		**12.26**		**15.54**		**18.10**		**21.42**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**	**NMDR-6**
Wet Soil + Mold (g)	4,695.00	4,795.00	4,895.00	5,000.00	5,040.00	4,990.00
Mass of Mold (g)	3,280.00	3,280.00	3,280.00	3,280.00	3,280.00	3,280.00
Mass of Wet Soil (g)	1,415.00	1,515.00	1,615.00	1,720.00	1,760.00	1,710.00
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	984.00
Wet Density (g/cc)	**1.44**	**1.54**	**1.64**	**1.75**	**1.79**	**1.74**
Dry Density (g/cc)	**1.35**	**1.40**	**1.46**	**1.51**	**1.51**	**1.43**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.52**
Opt. Moisture Content (%):	**17.00**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-34_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-34
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1697020.361 N ; 448658.593 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/27/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**QW**	**SA**	**0-328**	**KK8**	**10-378**	**10-435**
Wet Soil + Can (g)	151.22	147.24	140.10	154.20	141.41	148.62
Dry Soil + Can (g)	132.31	129.00	122.50	135.17	123.65	130.30
Mass of Can (g)	21.74	19.48	20.02	21.66	20.32	19.88
Moisture Loss (g)	18.91	18.24	17.60	19.03	17.76	18.32
Mass of Dry Soil (g)	110.56	109.51	102.48	113.51	103.33	110.42
Moisture Content (%)	17.10	16.66	17.17	16.77	17.19	16.59
Average Moisture (%)	**16.88**		**16.97**		**16.89**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-42**	**CBR-59**	**CBR98**
Wet Soil + Mold (g)	10450.00	10280.00	11290.00
Mass of Mold (g)	6800.00	6320.00	7155.00
Mass of Wet Soil (g)	3650.00	3960.00	4135.00
Volume of Mold (cc)	2174.00	2260.00	2266.00
Wet Density (g/cc)	**1.68**	**1.75**	**1.82**
Dry Density (g/cc)	**1.44**	**1.50**	**1.56**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	4.86	4.12	3.6
Reading After Soaking ($x10^{-1}$ mm)	6.39	5.59	4.73
Swell (%)	**1.31**	**1.26**	**0.97**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	16.74	20.93	26.16	0.86	1.08	1.35			
1.27	25.11	31.39	39.24	1.29	1.62	2.02			
1.91	30.69	38.37	47.96	1.58	1.98	2.47			
2.54	34.88	43.60	54.50	1.80	2.25	2.81	**2.56**	**3.20**	**3.99**
3.81	39.76	49.70	62.13	2.05	2.56	3.20			
5.08	43.25	54.06	67.58	2.23	2.79	3.48	**2.12**	**2.65**	**3.32**
7.62	47.44	59.30	74.12	2.45	3.06	3.82			
10.16	50.23	62.78	78.48	2.59	3.24	4.05			
12.70	53.02	66.27	82.84	2.73	3.42	4.27			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

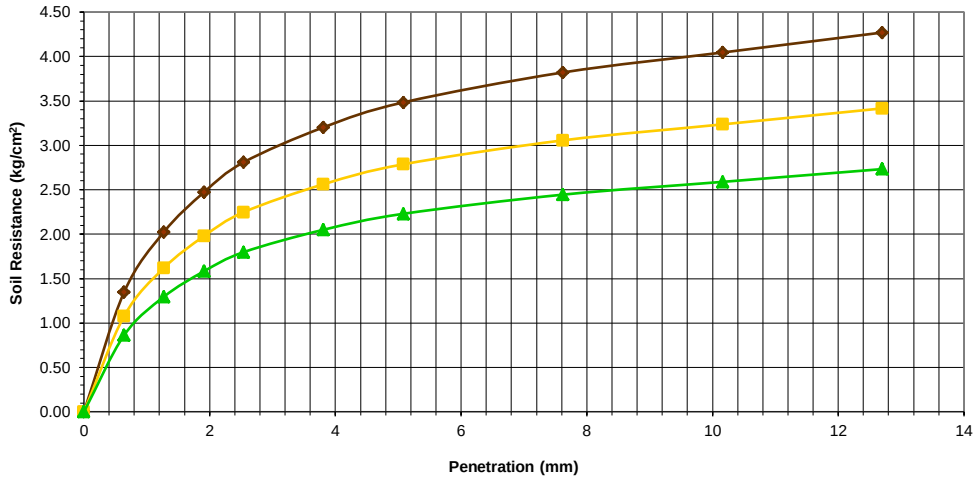
1705UIC1_RCBRT_TP-34_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

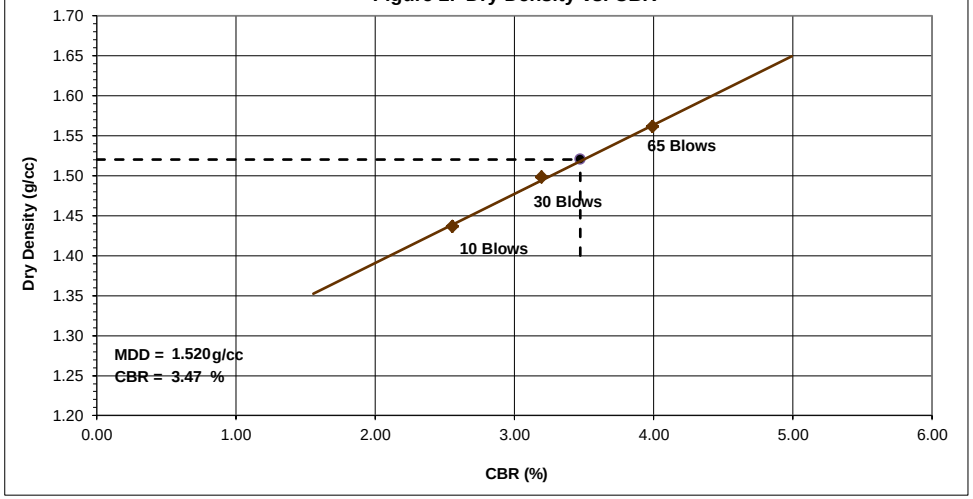
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-34
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1697020.361 N ; 448658.593 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/27/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.679	2.12
30	1.752	2.65
65	1.825	3.32

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.520	3.47
95	1.444	2.63

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-34_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/27/17	**TP/BS Number:**	TP-35
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1697520.36 N ; 448658.564 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/08/17

