

OUR JOB No.: GSS/12654A/22



SOIL INVESTIGATION
FOR
DESIGN & BUILD FOR PROPOSED
DRAIN AND EARTHWORKS
AT
ST2 AND ST3 SUNGEI TENGAH ROAD
FOR
M/S. YONGSHENG E&C PTE LTD



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1.0 INTRODUCTION

This report presents the results of the subsurface exploration for Design & Build for Proposed Drain and Earthworks at ST2 and ST3 Sungei Tengah Road for M/s. Yongsheng E&C Pte Ltd.

The work was carried out according to the instructions given by client.

The soil investigation was carried out in accordance with the following Standard Codes of Practice.

a) Borehole Drilling, Soil Sampling and Soil Classification

- BS EN ISO 14688-1:2018 (Soil Identification and Description)
- BS EN ISO 14688-2:2018 (Soil Classification Principles)
- BS EN ISO 22475-1:2021 (Technical principles for the sampling of soil, rock and groundwater)
- SS EN 1997-2:2010 (2015) (Ground Investigation and Testing)

b) In-situ Field Testing

- BS EN ISO 22476-3:2005 + A1:2011 (Field Testing-Standard Penetration Test)
- SS EN 1997-2:2010 (2015) (Ground Investigation and Testing)

c) Laboratory Testing

- BS 1377:1990 (Methods for Test for Soils for Civil Engineering Purposes)

2.0 SCOPE

The purposes of this site investigation were:

- a. To explore the subsurface condition of the proposed development area by drilling boreholes and to provide general data relating to the project.
- b. To carry out Field Standard Penetration Test (SPT) to determine the natural bearing resistance of the subsoil for the purpose of design.
- c. To obtain disturbed and undisturbed soil samples for carrying out the laboratory tests to determine the natural properties and relevant soil parameters of the subsoil pertaining to the site for the purpose of design.

3.0 FIELD EXPLORATION

Field exploration programme was conducted during the period from 3rd December 2022 to 13th January 2023. The soil investigation was supervised by personnel from our office who were responsible for maintaining Log of Boring and obtaining undisturbed samples of the subsurface soils.

A total of thirty-three (33) borings were drilled at locations indicated on **Plot Plan - Appendix A**.

The boring depths ranged from 13.00m to 39.21m below the ground surface. The **logs of borings** are presented in **Appendix B**.

4.0 DESCRIPTION OF FIELD EXPLORATION

4.1 DRILLING

The boreholes in the size of 100mm diameter were advanced by multi-speed rotary drilling machines “YBM-2WS” and “YBM-2WSII”. The boreholes were advanced by the rotation of the drill bit attached to the end of the hollow drill rod with simultaneous application of pressure. Cuttings were removed from the base of the borehole by the circulating water flush through the hollow drill rods and bit and were collected in the sump adjacent to the borehole at ground level. Water was pumped from a small sump and the soil-laden water emerging from the annular space between the drill rod and the wall of the borehole (or borehole casing, if used) was discharged into the same sump at ground level.

Casing was required in soft or cohesionless soils, but was often omitted in stiff cohesive soils.

Changes in the character of the soils were determined partly by the feel of the drill or the resistance to penetration and rotation of the bit and partly by examination of the spoils in the water as it emerges from the casing; but definite identification of the soil can only be made when representative samples were taken from the bottom of the borehole.

4.2 STANDARD PENETRATION TEST

The Standard Penetration Test utilized a 50mm outside diameter x 600mm long thick-walled split spoon sampler driven into undisturbed soil under the impact of a sliding hammer weighing 63.5kg having a free fall of 760mm. The penetration resistance, ‘N’ value, was recorded as the number of hammer blows required to achieve penetration of 300mm after an initial penetration of 150mm (to allow for any disturbed materials at the bottom of the borehole). After the completion of the test, the sampler tube was removed and disassembled to provide a “disturbed” but representative sample.

The Standard Penetration Tests were carried out at every change of stratum and at the bottom of every borehole. The 'N' values are indicated in the Logs of Boring.

The Standard Penetration Tests were conducted in accordance with BS EN ISO 22476-3:2005 + A1:2011.

The SPT Hammer Calibration Certificates are presented in **Appendix E**.

4.3 UNDISTURBED SAMPLES

Undisturbed soil samples were taken from borehole as directed by the Engineer according to the site condition. Generally, samples were taken at about every 1.5m interval in the soil strata.

A 3-in outside diameter thin-wall or drive sampler was forced by the drilling machine with the hydraulic feed to exert a force without uplifting of the drilling machine. After the sampler was removed from the borehole, the length of samples recovered was measured, noted and the recovery ratio was computed. When sampling below the water table or where water had been used for drilling, the water level was maintained at the top of the casing until the sampler was removed.

A maximum of 2-in. of undisturbed material was removed from the top and the bottom of the tube to take up a jar sample for both the top and the bottom. Subsequent to the preparation of these samples, both ends of the sample were coated with a non-shrinking wax to ensure air-tight seal. The void at the top and bottom of the tube was then filled and fitted with vented push-on or screw-on caps.

Disturbed samples were taken from continuous sampling and split barrel sample in conjunction with penetration resistance test for purpose of laboratory soil classification.

4.4 WATER LEVEL MEASUREMENT

The water level measurements in each borehole were taken during drilling in operation at the following times (the detail times are mentioned in borelogs).

- a. Before work commenced in the morning;
- b. After work had finished in the evening, but before water was added to the borehole to stabilize it.

The levels of the bottom of the borehole and the bottom of the casing (if any) were measured and recorded at the same time at each water level reading. Final water levels are included in the Logs of Boring.

5.0 LABORATORY TESTING

5.1 GENERAL

Both disturbed and undisturbed samples were obtained at various depths and at every change of soil strata for the purposes of identification, classification and testing to determine the shear strength and other parameters of the subsurface soils. The type of tests and depths were assigned by the Engineer.

These tests consisted of determinations of moisture content, bulk density and dry density, particle density, particle size distribution (sieve and hydrometer), atterberg limits test and unconsolidated undrained triaxial compression test (UU).

Laboratory tests were carried out in accordance with the British Standard Methods of Test for Soils for Civil Engineering Purposes (BS1377 : 1990).

The results of the Laboratory tests were summarized in the **Summary of Laboratory Test Results** and are presented in **Appendix D**.

5.2 MOISTURE CONTENT, BULK DENSITY AND DRY DENSITY

Moisture content and bulk density determinations were performed on numerous samples in order to provide an identification of the relevant strength of the samples and for correlation of the sample type.

5.3 PARTICLE DENSITY

Particle density (given in Mg/m^3) is numerically equal to the specific gravity.

Small pyknometer method was used to determine the specific gravity (Particle density).

5.4 PARTICLE SIZE DISTRIBUTION (SIEVE AND HYDROMETER)

Grain size distribution on selected samples was determined for classification. The percentage passing through the specified sieves were plotted as grading curves. Hydrometer analysis was carried out to determine the finer particles to distinguish between silt and clay.

5.5 ATTERBERG LIMITS TEST

The moisture content (in percent) at which the cohesive soil passes from a liquid state to a plastic state is called the liquid limit of the soil.

Similarly, the moisture content (in percent) at which the soil changes from a plastic to a semisolid state is referred to as the plastic limit. The determination of the moisture content by mechanical method, to determine these limits is referred to as the Atterberg Limits Tests.

The liquid limit was determined by the Cone Penetrometer Method. These liquid and plastic limits were determined from material retained on a 425 micron test sieve.

5.6 TRIAXIAL COMPRESSION TEST

Unconsolidated Undrained Triaxial Compression Test

Triaxial compression test was conducted to evaluate the shear strength of soil samples (38mm diameter x 76mm length). This test was performed under unconsolidated undrained (U-U) condition, at a loading rate of 1.52mm per minute.

6.0 SUBSURFACE SOIL CONDITION

The subsoil condition of the site at the location of the boreholes is, in general, filled soil (1.00m to 6.50m thick) underlain by residual, completely weathered and highly weathered soil layers of the CHOA CHU KANG GRANODIORITE-TONALITE PLUTON, existing with higher soil strengths.

The subsoil condition of the site at the location of the boreholes is, in general, summarized in Table 1A, 1B, 1C and 1D (***please refer to page nos. 11 to 14 of this report***).

The boreholes were terminated after achieving 1 to 3 nos. consecutive SPTs with N value greater than 100 at the following depths:

- **23.70m at BH2** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 18.00m depth and last SPT 100 blows achieved at 23.70m depth with zero penetration).
- **27.11m at BH3** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 21.00m depth and last SPT 100 blows achieved at 27.00m depth).
- **27.28m at BH4** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 21.00m depth and last SPT 100 blows achieved at 27.00m depth).
- **28.40m at BH5** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 24.00m depth and last SPT 100 blows achieved at 28.00m depth).
- **19.60m at BH6** after 2 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 18.00m depth and last SPT 100 blows achieved at 19.60m depth with zero penetration).
- **23.60m at BH7** after 2 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 21.00m depth and last SPT 100 blows achieved at 23.00m depth).

- **22.70m at BH8** after 2 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 21.00m depth and last SPT 100 blows achieved at 22.70m depth with zero penetration).
- **19.20m at BH9** after 2 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 18.00m depth and last SPT 100 blows achieved at 19.20m depth with zero penetration).
- **20.35m at BH10** after 2 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 19.50m depth and last SPT 100 blows achieved at 20.35m depth with zero penetration).
- **20.80m at BH11** after 2 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 18.00m depth and last SPT 100 blows achieved at 20.80m depth with zero penetration).
- **30.18m at BH12** after 1 no. SPT with $N > 100$, (SPT 100 blows achieved at 30.00m depth).
- **20.20m at BH13** after 2 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 18.00m depth and last SPT 100 blows achieved at 20.20m depth with zero penetration).
- **39.21m at BH14** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 33.00m depth and last SPT 100 blows achieved at 39.00m depth).
- **24.00m at BH15** after 2 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 21.00m depth and last SPT 100 blows achieved at 24.00m depth with zero penetration).
- **21.60m at BH16** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 18.00m depth and last SPT 100 blows achieved at 21.60m depth with zero penetration).
- **21.13m at BH17** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 15.00m depth and last SPT 100 blows achieved at 21.00m depth).

- **16.40m at BH18** after 2 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 15.00m depth and last SPT 100 blows achieved at 16.40m with zero penetration).
- **13.00m at BH19** after 2 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 12.00m depth and last SPT 100 blows achieved at 13.00m depth with zero penetration).
- **22.30m at BH20** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 18.00m depth and last SPT 100 blows achieved at 22.30m depth with zero penetration).
- **22.00m at BH21** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 18.00m depth and last SPT 100 blows achieved at 22.00m depth with zero penetration).
- **30.39m at BH22** after 1 no. SPT with $N > 100$, (SPT 100 blows achieved at 30.00m).
- **30.45m at BH23**
- **27.15m at BH24** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 21.00m depth and last SPT 100 blows achieved at 27.00m depth).
- **27.20m at BH25** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 21.00m depth and last SPT 100 blows achieved at 27.00m depth).
- **22.40m at BH26** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 18.00m depth and last SPT 100 blows achieved at 22.40m depth with zero penetration).
- **23.80m at BH27** after 2 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 21.00m depth and last SPT 100 blows achieved at 23.80m depth with zero penetration).

- **26.20m at BH28** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 21.00m depth and last SPT 100 blows achieved at 26.20m depth with zero penetration).
- **24.29m at BH29** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 18.00m depth and last SPT 100 blows achieved at 24.00m depth).
- **23.30m at BH30** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 18.00m depth and last SPT 100 blows achieved at 23.30m depth with zero penetration).
- **27.80m at BH31** after 2 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 27.00m depth and last SPT 100 blows achieved at 27.80m depth with zero penetration).
- **26.70m at BH32** after 2 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 26.00m depth and last SPT 100 blows achieved at 26.70m depth with zero penetration).
- **21.40m at BH33** after 3 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 18.00m depth and last SPT 100 blows achieved at 21.40m depth with zero penetration).
- **23.70m at BH34** after 2 nos. consecutive SPTs with $N > 100$, (first SPT 100 blows achieved at 22.50m depth and last SPT 100 blows achieved at 23.70m depth with zero penetration).

The subsoil conditions are also shown in the **Generalized Soil Profiles** presented in **Appendix C**.

**Table 1A - Summary of Subsoil Conditions from Boreholes
Sungei Tengah Road, Lorong Pasu - (BH2 to BH9)**

SOIL GROUP	BH2	BH3	BH4	BH5	BH6	BH7	BH8	BH9
FILL	<u>0.00m to 6.50m</u> Firm Gravelly Sandy SILT Firm Sandy SILT Firm to stiff Sandy SILT Very loose Clayey SAND Very soft Sandy CLAY Loose Sandy Silty GRAVEL	<u>0.00m to 5.00m</u> Stiff SILT Stiff Sandy SILT Soft Sandy SILT	<u>0.00m to 6.00m</u> Firm Sandy SILT Soft Sandy SILT Medium dense Gravelly SAND	<u>0.00m to 3.00m</u> Firm Gravelly Sandy SILT Loose Silty SAND Firm Sandy CLAY	<u>0.00m to 4.50m</u> Firm Sandy SILT Soft Sandy Silty CLAY	<u>0.00m to 4.50m</u> Firm Sandy SILT Firm Sandy CLAY	<u>0.00m to 2.10m</u> Firm Sandy SILT Firm Gravelly Silty CLAY	<u>0.00m to 3.00m</u> Firm Sandy SILT Very soft Sandy SILT
Residual Soil (CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	<u>6.50m to 12.00m</u> Stiff Sandy SILT Very stiff Gravelly Sandy SILT	<u>Not Encountered</u>	<u>6.00m to 15.00m</u> Stiff to very stiff Sandy SILT Stiff Sandy SILT	<u>3.00m to 21.00m</u> Firm to stiff Silty CLAY Stiff Sandy SILT Firm Sandy SILT Very stiff Gravelly Sandy SILT	<u>4.50m to 15.00m</u> Firm Sandy SILT Stiff Sandy SILT	<u>4.50m to 21.00m</u> Firm Sandy SILT Stiff Sandy SILT Very stiff Sandy SILT	<u>2.10m to 18.00m</u> Firm Sandy SILT Stiff Silty CLAY Stiff CLAY Stiff Sandy SILT	<u>3.00m to 12.00m</u> Stiff Sandy CLAY Firm Sandy SILT
Completely and Highly weathered (CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	<u>12.00m to 23.70m EOB</u> Dense Gravelly SAND Very dense Gravelly Silty SAND Very dense Silty SAND Very stiff Gravelly Sandy SILT	<u>5.00m to 27.11m EOB</u> Very dense Sandy GRAVEL Stiff Sandy SILT Very stiff SILT Medium dense Gravelly Clayey SAND Very dense Sandy Silty GRAVEL Very dense Gravelly Silty SAND	<u>15.00m to 27.28m EOB</u> Very stiff Gravelly SILT Very dense Sandy GRAVEL Very stiff SILT	<u>21.00m to 28.40m EOB</u> Very dense Sandy GRAVEL	<u>15.00m to 19.60m EOB</u> Very stiff Gravelly Sandy SILT Very stiff Gravelly Silty SAND	<u>21.00m to 23.60m EOB</u> Very dense Silty SAND	<u>18.00m to 22.70m EOB</u> Very stiff Gravelly SILT Very dense Gravelly SAND	<u>12.00m to 19.20m EOB</u> Stiff Gravelly Sandy SILT Very dense Gravelly Silty SAND Very dense Sandy Silty GRAVEL

**Table 1B - Summary of Subsoil Conditions from Boreholes
Sungei Tengah Road, Lorong Pasu - (BH10 to BH17)**

SOIL GROUP	BH10	BH11	BH12	BH13	BH14	BH15	BH16	BH17
FILL	<u>0.00m to 4.50m</u> Soft to firm Sandy SILT Soft Sandy CLAY Loose Sandy Clayey GRAVEL	<u>0.00m to 2.00m</u> Stiff Sandy SILT	<u>0.00m to 3.00m</u> Stiff Sandy SILT Firm Sandy CLAY	<u>0.00m to 2.10m</u> Firm Sandy Silty CLAY Stiff Silty CLAY	<u>0.00m to 3.00m</u> Firm Sandy SILT Firm Sandy Silty CLAY Firm Gravelly Sandy CLAY	<u>0.00m to 3.40m</u> Firm Sandy SILT Very stiff Sandy SILT Very stiff SILT Stiff Gravelly SILT	<u>0.00m to 6.00m</u> Firm Sandy CLAY Firm Sandy SILT Loose Silty SAND	<u>0.00m to 4.50m</u> Firm Gravelly Sandy SILT Very soft Sandy CLAY Stiff Sandy SILT
Residual Soil (CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	<u>4.50m to 18.00m</u> Firm SILT Soft SILT Very stiff Sandy SILT Stiff Sandy SILT	<u>2.00m to 18.00m</u> Stiff Sandy SILT Firm Sandy SILT	<u>3.00m to 27.00m</u> Firm Sandy CLAY Stiff Sandy SILT Very stiff Sandy SILT	<u>2.10m to 18.00m</u> Stiff Sandy SILT Stiff SILT Firm to stiff Sandy SILT Stiff Sandy SILT Very stiff Sandy SILT	<u>3.00m to 27.00m</u> Firm CLAY Stiff Sandy SILT Stiff SILT Very stiff Sandy SILT	<u>3.40m to 15.00m</u> Firm Sandy CLAY Stiff Sandy SILT	<u>6.00m to 15.00m</u> Stiff Sandy SILT Firm Sandy SILT	<u>4.50m to 12.00m</u> Stiff Sandy SILT Very stiff Sandy SILT
Completely and Highly weathered (CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	<u>18.00m to 20.35m EOB</u> Medium dense Gravelly Silty SAND Very dense Gravelly Silty SAND	<u>18.00m to 20.80m EOB</u> Very dense Gravelly Silty SAND	<u>27.00m to 30.18m EOB</u> Very stiff Sandy SILT Very dense Silty SAND	<u>18.00m to 20.20m EOB</u> Very dense Gravelly Silty SAND	<u>27.00m to 39.21m EOB</u> Very stiff Sandy SILT Very stiff SILT Very dense Sandy Silty GRAVEL Very stiff Gravelly Sandy SILT	<u>15.00m to 24.00m EOB</u> Very stiff Sandy SILT Very stiff Sandy GRAVEL	<u>15.00m to 21.60m EOB</u> Very stiff Sandy SILT Very dense Sandy GRAVEL	<u>12.00m to 21.13m EOB</u> Very dense Silty SAND Very dense Sandy GRAVEL

**Table 1C - Summary of Subsoil Conditions from Boreholes
Sungei Tengah Road, Lorong Pasu - (BH18 to BH26)**

SOIL GROUP	BH18	BH19	BH20	BH21	BH22	BH23	BH24	BH25	BH26
FILL	<u>0.00m to 3.50m</u> Firm Sandy SILT Soft Sandy SILT Medium dense Sandy GRAVEL	<u>0.00m to 1.00m</u> Firm Sandy CLAY	<u>0.00m to 3.00m</u> Firm Sandy CLAY Soft Sandy SILT Soft Gravelly Sandy CLAY	<u>0.00m to 1.00m</u> Firm Sandy SILT	<u>0.00m to 1.00m</u> Firm Sandy CLAY	<u>0.00m to 3.00m</u> Firm Sandy SILT Loose Clayey GRAVEL	<u>0.00m to 1.50m</u> Soft to firm Sandy Silty CLAY	<u>0.00m to 1.10m</u> Firm Sandy SILT	<u>0.00m to 3.60m</u> Soft to firm Sandy SILT Soft Sandy CLAY Soft Gravelly Sandy CLAY Firm Sandy Silty CLAY
Residual Soil (CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	<u>3.50m to 12.00m</u> Very stiff Gravelly SILT Firm to stiff Sandy SILT Stiff Sandy SILT	<u>1.00m to 9.00m</u> Soft Sandy SILT Firm Sandy SILT Stiff Sandy SILT	<u>3.00m to 15.00m</u> Firm Gravelly SILT Firm Sandy CLAY Stiff SILT Soft Sandy SILT Very stiff Sandy SILT	<u>1.00m to 18.00m</u> Firm Sandy SILT Stiff Sandy SILT Very stiff Gravelly Sandy SILT	<u>1.00m to 27.00m</u> Stiff Sandy CLAY Firm SILT Firm Sandy SILT Stiff SILT	<u>3.00m to 30.00m</u> Stiff Sandy SILT Firm Sandy SILT Medium dense Gravelly Silty SAND Dense Gravelly Silty SAND Very stiff Sandy SILT	<u>1.50m to 21.00m</u> Stiff Sandy SILT Firm Sandy SILT Firm SILT Very stiff Sandy SILT	<u>1.10m to 15.00m</u> Stiff Sandy CLAY Very stiff Sandy SILT	<u>3.60m to 15.00m</u> Stiff Gravelly Sandy SILT Stiff Sandy SILT Firm Sandy SILT
Completely and Highly weathered (CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	<u>12.00m to 16.40m EOB</u> Medium dense to dense Silty SAND Very dense Sandy GRAVEL	<u>9.00m to 13.00m EOB</u> Stiff Sandy SILT Very dense Silty SAND	<u>15.00m to 22.30m EOB</u> Very dense Silty SAND Very dense Gravelly SAND	<u>18.00m to 22.00m EOB</u> Very stiff Gravelly SILT	<u>27.00m to 30.39m EOB</u> Very stiff Gravelly Sandy SILT	<u>30.00m to 30.45m EOB</u> Dense Gravelly Silty SAND	<u>21.00m to 27.16m EOB</u> Very dense Gravelly Silty SAND	<u>15.00m to 27.20m EOB</u> Very dense Sandy Silty GRAVEL Very stiff Gravelly SILT Very dense Sandy GRAVEL	<u>15.00m to 22.40m EOB</u> Very dense Gravelly Silty SAND

**Table 1D - Summary of Subsoil Conditions from Boreholes
Sungei Tengah Road, Lorong Pasu - (BH27 to BH34)**

SOIL GROUP	BH27	BH28	BH29	BH30	BH31	BH32	BH33	BH34
FILL	<u>0.00m to 1.00m</u> Firm Sandy CLAY	<u>0.00m to 1.50m</u> Firm Gravelly Silty CLAY	<u>0.00m to 1.50m</u> Firm Sandy Silty CLAY Loose Silty Clayey SAND	<u>0.00m to 2.10m</u> Soft to firm Sandy Silty CLAY Firm Sandy CLAY	<u>0.00m to 3.00m</u> Firm Sandy SILT Firm Sandy Silty CLAY	<u>0.00m to 3.00m</u> Firm Sandy SILT Loose Sandy Silty GRAVEL Firm Clayey Sandy GRAVEL	<u>0.00m to 3.00m</u> Firm Sandy SILT Medium dense Sandy Silty GRAVEL	<u>0.00m to 4.50m</u> Soft to firm Sandy Gravelly Silty CLAY Soft Sandy Clayey SILT Firm Gravelly Sandy SILT
Residual Soil (CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	<u>1.00m to 18.00m</u> Stiff Sandy CLAY Stiff Sandy SILT Firm Sandy SILT Very stiff Sandy SILT	<u>1.50m to 18.00m</u> Firm Sandy SILT Stiff Sandy Silty CLAY Stiff Sandy SILT Very stiff SILT	<u>1.50m to 18.00m</u> Stiff Gravelly Sandy SILT Firm Sandy SILT Very stiff Sandy SILT Dense Sandy Clayey GRAVEL Very stiff Sandy SILT	<u>2.10m to 15.00m</u> Firm Sandy SILT Stiff Sandy CLAY Stiff SILT Stiff to very stiff Sandy SILT	<u>3.00m to 27.00m</u> Stiff Sandy CLAY Stiff Sandy SILT Very stiff Sandy SILT	<u>3.00m to 21.00m</u> Firm SILT Very stiff Sandy SILT Firm Sandy SILT Stiff SILT Very stiff SILT Stiff Sandy SILT	<u>3.00m to 12.00m</u> Firm Sandy SILT Stiff Sandy SILT Very stiff Sandy SILT	<u>4.50m to 22.50m</u> Stiff Sandy SILT
Completely and Highly Weathered (CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	<u>18.00m to 23.80m FOB</u> Very stiff Sandy SILT Very dense Gravelly Silty SAND	<u>18.00m to 26.20m FOB</u> Very stiff Gravelly Sandy SILT Very dense Sandy GRAVEL	<u>18.00m to 24.29m FOB</u> Very dense Gravelly Silty SAND Very dense Gravelly SAND	<u>15.00m to 23.30m FOB</u> Medium dense Gravelly Silty SAND Very stiff Gravelly Sandy SILT Very dense Gravelly Silty SAND	<u>27.00m to 27.80m FOB</u> Very dense Sandy GRAVEL	<u>21.00m to 26.70m FOB</u> Very stiff Sandy SILT Very dense Gravelly Silty SAND	<u>12.00m to 21.40m FOB</u> Very stiff Sandy SILT Very stiff Gravelly SILT Very dense Sandy GRAVEL	<u>22.50m to 23.70m FOB</u> Very dense Sandy GRAVEL

The following appendices are attached and complete this report:

- Appendix A - Plot Plan
- Appendix B - Log of Boring
- Appendix C - Generalized Soil Profile
- Appendix D - Summary of Laboratory Test Results
- Appendix E - Calibration Certificates

The final interpretation of the results of this investigation, selection of suitable foundation type and detailed design shall be the responsibility of the Engineer.

This report is prepared based on the results of the site investigation drilling (including in-situ and laboratory testing) carried out at the specified location(s) at the site. Where provided, the geological cross-sections between boreholes are representative only and Geospecs Pte Ltd cannot guarantee the extrapolation of subsoil conditions at locations away from the borehole(s) as subsoil conditions can vary both vertically and laterally. The recommendations (where provided) shall be used as a guide only.

If there is any discrepancy in the subsoil conditions (as encountered during construction), the matter should be referred back to Geospecs Pte Ltd for re-assessment in relation with the conclusions and recommendations of this report.

In any event, this report is prepared solely for and for the purpose of our Client and his Engineer and Geospecs Pte Ltd expressly accepts no responsibility or liability whatsoever and howsoever arising towards any other person and/or third party and such person and/or third party relies on the same at his own and sole risk. This report is not transferable to or to be used by other person and/or party without permission from Geospecs Pte Ltd.

Respectfully Submitted
GEOSPECS PTE LTD



APPENDIX A

PLOT PLAN



N41400
E16280

LEGEND

 - BOREHOLE LOCATIONS



N40990
E16280

N41400
E16730

N40990
E16730

NOTE:

1. HORIZONTAL DATUM BASED ON SVY-21 DATUM
2. INITIAL LEVEL BASED ON GOVT.MD VCP80347-6.318m.



Advance Survey Consultant Pte Ltd

40 Jalan Pemimpin, Tat Ann Building,
#02-07, Singapore 577185
Tel: 6350 2713 Fax: 6352 8792
Email: advancesurvey@singnet.com.sg
Website: www.advancesurvey.com.sg

GOH CHIN CHENG
F001
Registered Surveyor
Singapore
LSB Reg. No. 05

Project Title :

LORONG PASU

Drawing Title :

TOPOGRAPHICAL SURVEY PLAN

SCALE: 1: 850	DRAWN BY: WONG	SURVEYED BY: YEONG	DATE: 05.07.2022
Drawing No.:			REV.
FS_LORONG PASU/01/001/A1/2022			A
CADD File Name : TOPO.DWG		Sheet 1 of 3	A1

APPENDIX B

LOG OF BORING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 10/01/2023 DRILLING DATE COMPLETED: 13/01/2023 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 2 NORTHING: 41319.152 m EASTING: 16610.340 m REDUCED LEVEL: 112.245 m GWL:3.33m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock TCR (%)	Rock RQD (%)	Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80								C (kPa)	φ (°)	20	40	60	80						
		(1.00)	● x	DS 1	0.00	Firm brown and brownish grey slightly Gravelly Sandy SILT with clay. (FILL)								FILL	MG														
1	111.25	1.00	● x	DS 1	0.50	Firm brown and brownish grey Sandy SILT with organic matter. (FILL)								FILL	MS	0/46/29/25	80 (UU)	0											
2		(2.00)	● x	TW 1	1.50																								
3	109.25	3.00	● x	SPT 1	2.10																								
4	108.65	(0.60)	● x	TW 2	2.55	Firm brown and brownish grey fine Sandy CLAY. (FILL)								FILL	CS														
5	107.75	(0.90)	● x	SPT 2	3.00	Firm to stiff pinkish red, reddish orange and brownish yellow Sandy SILT. (FILL)								FILL	MS														
6	107.15	(0.60)	● x	TW 3	3.60	Very loose brown and brownish grey Clayey fine to coarse SAND. (FILL)								FILL	SC														
7	106.25	(0.90)	● x	SPT 3	4.05	Very soft brown and brownish grey Sandy CLAY. (FILL)								FILL	CS														
8	105.75	(0.50)	● x	U 1	5.10	Loose brown and dark brown Sandy Silty GRAVEL. (FILL)								FILL	GS														
9		(2.80)	● x	SPT 4	5.55	Stiff reddish brown and yellowish brown Sandy SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
10	102.95	9.30	● x	U 2	6.00																								
11		(2.70)	● x	SPT 5	6.50	Very stiff reddish orange and brownish yellow slightly Gravelly Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)										0/47/39/14	99 (UU)	0											
12	100.25	12.00	● x	SPT 6	6.95																								
13		(3.00)	● x	SPT 7	9.00	Dense reddish brown and brownish grey Gravelly fine to coarse SAND. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
14			● x	SPT 8	9.30																								
15	97.25	15.00	● x	SPT 7	9.75	Very dense bluish grey and light grey Gravelly Silty fine to coarse SAND. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
16		(3.00)	● x	SPT 8	12.00																								
17			● x	SPT 8	12.45																								
18	94.25	18.00	● x	SPT 8	15.00	Very dense light bluish grey Silty fine to coarse SAND. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
19		(3.00)	● x	SPT 8	15.45																								
20			● x	SPT 8	18.00																								
			● x	SPT 8	18.21																								

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST) - Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push - Mazier - Thick Wall Open Drive - Core Run - SPT Liner - Water	- Casagrande Piezometer - Water Standpipe - Consolidated Undrained Triaxial Test - Consolidated Drained Triaxial Test
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REMARKS:
 HSN219, ER68

 DATA QUALITY RATING

[illegible]

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 31/12/2022 DRILLING DATE COMPLETED: 04/01/2023 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 3 NORTHING: 41294.864 m EASTING: 16552.547 m REDUCED LEVEL: 113.877 m GWL:1.27m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
							● SPT N Value X Undrained Shear Strength (kPa)																						
1	112.38	1.50			DS 1	Stiff dark brownish yellow and brown SILT with some fine sand. (FILL)								FILL	M														
2	111.88	2.00			U 1	Stiff reddish brown, light yellowish grey and yellowish brown SILT. (FILL)	●				12/300			FILL	M														
3	110.88	3.00			SPT 1	Stiff brownish grey and dark brown fine and medium Sandy SILT with some gravel and organic matter. (FILL)	●							FILL	MS														
4		(2.00)			TW 1	Soft dark yellowish brown and brownish grey Sandy SILT with some peat. (FILL)	●				3/300			FILL	MS	0/57/28/15	27 (UU)	0											
5	108.88	5.00			TW 2																								
6	107.88	6.00			SPT 3	Very dense brownish yellow and reddish brown fine and medium Sandy GRAVEL with clay. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				57/300			G(V)	GS														
7		(3.50)			U 2	Stiff reddish brown, brownish yellow and yellowish grey slightly fine Sandy SILT with clay. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				14/300					0/18/53/29	75 (UU)	0											
8														G(V)	MS														
9	104.38	9.50			U 3		●				35/300																		
10		(5.50)			SPT 5	Very stiff light grey SILT with some fine sand and traces of gravel. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
11																													
12														G(V)	M														
13																													
14																													
15	98.88	15.00			SPT 7	Medium dense light greenish grey with mottled white slightly Gravelly very Clayey SAND. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				16/300			G(V)	SG														
16		(3.00)																											
17																													
18	95.88	18.00			SPT 8	Very dense light greenish grey and yellowish grey fine Sandy Silty GRAVEL. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				55/300			G(IV)	GS														
19		(3.00)																											
20																													



☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Undrained Triaxial Test *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test	REMARKS: HSN219, ER68 DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 31/12/2022 DRILLING DATE COMPLETED: 04/01/2023 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 3 NORTHING: 41294.864 m EASTING: 16552.547 m REDUCED LEVEL: 113.877 m GWL:1.27m dated																																
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL																																
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80																													
							X Undrained Shear Strength (kPa)																																													
21	92.88	21.00			21.00 SPT 9 21.23	Very dense greenish grey, grey and light yellow partially with speckled and mottled white Gravelly Silty SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/150			G(IV)	GS																																					
22																																																				
23																																																				
24		(6.00)			24.00 SPT 10 24.20						100/130				G(IV)	SG																																				
25																																																				
26																																																				
27	88.98 88.77	27.00 (0.11)			27.00 SPT 11 27.11	Very dense light bluish grey and yellowish grey Gravelly Silty fine and medium SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON) Hole Terminated at 27.11 m					100/70			G(IV)	SG																																					
28																																																				
29							<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">Ground Water Level (Measured from Ground Level)</th> </tr> <tr> <th>Date (dd/mm/yyyy)</th> <th>Time (hh:mm)</th> <th>Borehole Depth (m)</th> <th>Casing Depth (m)</th> <th>Water Level (m)</th> </tr> </thead> <tbody> <tr> <td>31/12/2022</td> <td>16:30</td> <td>9.95</td> <td>6.00</td> <td>1.10</td> </tr> <tr> <td>03/01/2023</td> <td>09:00</td> <td>18.45</td> <td>6.00</td> <td>1.30</td> </tr> <tr> <td>04/01/2023</td> <td>08:50</td> <td>27.11</td> <td>6.00</td> <td>1.40</td> </tr> </tbody> </table>										Ground Water Level (Measured from Ground Level)					Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)	31/12/2022	16:30	9.95	6.00	1.10	03/01/2023	09:00	18.45	6.00	1.30	04/01/2023	08:50	27.11	6.00	1.40											
Ground Water Level (Measured from Ground Level)																																																				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)																																																
31/12/2022	16:30	9.95	6.00	1.10																																																
03/01/2023	09:00	18.45	6.00	1.30																																																
04/01/2023	08:50	27.11	6.00	1.40																																																
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 06/01/2023 DRILLING DATE COMPLETED: 09/01/2023 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WSII BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 4 NORTHING: 41276.520 m EASTING: 16603.918 m REDUCED LEVEL: 113.994 m GWL:3.48m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
	113.49	(0.50) 0.50			DS 1 0.50	Firm brown and brownish grey Sandy SILT. (FILL)																							
1						Firm brownish grey and grey Sandy SILT with clay. (FILL)																							
2		(2.50)			1.50 TW 1 2.10 SPT 1 2.55						6/300																		
3	110.99	3.00			3.00 TW 2 3.60 SPT 2 4.05	Soft brown and yellowish brown Sandy SILT. (FILL)					1/300					0/39/37/24	27 (UU)	0											
4		(1.50)			4.50 U 1 5.10 SPT 3 5.55	Medium dense reddish brown and brown Gravelly SAND. (FILL)					11/300																		
5	109.49	4.50			6.00 U 2 6.50 SPT 4 6.95	Stiff to very stiff brownish yellow and reddish brown Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					16/300																		
6	107.99	6.00																											
7																													
8																													
9		(6.00)			9.00 U 3 9.50 SPT 5 9.95						19/300					0/50/30/20	104 (UU)	0											
10																													
11																													
12	101.99	12.00			12.00 SPT 6 12.45	Stiff bluish grey with speckled white Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					13/300																		
13																													
14		(3.00)																											
15	98.99	15.00			15.00 SPT 7 15.45	Very stiff bluish grey and grey Gravelly SILT. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					56/300																		
16																													
17		(3.00)																											
18	95.99	18.00			18.00 SPT 8 18.45	Very dense bluish grey and grey Sandy coarse GRAVEL. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					34/300																		
19																													
20		(3.00)																											

☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Undrained Triaxial Test *CU - Consolidated Drained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
HSN216, ER70

DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 06/01/2023 DRILLING DATE COMPLETED: 09/01/2023 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WSII BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 4 NORTHING: 41276.520 m EASTING: 16603.918 m REDUCED LEVEL: 113.994 m GWL:3.48m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							X Undrained Shear Strength (kPa)																						
							20 40 60 80																						
							20 40 60 80																						
21	92.99	21.00			21.00 SPT 9	Very stiff grey and bluish grey SILT. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/280			G(V)	GS														
22		(3.00)												G(V)	M														
23																													
24	89.99	24.00			24.00 SPT 10	Very dense bluish grey and dark grey Sandy coarse GRAVEL. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/100			G(IV)	GS														
25		(3.00)																											
26																													
27	86.99	27.00			27.00 SPT 11	Very stiff bluish grey and dark grey Gravelly SILT. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON) Hole Terminated at 27.28 m					100/205			G(IV)	MG														
28	86.71	(0.28)																											
29																													
30																													
31																													
32																													
33																													
34																													
35																													
36																													
37																													
38																													
39																													
40																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
06/01/2023	16:30	9.95	6.00	3.50
07/01/2023	09:10	18.45	6.00	3.55
09/01/2023	08:50	27.28	6.00	3.40

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test	REMARKS:
				HSN216, ER70
				DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 07/01/2023 DRILLING DATE COMPLETED: 10/01/2023 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WSII BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 5 NORTHING: 41274.576 m EASTING: 16653.190 m REDUCED LEVEL: 112.494 m GWL:2.37m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
							● SPT N Value																						
1		(1.50)	●	×	DS 1	Firm dark brownish yellow, reddish orange and olive grey Gravelly Sandy SILT. (FILL)								FILL	MG														
2	110.99	1.50	●	×	TW 1	Loose light greenish/bluish grey, yellowish brown and light reddish orange Silty SAND. (FILL)	●				4/300			FILL	SM	0/66/23/11	48 (UU)	0		▲	●	■							
3	110.39	(0.60) 2.10	●	×	SPT 1									FILL	CS														
4	109.49	(0.90) 3.00	●	×	TW 2	Firm dark brownish yellow fine Sandy CLAY. (FILL)								G(VI)	CS														
5	108.89	(0.60) 3.60	●	×	SPT 2	Firm to stiff light brownish yellow and light reddish orange Sandy Silty CLAY. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				8/300																		
6		(2.40)	●	×	TW 3	Stiff light brownish yellow, reddish pink and yellowish grey fine Sandy SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				9/300			G(VI)	MS														
7	106.49	6.00	●	×	SPT 3											0/36/33/31	66 (UU)	0		○	●	■							
8		(3.00)	●	×	TW 4	Firm brownish yellow and reddish orange Sandy SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				7/300			G(VI)	MS														
9	103.49	9.00	●	×	SPT 4																								
10		(3.00)	●	×	U 1	Stiff brownish yellow Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				13/300			G(VI)	MS														
11			●	×	SPT 5																								
12	100.49	12.00	●	×	SPT 6	Very stiff brownish yellow with mottled reddish brown partly Gravelly very Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				33/300																		
13			●	×																									
14			●	×																									
15		(6.00)	●	×	SPT 7									G(VI)	MG														
16			●	×																									
17			●	×																									
18	94.49	18.00	●	×	SPT 8	Stiff greenish grey with mottled yellowish white fine to medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				14/300			G(VI)	MS														
19		(3.00)	●	×																									
20			●	×																									

☒ - Sample	▲ - Permeability / Packer Test (PKT)	M - Mazier	PZS - Casagrande Piezometer
■ - Pressuremeter Test (PRM)	● - SPT N Value	U - Thick Wall Open Drive	WSP - Water Standpipe Consolidated Undrained Triaxial Test
▬ - Core Run	□ - Attempt TW/P/MZ/U	C - Core Run	*CU - Consolidated Drained Triaxial Test
⊕ - Field Vane Shear Test (FVST)	P - Piston Sample	SPTLS - SPT Liner	*CD - Consolidated Drained Triaxial Test
	TW - Thin Wall Push	W - Water	

REMARKS:
HSN216, ER70

DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 07/01/2023 DRILLING DATE COMPLETED: 10/01/2023 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WSII BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 5 NORTHING: 41274.576 m EASTING: 16653.190 m REDUCED LEVEL: 112.494 m GWL:2.37m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL 20 40 60 80									
							X Undrained Shear Strength (kPa)						TCR (%)	RQD (%)				C	φ	■ Bulk Density Mg/m ³ 1.5 1.8 2.1 2.4									
21	91.49	21.00		X	21.00 SPT 9	Very dense greenish grey with mottled yellowish white Sandy coarse GRAVEL. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	20	40	60	80	56/300				G(VI)	MS													
22		(3.00)		X	21.45										G(V)	GS													
23				X																									
24	88.49	24.00		X	24.00 SPT 10	Very dense greenish grey and brownish yellow with mottled white Sandy coarse GRAVEL. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/170																		
25				X	24.23																								
26		(4.40)		X											G(IV)	GS													
27				X	27.00 SPT 11					100/140																			
28				X	27.18																								
29	84.09	28.40		X	28.40 SPT 12	Hole Terminated at 28.40 m Refusal (Probably Rock)					100/0																		
30				X	28.40																								
31				X																									
32				X																									
33				X																									
34				X																									
35				X																									
36				X																									
37				X																									
38				X																									
39				X																									
40				X																									

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
07/01/2023	16:30	12.45	6.00	2.20
09/01/2023	09:10	21.45	6.00	2.50
10/01/2023	08:50	28.40	6.00	2.40

 Foundation & Soil Specialists	⊠ - Sample ■ - Pressuremeter Test (PRM) ▬ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test	REMARKS: HSN216, ER70 DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 03/01/2023 DRILLING DATE COMPLETED: 05/01/2023 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WSII BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 6 NORTHING: 41242.240 m EASTING: 16540.217 m REDUCED LEVEL: 115.18 m GWL:2.23m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
							● SPT N Value X Undrained Shear Strength (kPa)																						
1		(2.10)			DS 1	Firm dark brownish yellow and olive grey fine Sandy SILT with some peat and rootlet. (FILL)																							
2	113.08	2.10			TW 1																								
3		(2.40)			SPT 1	Soft yellowish brown, light reddish orange and light olive grey fine Sandy Silty CLAY with some gravel at bottom. (FILL)					4/300																		
4					TW 2																								
5	110.68	4.50			SPT 2						3/300																		
6		(1.50)			TW 3	Firm brownish yellow, reddish pink and reddish orange fine Sandy SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
7	109.18	6.00			SPT 3						7/300																		
8					TW 4																								
9					SPT 4	Stiff light brownish yellow, yellowish grey and reddish brown fine and medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					8/300																		
10					TW 5																								
11		(9.00)			SPT 5						9/300																		
12					TW 6																								
13					SPT 6						11/300																		
14																													
15	100.18	15.00																											



☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN216, ER70

 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 03/01/2023 DRILLING DATE COMPLETED: 05/01/2023 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WSII BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 6 NORTHING: 41242.240 m EASTING: 16540.217 m REDUCED LEVEL: 115.18 m GWL: 2.23m dated																																
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL																																
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80																													
							X Undrained Shear Strength (kPa)																																													
16		(3.00)	●	×	15.00 SPT 7 15.45	Very stiff brownish yellow partially with mottled white slightly Gravelly Sandy SILT. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					26/300				G(V)	MG																																				
17			●	×																																																
18	97.18	18.00	●	×	18.00 SPT 8 18.15	Very stiff dark olive/greenish grey with mottled white slightly Gravelly Silty SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/110				G(IV)	SG																																				
19		(1.60)	●	×																																																
20	95.58	19.60	●	×	19.60 SPT 9 19.60	Hole Terminated at 19.60 m Refusal (Probably Rock)					100/0																																									
21							<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="5">Ground Water Level (Measured from Ground Level)</th> </tr> <tr> <th>Date (dd/mm/yyyy)</th> <th>Time (hh:mm)</th> <th>Borehole Depth (m)</th> <th>Casing Depth (m)</th> <th>Water Level (m)</th> </tr> <tr> <td>03/01/2023</td> <td>16:30</td> <td>4.05</td> <td>3.00</td> <td>2.10</td> </tr> <tr> <td>04/01/2023</td> <td>09:00</td> <td>18.15</td> <td>6.00</td> <td>2.40</td> </tr> <tr> <td>05/01/2023</td> <td>08:50</td> <td>19.60</td> <td>6.00</td> <td>2.20</td> </tr> </table>										Ground Water Level (Measured from Ground Level)					Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)	03/01/2023	16:30	4.05	3.00	2.10	04/01/2023	09:00	18.15	6.00	2.40	05/01/2023	08:50	19.60	6.00	2.20											
Ground Water Level (Measured from Ground Level)																																																				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)																																																
03/01/2023	16:30	4.05	3.00	2.10																																																
04/01/2023	09:00	18.15	6.00	2.40																																																
05/01/2023	08:50	19.60	6.00	2.20																																																
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Foundation & Soil Specialists

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN216, ER70

DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 03/01/2023 DRILLING DATE COMPLETED: 06/01/2023 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: BOSE										BORING LOG: BH 7 NORTHING: 41226.919 m EASTING: 16596.636 m REDUCED LEVEL: 114.043 m GWL:2.87m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
	113.74	(0.30)			DS 1	Firm reddish brown and brownish grey fine Sandy SILT with concrete pieces. (FILL)																							
	113.04	1.00			DS 2	Firm reddish brown and brownish grey fine Sandy SILT. (FILL)																							
		(1.10)			1.50																								
2	111.94	2.10			TW 1	Firm brownish yellow, reddish orange and olive grey Sandy SILT with clay and some peat. (FILL)					5/300					0/42/31/27	51 (UU)	0											
		(0.90)			2.10																								
3	111.04	3.00			SPT 1	Firm reddish orange and reddish brown Sandy CLAY. (FILL)										0/40/33/27	46 (UU)	0											
		(1.50)			3.00						4/300																		
4					3.60	Firm reddish brown and olive brown Sandy SILT with peat and decomposed rootlet. (FILL)																							
	109.54	4.50			4.05																								
5		(1.50)			4.50	Firm reddish pink, light brownish yellow and yellowish grey fine and medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					7/300																		
					5.10																								
6	108.04	6.00			5.55																								
					6.00																								
7					6.70	Stiff reddish orange and brownish yellow fine and medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					10/300																		
					7.15																								
8																													
					9.00																								
10					9.70						9/300																		
					10.15																								
12		(12.00)			12.00						10/300																		
					12.45																								
15					15.00						11/300																		
					15.45																								
18	96.04	18.00			18.00	Very stiff light grey with speckled white and brownish yellow Sandy SILT. (Residual, CHOA CHO KANG GRANODIORITE-TONALITE PLUTON)					19/300																		
					18.45																								
19		(3.00)																											
20																													



☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN214, ER69

 DATA QUALITY RATING

[illegible]

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 06/01/2023 DRILLING DATE COMPLETED: 10/01/2023 LOGGED BY: SUBARAJ CHECKED BY: OKKAR JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: BOSE												BORING LOG: BH 8 NORTHING: 41224.428 m EASTING: 16642.863 m REDUCED LEVEL: 113.385 m GWL:2.33m dated						
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm 20 40 60 80 × Undrained Shear Strength (kPa) 20 40 60 80	SPT N blows/300mm	In Situ Test	Rock TCR (%) RQD (%)	Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength C φ	PL WC LL 20 40 60 80 ■ Bulk Density Mg/m³ 1.5 1.8 2.1 2.4			
1	113.09	(0.30)	×	×	DS 1	Firm dark brownish yellow, brown and olive grey fine to medium Sandy SILT. (FILL)		4/300			FILL	MS						
	112.79	(0.30)	×	×	DS 2		FILL				MS							
			●	×	DS 3	Firm yellowish grey, light yellow and reddish orange fine to medium Sandy SILT. (FILL)												
2	111.29	2.10	●	×	TW 1	Firm brownish yellow and light olive grey slightly Gravelly Silty CLAY. (FILL)		10/300			FILL	CG						
			●	×	SPT 1	Firm reddish pink and brownish yellow fine Sandy SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					G(VI)	MS						
4	108.89	4.50	×	×	TW 2	Stiff brownish yellow and reddish pink Silty CLAY. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)		9/300			G(VI)	C	0/3/46/51	86 (UU)	0			
			×	×	SPT 2													
			×	×	TW 3	Stiff light brownish yellow, light reddish pink and yellowish grey CLAY with silt. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					G(VI)	C						
5	107.39	6.00	×	×	SPT 3		8/300						0/44/36/20	52 (UU)	0			
			×	×	TW 4	Stiff light brownish yellow, yellowish grey and light reddish pink Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)											G(VI)	MS
			×	×	SPT 4													
9	104.39	9.00	×	×	TW 5	Firm reddish pink and light brownish yellow partially with mottled white fine to medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)		7/300										
			×	×	SPT 5		G(VI)									MS		
			×	×														
12	101.39	12.00	×	×	SPT 6	Stiff brownish yellow fine to medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)		12/300										
			×	×														
			×	×														
13		(3.00)	×	×							G(VI)	MS						
			×	×														
			×	×														
14			×	×														
			×	×														
			×	×														
15	98.39	15.00	×	×														
geo specs Foundation & Soil Specialists						⊗ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	△ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test	REMARKS: HSN214, ER69 DATA QUALITY RATING								

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 06/01/2023 DRILLING DATE COMPLETED: 10/01/2023 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: BOSE										BORING LOG: BH 8 NORTHING: 41224.428 m EASTING: 16642.863 m REDUCED LEVEL: 113.385 m GWL:2.33m dated																															
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL																															
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80																												
							● SPT N blows / 300 mm X Undrained Shear Strength (kPa) 20 40 60 80																																												
16		(3.00)	X	X	15.00 SPT 7 15.45	Stiff light greenish grey SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					13/300				G(VI)	M																																			
17			X	X																																															
18	95.39	18.00	X	X	18.00 SPT 8 18.45	Very stiff greenish grey slightly Gravelly SILT. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					43/300				G(V)	MG																																			
19		(3.00)	X	X																																															
20			X	X																																															
21	92.39	21.00	X	X	21.00 SPT 9 21.09	Very dense greenish grey and grey with mottled yellowish white Gravelly SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/60				G(IV)	SG																																			
22		(1.70)	X	X																																															
23	90.69	22.70	X	X	22.70 SPT 10 22.70	Hole Terminated at 22.70 m Refusal (Probably Rock)					100/0																																								
24							<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="5">Ground Water Level (Measured from Ground Level)</th> </tr> <tr> <th>Date (dd/mm/yyyy)</th> <th>Time (hh:mm)</th> <th>Borehole Depth (m)</th> <th>Casing Depth (m)</th> <th>Water Level (m)</th> </tr> <tr> <td>06/01/2023</td> <td>16:30</td> <td>1.00</td> <td>6.00</td> <td>2.40</td> </tr> <tr> <td>07/01/2023</td> <td>09:15</td> <td>15.45</td> <td>6.00</td> <td>2.30</td> </tr> <tr> <td>09/01/2023</td> <td>08:50</td> <td>18.45</td> <td>6.00</td> <td>2.40</td> </tr> <tr> <td>10/01/2023</td> <td>09:15</td> <td>22.70</td> <td>6.00</td> <td>2.20</td> </tr> </table>										Ground Water Level (Measured from Ground Level)					Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)	06/01/2023	16:30	1.00	6.00	2.40	07/01/2023	09:15	15.45	6.00	2.30	09/01/2023	08:50	18.45	6.00	2.40	10/01/2023	09:15	22.70	6.00	2.20					
Ground Water Level (Measured from Ground Level)																																																			
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)																																															
06/01/2023	16:30	1.00	6.00	2.40																																															
07/01/2023	09:15	15.45	6.00	2.30																																															
09/01/2023	08:50	18.45	6.00	2.40																																															
10/01/2023	09:15	22.70	6.00	2.20																																															
25																																																			
26																																																			
27																																																			
28																																																			
29																																																			
30																																																			

⊠ - Sample ■ - Pressuremeter Test (PRM) ▬ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test	REMARKS: HSN214, ER69 DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 08/12/2022 DRILLING DATE COMPLETED: 10/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WSII BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 9 NORTHING: 41186.884 m EASTING: 16525.117 m REDUCED LEVEL: 115.964 m GWL:2.60m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
1	114.46	1.50			DS 1	Firm reddish orange and brownish yellow fine and medium Sandy SILT with clay. (FILL)								FILL	MS														
2		1.50			TW 1	Very soft reddish orange and brownish yellow fine and medium Sandy SILT with clay and gravel at bottom. (FILL)					0/300			FILL	MS	0/39/33/28	30 (UU)	0											
3	112.96	3.00			SPT 1																								
4		1.50			TW 2	Stiff reddish brown, reddish pink and brownish yellow slightly fine and medium Sandy CLAY. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					10/300			G(VI)	CS	0/20/33/47	76 (UU)	0											
5		1.50			SPT 2																								
6	109.96	6.00			TW 3	Firm light brownish yellow and reddish orange fine and medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					7/300			G(VI)	MS														
7					SPT 3																								
8					TW 4	Stiff reddish brown and brownish yellow fine and medium Sandy SILT with some fine gravel. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					10/300																		
9		(6.00)			SPT 4																								
10					U 1																								
11					SPT 5																								
12	103.96	12.00			SPT 6	Stiff dark greenish grey with mottled white slightly Gravelly Sandy SILT. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					11/300			G(V)	MG														
13		(3.00)																											
14																													
15	100.96	15.00			SPT 7	Very dense dark greenish grey occasionally with speckled white very Gravelly Silty SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					36/300			G(IV)	SG														
16		(3.00)																											
17																													
18	97.96	18.00			SPT 8	Very dense dark greenish grey and grey with speckled white Sandy Silty coarse GRAVEL. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/270			G(IV)	GS														
19	96.76	19.20			SPT 9						100/0																		
20						Hole Terminated at 19.20 m Refusal (Probably Rock)																							
21																													
22																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
09/12/2022	09:00	12.45	3.00	2.50
10/12/2022	08:50	19.20	3.00	2.70

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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	REMARKS: HSN216, ER70 DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 03/12/2022 DRILLING DATE COMPLETED: 06/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 10 NORTHING: 41181.456 m EASTING: 16556.460 m REDUCED LEVEL: 115.742 m GWL:2.20m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							X Undrained Shear Strength (kPa)																						
1	114.24	1.50			DS 1	Soft to firm dark reddish orange and brownish yellow Sandy SILT with clay and some fine gravel. (FILL)																							
2	113.14	2.60			TW 1 SPT 1	Soft reddish orange and pinkish slightly red Sandy CLAY coarse gravel at bottom. (FILL)						3/300					0/27/28/45	36 (UU)	0										
3					SPT 2							4/300																	
4	111.24	4.50				Loose brown, dark reddish orange and olive grey very Sandy Clayey coarse GRAVEL. (FILL)																							
5	110.64	5.10			TW 2 SPT 3	Firm pinkish red, light brownish yellow and yellowish grey SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)						3/300																	
6						Soft pinkish red, light brownish yellow and yellowish grey SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)						3/300																	
7		(3.90)			TW 3 SPT 4																								
8																													
9	106.74	9.00																											
10		(3.00)			U 1 SPT 5	Very stiff light yellowish grey and light pinkish red slightly fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIOTE-TONALITE PLUTON)						20/300					0/25/57/18	154 (UU)	0										
11																													
12	103.74	12.00			SPT 6							13/300																	
13						Stiff light reddish pink and light brownish yellow with mottled white Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
14																													
15		(6.00)			SPT 7							12/300																	
16																													
17																													
18	97.74	18.00																											



☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Undrained Triaxial Test *CU - Consolidated Drained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN219, ER68

 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 03/12/2022 DRILLING DATE COMPLETED: 06/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 10 NORTHING: 41181.456 m EASTING: 16556.460 m REDUCED LEVEL: 115.742 m GWL: 2.20m dated																										
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL																										
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80																							
							X Undrained Shear Strength (kPa) 20 40 60 80																																							
19	96.24	19.50 (1.50)			18.00 SPT 8 18.45	Medium dense grey and dark grey with mottled white slightly Gravelly very Silty SAND. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)				20/300				G(V)	SG																															
20	95.39	20.35 (0.85)			19.50 SPT 9 19.69	Very dense dark grey and grey with mottled white very Gravelly Silty SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)				100/140				G(IV)	SG																															
21					20.35 SPT 10 20.35	Hole Terminated at 20.35 m Refusal (Probably Rock)				100/0																																				
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="5">Ground Water Level (Measured from Ground Level)</th> </tr> <tr> <th>Date (dd/mm/yyyy)</th> <th>Time (hh:mm)</th> <th>Borehole Depth (m)</th> <th>Casing Depth (m)</th> <th>Water Level (m)</th> </tr> <tr> <td>03/12/2022</td> <td>03:55</td> <td>3.55</td> <td>3.00</td> <td>2.20</td> </tr> <tr> <td>05/12/2022</td> <td>09:10</td> <td>9.95</td> <td>9.00</td> <td>2.10</td> </tr> <tr> <td>06/12/2022</td> <td>09:00</td> <td>20.35</td> <td>9.00</td> <td>2.30</td> </tr> </table>																						Ground Water Level (Measured from Ground Level)					Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)	03/12/2022	03:55	3.55	3.00	2.20	05/12/2022	09:10	9.95	9.00	2.10	06/12/2022	09:00	20.35	9.00	2.30
Ground Water Level (Measured from Ground Level)																																														
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)																																										
03/12/2022	03:55	3.55	3.00	2.20																																										
05/12/2022	09:10	9.95	9.00	2.10																																										
06/12/2022	09:00	20.35	9.00	2.30																																										
22																																														
23																																														
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35																																														
36																																														

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 30/11/2022 DRILLING DATE COMPLETED: 02/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WSII BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 11 NORTHING: 41177.409 m EASTING: 16603.556 m REDUCED LEVEL: 115.035 m GWL:1.83m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
1		(2.00)			DS 1	Stiff reddish orange, grey and light brown fine Sandy SILT with clay. (FILL)																							
2	113.04	2.00			U 1																								
3					2.00 SPT 1	Stiff brownish yellow with mottled reddish orange slightly fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					12/300						0/39/34/27	82 (UU)	0										
4		(4.00)			3.00 TW 1																								
5					3.60 SPT 2					9/300																			
6	109.04	6.00			4.05 TW 2																								
7	108.34	(0.70)			5.10 SPT 3	Stiff light brownish yellow and yellowish grey with mottled white Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					8/300						0/20/47/33	74 (UU)	0										
8		(2.30)			5.55 TW 3																								
9	106.04	9.00			6.70 SPT 4	Firm brownish yellow with mottled reddish pink fine and medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					7/300																		
10					7.15 TW 4																								
11					9.00 SPT 5	Stiff brownish yellow and reddish pink occasionally with speckled white fine and medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					11/300																		
12					9.70 SPT 6																								
13		(9.00)			10.15 SPT 7																								
14					12.00 SPT 8																								
15					12.45 SPT 9																								
16					15.00 SPT 10																								
17					15.45 SPT 11																								
18	97.04	18.00			18.00 SPT 12																								
19		(2.80)			18.33 SPT 13	Very dense dark greenish grey with speckled and mottled white slightly Gravelly Silty SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/220																		
20					20.80 SPT 14																								
21	94.24	20.80			20.80 SPT 15	Hole Terminated at 20.80 m Refusal (Probably Rock)					100/0																		
22																													

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	- Mazier - Thick Wall Open Drive - Core Run - SPTLS - SPT Liner - Water	- Casagrande Piezometer - Water Standpipe - Consolidated Undrained Triaxial Test - Consolidated Drained Triaxial Test
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REMARKS:
 HSN216, ER70

DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 03/12/2022 DRILLING DATE COMPLETED: 07/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 12 NORTHING: 41171.180 m EASTING: 16644.543 m REDUCED LEVEL: 114.576 m GWL:4.90m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							X Undrained Shear Strength (kPa)																						
							20 40 60 80																						
							20 40 60 80																						
1		(2.10)			DS 1	Stiff brown and brownish grey slightly Sandy SILT with clay. (FILL)																							
2	112.48	2.10			TW 1																								
		(0.90)			SPT 1	Firm brown and brownish yellow slightly Sandy CLAY. (FILL)					4/300																		
3	111.58	3.00																											
		(1.50)			TW 2	Firm pinkish red, reddish orange and brownish yellow slightly Sandy CLAY. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					4/300						0/27/23/50	44 (UU)	0										
4					SPT 2																								
	110.08	4.50			TW 3						9/300																		
5					SPT 3	Stiff pinkish red and brownish yellow Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
		(4.50)			TW 4						8/300						0/57/28/15	84 (UU)	0										
6					SPT 4																								
7																													
8																													
9	105.58	9.00			TW 5	Firm pinkish red and light yellow with partly white Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					7/300																		
10					SPT 5																								
11																													
12		(6.00)			TW 6						6/300																		
13					SPT 6																								
14																													
15	99.58	15.00			TW 7	Stiff pinkish red and greyish white with speckled grey Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					9/300																		
16					SPT 7																								
17																													
18		(6.00)			TW 8						12/300																		
19					SPT 8																								
20																													



- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Undrained Triaxial Test *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN219, ER68

DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 03/12/2022 DRILLING DATE COMPLETED: 07/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 12 NORTHING: 41171.180 m EASTING: 16644.543 m REDUCED LEVEL: 114.576 m GWL:4.90m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							● SPT N Value																						
21	93.58	21.00			21.00 SPT 9 21.45	Very stiff grey with speckled white Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				24/300			G(VI)	MS														
22																													
23																													
24		(6.00)			24.00 SPT 10 24.45			●			30/300			G(VI)	MS														
25																													
26																													
27	87.58	27.00			27.00 SPT 11 27.45	Very stiff grey with speckled white Sandy SILT. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				43/300																		
28																													
29		(3.00)												G(V)	MS														
30	84.58 84.40	30.00 (0.18) 30.18			30.00 SPT 12 30.18	Very dense grey with speckled white and yellow with speckled white Silty SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				100/120			G(IV)	SM														
31																													
32						Hole Terminated at 30.18 m																							
33																													
34																													
35																													
36																													
37																													
38																													
39																													
40																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
03/12/2022	16:50	4.05	3.00	5.10
05/12/2022	09:00	12.45	6.00	4.80
06/12/2022	08:50	24.45	6.00	4.90
07/12/2022	09:10	30.18	6.00	4.80

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS: HSN219, ER68 DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 30/11/2022 DRILLING DATE COMPLETED: 02/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 13 NORTHING: 41143.063 m EASTING: 16538.164 m REDUCED LEVEL: 115.883 m GWL:3.83m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							● SPT N blows / 300 mm × Undrained Shear Strength (kPa) 20 40 60 80																						
1	114.38	1.50			DS 1	Firm yellowish brown, light brown and reddish orange fine Sandy Silty CLAY with some gravel. (FILL)					10/300			FILL	CS	0/38/32/30	170 (UU)	0											
2	113.78	0.60			TW 1	Stiff reddish orange and brownish yellow Silty CLAY. (FILL)					10/300			FILL	C														
3		1.50			SPT 1	Stiff reddish pink, dark reddish brown and brownish yellow Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					10/300			G(VI)	MS														
4	112.28	3.60			TW 2	Stiff yellowish grey, light brownish yellow and light reddish pink SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					10/300			G(VI)	M	0/33/55/42	89 (UU)	0											
5					SPT 2																								
6					TW 3																								
7					SPT 3																								
8					TW 4																								
9	106.88	9.00			SPT 4																								
10	106.18	0.70			TW 5	Firm to stiff light reddish pink and light brownish yellow fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					14/300			G(VI)	MS														
11		2.30			SPT 5	Stiff brownish yellow and light reddish pink fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)								G(VI)	MS														
12	103.88	12.00			SPT 6	Very stiff brownish yellow and light reddish orange fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					38/300			G(VI)	MS														
13																													
14																													
15	100.88	15.00			SPT 7	Very stiff light yellowish grey and greyish white SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					16/300			G(VI)	M														
16																													
17																													
18	97.88	18.00			SPT 8	Very dense dark greenish grey and light yellow with speckled white slightly Gravelly very Silty fine and medium SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/250			G(IV)	SG														
19		2.20																											
20	95.68	20.20			SPT 9	Hole Terminated at 20.20 m Refusal (Probably Rock)					100/0																		
21																													
22																													

		- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)		- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push		M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water		PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test		REMARKS: HSN219, ER68 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 25/11/2022 DRILLING DATE COMPLETED: 29/11/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 14 NORTHING: 41132.090 m EASTING: 16577.051 m REDUCED LEVEL: 115.281 m GWL:4.00m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
							● SPT N Value × Undrained Shear Strength (kPa) 20 40 60 80																						
1	114.68	(0.60) 0.60			DS 1 0.60	Firm brown and reddish brown slightly Sandy SILT. (FILL)								FILL	MS														
2	113.18	(1.50) 2.10			TW 1 2.10	Firm dark yellowish brown and olive grey Sandy Silty CLAY. (FILL)								FILL	CS	0/36/24/40	60 (UU)	0											
3	112.28	(0.90) 3.00			SPT 1 2.55	Firm reddish brown and yellowish brown slightly Gravelly Sandy CLAY. (FILL)					7/300			FILL	CG														
4					TW 2 3.60	Firm reddish orange and brownish yellow CLAY with sand. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					4/300					0/11/24/65	61 (UU)	0											
5					SPT 2 4.05																								
6		(6.00)			TW 3 5.10						7/300																		
7					SPT 3 5.55									G(VI)	C														
8					TW 4 6.70						7/300																		
9	106.28	9.00			SPT 4 7.15																								
10		(3.00)			TW 5 9.70	Stiff pinkish red, reddish orange and brownish yellow Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					12/300			G(VI)	MS														
11					SPT 5 10.15																								
12	103.28	12.00			TW 6 12.00	Firm light brownish yellow and purplish red SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					6/300																		
13		(3.00)			SPT 6 12.45																								
14														G(VI)	M														
15	100.28	15.00			TW 7 15.00	Stiff pinkish red, purplish red and reddish orange SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					11/300																		
16		(6.00)			SPT 7 15.45																								
17																													
18					TW 8 18.00						14/300			G(VI)	M														
19					SPT 8 18.45																								
20																													
21	94.28	21.00			TW 9 21.00						23/300			G(VI)	MS														
22					SPT 9 21.45																								



☒ - Sample ■ - Pressuremeter Test (PRM) ▬ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN219, ER68

 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 25/11/2022 DRILLING DATE COMPLETED: 29/11/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 14 NORTHING: 41132.090 m EASTING: 16577.051 m REDUCED LEVEL: 115.281 m GWL:4.00m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							● SPT N blows / 300 mm X Undrained Shear Strength (kPa) 20 40 60 80																						
23		(3.00)	X			Very stiff reddish orange and brownish yellow Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)								G(VI)	MS														
24	91.28	24.00	X		24.00 SPT 10 24.45	Stiff greyish white with speckled grey and reddish orange Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					13/300			G(VI)	MS														
25		(3.00)	X																										
26			X																										
27	88.28	27.00	X		27.00 SPT 11 27.45	Very stiff greyish white with mottled grey and reddish orange Sandy SILT. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					30/300																		
28			X																										
29			X																										
30		(6.00)	X		30.00 SPT 12 30.45						26/300			G(V)	MS														
31			X																										
32			X																										
33	82.28	33.00	X		33.00 SPT 13 33.27	Very stiff bluish grey and brownish grey SILT. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/200			G(V)	M														
34		(3.00)	X																										
35			X																										
36	79.28	36.00	X		36.00 SPT 14 36.30	Very dense grey and bluish grey with mottled dark grey Sandy Silty GRAVEL. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/210			G(IV)	GS														
37		(3.00)	X																										
38			X																										
39	76.28 76.07	39.00 39.21	X		39.00 SPT 15 39.21	Very stiff bluish grey and brownish grey Gravelly Sandy SILT. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/140			G(IV)	MG														
40			X			Hole Terminated at 39.21 m																							
41																													
42																													
43																													
44																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
25/11/2022	16:50	10.15	9.00	4.20
26/11/2022	08:50	30.45	9.00	3.90
28/11/2022	09:10	33.27	9.00	3.80
29/11/2022	09:10	39.21	9.00	4.10

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Undrained Triaxial Test *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS: HSN219, ER68	DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 22/11/2022 DRILLING DATE COMPLETED: 24/11/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 15 NORTHING: 41122.728 m EASTING: 16617.589 m REDUCED LEVEL: 114.722 m GWL:4.55m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
		(1.00)			DS 1	Firm brown and yellowish brown slightly Sandy SILT with clay. (FILL)																							
1	113.72	1.00			0.60									FILL	MS														
		(0.80)			1.50	Very stiff dark reddish brown and purplish red Sandy SILT. (FILL)								FILL	MS	0/44/35/21	277 (UU)	0		Δ	●	■							
2	112.92	1.80			1.88																								
		(1.20)			3.00	Very stiff dark reddish brown SILT with concrete materials at bottom of layer. (FILL)								FILL	M														
3	111.72	3.00			3.40									FILL	MG														
		(0.40)			3.85	Stiff brown and yellowish brown Gravelly SILT. (FILL)																							
4	111.32	3.40			SPT 2																								
		(2.60)			4.50	Firm reddish brown and reddish orange slightly Sandy CLAY. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)								G(VI)	CS	0/31/30/39	50 (UU)	0		○	●	■							
5					5.10																								
					5.55																								
6	108.72	6.00			6.00																								
					6.70	Stiff pinkish red, reddish orange and brownish yellow Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
7					7.15																								
		(3.00)			9.00									G(VI)	MS														
8					9.60																								
					10.30	Stiff reddish orange, pinkish red and light yellow Sandy SILT with some fine gravel. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
9	105.72	9.00			10.75																								
					12.00																								
10					12.45									G(VI)	MS														
		(6.00)			15.00																								
11					15.45																								
					18.00	Very stiff grey with speckled white Sandy SILT with traces of gravel. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
12					18.45																								
13																													
14																													
15	99.72	15.00																											
16																													
17																													
18																													
19																													
20																													



☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Triaxial Test *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN219, ER68

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 22/11/2022 DRILLING DATE COMPLETED: 24/11/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 15 NORTHING: 41122.728 m EASTING: 16617.589 m REDUCED LEVEL: 114.722 m GWL:4.55m dated																						
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL																						
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80																			
							X Undrained Shear Strength (kPa)																																			
21	93.72	21.00			21.00 SPT 9 21.14	Very stiff grey with speckled white and mottled grey Sandy GRAVEL. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/70			G(V)	MS																											
22		(3.00)													G(IV)	GS																										
23																																										
24	90.72	24.00			24.00 SPT 10 24.00	Hole Terminated at 24.00 m Refusal (Probably Rock)					100/0																															
25							Ground Water Level (Measured from Ground Level) <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Date (dd/mm/yyyy)</th> <th>Time (hh:mm)</th> <th>Borehole Depth (m)</th> <th>Casing Depth (m)</th> <th>Water Level (m)</th> </tr> <tr> <td>23/11/2022</td> <td>08:50</td> <td>15.45</td> <td>9.00</td> <td>4.60</td> </tr> <tr> <td>24/11/2022</td> <td>09:15</td> <td>24.00</td> <td>9.00</td> <td>4.50</td> </tr> </table>										Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)	23/11/2022	08:50	15.45	9.00	4.60	24/11/2022	09:15	24.00	9.00	4.50											
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)																																						
23/11/2022	08:50	15.45	9.00	4.60																																						
24/11/2022	09:15	24.00	9.00	4.50																																						
26																																										
27																																										
28																																										
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 23/12/2022 DRILLING DATE COMPLETED: 28/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 16 NORTHING: 41280.514 m EASTING: 16449.637 m REDUCED LEVEL: 116.181 m GWL: 2.23m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							● SPT N Value X Undrained Shear Strength (kPa)																						
1		(3.00)			DS 1	Firm brown and brownish grey fine Sandy CLAY with decomposed wood and organic matter. (FILL)					4/300						0/40/22/35	46 (UU)	0										
2					TW 1																								
3	113.18	3.00			SPT 1																								
4		(1.50)			TW 2	Firm brown and brownish grey very Sandy SILT with clay and organic matter. (FILL)					6/300																		
5	111.68	4.50			SPT 2																								
6	111.08	5.10			TW 3	Loose dark yellowish brown Silty fine and medium SAND with some clay. (FILL)					4/300						0/68/19/13	39 (UU)	0										
7	110.18	6.00			SPT 3	Firm brown and yellowish brown Sandy CLAY. (FILL)																							
8					U 1	Stiff pinkish red, brownish yellow and reddish orange fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					14/300																		
9	107.18	9.00			SPT 4																								
10					TW 4	Firm pinkish red and brownish yellow fine to coarse Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					7/300																		
11					SPT 5																								
12		(6.00)									7/300																		
13					SPT 6																								
14																													
15	101.18	15.00																											

☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN216, ER70

 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 23/12/2022 DRILLING DATE COMPLETED: 28/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 16 NORTHING: 41280.514 m EASTING: 16449.637 m REDUCED LEVEL: 116.181 m GWL:2.23m dated																						
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL																						
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80																			
							X Undrained Shear Strength (kPa)																																			
16		(3.00)			15.00 SPT 7 15.45	Very stiff grey with speckled white and mottled yellow fine to coarse Sandy SILT. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					44/300				G(V)	MS																										
17																																										
18	98.18	18.00			18.00 SPT 8 18.20	Very dense grey and grey with speckled white Sandy GRAVEL. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/140																															
19																																										
20		(3.60)												G(IV)	GS																											
21					21.00 SPT 9 21.19						100/115																															
22	94.58	21.60			21.60 SPT 10 21.60	Hole Terminated at 21.60 m Refusal (Probably Rock)					100/0																															
23							Ground Water Level (Measured from Ground Level) <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Date (dd/mm/yyyy)</th> <th>Time (hh:mm)</th> <th>Borehole Depth (m)</th> <th>Casing Depth (m)</th> <th>Water Level (m)</th> </tr> </thead> <tbody> <tr> <td>24/12/2022</td> <td>16:30</td> <td>15.45</td> <td>6.00</td> <td>2.40</td> </tr> <tr> <td>27/12/2022</td> <td>09:00</td> <td>21.19</td> <td>6.00</td> <td>2.10</td> </tr> <tr> <td>28/12/2022</td> <td>09:30</td> <td>21.60</td> <td>6.00</td> <td>2.20</td> </tr> </tbody> </table>										Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)	24/12/2022	16:30	15.45	6.00	2.40	27/12/2022	09:00	21.19	6.00	2.10	28/12/2022	09:30	21.60	6.00	2.20						
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)																																						
24/12/2022	16:30	15.45	6.00	2.40																																						
27/12/2022	09:00	21.19	6.00	2.10																																						
28/12/2022	09:30	21.60	6.00	2.20																																						
24																																										
25																																										
26																																										
27																																										
28																																										
29																																										
30																																										

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 29/12/2022 DRILLING DATE COMPLETED: 31/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 17 NORTHING: 41252.348 m EASTING: 16486.040 m REDUCED LEVEL: 115.085 m GWL:1.90m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							X Undrained Shear Strength (kPa)																						
							20 40 60 80																						
							20 40 60 80																						
1		(2.10)			DS 1	Firm dark yellowish brown and brown slightly Gravelly fine Sandy SILT. (FILL)																							
2	112.99	2.10			TW 1																								
		(0.90)			SPT 1	Very soft dark yellowish brown and olive grey Sandy CLAY with some organic matter. (FILL)					1/300																		
3	112.09	3.00																											
		(1.50)			TW 2	Stiff dark yellowish brown and reddish brown slightly fine Sandy SILT with clay. (FILL)					9/300						0/10/59/31	82 (UU)											
4	110.59	4.50			SPT 2																								
5					U 1	Stiff brownish yellow, reddish brown and reddish pink slightly fine Sandy SILT with some gravel. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					11/300																		
6					SPT 3																								
7		(4.50)			U 2						15/300						0/23/41/36	125 (UU)											
8					SPT 4																								
9	106.09	9.00			U 3	Very stiff reddish brown, reddish pink and light brownish yellow fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					27/300																		
10		(3.00)			SPT 5																								
11																													
12	103.09	12.00			SPT 6	Very dense brownish yellow, light reddish pink and yellowish grey very Silty fine SAND. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					54/300																		
13		(3.00)																											
14																													
15	100.09	15.00																											



☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Triaxial Test *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN216, ER70

DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 29/12/2022 DRILLING DATE COMPLETED: 31/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 17 NORTHING: 41252.348 m EASTING: 16486.040 m REDUCED LEVEL: 115.085 m GWL:1.90m dated																			
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL																			
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80																
							X Undrained Shear Strength (kPa)																																
16			x	⊗	SPT 7 15.26	Very dense light brownish yellow and reddish orange Silty fine SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/190																												
17			x																																				
18		(6.00)	x	⊗	18.00 SPT 8 18.16						100/120			G(IV)	SM																								
19			x																																				
20			x																																				
21	94.09 93.96	21.00 (0.13) 21.13	x	⊗	21.00 SPT 9 21.13	Very dense brownish yellow, reddish brown and light bluish grey fine Sandy GRAVEL. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON) Hole Terminated at 21.13 m					100/100			G(IV)	GS																								
22											Ground Water Level (Measured from Ground Level) <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Date (dd/mm/yyyy)</th> <th>Time (hh:mm)</th> <th>Borehole Depth (m)</th> <th>Casing Depth (m)</th> <th>Water Level (m)</th> </tr> </thead> <tbody> <tr> <td>29/12/2022</td> <td>16:30</td> <td>12.45</td> <td>3.00</td> <td>1.90</td> </tr> <tr> <td>30/12/2022</td> <td>09:15</td> <td>18.16</td> <td>3.00</td> <td>1.80</td> </tr> <tr> <td>31/12/2022</td> <td>08:50</td> <td>21.13</td> <td>3.00</td> <td>2.00</td> </tr> </tbody> </table>					Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)	29/12/2022	16:30	12.45	3.00	1.90	30/12/2022	09:15	18.16	3.00	1.80	31/12/2022	08:50	21.13	3.00	2.00				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)																																			
29/12/2022	16:30	12.45	3.00	1.90																																			
30/12/2022	09:15	18.16	3.00	1.80																																			
31/12/2022	08:50	21.13	3.00	2.00																																			
23																																							
24																																							
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27																																							
28																																							
29																																							
30																																							

Foundation & Soil Specialists

⊗ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN216, ER70

 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 24/12/2022 DRILLING DATE COMPLETED: 27/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 18 NORTHING: 41238.454 m EASTING: 16445.258 m REDUCED LEVEL: 116.007 m GWL:2.40m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							● SPT N blows / 300 mm X Undrained Shear Strength (kPa) 20 40 60 80																						
1	114.51	1.50			DS 1	Firm dark yellowish brown and olive grey occasionally with speckled white fine Sandy SILT with gravel. (FILL)								FILL	MS														
2		(1.50)			TW 1	Soft dark yellowish grey, brown and olive grey very Sandy SILT with clay and coarse gravel at bottom. (FILL)					2/300			FILL	MS	0/57/30/13	22 (UU)	0											
3	113.01	3.00			SPT 1																								
4	112.51	(0.50)			U 1	Medium dense dark reddish brown, brownish yellow and grey Sandy coarse GRAVEL. (FILL)					20/300			FILL	GS														
5	111.51	(1.00)			SPT 2	Very stiff dark reddish brown and dark brownish yellow slightly Gravelly SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)								G(VI)	MG														
6		(4.50)			TW 2						6/300																		
7					SPT 3																								
8					TW 3	Firm to stiff light brownish yellow and reddish orange slightly Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					9/300			G(VI)	MS	0/16/43/41	80 (UU)	0											
9	107.01	9.00			SPT 4																								
10	106.41	(0.60)			TW 4	Stiff light brownish yellow and yellowish grey occasionally with mottled white fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					11/300			G(VI)	MS														
11		(2.40)			SPT 5									G(VI)	MS														
12	104.01	12.00			SPT 6	Stiff brownish yellow and yellowish grey fine Sandy SILT with coarse gravel. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					30/300																		
13		(3.00)			SPT 7	Medium dense to dense light brownish yellow and yellowish grey very Silty fine SAND. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)								G(V)	SM														
14					SPT 8																								
15	101.01	15.00			SPT 9	Very dense light grey and light yellowish/greenish grey fine Sandy GRAVEL. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/195			G(IV)	GS														
16	99.61	16.40			SPT 10						100/0																		
17						Hole Terminated at 16.40 m Refusal (Probably Rock)																							
18																													
19																													
20																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
24/12/2022	16:30	10.05	6.00	2.50
27/12/2022	09:00	16.40	6.00	2.30

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated *CU - Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS: HSN219, ER68	DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 29/12/2022 DRILLING DATE COMPLETED: 29/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 19 NORTHING: 41209.643 m EASTING: 16478.315 m REDUCED LEVEL: 115.769 m GWL:2.80m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							● SPT N blows / 300 mm X Undrained Shear Strength (kPa) 20 40 60 80																						
1	114.77	1.00			U 1 0.30	Firm brown and brownish grey Sandy CLAY. (FILL)								FILL	CS														
2		(2.00)			1.50 TW 1 2.10 SPT 1 2.55	Soft reddish brown and reddish orange fine Sandy SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					2/300			G(VI)	MS	0/39/36/25	31 (UU)	0											
3	112.77	3.00			3.00 TW 2 3.70 SPT 2 4.15 4.50	Firm reddish orange and reddish brown fine Sandy SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					7/300			G(VI)	MS	0/36/34/30	52 (UU)	0											
4	111.27	4.50			4.50 U 1 5.10 SPT 3 5.55	Stiff reddish orange and brownish yellow fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					10/300																		
5		(4.50)			5.10 SPT 3 5.55																								
6					6.00 U 2 6.70 SPT 4 7.15						8/300			G(VI)	MS														
7					6.70 SPT 4 7.15																								
8																													
9	106.77	9.00			9.00 U 3 9.70 SPT 5 10.15	Stiff grey with speckled white Sandy SILT. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					10/300			G(V)	MS														
10		(3.00)																											
11																													
12	103.77	12.00			12.00 SPT 6 12.37	Very dense grey with speckled white Silty fine to coarse SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/215			G(IV)	SM														
13	102.77	13.00			13.00 SPT 7 13.00						100/0																		
14		(1.00)				Hole Terminated at 13.00 m Refusal (Probably Rock)																							
15																													
16																													
17																													
18																													
19																													
20																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
29/12/2022	16:30	13.00	6.00	2.80

Foundation & Soil Specialists	☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST) ▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Undrained Triaxial Test *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
REMARKS: HSN219, ER68 DATA QUALITY RATING	

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 21/12/2022 DRILLING DATE COMPLETED: 23/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 20 NORTHING: 41200.020 m EASTING: 16428.598 m REDUCED LEVEL: 117.871 m GWL:3.33m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
							● SPT N Value																						
		(1.00)			0.30	Firm brown and brownish grey fine Sandy CLAY. (FILL)									FILL	CS													
1	116.87	1.00																											
		(1.10)			1.50	Soft brown and yellowish/reddish brown fine Sandy SILT. (FILL)									FILL	MS	0/41/31/28	36 (UU)	0										
2	115.77	2.10			2.10																								
		(0.90)			2.55	Soft brown and reddish brown Gravelly Sandy CLAY. (FILL)									FILL	CG													
3	114.87	3.00			3.00																								
		(1.50)			3.60	Firm brown and reddish orange Gravelly SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)									G(VI)	MG													
4	113.37	4.50			4.05																								
		(1.50)			5.10	Firm pinkish red and reddish orange slightly Sandy CLAY. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)									G(VI)	CS	0/18/36/46	73 (UU)	0										
5	111.87	6.00			5.55																								
		(3.00)			6.60	Stiff reddish orange and brownish yellow SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)									G(VI)	M													
7					7.05																								
		(0.50)			9.50	Stiff brownish yellow with speckled white fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)									G(VI)	MS													
10	108.37	9.50			9.95																								
		(2.50)				Soft pinkish red, reddish orange and brownish yellow Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)									G(VI)	MS													
12	105.87	12.00			12.00																								
		(3.00)			12.45	Very stiff reddish orange with speckled white Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)									G(VI)	MS													
13																													
		(3.00)																											
15	102.87	15.00			15.00																								
		(3.00)			15.45	Very dense grey with speckled white Silty fine to coarse SAND. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)									G(V)	SM													
16																													
		(3.00)																											
18	99.87	18.00																											

⊗ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Undrained Triaxial Test *CU - *CD - Drained Triaxial Test
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REMARKS:
 HSN219, ER68

 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 21/12/2022 DRILLING DATE COMPLETED: 23/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 20 NORTHING: 41200.020 m EASTING: 16428.598 m REDUCED LEVEL: 117.871 m GWL:3.33m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
19					SPT 8 18.40	Very dense grey with speckled white Gravelly fine to coarse SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/260																		
20		(4.30)													G(IV)	SG													
21					SPT 9 (NO RECOVERY) 21.00 21.06							100/30																	
22	95.57	22.30			SPT 10 22.30							100/0																	
23						Hole Terminated at 22.30 m Refusal (Probably Rock)																							
24																													
25																													
26																													
27																													
28																													
29																													
30																													
31																													
32																													
33																													
34																													
35																													
36																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
21/12/2022	16:30	4.05	3.00	3.50
22/12/2022	09:00	12.45	6.00	3.30
23/12/2022	08:50	22.30	6.00	3.20

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	- Mazier - Thick Wall Open Drive - Core Run - SPTLS - SPT Liner - Water - Casagrande Piezometer - Water Standpipe - Consolidated Undrained Triaxial Test - Consolidated Drained Triaxial Test
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	REMARKS: HSN219, ER68 DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 07/12/2022 DRILLING DATE COMPLETED: 08/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 21 NORTHING: 41159.875 m EASTING: 16478.222 m REDUCED LEVEL: 116.594 m GWL:3.40m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
		(1.00)			U 1 0.05 0.30	Firm brown and yellowish brown fine Sandy SILT. (FILL)																							
1	115.59	1.00												FILL	MS														
2		(2.00)			1.50 TW 1 2.10 SPT 1 2.55	Firm pinkish red, reddish orange and light yellow Sandy SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					7/300			G(VI)	MS														
3	113.59	3.00																											
4					3.00 TW 2 3.60 SPT 2 4.05	Stiff pinkish red, reddish orange and brownish yellow Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					8/300																		
5					4.50 TW 3 5.10 SPT 3 5.55						9/300					0/35/40/25	91 (UU)	0											
6		(6.00)			6.00 TW 4 6.70 SPT 4 7.15						11/300			G(VI)	MS														
7																													
8																													
9	107.59	9.00			9.00 U 1 9.50 SPT 5 9.95	Stiff pinkish red with speckled white and reddish orange slightly Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					15/300			G(VI)	MS		0/28/50/22	87 (UU)	0										
10		(3.00)																											
11																													
12	104.59	12.00			12.00 SPT 6 12.45	Stiff greyish white with speckled grey Sandy SILT with clay and gravel. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					13/300			G(VI)	MS														
13		(3.00)																											
14																													
15	101.59	15.00			15.00 SPT 7 15.45	Very stiff greyish white with mottled grey slightly Gravelly Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					25/300			G(VI)	MG														
16		(3.00)																											
17																													
18	98.59	18.00																											



☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Undrained Triaxial Test *CU - *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN219, ER68

 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 07/12/2022 DRILLING DATE COMPLETED: 08/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 21 NORTHING: 41159.875 m EASTING: 16478.222 m REDUCED LEVEL: 116.594 m GWL:3.40m dated																							
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL																							
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80																				
19		(4.00)			SPT 8 18.35	Very stiff greenish grey Gravelly SILT. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/245			G(IV)	MG																												
21					SPT 9 21.00 21.22						100/135																																
22	94.59	22.00			SPT 10 22.00 22.00	Hole Terminated at 22.00 m Refusal (Probably Rock)					100/0																																
							<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="5">Ground Water Level (Measured from Ground Level)</th> </tr> <tr> <th>Date (dd/mm/yyyy)</th> <th>Time (hh:mm)</th> <th>Borehole Depth (m)</th> <th>Casing Depth (m)</th> <th>Water Level (m)</th> </tr> <tr> <td>07/12/2022</td> <td>16:50</td> <td>9.95</td> <td>6.00</td> <td>3.50</td> </tr> <tr> <td>08/12/2022</td> <td>09:10</td> <td>22.00</td> <td>6.00</td> <td>3.30</td> </tr> </table>																	Ground Water Level (Measured from Ground Level)					Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)	07/12/2022	16:50	9.95	6.00	3.50	08/12/2022	09:10	22.00	6.00	3.30
Ground Water Level (Measured from Ground Level)																																											
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)																																							
07/12/2022	16:50	9.95	6.00	3.50																																							
08/12/2022	09:10	22.00	6.00	3.30																																							
23																																											
24																																											
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29																																											
30																																											
31																																											
32																																											
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35																																											
36																																											

Foundation & Soil Specialists

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	- Mazier - Thick Wall Open Drive - Core Run - SPTLS - SPT Liner - Water	- Casagrande Piezometer - Water Standpipe - Consolidated Undrained Triaxial Test - Consolidated Drained Triaxial Test
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REMARKS:
HSN219, ER68

DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 13/12/2022 DRILLING DATE COMPLETED: 15/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WSII BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 22 NORTHING: 41297.706 m EASTING: 16364.725 m REDUCED LEVEL: 117.034 m GWL:2.13m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							● SPT N Value × Undrained Shear Strength (kPa) 20 40 60 80																						
1	116.03	1.00			DS 1	Firm brown and brownish yellow slightly Sandy CLAY. (FILL)									FILL	CS													
2					TW 1	Stiff reddish orange and yellowish brown slightly Sandy CLAY. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					11/300						3/31/22/44	79 (UU)	0										
3					SPT 1																								
4					TW 2						12/300																		
5		(8.00)			SPT 2																								
6					TW 3										G(VI)	CS	0/29/34/37	93 (UU)	0										
7					SPT 3						10/300																		
8					TW 4						10/300																		
9	108.03	9.00			SPT 4																								
10					TW 5	Firm brownish yellow with speckled white SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					6/300				G(VI)	M													
11		(3.00)			SPT 5																								
12	105.03	12.00			SPT 6	Firm pinkish red and reddish orange with speckled white Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					7/300				G(VI)	MS													
13					SPT 7																								
14		(3.00)			SPT 8																								
15	102.03	15.00			SPT 9	Stiff light grey SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					8/300																		
16					SPT 10																								
17					SPT 11																								
18					SPT 12																								
19					SPT 13																								
20					SPT 14																								

Foundation & Soil Specialists

☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Undrained Triaxial Test *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN216, ER70

 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 13/12/2022 DRILLING DATE COMPLETED: 15/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WSII BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 22 NORTHING: 41297.706 m EASTING: 16364.725 m REDUCED LEVEL: 117.034 m GWL:2.13m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							X Undrained Shear Strength (kPa)																						
							20 40 60 80																						
							20 40 60 80																						
21		(12.00)	X	X	21.00 SPT 9 21.45	Stiff light grey SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					15/300																		
22			X	X																									
23			X	X																									
24			X	X	24.00 SPT 10 24.45						14/300			G(VI)	M														
25			X	X																									
26			X	X																									
27	90.03	27.00	X	X	27.00 SPT 11 27.45	Very stiff grey with speckled white Gravelly very Sandy SILT. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					61/300																		
28		(3.00)	X	X										G(V)	MG														
29			X	X																									
30	87.03	30.00	X	X	30.00 SPT 12 30.39	Very stiff grey with speckled white Gravelly very Sandy SILT. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/240																		
	86.64	(0.39) 30.39	X	X										G(IV)	MG														
31						Hole Terminated at 30.39 m																							
32																													
33																													
34																													
35																													
36																													
37																													
38																													
39																													
40																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
13/12/2022	16:30	12.45	6.00	2.30
14/12/2022	09:10	27.45	6.00	2.20
15/12/2022	08:50	30.39	6.00	1.90

	- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test	REMARKS: HSN216, ER70 DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 16/12/2022 DRILLING DATE COMPLETED: 19/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 23 NORTHING: 41267.078 m EASTING: 16397.731 m REDUCED LEVEL: 116.846 m GWL:2.23m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							● SPT N Value X Undrained Shear Strength (kPa) 20 40 60 80																						
1		(2.10)			DS 1	Firm dark yellowish brown, reddish orange and bluish grey fine and medium Sandy SILT with some gravel and organic matter. (FILL)									FILL	MS													
2	114.75	2.10			TW 1						4/300																		
		(0.90)			SPT 1	Loose brownish yellow, dark reddish brown and grey Sandy Clayey coarse GRAVEL. (FILL)									FILL	GS													
3	113.85	3.00																											
					TW 2	Stiff reddish pink, brownish yellow and dark reddish brown fine Sandy SILT with gravel. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					10/300				G(VI)	MS													
4		(1.50)			SPT 2																								
	112.35	4.50																											
5					TW 3	Stiff reddish orange and brownish yellow slightly fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					11/300						0/21/41/38	105 (UU)	0										
					SPT 3																								
6																													
		(4.50)			TW 4						12/300				G(VI)	MS													
7					SPT 4																								
8																													
9	107.85	9.00			TW 5	Firm light yellowish grey and light reddish pink slightly fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					5/300				G(VI)	MS	0/17/43/40	42 (UU)	0										
10		(3.00)			SPT 5																								
11																													
12	104.85	12.00			TW 6	Medium dense yellowish grey and light reddish pink occasionally with mottled white slightly Gravelly very Silty SAND. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					11/300				G(VI)	SG													
13		(3.00)																											
14																													
15	101.85	15.00			SPT 7	Dense light greenish/yellowish grey with mottled white slightly Gravelly very Silty SAND. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					35/300																		
16																													
17																													
18		(6.00)			TW 8						35/300				G(VI)	SG													
19																													
20																													



☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Undrained Triaxial Test *CU - *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN216, ER70

 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 16/12/2022 DRILLING DATE COMPLETED: 19/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 23 NORTHING: 41267.078 m EASTING: 16397.731 m REDUCED LEVEL: 116.846 m GWL:2.23m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							X Undrained Shear Strength (kPa) 20 40 60 80																						
21	95.85	21.00			21.00 SPT 9	Dense bluish/greenish grey with mottled dark green with mottled dark green slightly Gravelly Silty SAND. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					48/300			G(VI)	SG														
22		(3.00)			21.45										G(VI)	SG													
23																													
24	92.85	24.00			24.00 SPT 10	Very stiff greenish grey, grey and light reddish pink with speckled and mottled white very Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					28/300																		
25					24.45																								
26																													
27		(6.00)			27.00 SPT 11						33/300			G(VI)	MS														
28					27.45																								
29																													
30	86.85	30.00			30.00 SPT 12	Dense light greenish grey, grey and reddish pink with speckled and mottled white slightly Gravelly very Silty SAND. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON) Hole Terminated at 30.45 m					48/300			G(V)	SG														
31	86.40	(0.45) 30.45			30.45																								
32																													
33																													
34																													
35																													
36																													
37																													
38																													
39																													
40																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
16/12/2022	16:30	10.15	6.00	1.80
17/12/2022	08:50	15.45	6.00	1.60
19/12/2022	09:15	30.45	6.00	1.80

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	- Mazier - Thick Wall Open Drive - Core Run - SPTLS - SPT Liner - Water	- Casagrande Piezometer - Water Standpipe - Consolidated Undrained Triaxial Test - Consolidated Drained Triaxial Test
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	REMARKS: HSN216, ER70 DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 17/12/2022 DRILLING DATE COMPLETED: 20/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 24 NORTHING: 41258.186 m EASTING: 16360.141 m REDUCED LEVEL: 117.051 m GWL:1.97m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
							● SPT N blows / 300 mm X Undrained Shear Strength (kPa)																						
1	115.55	1.50			DS 1	Soft to firm reddish orange and brown fine Sandy Silty CLAY with some gravel. (FILL)								FILL	CS														
2					TW 1	Stiff reddish pink, reddish brown and brownish yellow fine Sandy SILT with some gravel. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				12/300																		
3					SPT 1																								
4		(5.20)			U 1		●				13/300			G(VI)	MS		0/37/34/29	101 (UU)	0										
5					SPT 2																								
6					U 2		●				14/300																		
7	110.35	6.70			TW 2	Firm purplish red, reddish orange and brownish yellow fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				6/300						0/36/37/27	54 (UU)	0										
8		(2.30)			SPT 4									G(VI)	MS														
9	108.05	9.00																											
10		(3.00)			TW 3	Stiff brownish yellow and light reddish orange slightly Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				11/300			G(VI)	MS														
11					SPT 5																								
12	105.05	12.00					●				5/300																		
13		(3.00)			SPT 6	Firm light greenish grey occasionally with speckled white SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)								G(VI)	M														
14																													
15	102.05	15.00			SPT 7	Stiff light greenish grey partially with speckled white fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				12/300			G(VI)	MS														
16		(3.00)																											
17																													
18	99.05	18.00			SPT 8	Very stiff light greenish grey partially with speckled and mottled white fine Sandy SILT with some fine gravel. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				17/300			G(VI)	MS														
19		(3.00)																											
20																													

☒ - Sample	⚠ - Permeability / Packer Test (PKT)	M - Mazier	PZS - Casagrande Piezometer
■ - Pressuremeter Test (PRM)	● - SPT N Value	U - Thick Wall Open Drive	WSP - Water Standpipe Consolidated
□ - Core Run	□ - Attempt TW/P/MZ/U	C - Core Run	*CU - Undrained Triaxial Test
⊕ - Field Vane Shear Test (FVST)	P - Piston Sample	SPTLS - SPT Liner	*CD - Consolidated Drained Triaxial Test
	TW - Thin Wall Push	W - Water	

REMARKS:
HSN219, ER68

DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 17/12/2022 DRILLING DATE COMPLETED: 20/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 24 NORTHING: 41258.186 m EASTING: 16360.141 m REDUCED LEVEL: 117.051 m GWL:1.97m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							X Undrained Shear Strength (kPa)																						
21	96.05	21.00		X	21.00 SPT 9	Very dense greenish grey with light yellow with speckled and mottled white slightly Gravelly Silty SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/145			G(VI)	MS														
22					21.22																								
23																													
24		(6.00)		X	24.00 SPT 10						100/130				G(IV)	SG													
25					24.28																								
26																													
27	89.95 89.90	27.00 (0.15)		X	27.00 SPT 11	Very dense dark greenish grey with speckled and mottled white Gravelly Silty SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON) Hole Terminated at 27.15 m					100/100			G(IV)	SG														
28					27.15																								
29																													
30																													
31																													
32																													
33																													
34																													
35																													
36																													
37																													
38																													
39																													
40																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
17/12/2022	16:30	10.15	6.00	2.10
19/12/2022	09:00	21.22	6.00	1.80
20/12/2022	09:15	27.15	6.00	2.00

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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 Foundation & Soil Specialists	REMARKS: HSN219, ER68 DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 14/12/2022 DRILLING DATE COMPLETED: 16/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 25 NORTHING: 41214.839 m EASTING: 16353.798 m REDUCED LEVEL: 117.486 m GWL:2.67m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
		(1.10)			DS 1	Firm brown and yellowish brown slightly fine Sandy SILT with clay. (FILL)																							
1	116.39	1.10			0.00 0.60									FILL	MS														
2					1.50 2.10 SPT 1	Stiff reddish orange and brownish yellow slightly fine Sandy CLAY. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					10/300					0/21/35/44	103 (UU)	0											
3					2.55 3.00 TW 2																								
4					3.60 SPT 2						9/300																		
5					4.05 4.50 U 1											0/18/37/45	79 (UU)	0											
6					5.10 SPT 3						11/300																		
7		(10.90)			5.55 6.00 U 2									G(VI)	CS														
8					6.70 SPT 4						10/300																		
9					7.15 9.00 U 3																								
10					9.60 SPT 5						14/300																		
11					10.15 12.00 SPT 6																								
12	105.49	12.00			12.45	Very stiff grey with speckled white and dark grey Sandy SILT with gravel. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					28/300			G(VI)	MS														
13		(3.00)																											
14																													
15	102.49	15.00			15.00 SPT 7	Very dense grey with speckled white and dark grey Sandy Silty GRAVEL. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/290																		
16		(3.00)			15.44									G(V)	GS														
17																													
18	99.49	18.00			18.00 SPT 8	Very stiff grey with partly white Gravelly SILT. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					34/300																		
19		(3.00)			18.45									G(V)	MG														
20																													



☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN219, ER68

 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 14/12/2022 DRILLING DATE COMPLETED: 16/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 25 NORTHING: 41214.839 m EASTING: 16353.798 m REDUCED LEVEL: 117.486 m GWL:2.67m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
21	96.49	21.00	●	×	21.00 SPT 9	Very dense bluish grey and dark grey Sandy coarse GRAVEL. (Highly weathered, CHOA CHU KANG GRANODIORTIE-TONALITE PLUTON)					100/215			G(V)	MG														
22		(3.00)	●	×											G(IV)	GS													
23			●	×																									
24	93.49	24.00	●	×	24.00 SPT 10	Very stiff grey and grey with partly white Gravelly SILT. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/225																		
25		(3.20)	●	×											G(IV)	MG													
26			●	×																									
27	90.29	27.20	●	×	27.00 SPT 11	Hole Terminated at 27.20 m					100/140																		
28																													
29																													
30																													
31																													
32																													
33																													
34																													
35																													
36																													
37																													
38																													
39																													
40																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
14/12/2022	16:30	15.44	6.00	2.80
15/12/2022	09:15	24.30	6.00	2.60
16/12/2022	09:10	27.20	6.00	2.60

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS: HSN219, ER68	DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 20/12/2022 DRILLING DATE COMPLETED: 22/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WSII BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 26 NORTHING: 41230.676 m EASTING: 16392.711 m REDUCED LEVEL: 116.832 m GWL: 2.16m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
							● SPT N blows / 300 mm X Undrained Shear Strength (kPa)																						
1		(1.50)			DS 1	Soft to firm reddish brown, brown and yellow fine and medium Sandy SILT with gravel. (FILL)								FILL	MS														
2	115.33	1.50			TW 1	Soft reddish orange and brownish yellow Sandy CLAY. (FILL)								FILL	CS	0/43/25/32	34 (UU)	0											
	114.73	2.10			SPT 1	Soft brownish yellow Gravelly Sandy CLAY. (FILL)					2/300			FILL	CG														
3	113.83	3.00			TW 2	Firm reddish orange and brownish yellow Sandy Silty CLAY. (FILL)								FILL	CS	0/46/25/29	96 (UU)	0											
	113.23	3.60			SPT 2	Stiff reddish pink, light brownish yellow and yellowish grey slightly Gravelly fine and medium Sandy SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					14/300				G(VI)	MG													
4		(1.50)			TW 3	Stiff reddish pink, light brownish yellow and yellowish grey fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
5	111.73	5.10			SPT 3						9/300																		
6		(1.60)			TW 4										G(VI)	MS													
7	110.13	6.70			SPT 4						7/300																		
8						Firm reddish pink, brownish yellow and grey with speckled and mottled white Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
9																													
10					TW 5																								
					SPT 5						5/300																		
11		(8.30)													G(VI)	MS													
12																													
13																													
14																													
15	101.83	15.00			SPT 6						7/300																		



☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Triaxial Test *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN214, ER69

 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 20/12/2022 DRILLING DATE COMPLETED: 22/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WSII BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: GANAPATHY										BORING LOG: BH 26 NORTHING: 41230.676 m EASTING: 16392.711 m REDUCED LEVEL: 116.832 m GWL:2.16m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							● SPT N blows / 300 mm																						
							✕ Undrained Shear Strength (kPa)																						
								20	40	60	80																		
								20	40	60	80																		
16		(3.00)		15.00 SPT 7 15.42	Very dense grey, greenish grey and yellow with mottled white Gravelly Silty SAND. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)						58/300			G(V)	SG														
17																													
18	98.83	18.00		18.00 SPT 8 18.18	Very dense grey, greenish grey and light yellow with mottled white Gravelly Silty SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)						100/130			G(IV)	SG														
19		(4.40)																											
20																													
21				21.00 SPT 9 21.22							100/170																		
22	94.43	22.40		22.40 SPT 10 22.40	Hole Terminated at 22.40 m Refusal (Probably Rock)						100/0																		
23																													
24																													
25																													
26																													
27																													
28																													
29																													
30																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
20/12/2022	16:30	7.15	6.00	2.00
21/12/2022	09:10	18.18	6.00	2.30
22/12/2022	09:15	22.40	6.00	2.20

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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geospecs Foundation & Soil Specialists	REMARKS: HSN214, ER69 DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 10/12/2022 DRILLING DATE COMPLETED: 12/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 27 NORTHING: 41178.775 m EASTING: 16384.458 m REDUCED LEVEL: 117.347 m GWL:3.40m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
		(1.00)			DS 1	Firm brown and yellowish brown Sandy CLAY. (FILL)									FILL	CS													
1	116.35	1.00			0.50																								
		(3.50)			TW 1	Stiff reddish orange, pinkish red and light yellow slightly fine Sandy CLAY. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					10/300																		
2					2.10		•																						
					SPT 1																								
3					2.55																								
					TW 2																								
4					3.60		•				11/300																		
	112.85	4.50			SPT 2																								
5					4.05																								
					TW 3	Stiff pinkish red and light yellow slightly Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					10/300																		
6					5.10		•																						
					SPT 3																								
7					5.55																								
		(5.20)			TW 4																								
8					6.00																								
					SPT 4		•				9/300																		
9					6.70																								
					7.15																								
10					9.00																								
	107.65	9.70			TW 5	Stiff reddish orange and pinkish red with spotted grey and mottled white Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					9/300																		
11					9.70		•																						
		(2.30)			SPT 5																								
12					10.15																								
	105.35	12.00			12.00		•				6/300																		
13					12.45																								
		(3.00)			TW 6	Firm grey with speckled white Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
14																													
					SPT 6																								
15					15.00		•				21/300																		
	102.35	15.00			15.45																								
16																													
		(3.00)			TW 7	Very stiff greyish white with mottled dark grey fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
17																													
					SPT 7																								
18	99.35	18.00			15.45																								



- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN219, ER68

DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 10/12/2022 DRILLING DATE COMPLETED: 12/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 27 NORTHING: 41178.775 m EASTING: 16384.458 m REDUCED LEVEL: 117.347 m GWL:3.40m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							20	40	60	80																			
19		(3.00)	x	x	18.00 SPT 8 18.45	Very stiff greenish grey with speckled white fine Sandy SILT. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					34/300			G(V)	MS														
20			x	x																									
21	96.35	21.00	.	.	21.00 SPT 9 21.31	Very dense grey with speckled white Gravelly Silty fine to coarse SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/210			G(IV)	SG														
22		(2.80)	.	.																									
23			.	.																									
24	93.55	23.80	.	.	23.80 SPT 10 23.80	Hole Terminated at 23.80 m Refusal (Probably Rock)					100/0																		
25																													
26																													
27																													
28																													
29																													
30																													
31																													
32																													
33																													
34																													
35																													
36																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
10/12/2022	16:00	15.45	6.00	3.50
12/12/2022	09:15	23.80	6.00	3.30

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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 Foundation & Soil Specialists	REMARKS: HSN219, ER68 DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 28/12/2022 DRILLING DATE COMPLETED: 30/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: BOSE										BORING LOG: BH 28 NORTHING: 41125.247 m EASTING: 16342.505 m REDUCED LEVEL: 119.653 m GWL:2.58m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
	119.25	(0.40)			DS 1	Firm dark reddish orange and olive grey very Gravelly Silty CLAY with fine sand. (FILL)																							
					DS 2	Firm reddish orange slightly Gravelly Silty CLAY. (FILL)																							
1		(1.10)																											
	118.15	1.50																											
2		(1.50)			TW 1	Firm reddish orange slightly fine Sandy SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					5/300					0/20/37/43	54 (UU)	0											
					SPT 1																								
3	116.65	3.00																											
		(0.60)			TW 2	Stiff reddish orange and brownish yellow fine Sandy Silty CLAY. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					9/300																		
4	116.05	3.60																											
					SPT 2																								
5					U 1	Stiff reddish brown, purplish grey and brownish yellow slightly fine Sandy SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					10/300					0/28/32/40	75 (UU)	0											
					SPT 3																								
6					U 2						11/300																		
					SPT 4																								
7																													
					SPT 5																								
8		(8.40)																											
					U 3																								
9																													
					SPT 6																								
10																													
					SPT 7																								
11																													
12	107.65	12.00				Very stiff greenish grey partially with speckled and streaked white SILT with traces of fine sand. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					11/300																		
13																													
14																													
15		(6.00)									10/300																		
16																													
17																													
18	101.65	18.00																											



Sample Pressuremeter Test (PRM) Core Run Field Vane Shear Test (FVST)	Permeability / Packer Test (PKT) SPT N Value Attempt TW/P/MZ/U Piston Sample Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN214, ER69

DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 28/12/2022 DRILLING DATE COMPLETED: 30/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: BOSE										BORING LOG: BH 28 NORTHING: 41125.247 m EASTING: 16342.505 m REDUCED LEVEL: 119.653 m GWL:2.58m dated																										
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL																										
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80																							
							X Undrained Shear Strength (kPa)																																							
19		(3.00)			18.00 SPT 8 18.45	Very stiff grey and yellow with mottled white slightly Gravelly very Sandy SILT. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					24/300				G(V)	MG																														
20																																														
21	98.65	21.00			21.00 SPT 9 21.03	Very dense grey and dark yellowish brown with speckled and mottled white very Sandy GRAVEL. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/10																																			
22																																														
23																																														
24		(5.20)			24.00 SPT 10 24.05						100/30				G(IV)	GS																														
25																																														
26	93.45	26.20			26.20 SPT 11 26.20	Hole Terminated at 26.20 m Refusal (Probably Rock)					100/0																																			
27							Ground Water Level (Measured from Ground Level) <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Date (dd/mm/yyyy)</th> <th>Time (hh:mm)</th> <th>Borehole Depth (m)</th> <th>Casing Depth (m)</th> <th>Water Level (m)</th> </tr> <tr> <td>28/12/2022</td> <td>16:30</td> <td>7.15</td> <td>6.00</td> <td>2.70</td> </tr> <tr> <td>29/12/2022</td> <td>09:10</td> <td>18.45</td> <td>6.00</td> <td>2.50</td> </tr> <tr> <td>30/12/2022</td> <td>09:00</td> <td>26.20</td> <td>6.00</td> <td>2.55</td> </tr> </table>										Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)	28/12/2022	16:30	7.15	6.00	2.70	29/12/2022	09:10	18.45	6.00	2.50	30/12/2022	09:00	26.20	6.00	2.55										
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)																																										
28/12/2022	16:30	7.15	6.00	2.70																																										
29/12/2022	09:10	18.45	6.00	2.50																																										
30/12/2022	09:00	26.20	6.00	2.55																																										
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29																																														
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34																																														
35																																														
36																																														

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 23/12/2022 DRILLING DATE COMPLETED: 27/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 29 NORTHING: 41120.443 m EASTING: 16384.362 m REDUCED LEVEL: 119.396 m GWL:2.40m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
	119.10	(0.30)			DS 1	Firm reddish orange and olive grey Silty CLAY with gravel. (FILL)																							
1		(1.20)			DS 2	Loose brownish yellow Silty Clayey fine and medium SAND. (FILL)																							
	117.90	1.50																											
2		(0.60)			TW 1	Stiff dark reddish orange Gravelly Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
	117.30	2.10			SPT 1																								
3		(0.90)																											
	116.40	3.00																											
4		(1.50)			TW 2	Firm reddish pink and brownish yellow fine and medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
					SPT 2																								
	114.90	4.50																											
5					TW 3	Stiff reddish orange and brownish yellow slightly fine Sandy SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
					SPT 3																								
6																													
					TW 4	Firm reddish pink and brownish yellow fine Sandy SILT with clay and some gravel. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
7		(4.50)			SPT 4																								
8																													
9																													
	110.40	9.00			U 1	Very stiff light brownish yellow and yellowish grey slightly Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
10		(3.00)			SPT 5																								
11																													
12																													
	107.40	12.00			SPT 6																								
13		(3.00)				Dense brownish yellow and yellowish grey Sandy Clayey coarse GRAVEL. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
14																													
15																													
	104.40	15.00			SPT 7																								
16		(3.00)				Very stiff brownish yellow occasionally with mottled grey and white Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)																							
17																													
18																													
	101.40	18.00																											

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	- Mazier - Thick Wall Open Drive - Core Run - SPTLS - SPT Liner - Water	- Casagrande Piezometer - Water Standpipe Consolidated Undrained Triaxial Test - CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN219, ER68

DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 23/12/2022 DRILLING DATE COMPLETED: 27/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: JAYAPANDIAN										BORING LOG: BH 29 NORTHING: 41120.443 m EASTING: 16384.362 m REDUCED LEVEL: 119.396 m GWL:2.40m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
19					18.00 SPT 8 18.41	Very dense greenish grey and grey with mottled yellowish white Gravelly Silty SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/260																		
20																													
21		(6.00)			21.00 SPT 9 21.19						100/130			G(IV)	SG														
22																													
23																													
24	95.40	24.00			24.00 SPT 10 24.29	Very dense greenish grey and brownish yellow with mottled white Gravelly fine to coarse SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON) Hole Terminated at 24.29 m					100/190			G(IV)	SG														
25	95.11	(0.29) 24.29																											
26																													
27																													
28																													
29																													
30																													
31																													
32																													
33																													
34																													
35																													
36																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
23/12/2022	16:30	15.45	6.00	2.30
27/12/2022	08:50	24.29	6.00	2.50

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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 Foundation & Soil Specialists	REMARKS: HSN219, ER68 DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 14/12/2022 DRILLING DATE COMPLETED: 16/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: BOSE										BORING LOG: BH 30 NORTHING: 41113.601 m EASTING: 16424.521 m REDUCED LEVEL: 118.953 m GWL:2.17m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							X Undrained Shear Strength (kPa)																						
							20 40 60 80																						
							20 40 60 80																						
19		(3.00)			SPT 8 18.19	Very stiff greenish grey with mottled white slightly Gravelly very Sandy SILT. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/125				G(IV)	MG													
20																													
21	97.95	21.00			21.00 SPT 9 21.07	Very dense greenish grey with mottled white very Gravelly slightly Silty SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/40				G(IV)	SG													
22		(2.30)																											
23	95.65	23.30			23.30 SPT 10 23.30	Hole Terminated at 23.30 m Refusal (Probably Rock)					100/0																		
24																													
25																													
26																													
27																													
28																													
29																													
30																													
31																													
32																													
33																													
34																													
35																													
36																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
14/12/2022	16:30	15.45	6.00	2.10
15/12/2022	09:10	21.07	6.00	2.30
16/12/2022	08:50	23.30	6.00	2.10

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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	REMARKS: HSN214, ER69 DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 16/12/2022 DRILLING DATE COMPLETED: 20/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: BOSE										BORING LOG: BH 31 NORTHING: 41106.415 m EASTING: 16468.147 m REDUCED LEVEL: 118.562 m GWL:2.62m dated																											
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL																											
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80																								
							X Undrained Shear Strength (kPa)																																								
21			x			Very stiff pinkish red and reddish brown Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					26/300																																				
22			x																																												
23		(9.00)	x																																												
24			x								34/300																																				
25			x																																												
26			x																																												
27	91.56	27.00	x			Very dense brown and brownish grey Sandy GRAVEL. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON) Hole Terminated at 27.80 m Refusal (Probably Rock)					100/10																																				
28	90.76	27.80	x								100/0																																				
29							Ground Water Level (Measured from Ground Level) <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Date (dd/mm/yyyy)</th> <th>Time (hh:mm)</th> <th>Borehole Depth (m)</th> <th>Casing Depth (m)</th> <th>Water Level (m)</th> </tr> </thead> <tbody> <tr> <td>17/12/2022</td> <td>16:30</td> <td>10.05</td> <td>9.00</td> <td>2.70</td> </tr> <tr> <td>19/12/2022</td> <td>09:10</td> <td>24.45</td> <td>9.00</td> <td>2.55</td> </tr> <tr> <td>20/12/2022</td> <td>09:15</td> <td>27.80</td> <td>9.00</td> <td>2.60</td> </tr> </tbody> </table>										Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)	17/12/2022	16:30	10.05	9.00	2.70	19/12/2022	09:10	24.45	9.00	2.55	20/12/2022	09:15	27.80	9.00	2.60											
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)																																											
17/12/2022	16:30	10.05	9.00	2.70																																											
19/12/2022	09:10	24.45	9.00	2.55																																											
20/12/2022	09:15	27.80	9.00	2.60																																											
30																																															
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40																																															



- Sample



- Pressuremeter Test (PRM)



- Core Run



- Field Vane Shear Test (FVST)



- Permeability / Packer Test (PKT)



- SPT N Value



- Attempt TW/P/MZ/U



- Piston Sample



- Thin Wall Push

M - Mazier

U - Thick Wall Open Drive

C - Core Run

SPTLS - SPT Liner

W - Water

PZS - Casagrande Piezometer

WSP - Water Standpipe

*CU - Consolidated Undrained Triaxial Test

*CD - Consolidated Drained Triaxial Test

REMARKS:
HSN214, ER69

DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 28/12/2022 DRILLING DATE COMPLETED: 31/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: KALAI										BORING LOG: BH 32 NORTHING: 41078.546 m EASTING: 16357.333 m REDUCED LEVEL: 120.067 m GWL:3.07m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							● SPT N blows / 300 mm X Undrained Shear Strength (kPa) 20 40 60 80																						
1	118.57	1.50			DS 1	Firm reddish orange and brownish yellow fine and medium Sandy SILT. (FILL)					4/300			FILL	MS														
2	117.97	(0.60) 2.10			TW 1	Loose reddish brown and brownish yellow Sandy Silty GRAVEL. (FILL)								FILL	GS														
3	117.07	(0.90) 3.00			SPT 1	Firm reddish orange and reddish brown very Clayey Sandy GRAVEL. (FILL)								FILL	GC														
4	115.57	(1.50) 4.50			TW 2	Firm light reddish pink and light brownish yellow SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					7/300			G(VI)	M														
5		(1.50) 6.00			U 1	Very stiff dark reddish brown, brownish yellow and yellowish grey slightly Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					19/300			G(VI)	MS	0/13/46/41	163 (UU)	0											
6	114.07	6.00			SPT 3																								
7		(3.00) 9.00			TW 3	Firm reddish orange, reddish pink and light brownish yellow fine Sandy SILT with clay. (Residual, CHOA CHU KANG GARNODIORITE-TONALITE PLUTON)					6/300			G(VI)	MS														
8					SPT 4																								
9	111.07	9.00			TW 4	Stiff light reddish pink, light yellow and yellowish grey SILT with sand. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					8/300					0/11/49/40	81 (UU)	0											
10					SPT 5																								
11		(6.00) 15.00			12.00 SPT 6						9/300			G(VI)	M														
12																													
13																													
14																													
15	105.07	15.00			15.00 SPT 7	Very stiff reddish orange with mottled brownish yellow and purplish grey SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					21/300			G(VI)	M														
16		(3.00) 18.00			15.45																								
17																													
18	102.07	18.00			18.00 SPT 8	Stiff grey with mottled white fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					10/300			G(VI)	MS														
19		(3.00) 21.00			18.45																								
20																													

☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Undrained Triaxial Test *CU - *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN214, ER69

 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 28/12/2022 DRILLING DATE COMPLETED: 31/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: KALAI										BORING LOG: BH 32 NORTHING: 41078.546 m EASTING: 16357.333 m REDUCED LEVEL: 120.067 m GWL:3.07m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	● SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
21	99.07	21.00				Very stiff purplish red and grey with mottled white Sandy SILT with some fine gravel. (Completely weathered, CHOA CHU KANG GRANODIROITE-TONALITE PLUTON)					19/300			G(VI)	MS														
22																													
23																													
24		(5.00)													G(V)	MS													
25																													
26	94.07	26.00				Very dense grey with mottled light yellow and white slightly Gravelly very Silty SAND. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON) Hole Terminated at 26.70 m Refusal (Probably Rock)					100/40																		
		(0.70)																											
27	93.37	26.70										100/0			G(IV)	SG													
28																													
29																													
30																													
31																													
32																													
33																													
34																													
35																													
36																													
37																													
38																													
39																													
40																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
28/12/2022	16:30	10.15	4.50	3.20
30/12/2022	09:00	21.45	4.50	3.00
31/12/2022	09:15	26.70	4.50	3.00

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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 Foundation & Soil Specialists	REMARKS: HSN214, ER69 DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 24/12/2022 DRILLING DATE COMPLETED: 28/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: KALAI										BORING LOG: BH 33 NORTHING: 41070.948 m EASTING: 16395.325 m REDUCED LEVEL: 120.187 m GWL:2.83m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
1		(1.50)			DS 1	Firm dark yellowish brown and brown fine and medium Sandy SILT. (FILL)									FILL	MS													
2	118.69	1.50			SPT 1	Medium dense brown and dark brownish yellow fine Sandy Silty GRAVEL. (FILL)						18/300			FILL	GS													
3		(1.50)																											
4	117.19	3.00			TW 1	Firm reddish pink, light brownish yellow and yellowish grey slightly fine and medium Sandy SILT with clay. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)						4/300			G(VI)	MS	0/25/36/39	65 (UU)	0										
5		(1.50)			SPT 2																								
6	115.69	4.50			TW 2	Stiff reddish pink, light brownish yellow and yellowish grey slightly fine and medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)						11/300																	
7		(4.50)			SPT 3																								
8					TW 3																								
9					SPT 4							11/300			G(VI)	MS	0/27/40/33	84 (UU)	0										
10	111.19	9.00			U 1	Very stiff brownish yellow and light reddish orange fine and medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)						18/300			G(VI)	MS													
11		(3.00)			SPT 5																								
12																													
13	108.19	12.00			U 2	Very stiff greenish grey and grey with mottled white Sandy SILT with some fine gravel. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)						16/300			G(V)	MS													
14					SPT 6																								
15																													

☒ - Sample ■ - Pressuremeter Test (PRM) ■ - Core Run ⊕ - Field Vane Shear Test (FVST)	▲ - Permeability / Packer Test (PKT) ● - SPT N Value □ - Attempt TW/P/MZ/U P - Piston Sample TW - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe Consolidated Triaxial Test *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN214, ER69

 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 24/12/2022 DRILLING DATE COMPLETED: 28/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: KALAI										BORING LOG: BH 33 NORTHING: 41070.948 m EASTING: 16395.325 m REDUCED LEVEL: 120.187 m GWL:2.83m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
		(6.00)			15.00 SPT 7 15.45	Very stiff greenish grey and grey with mottled white Sandy SILT with some fine gravel. (Completely weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					17/300																		
16														G(V)	MS														
17																													
18	102.19	18.00			18.00 SPT 8 18.42	Very stiff bluish grey occasionally with speckled white slightly Gravelly SILT. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/280																		
19		(3.00)												G(IV)	MG														
20																													
21	99.19	21.00			21.00 SPT 9 21.03 21.40	Very dense greenish grey and grey with mottled white Sandy GRAVEL. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/20																		
22	98.79	(0.40) 21.40			21.40 SPT 10	Hole Terminated at 21.40 m Refusal (Probably Rock)					100/0			G(IV)	GS														
23																													
24																													
25																													
26																													
27																													
28																													
29																													
30																													

Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
24/12/2022	16:30	9.95	6.00	2.70
27/12/2022	09:10	21.03	6.00	3.00
28/12/2022	09:10	21.40	6.00	2.80

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS: HSN214, ER69	DATA QUALITY RATING
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PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 21/12/2022 DRILLING DATE COMPLETED: 23/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: BOSE										BORING LOG: BH 34 NORTHING: 41063.287 m EASTING: 16444.771 m REDUCED LEVEL: 118.979 m GWL:2.73m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/S/A/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C (kPa)	φ (°)	20	40	60	80						
1	117.48	1.50			DS 1 0.30 DS 2 1.00	Soft to firm dark brownish yellow and brown slightly Sandy Gravelly SILTY CLAY. (FILL)																							
2		(1.50)			TW 1 2.10 SPT 1 2.55	Soft dark yellowish brown, brown and olive grey fine Sandy Clayey SILT. (FILL)					3/300					0/38/43/19	29 (UU)	0											
3	115.98	3.00			TW 2 3.60 SPT 2 4.05	Firm brownish yellow and light reddish orange slightly Gravelly fine and medium Sandy SILT with clay. (FILL)					7/300																		
4	114.48	4.50			TW 3 5.10 SPT 3 5.55	Stiff light brownish yellow and light reddish pink fine and medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					10/300					0/36/33/31	92 (UU)	0											
5	112.98	6.00			TW 4 6.70 SPT 4 7.15	Stiff light brownish yellow and light reddish pink fine and medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					9/300																		
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14		(15.00)																											
15																													
16																													
17																													
18																													

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST) - Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water	PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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REMARKS:
 HSN214, ER69

 DATA QUALITY RATING

PROJECT: SI WORK FOR SUNGEI TENGAH ROAD / LORONG PASU CLIENT: M/S. YONGSHENG E&C PTE LTD PROJECT NO.: BCA TEMPORARY LOCATION: SUNGEI TENGAH ROAD / LORONG PASU DRILLING DATE STARTED: 21/12/2022 DRILLING DATE COMPLETED: 23/12/2022 LOGGED BY: SUBARAJ CHECKED BY: OKKAR										JOB REF. NO.: GSS/12654A/22 DRILLING RIG: YBM-2WS BOREHOLE DIA: 100mm CORE DIA: DRILLING METHOD: RO DRILLED BY: BOSE										BORING LOG: BH 34 NORTHING: 41063.287 m EASTING: 16444.771 m REDUCED LEVEL: 118.979 m GWL:2.73m dated									
Scale	Reduced Level (m)	Depth (m) (Thickness)	Graphic Log	Legend	Type & No.	Description	SPT N blows / 300 mm				SPT N blows/300mm	In Situ Test	Rock		Geological Classification	British Soil Classification	Grain Size Analysis G/SA/S/C	Shear Strength		PL WC LL									
							20	40	60	80			TCR (%)	RQD (%)				C	φ	20	40	60	80						
							●																						
19					18.00 SPT 8 18.45	Stiff light brownish yellow and light reddish pink fine and medium Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					12/300			G(VI)	MS														
20																													
21	97.98	21.00			21.00 SPT 9 21.45	Stiff light greenish grey with mottled white fine Sandy SILT. (Residual, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)	●				11/300			G(VI)	MS														
22		(1.50)																											
23	96.48	22.50			22.50 SPT 10 22.54	Very dense greenish grey and grey with mottled white Sandy GRAVEL. (Highly weathered, CHOA CHU KANG GRANODIORITE-TONALITE PLUTON)					100/30			G(IV)	GS														
24	95.28	23.70			23.70 SPT 11 23.70	Hole Terminated at 23.70 m Refusal (Probably Rock)					100/0																		
25																													
26																													
27																													
28																													
29																													
30																													
31																													
32																													
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34																													
35																													
36																													