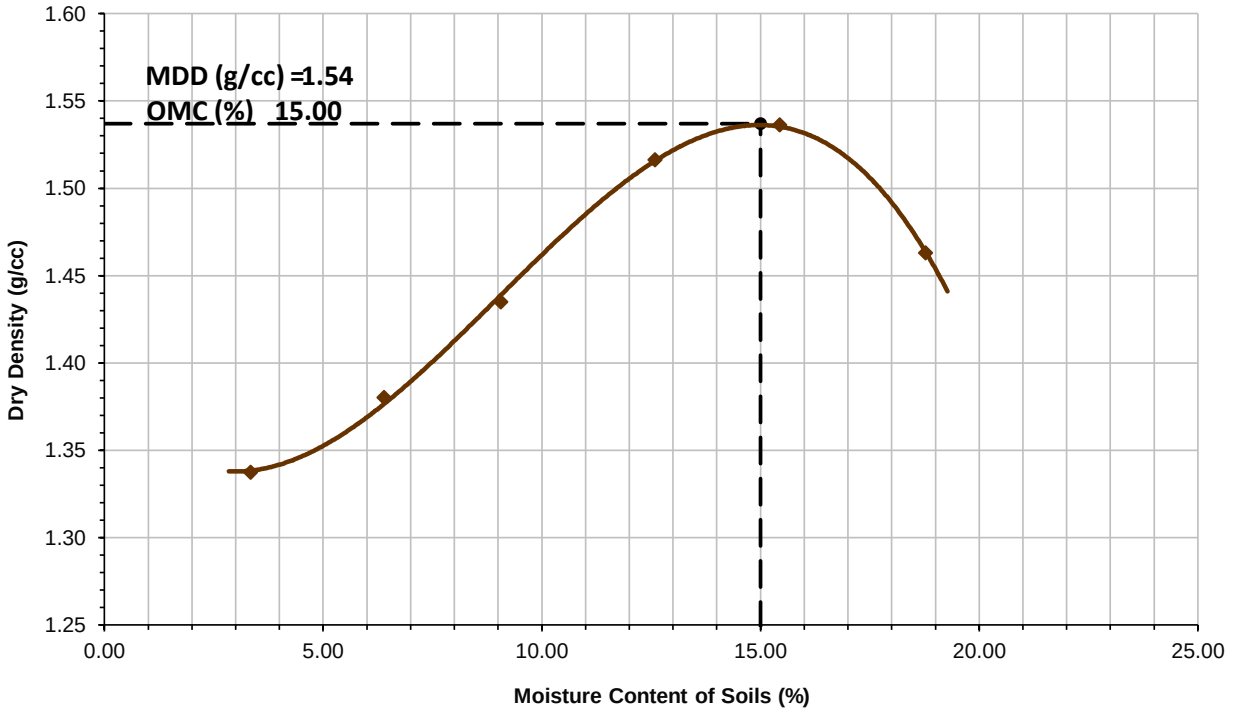
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**IO-4**	**10-309**	**0-57**	**10-129**	**IO-7**	**10-436**	**R-8**	**10-438**	**10.435**	**0-56**	**10-377**	**0-95**
Wet Soil + Can (g)	172.26	169.12	184.21	180.93	180.98	180.28	187.49	177.48	162.23	177.43	152.38	154.17
Dry Soil + Can (g)	167.70	163.90	174.68	171.06	167.62	166.96	168.50	159.86	143.15	156.74	131.30	133.50
Mass of Can (g)	17.67	20.53	22.70	19.70	20.08	20.02	17.55	20.05	19.86	22.34	20.03	22.43
Moisture Loss (g)	4.56	5.22	9.53	9.87	13.36	13.32	18.99	17.62	19.08	20.69	21.08	20.67
Mass of Dry Soil (g)	150.03	143.37	151.98	151.36	147.54	146.94	150.95	139.81	123.29	134.40	111.27	111.07
Moisture Content (%)	3.04	3.64	6.27	6.52	9.06	9.06	12.58	12.60	15.48	15.39	18.94	18.61
Average Moisture (%)	**3.34**		**6.40**		**9.06**		**12.59**		**15.44**		**18.78**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,415.00	4,500.00	4,595.00	4,735.00	4,800.00	4,765.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,360.00	1,445.00	1,540.00	1,680.00	1,745.00	1,710.00
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	984.00
Wet Density (g/cc)	**1.38**	**1.47**	**1.57**	**1.71**	**1.77**	**1.74**
Dry Density (g/cc)	**1.34**	**1.38**	**1.44**	**1.52**	**1.54**	**1.46**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.54**
Opt. Moisture Content (%):	**15.00**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-35_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-35
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1697520.36 N ; 448658.564 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/27/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**VF**	**RD**	**0-31**	**10-436**	**0-257**	**0-132**
Wet Soil + Can (g)	178.67	193.87	153.38	167.54	168.42	190.04
Dry Soil + Can (g)	157.52	171.97	135.46	148.61	148.60	168.60
Mass of Can (g)	20.46	22.25	18.93	19.98	19.67	22.47
Moisture Loss (g)	21.15	21.90	17.92	18.93	19.82	21.44
Mass of Dry Soil (g)	137.06	149.73	116.53	128.63	128.93	146.13
Moisture Content (%)	15.43	14.63	15.38	14.72	15.37	14.67
Average Moisture (%)	**15.03**		**15.05**		**15.02**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CB R-3**	**CBR-07**	**CBR-100**
Wet Soil + Mold (g)	10470.00	10190.00	10940.00
Mass of Mold (g)	6770.00	6325.00	6840.00
Mass of Wet Soil (g)	3700.00	3865.00	4100.00
Volume of Mold (cc)	2215.00	2235.00	2256.00
Wet Density (g/cc)	**1.67**	**1.73**	**1.82**
Dry Density (g/cc)	**1.45**	**1.50**	**1.58**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	2.43	2.75	1.8
Reading After Soaking ($x10^{-1}$ mm)	5.91	6.03	4.38
Swell (%)	**2.99**	**2.82**	**2.22**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	15.35	19.18	23.98	0.79	0.99	1.24			
1.27	23.72	29.65	37.06	1.22	1.53	1.91			
1.91	30.69	38.37	47.96	1.58	1.98	2.47			
2.54	34.88	43.60	54.50	1.80	2.25	2.81	**2.56**	**3.20**	**3.99**
3.81	39.07	48.83	61.04	2.01	2.52	3.15			
5.08	41.86	52.32	65.40	2.16	2.70	3.37	**2.05**	**2.57**	**3.21**
7.62	44.65	55.81	69.76	2.30	2.88	3.60			
10.16	46.04	57.55	71.94	2.37	2.97	3.71			
12.70	47.44	59.30	74.12	2.45	3.06	3.82			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

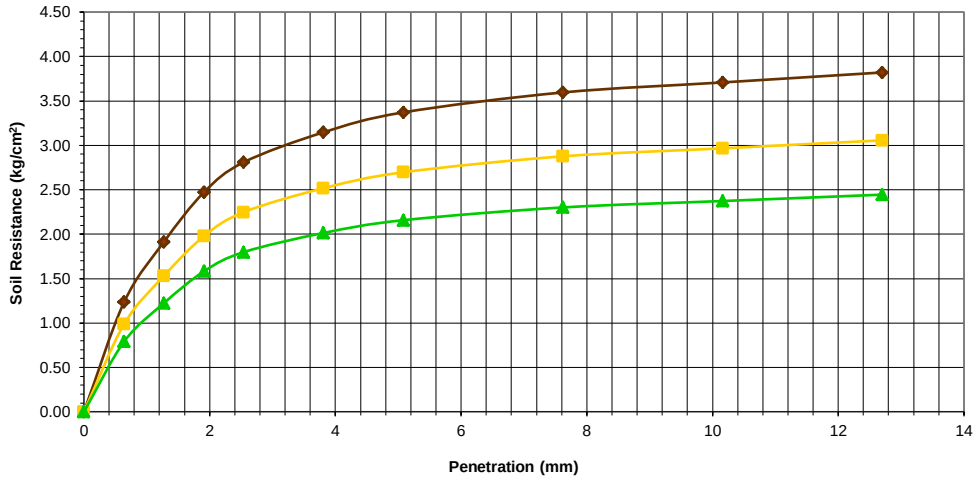
1705UIC1_RCBRT_TP-35_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

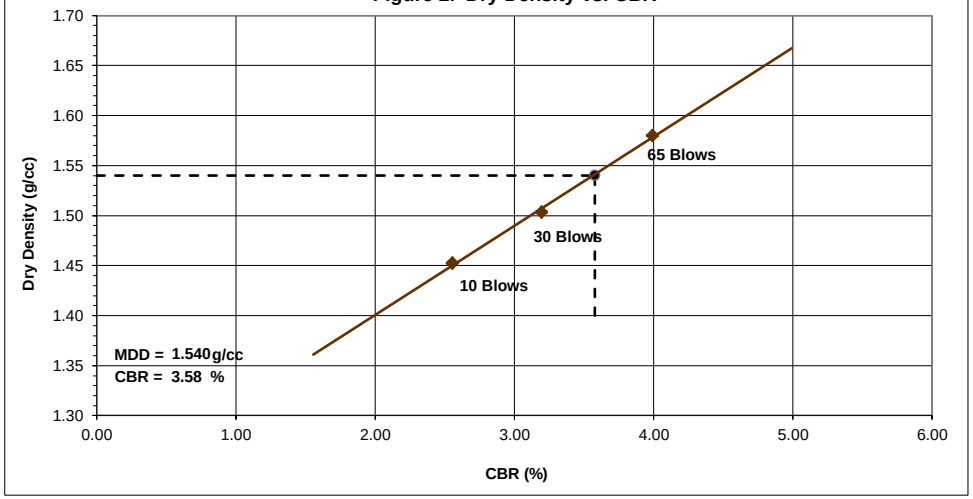
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-35
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1697520.36 N ; 448658.564 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/27/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.670	2.05
30	1.729	2.57
65	1.817	3.21

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.540	3.58
95	1.463	2.69

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-35_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/27/17	**TP/BS Number:**	TP-36
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1698020.36 N ; 448658.535 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/06/17

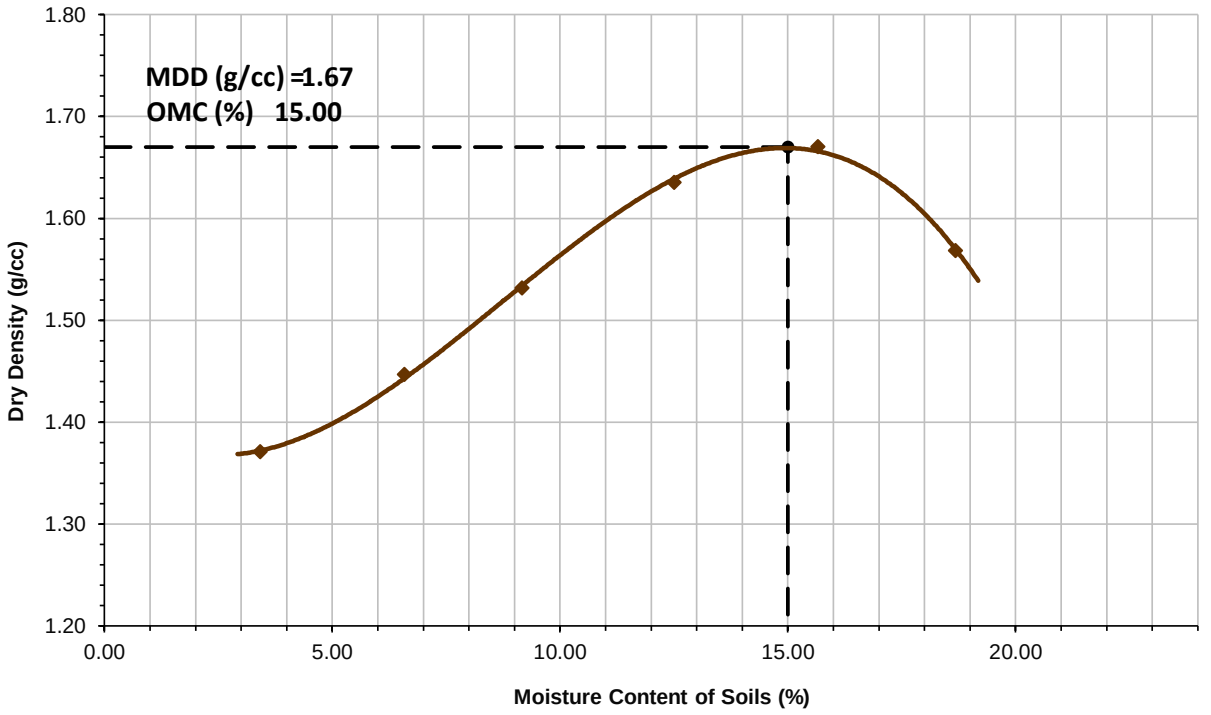
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**10-332**	**0-246**	**10-474**	**9H**	**0-252**	**IO-95**	**10-284**	**0-1**	**IO-14**	**0-16**	**10-356**	**0-89**
Wet Soil + Can (g)	162.73	176.46	155.91	161.45	160.95	164.34	146.04	159.77	166.85	183.20	167.95	175.37
Dry Soil + Can (g)	158.16	171.14	147.38	152.70	148.98	152.32	132.14	143.82	146.36	161.74	144.46	151.52
Mass of Can (g)	20.42	19.91	19.91	17.42	20.20	19.19	20.10	17.24	17.52	22.52	19.85	22.64
Moisture Loss (g)	4.57	5.32	8.53	8.75	11.97	12.02	13.90	15.95	20.49	21.46	23.49	23.85
Mass of Dry Soil (g)	137.74	151.23	127.47	135.28	128.78	133.13	112.04	126.58	128.84	139.22	124.61	128.88
Moisture Content (%)	3.32	3.52	6.69	6.47	9.29	9.03	12.41	12.60	15.90	15.41	18.85	18.51
Average Moisture (%)	**3.42**		**6.58**		**9.16**		**12.50**		**15.66**		**18.68**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,365.00	4,480.00	4,600.00	4,755.00	4,840.00	4,775.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,310.00	1,425.00	1,545.00	1,700.00	1,785.00	1,720.00
Volume of Mold (cc)	924.00	924.00	924.00	924.00	924.00	924.00
Wet Density (g/cc)	**1.42**	**1.54**	**1.67**	**1.84**	**1.93**	**1.86**
Dry Density (g/cc)	**1.37**	**1.45**	**1.53**	**1.64**	**1.67**	**1.57**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.67**
Opt. Moisture Content (%):	**15.00**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-36_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-36
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1698020.36 N ; 448658.535 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/27/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**SG**	**FC**	**AA6**	**BB9**	**KK1**	**3G**
Wet Soil + Can (g)	150.56	154.82	147.81	170.22	143.13	163.23
Dry Soil + Can (g)	133.50	137.60	131.19	151.34	127.14	144.84
Mass of Can (g)	21.85	21.27	22.54	22.38	22.30	20.26
Moisture Loss (g)	17.06	17.22	16.62	18.88	15.99	18.39
Mass of Dry Soil (g)	111.64	116.33	108.65	128.96	104.84	124.58
Moisture Content (%)	15.28	14.80	15.30	14.64	15.25	14.76
Average Moisture (%)	**15.04**		**14.97**		**15.01**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-44**	**CBR-35**	**CBR-72**
Wet Soil + Mold (g)	11230.00	11810.00	11780.00
Mass of Mold (g)	7250.00	7605.00	7400.00
Mass of Wet Soil (g)	3980.00	4205.00	4380.00
Volume of Mold (cc)	2199.00	2222.00	2227.00
Wet Density (g/cc)	**1.81**	**1.89**	**1.97**
Dry Density (g/cc)	**1.57**	**1.65**	**1.71**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	1.38	1.1	1.02
Reading After Soaking ($x10^{-1}$ mm)	2.94	2.61	2.18
Swell (%)	**1.34**	**1.30**	**1.00**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	15.35	19.18	23.98	0.79	0.99	1.24			
1.27	26.51	33.14	41.42	1.37	1.71	2.14			
1.91	33.48	41.86	52.32	1.73	2.16	2.70			
2.54	37.67	47.09	58.86	1.94	2.43	3.03	**2.76**	**3.45**	**4.31**
3.81	43.95	54.94	68.67	2.27	2.83	3.54			
5.08	47.44	59.30	74.12	2.45	3.06	3.82	**2.33**	**2.91**	**3.64**
7.62	50.23	62.78	78.48	2.59	3.24	4.05			
10.16	51.62	64.53	80.66	2.66	3.33	4.16			
12.70	53.02	66.27	82.84	2.73	3.42	4.27			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