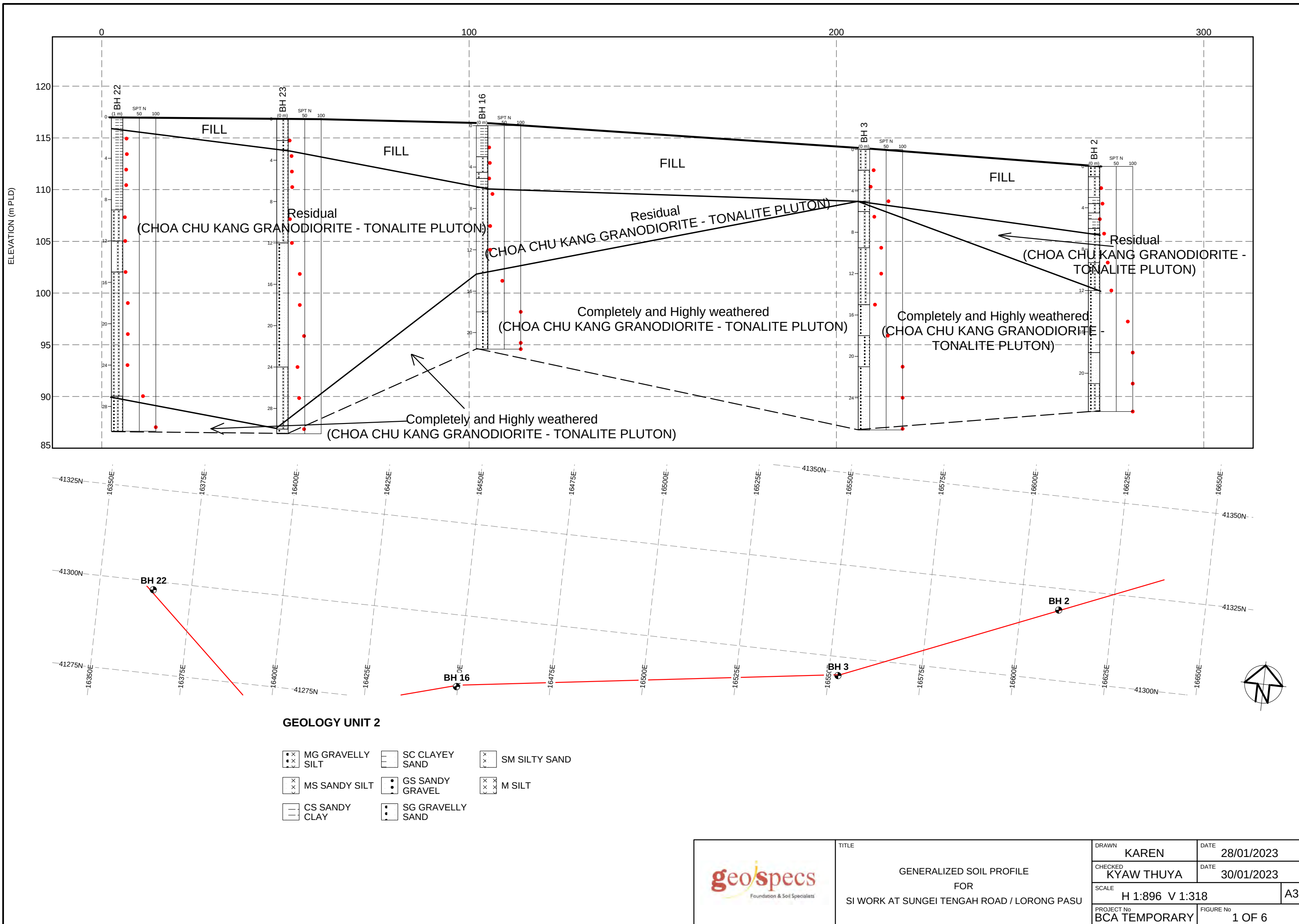
Ground Water Level (Measured from Ground Level)				
Date (dd/mm/yyyy)	Time (hh:mm)	Borehole Depth (m)	Casing Depth (m)	Water Level (m)
21/12/2022	16:30	12.45	6.00	2.60
22/12/2022	09:10	22.54	6.00	2.90
23/12/2022	08:50	23.70	6.00	2.70

- Sample - Pressuremeter Test (PRM) - Core Run - Field Vane Shear Test (FVST)	- Permeability / Packer Test (PKT) - SPT N Value - Attempt TW/P/MZ/U - Piston Sample - Thin Wall Push	M - Mazier U - Thick Wall Open Drive C - Core Run SPTLS - SPT Liner W - Water PZS - Casagrande Piezometer WSP - Water Standpipe *CU - Consolidated Undrained Triaxial Test *CD - Consolidated Drained Triaxial Test
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geospecs Foundation & Soil Specialists	REMARKS: HSN214, ER69 DATA QUALITY RATING
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APPENDIX C

GENERALIZED SOIL PROFILE

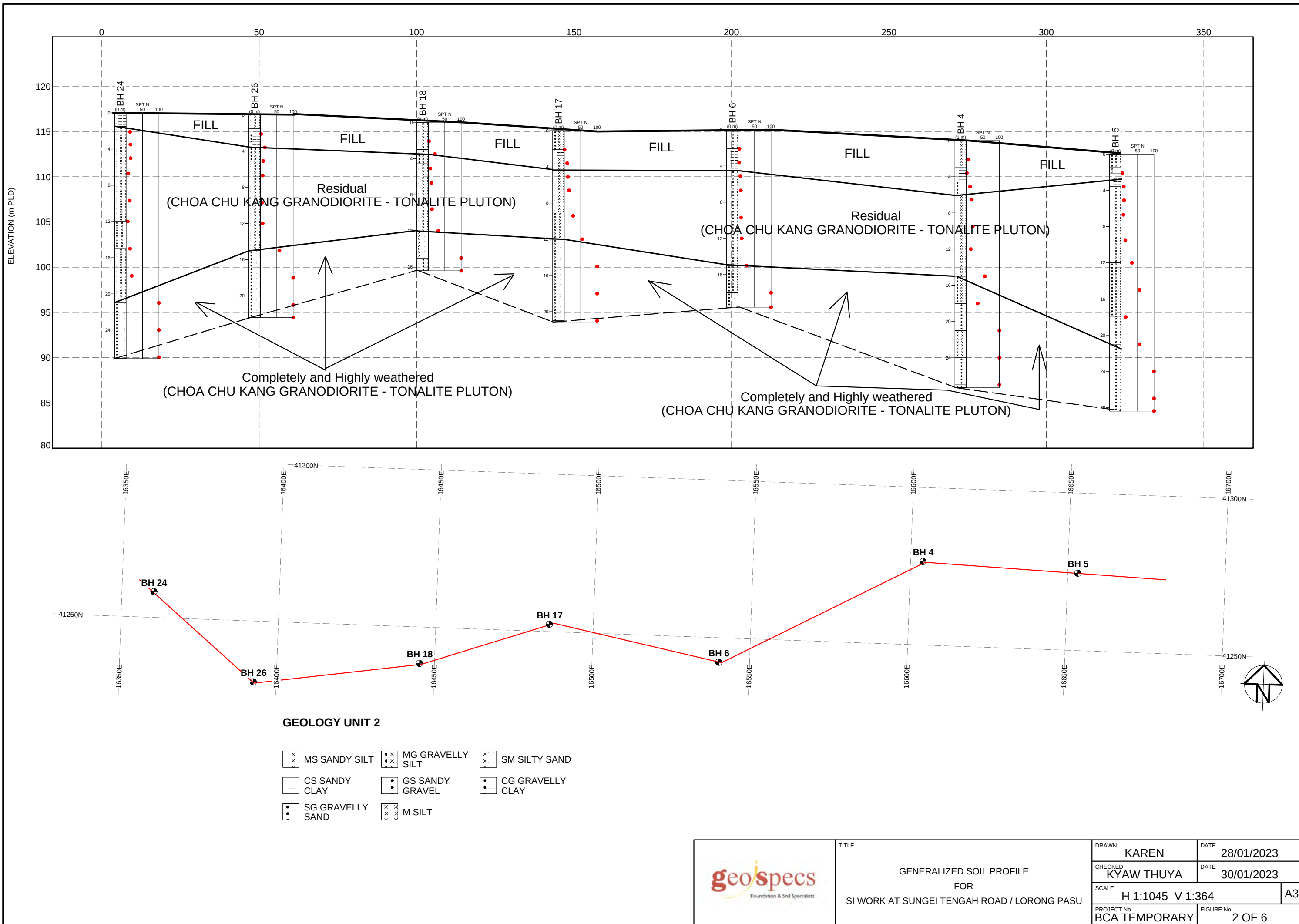


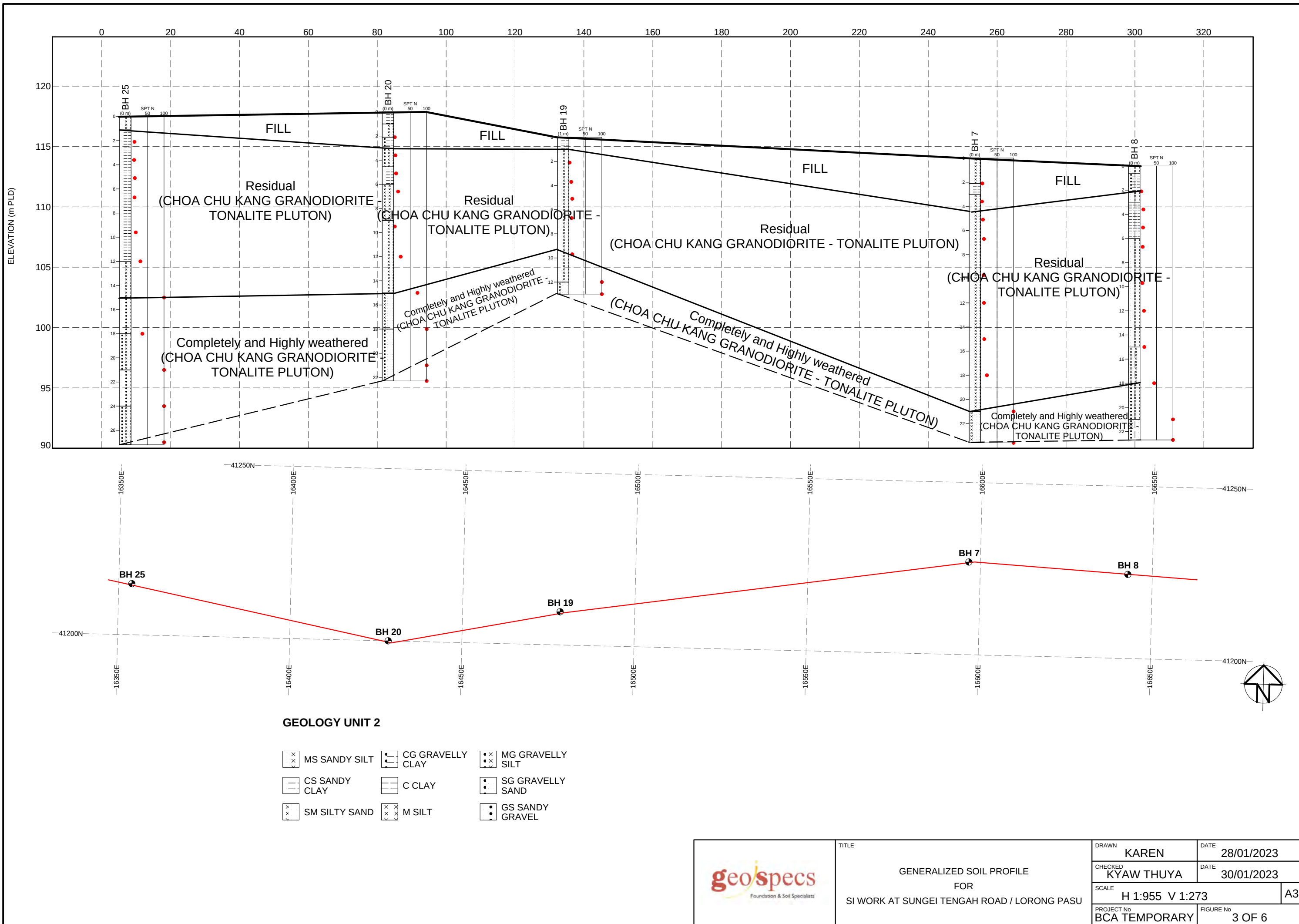
GEOLOGY UNIT 2

- | | | |
|------------------|------------------|---------------|
| MG GRAVELLY SILT | SC CLAYEY SAND | SM SILTY SAND |
| MS SANDY SILT | GS SANDY GRAVEL | M SILT |
| CS SANDY CLAY | SG GRAVELLY SAND | |

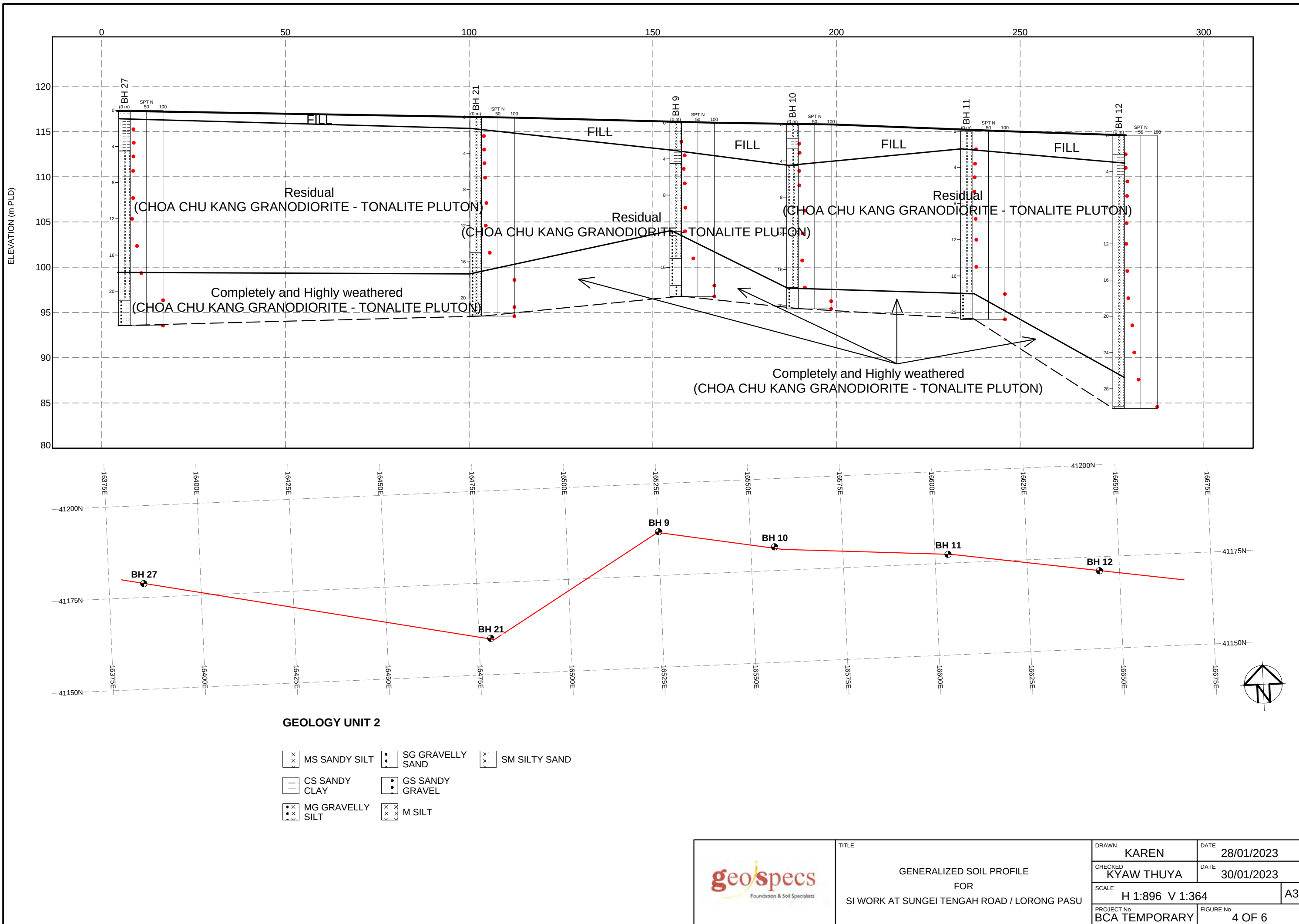


TITLE GENERALIZED SOIL PROFILE FOR SI WORK AT SUNGEI TENGAH ROAD / LORONG PASU	DRAWN KAREN	DATE 28/01/2023
	CHECKED KYAW THUYA	DATE 30/01/2023
	SCALE H 1:896 V 1:318	A3
	PROJECT No BCA TEMPORARY	FIGURE No 1 OF 6





	TITLE GENERALIZED SOIL PROFILE FOR SI WORK AT SUNGEI TENGAH ROAD / LORONG PASU		DRAWN KAREN	DATE 28/01/2023
			CHECKED KYAW THUYA	DATE 30/01/2023
			SCALE H 1:955 V 1:273	
			PROJECT No BCA TEMPORARY	
			FIGURE No 3 OF 6	
			A3	

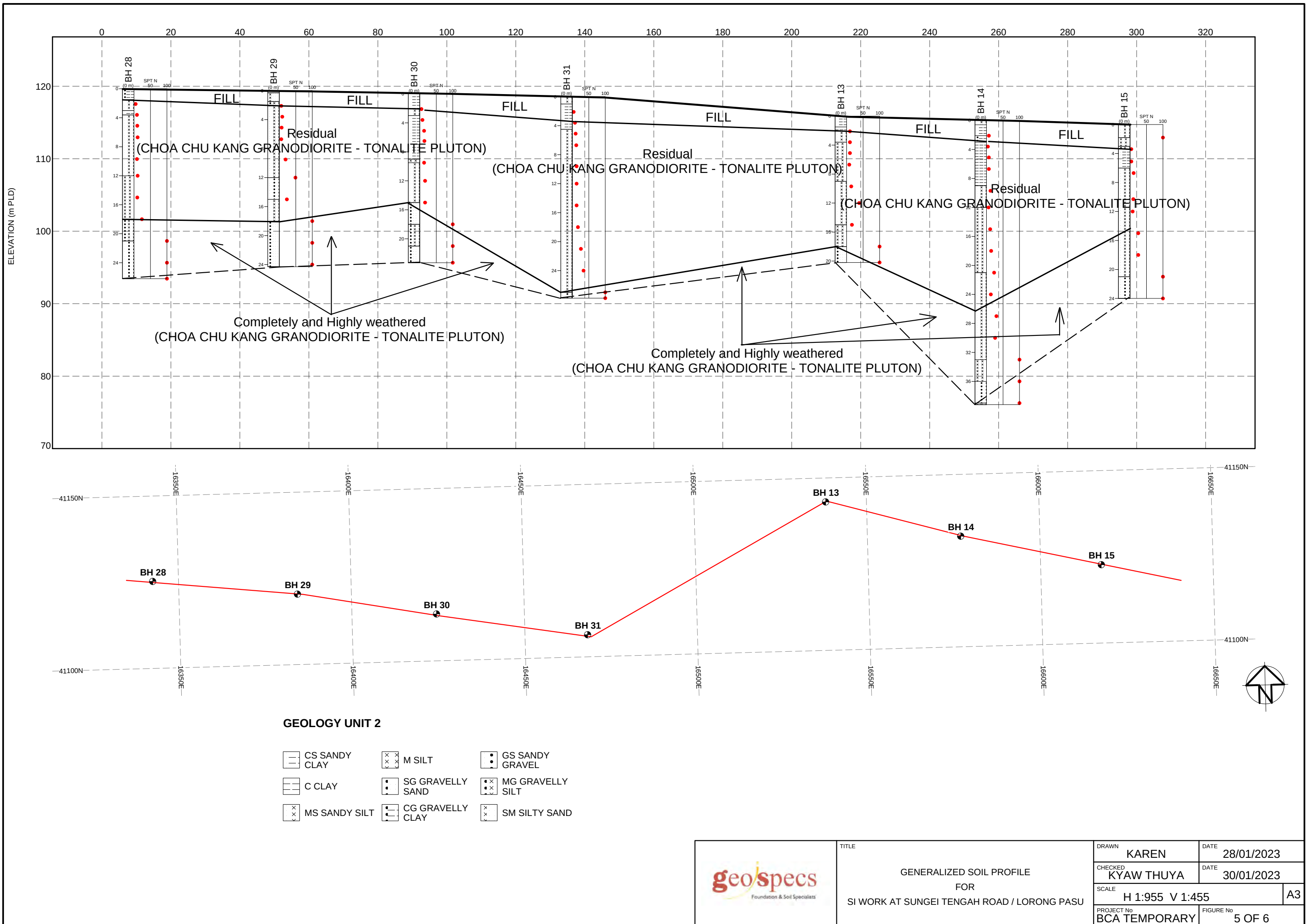


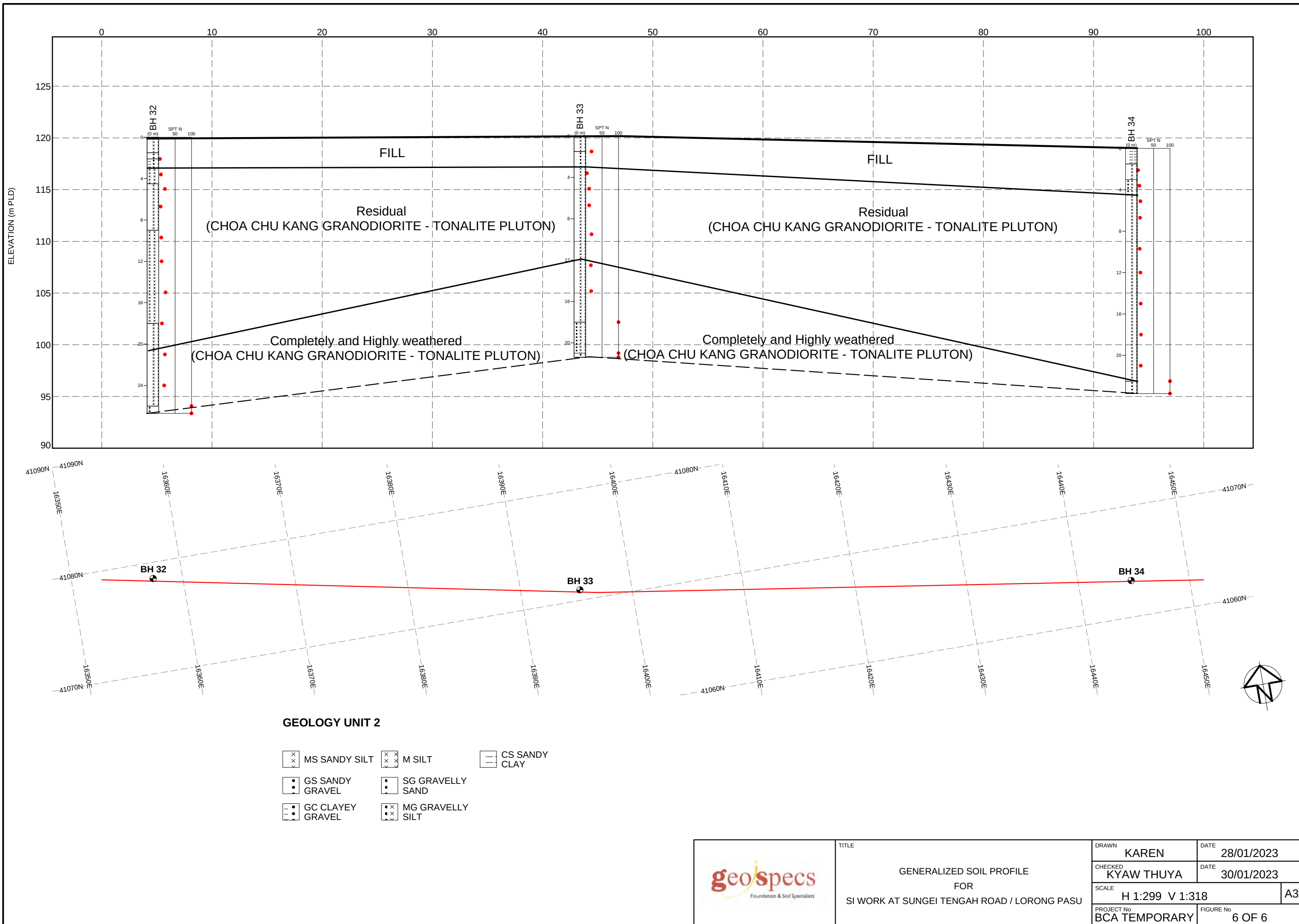
GEOLOGY UNIT 2

- | | | |
|------------------|------------------|---------------|
| MS SANDY SILT | SG GRAVELLY SAND | SM SILTY SAND |
| CS SANDY CLAY | GS SANDY GRAVEL | |
| MG GRAVELLY SILT | M SILT | |



TITLE GENERALIZED SOIL PROFILE FOR SI WORK AT SUNGEI TENGAH ROAD / LORONG PASU	DRAWN KAREN	DATE 28/01/2023
	CHECKED KYAW THUYA	DATE 30/01/2023
	SCALE H 1:896 V 1:364	A3
	PROJECT No BCA TEMPORARY	FIGURE No 4 OF 6





TITLE GENERALIZED SOIL PROFILE FOR SI WORK AT SUNGEI TENGAH ROAD / LORONG PASU	DRAWN KAREN	DATE 28/01/2023
	CHECKED KYAW THUYA	DATE 30/01/2023
	SCALE H 1:299 V 1:318	A3
	PROJECT No BCA TEMPORARY	FIGURE No 6 OF 6

APPENDIX D

SUMMARY OF LABORATORY TEST RESULTS



SOIL MATERIALS LABORATORY PTE LTD

Company Registration Number. 201428681E
 25 Kaki Bukit Road 4 #08-38 Synergy@Kaki Bukit Singapore 417800
 Tel: 67022556 Fax: 67022557 Email: smlab@singnet.com.sg



SUMMARY OF LABORATORY TESTS RESULTS

Project:			Sungei Tengah Road/Lorong Pasu											
Job Ref No:			SML/345A/2022											
Date of Report:			26 January 2023											
Boring No:			BH2											
Sample No:			TW1	TW2	TW3	U2								
Specimen Depth (m)			From	1.50	3.00	4.50	9.00							
			To	2.10	3.60	5.10	9.30							
Natural Moisture Content			%	23	29	29	36							
Bulk Density			Mg/m3	2.04	2.03	1.97	1.99							
Dry Density			Mg/m3	1.66	1.57	1.53	1.46							
Particle Density of Soil			Mg/m3	2.69			2.68							
Grain Size Analysis by Wet Sieving Method	Gravel	%	0			0								
	Sand	%	46			47								
	Silt	%	29			39								
	Clay	%	25			14								
Atterberg Limits	Liquid Limit	%	33			51								
	Plastic Limit	%	25			32								
	Plasticity Index	%	8			19								
Unconfined Compression Test	Shear Strength	kN/m2												
	Unconfined Compressive strength	kN/m2												
Triaxial Compression Test	Total Stress		UU			UU								
	Cohesion	kN/m2	80			99								
	Phi Angle	degree	0			0								
	Effective Stress													
	Cohesion	kN/m2												
	Phi Angle	degree												
Consolidation Test	One Dimensional Consol													
	Initial Void Ratio													
	Degree of Saturation	%												
	Preconsolidation Press.	kN/m2												
	Compression Index													
Rock Test	Point Load Strength	N/mm ²												
	Compressive Strength	N/mm ²												
Legend:			Remarks											
UU-Unconsolidated Undrained Test CU-Consolidated Undrained Test CD-Consolidated Drained Test UUP-UU with Pore Pressure Measurement UC-Unconfined Compression M-Multistage Tests O-One Dimensional Consolidation			Prepared:  Si Thu Htun Engineer											
			Checked/Approved:  Khin Maung Nyunt Laboratory Manager											

This laboratory is Accredited under The Singapore Accreditation Council - Singapore Laboratory Accreditation Scheme (SAC-SINGLAS) and has met the requirement of ISO/IEC 17025:2017.

The results reported herein have been performed in accordance with the laboratory's terms of accreditation under the Singapore Accreditation Council- Singapore Laboratory Accreditation Scheme (SAC-SINGLAS).

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SOIL MATERIALS LABORATORY PTE LTD

Company Registration Number. 201428681E
25 Kaki Bukit Road 4 #08-38 Synergy@Kaki Bukit Singapore 417800
Tel: 67022556 Fax: 67022557 Email: smlab@singnet.com.sg



SUMMARY OF LABORATORY TESTS RESULTS

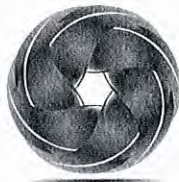
Project:		Sungei Tengah Road/Lorong Pasu											
Job Ref No:		SML/345A/2022											
Date of Report:		26 January 2023											
Boring No:		BH3				BH4							
Sample No:		U1	TW1	TW2	U2	TW1	TW2	U1	U2	U3			
Specimen Depth (m)	From	1.50	3.00	4.50	6.00	1.50	3.00	4.50	6.00	9.00			
	To	2.00	3.60	5.00	6.50	2.10	3.60	5.10	6.50	9.50			
Natural Moisture Content		%	29	28	30	34	24	41	27	27	33		
Bulk Density		Mg/m ³	2.00	2.00	1.94	1.93	1.91	2.00	2.11	2.02	1.97		
Dry Density		Mg/m ³	1.55	1.56	1.49	1.44	1.54	1.41	1.66	1.59	1.48		
Particle Density of Soil		Mg/m ³		2.66		2.68		2.66			2.68		
Grain Size Analysis by Wet Sieving Method	Gravel	%		0		0		0			0		
	Sand	%		57		18		39			50		
	Silt	%		28		53		37			30		
	Clay	%		15		29		24			20		
Atterberg Limits	Liquid Limit	%		43		48		51			45		
	Plastic Limit	%		29		29		30			29		
	Plasticity Index	%		14		19		21			16		
Unconfined Compression Test	Shear Strength	kN/m ²											
	Unconfined Compressive strength	kN/m ²											
Triaxial Compression Test	Total Stress			UU		UU		UU			UU		
	Cohesion	kN/m ²		27		75		27			104		
	Phi Angle	degree		0		0		0			0		
	Effective Stress												
	Cohesion	kN/m ²											
	Phi Angle	degree											
Consolidation Test	One Dimensional Consol												
	Initial Void Ratio												
	Degree of Saturation	%											
	Preconsolidation Press.	kN/m ²											
	Compression Index												
Rock Test	Point Load Strength	N/mm ²											
	Compressive Strength	N/mm ²											
Legend:		Remarks											
UU-Unconsolidated Undrained Test CU-Consolidated Undrained Test CD-Consolidated Drained Test UUP-UU with Pore Pressure Measurement UC-Unconfined Compression M-Multistage Tests O-One Dimensional Consolidation		Prepared:						Checked/Approved:					
		 Si Thu Htun Engineer						 Khin Maung Nyunt Laboratory Manager					

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SOIL MATERIALS LABORATORY PTE LTD

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Tel: 67022556 Fax: 67022557 Email: smlab@singnet.com.sg



SUMMARY OF LABORATORY TESTS RESULTS

Project:		Sungei Tengah Road/Lorong Pasu											
Job Ref No:		SML/345A/2022											
Date of Report:		26 January 2023											
Boring No:		BH5				BH6							
Sample No:		TW1	TW2	TW4	U1	TW1	TW2	TW3	TW5				
Specimen Depth (m)	From	1.50	3.00	6.00	9.00	1.50	3.00	4.50	9.00				
	To	2.10	3.60	6.70	9.50	2.10	3.60	5.10	9.70				
Natural Moisture Content		%	16	38	39	32	23	35	32	35			
Bulk Density		Mg/m ³	2.02	1.85	1.85	1.92	1.99	1.93	1.94	1.89			
Dry Density		Mg/m ³	1.74	1.34	1.33	1.45	1.62	1.43	1.47	1.40			
Particle Density of Soil		Mg/m ³	2.65		2.70				2.67	2.68			
Grain Size Analysis by Wet Sieving Method	Gravel	%	0		0				0	0			
	Sand	%	66		36				39	34			
	Silt	%	23		33				33	41			
	Clay	%	11		31				28	25			
Atterberg Limits	Liquid Limit	%	27		56				52	57			
	Plastic Limit	%	23		32				31	31			
	Plasticity Index	%	4		24				21	26			
Unconfined Compression Test	Shear Strength	kN/m ²											
	Unconfined Compressive strength	kN/m ²											
Triaxial Compression Test	Total Stress		UU		UU			UU	UU				
	Cohesion	kN/m ²	48		66			33	63				
	Phi Angle	degree	0		0			0	0				
	Effective Stress												
	Cohesion	kN/m ²											
	Phi Angle	degree											
Consolidation Test	One Dimensional Consol												
	Initial Void Ratio												
	Degree of Saturation	%											
	Preconsolidation Press.	kN/m ²											
	Compression Index												
Rock Test	Point Load Strength	N/mm ²											
	Compressive Strength	N/mm ²											
Legend:		Remarks											
UU-Unconsolidated Undrained Test CU-Consolidated Undrained Test CD-Consolidated Drained Test UUP-UU with Pore Pressure Measurement UC-Unconfined Compression M-Multistage Tests O-One Dimensional Consolidation		Prepared:											
		 Si Thu Htun Engineer						Checked/Approved:  Khin Maung Nyunt Laboratory Manager					

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SUMMARY OF LABORATORY TESTS RESULTS

Project:			Sungei Tengah Road/Lorong Pasu											
Job Ref No:			SML/345A/2022											
Date of Report:			26 January 2023											
Boring No:			BH7				BH8							
Sample No:			TW1	TW2	TW3	U1	TW1	TW2	TW3	TW5				
Specimen Depth (m)			From	1.50	3.00	4.50	6.00	1.50	3.00	4.50	9.00			
			To	2.10	3.60	5.10	6.70	2.10	3.60	5.10	9.70			
Natural Moisture Content			%	34	47	36	38	39	47	51	40			
Bulk Density			Mg/m3	1.87	1.68	1.91	1.77	1.82	1.80	1.73	1.85			
Dry Density			Mg/m3	1.40	1.14	1.40	1.28	1.31	1.22	1.14	1.32			
Particle Density of Soil			Mg/m3	2.65	2.65					2.68	2.68			
Grain Size Analysis by Wet Sieving Method	Gravel	%	0	0						0	0			
	Sand	%	42	40						3	44			
	Silt	%	31	33						46	36			
	Clay	%	27	27						51	20			
Atterberg Limits	Liquid Limit	%	53	65						64	55			
	Plastic Limit	%	30	35						30	32			
	Plasticity Index	%	23	30						34	23			
Unconfined Compression Test	Shear Strength	kN/m2												
	Unconfined Compressive strength	kN/m2												
Triaxial Compression Test	Total Stress		UU	UU						UU	UU			
	Cohesion	kN/m2	51	46						86	52			
	Phi Angle	degree	0	0						0	0			
	Effective Stress													
	Cohesion	kN/m2												
	Phi Angle	degree												
Consolidation Test	One Dimensional Consol													
	Initial Void Ratio													
	Degree of Saturation	%												
	Preconsolidation Press.	kN/m2												
	Compression Index													
Rock Test	Point Load Strength	N/mm ²												
	Compressive Strength	N/mm ²												
Legend:			Remarks											
UU-Unconsolidated Undrained Test CU-Consolidated Undrained Test CD-Consolidated Drained Test UUP-UU with Pore Pressure Measurement UC-Unconfined Compression M-Multistage Tests O-One Dimensional Consolidation			Prepared:  Si Thu Htun Engineer											
			Checked/Approved:  Khin Maung Nyunt Laboratory Manager											

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SUMMARY OF LABORATORY TESTS RESULTS

Project:		Sungei Tengah Road/Lorong Pasu											
Job Ref No:		SML/345A/2022											
Date of Report:		26 January 2023											
Boring No:		BH9				BH10							
Sample No:		TW1	TW2	TW3	TW4	TW1	TW2	TW3	U1				
Specimen Depth (m)	From	1.50	3.00	4.50	6.00	1.50	4.50	6.00	9.00				
	To	2.10	3.60	5.10	6.70	2.10	5.10	6.70	9.50				
Natural Moisture Content	%	44	45	38	38	34	47	47	41				
Bulk Density	Mg/m ³	1.81	1.78	1.83	1.86	1.88	1.73	1.74	1.85				
Dry Density	Mg/m ³	1.26	1.22	1.33	1.35	1.41	1.18	1.18	1.32				
Particle Density of Soil	Mg/m ³	2.68	2.68			2.68			2.68				
Grain Size	Gravel %	0	0			0			0				
Analysis by	Sand %	39	20			27			25				
Wet Sieving	Silt %	33	33			28			57				
Method	Clay %	28	47			45			18				
Atterberg Limits	Liquid Limit %	49	52			44			48				
	Plastic Limit %	30	27			25			30				
	Plasticity Index %	19	25			19			18				
Unconfined Compression Test	Shear Strength kN/m ²												
	Unconfined Compressive strength kN/m ²												
Triaxial Compression Test	Total Stress	UU	UU			UU			UU				
	Cohesion kN/m ²	30	76			36			154				
	Phi Angle degree	0	0			0			0				
	Effective Stress												
	Cohesion kN/m ²												
	Phi Angle degree												
Consolidation Test	One Dimensional Consol												
	Initial Void Ratio												
	Degree of Saturation %												
	Preconsolidation Press. kN/m ²												
	Compression Index												
Rock Test	Point Load Strength N/mm ²												
	Compressive Strength N/mm ²												
Legend:		Remarks											
UU-Unconsolidated Undrained Test CU-Consolidated Undrained Test CD-Consolidated Drained Test UUP-UU with Pore Pressure Measurement UC-Unconfined Compression M-Multistage Tests O-One Dimensional Consolidation		Prepared:  Si Thu Htun Engineer											
		Checked/Approved:  Khin Maung Nyunt Laboratory Manager											

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SUMMARY OF LABORATORY TESTS RESULTS

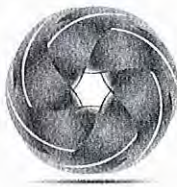
Project:		Sungei Tengah Road/Lorong Pasu											
Job Ref No:		SML/345A/2022											
Date of Report:		26 January 2023											
Boring No:		BH11				BH12							
Sample No:		U1	TW2	TW3	TW4	TW1	TW2	TW4	TW5				
Specimen Depth (m)	From	1.50	4.50	6.00	9.00	1.50	3.00	6.00	9.00				
	To	2.00	5.10	6.70	9.70	2.10	3.60	6.70	9.70				
Natural Moisture Content	%	15	46	42	36	31	38	36	39				
Bulk Density	Mg/m ³	2.14	1.79	1.82	1.89	1.91	1.82	1.85	1.86				
Dry Density	Mg/m ³	1.86	1.23	1.28	1.39	1.46	1.32	1.36	1.34				
Particle Density of Soil	Mg/m ³	2.69	2.68				2.69	2.69					
Grain Size Analysis by Wet Sieving Method	Gravel	%	0	0			0	0					
	Sand	%	39	20			27	57					
	Silt	%	34	47			23	28					
	Clay	%	27	33			50	15					
Atterberg Limits	Liquid Limit	%	33	59			52	51					
	Plastic Limit	%	26	33			27	30					
	Plasticity Index	%	7	26			25	21					
Unconfined Compression Test	Shear Strength	kN/m ²											
	Unconfined Compressive strength	kN/m ²											
Triaxial Compression Test	Total Stress		UU	UU			UU	UU					
	Cohesion	kN/m ²	82	74			44	84					
	Phi Angle	degree	0	0			0	0					
	Effective Stress												
	Cohesion	kN/m ²											
	Phi Angle	degree											
Consolidation Test	One Dimensional Consol												
	Initial Void Ratio												
	Degree of Saturation	%											
	Preconsolidation Press.	kN/m ²											
	Compression Index												
Rock Test	Point Load Strength	N/mm ²											
	Compressive Strength	N/mm ²											
Legend:		Remarks											
UU-Unconsolidated Undrained Test CU-Consolidated Undrained Test CD-Consolidated Drained Test UUP-UU with Pore Pressure Measurement UC-Unconfined Compression M-Multistage Tests O-One Dimensional Consolidation		Prepared:						Checked/Approved:					
		 Si Thu Htun Engineer						 Khin Maung Nyunt Laboratory Manager					

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SUMMARY OF LABORATORY TESTS RESULTS

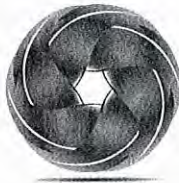
Project:			Sungei Tengah Road/Lorong Pasu										
Job Ref No:			SML/345A/2022										
Date of Report:			26 January 2023										
Boring No:			BH13				BH14						
Sample No:			TW1	TW2	TW3	TW4	TW1	TW2	TW3	TW5			
Specimen Depth (m)			From	1.50	3.00	4.50	6.00	1.50	3.00	4.50	9.00		
			To	2.10	3.60	5.10	6.70	2.10	3.60	5.10	9.70		
Natural Moisture Content			%	43	16	47	49	31	46	51	44		
Bulk Density			Mg/m3	1.76	2.10	1.76	1.74	1.89	1.76	1.75	1.86		
Dry Density			Mg/m3	1.23	1.82	1.20	1.17	1.44	1.20	1.16	1.29		
Particle Density of Soil			Mg/m3		2.70		2.67	2.68	2.70				
Grain Size Analysis by Wet Sieving Method	Gravel	%		0		0	0	0					
	Sand	%		38		3	36	11					
	Silt	%		32		55	24	24					
	Clay	%		30		42	40	65					
Atterberg Limits	Liquid Limit	%		32		65	49	53					
	Plastic Limit	%		25		35	26	27					
	Plasticity Index	%		7		30	23	26					
Unconfined Compression Test	Shear Strength	kN/m2											
	Unconfined Compressive strength	kN/m2											
Triaxial Compression Test	Total Stress			UU		UU	UU	UU					
	Cohesion	kN/m2		170		89	60	61					
	Phi Angle	degree		0		0	0	0					
	Effective Stress												
	Cohesion	kN/m2											
Consolidation Test	Phi Angle	degree											
	One Dimensional Consol												
	Initial Void Ratio												
	Degree of Saturation	%											
	Preconsolidation Press.	kN/m2											
Rock Test	Compression Index												
	Point Load Strength	N/mm ²											
	Compressive Strength	N/mm ²											
Legend:			Remarks										
UU-Unconsolidated Undrained Test CU-Consolidated Undrained Test CD-Consolidated Drained Test UUP-UU with Pore Pressure Measurement UC-Unconfined Compression M-Multistage Tests O-One Dimensional Consolidation			Prepared:  Si Thu Htun Engineer										
			Checked/Approved:  Khin Maung Nyunt Laboratory Manager										

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SUMMARY OF LABORATORY TESTS RESULTS

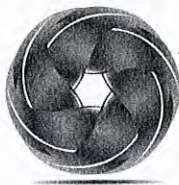
Project:		Sungei Tengah Road/Lorong Pasu											
Job Ref No:		SML/345A/2022											
Date of Report:		26 January 2023											
Boring No:		BH15				BH16							
Sample No:		U1	U2	TW1	TW2	TW1	TW2	TW3	TW4				
Specimen Depth (m)	From	1.50	3.00	4.50	6.00	1.50	3.00	4.50	9.00				
	To	1.80	3.40	5.10	6.70	2.10	3.60	5.10	9.70				
Natural Moisture Content	%	13	19	40	36	25	16	21	39				
Bulk Density	Mg/m ³	2.27	2.21	1.84	1.93	2.01	2.19	2.11	1.83				
Dry Density	Mg/m ³	2.01	1.86	1.31	1.42	1.61	1.89	1.74	1.32				
Particle Density of Soil	Mg/m ³	2.66		2.67		2.67		2.68					
Grain Size Analysis by Wet Sieving Method	Gravel	%	0		0		0		0				
	Sand	%	44		31		40		68				
	Silt	%	35		30		22		19				
	Clay	%	21		39		38		13				
Atterberg Limits	Liquid Limit	%	34		51		35	33					
	Plastic Limit	%	25		27		20	25					
	Plasticity Index	%	9		24		15	8					
Unconfined Compression Test	Shear Strength	kN/m ²											
	Unconfined Compressive strength	kN/m ²											
Triaxial Compression Test	Total Stress		UU		UU		UU		UU				
	Cohesion	kN/m ²	277		50		46		39				
	Phi Angle	degree	0		0		0		0				
	Effective Stress												
	Cohesion	kN/m ²											
	Phi Angle	degree											
Consolidation Test	One Dimensional Consol												
	Initial Void Ratio												
	Degree of Saturation	%											
	Preconsolidation Press.	kN/m ²											
	Compression Index												
Rock Test	Point Load Strength	N/mm ²											
	Compressive Strength	N/mm ²											
Legend:		Remarks											
UU-Unconsolidated Undrained Test CU-Consolidated Undrained Test CD-Consolidated Drained Test UUP-UU with Pore Pressure Measurement UC-Unconfined Compression M-Multistage Tests O-One Dimensional Consolidation		Prepared:  Si Thu Htun Engineer											
		Checked/Approved:  Khin Maung Nyunt Laboratory Manager											

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SUMMARY OF LABORATORY TESTS RESULTS

Project:		Sungei Tengah Road/Lorong Pasu											
Job Ref No:		SML/345A/2022											
Date of Report:		26 January 2023											
Boring No:		BH17				BH18							
Sample No:		TW1	TW2	U1	U2	TW1	U1	TW2	TW3	TW4			
Specimen Depth (m)	From	1.50	3.00	4.50	6.00	1.50	3.00	4.50	6.00	9.00			
	To	2.10	3.60	5.10	6.60	2.10	3.50	5.10	6.70	9.60			
Natural Moisture Content		%	31	20	32	31	27	22	40	38	35		
Bulk Density		Mg/m ³	1.99	2.39	1.94	1.99	1.92	-	1.83	1.85	1.91		
Dry Density		Mg/m ³	1.52	2.00	1.47	1.52	1.51	-	1.31	1.34	1.41		
Particle Density of Soil		Mg/m ³		2.70		2.70	2.67			2.68			
Grain Size Analysis by Wet Sieving Method	Gravel	%		0		0	0			0			
	Sand	%		10		23	57			16			
	Silt	%		59		41	30			43			
	Clay	%		31		36	13			41			
Atterberg Limits	Liquid Limit	%		33		49	36			51			
	Plastic Limit	%		25		30	26			32			
	Plasticity Index	%		8		19	10			19			
Unconfined Compression Test	Shear Strength	kN/m ²											
	Unconfined Compressive strength	kN/m ²											
Triaxial Compression Test	Total Stress			UU		UU	UU			UU			
	Cohesion	kN/m ²		82		125	22			80			
	Phi Angle	degree		0		0	0			0			
	Effective Stress												
	Cohesion	kN/m ²											
	Phi Angle	degree											
Consolidation Test	One Dimensional Consol												
	Initial Void Ratio												
	Degree of Saturation	%											
	Preconsolidation Press.	kN/m ²											
	Compression Index												
Rock Test	Point Load Strength	N/mm ²											
	Compressive Strength	N/mm ²											
Legend:		Remarks											
UU-Unconsolidated Undrained Test													
CU-Consolidated Undrained Test													
CD-Consolidated Drained Test													
UUP-UU with Pore Pressure Measurement													
UC-Unconfined Compression													
M-Multistage Tests													
O-One Dimensional Consolidation													
Prepared:		 Si Thu Htun Engineer						Checked/Approved:  Khin Maung Nyunt Laboratory Manager					

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SUMMARY OF LABORATORY TESTS RESULTS

Project:		Sungei Tengah Road/Lorong Pasu											
Job Ref No:		SML/345A/2022											
Date of Report:		26 January 2023											
Boring No:		BH19				BH20							
Sample No:		TW1	TW2	U2	U3	TW1	TW2	TW3	U1				
Specimen Depth (m)	From	1.50	3.00	6.00	9.00	1.50	3.00	4.50	6.00				
	To	2.10	3.70	6.70	9.70	2.10	3.60	5.10	6.60				
Natural Moisture Content	%	40	43	41	36	34	35	41	45				
Bulk Density	Mg/m ³	1.91	1.85	1.84	1.84	1.90	1.99	1.87	1.77				
Dry Density	Mg/m ³	1.36	1.29	1.30	1.35	1.42	1.47	1.33	1.22				
Particle Density of Soil	Mg/m ³	2.70	2.69			2.67		2.68					
Grain Size	Gravel %	0	0			0		0					
Analysis by Wet Sieving Method	Sand %	39	36			41		18					
	Silt %	36	34			31		36					
	Clay %	25	30			28		46					
Atterberg Limits	Liquid Limit %	57	59			56		58					
	Plastic Limit %	32	32			31		29					
	Plasticity Index %	25	27			25		29					
Unconfined Compression Test	Shear Strength kN/m ²												
	Unconfined Compressive strength kN/m ²												
Triaxial Compression Test	Total Stress	UU	UU			UU		UU					
	Cohesion kN/m ²	31	52			36		73					
	Phi Angle degree	0	0			0		0					
	Effective Stress												
	Cohesion kN/m ²												
	Phi Angle degree												
Consolidation Test	One Dimensional Consol												
	Initial Void Ratio												
	Degree of Saturation %												
	Preconsolidation Press. kN/m ²												
	Compression Index												
Rock Test	Point Load Strength N/mm ²												
	Compressive Strength N/mm ²												
Legend:		Remarks											
UU-Unconsolidated Undrained Test CU-Consolidated Undrained Test CD-Consolidated Drained Test UUP-UU with Pore Pressure Measurement UC-Unconfined Compression M-Multistage Tests O-One Dimensional Consolidation		Prepared:  Si Thu Htun Engineer											
		Checked/Approved:  Khin Maung Nyunt Laboratory Manager											

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SUMMARY OF LABORATORY TESTS RESULTS

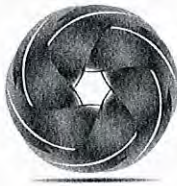
Project:		Sungei Tengah Road/Lorong Pasu											
Job Ref No:		SML/345A/2022											
Date of Report:		26 January 2023											
Boring No:		BH21					BH22						
Sample No:		TW1	TW2	TW3	TW4	U1	TW1	TW2	TW3	TW4	TW5		
Specimen Depth (m)	From	1.50	3.00	4.50	6.00	9.00	1.50	3.00	4.50	6.00	9.00		
	To	2.10	3.60	5.10	6.70	9.50	2.10	3.60	5.10	6.60	9.70		
Natural Moisture Content		%	38	35	36	36	32	40	41	39	36	45	
Bulk Density		Mg/m ³	1.84	1.86	1.86	1.97	1.91	1.86	1.89	1.84	1.98	1.79	
Dry Density		Mg/m ³	1.33	1.38	1.36	1.45	1.46	1.34	1.34	1.32	1.46	1.23	
Particle Density of Soil		Mg/m ³			2.67		2.68	2.70		2.68			
Grain Size Analysis by Wet Sieving Method	Gravel	%			0		0	3		0			
	Sand	%			35		28	31		29			
	Silt	%			40		50	22		34			
	Clay	%			25		22	44		37			
Atterberg Limits	Liquid Limit	%			53		49	54		53			
	Plastic Limit	%			30		28	28		27			
	Plasticity Index	%			23		21	26		26			
Unconfined Compression Test	Shear Strength	kN/m ²											
	Unconfined Compressive strength	kN/m ²											
Triaxial Compression Test	Total Stress				UU		UU	UU		UU			
	Cohesion	kN/m ²			91		87	79		93			
	Phi Angle	degree			0		0	0		0			
	Effective Stress												
	Cohesion	kN/m ²											
	Phi Angle	degree											
Consolidation Test	One Dimensional Consol												
	Initial Void Ratio												
	Degree of Saturation	%											
	Preconsolidation Press.	kN/m ²											
	Compression Index												
Rock Test	Point Load Strength	N/mm ²											
	Compressive Strength	N/mm ²											
Legend:		Remarks											
UU-Unconsolidated Undrained Test CU-Consolidated Undrained Test CD-Consolidated Drained Test UUP-UU with Pore Pressure Measurement UC-Unconfined Compression M-Multistage Tests O-One Dimensional Consolidation		Prepared:											
		 Si Thu Htun Engineer Checked/Approved:  Khin Maung Nyunt Laboratory Manager											

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SUMMARY OF LABORATORY TESTS RESULTS

Project:		Sungei Tengah Road/Lorong Pasu											
Job Ref No:		SML/345A/2022											
Date of Report:		26 January 2023											
Boring No:		BH23				BH24							
Sample No:		TW1	TW2	TW3	TW5	TW1	U1	U2	TW2				
Specimen Depth (m)	From	1.50	3.00	4.50	9.00	1.50	3.00	4.50	6.00				
	To	2.10	3.60	5.10	9.70	2.10	3.50	5.00	6.70				
Natural Moisture Content	%	21	34	37	49	37	36	38	41				
Bulk Density	Mg/m ³	2.07	1.92	1.89	1.76	1.85	1.95	1.87	1.81				
Dry Density	Mg/m ³	1.71	1.43	1.38	1.18	1.35	1.43	1.36	1.28				
Particle Density of Soil	Mg/m ³			2.68	2.68		2.68		2.70				
Grain Size Analysis by Wet Sieving Method	Gravel	%		0	0		0		0				
	Sand	%		21	17		37		36				
	Silt	%		41	43		34		37				
	Clay	%		38	40		29		27				
Atterberg Limits	Liquid Limit	%		50	59		48		57				
	Plastic Limit	%		31	33		30		32				
	Plasticity Index	%		19	26		18		25				
Unconfined Compression Test	Shear Strength	kN/m ²											
	Unconfined Compressive strength	kN/m ²											
Triaxial Compression Test	Total Stress			UU	UU		UU		UU				
	Cohesion	kN/m ²		105	42		101		54				
	Phi Angle	degree		0	0		0		0				
	Effective Stress												
	Cohesion	kN/m ²											
	Phi Angle	degree											
Consolidation Test	One Dimensional Consol												
	Initial Void Ratio												
	Degree of Saturation	%											
	Preconsolidation Press.	kN/m ²											
	Compression Index												
Rock Test	Point Load Strength	N/mm ²											
	Compressive Strength	N/mm ²											
Legend:		Remarks											
UU-Unconsolidated Undrained Test CU-Consolidated Undrained Test CD-Consolidated Drained Test UUP-UU with Pore Pressure Measurement UC-Unconfined Compression M-Multistage Tests O-One Dimensional Consolidation		Prepared:  Si Thu Htun Engineer											
		Checked/Approved:  Khin Maung Nyunt Laboratory Manager											

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SUMMARY OF LABORATORY TESTS RESULTS

Project:			Sungei Tengah Road/Lorong Pasu											
Job Ref No:			SML/345A/2022											
Date of Report:			26 January 2023											
Boring No:			BH25				BH26							
Sample No:			TW1	TW2	U1	U3	TW1	TW2	TW4	TW5				
Specimen Depth (m)			From	1.50	3.00	4.50	9.00	1.50	3.00	6.00	9.00			
			To	2.10	3.60	5.10	9.60	2.10	3.60	6.70	9.70			
Natural Moisture Content			%	39	36	42	37	21	28	39	35			
Bulk Density			Mg/m3	1.90	1.90	1.83	1.84	2.28	1.96	1.89	1.88			
Dry Density			Mg/m3	1.37	1.40	1.29	1.34	1.90	1.54	1.36	1.39			
Particle Density of Soil			Mg/m3	2.70		2.68		2.66	2.69					
Grain Size	Gravel	%	0		0		0	0						
Analysis by	Sand	%	21		18		43	46						
	Wet Sieving	%	35		37		25	25						
Method	Clay	%	44		45		32	29						
Atterberg Limits	Liquid Limit	%	48		57		37	43						
	Plastic Limit	%	26		28		23	24						
	Plasticity Index	%	22		29		14	19						
Unconfined Compression Test	Shear Strength	kN/m2												
	Unconfined Compressive strength	kN/m2												
Triaxial Compression Test	Total Stress		UU		UU		UU	UU						
	Cohesion	kN/m2	103		79		34	96						
	Phi Angle	degree	0		0		0	0						
	Effective Stress													
	Cohesion	kN/m2												
	Phi Angle	degree												
Consolidation Test	One Dimensional Consol													
	Initial Void Ratio													
	Degree of Saturation	%												
	Preconsolidation Press.	kN/m2												
	Compression Index													
Rock Test	Point Load Strength	N/mm ²												
	Compressive Strength	N/mm ²												
Legend:			Remarks											
UU-Unconsolidated Undrained Test														
CU-Consolidated Undrained Test														
CD-Consolidated Drained Test														
UUP-UU with Pore Pressure Measurement														
UC-Unconfined Compression														
M-Multistage Tests														
O-One Dimensional Consolidation														
Prepared:			 Si Thu Htun Engineer Checked/Approved:  Khin Maung Nyunt Laboratory Manager											

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SUMMARY OF LABORATORY TESTS RESULTS

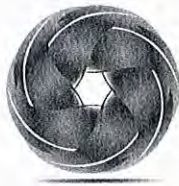
Project:		Sungei Tengah Road/Lorong Pasu											
Job Ref No:		SML/345A/2022											
Date of Report:		26 January 2023											
Boring No:		BH27				BH28							
Sample No:		TW1	TW2	TW3	TW4	TW1	TW2	U1	U2				
Specimen Depth (m)	From	1.50	3.00	4.50	6.00	1.50	3.00	4.50	6.00				
	To	2.10	3.60	5.10	6.70	2.10	3.60	5.10	6.70				
Natural Moisture Content		%	39	40	40	42	48	50	49	50			
Bulk Density		Mg/m ³	1.84	1.82	1.81	1.79	1.79	1.73	1.77	1.74			
Dry Density		Mg/m ³	1.32	1.30	1.29	1.26	1.21	1.15	1.18	1.16			
Particle Density of Soil		Mg/m ³		2.69		2.68	2.71		2.70				
Grain Size Analysis by Wet Sieving Method	Gravel	%		0		0	0		0				
	Sand	%		28		22	20		28				
	Silt	%		31		46	37		32				
	Clay	%		41		32	43		40				
Atterberg Limits	Liquid Limit	%		48		50	65		66				
	Plastic Limit	%		26		30	31		31				
	Plasticity Index	%		22		20	34		35				
Unconfined Compression Test	Shear Strength	kN/m ²											
	Unconfined Compressive strength	kN/m ²											
Triaxial Compression Test	Total Stress			UU		UU	UU		UU				
	Cohesion	kN/m ²		107		80	54		75				
	Phi Angle	degree		0		0	0		0				
	Effective Stress												
	Cohesion	kN/m ²											
	Phi Angle	degree											
Consolidation Test	One Dimensional Consol												
	Initial Void Ratio												
	Degree of Saturation	%											
	Preconsolidation Press.	kN/m ²											
	Compression Index												
Rock Test	Point Load Strength	N/mm ²											
	Compressive Strength	N/mm ²											
Legend:		Remarks											
UU-Unconsolidated Undrained Test													
CU-Consolidated Undrained Test													
CD-Consolidated Drained Test													
UUP-UU with Pore Pressure Measurement													
UC-Unconfined Compression													
M-Multistage Tests													
O-One Dimensional Consolidation													
Prepared:		 Si Thu Htun Engineer						Checked/Approved:  Khin Maung Nyunt Laboratory Manager					

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SUMMARY OF LABORATORY TESTS RESULTS

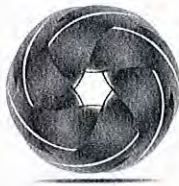
Project:		Sungei Tengah Road/Lorong Pasu											
Job Ref No:		SML/345A/2022											
Date of Report:		26 January 2023											
Boring No:		BH29				BH30							
Sample No:		TW1	TW2	TW4	U1	TW1	TW2	U1	U2				
Specimen Depth (m)	From	1.50	3.00	6.00	9.00	1.50	3.00	4.50	6.00				
	To	2.10	3.60	6.70	9.50	2.10	3.60	5.10	6.50				
Natural Moisture Content	%	35	43	55	38	39	46	37	39				
Bulk Density	Mg/m ³	2.02	1.84	1.72	1.88	1.83	1.88	1.86	1.88				
Dry Density	Mg/m ³	1.50	1.29	1.11	1.36	1.32	1.29	1.36	1.35				
Particle Density of Soil	Mg/m ³		2.70		2.69	2.70		2.71					
Grain Size Analysis by Wet Sieving Method	Gravel	%		0		0		0					
	Sand	%		28		23	24		32				
	Silt	%		45		41	29		25				
	Clay	%		27		36	47		43				
Atterberg Limits	Liquid Limit	%		58		51	57		52				
	Plastic Limit	%		33		31	28		27				
	Plasticity Index	%		25		20	29		25				
Unconfined Compression Test	Shear Strength	kN/m ²											
	Unconfined Compressive strength	kN/m ²											
Triaxial Compression Test	Total Stress			UU		UU	UU		UU				
	Cohesion	kN/m ²		89		155	64		85				
	Phi Angle	degree		0		0	0		0				
	Effective Stress												
	Cohesion	kN/m ²											
	Phi Angle	degree											
Consolidation Test	One Dimensional Consol												
	Initial Void Ratio												
	Degree of Saturation	%											
	Preconsolidation Press.	kN/m ²											
	Compression Index												
Rock Test	Point Load Strength	N/mm ²											
	Compressive Strength	N/mm ²											
Legend:		Remarks											
UU-Unconsolidated Undrained Test CU-Consolidated Undrained Test CD-Consolidated Drained Test UUP-UU with Pore Pressure Measurement UC-Unconfined Compression M-Multistage Tests O-One Dimensional Consolidation		Prepared:  Si Thu Htun Engineer											
		Checked/Approved:  Khin Maung Nyunt Laboratory Manager											

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SUMMARY OF LABORATORY TESTS RESULTS

Project:		Sungei Tengah Road/Lorong Pasu											
Job Ref No:		SML/345A/2022											
Date of Report:		26 January 2023											
Boring No:		BH31				BH32							
Sample No:		TW1	TW2	TW3	U1	TW2	U1	TW3	TW4				
Specimen Depth (m)	From	1.50	3.00	4.50	6.00	3.00	4.50	6.00	9.00				
	To	2.10	3.60	5.10	6.70	3.60	5.00	6.70	9.70				
Natural Moisture Content	%	30	38	35	40	47	48	46	55				
Bulk Density	Mg/m3	1.93	1.84	1.90	1.83	1.77	1.81	1.85	1.69				
Dry Density	Mg/m3	1.48	1.33	1.41	1.31	1.20	1.23	1.27	1.09				
Particle Density of Soil	Mg/m3		2.71		2.70		2.68		2.69				
Grain Size Analysis by Wet Sieving Method	Gravel	%		0		0		0		0			
	Sand	%		22		22		13		11			
	Silt	%		29		45		46		49			
	Clay	%		49		33		41		40			
Atterberg Limits	Liquid Limit	%		55		56		62		65			
	Plastic Limit	%		28		31		33		35			
	Plasticity Index	%		27		25		29		30			
Unconfined Compression Test	Shear Strength	kN/m2											
	Unconfined Compressive strength	kN/m2											
Triaxial Compression Test	Total Stress			UU		UU		UU		UU			
	Cohesion	kN/m2		106		98		163		81			
	Phi Angle	degree		0		0		0		0			
	Effective Stress												
	Cohesion	kN/m2											
	Phi Angle	degree											
Consolidation Test	One Dimensional Consol												
	Initial Void Ratio												
	Degree of Saturation	%											
	Preconsolidation Press.	kN/m2											
	Compression Index												
Rock Test	Point Load Strength	N/mm ²											
	Compressive Strength	N/mm ²											
Legend:		Remarks											
UU-Unconsolidated Undrained Test CU-Consolidated Undrained Test CD-Consolidated Drained Test UUP-UU with Pore Pressure Measurement UC-Unconfined Compression M-Multistage Tests O-One Dimensional Consolidation		Prepared:  Si Thu Htun Engineer											
		Checked/Approved:  Khin Maung Nyunt Laboratory Manager											

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SUMMARY OF LABORATORY TESTS RESULTS

Project:		Sungei Tengah Road/Lorong Pasu											
Job Ref No:		SML/345A/2022											
Date of Report:		26 January 2023											
Boring No:		BH33				BH34							
Sample No:		TW1	TW3	U1	U2	TW1	TW2	TW3	TW5				
Specimen Depth (m)	From	3.00	6.00	9.00	12.00	1.50	3.00	4.50	9.00				
	To	3.60	6.70	9.50	12.50	2.10	3.60	5.10	9.70				
Natural Moisture Content	%	36	39	35	27	31	27	33	38				
Bulk Density	Mg/m3	1.86	1.83	1.87	2.00	2.00	1.88	1.90	1.87				
Dry Density	Mg/m3	1.37	1.32	1.39	1.57	1.53	1.48	1.42	1.36				
Particle Density of Soil	Mg/m3	2.67	2.68			2.67		2.68					
Grain Size Analysis by Wet Sieving Method	Gravel	%	0	0		0		0					
	Sand	%	25	27		38		36					
	Silt	%	36	40		43		33					
	Clay	%	39	33		19		31					
Atterberg Limits	Liquid Limit	%	50	56		43		46					
	Plastic Limit	%	27	32		28		29					
	Plasticity Index	%	23	24		15		17					
Unconfined Compression Test	Shear Strength	kN/m2											
	Unconfined Compressive strength	kN/m2											
Triaxial Compression Test	Total Stress		UU	UU		UU		UU					
	Cohesion	kN/m2	65	84		29		92					
	Phi Angle	degree	0	0		0		0					
	Effective Stress												
	Cohesion	kN/m2											
	Phi Angle	degree											
Consolidation Test	One Dimensional Consol												
	Initial Void Ratio												
	Degree of Saturation	%											
	Preconsolidation Press.	kN/m2											
	Compression Index												
Rock Test	Point Load Strength	N/mm ²											
	Compressive Strength	N/mm ²											
Legend:		Remarks											
UU-Unconsolidated Undrained Test													
CU-Consolidated Undrained Test													
CD-Consolidated Drained Test													
UUP-UU with Pore Pressure Measurement													
UC-Unconfined Compression													
M-Multistage Tests													
O-One Dimensional Consolidation													
Prepared:		 Si Thu Htun Engineer						Checked/Approved:  Khin Maung Nyunt Laboratory Manager					

This laboratory is Accredited under The Singapore Accreditation Council - Singapore Laboratory Accreditation Scheme (SAC-SINGLAS) and has met the requirement of ISO/IEC 17025:2017.