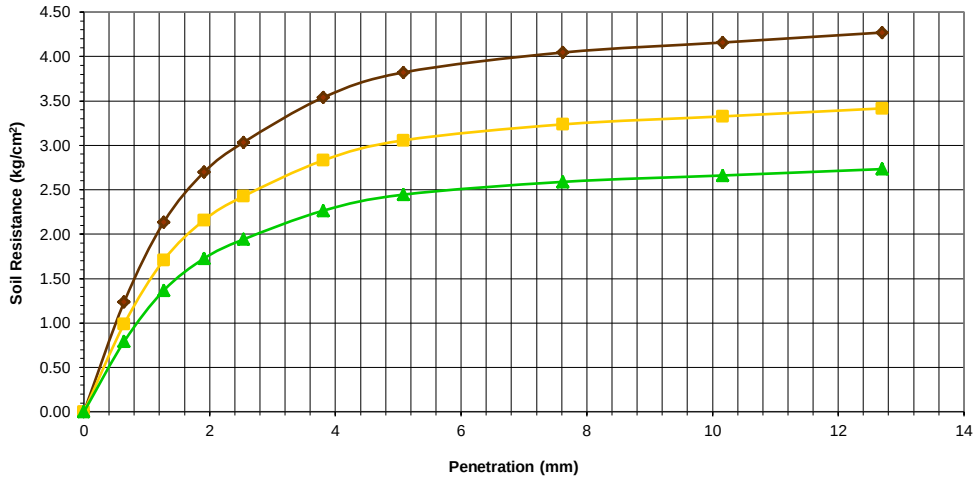
1705UIC1_RCBRT_TP-36_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

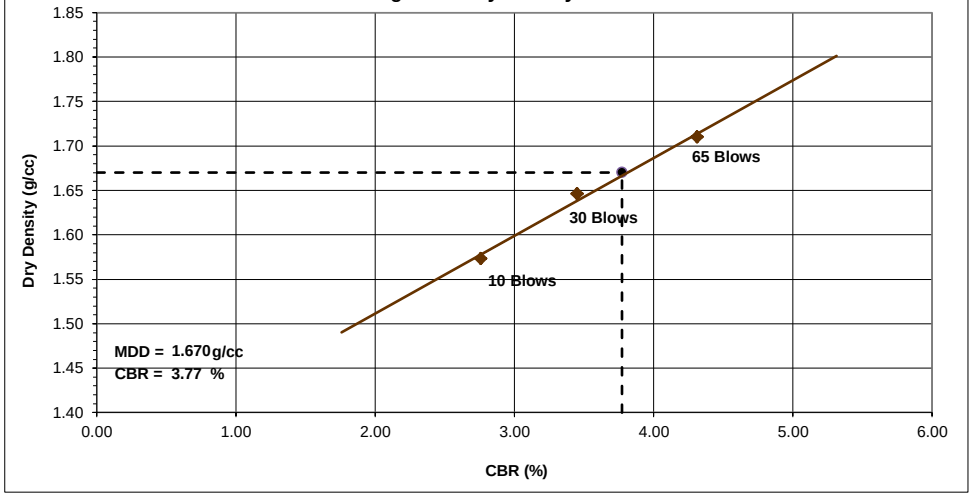
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-36
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1698020.36 N ; 448658.535 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/27/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.810	2.33
30	1.892	2.91
65	1.967	3.64

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.670	3.77
95	1.587	2.89

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/27/17	**TP/BS Number:**	TP-37
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1698520.36 N ; 448658.506 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/08/17

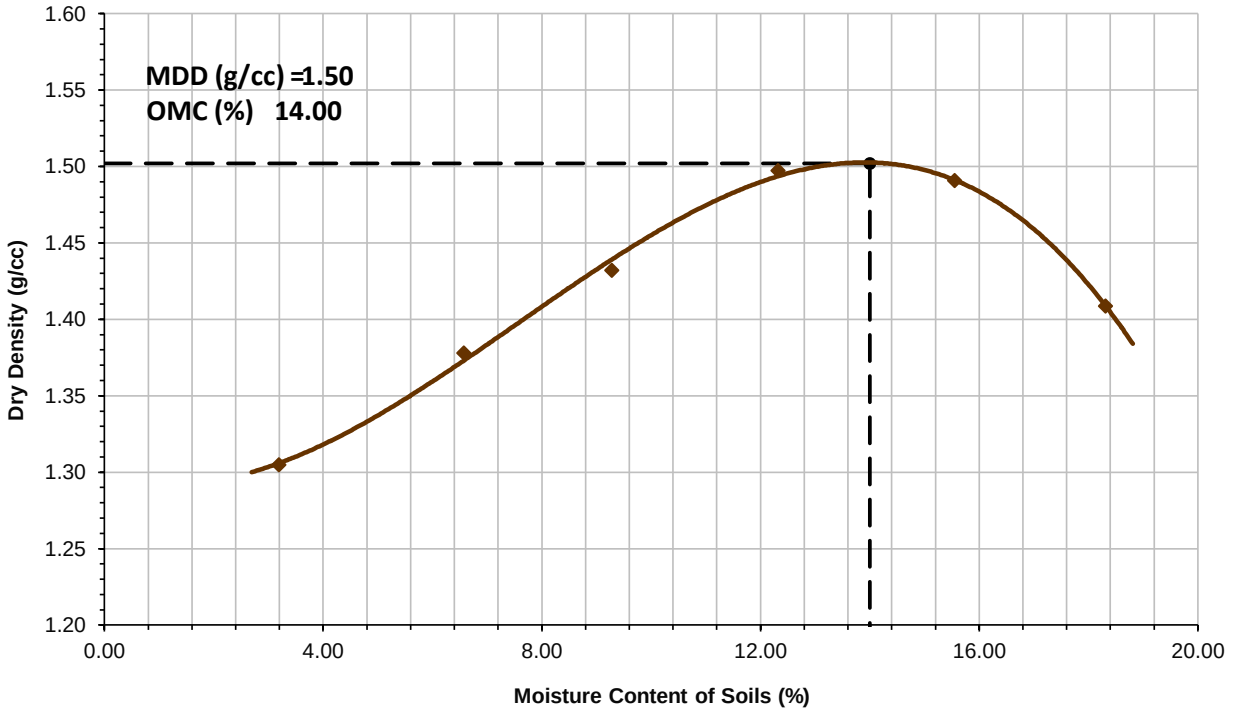
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**0-268**	**IO-75**	**0-31**	**10-148**	**10-197**	**10-378**	**10-317**	**10-431**	**10-168**	**7M**	**X9**	**KK3**
Wet Soil + Can (g)	170.84	157.59	156.60	162.09	180.27	175.71	168.93	166.96	175.62	189.38	168.53	182.15
Dry Soil + Can (g)	166.06	153.40	148.04	153.42	166.72	162.54	153.02	150.48	154.30	166.50	145.50	157.34
Mass of Can (g)	19.85	19.02	19.09	20.10	21.05	20.34	20.46	20.17	19.02	17.45	21.35	20.04
Moisture Loss (g)	4.78	4.19	8.56	8.67	13.55	13.17	15.91	16.48	21.32	22.88	23.03	24.81
Mass of Dry Soil (g)	146.21	134.38	128.95	133.32	145.67	142.20	132.56	130.31	135.28	149.05	124.15	137.30
Moisture Content (%)	3.27	3.12	6.64	6.50	9.30	9.26	12.00	12.65	15.76	15.35	18.55	18.07
Average Moisture (%)	**3.19**		**6.57**		**9.28**		**12.32**		**15.56**		**18.31**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,380.00	4,500.00	4,595.00	4,710.00	4,750.00	4,695.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,325.00	1,445.00	1,540.00	1,655.00	1,695.00	1,640.00
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	984.00
Wet Density (g/cc)	**1.35**	**1.47**	**1.57**	**1.68**	**1.72**	**1.67**
Dry Density (g/cc)	**1.30**	**1.38**	**1.43**	**1.50**	**1.49**	**1.41**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.50**
Opt. Moisture Content (%):	**14.00**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-37_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-37
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1698520.36 N ; 448658.506 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/27/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**NY**	**HG**	**10-420**	**0-57**	**1O-89**	**0-2**
Wet Soil + Can (g)	179.61	180.59	173.57	181.14	166.04	184.24
Dry Soil + Can (g)	159.55	161.43	154.44	162.11	147.73	164.72
Mass of Can (g)	18.72	21.07	19.52	22.70	19.10	22.42
Moisture Loss (g)	20.06	19.16	19.13	19.03	18.31	19.52
Mass of Dry Soil (g)	140.83	140.35	134.92	139.41	128.63	142.30
Moisture Content (%)	14.24	13.65	14.18	13.65	14.23	13.72
Average Moisture (%)	**13.95**		**13.91**		**13.98**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-26**	**CBR-34**	**CBR-82**
Wet Soil + Mold (g)	10010.00	10070.00	10130.00
Mass of Mold (g)	6520.00	6355.00	6205.00
Mass of Wet Soil (g)	3490.00	3715.00	3925.00
Volume of Mold (cc)	2173.00	2224.00	2245.00
Wet Density (g/cc)	**1.61**	**1.67**	**1.75**
Dry Density (g/cc)	**1.41**	**1.47**	**1.53**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	3.15	1.09	2.33
Reading After Soaking ($x10^{-1}$ mm)	6.2	3.6	4.59
Swell (%)	**2.62**	**2.16**	**1.94**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	13.95	17.44	21.80	0.72	0.90	1.12			
1.27	22.32	27.90	34.88	1.15	1.44	1.80			
1.91	29.30	36.62	45.78	1.51	1.89	2.36			
2.54	33.48	41.86	52.32	1.73	2.16	2.70	**2.45**	**3.07**	**3.83**
3.81	39.07	48.83	61.04	2.01	2.52	3.15			
5.08	41.86	52.32	65.40	2.16	2.70	3.37	**2.05**	**2.57**	**3.21**
7.62	46.04	57.55	71.94	2.37	2.97	3.71			
10.16	48.83	61.04	76.30	2.52	3.15	3.93			
12.70	51.62	64.53	80.66	2.66	3.33	4.16			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

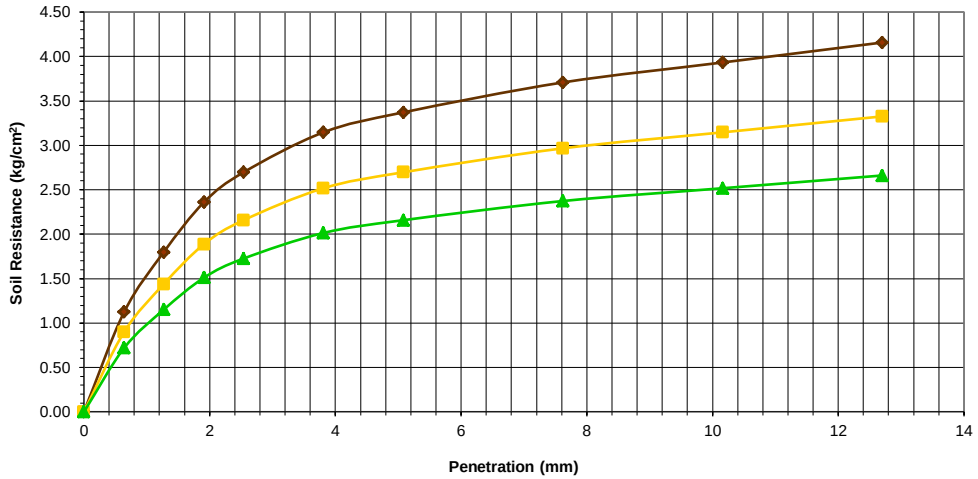
1705UIC1_RCBRT_TP-37_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

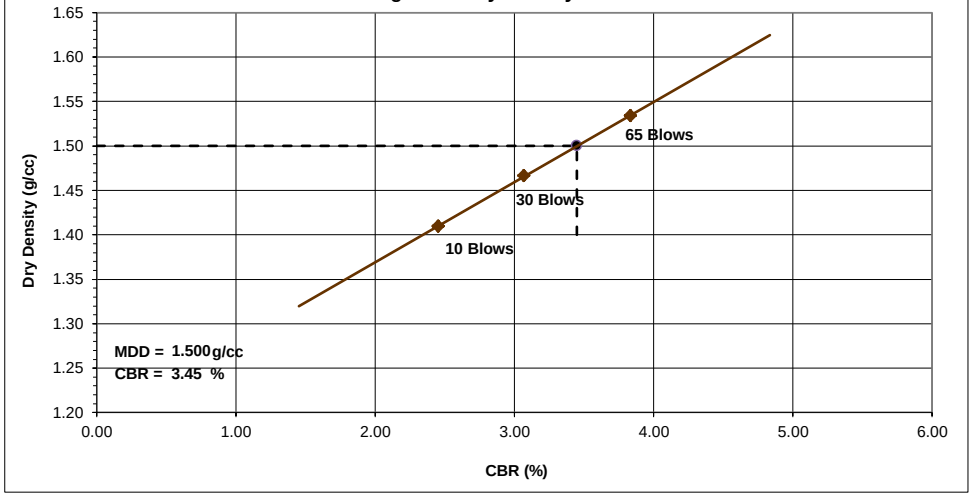
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-37
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1698520.36 N ; 448658.506 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/27/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.606	2.05
30	1.670	2.57
65	1.748	3.21

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.500	3.45
95	1.425	2.62

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-37_0

A.M. GEOCONSULT AND ASSOCIATES, INC.