The results reported herein have been performed in accordance with the laboratory's terms of accreditation under the Singapore Accreditation Council - Singapore Laboratory Accreditation Scheme (SAC-SINGLAS).

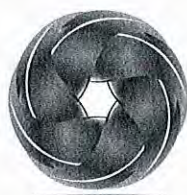
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MOISTURE CONTENT / DENSITY

[TEST METHOD - BS 1377:1990-PART 2]

Borehole Number	Sample Number	Depth		Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)
		From (m)	To (m)			
BH2	TW1	1.50	2.10	23	2.04	1.66
	TW2	3.00	3.60	29	2.03	1.57
	TW3	4.50	5.10	29	1.97	1.53
	U2	9.00	9.30	36	1.99	1.46
BH3	U1	1.50	2.00	29	2.00	1.55
	TW1	3.00	3.60	28	2.00	1.56
	TW2	4.50	5.00	30	1.94	1.49
	U2	6.00	6.50	34	1.93	1.44
BH4	TW1	1.50	2.10	24	1.91	1.54
	TW2	3.00	3.60	41	2.00	1.41
	U1	4.50	5.10	27	2.11	1.66
	U2	6.00	6.50	27	2.02	1.59
	U3	9.00	9.50	33	1.97	1.48
BH5	TW1	1.50	2.10	16	2.02	1.74
	TW2	3.00	3.60	38	1.85	1.34
	TW4	6.00	6.70	39	1.85	1.33
	U1	9.00	9.50	32	1.92	1.45
BH6	TW1	1.50	2.10	23	1.99	1.62
	TW2	3.00	3.60	35	1.93	1.43
	TW3	4.50	5.10	32	1.94	1.47
	TW5	9.00	9.70	35	1.89	1.40
BH7	TW1	1.50	2.10	34	1.87	1.40
	TW2	3.00	3.60	47	1.68	1.14
	TW3	4.50	5.10	36	1.91	1.40
	U1	6.00	6.70	38	1.77	1.28



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Prepared Date: 26 January 2023

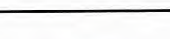
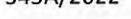
Engineer:

Si Thu Htun

Checked/Approved


 Khin Maung Nyunt
 Laboratory Manager


[TEST METHOD - BS 1377:1990-PART 2]

	Project: Sungei Tengah Road/Lorong Pasu		 Accredited Laboratory SAC-SING Cert No: LA-2015-0
	Job Ref: SML/345A/2022	Checked/Approved  Khin Maung Nyunt Laboratory Manager	
	Prepared Date: 26 January 2023		
	Engineer:  Si Thu Htun		

MOISTURE CONTENT / DENSITY

[TEST METHOD - BS 1377:1990-PART 2]

Borehole Number	Sample Number	Depth		Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)
		From (m)	To (m)			
BH11	U1	1.50	2.00	15	2.14	1.86
	TW2	4.50	5.10	46	1.79	1.23
	TW3	6.00	6.70	42	1.82	1.28
	TW4	9.00	9.70	36	1.89	1.39
BH12	TW1	1.50	2.10	31	1.91	1.46
	TW2	3.00	3.60	38	1.82	1.32
	TW4	6.00	6.70	36	1.85	1.36
	TW5	9.00	9.70	39	1.86	1.34
BH13	TW1	1.50	2.10	43	1.76	1.23
	TW2	3.00	3.60	16	2.10	1.82
	TW3	4.50	5.10	47	1.76	1.20
	TW4	6.00	6.70	49	1.74	1.17
BH14	TW1	1.50	2.10	31	1.89	1.44
	TW2	3.00	3.60	46	1.76	1.20
	TW3	4.50	5.10	51	1.75	1.16
	TW5	9.00	9.70	44	1.86	1.29
BH15	U1	1.50	1.80	13	2.27	2.01
	U2	3.00	3.40	19	2.21	1.86
	TW1	4.50	5.10	40	1.84	1.31
	TW2	6.00	6.70	36	1.93	1.42
BH16	TW1	1.50	2.10	25	2.01	1.61
	TW2	3.00	3.60	16	2.19	1.89
	TW3	4.50	5.10	21	2.11	1.74
	TW4	9.00	9.70	39	1.83	1.32



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Prepared Date: 26 January 2023

Engineer:


Si Thu Htun

Checked/Approved


Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

MOISTURE CONTENT / DENSITY

[TEST METHOD - BS 1377:1990-PART 2]

Borehole Number	Sample Number	Depth		Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)
		From (m)	To (m)			
BH17	TW1	1.50	2.10	31	1.99	1.52
	TW2	3.00	3.60	20	2.39	2.00
	U1	4.50	5.10	32	1.94	1.47
	U2	6.00	6.60	31	1.99	1.52
BH18	TW1	1.50	2.10	27	1.92	1.51
	U1	3.00	3.50	22	-	-
	TW2	4.50	5.10	40	1.83	1.31
	TW3	6.00	6.70	38	1.85	1.34
	TW4	9.00	9.60	35	1.91	1.41
BH19	TW1	1.50	2.10	40	1.91	1.36
	TW2	3.00	3.70	43	1.85	1.29
	U2	6.00	6.70	41	1.84	1.30
	U3	9.00	9.70	36	1.84	1.35
BH20	TW1	1.50	2.10	34	1.90	1.42
	TW2	3.00	3.60	35	1.99	1.47
	TW3	4.50	5.10	41	1.87	1.33
	U1	6.00	6.60	45	1.77	1.22



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Prepared Date: 26 January 2023

Engineer: 
Si Thu Htun

Checked/Approved


Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

MOISTURE CONTENT / DENSITY

[TEST METHOD - BS 1377:1990-PART 2]

Borehole Number	Sample Number	Depth		Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)
		From (m)	To (m)			
BH21	TW1	1.50	2.10	38	1.84	1.33
	TW2	3.00	3.60	35	1.86	1.38
	TW3	4.50	5.10	36	1.86	1.36
	TW4	6.00	6.70	36	1.97	1.45
	U1	9.00	9.50	32	1.91	1.46
BH22	TW1	1.50	2.10	40	1.86	1.34
	TW2	3.00	3.60	41	1.89	1.34
	TW3	4.50	5.10	39	1.84	1.32
	TW4	6.00	6.60	36	1.98	1.46
	TW5	9.00	9.70	45	1.79	1.23
BH23	TW1	1.50	2.10	21	2.07	1.71
	TW2	3.00	3.60	34	1.92	1.43
	TW3	4.50	5.10	37	1.89	1.38
	TW5	9.00	9.70	49	1.76	1.18
BH24	TW1	1.50	2.10	37	1.85	1.35
	U1	3.00	3.50	36	1.95	1.43
	U2	4.50	5.00	38	1.87	1.36
	TW2	6.00	6.70	41	1.81	1.28
BH25	TW1	1.50	2.10	39	1.90	1.37
	TW2	3.00	3.60	36	1.90	1.40
	U1	4.50	5.10	42	1.83	1.29
	U3	9.00	9.60	37	1.84	1.34



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Prepared Date: 26 January 2023

Engineer: 
Si Thu Htun

Checked/Approved


Khin Maung Nyunt
Laboratory Manager

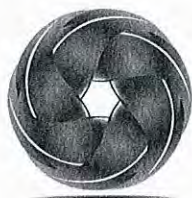


SOIL MATERIALS LABORATORY PTE LTD

MOISTURE CONTENT / DENSITY

[TEST METHOD - BS 1377:1990-PART 2]

Borehole Number	Sample Number	Depth		Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)
		From (m)	To (m)			
BH26	TW1	1.50	2.10	21	2.28	1.90
	TW2	3.00	3.60	28	1.96	1.54
	TW4	6.00	6.70	39	1.89	1.36
	TW5	9.00	9.70	35	1.88	1.39
BH27	TW1	1.50	2.10	39	1.84	1.32
	TW2	3.00	3.60	40	1.82	1.30
	TW3	4.50	5.10	40	1.81	1.29
	TW4	6.00	6.70	42	1.79	1.26
BH28	TW1	1.50	2.10	48	1.79	1.21
	TW2	3.00	3.60	50	1.73	1.15
	U1	4.50	5.10	49	1.77	1.18
	U2	6.00	6.70	50	1.74	1.16
BH29	TW1	1.50	2.10	35	2.02	1.50
	TW2	3.00	3.60	43	1.84	1.29
	TW4	6.00	6.70	55	1.72	1.11
	U1	9.00	9.50	38	1.88	1.36
BH30	TW1	1.50	2.10	39	1.83	1.32
	TW2	3.00	3.60	46	1.88	1.29
	U1	4.50	5.10	37	1.86	1.36
	U2	6.00	6.50	39	1.88	1.35
BH31	TW1	1.50	2.10	30	1.93	1.48
	TW2	3.00	3.60	38	1.84	1.33
	TW3	4.50	5.10	35	1.90	1.41
	U1	6.00	6.70	40	1.83	1.31



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Prepared Date: 26 January 2023

Engineer:


Si Thu Htun

Checked/Approved


Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

[TEST METHOD - BS 1377:1990-PART 2]

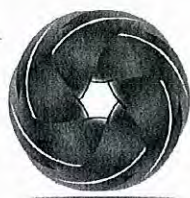
	Project: Sungei Tengah Road/Lorong Pasu		
	Job Ref: SML/345A/2022	Checked/Approved  Khin Maung Nyunt Laboratory Manager	
	Prepared Date: 26 January 2023		
	Engineer:  Si Thu Htun		

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE DENSITY

[TEST METHOD - BS 1377:1990-PART 2]

Borehole Number	Sample Number	Depth		Particle Density (mg/m ³)
		From (m)	To (m)	
BH2	TW1	1.50	2.10	2.69
	U2	9.00	9.30	2.68
BH3	TW1	3.00	3.60	2.66
	U2	6.00	6.50	2.68
BH4	TW2	3.00	3.60	2.66
	U3	9.00	9.50	2.68
BH5	TW1	1.50	2.10	2.65
	TW4	6.00	6.70	2.70
BH6	TW3	4.50	5.10	2.67
	TW5	9.00	9.70	2.68
BH7	TW1	1.50	2.10	2.65
	TW2	3.00	3.60	2.65
BH8	TW3	4.50	5.10	2.68
	TW5	9.00	9.70	2.68
BH9	TW1	1.50	2.10	2.68
	TW2	3.00	3.60	2.68
BH10	TW1	1.50	2.10	2.68
	U1	9.00	9.50	2.68



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Prepared Date: 26-January-23

Engineer: 
Si Thu Htun

Checked/Approved


Khin Maung Nyunt
Laboratory Manager



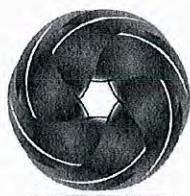
Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE DENSITY

[TEST METHOD - BS 1377:1990-PART 2]

Borehole Number	Sample Number	Depth		Particle Density (mg/m ³)
		From (m)	To (m)	
BH11	U1	1.50	2.00	2.69
	TW2	4.50	5.10	2.68
BH12	TW2	3.00	3.60	2.69
	TW4	6.00	6.70	2.69
BH13	TW2	3.00	3.60	2.70
	TW4	6.00	6.70	2.67
BH14	TW1	1.50	2.10	2.68
	TW2	3.00	3.60	2.70
BH15	U1	1.50	1.80	2.66
	TW1	4.50	5.10	2.67
BH16	TW1	1.50	2.10	2.67
	TW3	4.50	5.10	2.68
BH17	TW2	3.00	3.60	2.70
	U2	6.00	6.60	2.70
BH18	TW1	1.50	2.10	2.67
	TW3	6.00	6.70	2.68
BH19	TW1	1.50	2.10	2.70
	TW2	3.00	3.70	2.69
BH20	TW1	1.50	2.10	2.67
	TW3	4.50	5.10	2.68



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Prepared Date: 26-January-23

Engineer:


Si Thu Htun

Checked/Approved


Khin Maung Nyunt
Laboratory Manager


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SAC-SINGLAS
Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE DENSITY

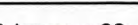
[TEST METHOD - BS 1377:1990-PART 2]

Borehole Number	Sample Number	Depth		Particle Density (mg/m³)
		From (m)	To (m)	
BH21	TW3	4.50	5.10	2.67
	U1	9.00	9.50	2.68
BH22	TW1	1.50	2.10	2.70
	TW3	4.50	5.10	2.68
BH23	TW3	4.50	5.10	2.68
	TW5	9.00	9.70	2.68
BH24	U1	3.00	3.50	2.68
	TW2	6.00	6.70	2.70
BH25	TW1	1.50	2.10	2.70
	U1	4.50	5.10	2.68
BH26	TW1	1.50	2.10	2.66
	TW2	3.00	3.60	2.69
BH27	TW2	3.00	3.60	2.69
	TW4	6.00	6.70	2.68
BH28	TW1	1.50	2.10	2.71
	U1	4.50	5.10	2.70
BH29	TW2	3.00	3.60	2.70
	U1	9.00	9.50	2.69
BH30	TW1	1.50	2.10	2.70
	U1	4.50	5.10	2.71
BH31	TW2	3.00	3.60	2.71
	U1	6.00	6.70	2.70
BH32	U1	4.50	5.00	2.68
	TW4	9.00	9.70	2.69

	Project: Sungei Tengah Road/Lorong Pasu		 Khin Maung Nyunt Laboratory Manager	 SAC-SINGLAS Cert No: LA-2015-0601-B	
	Job Ref:	SML/345A/2022			Checked/Approved
	Prepared Date:	26-January-23			
	Engineer:	 Si Thu Htun			

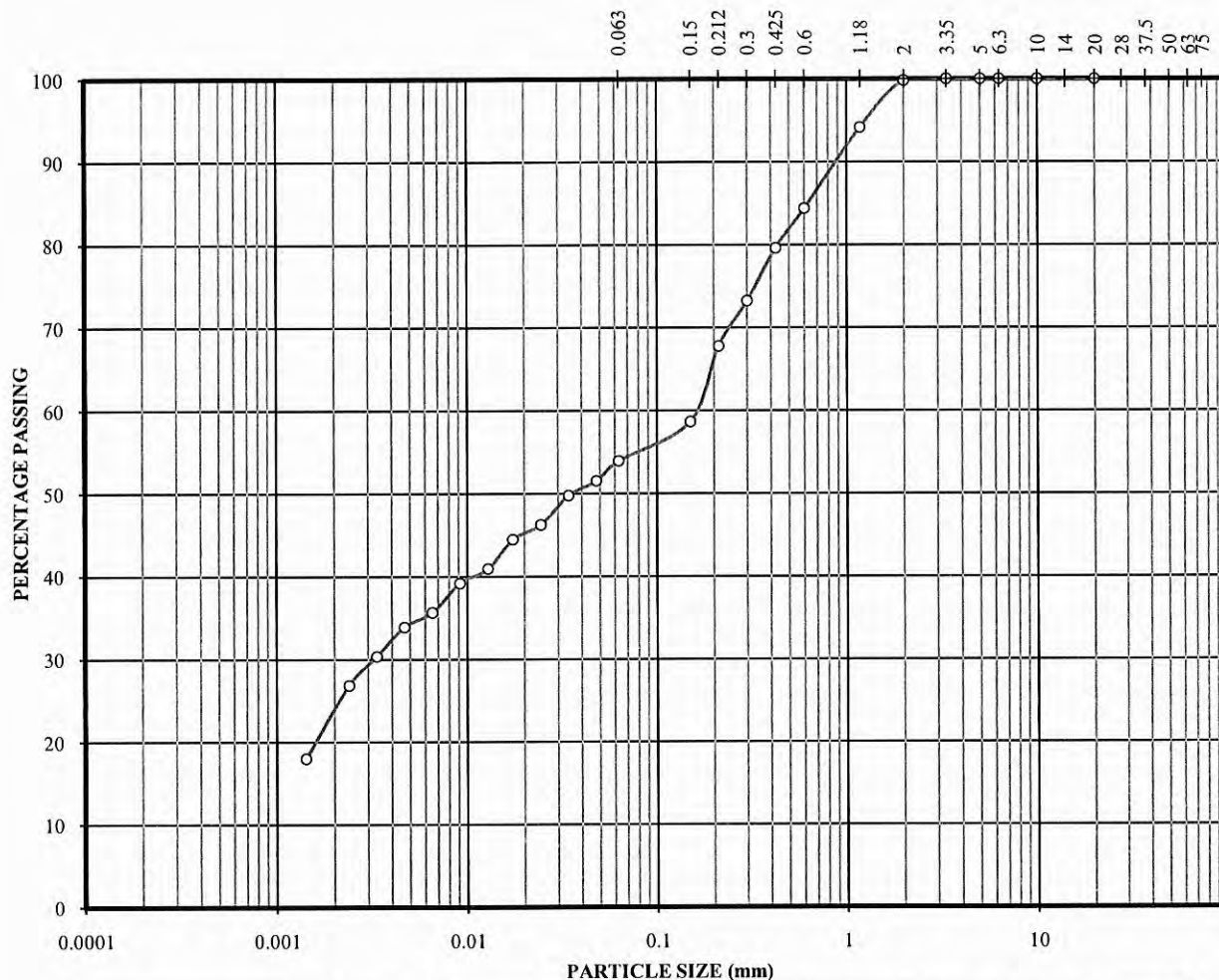
SOIL MATERIALS LABORATORY PTE LTD

[TEST METHOD - BS 1377:1990-PART 2]

	Project: Sungei Tengah Road/Lorong Pasu		 SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref: SML/345A/2022	Checked/Approved  Khin Maung Nyunt Laboratory Manager	
	Prepared Date: 26-January-23		
	Engineer:  Si Thu Htun		
SOIL MATERIALS LABORATORY PTE LTD			

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

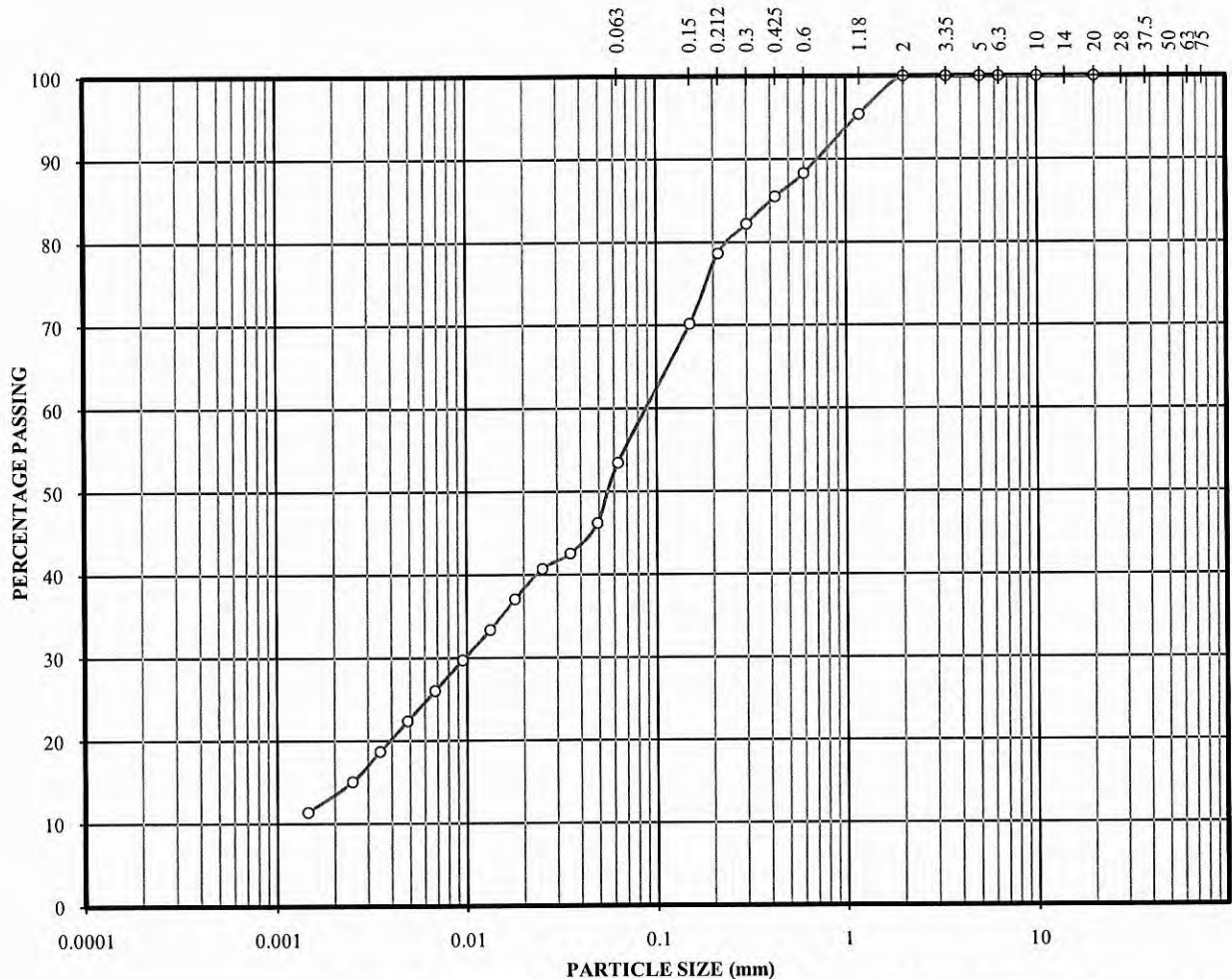
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Olive brown and brownish yellow Sandy SILT	
TW1	1.50m-2.10m	0	46	29	25		

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun  Checked/Approved: Khin Maung Nyunt Laboratory Manager
	Job Ref:	SML/345A/2022	
	Borehole No:	BH2	
	Sample No:	TW1	
	Depth:	1.50m-2.10m	
	Prepared Date:	25-Jan-2023	
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

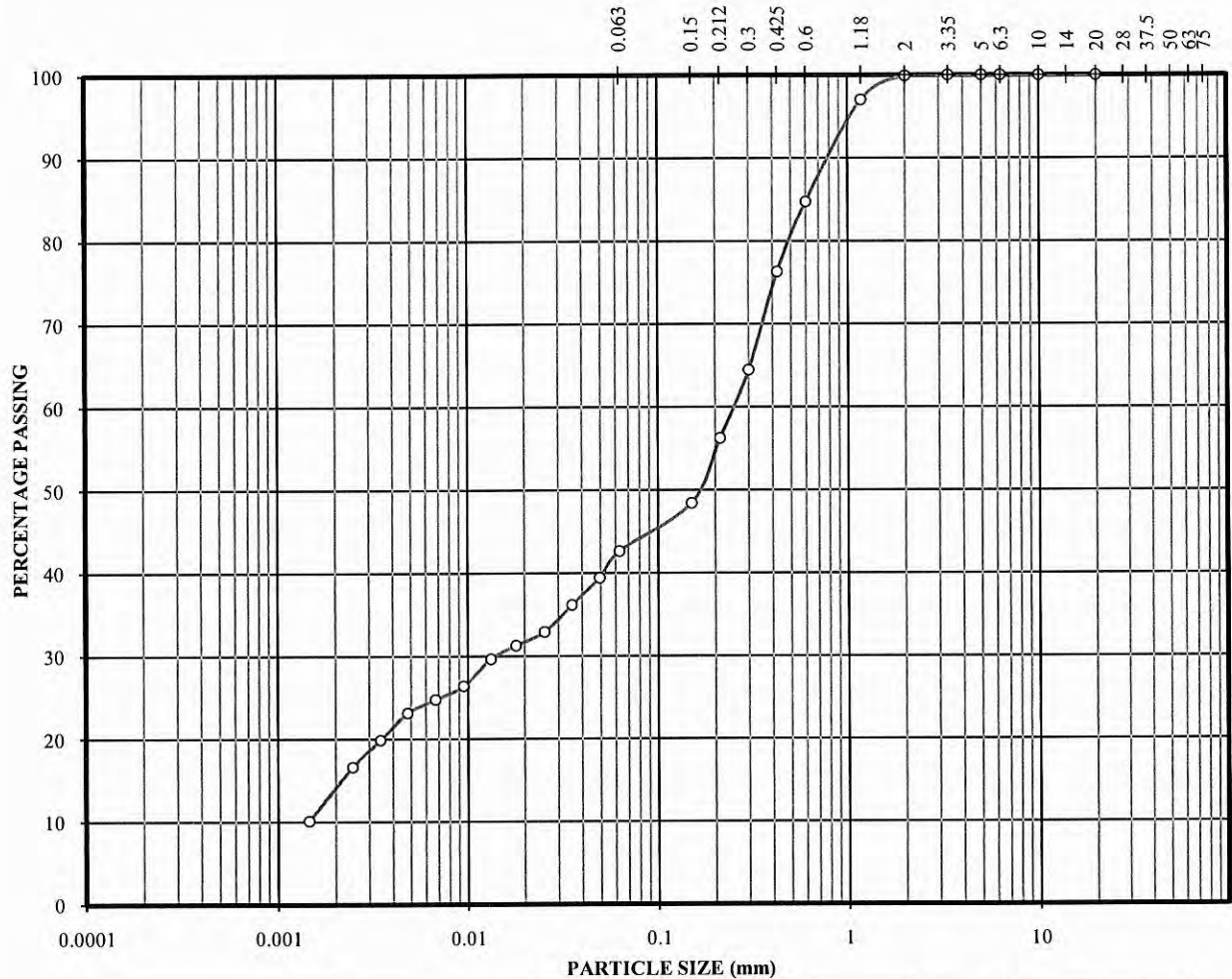
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and reddish yellow Sandy SILT
U2	9.00m-9.30m	0	47	39	14	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun  Checked/Approved: Khin Maung Nyunt Laboratory Manager
	Job Ref:	SML/345A/2022	
	Borehole No:	BH2	
	Sample No:	U2	
	Depth:	9.00m-9.30m	
	Prepared Date:	25-Jan-2023	
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

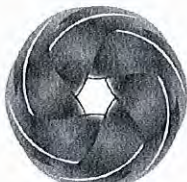
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

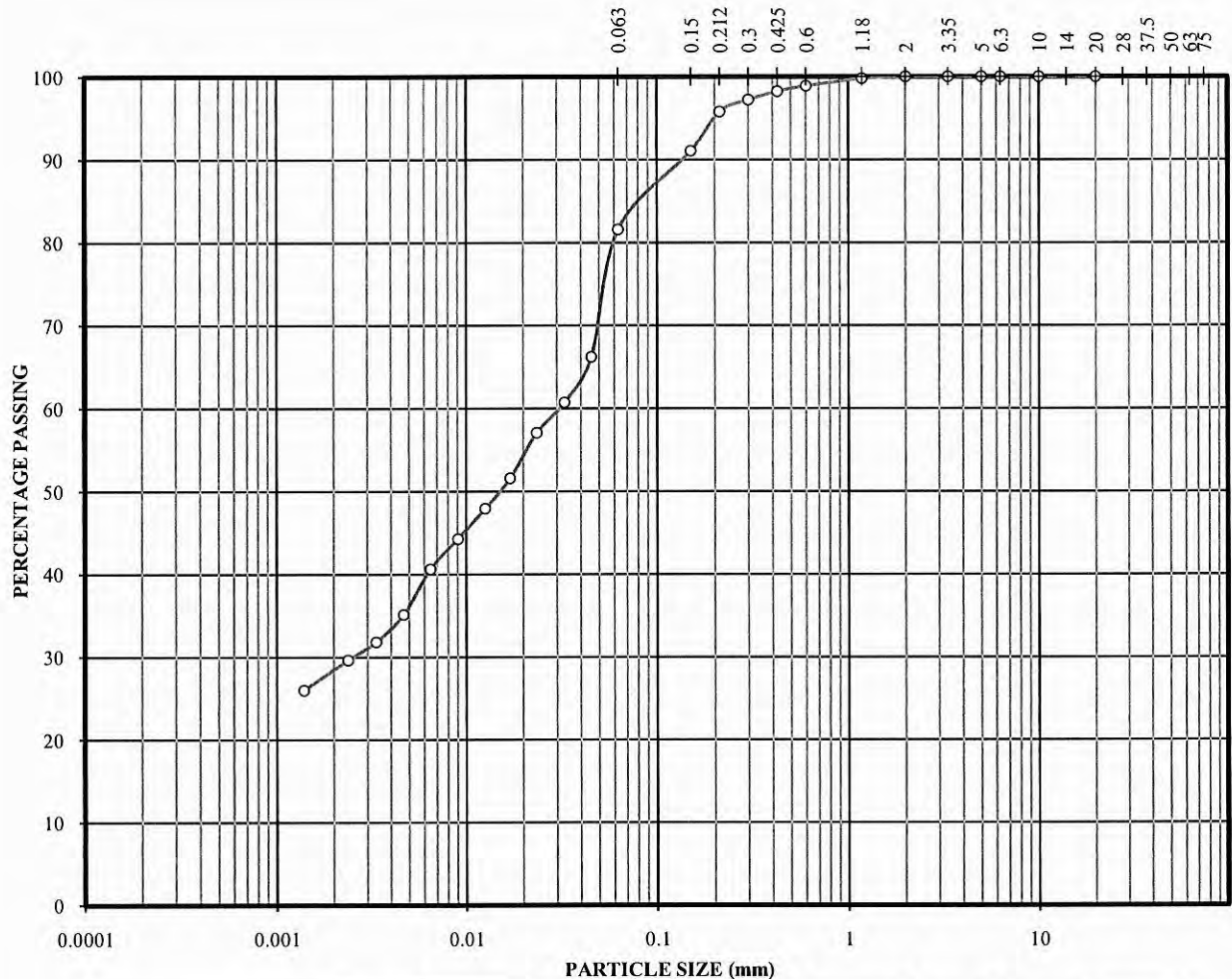
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Brownish yellow and olive brown Sandy SILT
TW1	3.00m-3.60m	0	57	28	15	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun  Khin Maung Nyunt Laboratory Manager
	Job Ref: SML/345A/2022	Checked/Approved:	
	Borehole No: BH3		
	Sample No: TW1		
	Depth: 3.00m-3.60m		
	Prepared Date: 25-Jan-2023		
 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B			

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

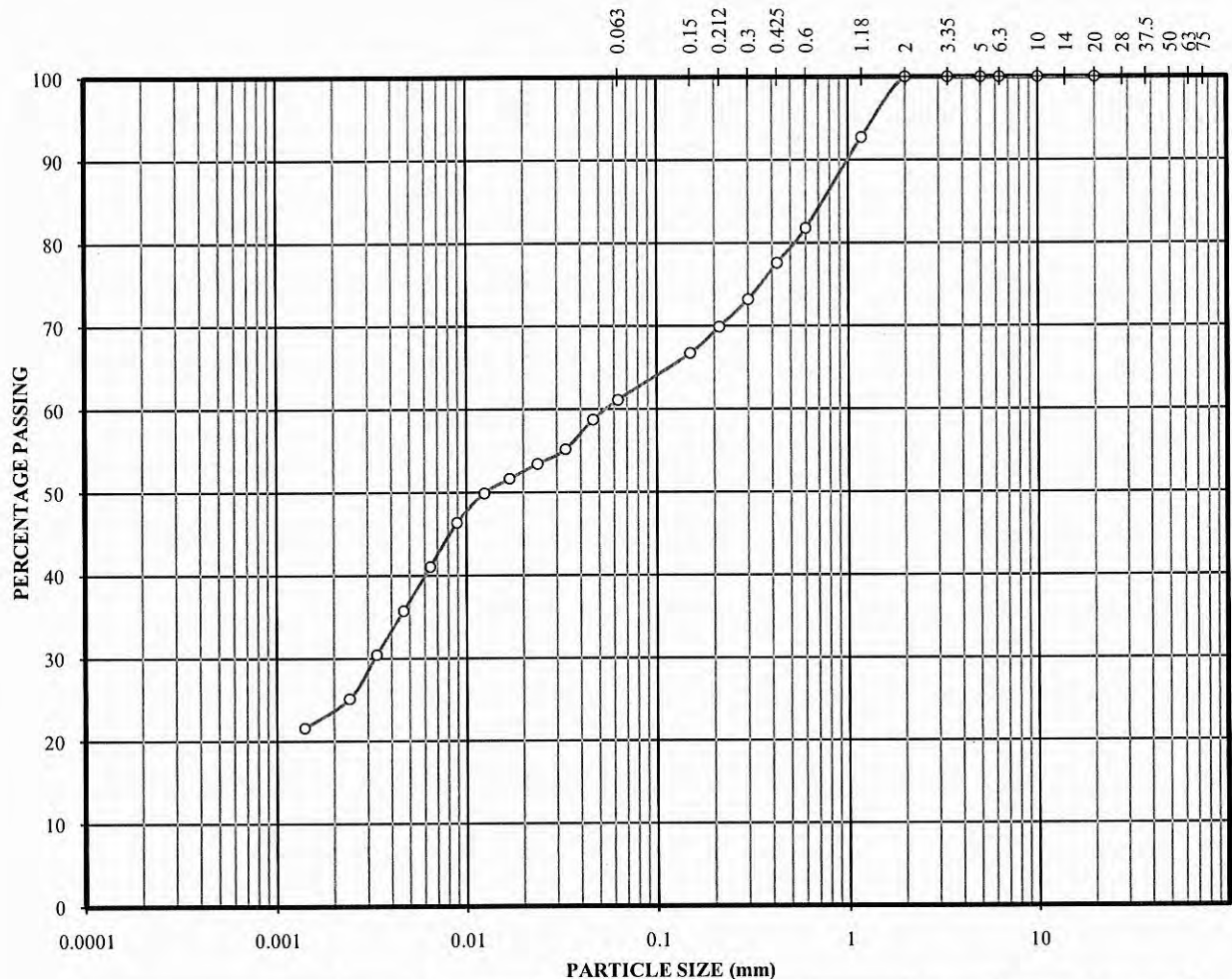
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and reddish orange slightly Sandy SILT
U2	6.00m-6.50m	0	18	53	29	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun  Checked/Approved: Khin Maung Nyunt Laboratory Manager	 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref:	SML/345A/2022		
	Borehole No:	BH3		
	Sample No:	U2		
	Depth:	6.00m-6.50m		
	Prepared Date:	25-Jan-2023		

SOIL MATERIALS LABORATORY PTE LTD

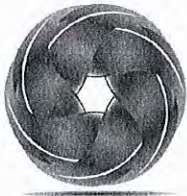
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

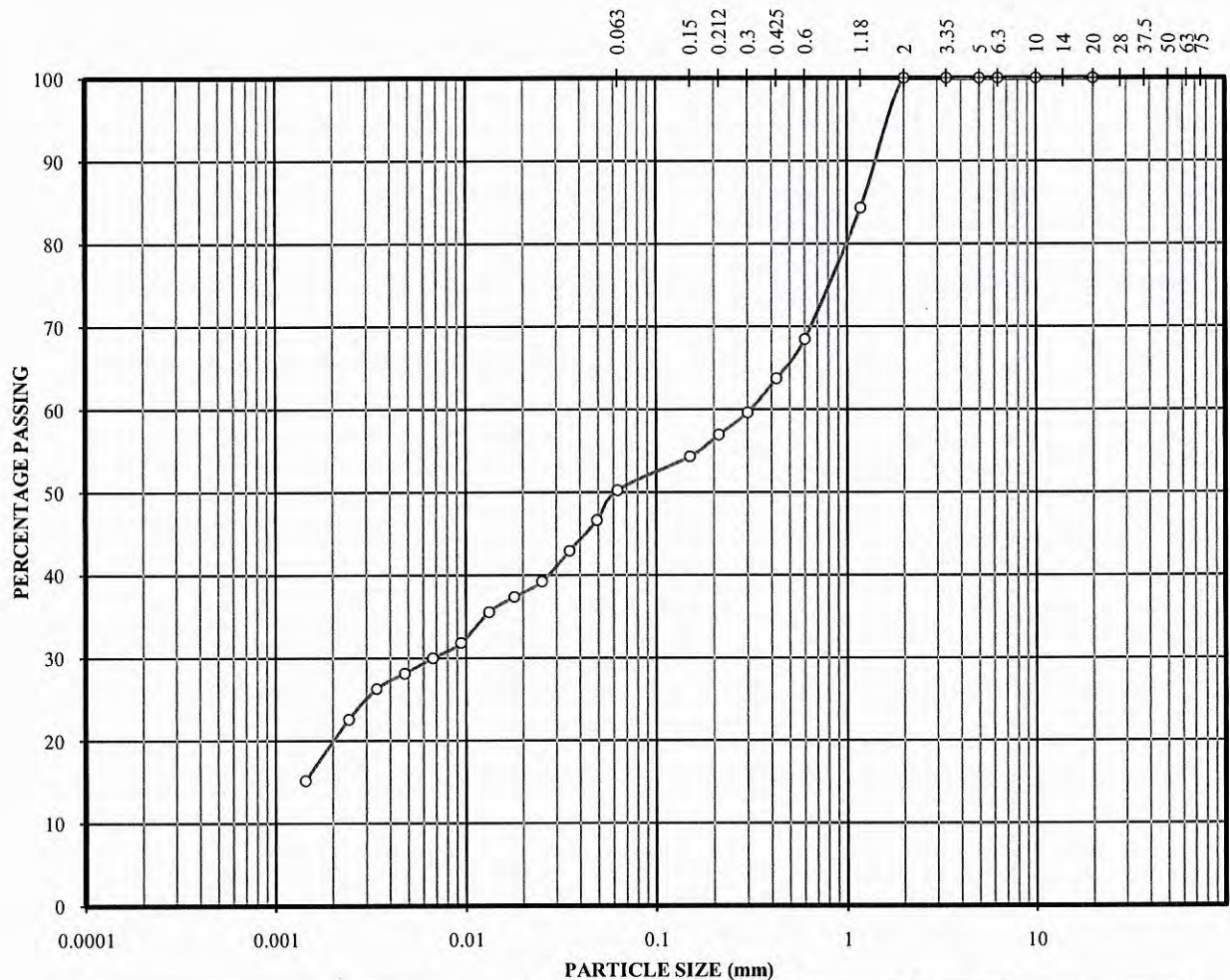
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light yellowish brown and light red Sandy SILT
TW2	3.00m-3.60m	0	39	37	24	

	Project: Sungei Tengah Road/Lorong Pasu		Engineer: Si Thu Htun 
	Job Ref: SML/345A/2022		
	Borehole No: BH4		Checked/Approved:  Khin Maung Nyunt Laboratory Manager
	Sample No: TW2		
	Depth: 3.00m-3.60m		
	Prepared Date: 25-Jan-2023		
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

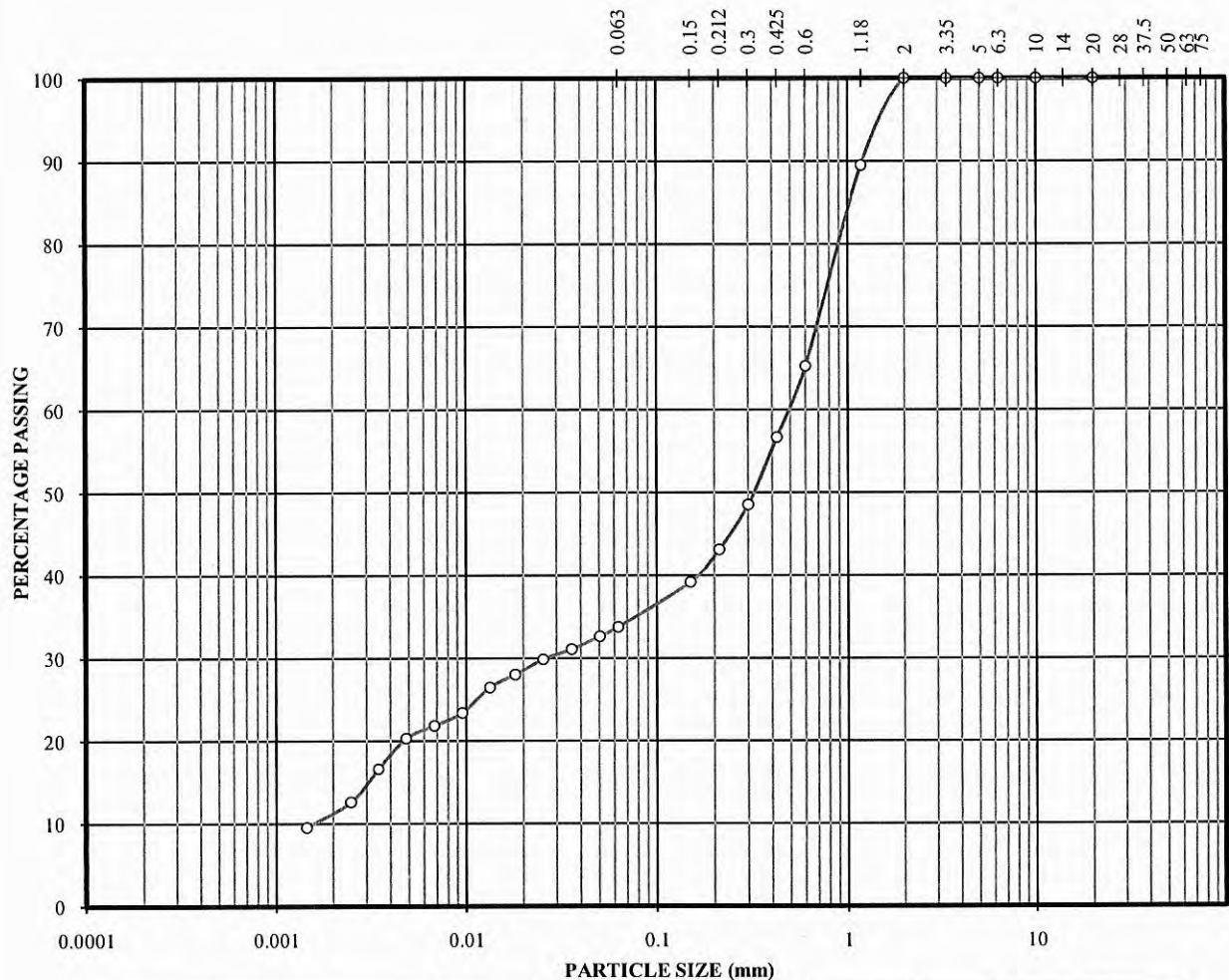
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Reddish brown and brownish yellow Sandy SILT
U3	9.00m-9.50m	0	50	30	20	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun
	Job Ref:	SML/345A/2022	
	Borehole No:	BH4	
	Sample No:	U3	
	Depth:	9.00m-9.50m	
	Prepared Date:	25-Jan-2023	
		Checked/Approved:	 Khin Maung Nyunt
		Laboratory Manager	
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

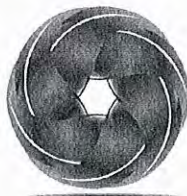
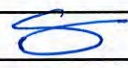
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

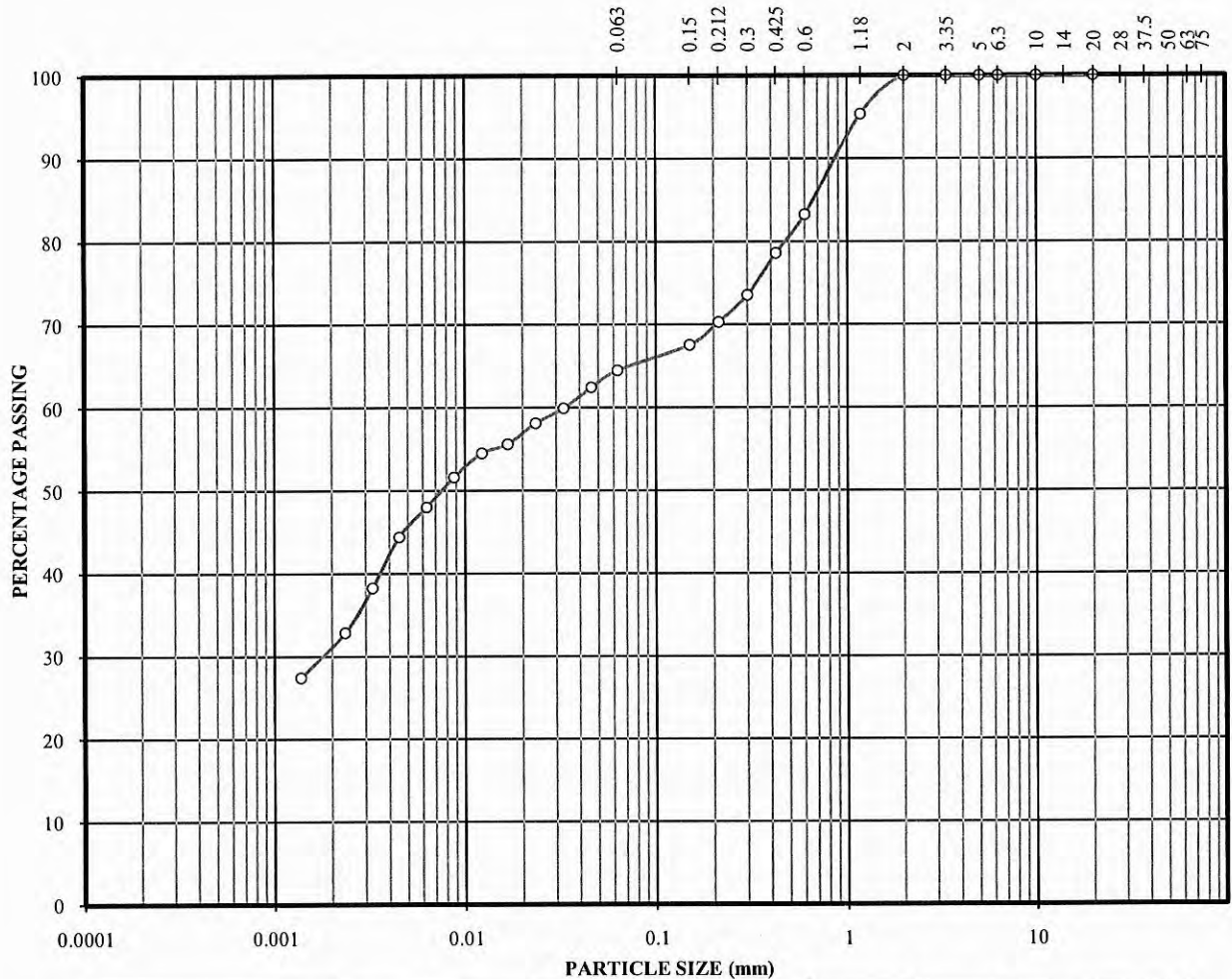
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Light olive brown and brownish grey very Silty SAND	
TW1	1.50m-2.10m	0	66	23	11		

	Project: Sungei Tengah Road/Lorong Pasu			 SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun		
	Borehole No: BH5	Checked/Approved:  Khin Maung Nyunt Laboratory Manager		
	Sample No: TW1			
	Depth: 1.50m-2.10m			
	Prepared Date: 25-Jan-2023			

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

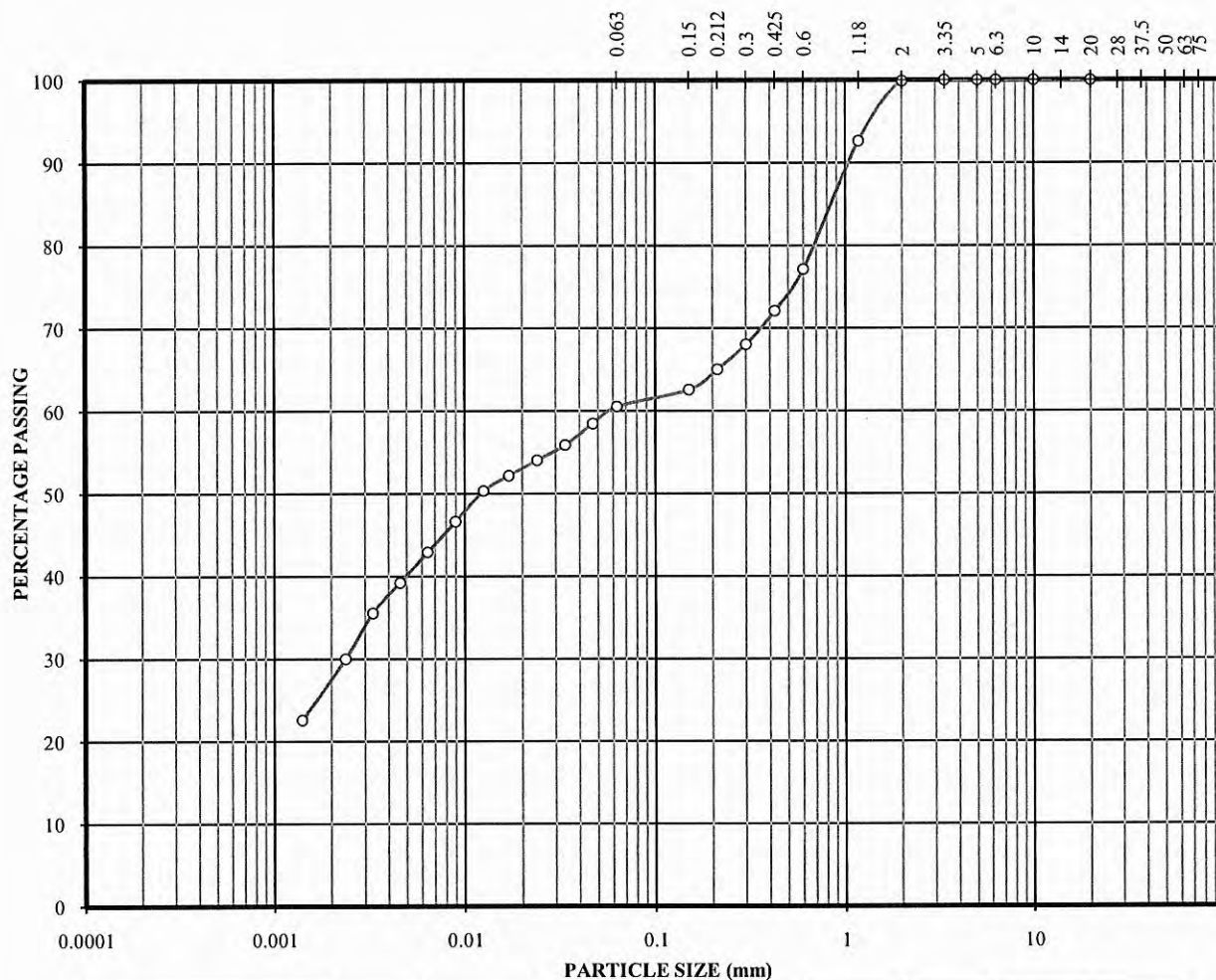
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and reddish orange Sandy SILT
TW4	6.00m-6.70m	0	36	33	31	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun Khin Maung Nyunt Laboratory Manager
	Job Ref:	SML/345A/2022	
	Borehole No:	BH5	
	Sample No:	TW4	
	Depth:	6.00m-6.70m	
	Prepared Date:	25-Jan-2023	
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

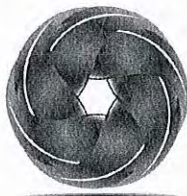
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

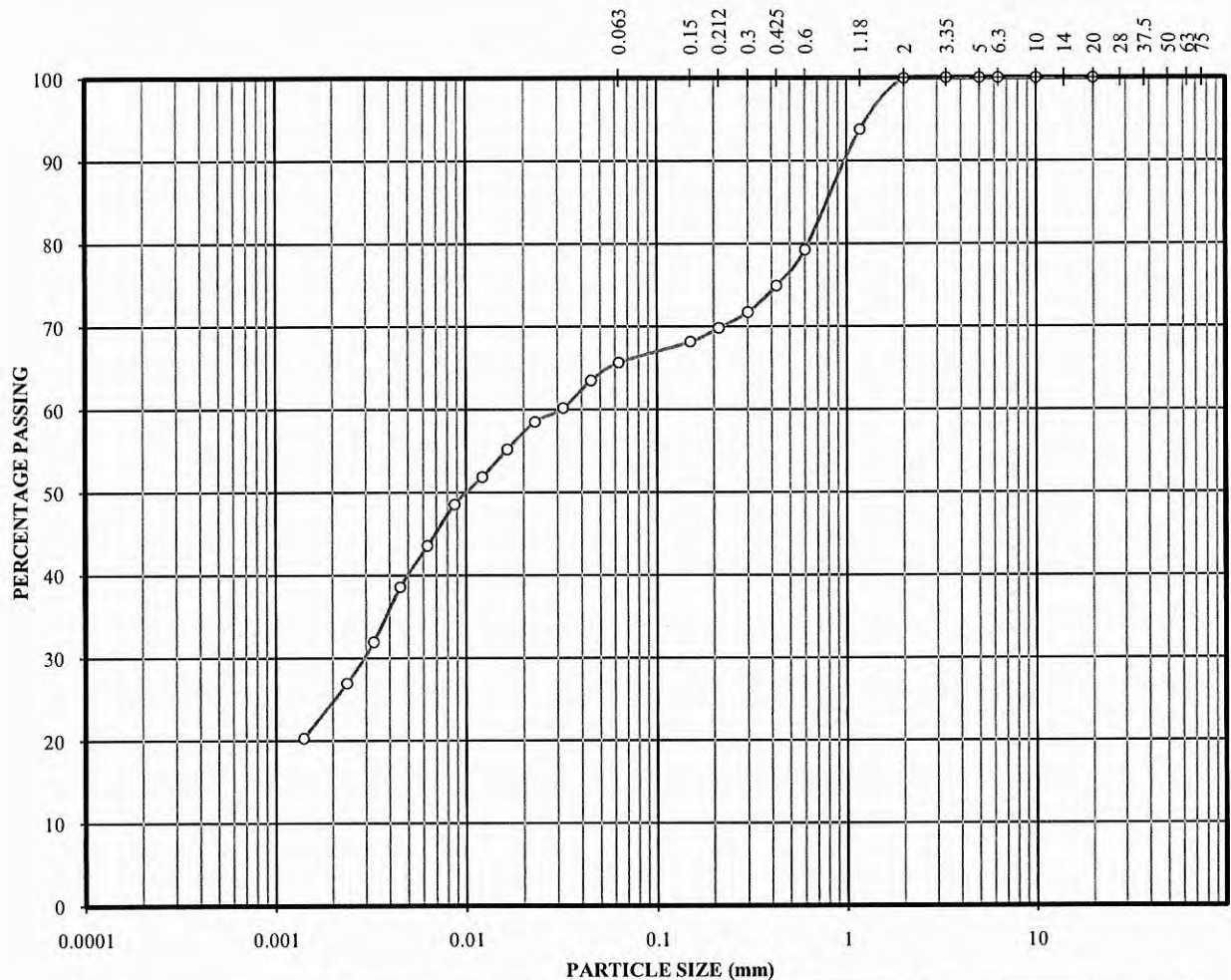
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Reddish orange and brownish yellow Sandy SILT
TW3	4.50m-5.10m	0	39	33	28	

	Project: Sungei Tengah Road/Lorong Pasu		 Cert No: LA-2015-0601-B
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun 	
	Borehole No: BH6	Checked/Approved:  Khin Maung Nyunt Laboratory Manager	
	Sample No: TW3		
	Depth: 4.50m-5.10m		
	Prepared Date: 25-Jan-2023		

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

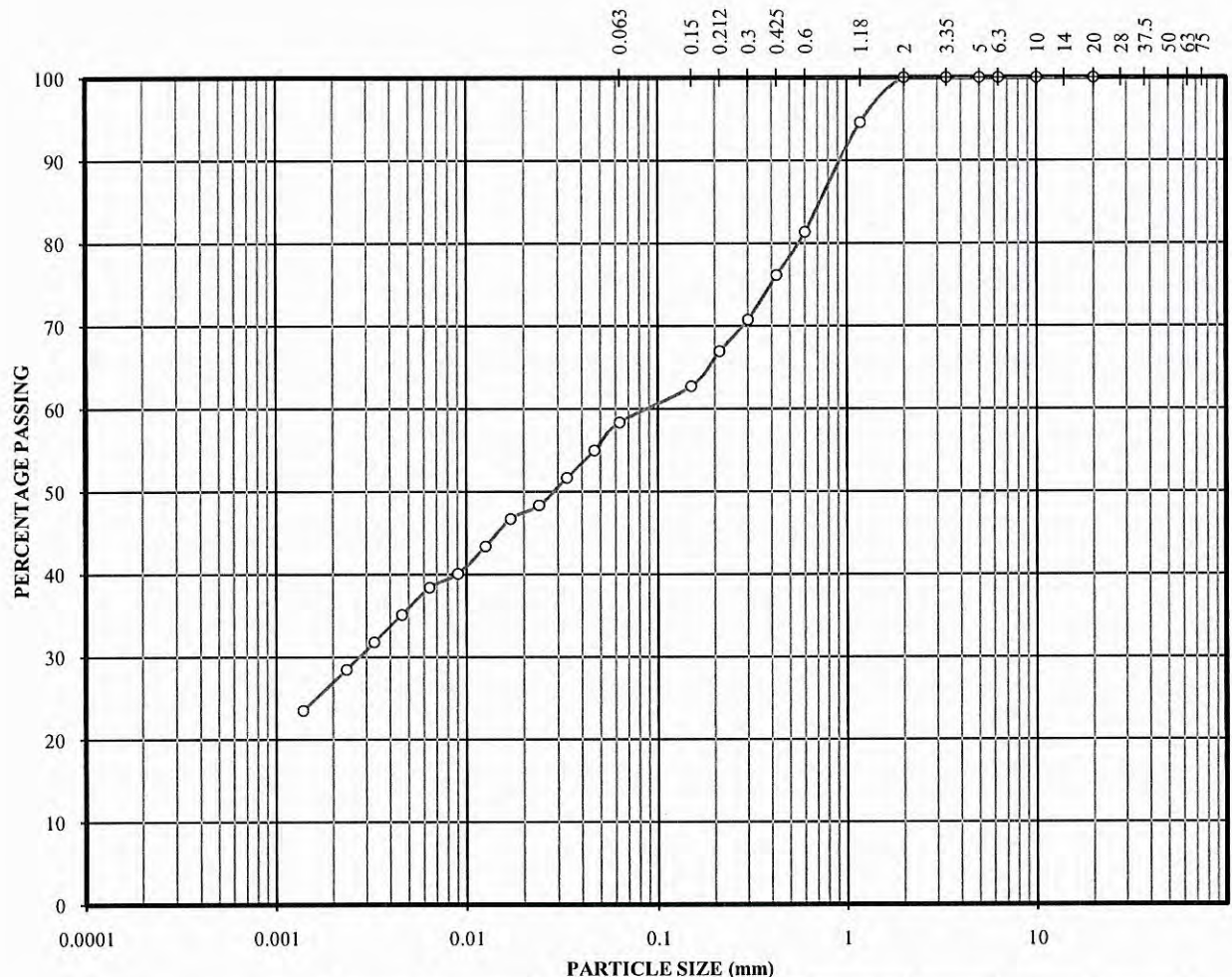
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and light red slightly Sandy SILT
TW5	9.00m-9.70m	0	34	41	25	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun
	Job Ref:	SML/345A/2022	
	Borehole No:	BH6	
	Sample No:	TW5	
	Depth:	9.00m-9.70m	
	Prepared Date:	25-Jan-2023	
			 Khin Maung Nyunt Laboratory Manager
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

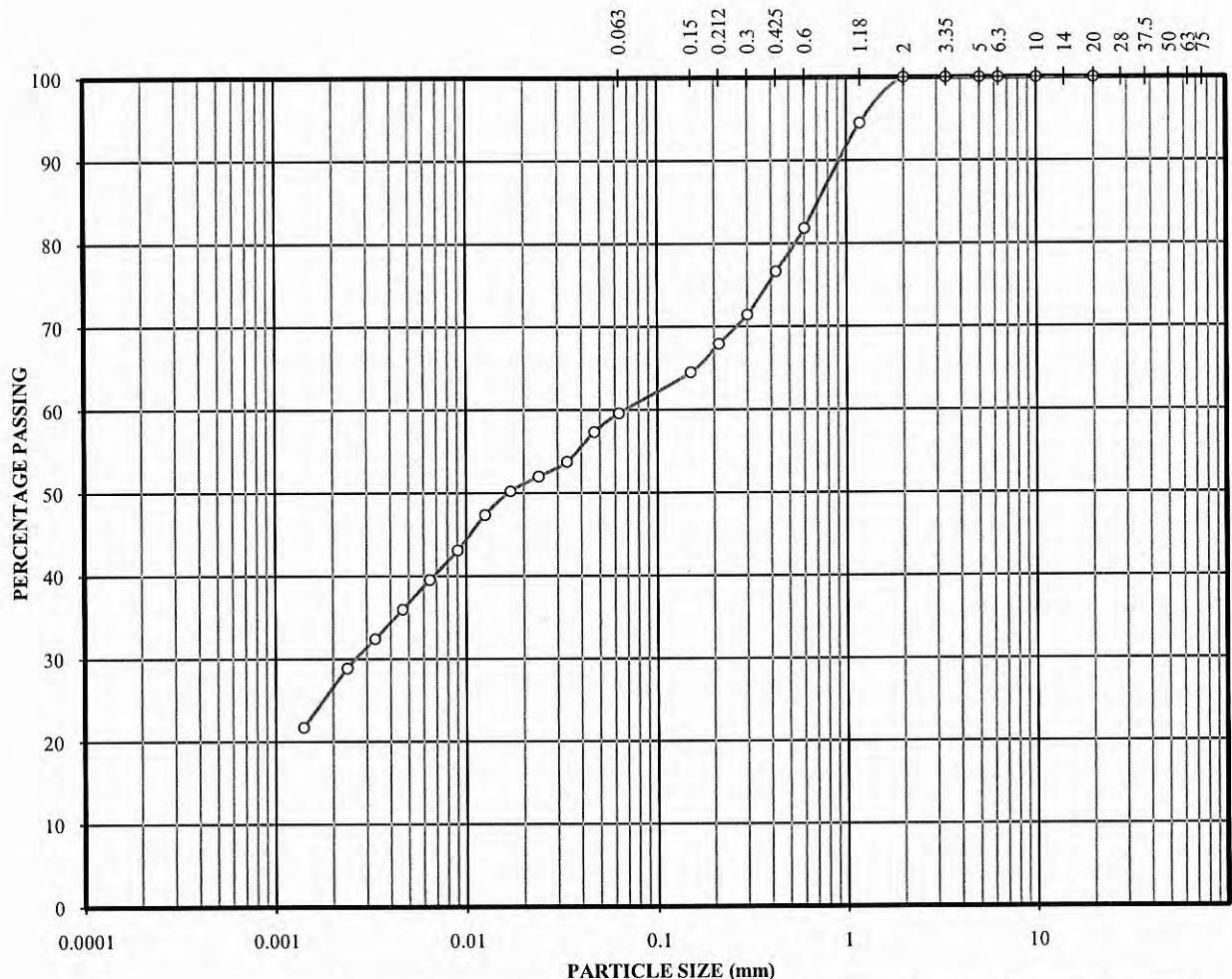
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Light olive brown and reddish orange Sandy SILT	
TW1	1.50m-2.10m	0	42	31	27		

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun	 Khin Maung Nyunt	 Cert No: LA-2015-0601-B
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun			
	Borehole No: BH7	Checked/Approved:			
	Sample No: TW1				
	Depth: 1.50m-2.10m				
	Prepared Date: 25-Jan-2023				

SOIL MATERIALS LABORATORY PTE LTD

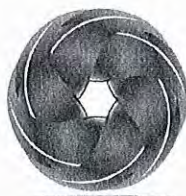
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

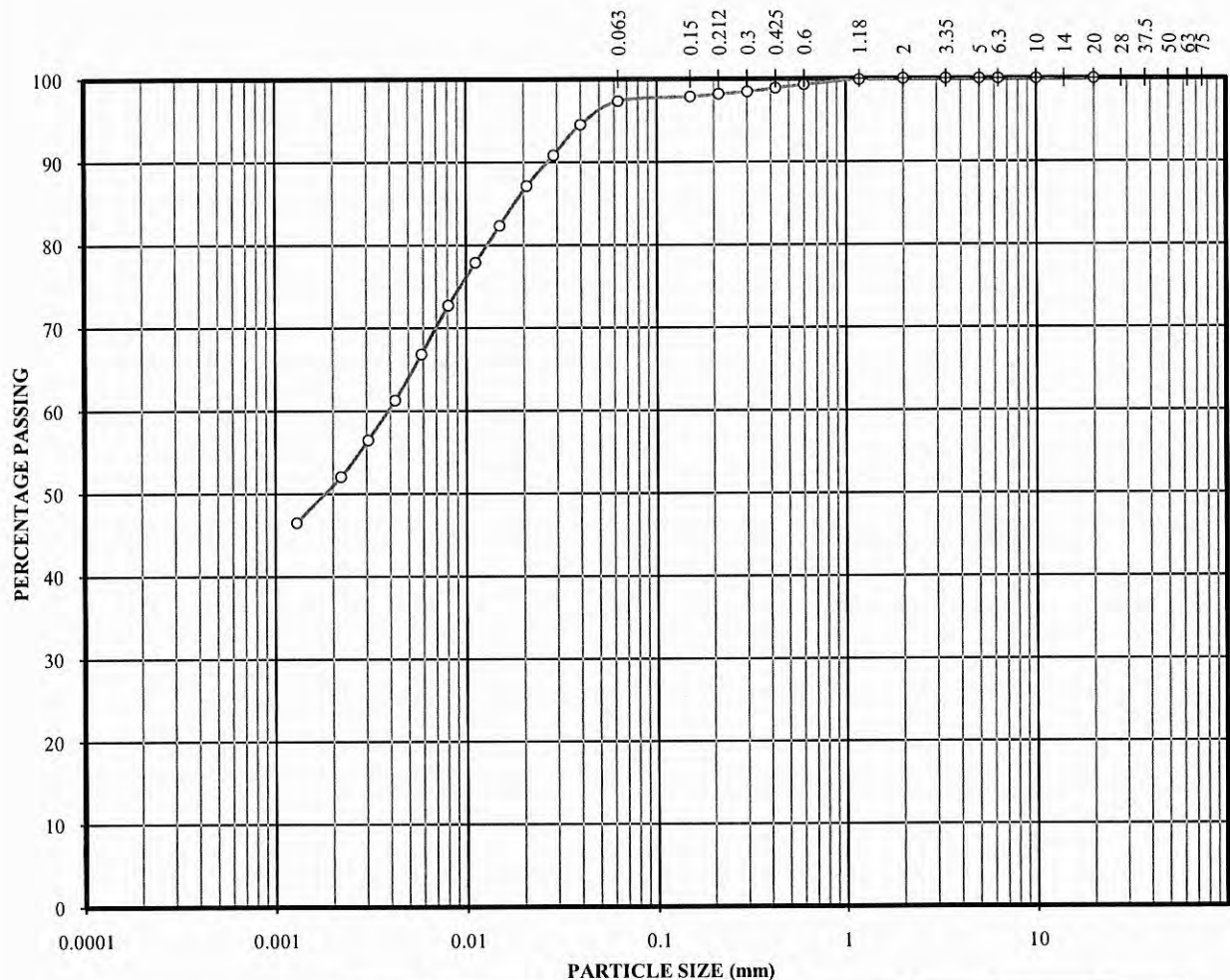
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Dark brownish grey and reddish brown Sandy SILT
TW2	3.00m-3.60m	0	40	33	27	

	Project: Sungei Tengah Road/Lorong Pasu	
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun 
	Borehole No: BH7	Checked/Approved:  Khin Maung Nyunt Laboratory Manager
	Sample No: TW2	
	Depth: 3.00m-3.60m	
	Prepared Date: 25-Jan-2023	
 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B		

SOIL MATERIALS LABORATORY PTE LTD

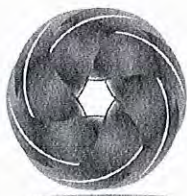
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and reddish orange slightly Sandy CLAY
TW3	4.50m-5.10m	0	3	46	51	



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH8

Checked/Approved:

Sample No: TW3

Depth: 4.50m-5.10m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

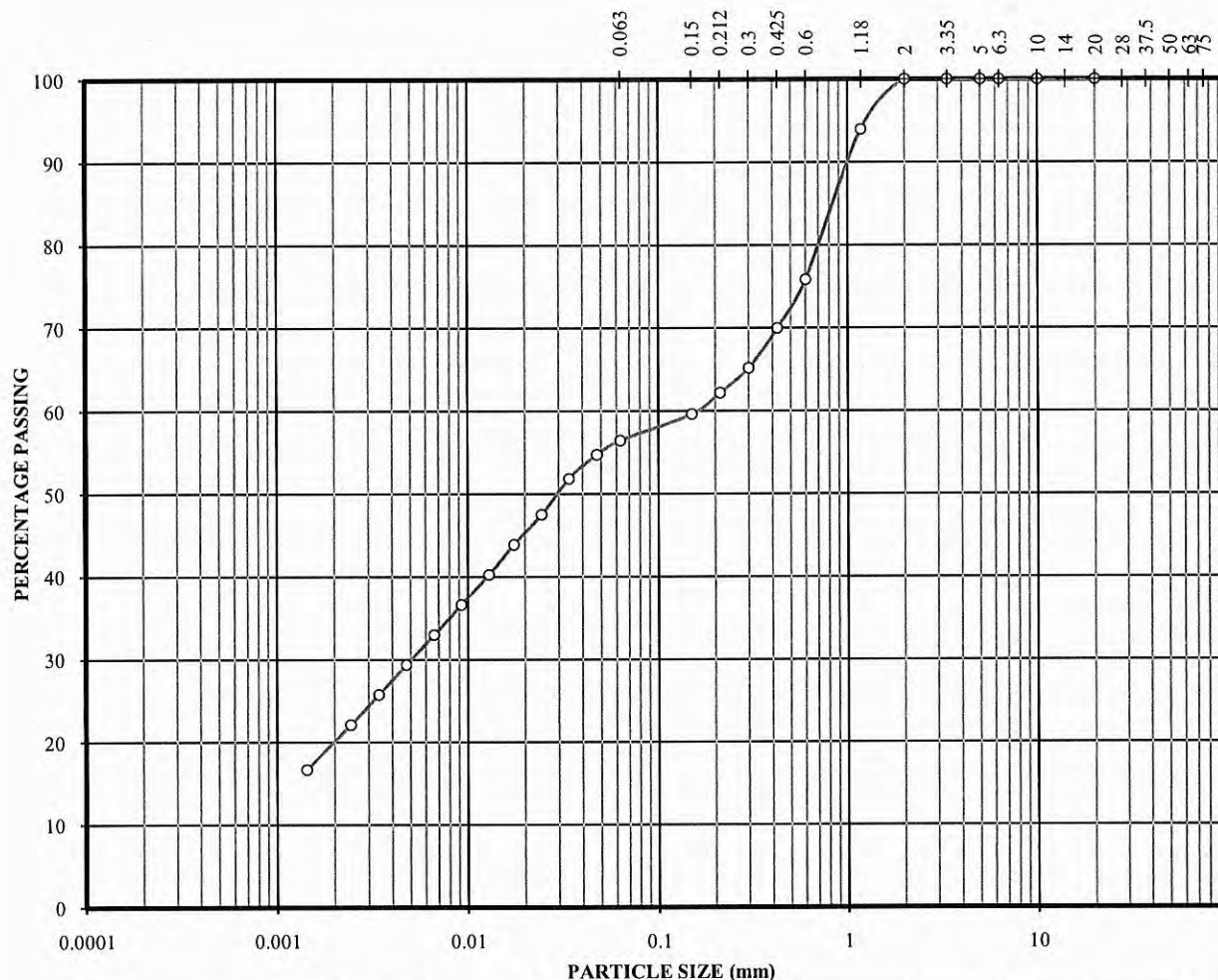
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

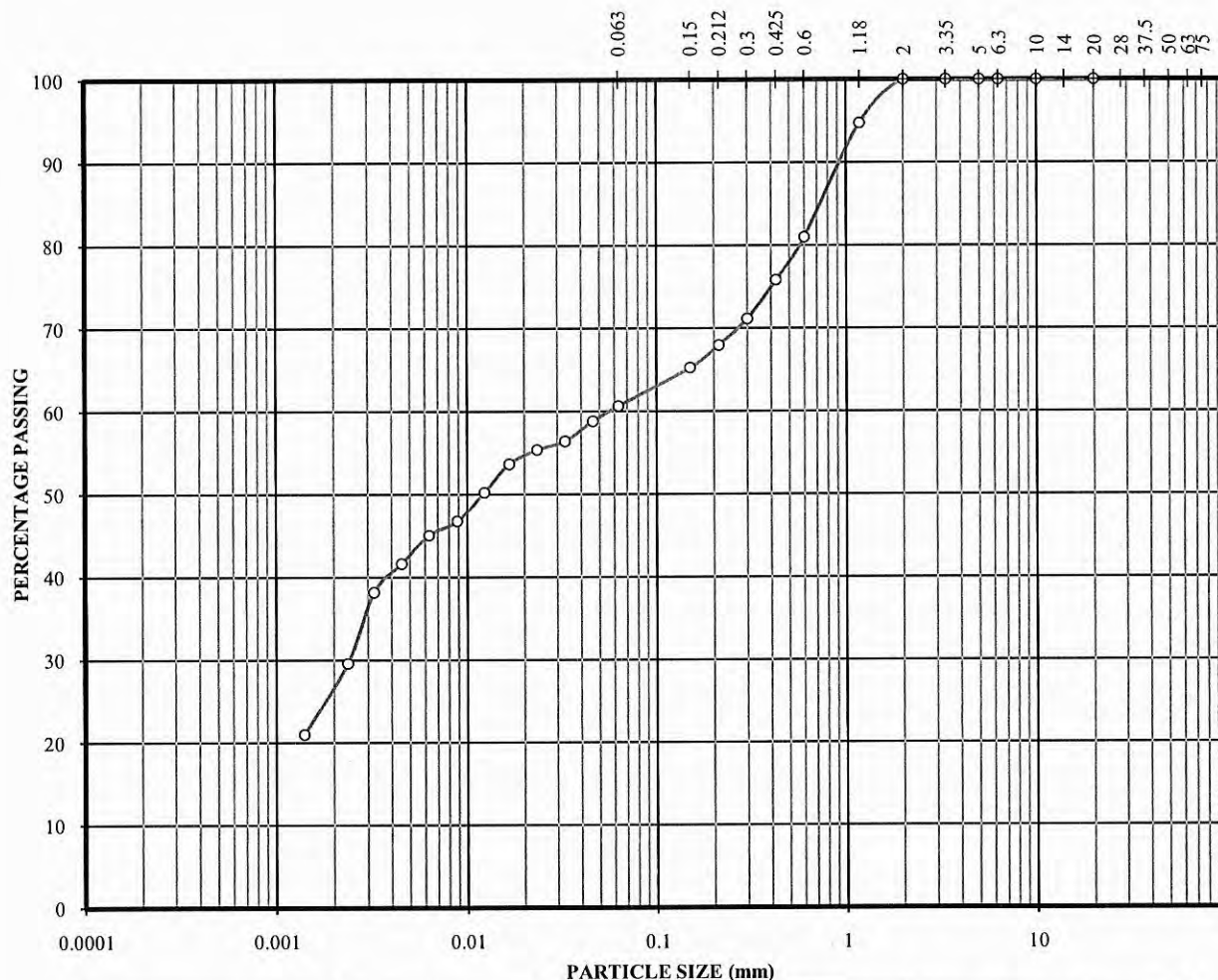
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Reddish orange and light brownish yellow Sandy SILT
TW5	9.00m-9.70m	0	44	36	20	

	Project: Sungei Tengah Road/Lorong Pasu		
	Job Ref:	SML/345A/2022	
	Borehole No:	BH8	
	Sample No:	TW5	
	Depth:	9.00m-9.70m	
	Prepared Date:	25-Jan-2023	
			 Khin Maung Nyunt Laboratory Manager
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

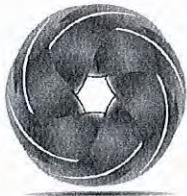
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

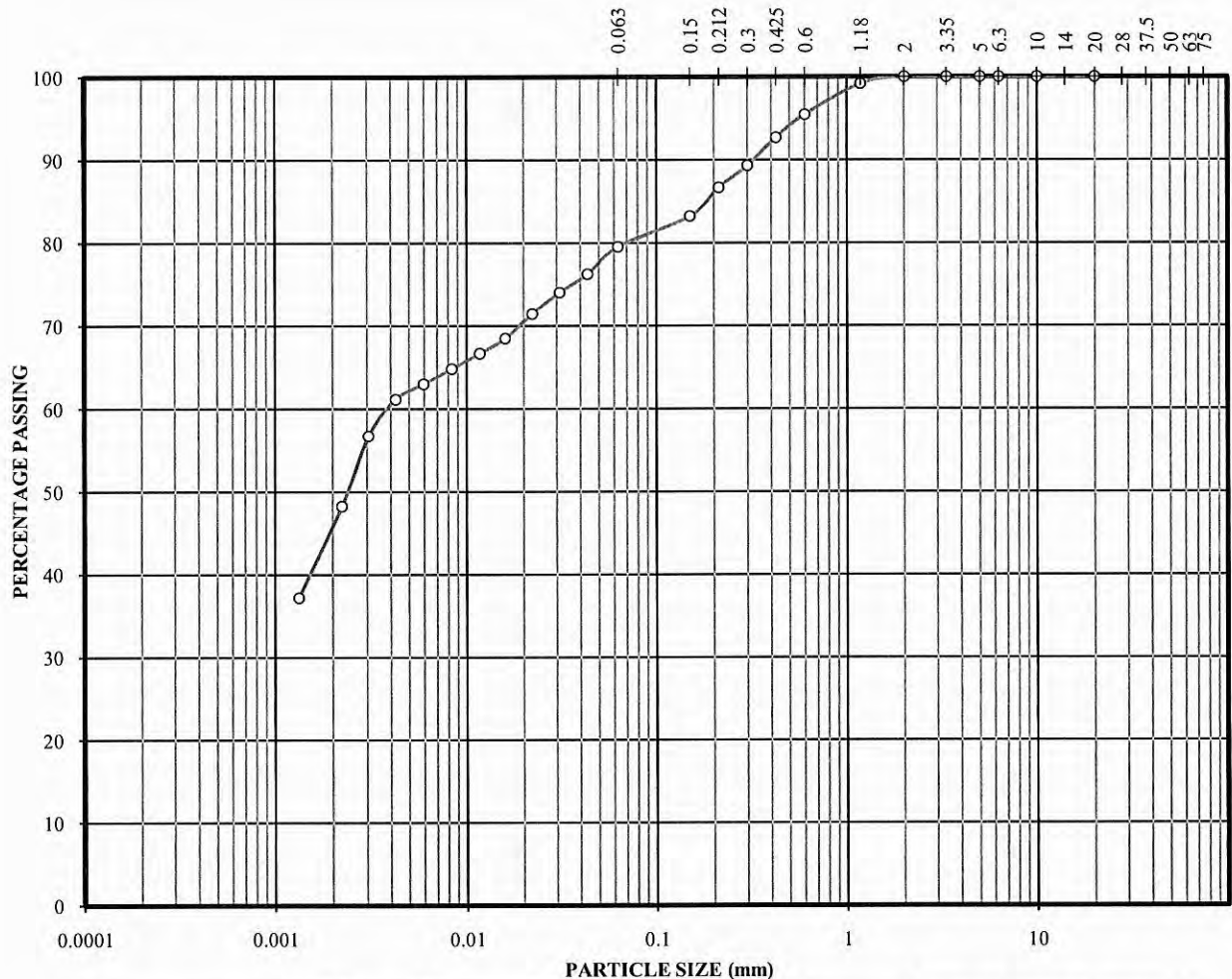
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and reddish orange Sandy SILT
TW1	1.50m-2.10m	0	39	33	28	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun  Checked/Approved: Khin Maung Nyunt Laboratory Manager
	Job Ref:	SML/345A/2022	
	Borehole No:	BH9	
	Sample No:	TW1	
	Depth:	1.50m-2.10m	
	Prepared Date:	25-Jan-2023	
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

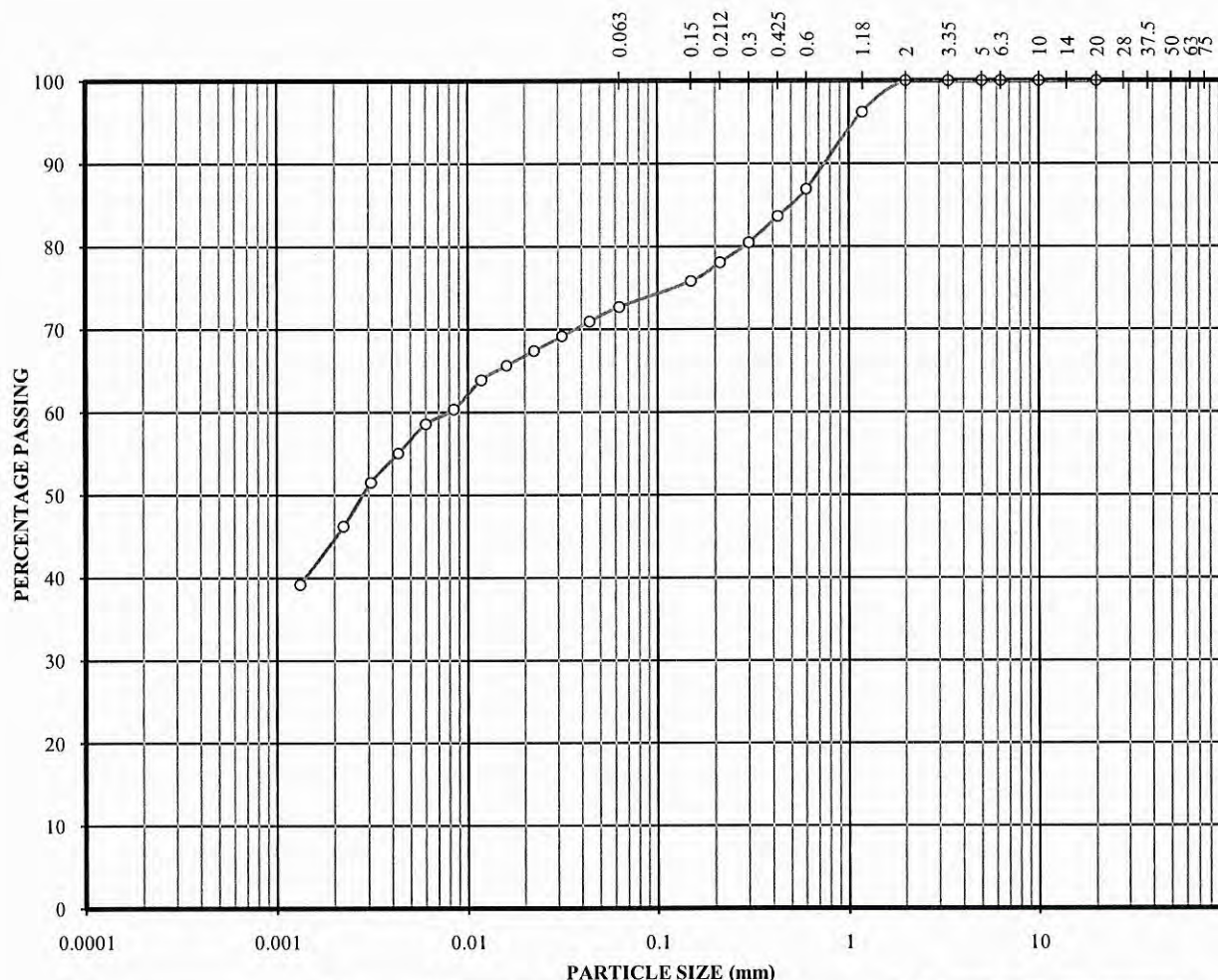
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Reddish orange and brownish yellow slightly Sandy CLAY
TW2	3.00m-3.60m	0	20	33	47	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun
	Job Ref:	SML/345A/2022	
	Borehole No:	BH9	
	Sample No:	TW2	
	Depth:	3.00m-3.60m	
	Prepared Date:	25-Jan-2023	
			 Khin Maung Nyunt Laboratory Manager
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

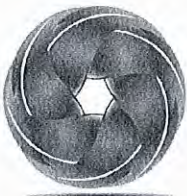
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

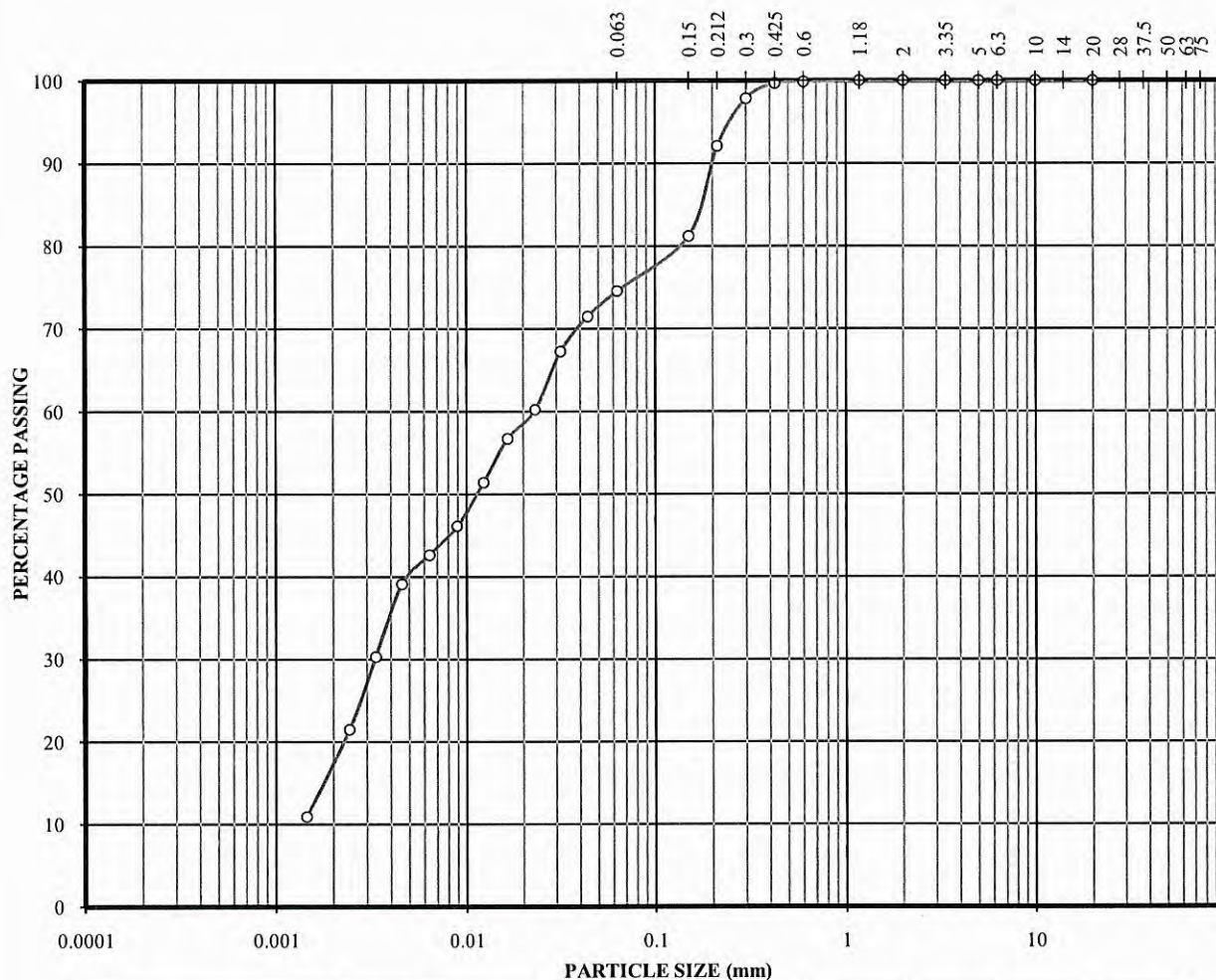
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Reddish brown and brownish yellow slightly Sandy CLAY
TW1	1.50m-2.10m	0	27	28	45	

	Project: Sungei Tengah Road/Lorong Pasu		 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref:	SML/345A/2022	
	Borehole No:	BH10	
	Sample No:	TW1	
	Depth:	1.50m-2.10m	
	Prepared Date:	25-Jan-2023	
		Engineer: Si Thu Htun	Checked/Approved:  Khin Maung Nyunt Laboratory Manager

SOIL MATERIALS LABORATORY PTE LTD

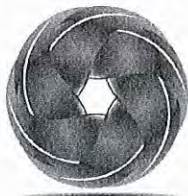
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

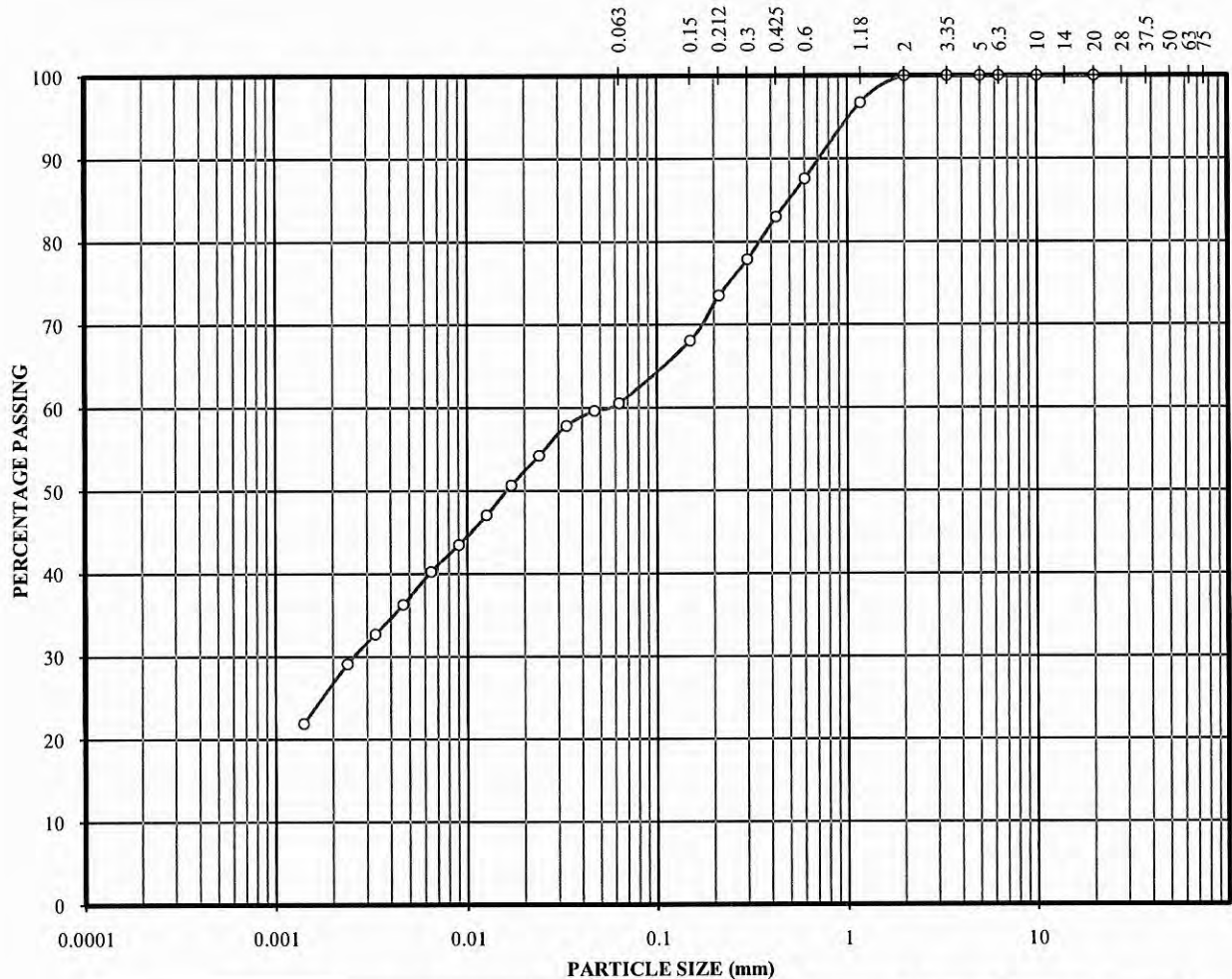
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Light brownish grey and pink slightly Sandy SILT	
U1	9.00m-9.50m	0	25	57	18		

	Project: Sungei Tengah Road/Lorong Pasu		 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun 	
	Borehole No: BH10	Checked/Approved: 	
	Sample No: U1	Khin Maung Nyunt	
	Depth: 9.00m-9.50m	Laboratory Manager	
	Prepared Date: 25-Jan-2023		

SOIL MATERIALS LABORATORY PTE LTD

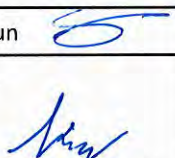
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

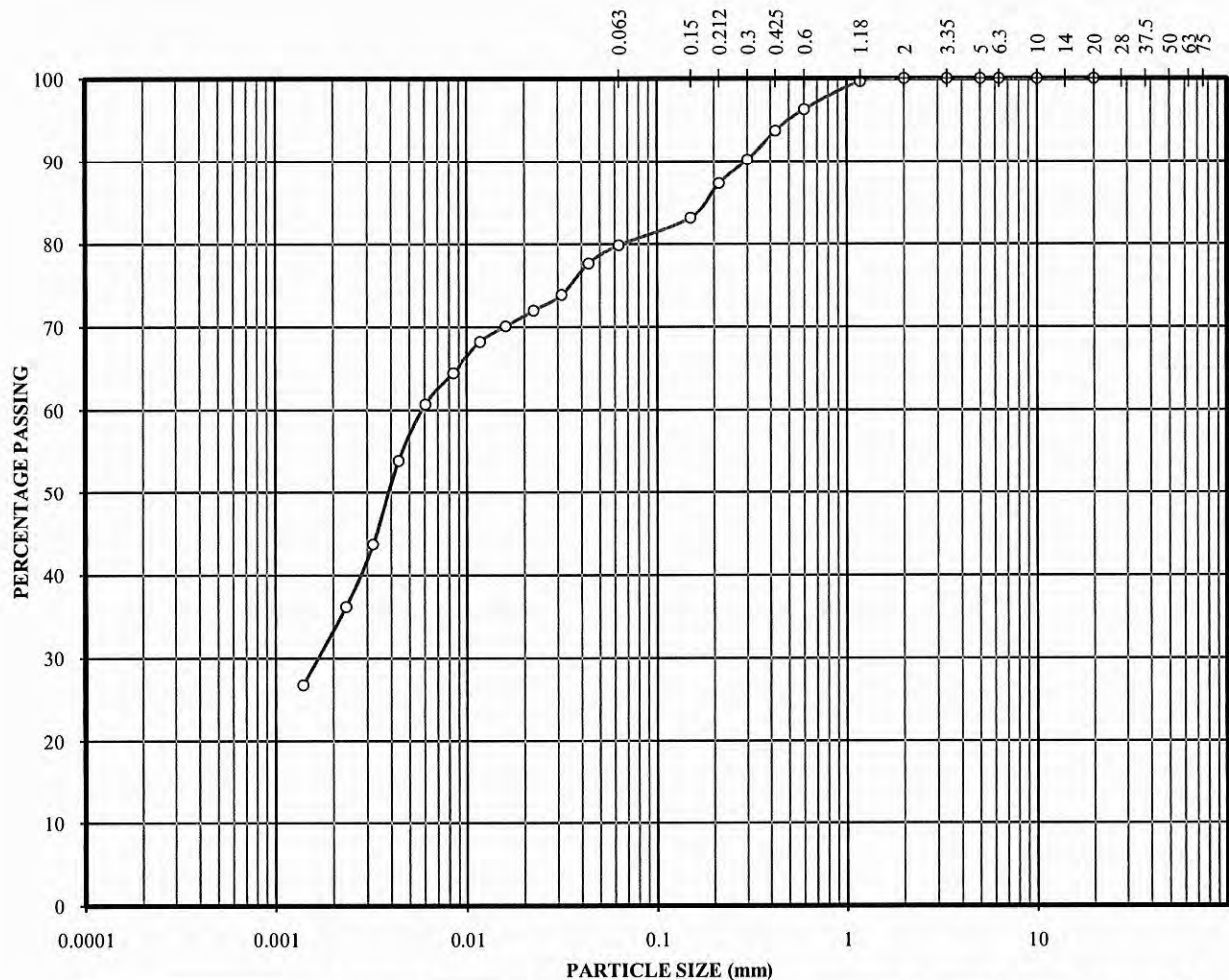
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light yellowish brown and brownish grey Sandy SILT
U1	1.50m-2.00m	0	39	34	27	

	Project: Sungei Tengah Road/Lorong Pasu		
	Job Ref:	SML/345A/2022	
	Borehole No:	BH11	
	Sample No:	U1	
	Depth:	1.50m-2.00m	
	Prepared Date:	25-Jan-2023	
		Engineer: Si Thu Htun	
		Checked/Approved:	
		Khin Maung Nyunt	
		Laboratory Manager	

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

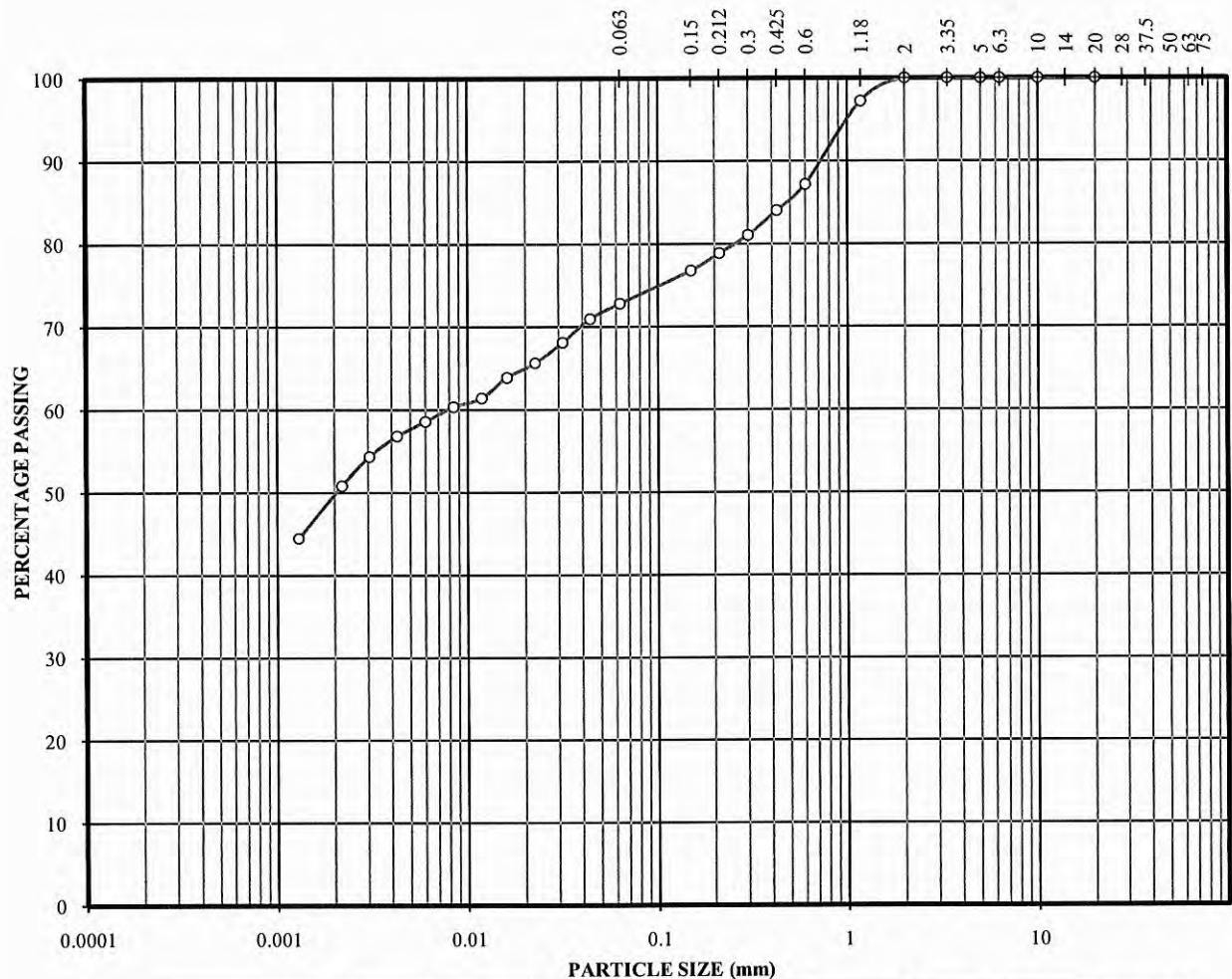
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and reddish orange slightly Sandy SILT
TW2	4.50m-5.10m	0	20	47	33	

	Project: Sungei Tengah Road/Lorong Pasu		
	Job Ref:	SML/345A/2022	
	Borehole No:	BH11	
	Sample No:	TW2	
	Depth:	4.50m-5.10m	
	Prepared Date:	25-Jan-2023	
			 Khin Maung Nyunt Laboratory Manager
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Reddish orange and brownish yellow slightly Sandy CLAY
TW2	3.00m-3.60m	0	27	23	50	



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH12

Checked/Approved:

Sample No: TW2

Depth: 3.00m-3.60m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

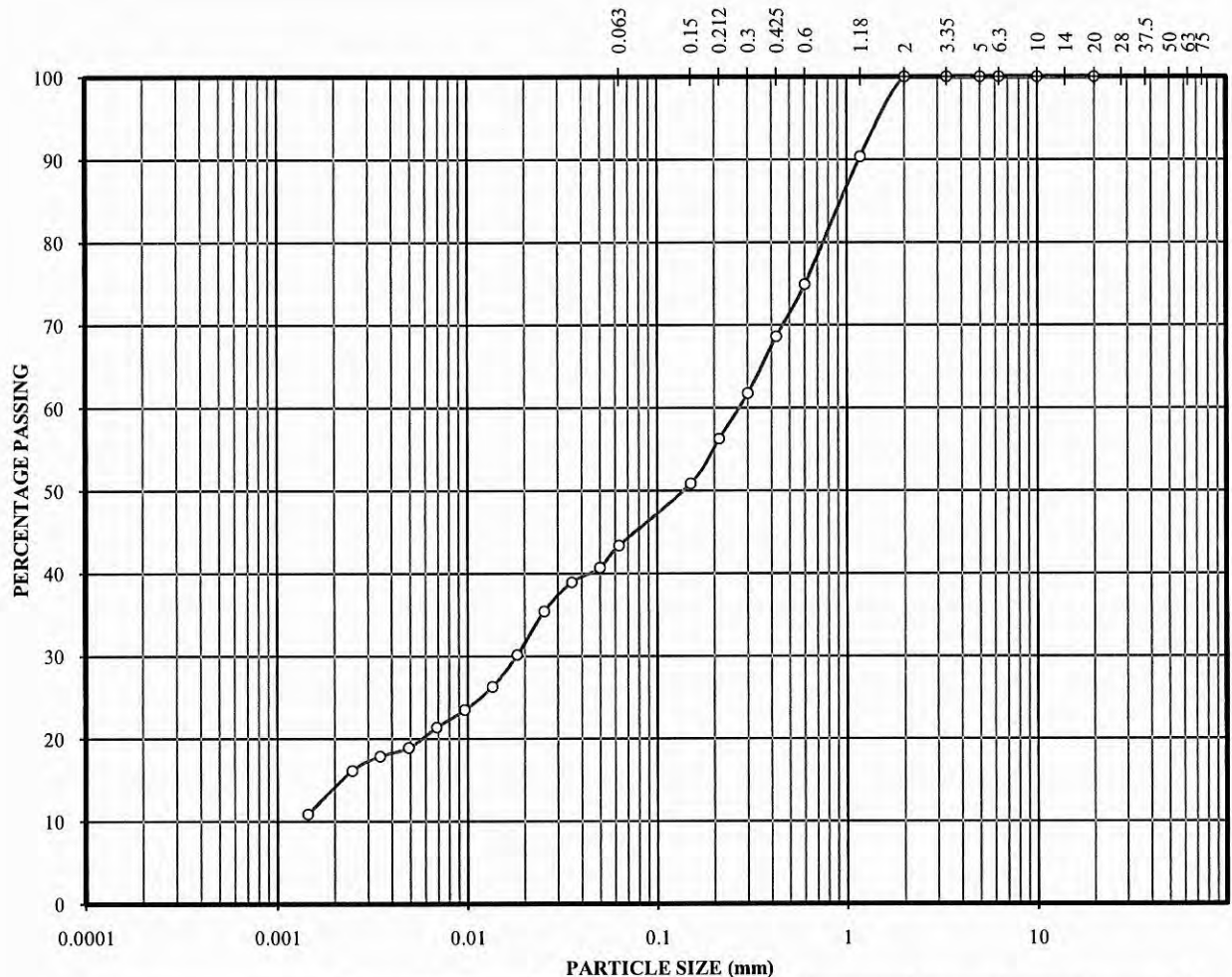
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

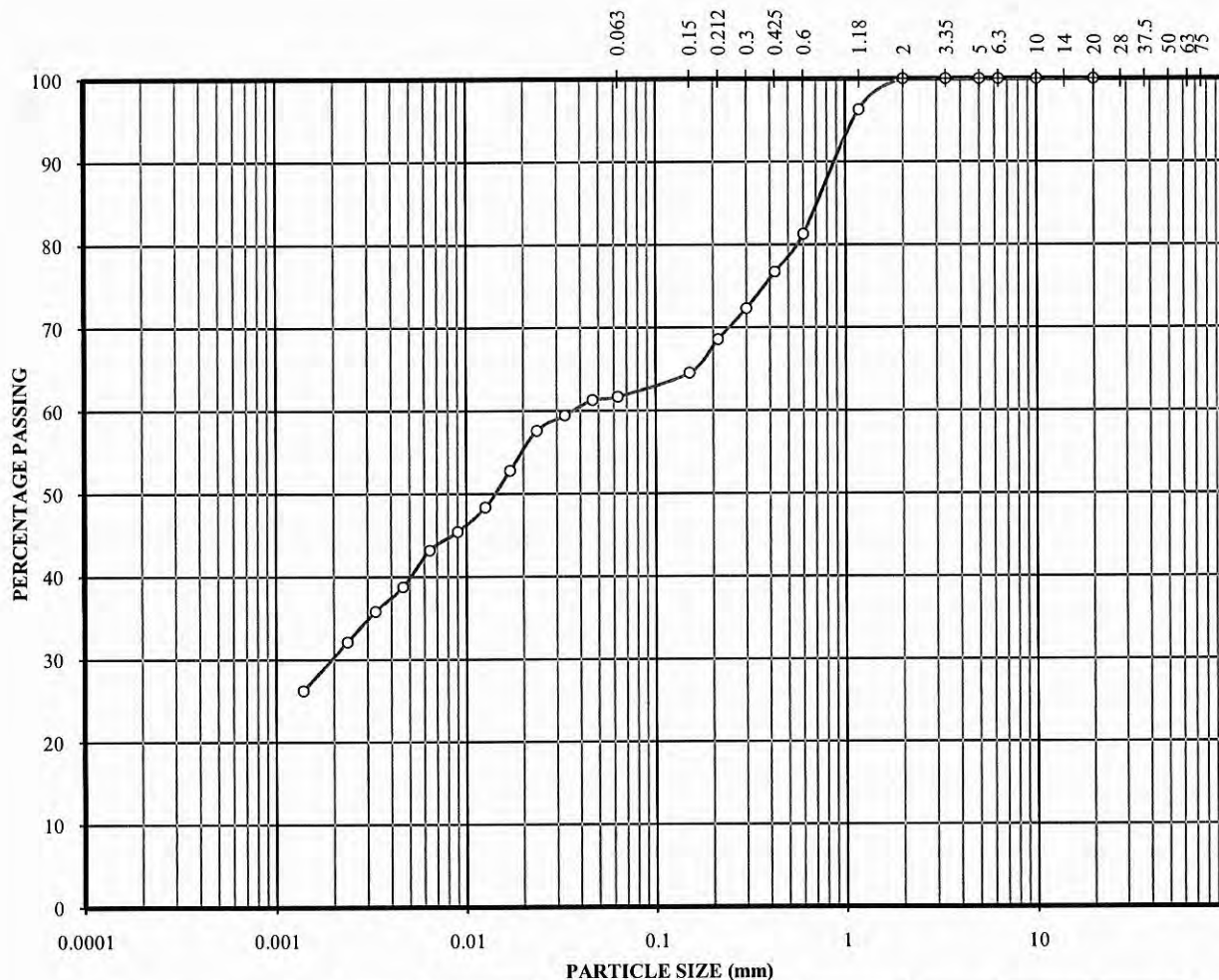
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brown and reddish orange Sandy SILT
TW4	6.00m-6.70m	0	57	28	15	

	Project: Sungei Tengah Road/Lorong Pasu		 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun 	
	Borehole No: BH12	Checked/Approved: 	
	Sample No: TW4	Khin Maung Nyunt	
	Depth: 6.00m-6.70m	Laboratory Manager	
	Prepared Date: 25-Jan-2023		

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

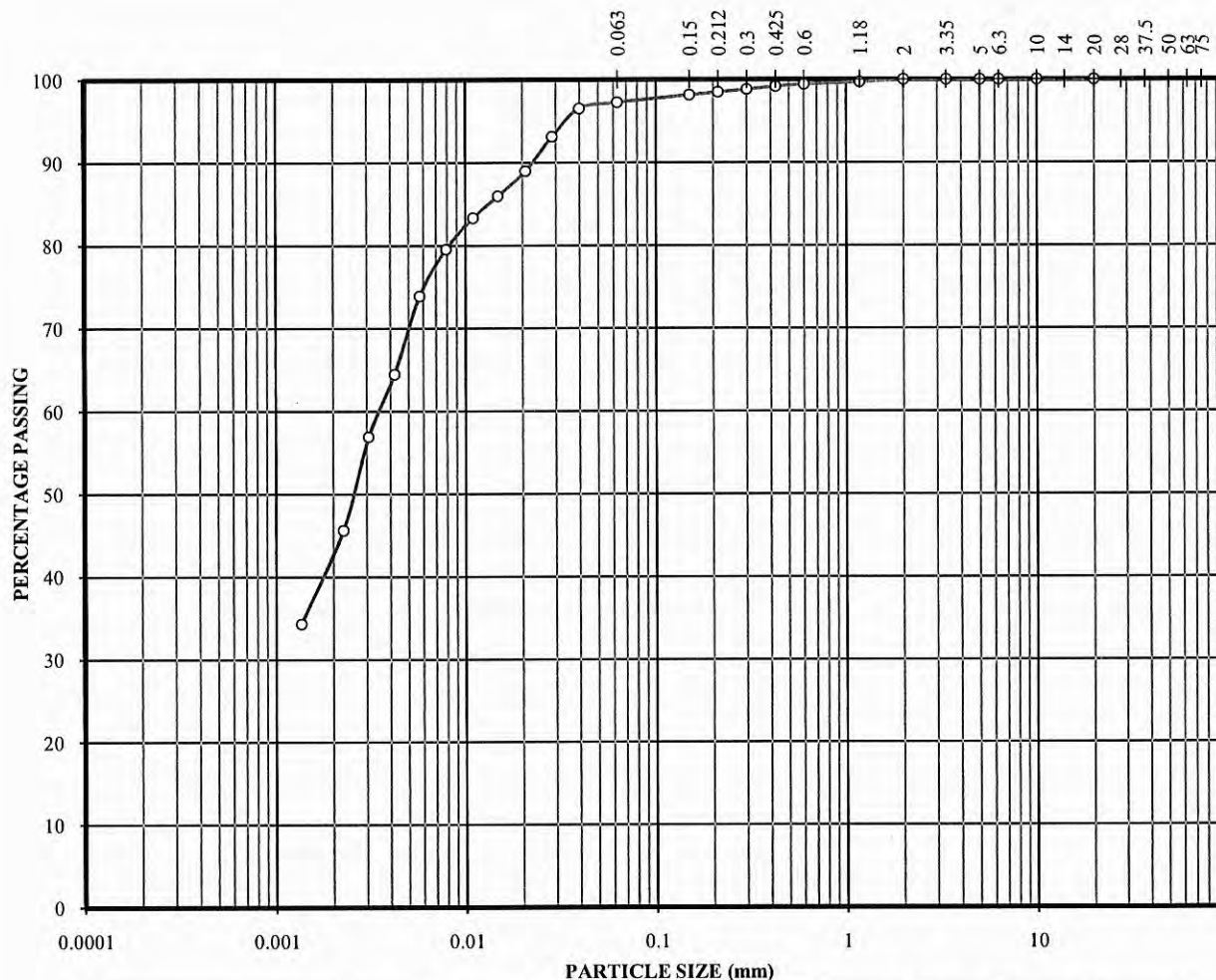
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Reddish brown and light red Sandy SILT
TW2	3.00m-3.60m	0	38	32	30	

	Project: Sungei Tengah Road/Lorong Pasu		 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref:	SML/345A/2022	
	Borehole No:	BH13	
	Sample No:	TW2	
	Depth:	3.00m-3.60m	
	Prepared Date:	25-Jan-2023	
		Engineer: Si Thu Htun	Checked/Approved: Khin Maung Nyunt Laboratory Manager

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

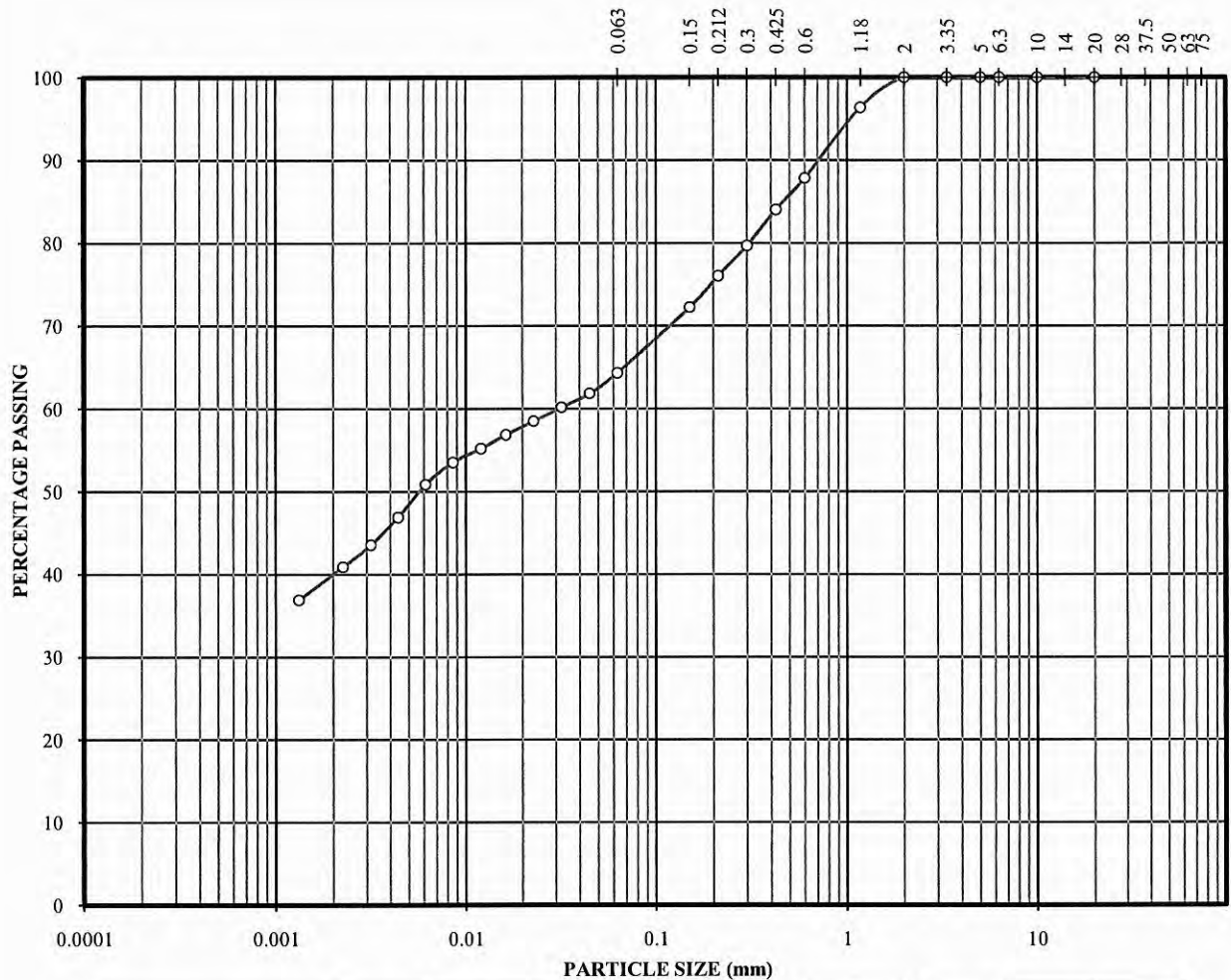
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and light grey slightly Sandy SILT
TW4	6.00m-6.70m	0	3	55	42	

	Project: Sungei Tengah Road/Lorong Pasu		Engineer: Si Thu Htun
	Job Ref: SML/345A/2022		
	Borehole No: BH13		Checked/Approved: Khin Maung Nyunt Laboratory Manager
	Sample No: TW4		
	Depth: 6.00m-6.70m		
	Prepared Date: 25-Jan-2023		
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

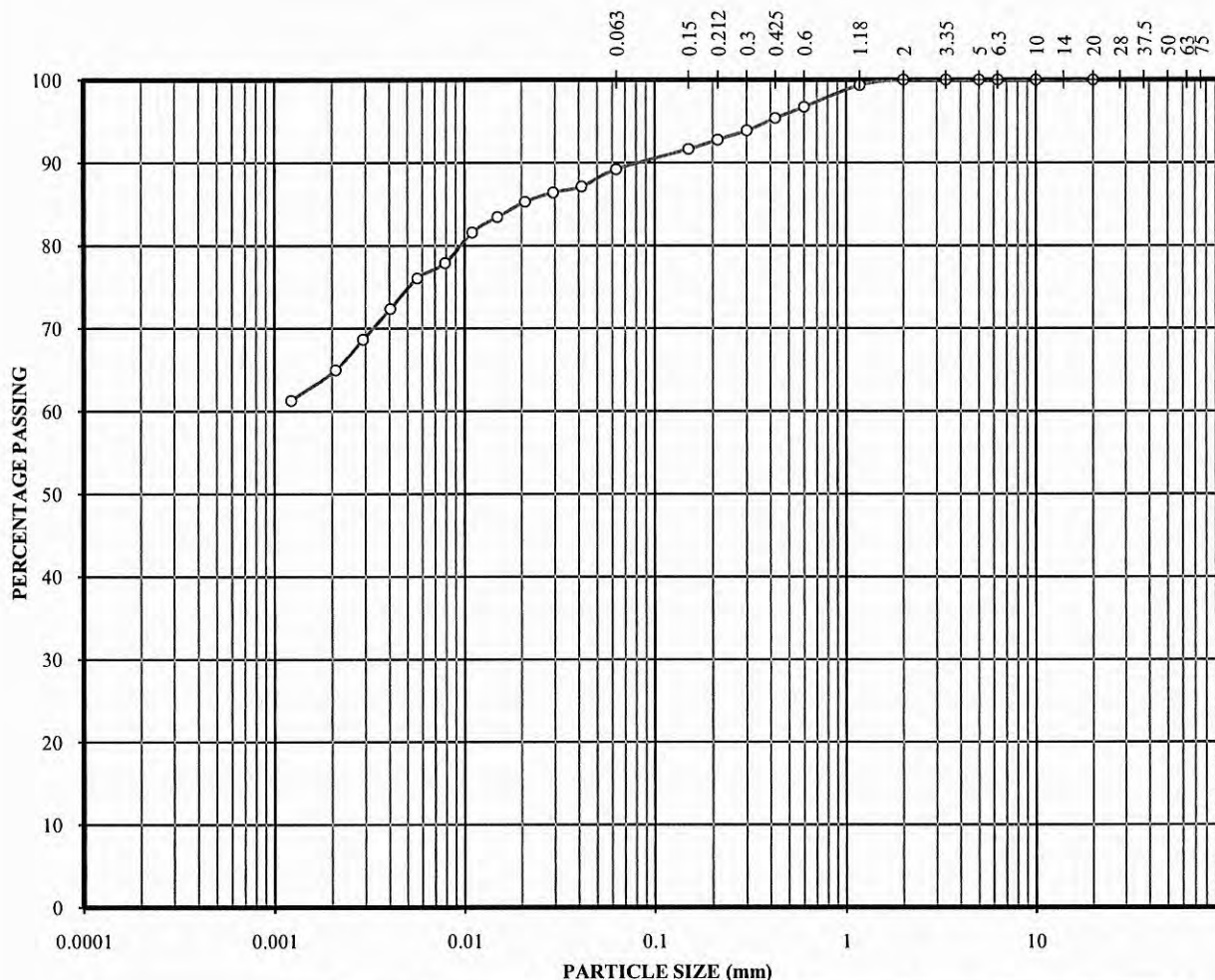
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Reddish yellow and light brown Sandy CLAY
TW1	1.50m-2.10m	0	36	24	40	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun  Checked/Approved: Khin Maung Nyunt Laboratory Manager
	Job Ref:	SML/345A/2022	
	Borehole No:	BH14	
	Sample No:	TW1	
	Depth:	1.50m-2.10m	
	Prepared Date:	25-Jan-2023	
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

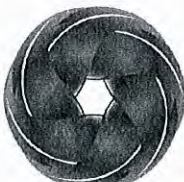
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

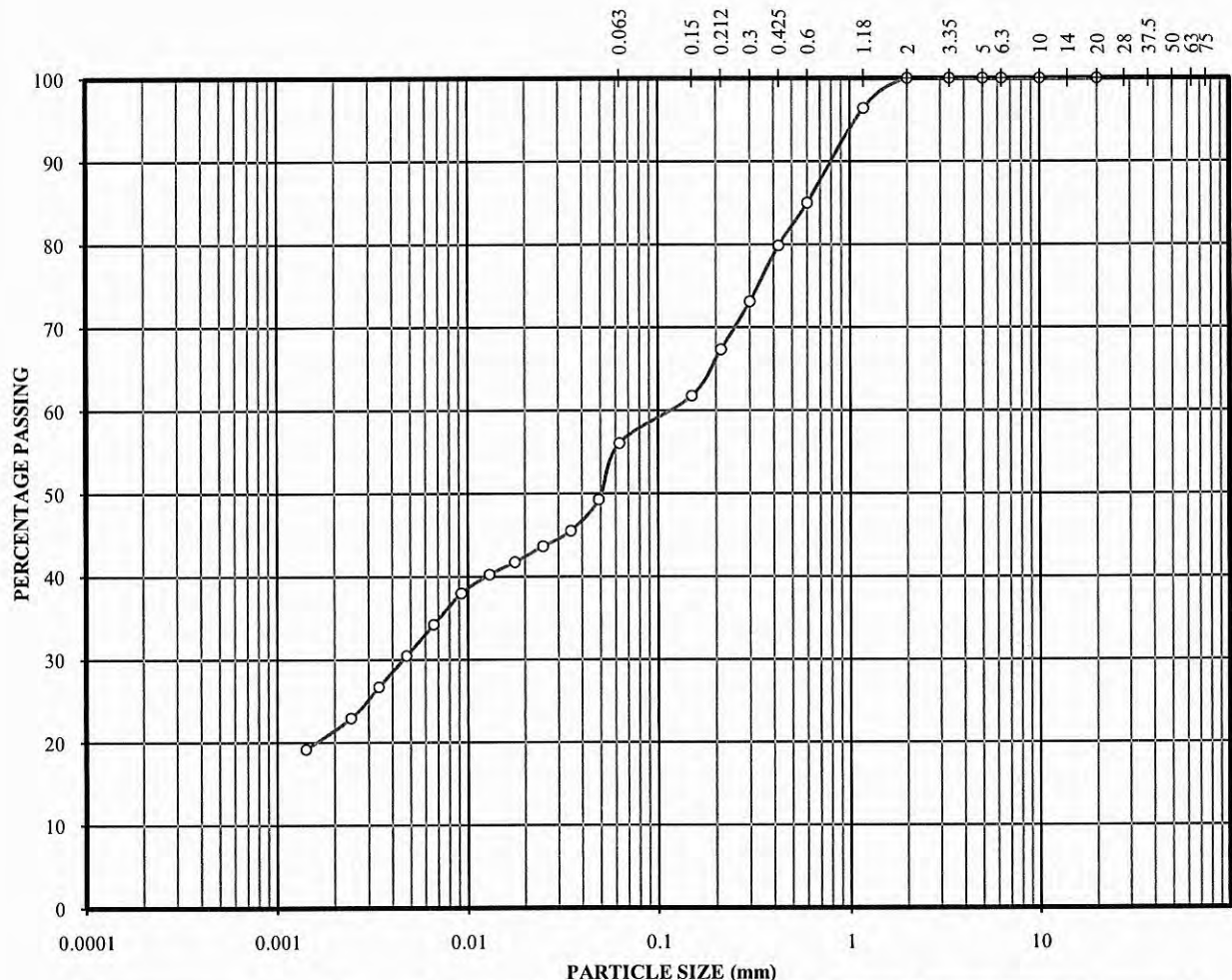
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
TW2	3.00m-3.60m	0	11	24	65	Reddish yellow and light olive brown slightly Sandy CLAY

	Project: Sungei Tengah Road/Lorong Pasu		 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun 	
	Borehole No: BH14	Checked/Approved:  Khin Maung Nyunt Laboratory Manager	
	Sample No: TW2		
	Depth: 3.00m-3.60m		
	Prepared Date: 25-Jan-2023		

SOIL MATERIALS LABORATORY PTE LTD

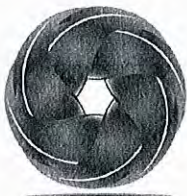
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

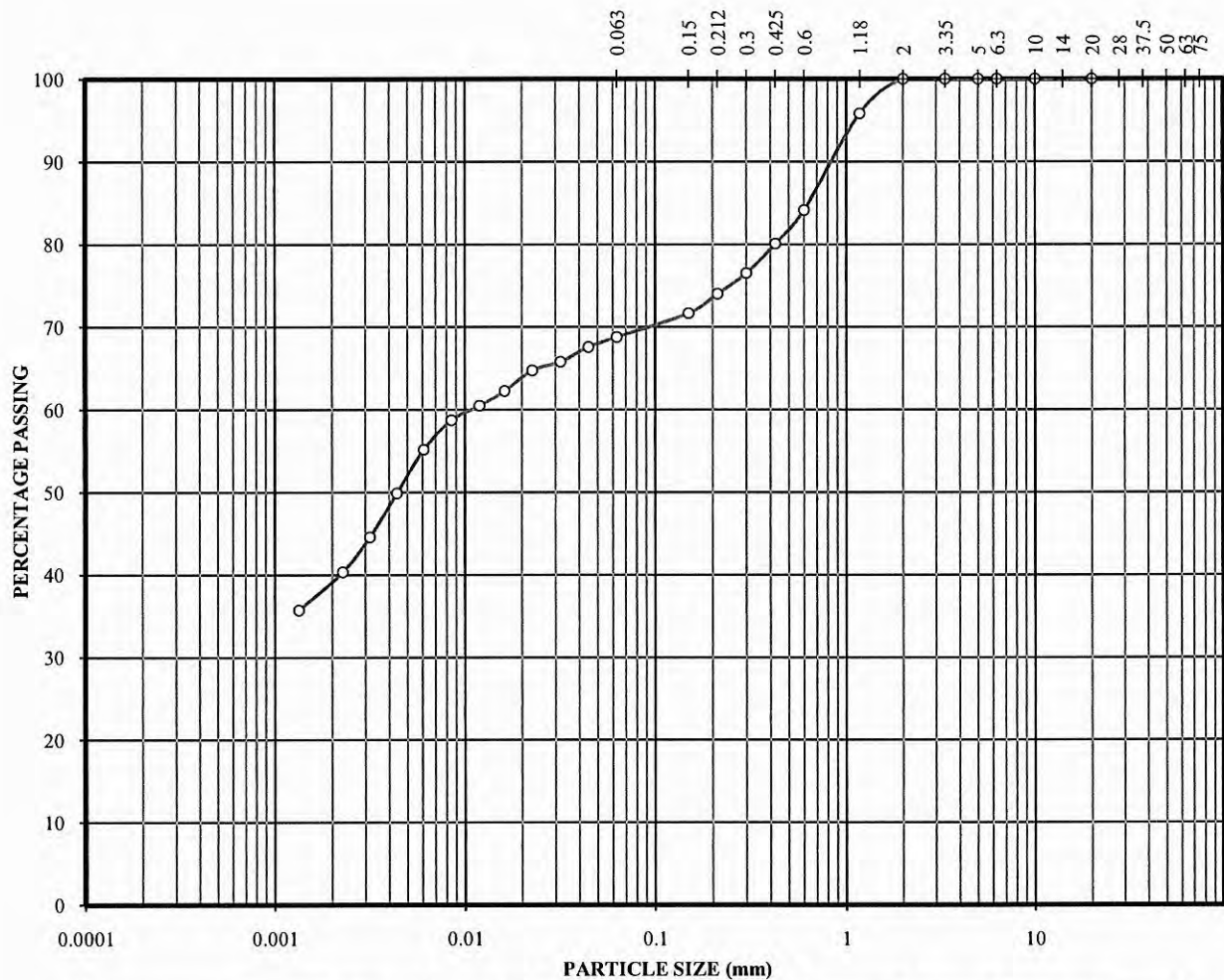
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Reddish orange and reddish brown Sandy SILT	
U1	1.50m-1.80m	0	44	35	21		