MOISTURE DENSITY RELATION TEST REPORT

AASHTO T99-10/AASHTO T180-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD		
Date of Sampling:	05/27/17	**TP/BS Number:**	TP-38
Sampling Procedure:	AASHTO R13-03 (2007)	**Sample ID:**	SS1
Coordinates:	1699020.36 N ; 448658.477 E	**Layer Depth (m):**	0.00-1.50
Station:	-	**Date of Testing:**	06/07/17

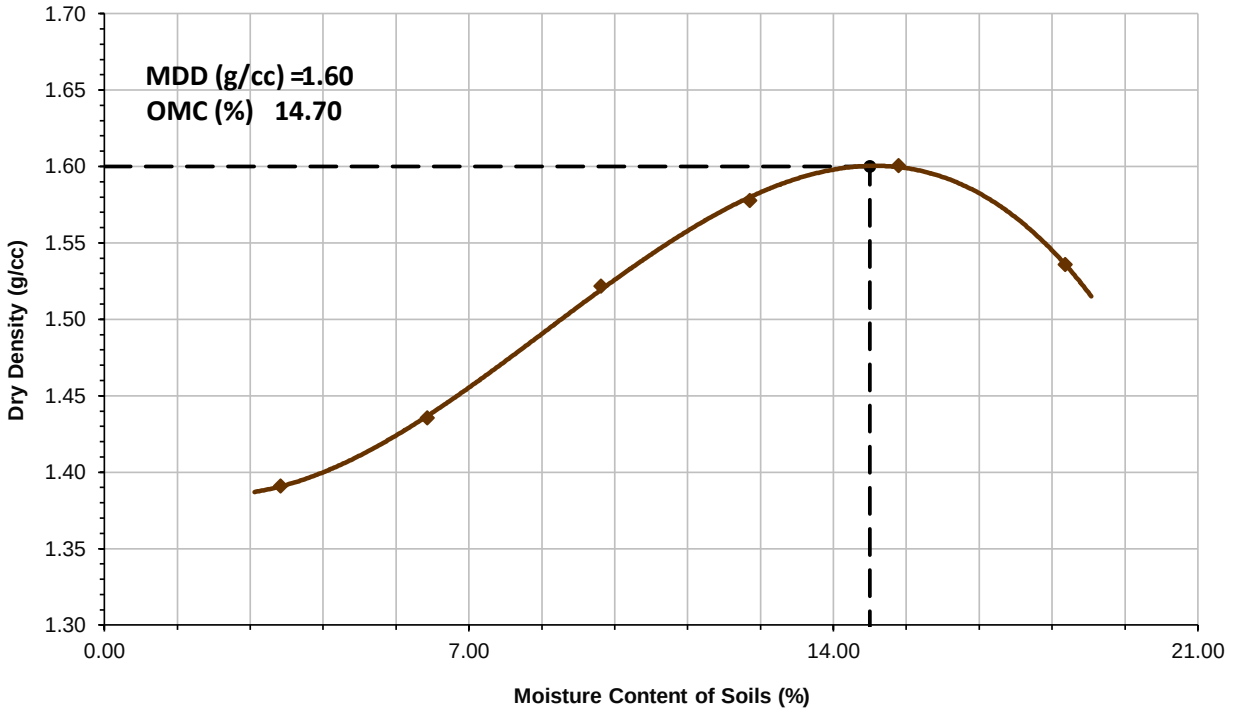
MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

Trial Number	**1**		**2**		**3**		**4**		**5**		**6**	
Can Number	**10-310**	**10-170**	**10-101**	**10-251**	**OO7**	**0-149**	**10-221**	**IO-63**	**10-114**	**0-353**	**2E**	**10-389**
Wet Soil + Can (g)	153.98	160.62	188.58	170.18	177.88	178.13	162.93	160.92	156.08	173.02	180.56	178.33
Dry Soil + Can (g)	149.62	156.02	178.54	161.60	164.66	164.34	146.94	145.34	138.08	152.74	155.26	153.96
Mass of Can (g)	20.09	20.46	19.88	20.20	22.63	23.03	20.17	17.39	19.94	19.87	20.40	19.68
Moisture Loss (g)	4.36	4.60	10.04	8.58	13.22	13.79	15.99	15.58	18.00	20.28	25.30	24.37
Mass of Dry Soil (g)	129.53	135.56	158.66	141.40	142.03	141.31	126.77	127.95	118.14	132.87	134.86	134.28
Moisture Content (%)	3.37	3.39	6.33	6.07	9.31	9.76	12.61	12.18	15.24	15.26	18.76	18.15
Average Moisture (%)	**3.38**		**6.20**		**9.53**		**12.40**		**15.25**		**18.45**	

DENSITY DETERMINATION

Trial Number	**1**	**2**	**3**	**4**	**5**	**6**
Mold Number	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**	**NMDR-4**
Wet Soil + Mold (g)	4,470.00	4,555.00	4,695.00	4,800.00	4,870.00	4,845.00
Mass of Mold (g)	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00	3,055.00
Mass of Wet Soil (g)	1,415.00	1,500.00	1,640.00	1,745.00	1,815.00	1,790.00
Volume of Mold (cc)	984.00	984.00	984.00	984.00	984.00	984.00
Wet Density (g/cc)	**1.44**	**1.52**	**1.67**	**1.77**	**1.84**	**1.82**
Dry Density (g/cc)	**1.39**	**1.44**	**1.52**	**1.58**	**1.60**	**1.54**

Figure 1. Compaction Curve



Test Method:

METHOD C

Mass of Hammer:

4.54 KILOGRAMS

Maximum Dry Density (g/cc):	**1.60**
Opt. Moisture Content (%):	**14.70**

Performed by: DANILO DELAN
Laboratory Technician

Approved by: REMEDIOS O. SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RMDRT_TP-38_0

CALIFORNIA BEARING RATIO TEST REPORT

AASHTO T193-10

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**TP/BS Number:**	TP-38
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Sample ID:**	SS1
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Layer Depth (m):**	0.00-1.50
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Coordinates:**	1699020.36 N ; 448658.477 E
Consultant:	-	**Contact Number:**	-	**Station:**	-
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/27/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

MOISTURE CONTENT OF SOILS DETERMINATION - AASHTO T265-93 (2008)

	10 Blows		30 Blows		65 Blows	
	Before Compaction	After Compaction	Before Compaction	After Compaction	Before Compaction	After Compaction
Can Number	**F**	**E**	**1O-75**	**0-34**	**0-413**	**10-377**
Wet Soil + Can (g)	135.77	160.50	167.65	173.91	140.20	158.71
Dry Soil + Can (g)	120.81	142.64	148.20	154.28	124.55	141.23
Mass of Can (g)	20.54	18.90	19.01	18.03	19.94	20.11
Moisture Loss (g)	14.96	17.86	19.45	19.63	15.65	17.48
Mass of Dry Soil (g)	100.28	123.74	129.19	136.25	104.61	121.12
Moisture Content (%)	14.92	14.43	15.06	14.41	14.96	14.43
Average Moisture (%)	**14.67**		**14.73**		**14.70**	

DENSITY DETERMINATION

	10 Blows	30 Blows	65 Blows
Mold Number	**CBR-68**	**CBR-66**	**CBR-83**
Wet Soil + Mold (g)	11470.00	9960.00	11710.00
Mass of Mold (g)	7700.00	5940.00	7545.00
Mass of Wet Soil (g)	3770.00	4020.00	4165.00
Volume of Mold (cc)	2193.00	2239.00	2228.00
Wet Density (g/cc)	**1.72**	**1.80**	**1.87**
Dry Density (g/cc)	**1.50**	**1.56**	**1.63**

SWELL DETERMINATION

	10 Blows	30 Blows	65 Blows
Reading Before Soaking ($x10^{-1}$ mm)	3.94	1.03	2.92
Reading After Soaking ($x10^{-1}$ mm)	5.02	1.73	2.98
Swell (%)	**0.93**	**0.60**	**0.05**

LOAD-PENETRATION DETERMINATION

Penetration (mm)	Load Reading (kgs.) Blows			Soil Resistance (kg/cm^2) Blows			CBR (%) Blows		
	10	30	65	10	30	65	10	30	65
0.64	13.95	17.44	21.80	0.72	0.90	1.12			
1.27	23.72	29.65	37.06	1.22	1.53	1.91			
1.91	30.69	38.37	47.96	1.58	1.98	2.47			
2.54	36.28	45.34	56.68	1.87	2.34	2.92	**2.66**	**3.32**	**4.15**
3.81	42.55	53.19	66.49	2.19	2.74	3.43			
5.08	46.04	57.55	71.94	2.37	2.97	3.71	**2.26**	**2.83**	**3.53**
7.62	49.53	61.91	77.39	2.55	3.19	3.99			
10.16	51.62	64.53	80.66	2.66	3.33	4.16			
12.70	53.02	66.27	82.84	2.73	3.42	4.27			

LRC (Kg/div):	2.18
Area of Piston (cm^2):	19.40

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

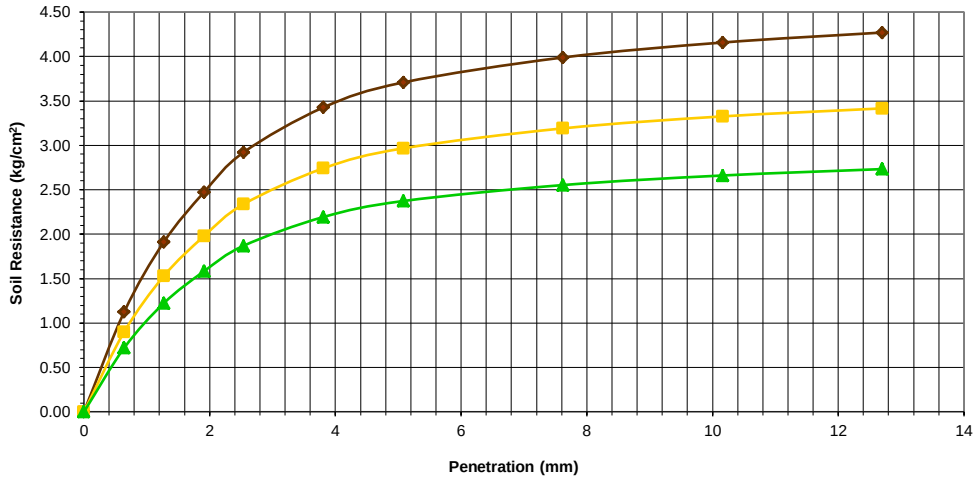
1705UIC1_RCBRT_TP-38_0

CALIFORNIA BEARING RATIO TEST REPORT (CONTINUATION)

AASHTO T193-10

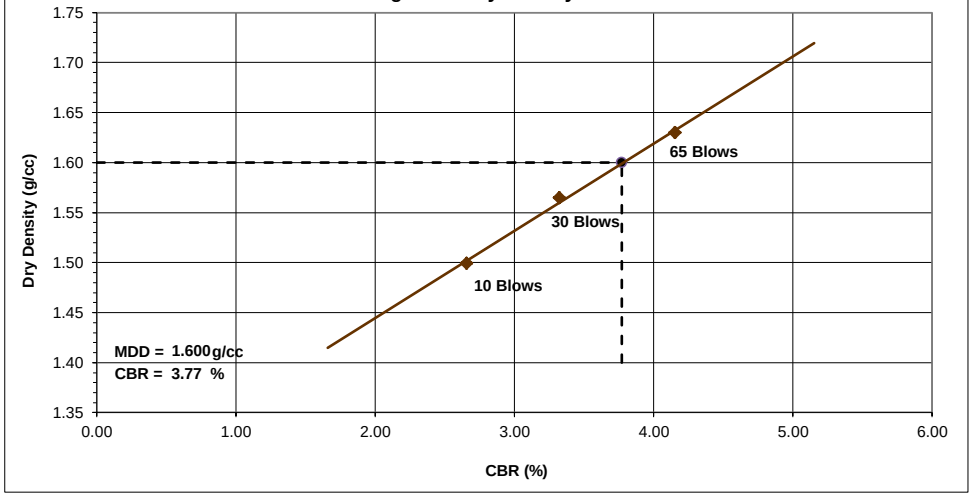
Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS			**Test Pit Number:**	TP-38
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)			**Layer Depth (m) :**	0.00-1.50
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1	**Coordinates:**	1699020.36 N ; 448658.477 E
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY			**Station:**	-
Consultant:	-	**Contact Number:**	-		
Sampling Location:	CGC TO AIRPORT ACCESS ROAD			**Date of Sampling:**	05/27/17
Sampling Procedure:	AASHTO R13-03 (2007)			**Date of Testing:**	06/13/17

Figure 1. Soil Resistance vs. Penetration



BLOWS	WET DENSITY (g/cc)	CBR (%)
10	1.719	2.26
30	1.795	2.83
65	1.869	3.53

Figure 2. Dry Density vs. CBR



% MDD	DRY DENSITY (g/cc)	CBR (%)
100	1.600	3.77
95	1.520	2.87

Performed by: DANILO DELAN
Senior Laboratory Technician

Approved by: REMEDIOS SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

1705UIC1_RCBRT_TP-38_0

APPENDIX E: PHOTOGRAPHS

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 1
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 7/1/17
STATION: -
COORDINATES: 1683735.821 N ;452089.657 E
SITE TOPOGRAPHY: FLAT

Figure 1.1 Panoramic View

Figure 1.2 Test Pit 1

TEST PIT 2
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 7/1/17
STATION: -
COORDINATES: 1684423.994 N ;451364.1 E
SITE TOPOGRAPHY: FLAT

Figure 2.1 Panoramic View

Figure 2.2 Test Pit 2

Photographed by:	RANEL FLORES *Field Supervisor*	
Approved by:	REMEDIOS O SOLDAO *Head of Engineering Department*	**DPWH-BRS ACCREDITED TESTING LABORATORY**

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 3
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 7/1/17
STATION: -
COORDINATES: 1684826.646 N ;451077.861 E
SITE TOPOGRAPHY: FLAT

Figure 3.1 Panoramic View

Figure 3.2 Test Pit 3

TEST PIT 4
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 7/1/2017
STATION: -
COORDINATES: 1685322.38 N ;451028.032 E
SITE TOPOGRAPHY: FLAT

Figure 4.1 Panoramic View

Figure 4.2 Test Pit 4

Photographed by:	RANEL FLORES *Field Supervisor*	
Approved by:	REMEDIOS O SOLDAO *Head of Engineering Department*	**DPWH-BRS ACCREDITED TESTING LABORATORY**

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 5
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 7/1/17
STATION: -
COORDINATES: 1685800.266 N ;450962.727 E
SITE TOPOGRAPHY: FLAT

Figure 5.1 Panoramic View

Figure 5.2 Test Pit 5

TEST PIT 6
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 7/1/2017
STATION: -
COORDINATES: 1686231.699 N ;450713.893 E
SITE TOPOGRAPHY: FLAT

Figure 6.1 Panoramic View

Figure 6.2 Test Pit 6

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 7
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 7/1/17
STATION: -
COORDINATES: 1686719.907 N ;450661.102 E
SITE TOPOGRAPHY: FLAT

Figure 7.1 Panoramic View

Figure 7.2 Test Pit 7

TEST PIT 8
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: -7/1/17
STATION: -
COORDINATES: 1687148.043 N ;450491.548 E
SITE TOPOGRAPHY: FLAT

Figure 8.1 Panoramic View

Figure 8.2 Test Pit 8

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 9
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 7/1/17
STATION: -
COORDINATES: 1687275.494 N ;450008.067 E
SITE TOPOGRAPHY: FLAT

Figure 9.1 Panoramic View

Figure 9.2 Test Pit 9

TEST PIT 10
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 7/1/17
STATION: -
COORDINATES: 1687369.042 N ;449529.092 E
SITE TOPOGRAPHY: FLAT

Figure 10.1 Panoramic View

Figure 10.2 Test Pit 10

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 11
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 7/1/17
STATION: -
COORDINATES: 1687658.311 N ;449121.267 E
SITE TOPOGRAPHY: FLAT