	Project: Sungei Tengah Road/Lorong Pasu		
	Job Ref:	SML/345A/2022	
	Borehole No:	BH15	
	Sample No:	U1	
	Depth:	1.50m-1.80m	
	Prepared Date:	25-Jan-2023	Engineer: Si Thu Htun  Checked/Approved:  Khin Maung Nyunt Laboratory Manager

SOIL MATERIALS LABORATORY PTE LTD

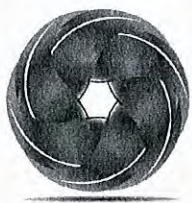
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

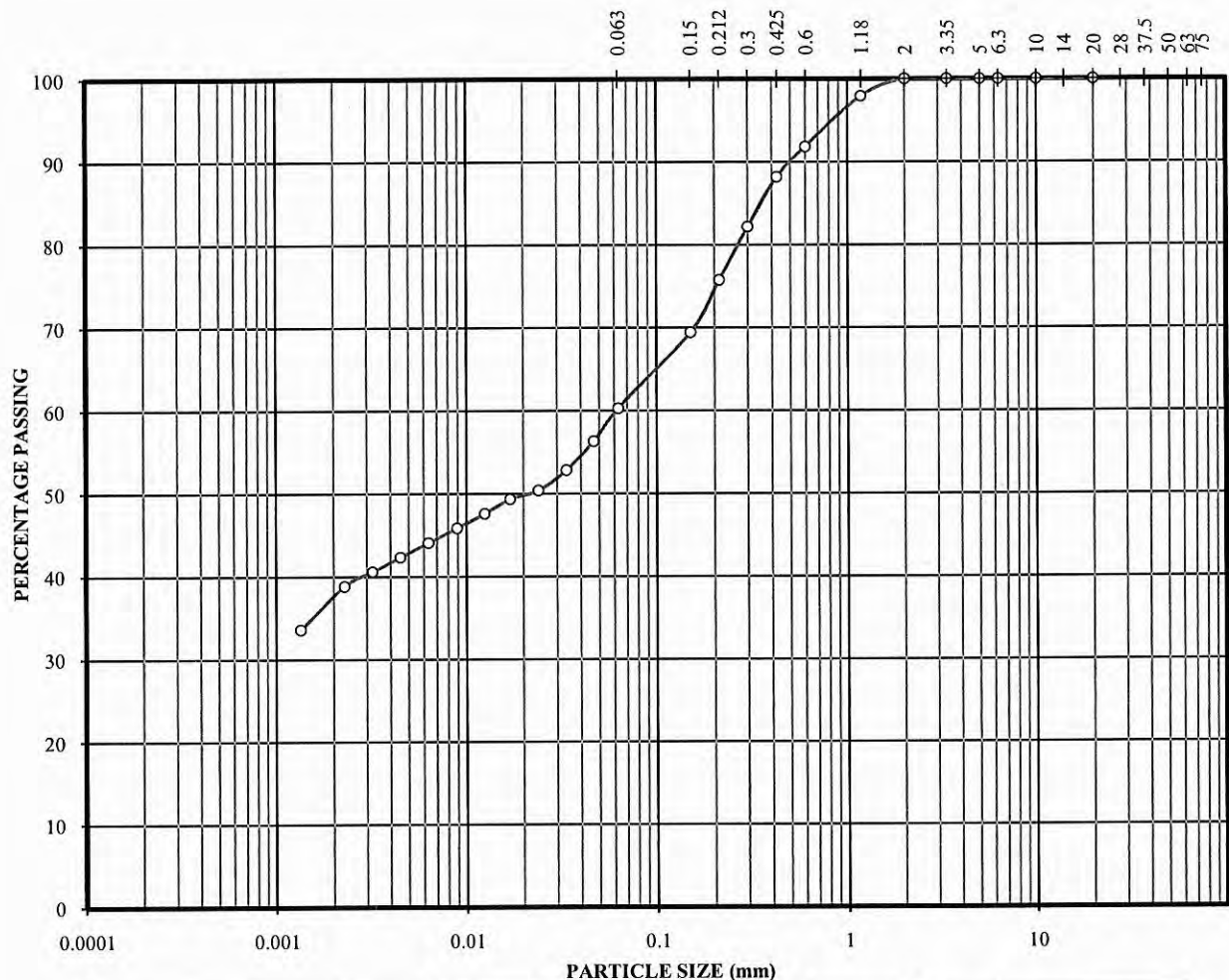
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Reddish brown and reddish orange slightly Sandy CLAY
TW1	4.50m-5.10m	0	31	30	39	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun  Khin Maung Nyunt Laboratory Manager
	Job Ref: SML/345A/2022		
	Borehole No: BH15		
	Sample No: TW1		
	Depth: 4.50m-5.10m		
	Prepared Date: 25-Jan-2023		
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

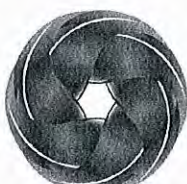
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

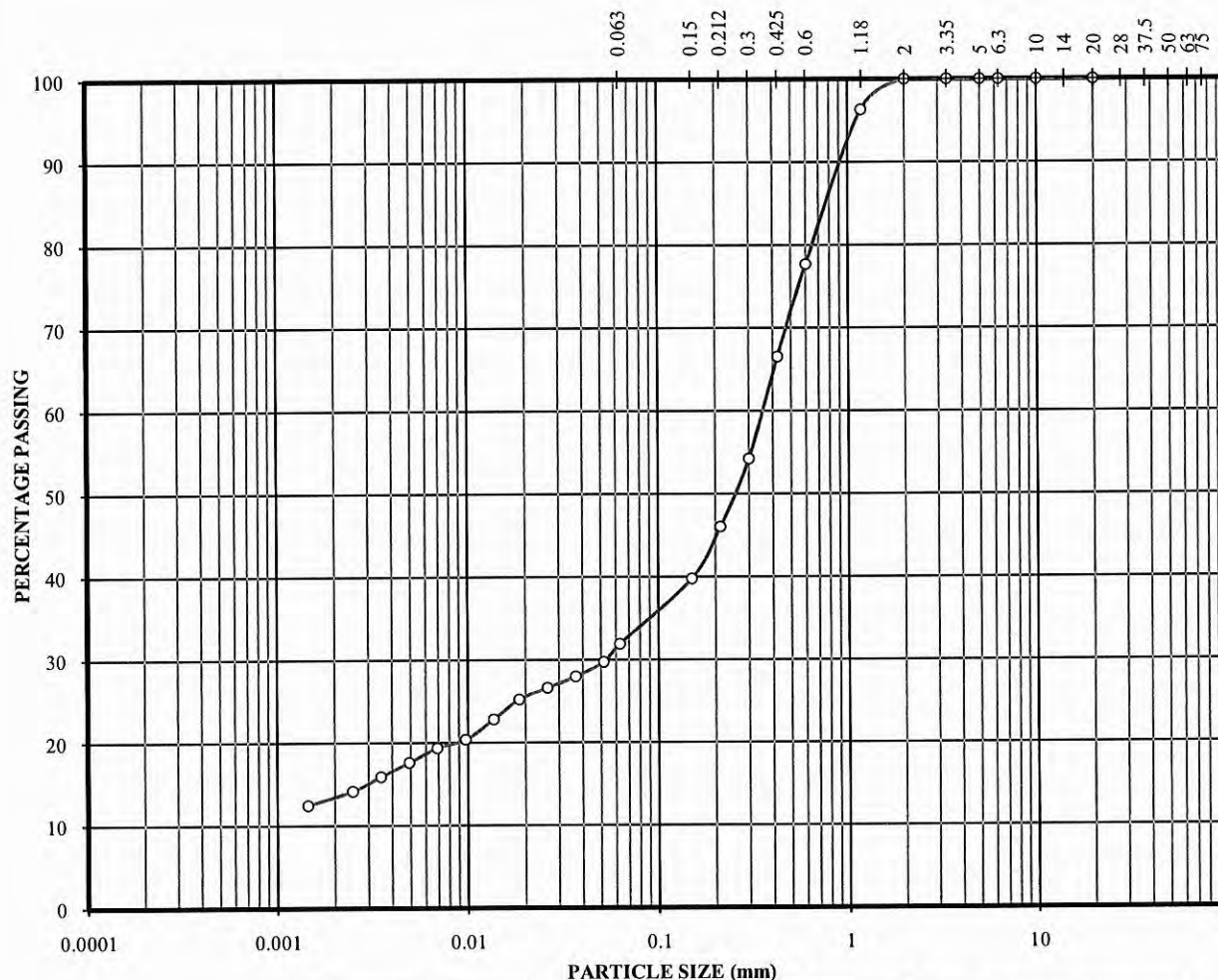
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Light olive brown and reddish yellow Sandy CLAY	
TW1	1.50m-2.10m	0	40	22	38		

	Project: Sungei Tengah Road/Lorong Pasu		 Cert No: LA-2015-0601-B
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun 	
	Borehole No: BH16	Checked/Approved:  Khin Maung Nyunt Laboratory Manager	
	Sample No: TW1		
	Depth: 1.50m-2.10m		
	Prepared Date: 25-Jan-2023		

SOIL MATERIALS LABORATORY PTE LTD

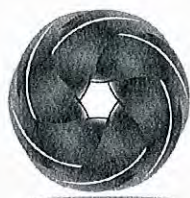
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light olive brown Silty SAND
TW3	4.50m-5.10m	0	68	19	13	



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH16

Checked/Approved:

Sample No: TW3

Depth: 4.50m-5.10m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

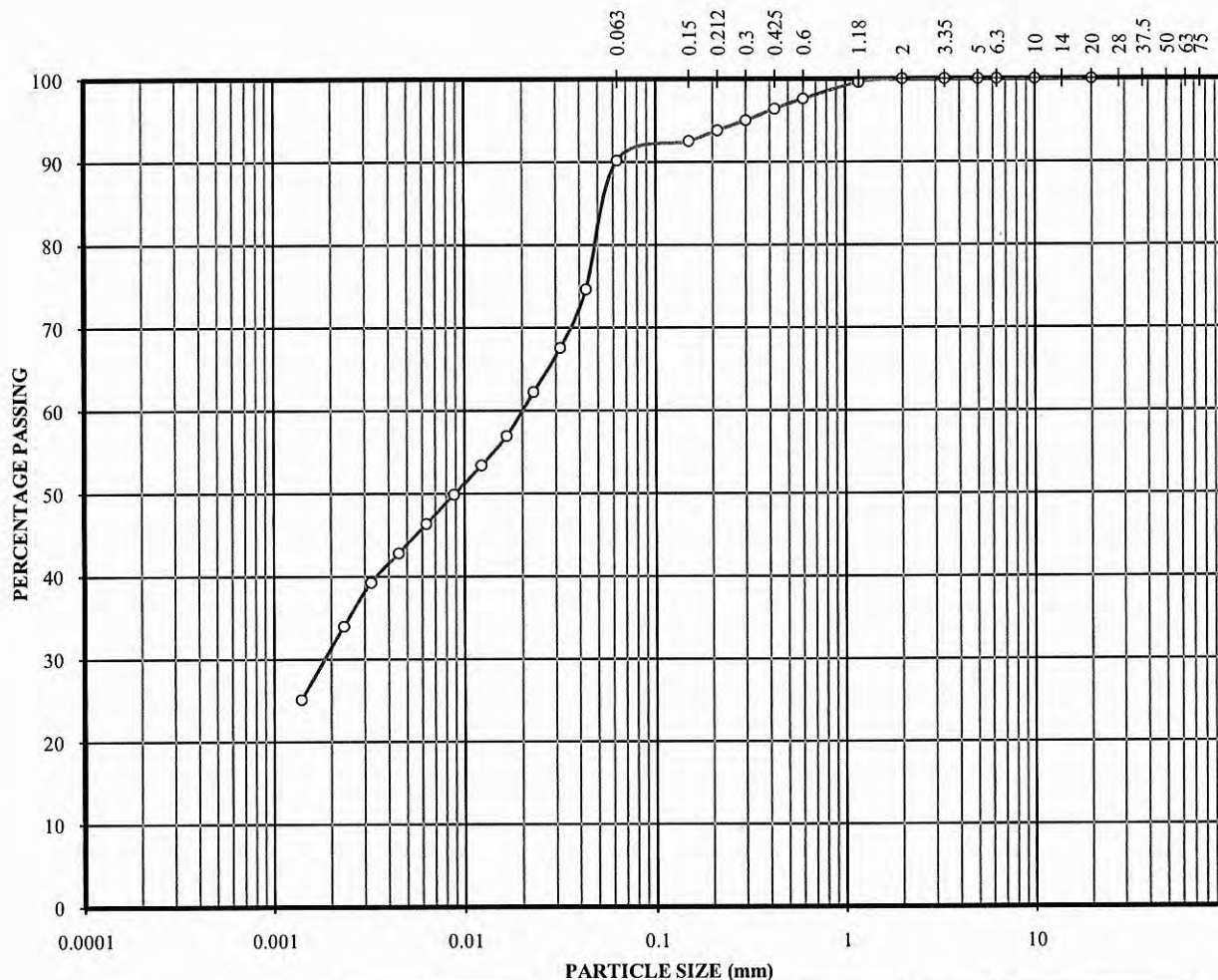
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

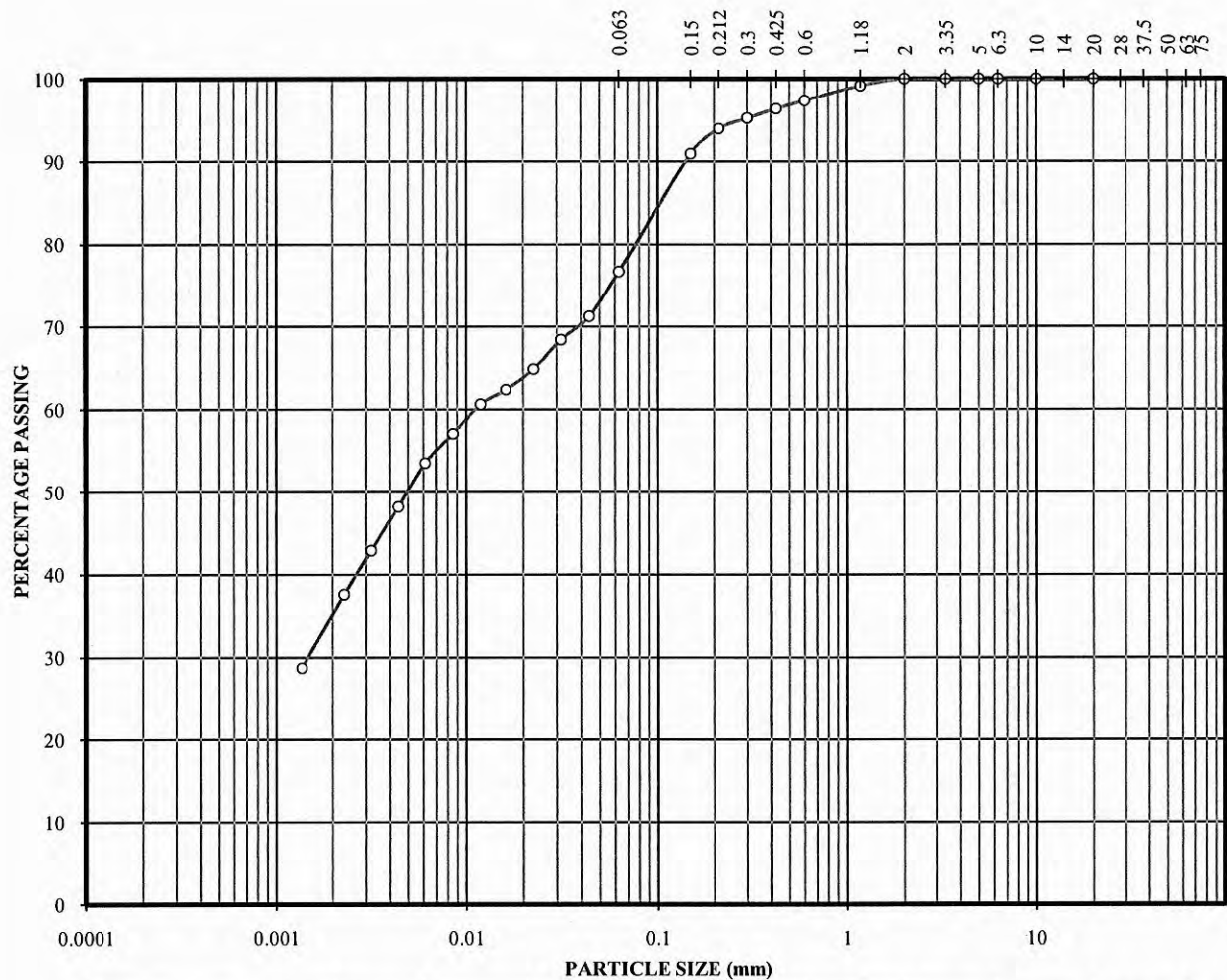
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Light olive brown and reddish orange slightly Sandy SILT	
TW2	3.00m-3.60m	0	10	59	31		

	Project: Sungei Tengah Road/Lorong Pasu		 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref:	SML/345A/2022	
	Borehole No:	BH17	
	Sample No:	TW2	
	Depth:	3.00m-3.60m	
	Prepared Date:	25-Jan-2023	
		Engineer: Si Thu Htun	Checked/Approved: Khin Maung Nyunt Laboratory Manager

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

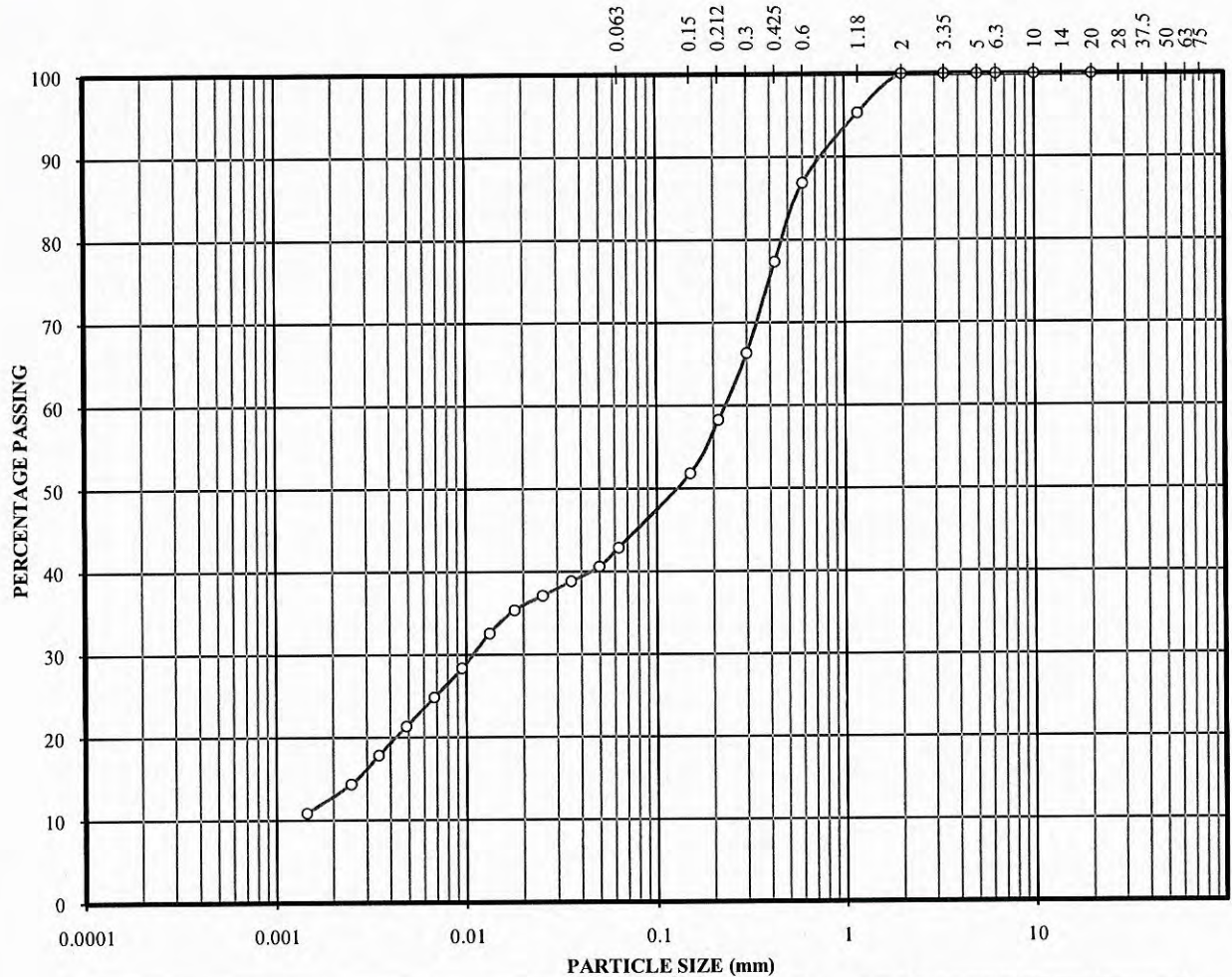
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and reddish orange slightly Sandy SILT
U2	6.00m-6.60m	0	23	41	36	

	Project: Sungei Tengah Road/Lorong Pasu		
	Job Ref:	SML/345A/2022	
	Borehole No:	BH17	
	Sample No:	U2	
	Depth:	6.00m-6.60m	
	Prepared Date:	25-Jan-2023	
			Checked/Approved: Khin Maung Nyunt Laboratory Manager
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

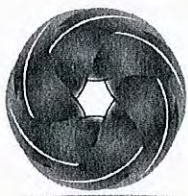
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light olive brown and brownish yellow Sandy SILT
TW1	1.50m-2.10m	0	57	30	13	



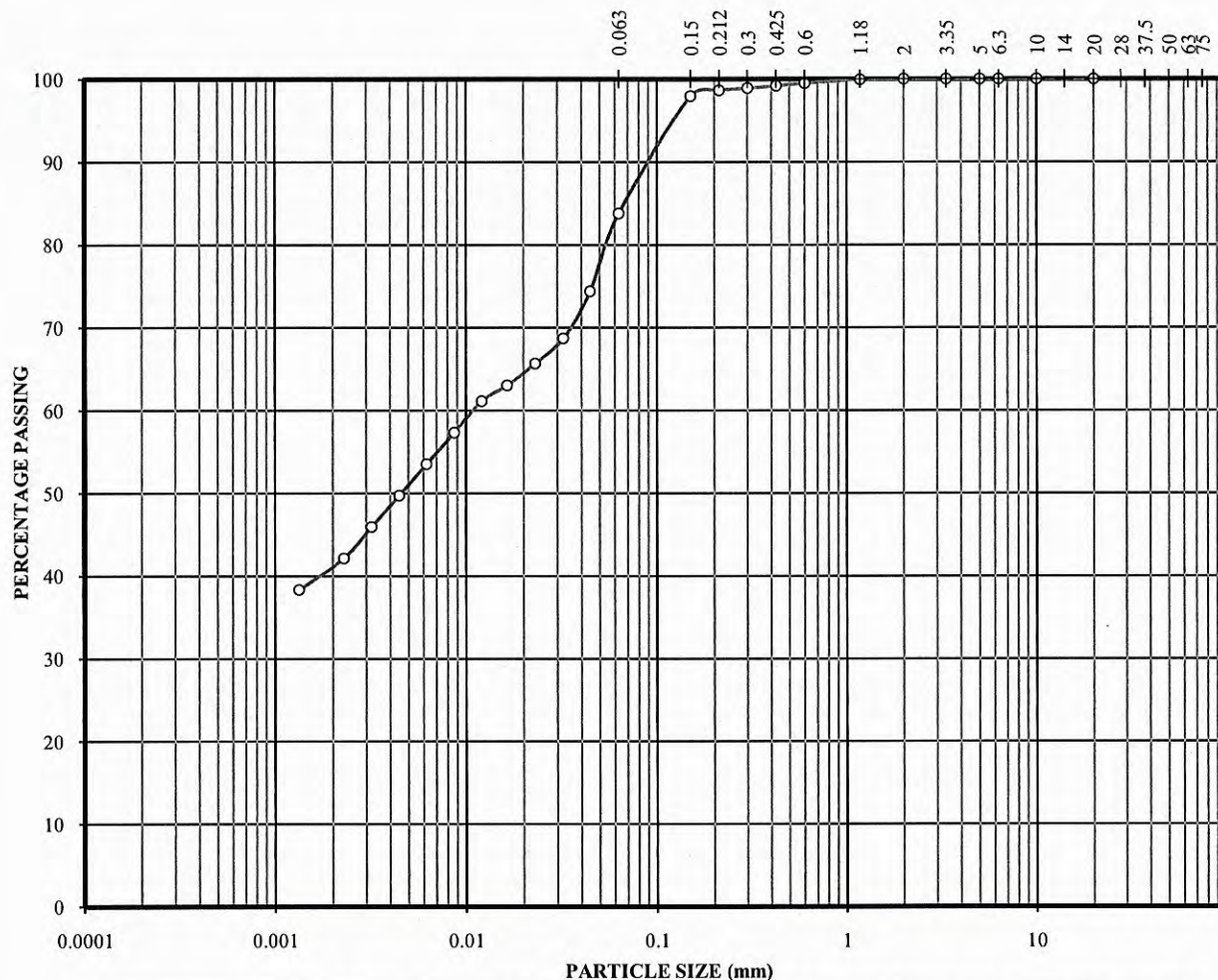
Project:	Sungei Tengah Road/Lorong Pasu	
Job Ref:	SML/345A/2022	Engineer: Si Thu Htun
Borehole No:	BH18	Checked/Approved: Khin Maung Nyunt Laboratory Manager
Sample No:	TW1	
Depth:	1.50m-2.10m	
Prepared Date:	25-Jan-2023	



SOIL MATERIALS LABORATORY PTE LTD

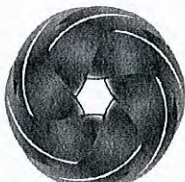
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Light brownish yellow and reddish orange slightly Sandy SILT	
TW3	6.00m-6.70m	0	16	43	41		

	Project: Sungei Tengah Road/Lorong Pasu		
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun	
	Borehole No: BH18	 Khin Maung Nyunt Laboratory Manager	
	Sample No: TW3		
	Depth: 6.00m-6.70m		
	Prepared Date: 25-Jan-2023		

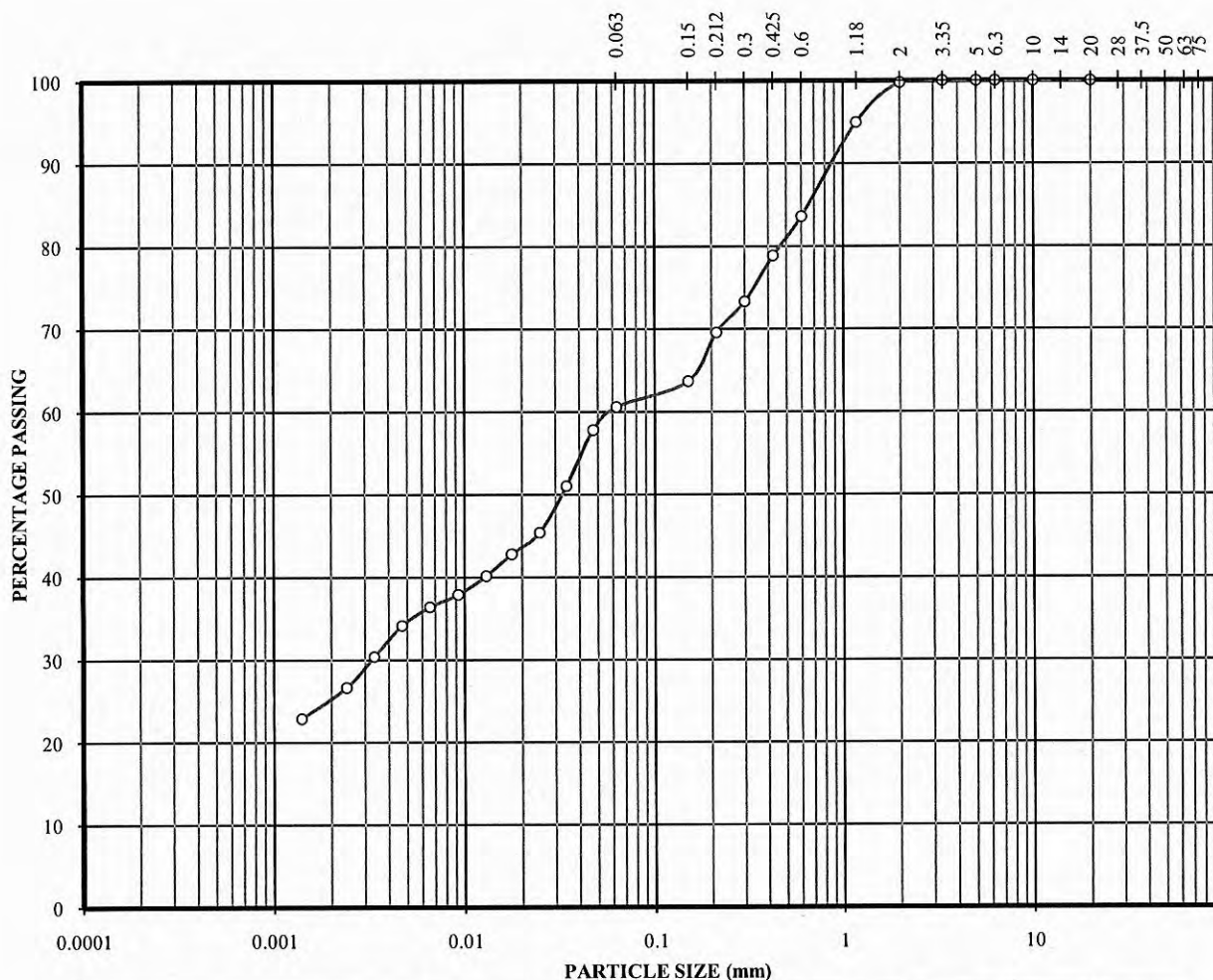


Accredited Laboratory
SAC-SINGLAS
Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

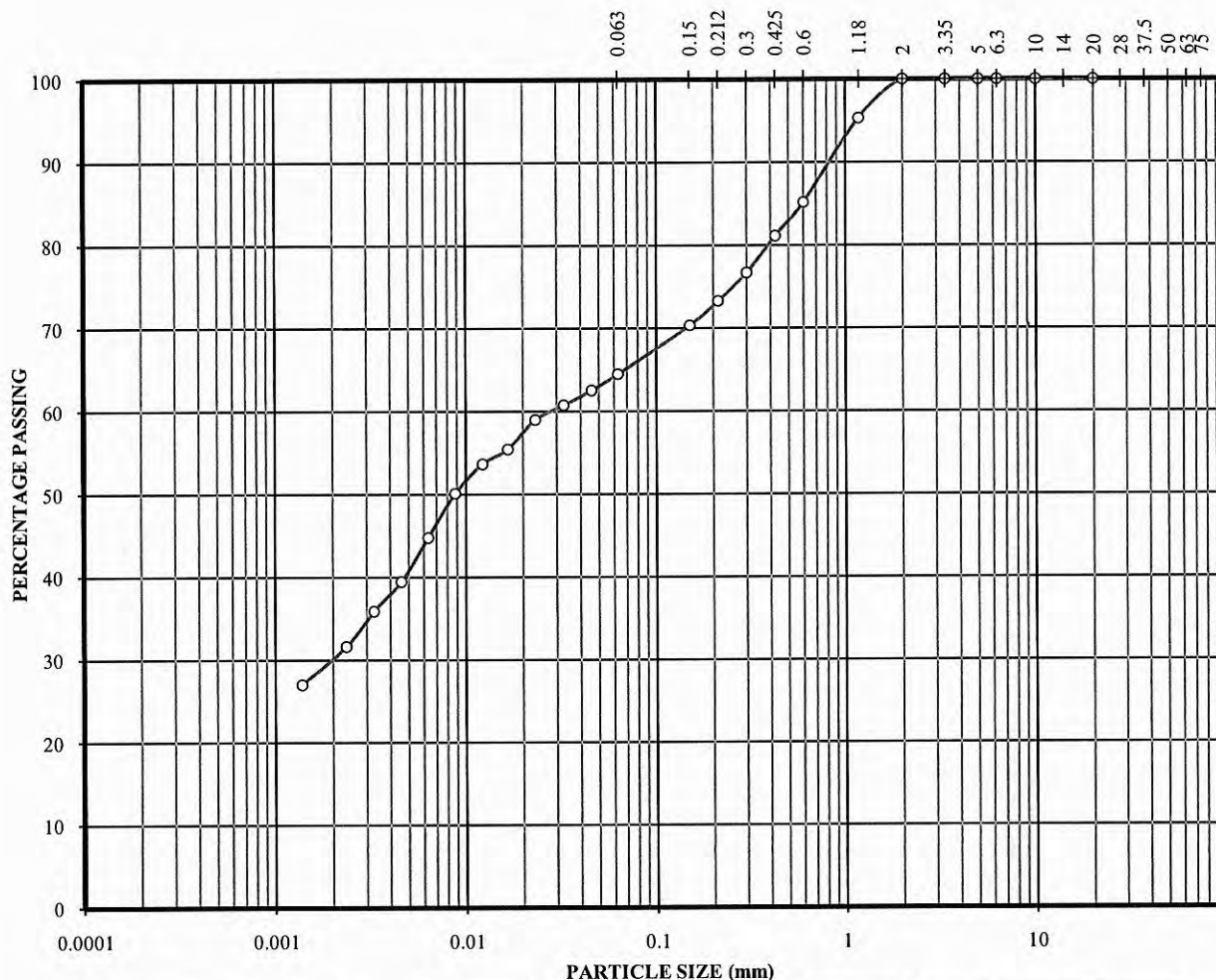
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brown and reddish orange Sandy SILT
TW1	1.50m-2.10m	0	39	36	25	

	Project: Sungei Tengah Road/Lorong Pasu		
	Job Ref:	SML/345A/2022	
	Borehole No:	BH19	
	Sample No:	TW1	
	Depth:	1.50m-2.10m	
	Prepared Date:	25-Jan-2023	
		Engineer: Si Thu Htun	
		Checked/Approved:	
		Khin Maung Nyunt	
		Laboratory Manager	

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

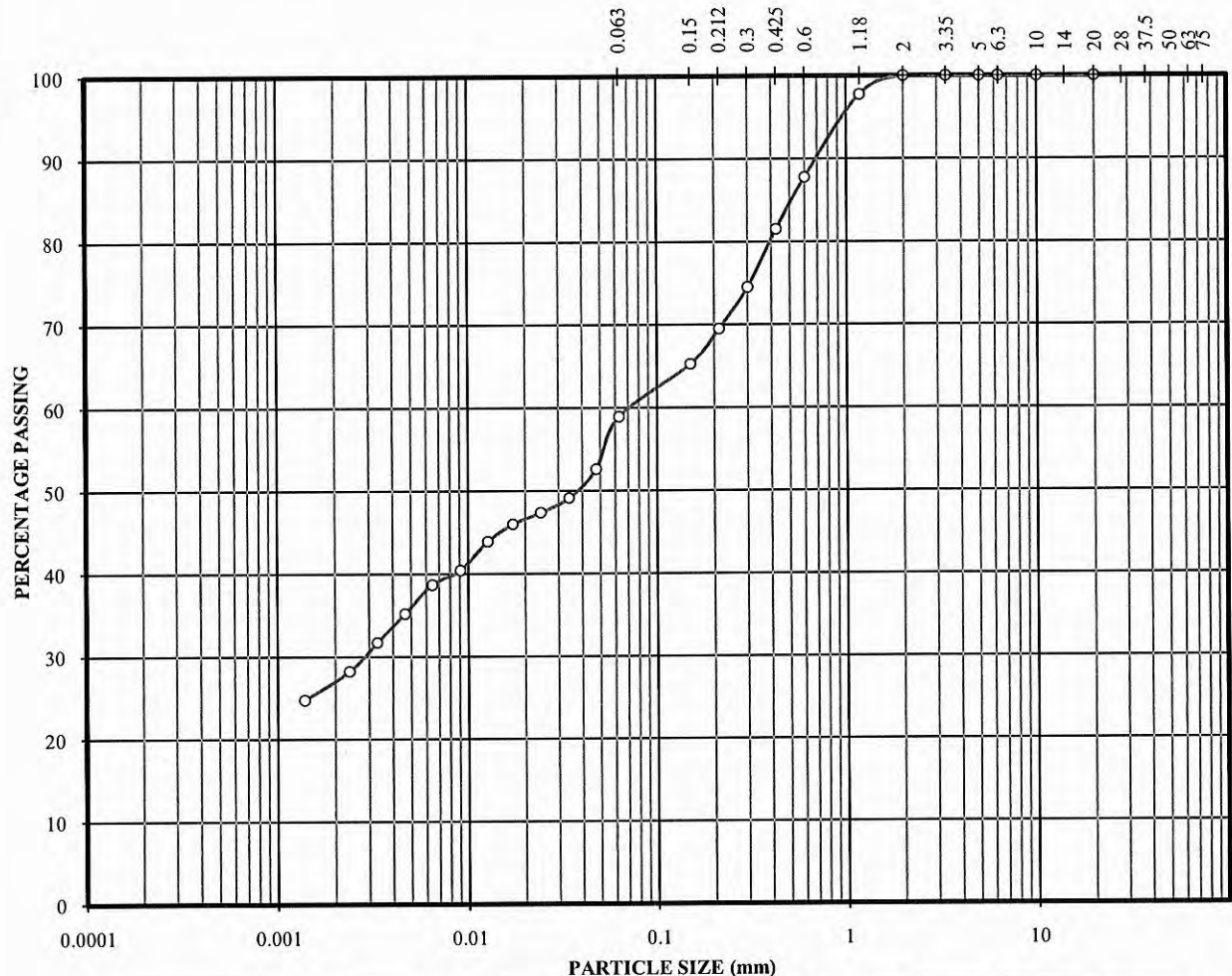
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Brownish yellow and reddish orange Sandy SILT
TW2	3.00m-3.70m	0	36	34	30	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun Khin Maung Nyunt Laboratory Manager
	Job Ref:	SML/345A/2022	
	Borehole No:	BH19	
	Sample No:	TW2	
	Depth:	3.00m-3.70m	
	Prepared Date:	25-Jan-2023	
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

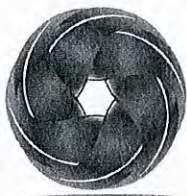
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Light olive brown and yellowish brown Sandy SILT	
TW1	1.50m-2.10m	0	41	31	28		



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH20

Checked/Approved:

Sample No: TW1

Depth: 1.50m-2.10m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

Laboratory Manager

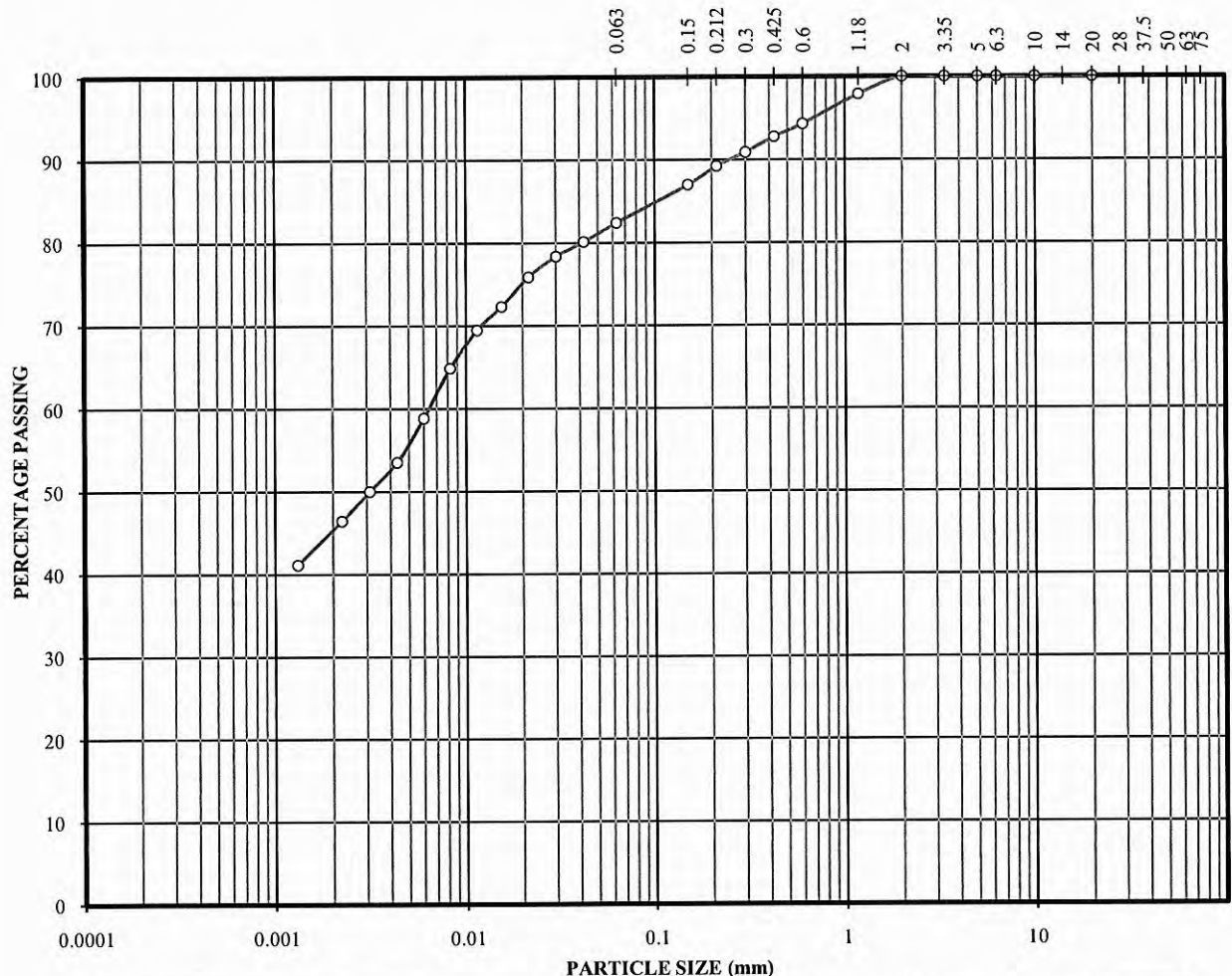


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

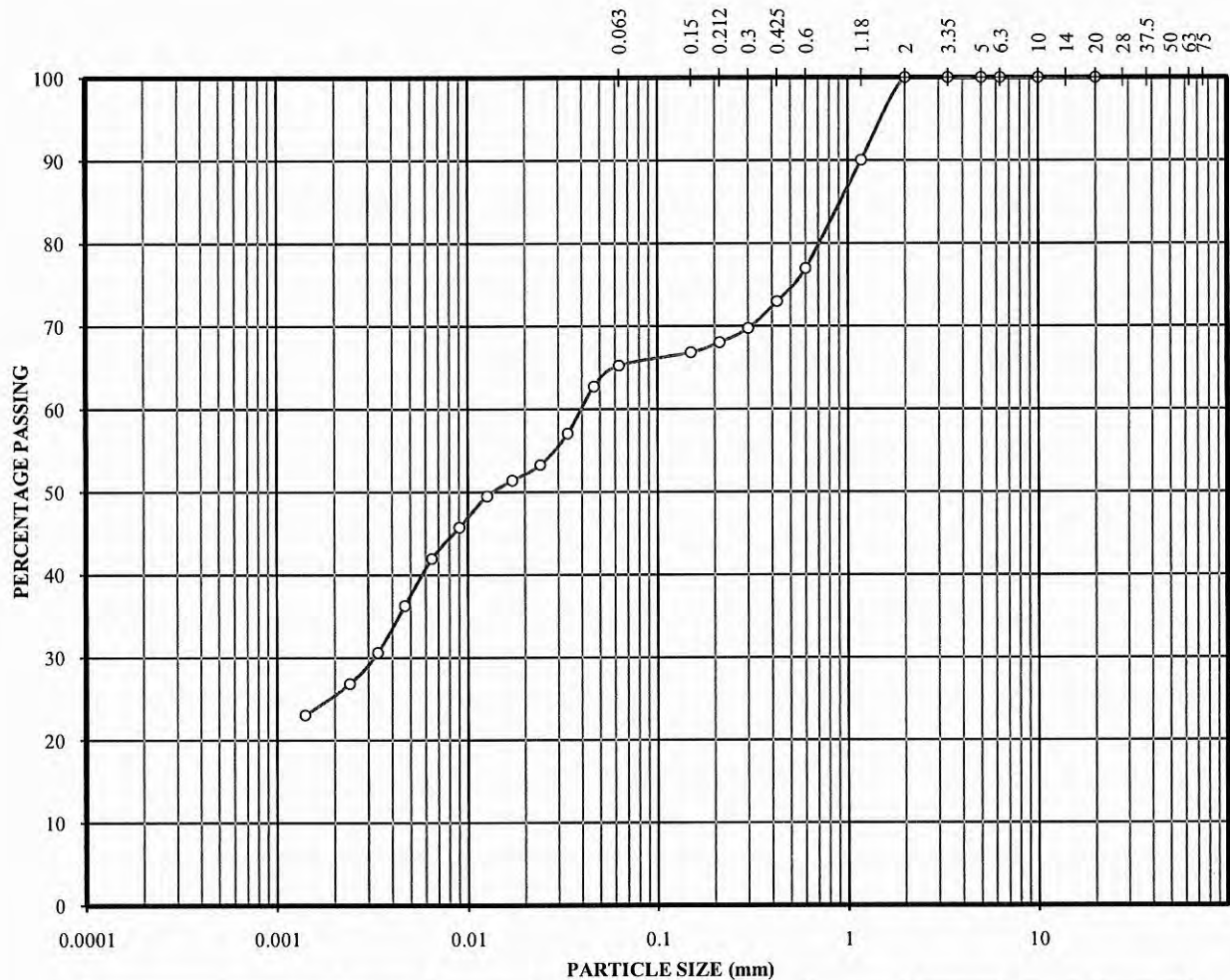
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Reddish brown and brownish yellow slightly Sandy CLAY	
TW3	4.50m-5.10m	0	18	36	46		

	Project: Sungei Tengah Road/Lorong Pasu		
	Job Ref:	SML/345A/2022	
	Borehole No:	BH20	
	Sample No:	TW3	
	Depth:	4.50m-5.10m	
Prepared Date:		25-Jan-2023	Engineer: Si Thu Htun Checked/Approved: Khin Maung Nyunt Laboratory Manager

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



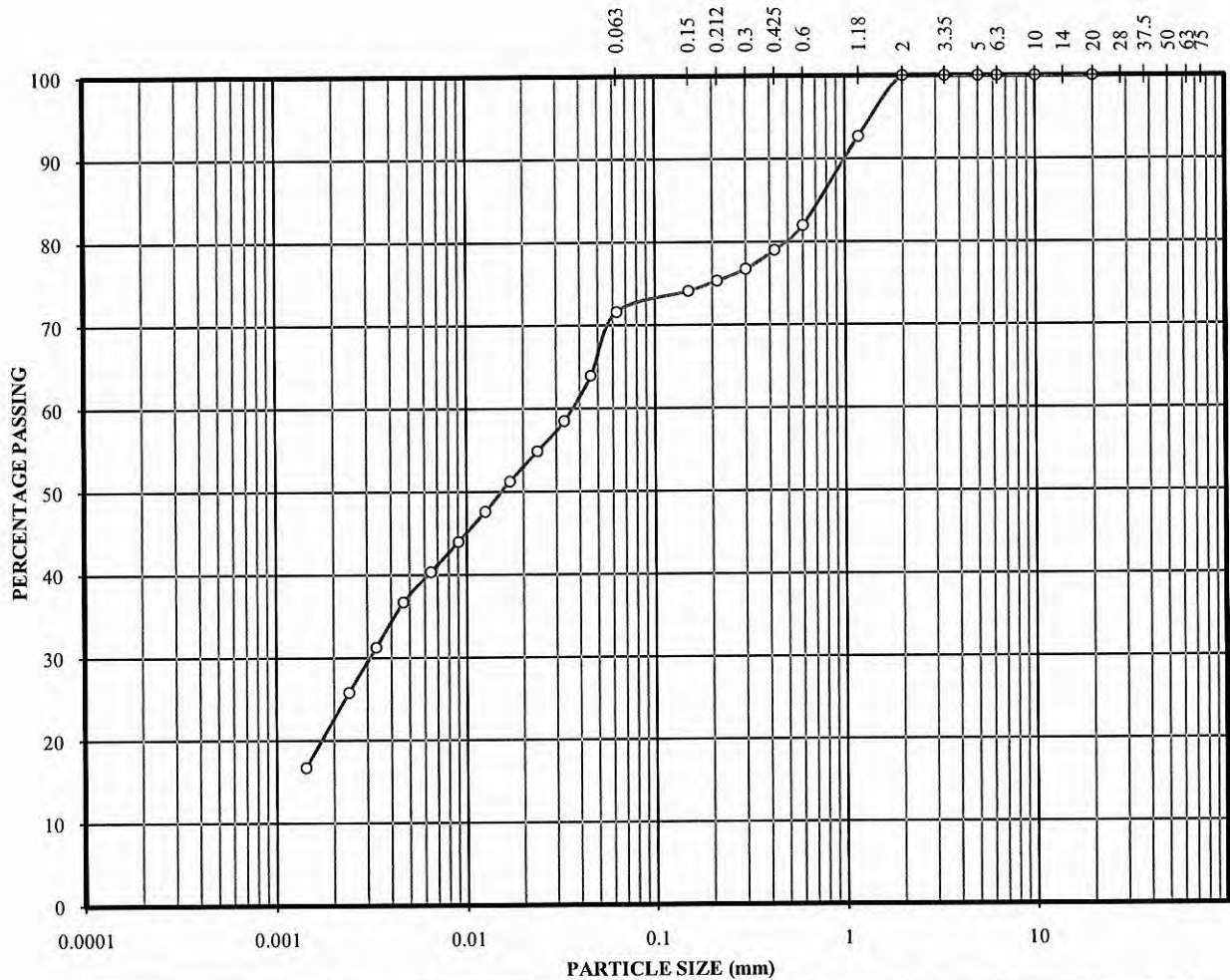
	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and reddish orange Sandy SILT
TW3	4.50m-5.10m	0	35	40	25	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun
	Job Ref:	SML/345A/2022	
	Borehole No:	BH21	
	Sample No:	TW3	
	Depth:	4.50m-5.10m	
	Prepared Date:	25-Jan-2023	
			 Khin Maung Nyunt Laboratory Manager
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



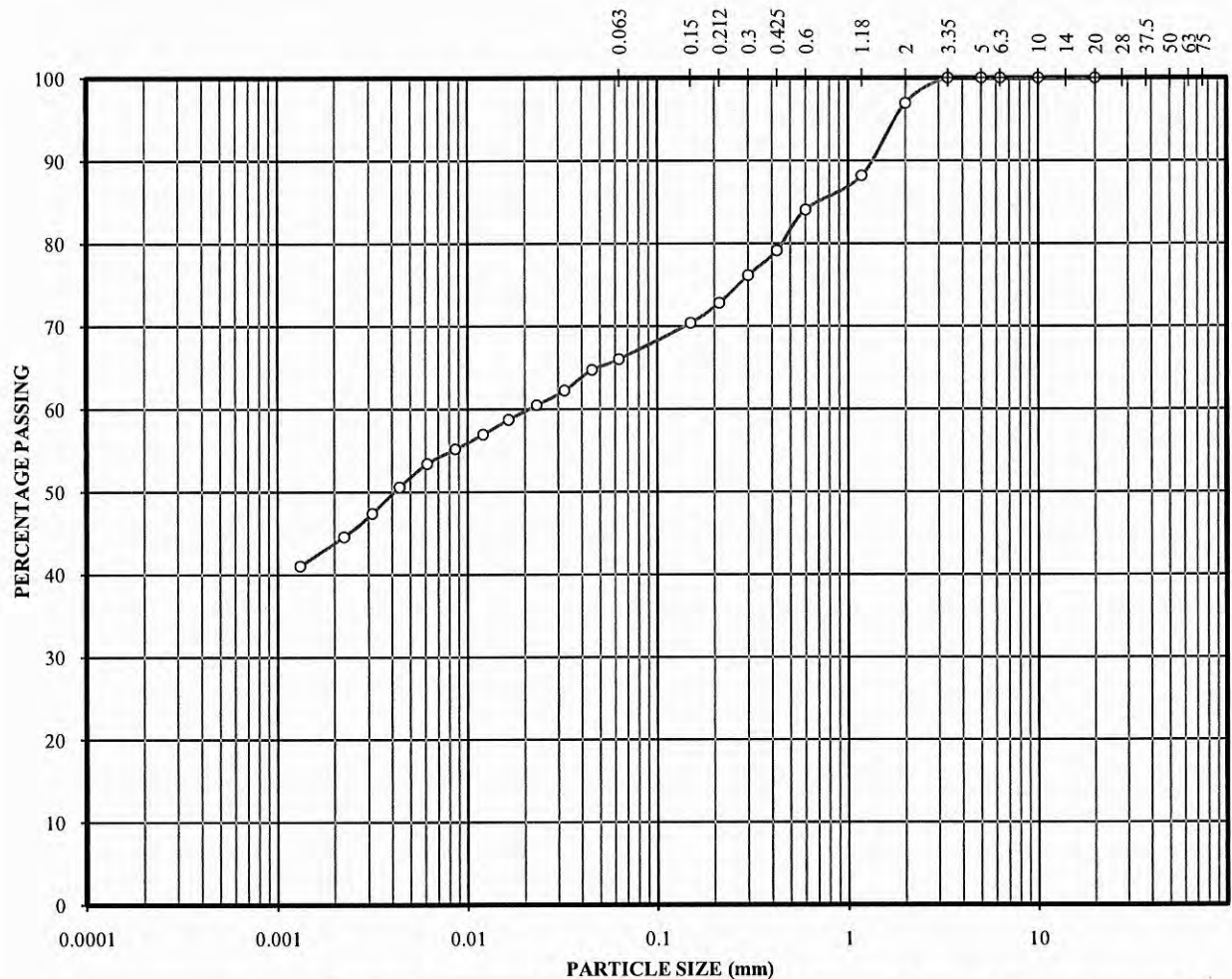
	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Reddish brown and brownish yellow slightly Sandy SILT
U1	9.00m-9.50m	0	28	50	22	

	Project: Sungei Tengah Road/Lorong Pasu		Engineer: Si Thu Htun
	Job Ref: SML/345A/2022		
	Borehole No: BH21		Checked/Approved: Khin Maung Nyunt Laboratory Manager
	Sample No: U1		
	Depth: 9.00m-9.50m		
	Prepared Date: 25-Jan-2023		
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

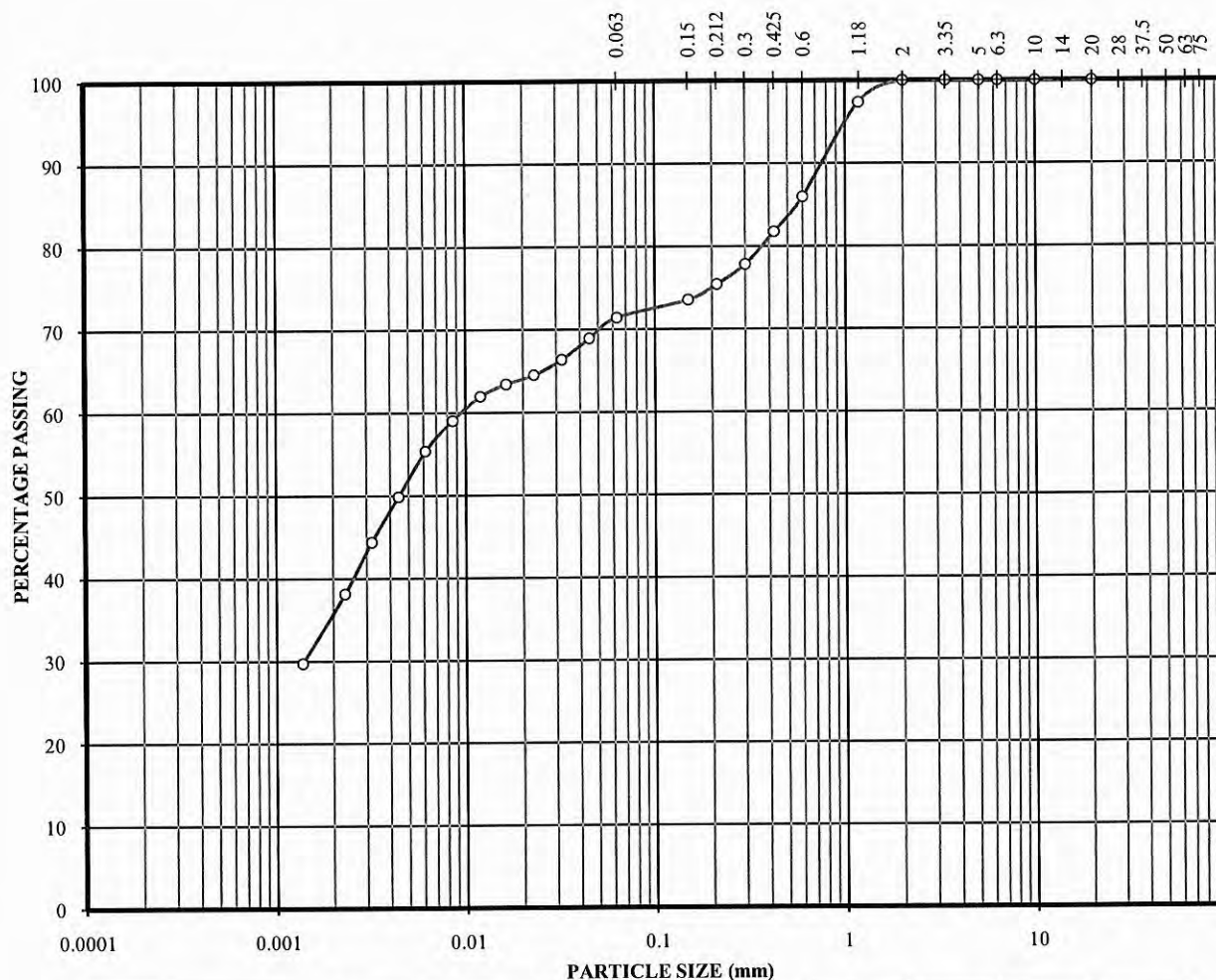
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						ddish orange and yellowish brown slightly gravelly slightly Sandy	CLAY
TW1	1.50m-2.10m	3	31	22	44		

	Project: Sungei Tengah Road/Lorong Pasu		
	Job Ref:	SML/345A/2022	
	Borehole No:	BH22	
	Sample No:	TW1	
	Depth:	1.50m-2.10m	
	Prepared Date:	25-Jan-2023	
			Checked/Approved:
			Khin Maung Nyunt Laboratory Manager
			Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and reddish orange slightly Sandy CLAY
TW3	4.50m-5.10m	0	29	34	37	



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH22

Checked/Approved:

Sample No: TW3

Depth: 4.50m-5.10m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

Laboratory Manager

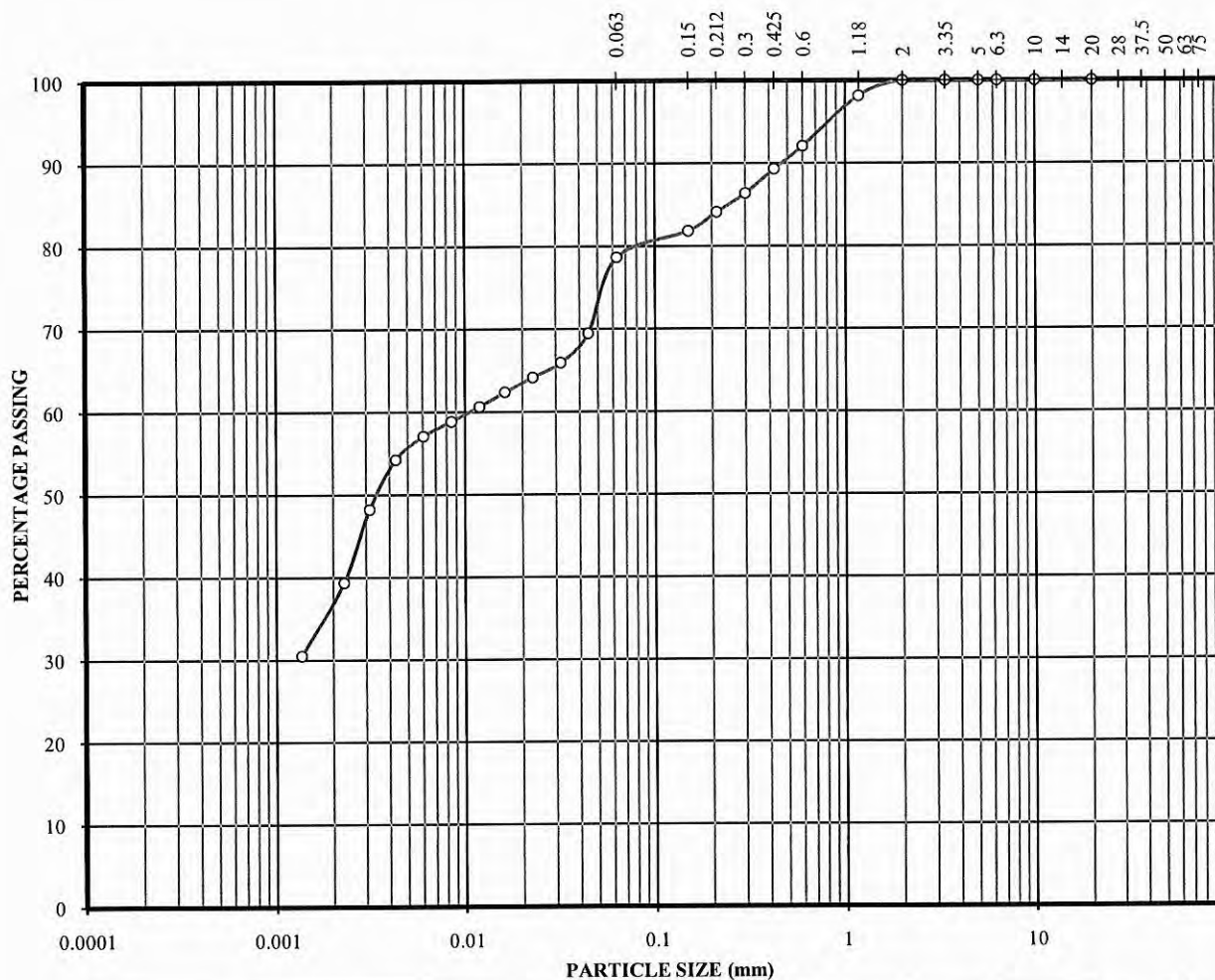


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light red and brownish yellow slightly Sandy SILT
TW3	4.50m-5.10m	0	21	41	38	



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH23

Checked/Approved:

Sample No: TW3

Depth: 4.50m-5.10m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

Laboratory Manager

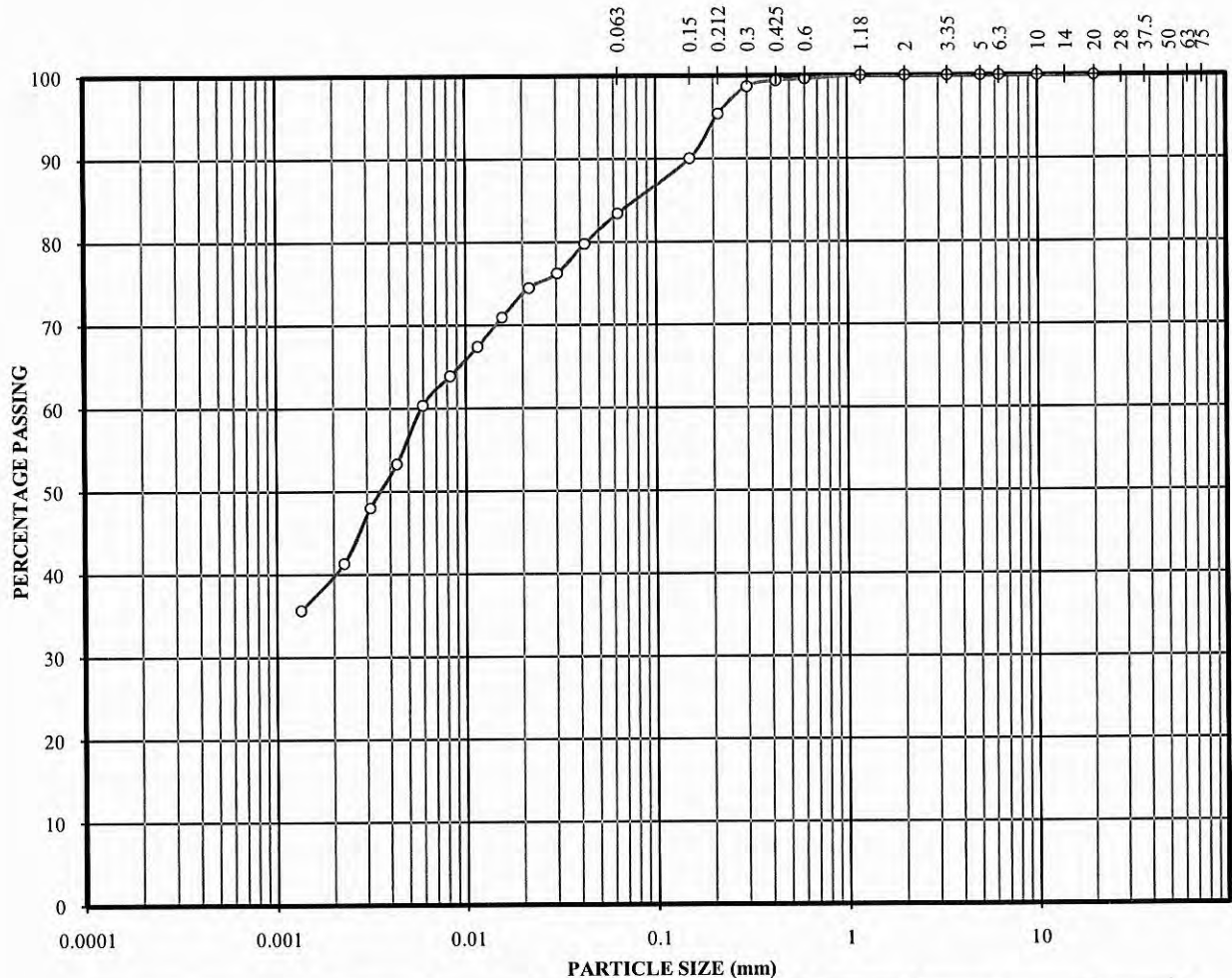


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

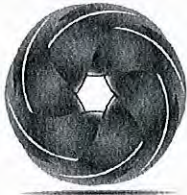
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

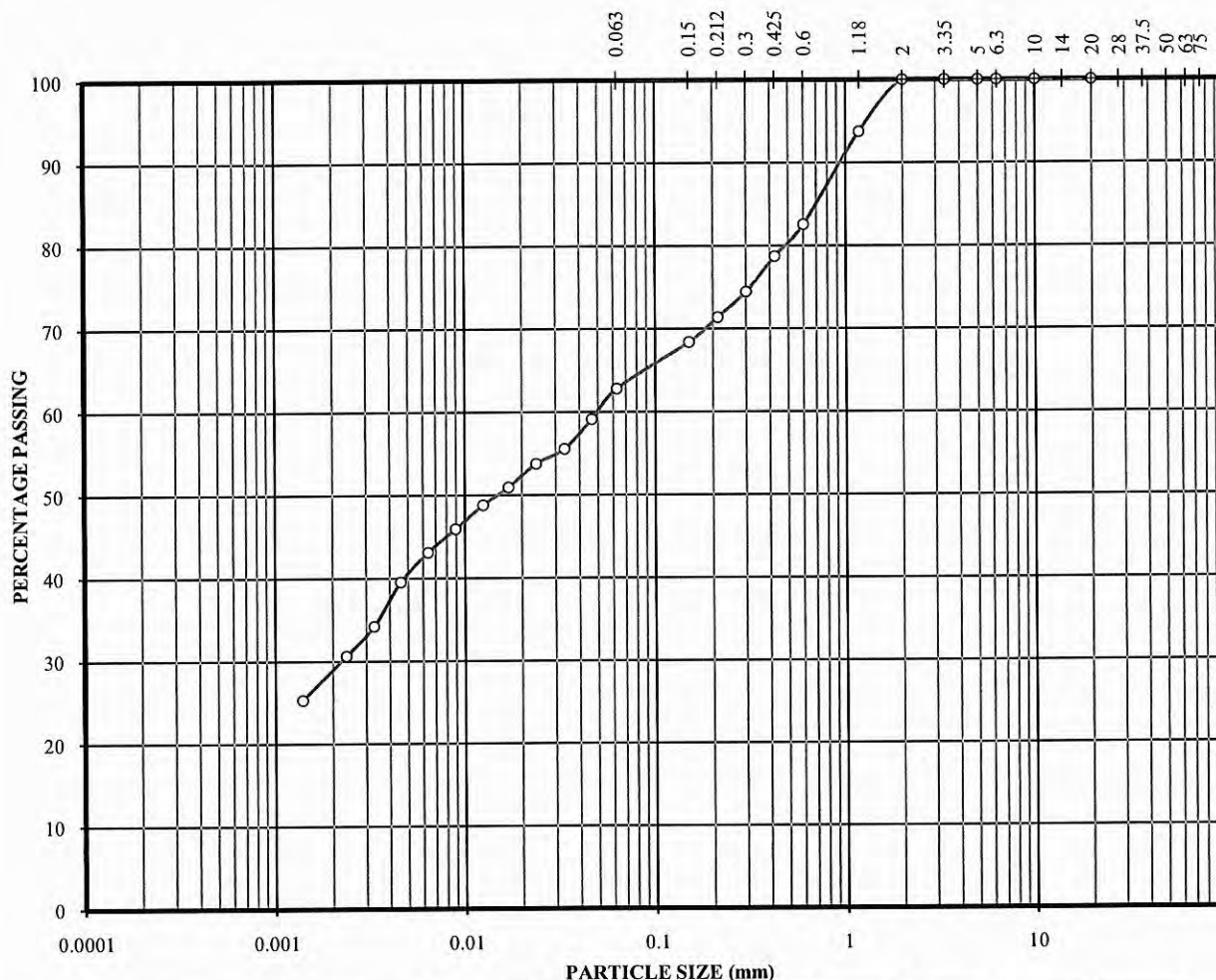
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Light brownish grey slightly Sandy SILT	
TW5	9.00m-9.70m	0	17	43	40		

	Project: Sungei Tengah Road/Lorong Pasu		 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun 	
	Borehole No: BH23	Checked/Approved: 	
	Sample No: TW5	Khin Maung Nyunt	
	Depth: 9.00m-9.70m	Laboratory Manager	
	Prepared Date: 25-Jan-2023		

SOIL MATERIALS LABORATORY PTE LTD

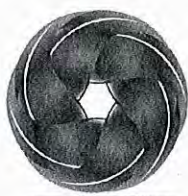
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and reddish orange Sandy SILT
U1	3.00m-3.50m	0	37	34	29	



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH24

Checked/Approved:

Sample No: U1

Depth: 3.00m-3.50m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

Laboratory Manager

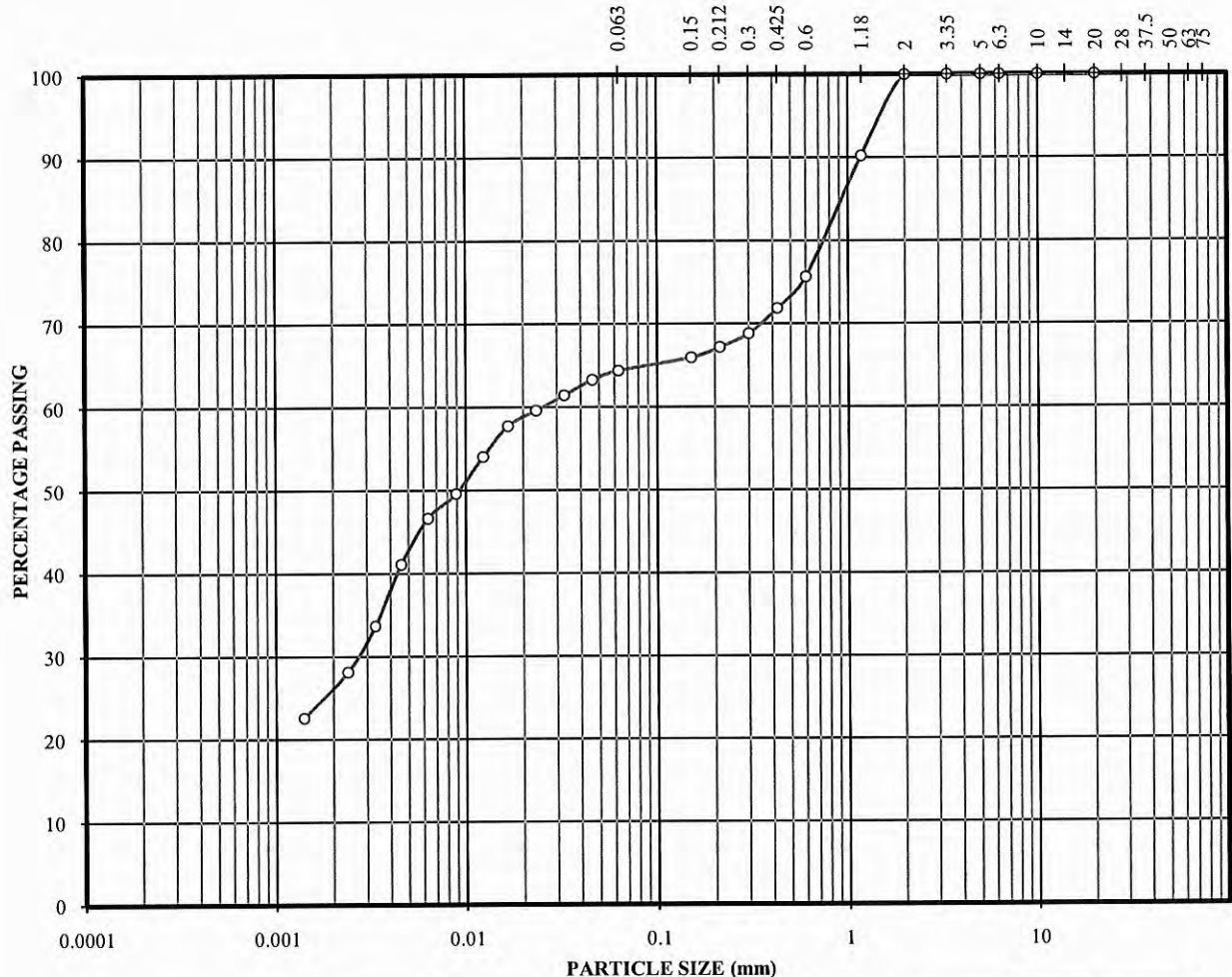


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

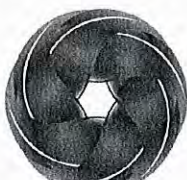
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

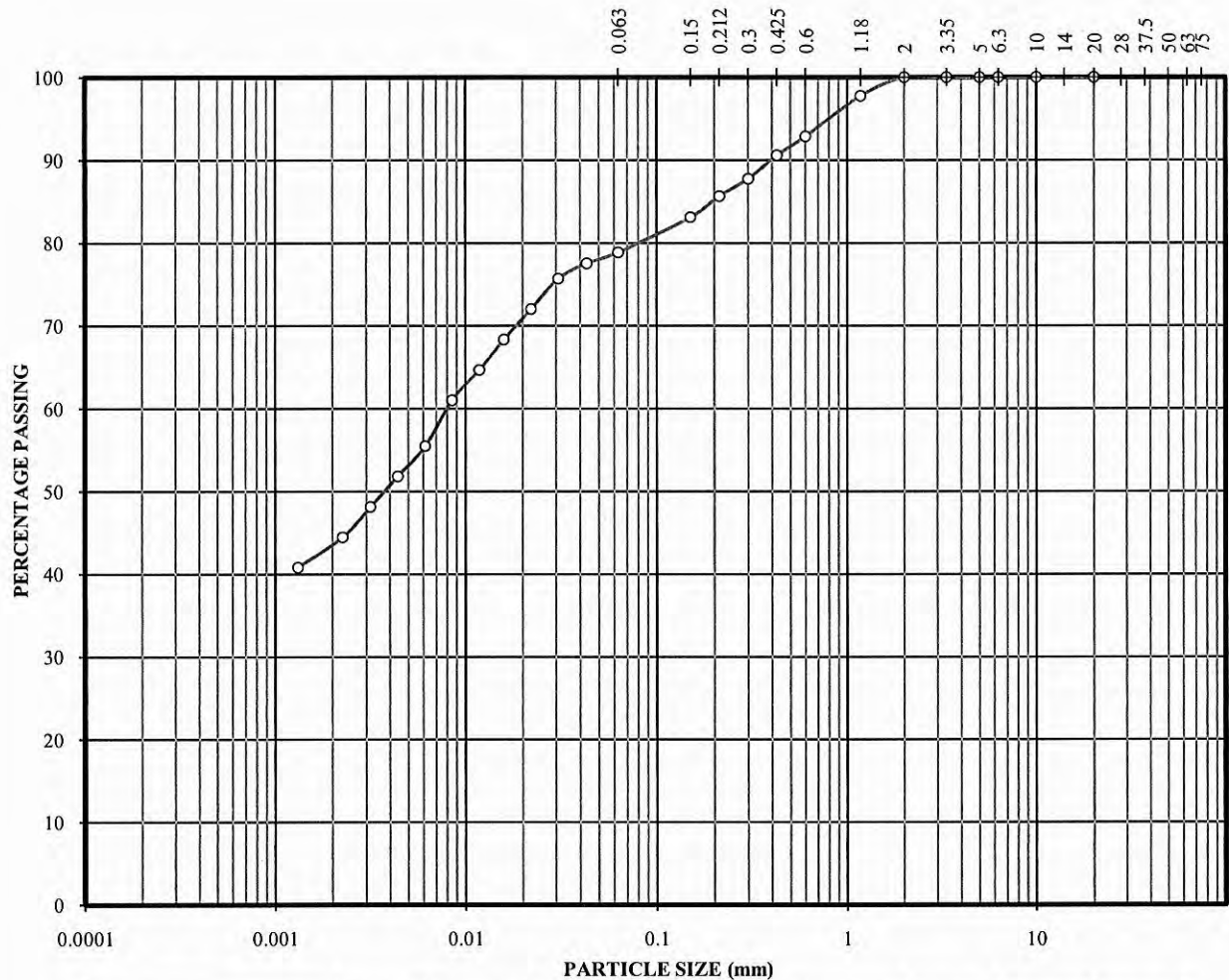
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Reddish orange and light brownish yellow Sandy SILT
TW2	6.00m-6.70m	0	36	37	27	

	Project: Sungei Tengah Road/Lorong Pasu		 Cert No: LA-2015-0601-B
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun 	
	Borehole No: BH24	Checked/Approved:  Khin Maung Nyunt Laboratory Manager	
	Sample No: TW2		
	Depth: 6.00m-6.70m		
	Prepared Date: 25-Jan-2023		

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

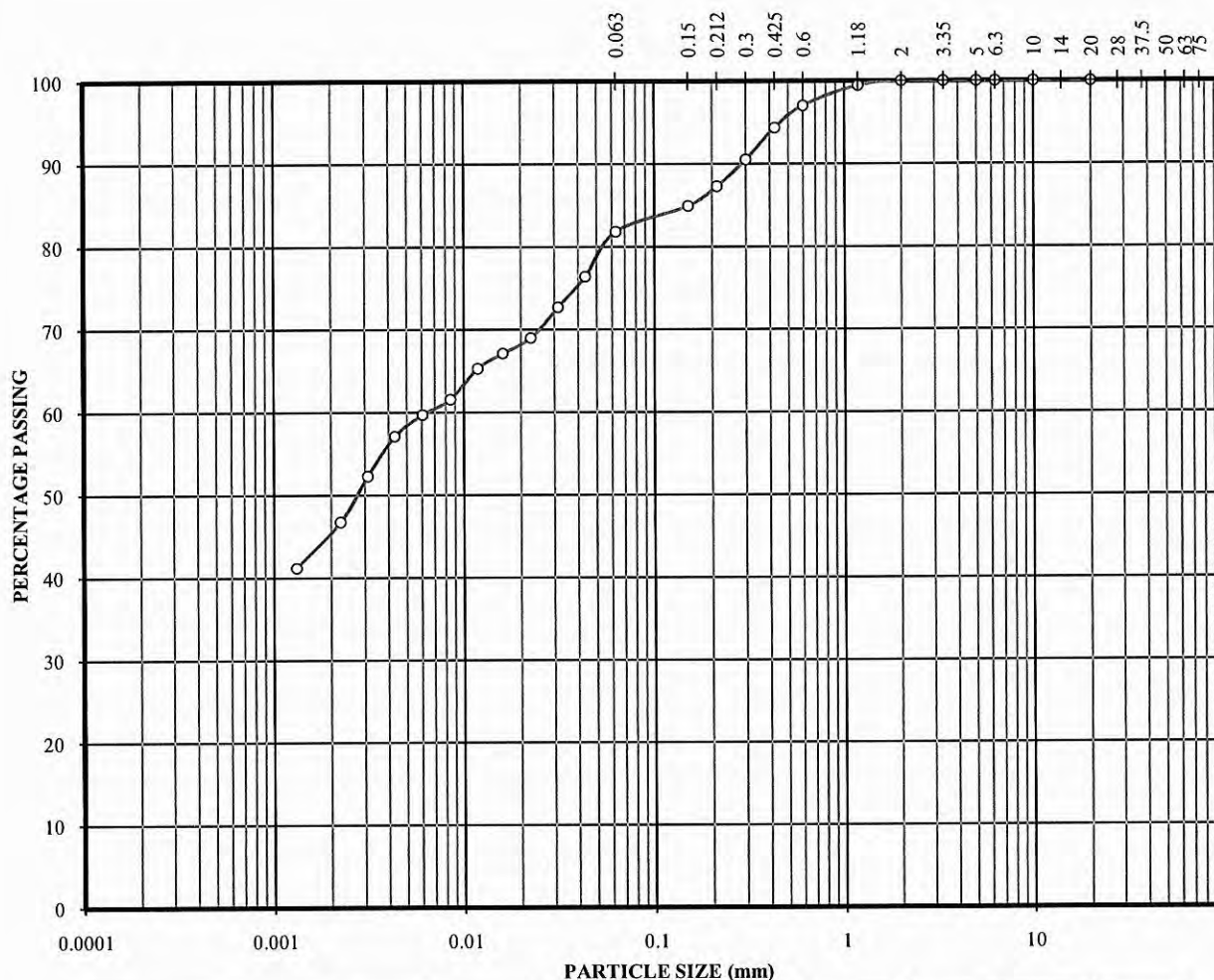
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Brownish yellow and reddish orange slightly Sandy CLAY
TW1	1.50m-2.10m	0	21	35	44	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun
	Job Ref:	SML/345A/2022	
	Borehole No:	BH25	
	Sample No:	TW1	
	Depth:	1.50m-2.10m	
	Prepared Date:	25-Jan-2023	
			 Khin Maung Nyunt Laboratory Manager
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

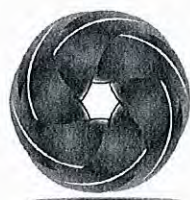
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Brownish yellow and light red slightly Sandy CLAY
U1	4.50m-5.10m	0	18	37	45	



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH25

Checked/Approved:

Sample No: U1

Depth: 4.50m-5.10m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

Laboratory Manager

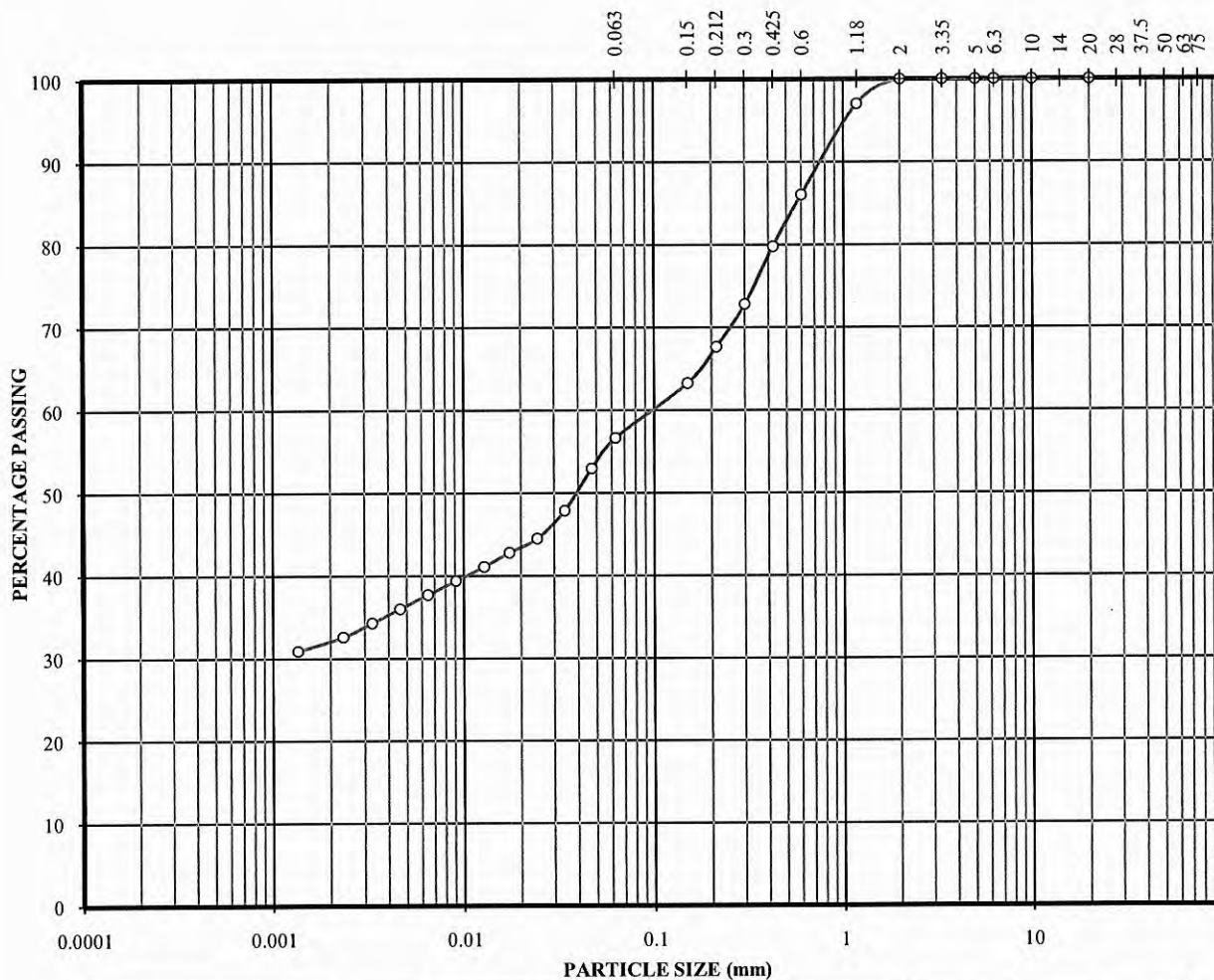


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light yellowish brown and reddish orange Sandy CLAY
TW1	1.50m-2.10m	0	43	25	32	

	Project: Sungei Tengah Road/Lorong Pasu	
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun 
	Borehole No: BH26	Checked/Approved:  Khin Maung Nyunt Laboratory Manager
	Sample No: TW1	
	Depth: 1.50m-2.10m	
	Prepared Date: 25-Jan-2023	



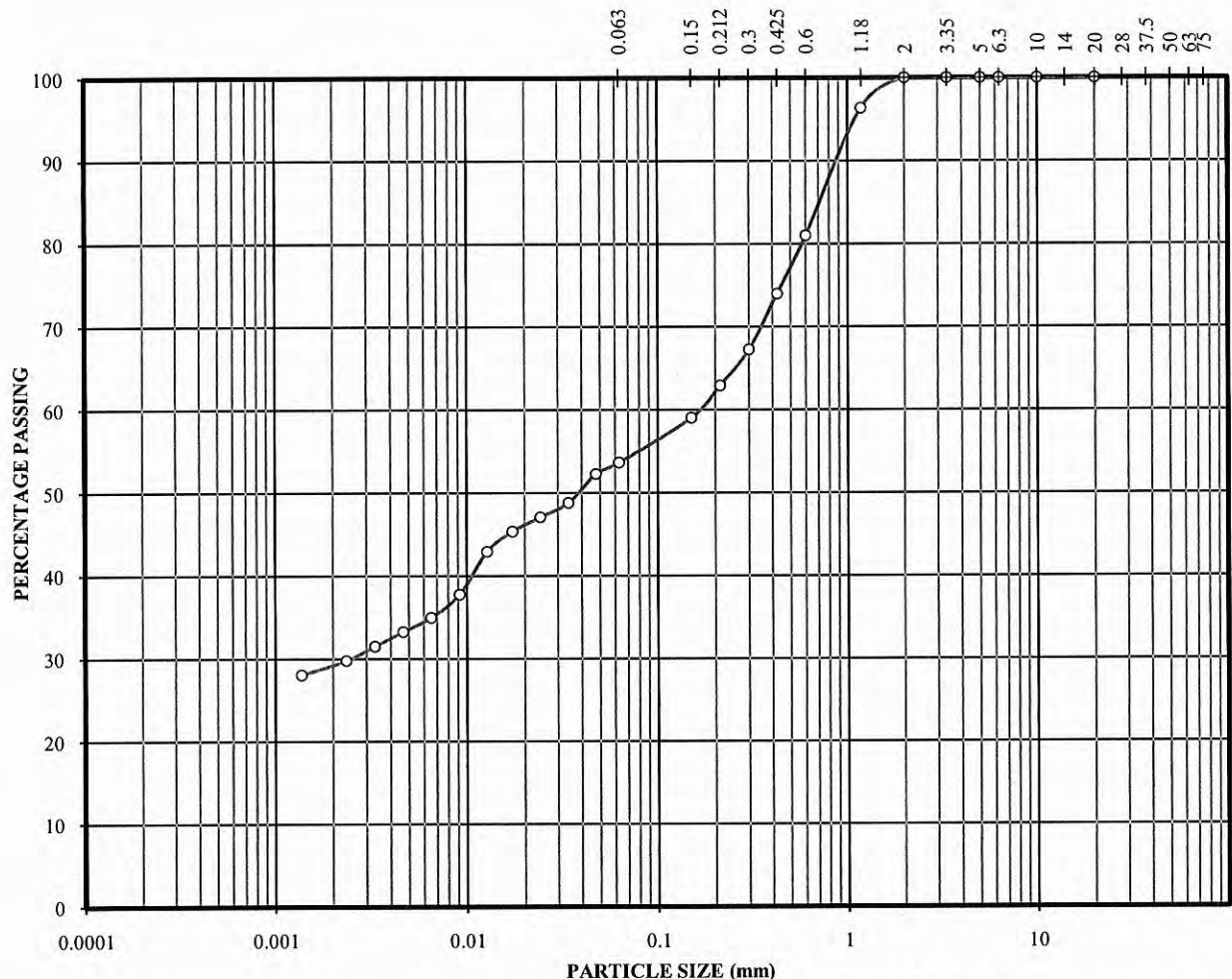
Accredited Laboratory
SAC-SINGLAS
Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

Cert No: LA-2015-0601-B

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

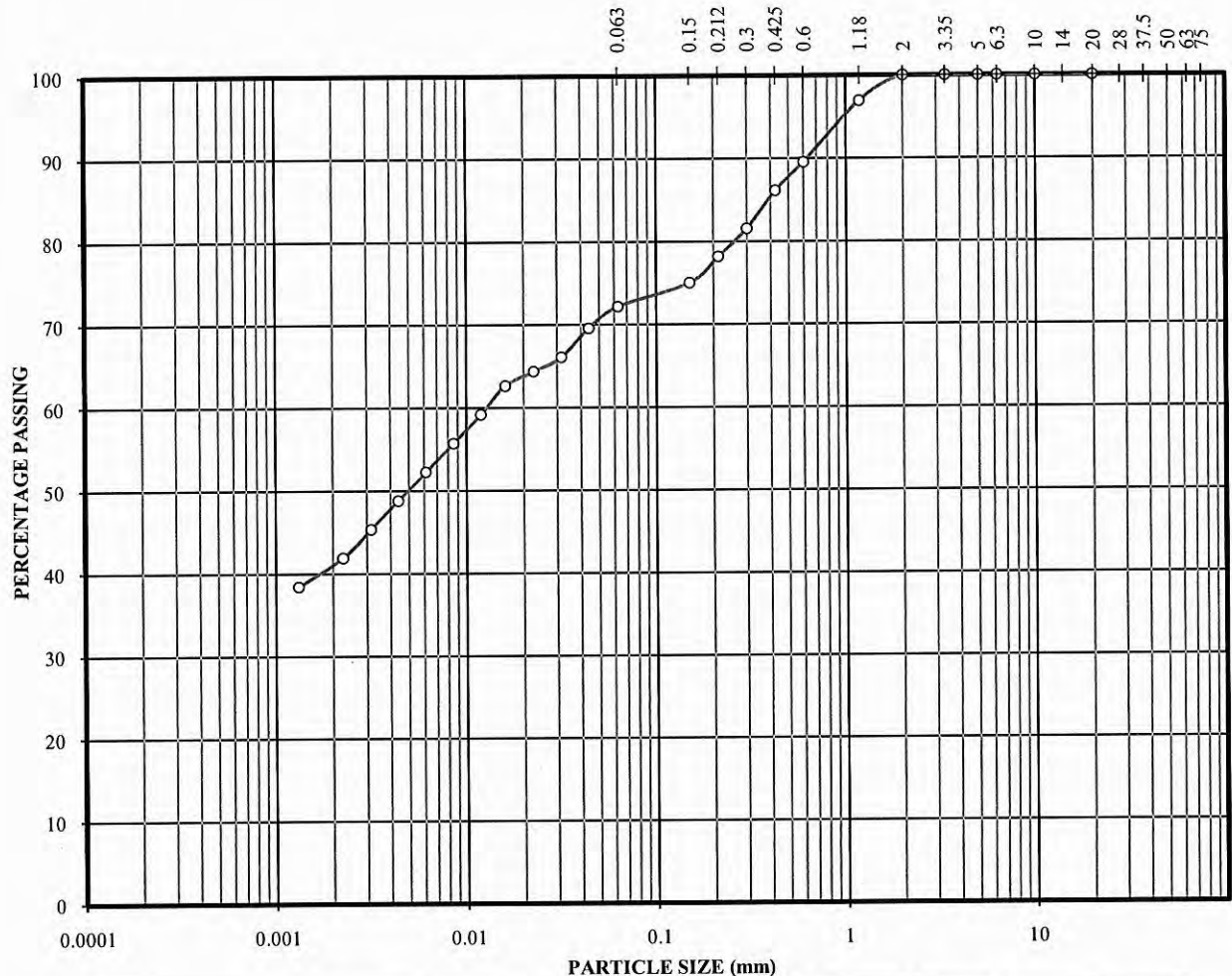
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light olive brown and reddish orange Sandy CLAY
TW2	3.00m-3.60m	0	46	25	29	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun Khin Maung Nyunt Laboratory Manager	 Cert No: LA-2015-0601-B
	Job Ref:	SML/345A/2022		
	Borehole No:	BH26		
	Sample No:	TW2		
	Depth:	3.00m-3.60m		
	Prepared Date:	25-Jan-2023		

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Light brownish yellow and light red slightly Sandy CLAY	
TW2	3.00m-3.60m	0	28	31	41		



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH27

Checked/Approved:

Sample No: TW2

Depth: 3.00m-3.60m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

Laboratory Manager

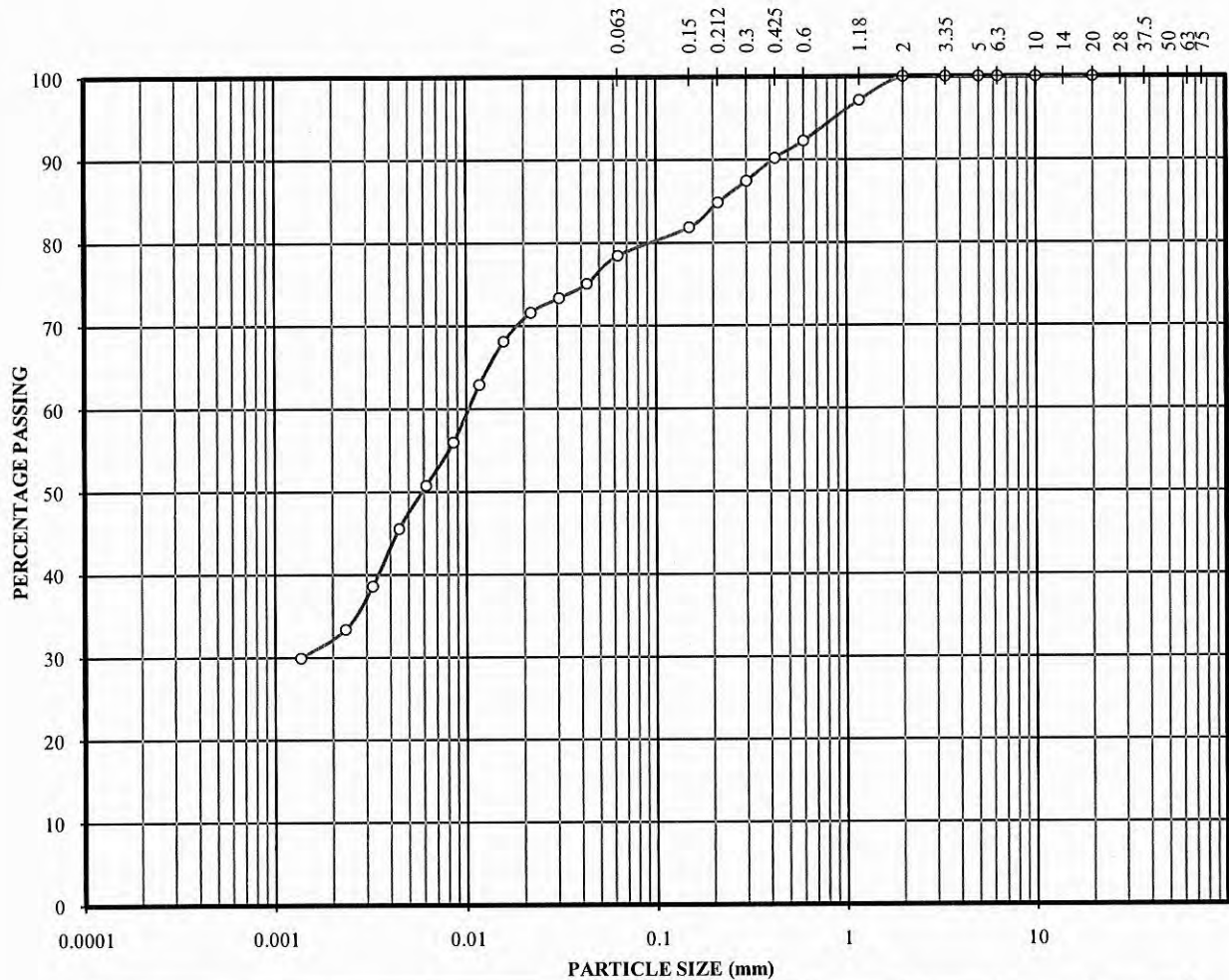


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

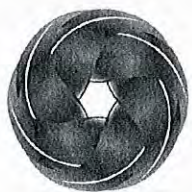
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



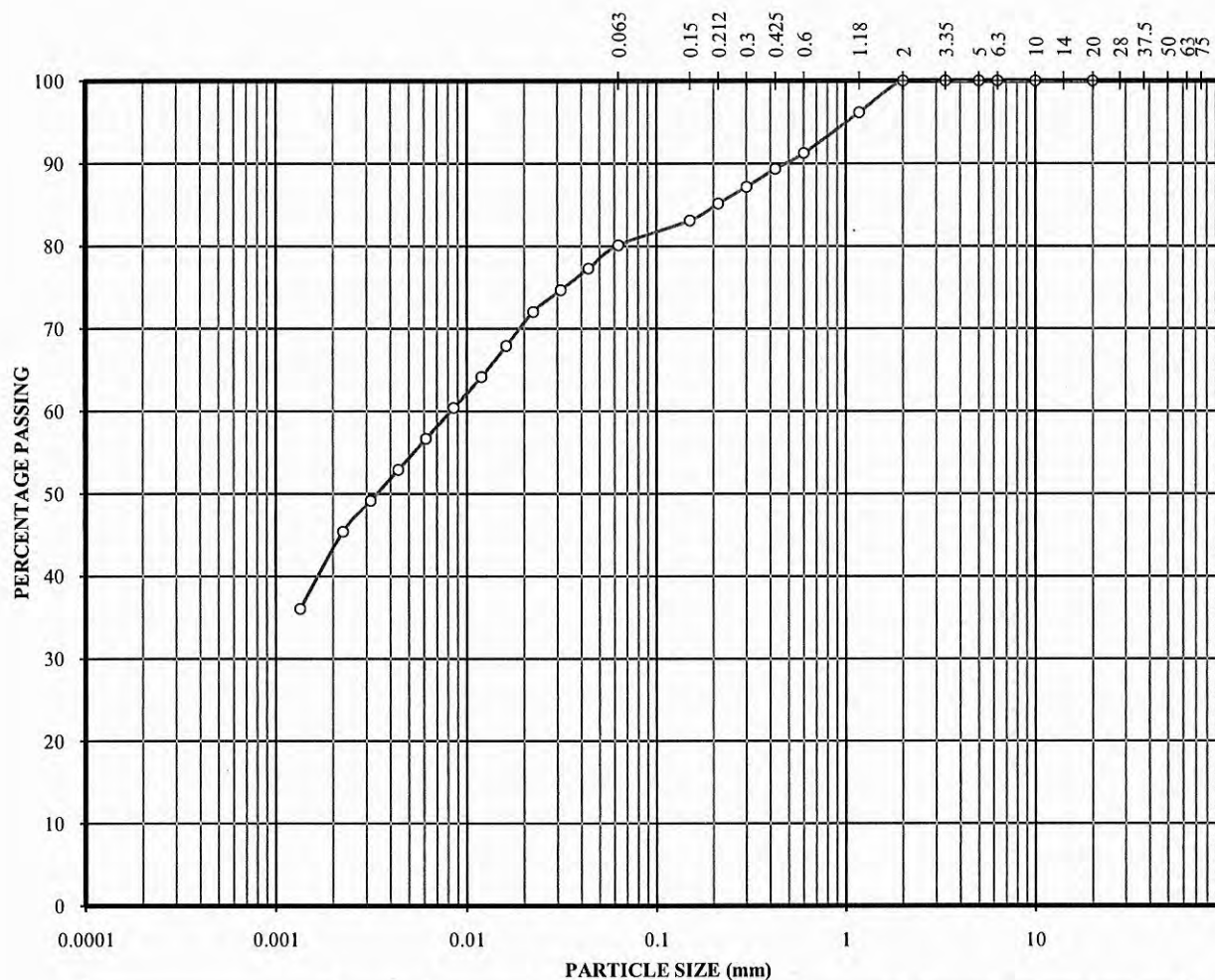
	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
TW4	6.00m-6.70m	0	22	46	32	Light brownish yellow and reddish brown slightly Sandy SILT

	Project: Sungei Tengah Road/Lorong Pasu		 SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun 	
	Borehole No: BH27	Checked/Approved: 	
	Sample No: TW4	Khin Maung Nyunt	
	Depth: 6.00m-6.70m	Laboratory Manager	
	Prepared Date: 25-Jan-2023		

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

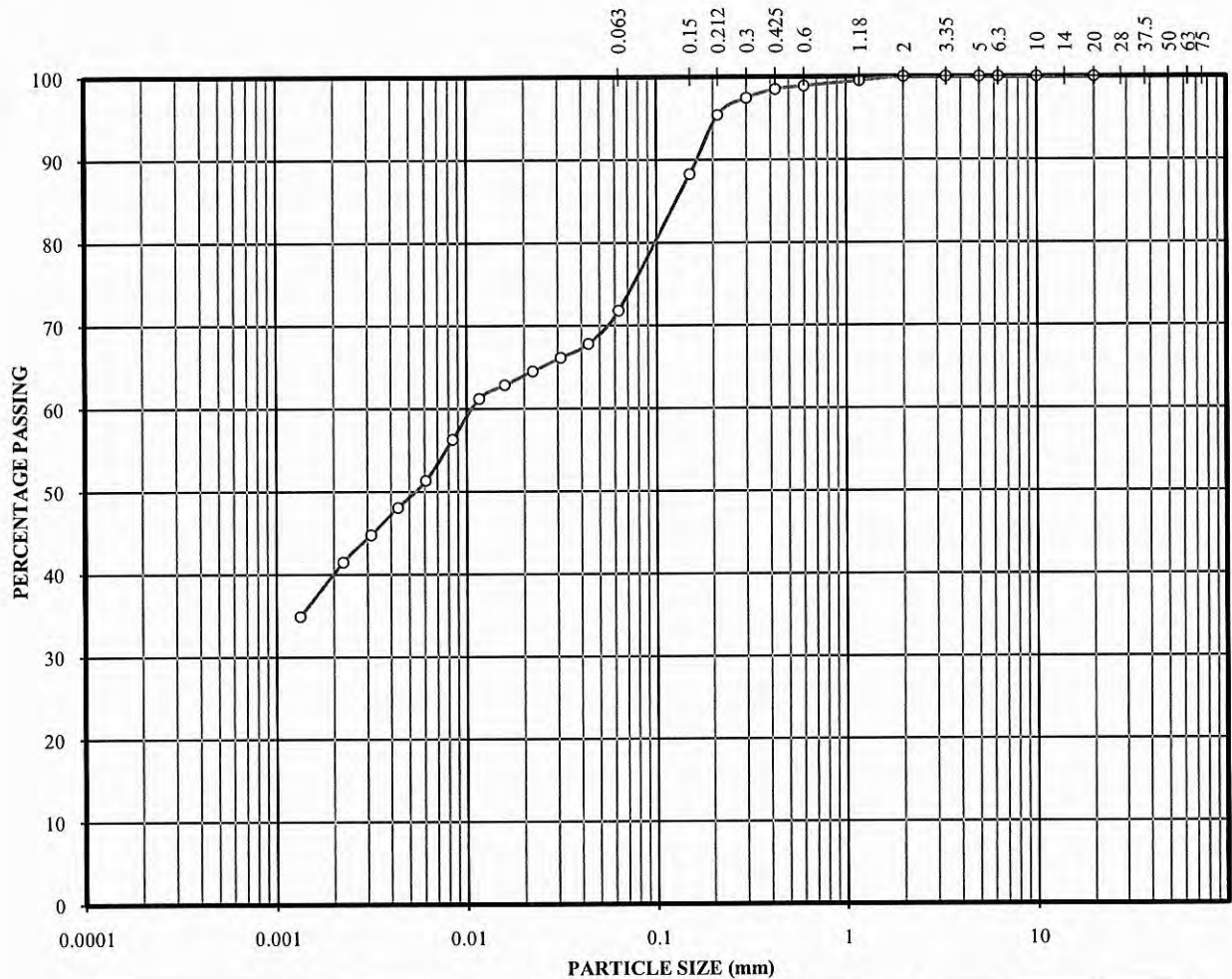
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Reddish yellow and reddish orange slightly Sandy CLAY
TW1	1.50m-2.10m	0	20	37	43	

	Project: Sungei Tengah Road/Lorong Pasu		 Khin Maung Nyunt Laboratory Manager
	Job Ref:	SML/345A/2022	
	Borehole No:	BH28	
	Sample No:	TW1	
	Depth:	1.50m-2.10m	
	Prepared Date:	25-Jan-2023	
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

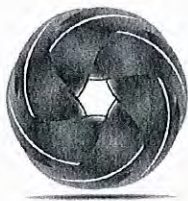
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light red and brownish yellow slightly Sandy CLAY
U1	4.50m-5.10m	0	28	32	40	



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH28

Checked/Approved:

Sample No: U1

Depth: 4.50m-5.10m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

Laboratory Manager

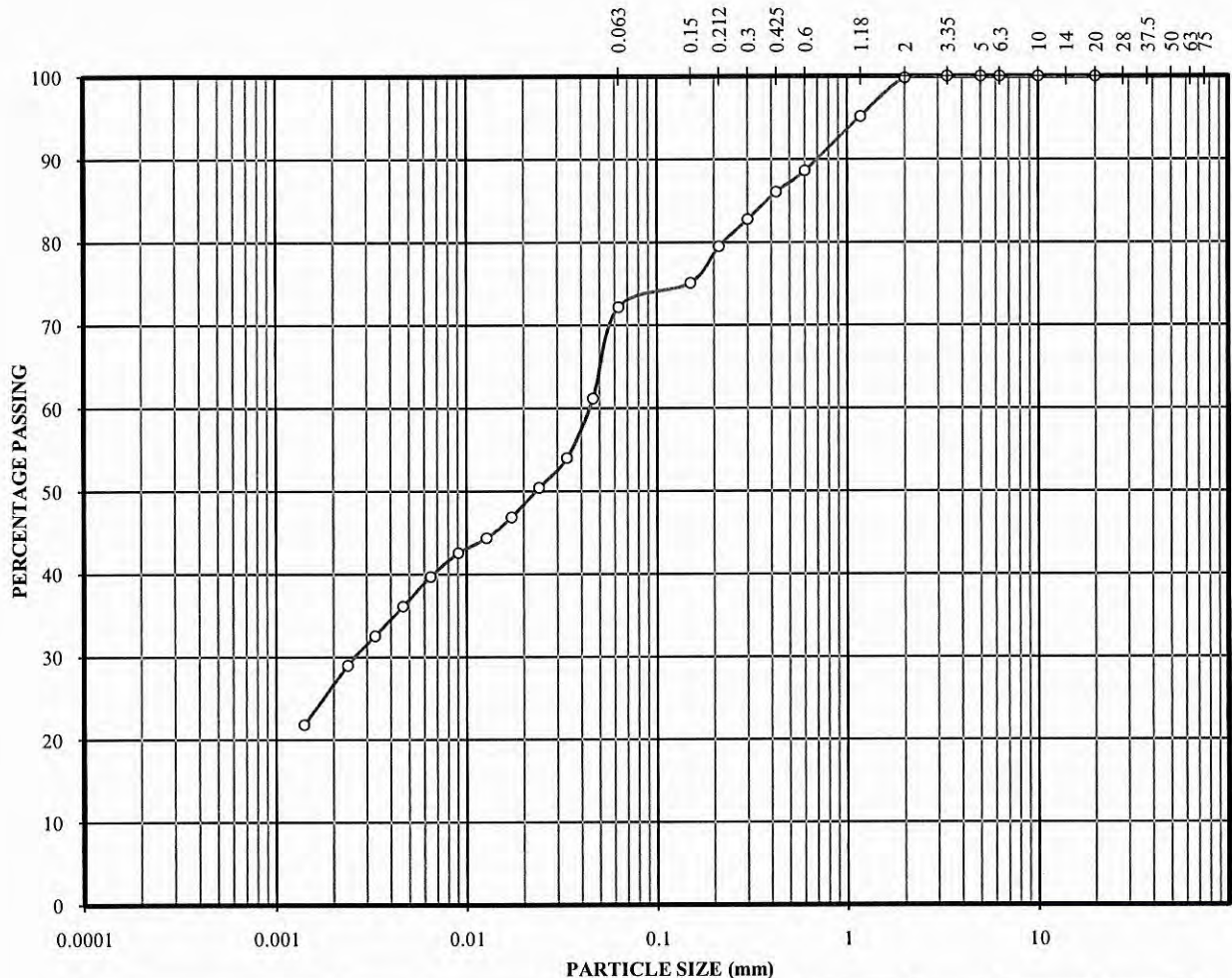


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



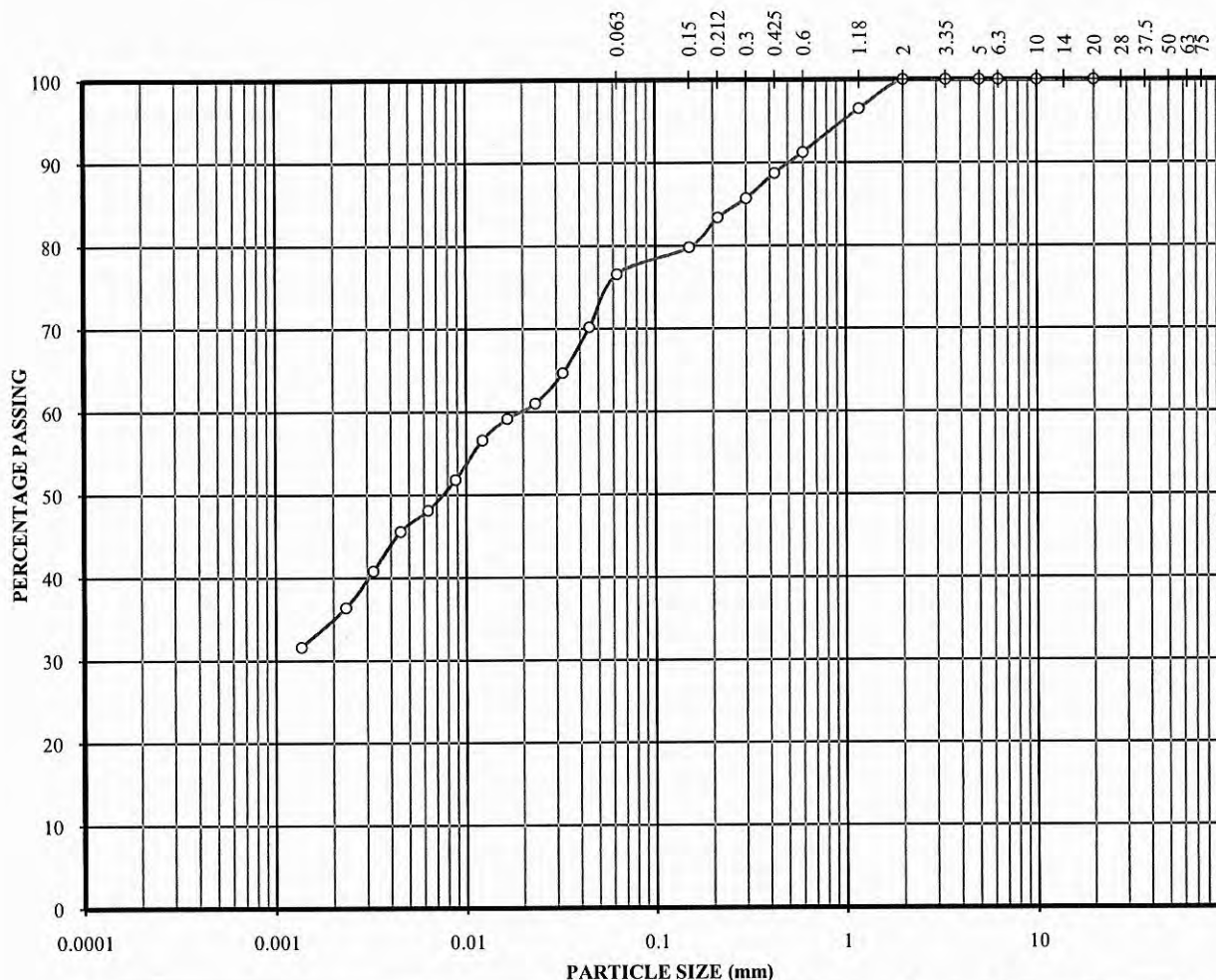
	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Light red and reddish orange slightly Sandy SILT	
TW2	3.00m-3.60m	0	28	45	27		

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun  Checked/Approved: Khin Maung Nyunt Laboratory Manager	 SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref:	SML/345A/2022		
	Borehole No:	BH29		
	Sample No:	TW2		
	Depth:	3.00m-3.60m		
	Prepared Date:	25-Jan-2023		

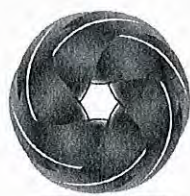
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and light grey slightly Sandy SILT
U1	9.00m-9.50m	0	23	41	36	



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH29

Checked/Approved:

Sample No: U1

Depth: 9.00m-9.50m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

Laboratory Manager

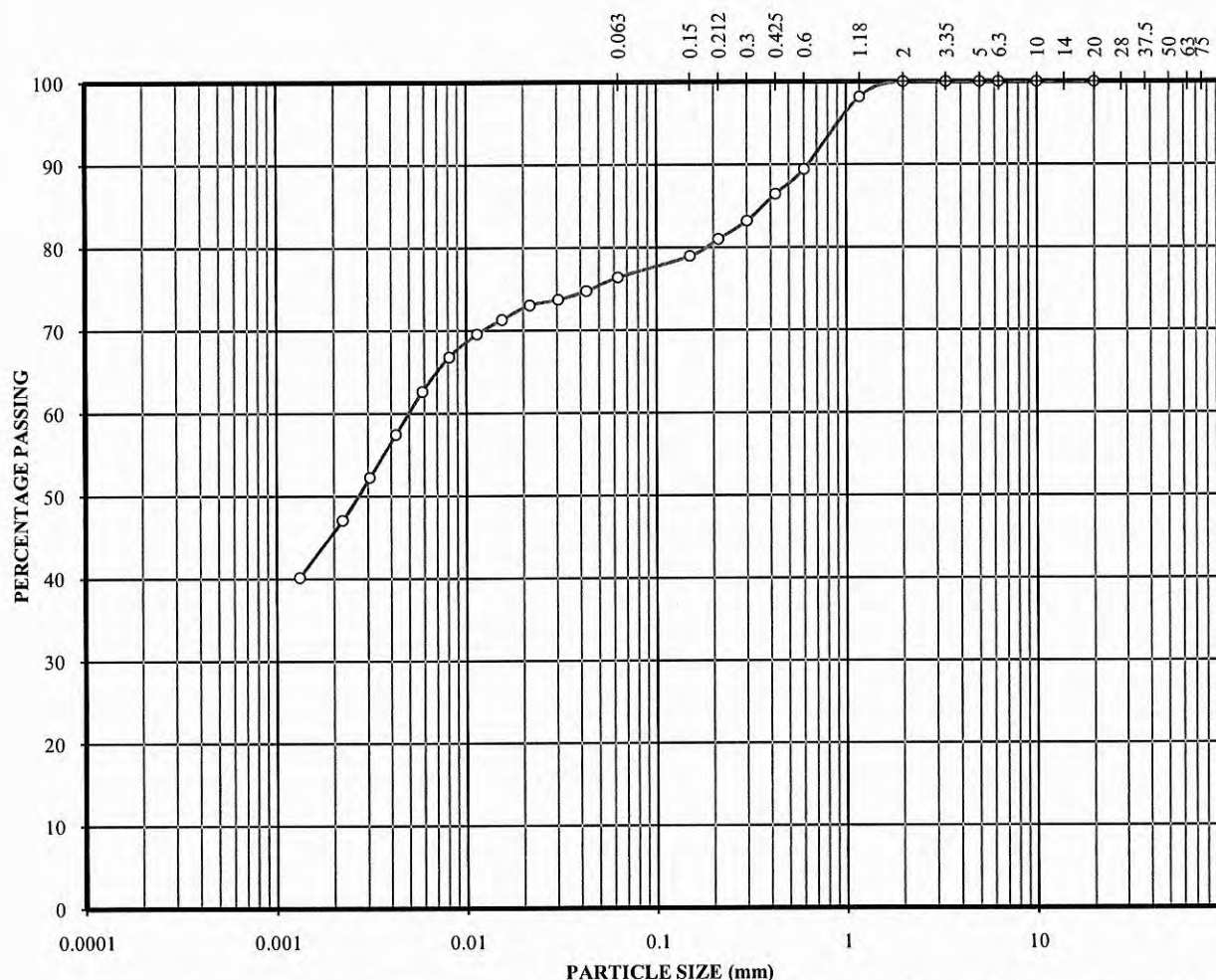


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and reddish orange slightly Sandy CLAY
TW1	1.50m-2.10m	0	24	29	47	



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH30

Checked/Approved:

Sample No: TW1

Depth: 1.50m-2.10m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

Laboratory Manager

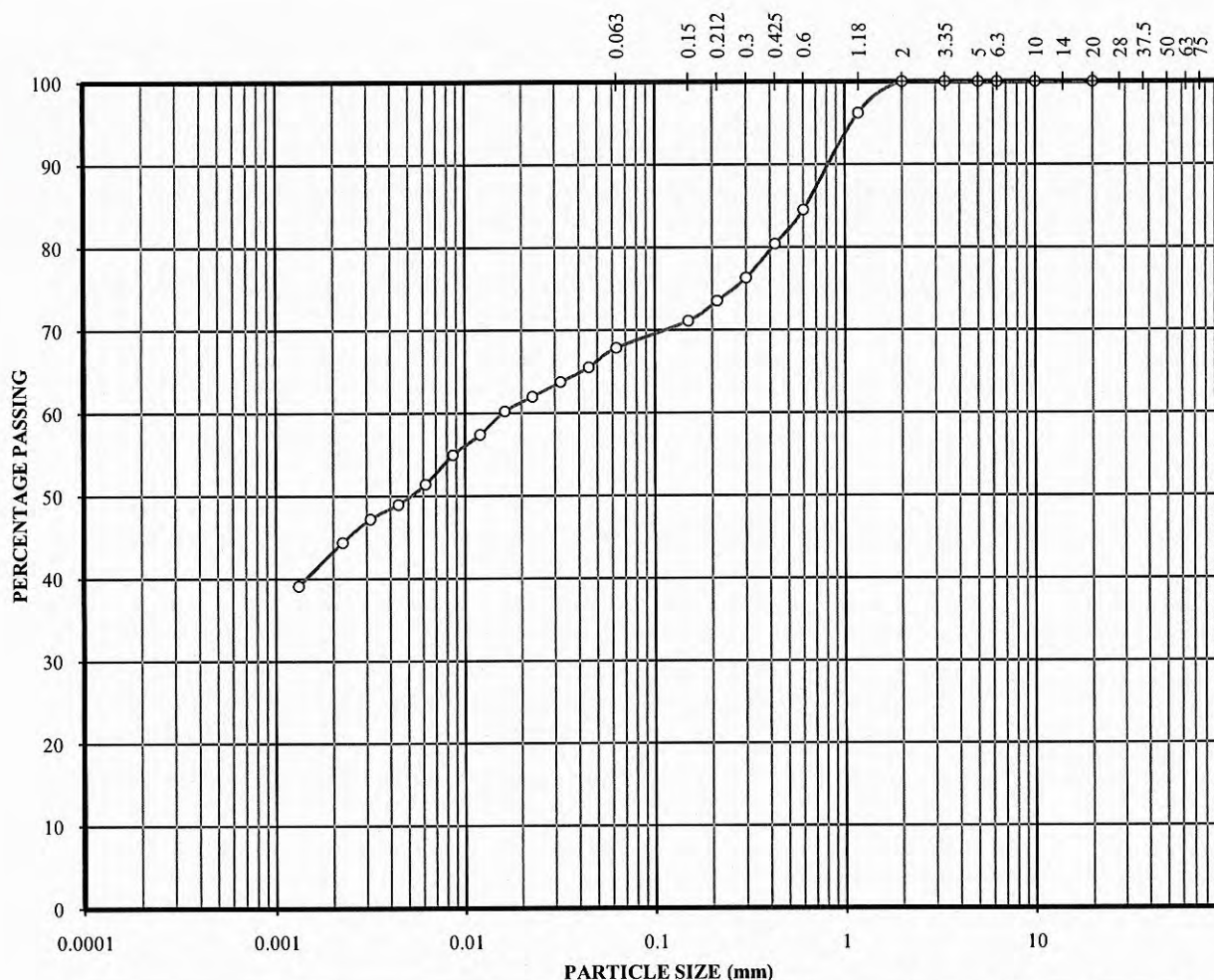


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

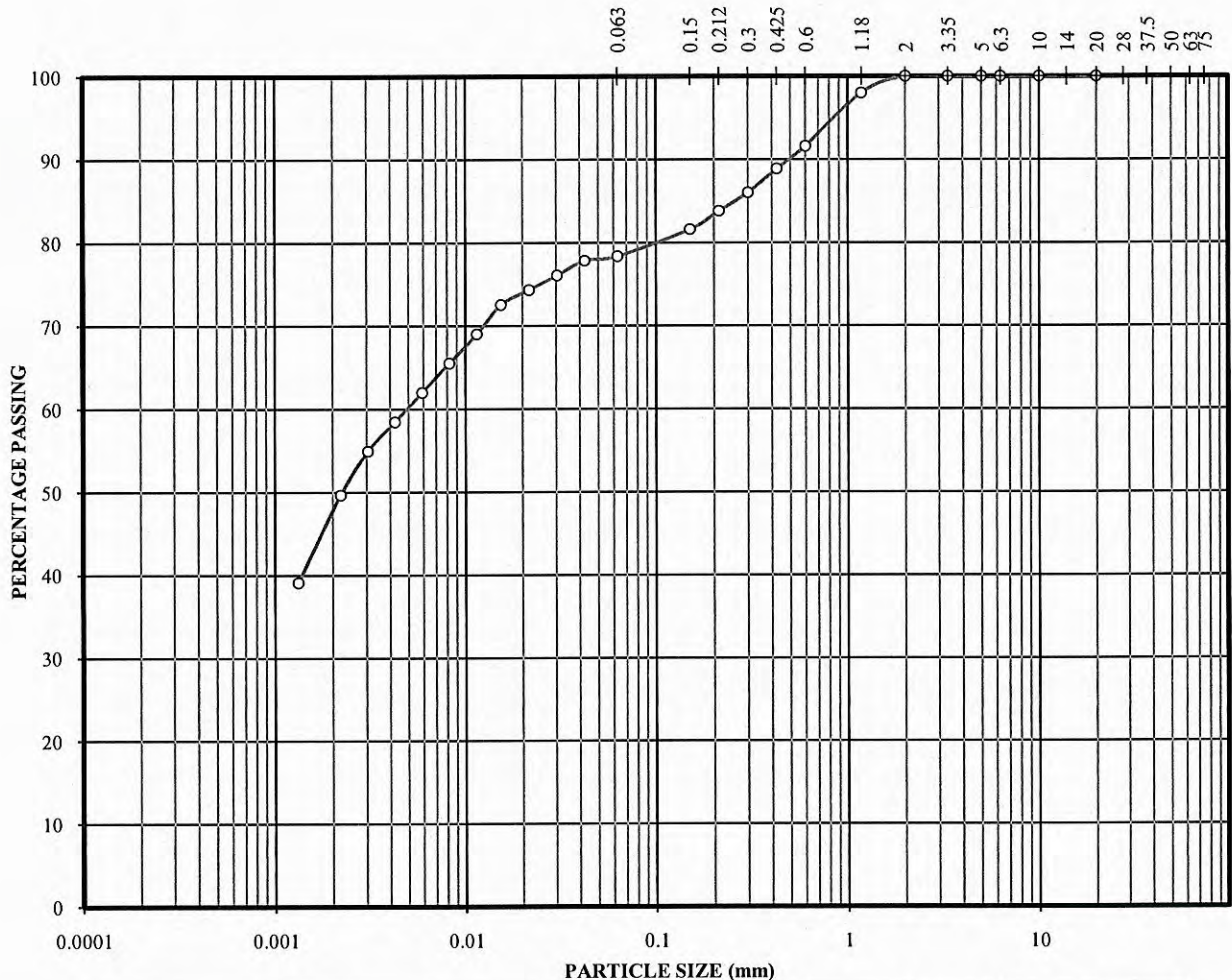
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Reddish orange and brownish yellow slightly Sandy CLAY	
U1	4.50m-5.10m	0	32	25	43		