Figure 11.1 Panoramic View

Figure 11.2 Test Pit 11

TEST PIT 12
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/29/17
STATION: -
COORDINATES: 1688343.811 N ; 448069.601 E
SITE TOPOGRAPHY: FLAT

Figure 12.1 Panoramic View

Figure 12.2 Test Pit 12

Photographed by: RANEL FLORES
Field Supervisor

DPWH-BRS ACCREDITED TESTING LABORATORY

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 13
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/29/17
STATION: -
COORDINATES: 1688819.925 N ; 447961.529 E
SITE TOPOGRAPHY: FLAT

Figure 13.1 Panoramic View

Figure 13.2 Test Pit 13

TEST PIT 14
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: /29/17
STATION: -
COORDINATES: 1688951.764 N ; 447494.001 E
SITE TOPOGRAPHY: FLAT

Figure 14.1 Panoramic View

Figure 14.2 Test Pit 14

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 15
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: -5/29/17
STATION: -
COORDINATES: 1689194.206 N ; 447059.296 E
SITE TOPOGRAPHY: FLAT

Figure 15.1 Panoramic View

Figure 15.2 Test Pit 15

TEST PIT 16
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: -5/29/17
STATION: -
COORDINATES: 1689507.641 N ; 446669.789 E
SITE TOPOGRAPHY: FLAT

Figure 16.1 Panoramic View

Figure 16.2 Test Pit 16

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 17
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/28/17
STATION: -
COORDINATES: 1689822.811 N ; 446281.63 E
SITE TOPOGRAPHY: FLAT

Figure 17.1 Panoramic View

Figure 17.2 Test Pit 17

TEST PIT 18
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/28/17
STATION: -
COORDINATES: 1690153.898 N ; 445907.959 E
SITE TOPOGRAPHY: FLAT

Figure 18.1 Panoramic View

Figure 18.2 Test Pit 18

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 19
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/28/17
STATION: -
COORDINATES: 1690577.494 N ; 445646.693 E
SITE TOPOGRAPHY: FLAT

Figure 19.1 Panoramic View

Figure 19.2 Test Pit 19

TEST PIT 20
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/28/17
STATION: -
COORDINATES: 1691063.259 N ; 445538.405 E
SITE TOPOGRAPHY: FLAT

Figure 20.1 Panoramic View

Figure 20.2 Test Pit 20

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 21
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/28/17
STATION: -
COORDINATES: 1691557.717 N ; 445595.018 E
SITE TOPOGRAPHY: FLAT

Figure 21.1 Panoramic View

Figure 21.2 Test Pit 21

TEST PIT 22
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/28/17
STATION: -
COORDINATES: 1692023.284 N ; 445776.023 E
SITE TOPOGRAPHY: FLAT

Figure 22.1 Panoramic View

Figure 22.2 Test Pit 22

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 23
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/26/17
STATION: -
COORDINATES: 1692458.562 N ; 446021.861 E
SITE TOPOGRAPHY: FLAT

Figure 23.1 Panoramic View

Figure 23.2 Test Pit 23

TEST PIT 24
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/26/17
STATION: -
COORDINATES: 1692861.171 N ; 446318.176 E
SITE TOPOGRAPHY: FLAT

Figure 24.1 Panoramic View

Figure 24.2 Test Pit 24

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 25
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/26/17
STATION: -
COORDINATES: 1693264.689 N ; 446612.642 E
SITE TOPOGRAPHY: FLAT

Figure 25.1 Panoramic View

Figure 25.2 Test Pit 25

TEST PIT 26
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/26/17
STATION: -
COORDINATES: 1693663.896 N ; 446912.708 E
SITE TOPOGRAPHY: FLAT

Figure 26.1 Panoramic View

Figure 26.2 Test Pit 26

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 27
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/26/17
STATION: -
COORDINATES: 1694088.819 N ; 447173.253 E
SITE TOPOGRAPHY: FLAT

Figure 27.1 Panoramic View

Figure 27.2 Test Pit 27

TEST PIT 28
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/26/17
STATION: -
COORDINATES: 1694447.817 N ; 447519.913 E
SITE TOPOGRAPHY: FLAT

Figure 28.1 Panoramic View

Figure 28.2 Test Pit 28

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 29
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/25/17
STATION: -
COORDINATES: 1694797.808 N ; 447876.322 E
SITE TOPOGRAPHY: FLAT

Figure 29.1 Panoramic View

Figure 29.2 Test Pit 29

TEST PIT 30
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/25/17
STATION: -
COORDINATES: 1695171.276 N ; 448208.77 E
SITE TOPOGRAPHY: FLAT

Figure 30.1 Panoramic View

Figure 30.2 Test Pit 30

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 31
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/25/17
STATION: -
COORDINATES: 1695546.177 N ; 448539.511 E
SITE TOPOGRAPHY: FLAT

Figure 31.1 Panoramic View

Figure 31.2 Test Pit 31

TEST PIT 32
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/26/17
STATION: -
COORDINATES: 1696020.361 N ; 448658.651 E
SITE TOPOGRAPHY: FLAT

Figure 32.1 Panoramic View

Figure 32.2 Test Pit 32

Photographed by:	RANEL FLORES *Field Supervisor*	
Approved by:	REMEDIOS O SOLDAO *Head of Engineering Department*	**DPWH-BRS ACCREDITED TESTING LABORATORY**

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 33
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/27/17
STATION: -
COORDINATES: 1696512.278 N ; 448658.623 E
SITE TOPOGRAPHY: FLAT

Figure 33.1 Panoramic View

Figure 33.2 Test Pit 33

TEST PIT 34
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/27/17
STATION: -
COORDINATES: 1697020.361 N ; 448658.593 E
SITE TOPOGRAPHY: FLAT

Figure 34.1 Panoramic View

Figure 34.2 Test Pit 34

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 35
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/27/17
STATION: -
COORDINATES: 1697520.36 N ; 448658.564 E
SITE TOPOGRAPHY: FLAT

Figure 35.1 Panoramic View

Figure 35.2 Test Pit 35

TEST PIT 36
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/27/17
STATION: -
COORDINATES: 1698020.36 N ; 448658.535 E
SITE TOPOGRAPHY: FLAT

Figure 36.1 Panoramic View

Figure 36.2 Test Pit 236

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY

PHOTOGRAPHS

Project Name:	GEOTECHNICAL INVESTIGATION WORK FOR DETAILED ENGINEERING DESIGN OF THE PROPOSED ACCESS ROADS		
Project Location:	CGC TO AIRPORT ACCESS ROAD (ROAD 1)		
Client:	URBAN INTEGRATED CONSULTANTS, INC	**Project Reference #:**	1705UIC1
Client's Address:	8 LANDS, VASRA, DILIMAN, QUEZON CITY		
Consultant:	-	**Contact Number:**	-

TEST PIT 37
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/27/17
STATION: -
COORDINATES: 1698520.36 N ; 448658.506 E
SITE TOPOGRAPHY: FLAT

Figure 37.1 Panoramic View

Figure 37.2 Test Pit 37

TEST PIT 38
SAMPLING LOCATION: CGC TO AIRPORT ACCESS ROAD
DATE OF SAMPLING: 5/27/17
STATION: -
COORDINATES: 1699020.36 N ; 448658.477 E
SITE TOPOGRAPHY: FLAT

Figure 38.1 Panoramic View

Figure 38.2 Test Pit 38

Photographed by: RANEL FLORES
Field Supervisor

Approved by: REMEDIOS O SOLDAO
Head of Engineering Department

DPWH-BRS ACCREDITED TESTING LABORATORY