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun  Khin Maung Nyunt Laboratory Manager	 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref:	SML/345A/2022		
	Borehole No:	BH30		
	Sample No:	U1		
	Depth:	4.50m-5.10m		
	Prepared Date:	25-Jan-2023		

SOIL MATERIALS LABORATORY PTE LTD

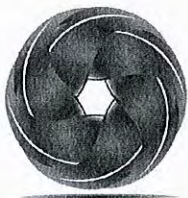
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and reddish orange slightly Sandy CLAY
TW2	3.00m-3.60m	0	22	29	49	



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH31

Checked/Approved:

Sample No: TW2

Depth: 3.00m-3.60m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

Laboratory Manager

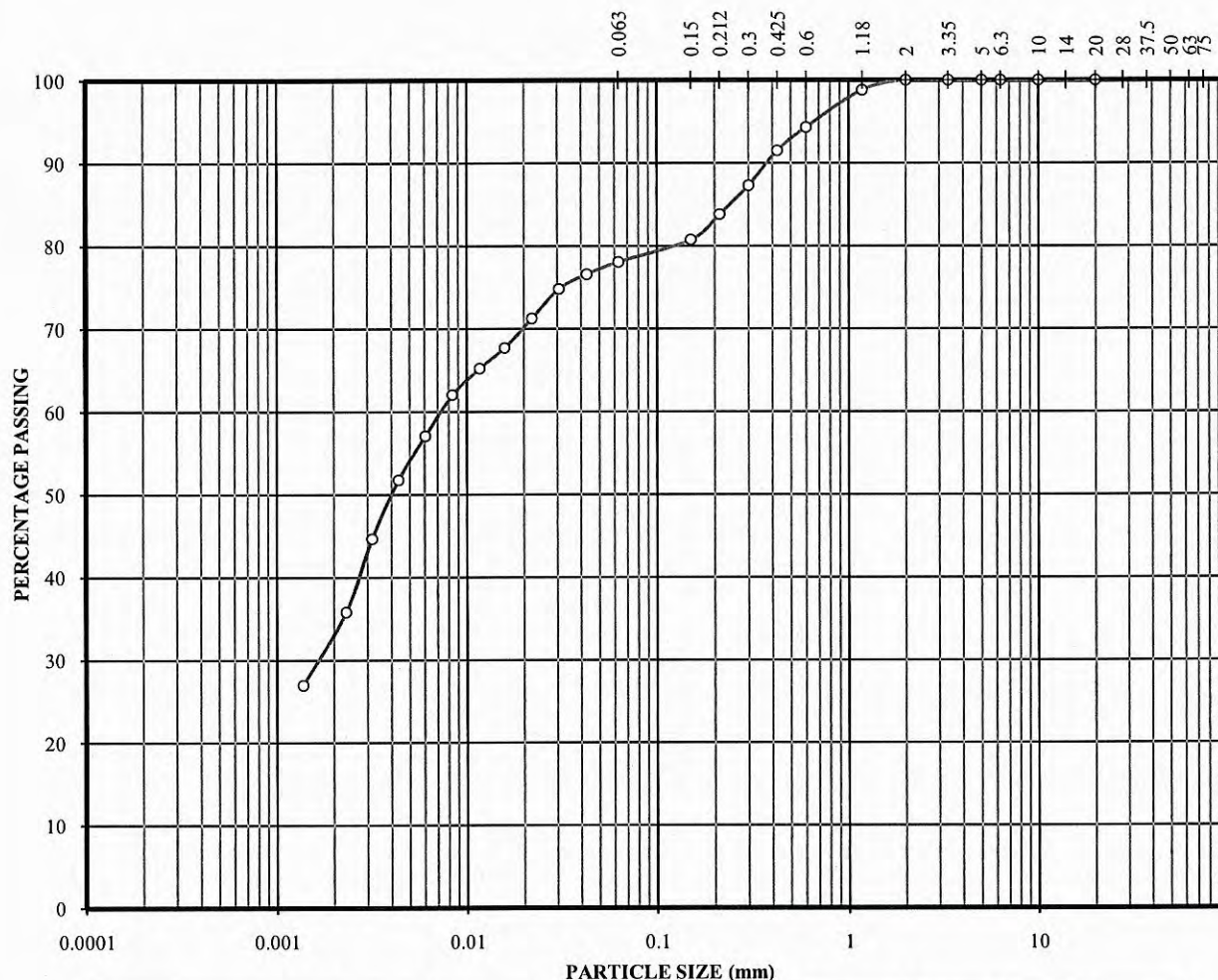


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

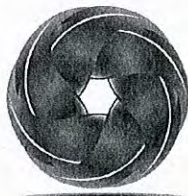
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

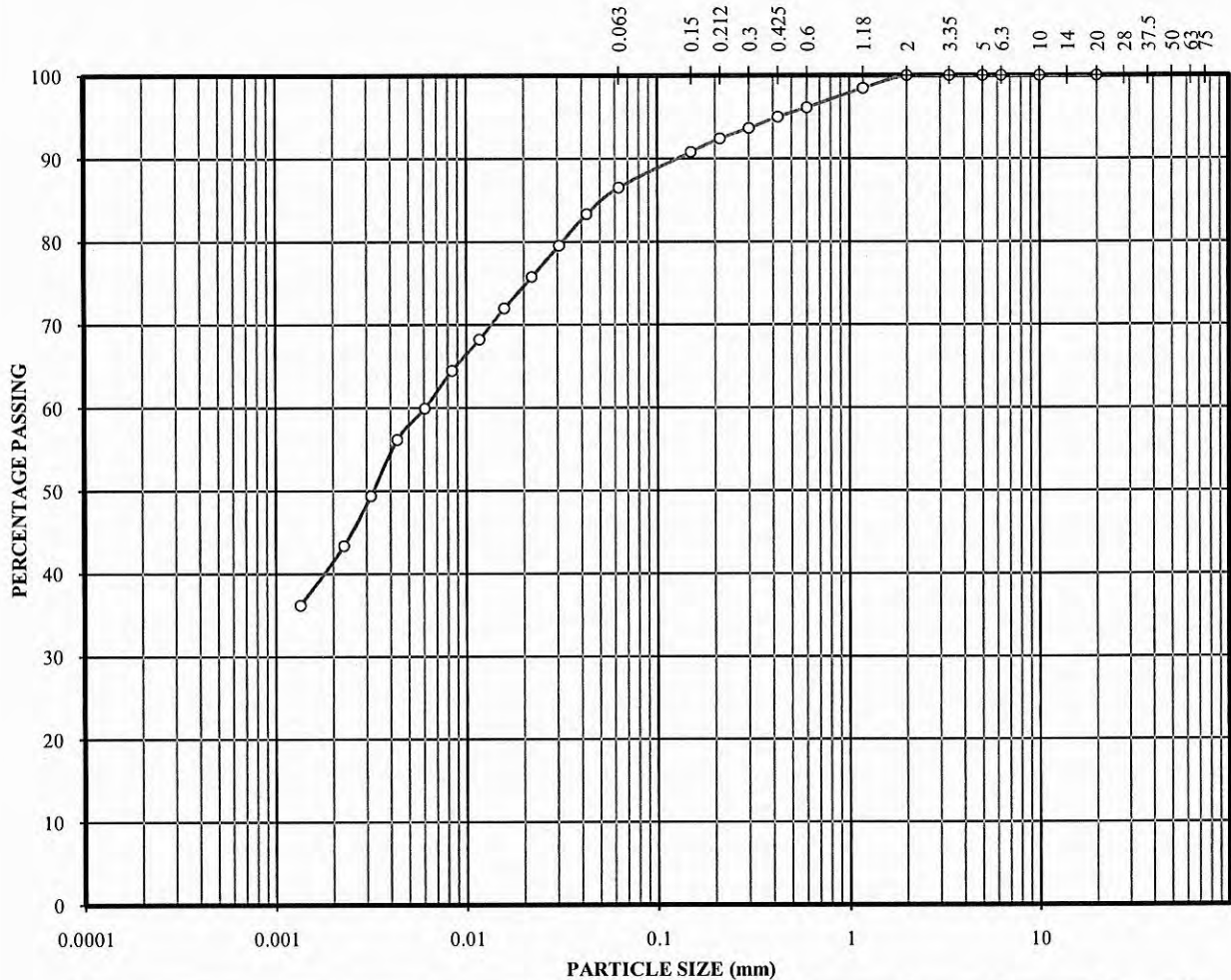
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish grey and reddish brown slightly Sandy SILT
U1	6.00m-6.70m	0	22	45	33	

	Project: Sungei Tengah Road/Lorong Pasu		  Khin Maung Nyunt Laboratory Manager	 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun		
	Borehole No: BH31	Checked/Approved:		
	Sample No: U1			
	Depth: 6.00m-6.70m			
	Prepared Date: 25-Jan-2023			

SOIL MATERIALS LABORATORY PTE LTD

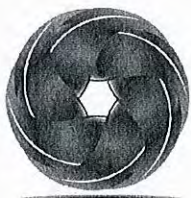
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
U1	4.50m-5.00m	0	13	46	41	Light brownish yellow and reddish orange slightly Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH32

Checked/Approved:

Sample No: U1

Depth: 4.50m-5.00m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

Laboratory Manager

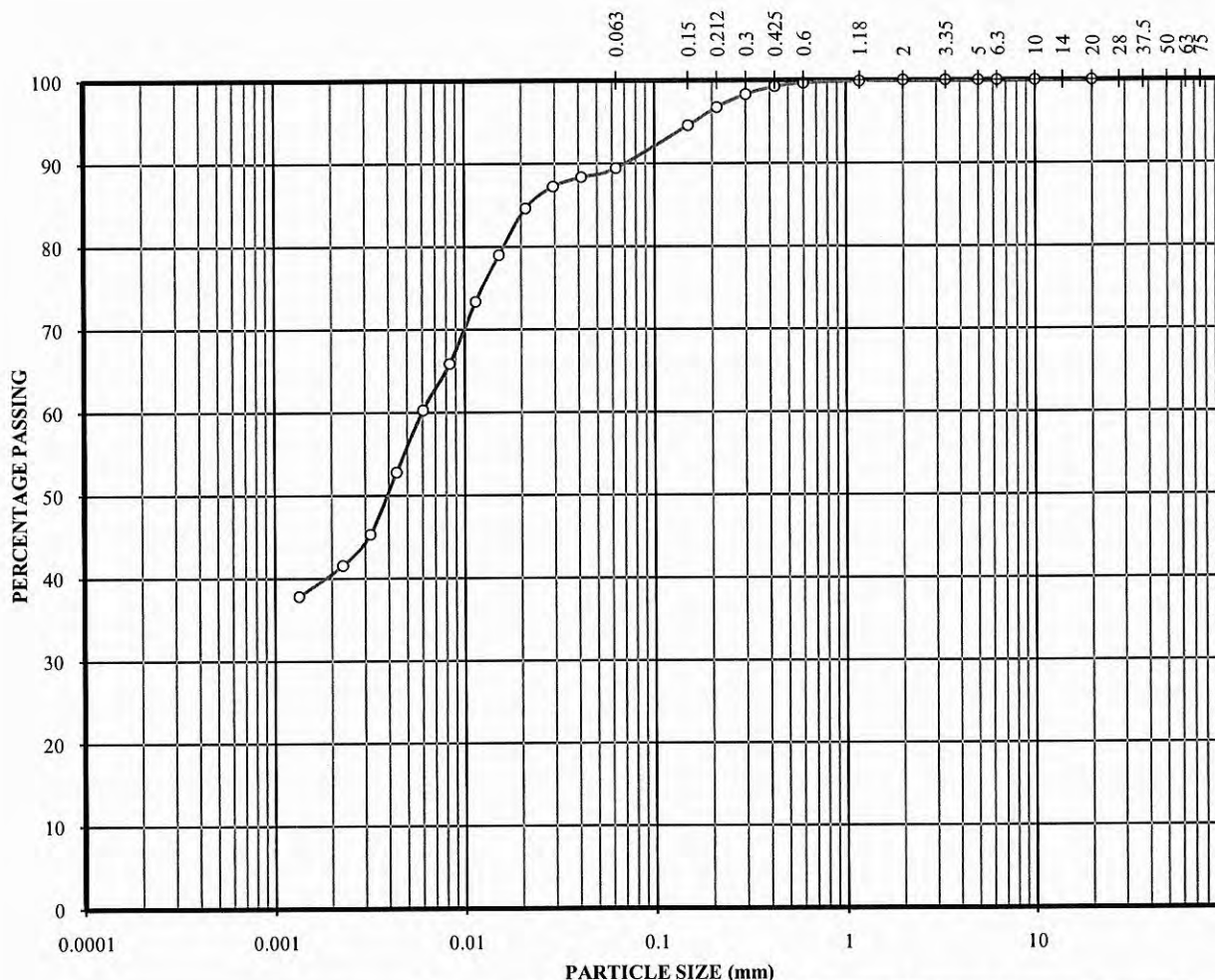


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

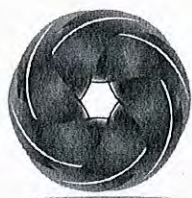
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Pink and light brownish yellow slightly Sandy SILT
TW4	9.00m-9.70m	0	11	49	40	



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH32

Checked/Approved:

Sample No: TW4

Depth: 9.00m-9.70m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

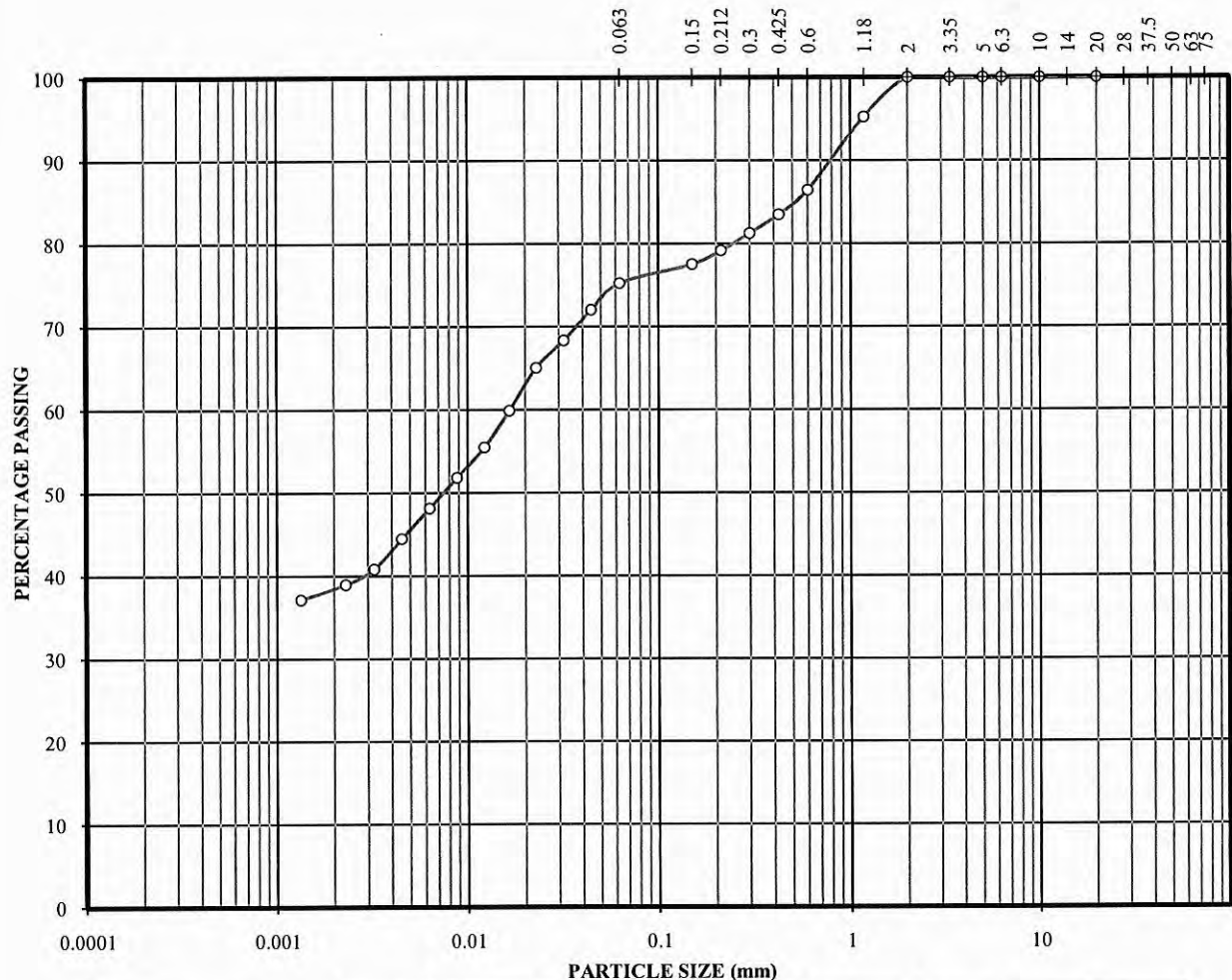
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

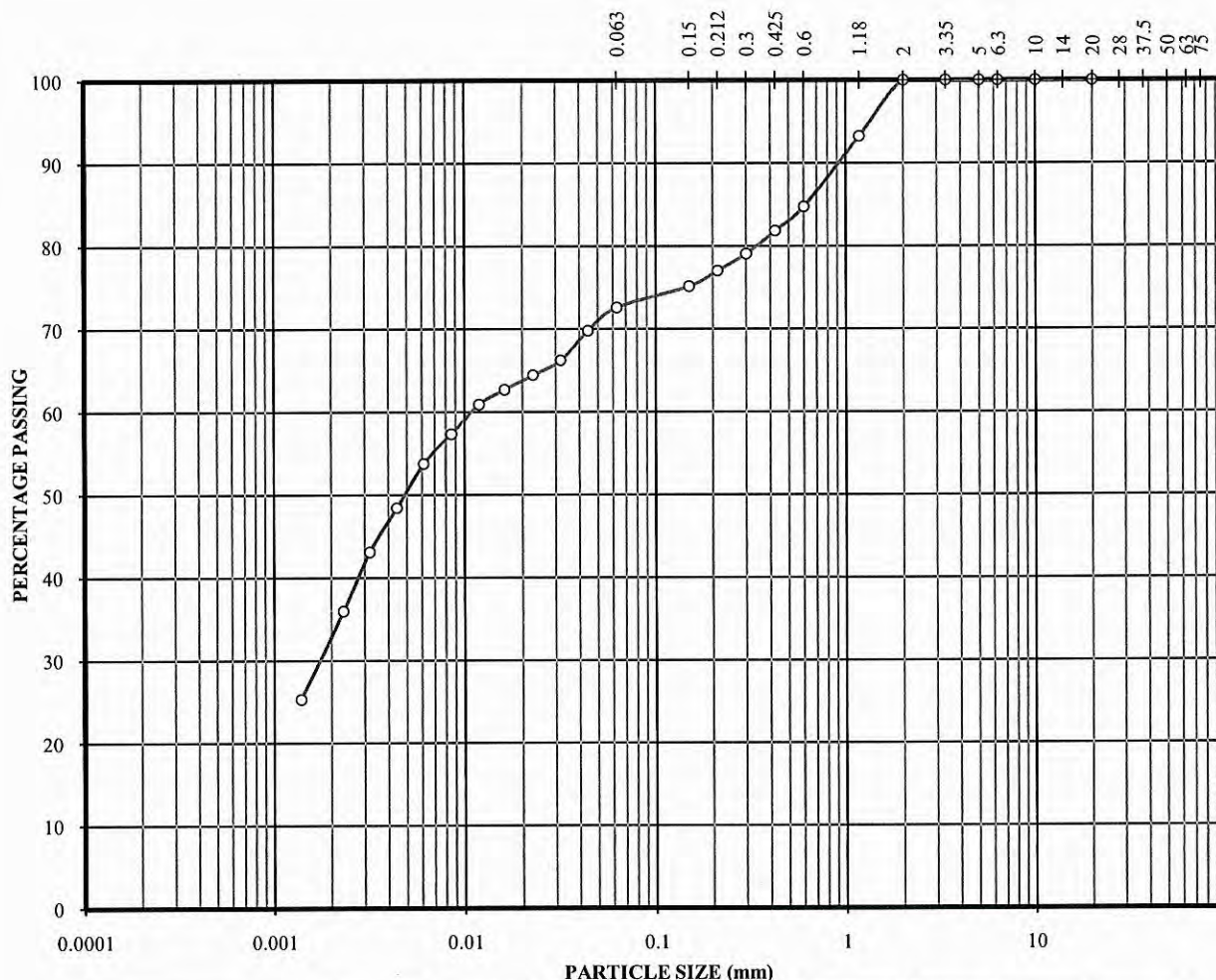
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and reddish orange slightly Sandy CLAY
TW1	3.00m-3.60m	0	25	36	39	

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun
	Job Ref:	SML/345A/2022	
	Borehole No:	BH33	
	Sample No:	TW1	
	Depth:	3.00m-3.60m	
	Prepared Date:	25-Jan-2023	 Khin Maung Nyunt Laboratory Manager
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

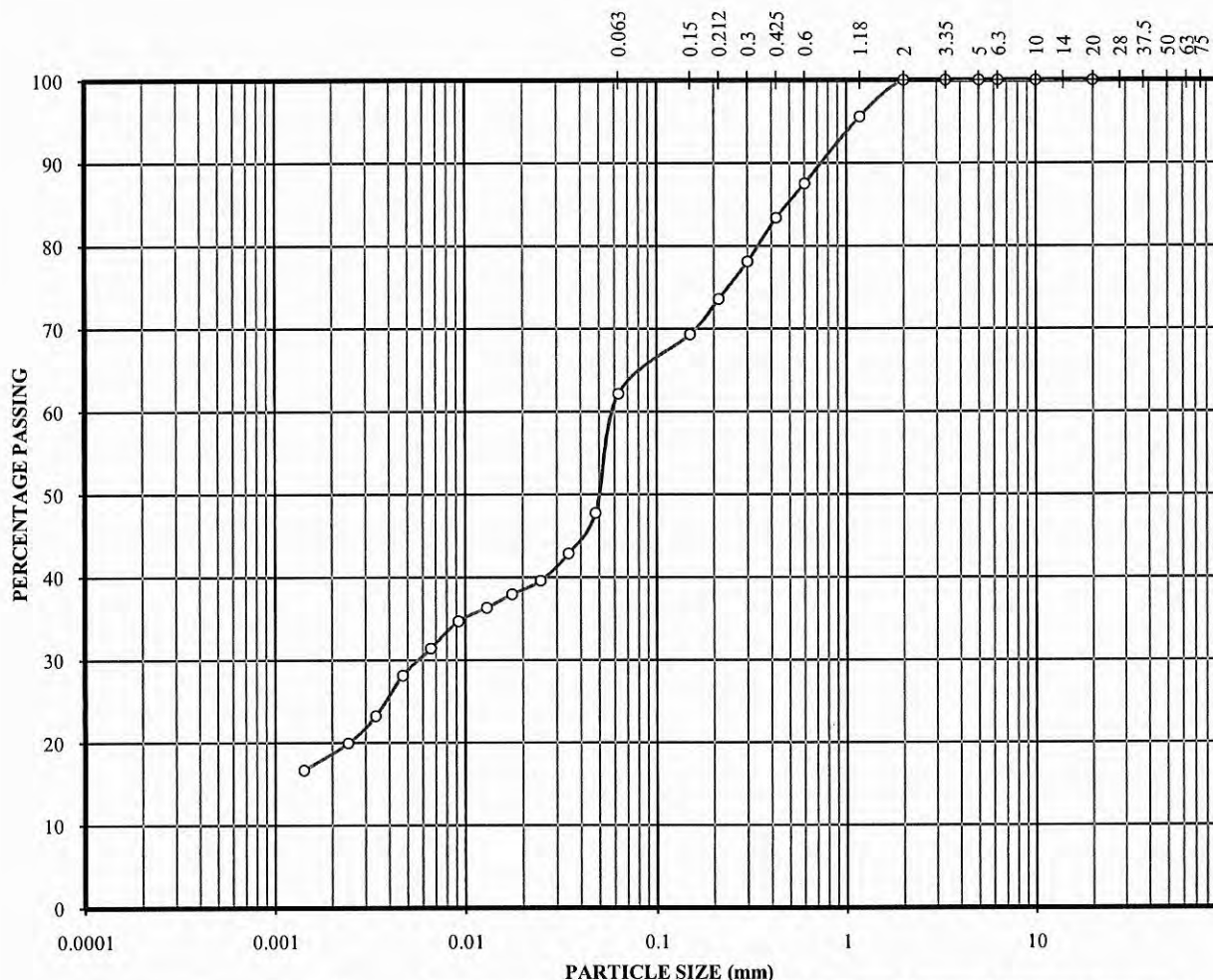
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION
						Light brownish yellow and reddish brown slightly Sandy SILT
TW3	6.00m-6.70m	0	27	40	33	

	Project: Sungei Tengah Road/Lorong Pasu		
	Job Ref:	SML/345A/2022	
	Borehole No:	BH33	
	Sample No:	TW3	
	Depth:	6.00m-6.70m	
	Prepared Date:	25-Jan-2023	
		Engineer: Si Thu Htun	Checked/Approved: Khin Maung Nyunt Laboratory Manager
			Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

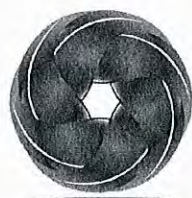
PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Light reddish brown and reddish orange Sandy SILT	
TW1	1.50m-2.10m	0	38	43	19		



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH34

Checked/Approved:

Sample No: TW1

Depth: 1.50m-2.10m

Khin Maung Nyunt

Prepared Date: 25-Jan-2023

Laboratory Manager

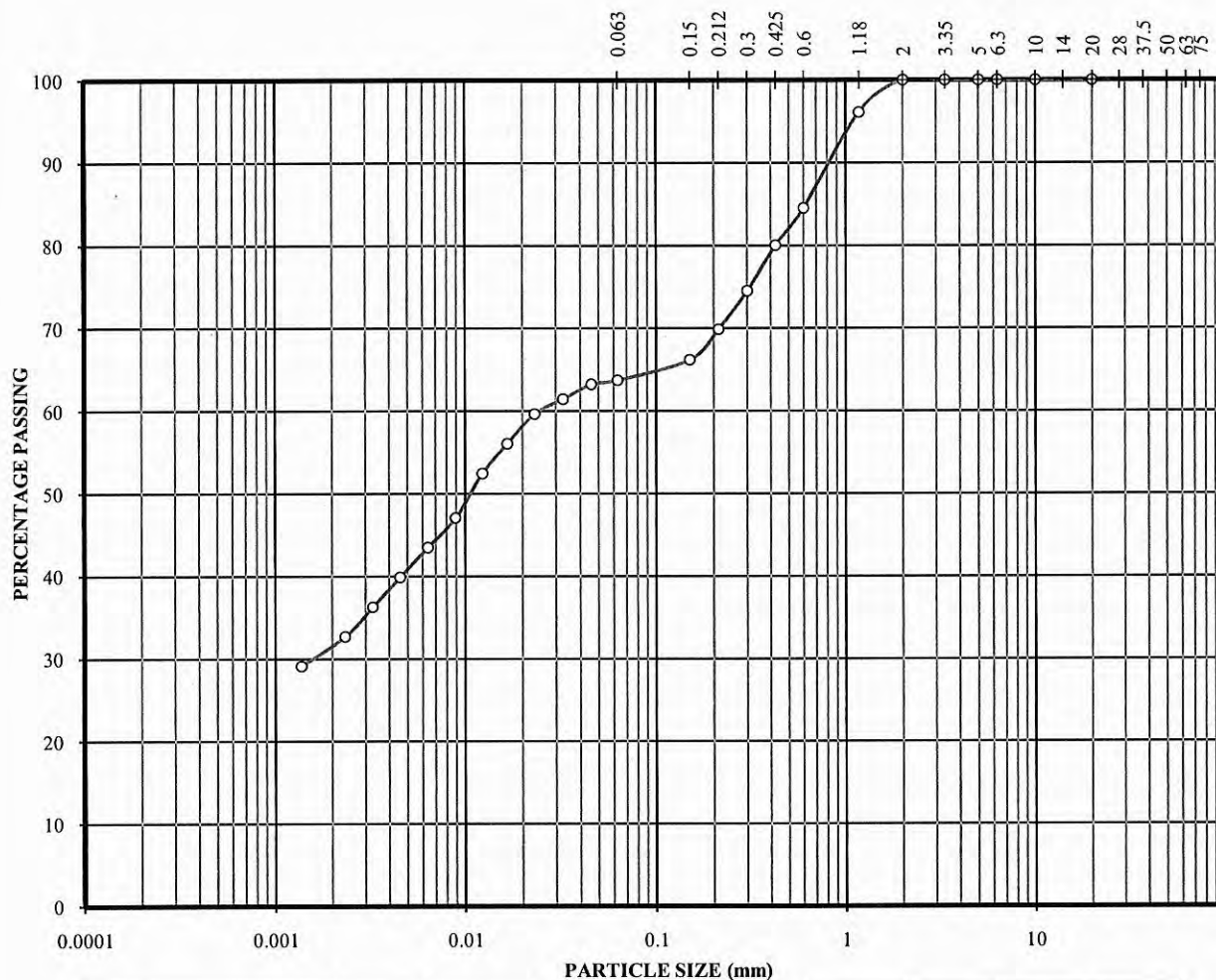


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

PARTICLE SIZE DISTRIBUTION BY HYDROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2: 9.5]



	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE
CLAY	SILT			SAND			GRAVEL		

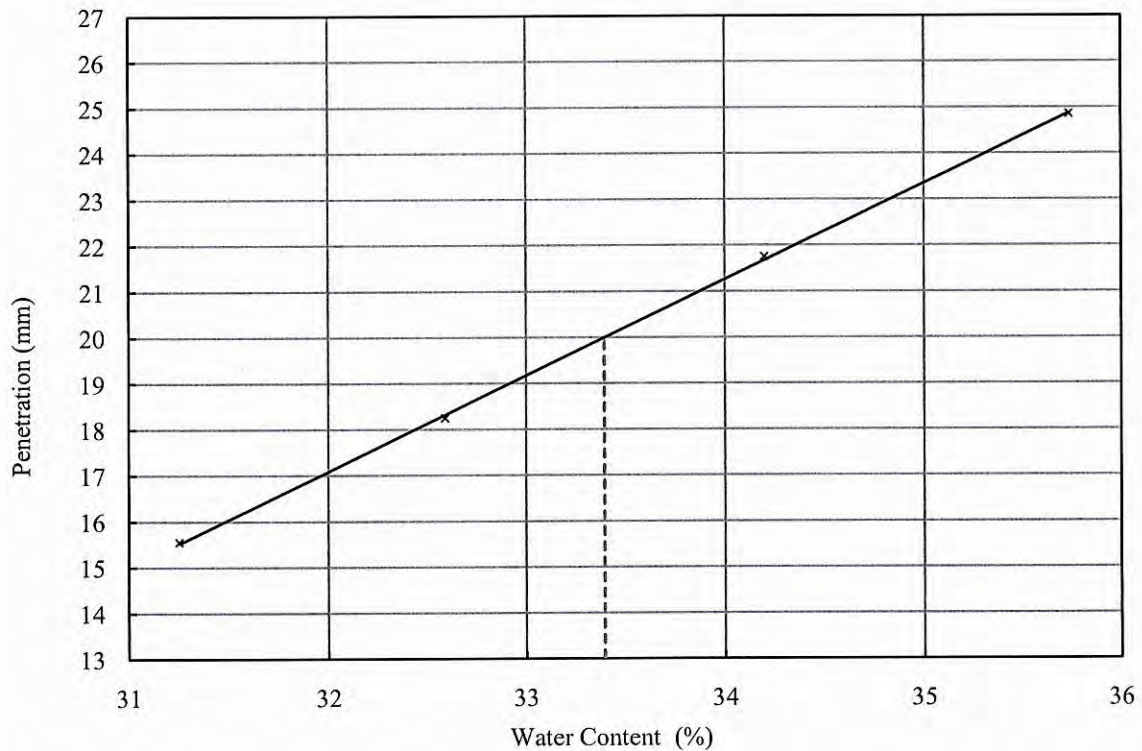
SAMPLE NO	DEPTH (m)	GRAVEL %	SAND %	SILT %	CLAY %	SAMPLE DESCRIPTION	
						Light brownish yellow and pink Sandy SILT	
TW3	4.50m-5.10m	0	36	33	31		

	Project: Sungei Tengah Road/Lorong Pasu		
	Job Ref:	SML/345A/2022	
	Borehole No:	BH34	
	Sample No:	TW3	
	Depth:	4.50m-5.10m	
	Prepared Date:	25-Jan-2023	
			Checked/Approved:
			Khin Maung Nyunt Laboratory Manager
			Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.19	22.21	23.10	22.18	18.15	18.15
Dry Weight + Tare	(g)	17.74	18.41	18.75	17.91	16.09	16.08
Tare Weight	(g)	6.70	6.75	6.03	5.96	7.94	7.91
Water Content	(%)	31.25	32.59	34.20	35.73	25.28	25.34
Penetration	(mm)	15.55	18.25	21.75	24.85		
LIQUID LIMIT		(%)	33				
PLASTIC LIMIT		(%)	25				
PLASTICITY INDEX		(%)	8				

Soil Description : Olive brown and brownish yellow Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH2

Sample No: TW1

Depth: 1.50m-2.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

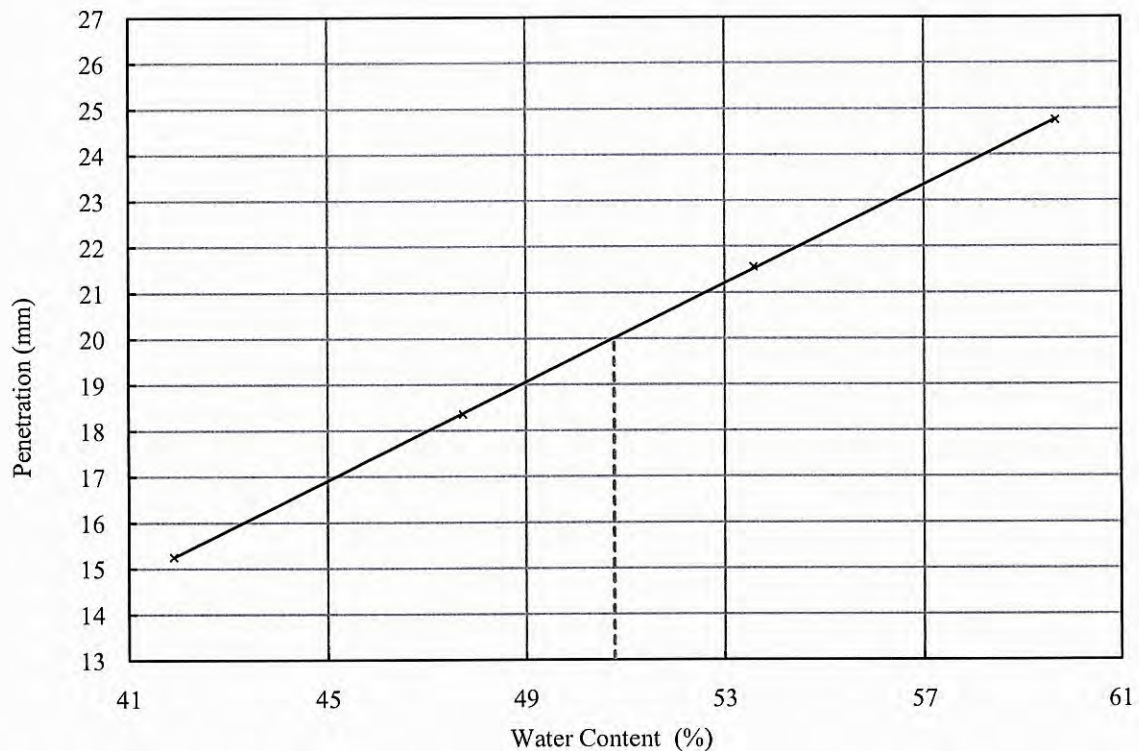
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.15	20.18	21.16	21.20	18.16	18.18
Dry Weight + Tare	(g)	16.22	15.76	16.00	15.33	15.74	15.62
Tare Weight	(g)	6.84	6.50	6.37	5.49	8.06	7.52
Water Content	(%)	41.90	47.73	53.58	59.65	31.51	31.60
Penetration	(mm)	15.25	18.35	21.55	24.75		
LIQUID LIMIT		(%)	51				
PLASTIC LIMIT		(%)	32				
PLASTICITY INDEX		(%)	19				

Soil Description : Light brownish yellow and reddish yellow Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH2

Sample No: U2

Depth: 9.00m-9.30m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

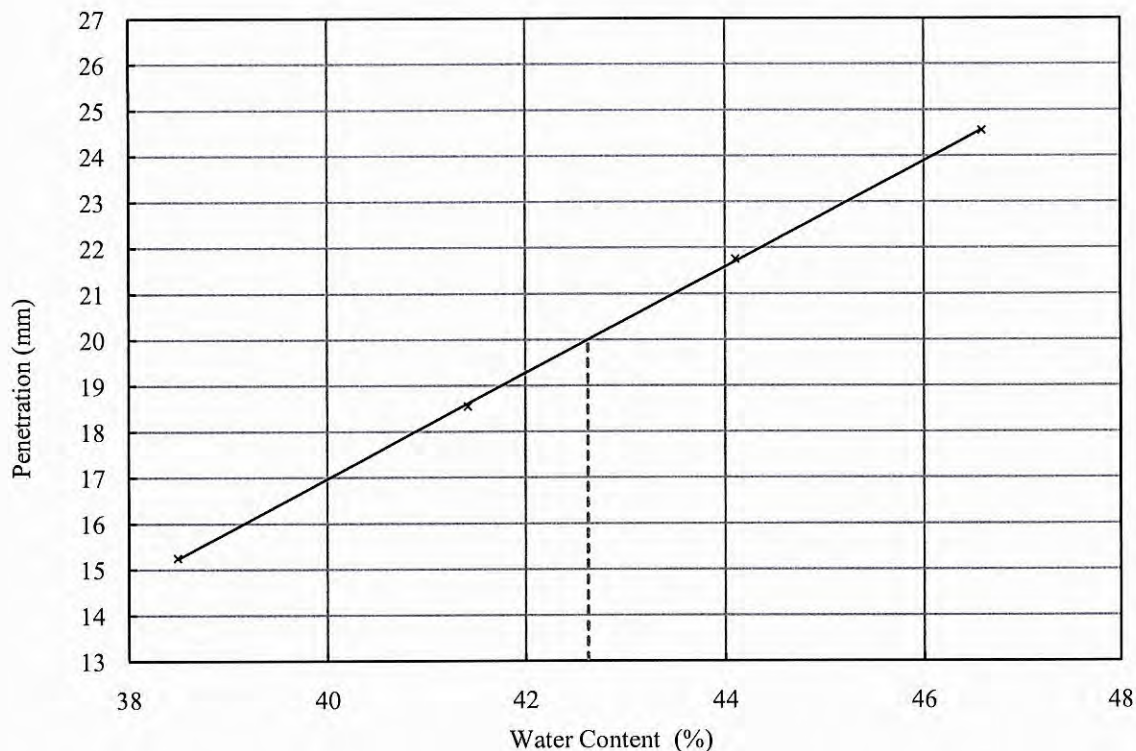
Checked/Approved

Khin Maung Nyunt
Laboratory Manager



ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

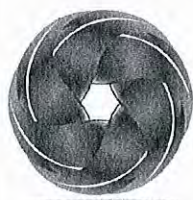


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.13	20.17	22.11	20.18	18.15	18.14
Dry Weight + Tare	(g)	16.85	15.97	17.36	15.81	15.89	15.83
Tare Weight	(g)	5.73	5.83	6.59	6.43	8.08	7.87
Water Content	(%)	38.49	41.42	44.10	46.59	28.94	29.02
Penetration	(mm)	15.25	18.55	21.75	24.55		
LIQUID LIMIT		(%)	43				
PLASTIC LIMIT		(%)	29				
PLASTICITY INDEX		(%)	14				

Soil Description : Brownish yellow and olive brown Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH3

Sample No: TW1

Depth: 3.00m-3.60m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

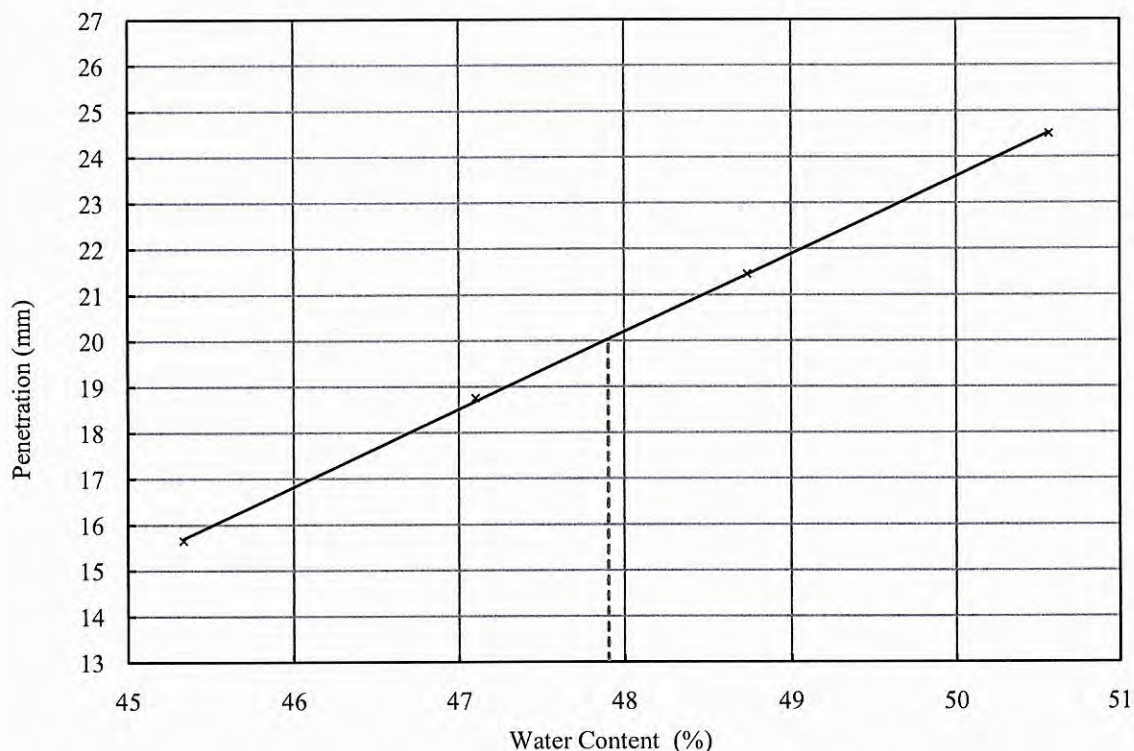
Khin Maung Nyunt
Laboratory Manager



Cert No: LA-2015-0601-B

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

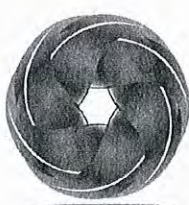


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.18	22.06	22.13	21.10	18.15	18.12
Dry Weight + Tare	(g)	17.10	17.51	17.70	16.62	15.77	15.82
Tare Weight	(g)	8.10	7.85	8.61	7.76	7.56	7.89
Water Content	(%)	45.33	47.10	48.73	50.56	28.99	29.00
Penetration	(mm)	15.65	18.75	21.45	24.50		
LIQUID LIMIT		(%)	48				
PLASTIC LIMIT		(%)	29				
PLASTICITY INDEX		(%)	19				

Soil Description : Light brownish yellow and reddish orange slightly Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH3

Sample No: U2

Depth: 6.00m-6.50m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

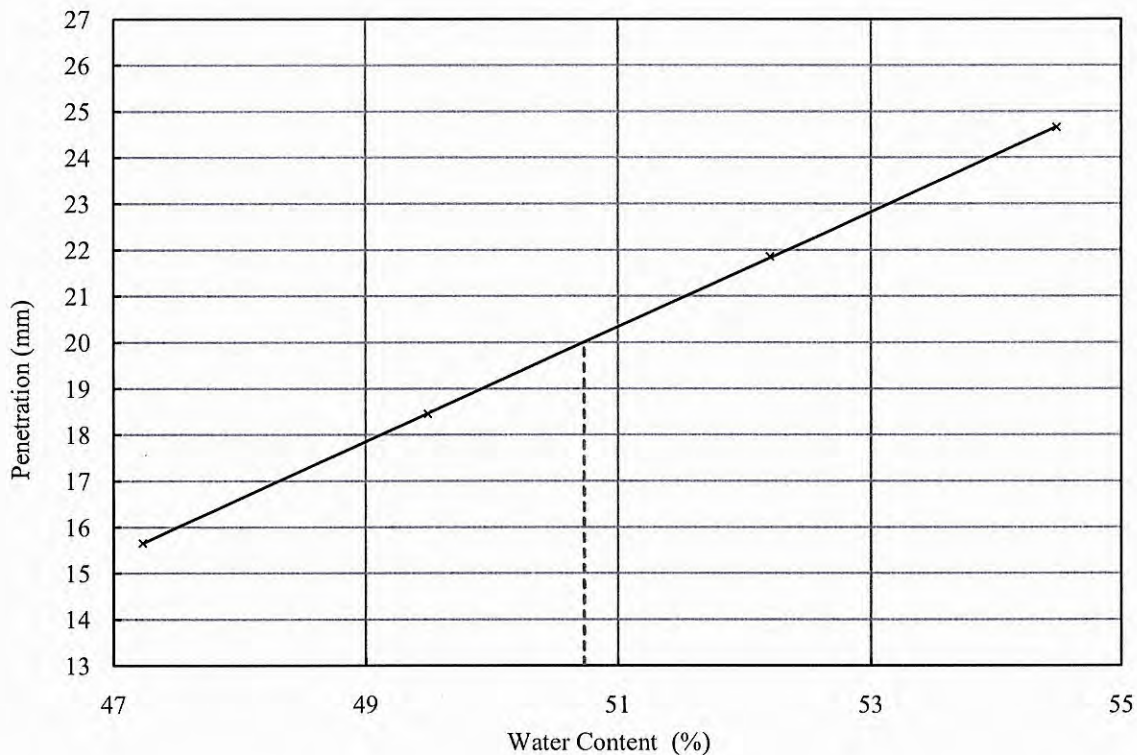


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

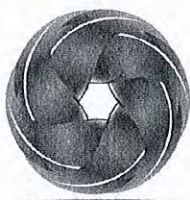


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	22.06	23.14	22.13	22.15	18.18	18.16
Dry Weight + Tare	(g)	17.03	17.76	16.67	16.56	15.77	15.79
Tare Weight	(g)	6.38	6.89	6.21	6.30	7.67	7.83
Water Content	(%)	47.23	49.49	52.20	54.48	29.75	29.77
Penetration	(mm)	15.65	18.45	21.85	24.65		
LIQUID LIMIT		(%)	51				
PLASTIC LIMIT		(%)	30				
PLASTICITY INDEX		(%)	21				

Soil Description : Light yellowish brown and light red Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH4

Checked/Approved

Sample No: TW2

Depth: 3.00m-3.60m

Prepared Date: 25 January, 2023

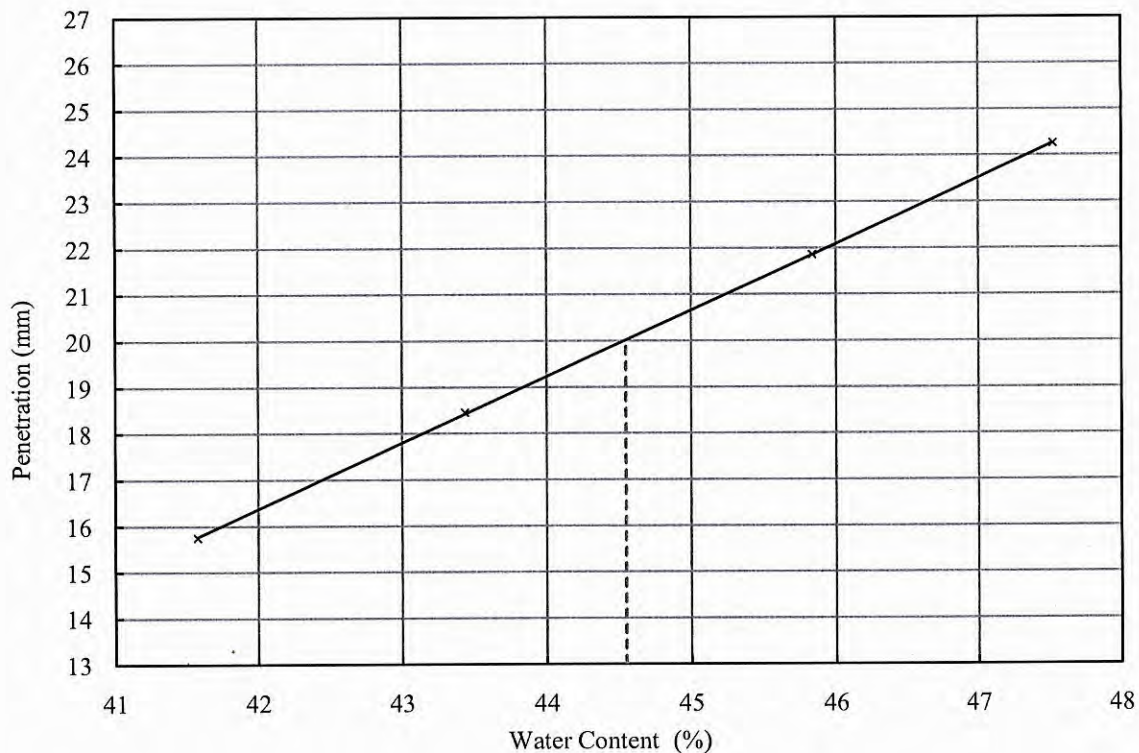
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

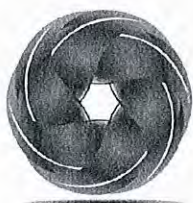


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	22.20	22.22	22.14	22.21	18.14	18.20
Dry Weight + Tare	(g)	17.46	17.72	17.46	17.03	15.77	15.89
Tare Weight	(g)	6.06	7.36	7.25	6.13	7.55	7.91
Water Content	(%)	41.58	43.44	45.84	47.52	28.83	28.95
Penetration	(mm)	15.75	18.45	21.85	24.25		
LIQUID LIMIT		(%)	45				
PLASTIC LIMIT		(%)	29				
PLASTICITY INDEX		(%)	16				

Soil Description : Reddish brown and brownish yellow Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH4

Sample No: U3

Depth: 9.00m-9.50m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

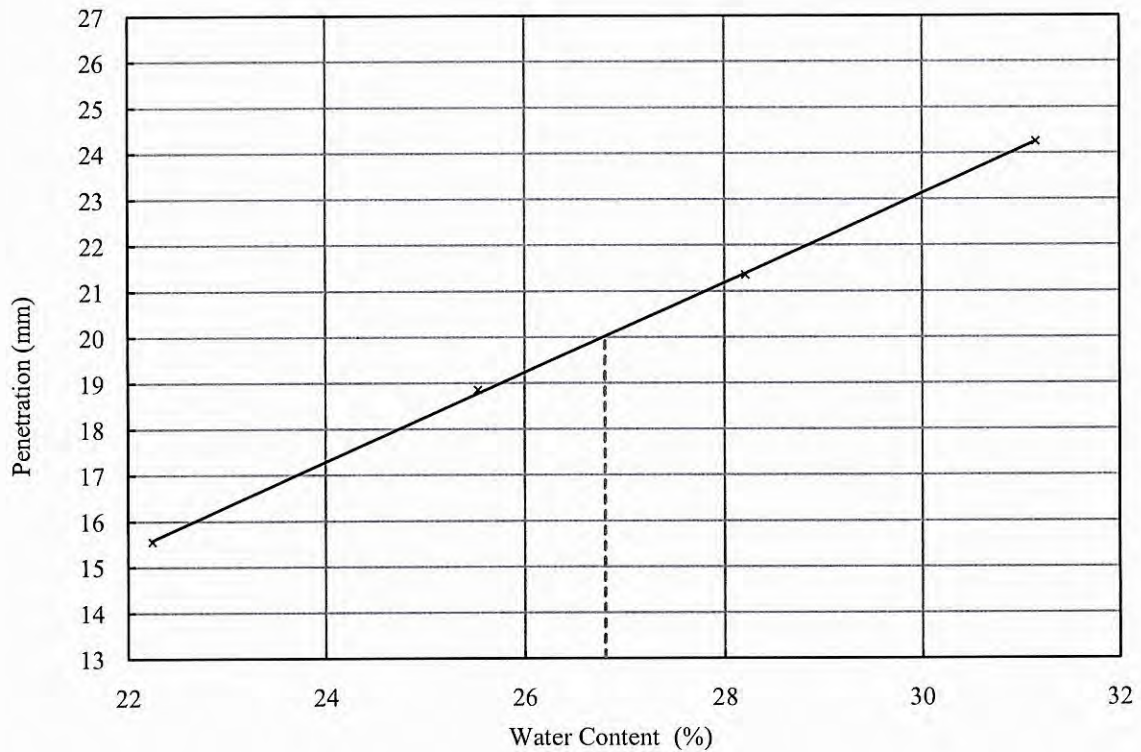


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	22.16	21.13	23.15	20.23	18.10	18.12
Dry Weight + Tare	(g)	19.47	18.23	19.48	17.04	16.15	16.20
Tare Weight	(g)	7.38	6.87	6.47	6.80	7.67	7.86
Water Content	(%)	22.25	25.53	28.21	31.15	23.00	23.02
Penetration	(mm)	15.55	18.85	21.35	24.25		

LIQUID LIMIT	(%)	27
PLASTIC LIMIT	(%)	23
PLASTICITY INDEX	(%)	4

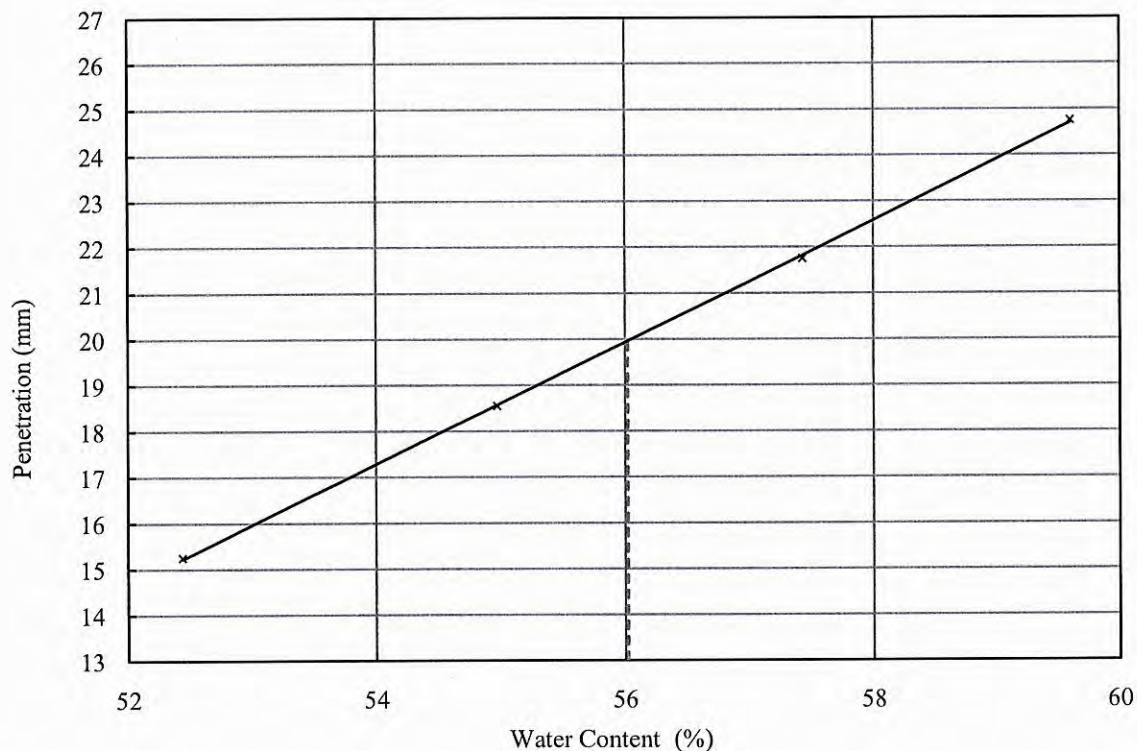
Soil Description : Light olive brown and brownish grey very Silty SAND

	Project: Sungei Tengah Road/Lorong Pasu		 Cert No: LA-2015-0601-B
	Job Ref:	SML/345A/2022	
	Borehole No:	BH5	
	Sample No:	TW1	
	Depth:	1.50m-2.10m	
	Prepared Date:	25 January, 2023	
		Engineer: Si Thu Htun	Checked/Approved Khin Maung Nyunt Laboratory Manager

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



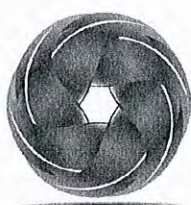
History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.22	20.13	21.14	20.17	18.16	18.12
Dry Weight + Tare	(g)	16.06	15.43	15.88	15.08	15.59	15.65
Tare Weight	(g)	6.22	6.88	6.72	6.54	7.47	7.85
Water Content	(%)	52.44	54.97	57.42	59.60	31.65	31.67
Penetration	(mm)	15.25	18.55	21.75	24.75		

LIQUID LIMIT	(%)	56
PLASTIC LIMIT	(%)	32
PLASTICITY INDEX	(%)	24

Soil Description : Light brownish yellow and reddish orange Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH5

Sample No: TW4

Depth: 6.00m-6.70m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

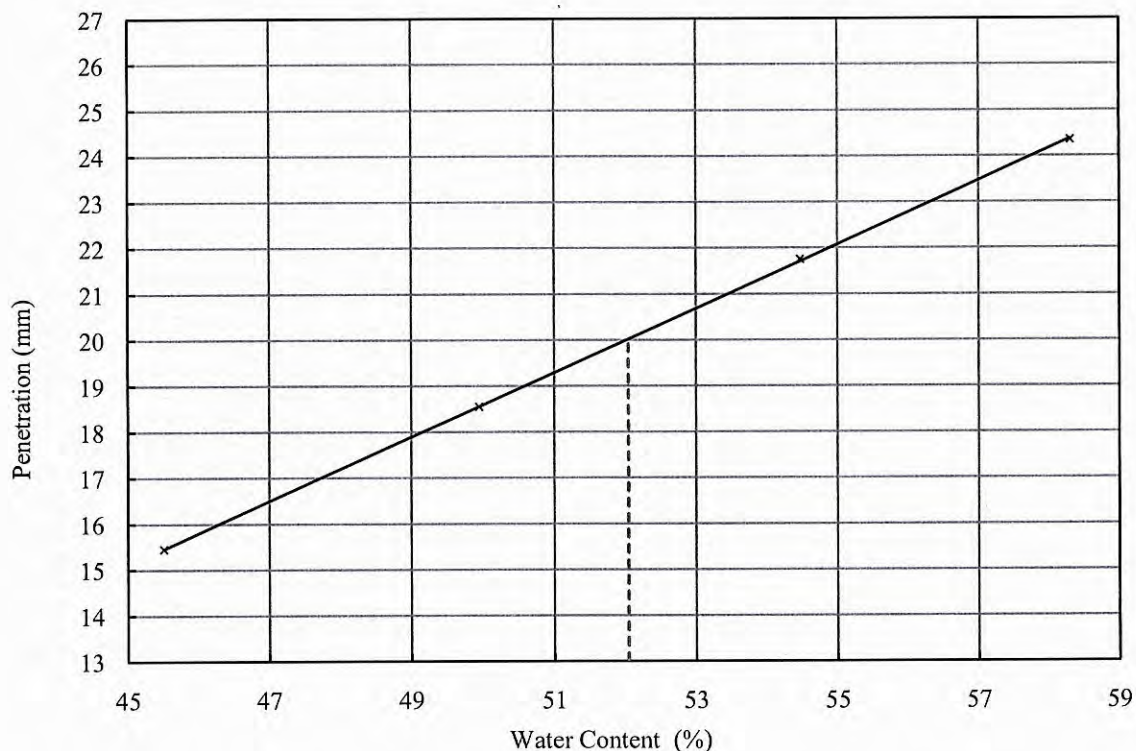
Checked/Approved

Khin Maung Nyunt
Laboratory Manager



ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

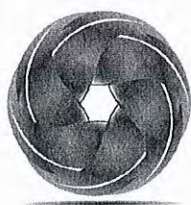


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.14	20.22	21.23	21.21	18.19	18.12
Dry Weight + Tare	(g)	15.94	15.73	15.87	15.59	15.78	15.71
Tare Weight	(g)	6.71	6.74	6.03	5.95	7.94	7.90
Water Content	(%)	45.50	49.94	54.47	58.30	30.74	30.86
Penetration	(mm)	15.45	18.55	21.75	24.35		
LIQUID LIMIT		(%)	52				
PLASTIC LIMIT		(%)	31				
PLASTICITY INDEX		(%)	21				

Soil Description : Reddish orange and brownish yellow Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH6

Sample No: TW3

Depth: 4.50m-5.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

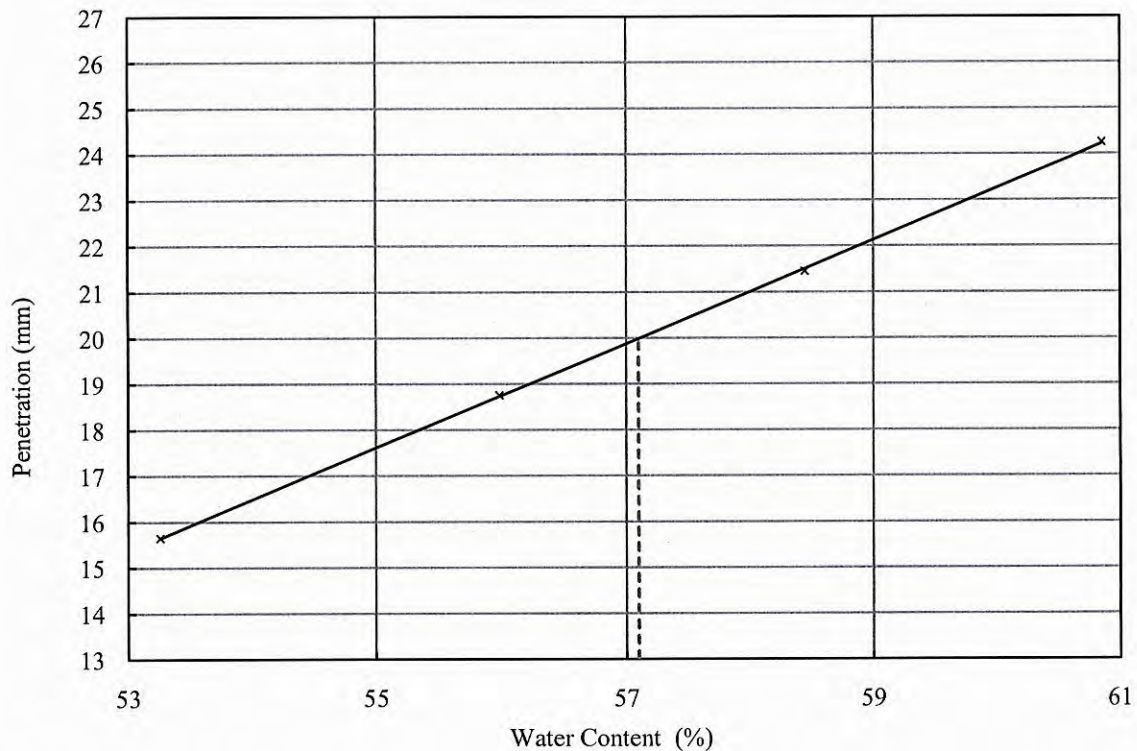
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

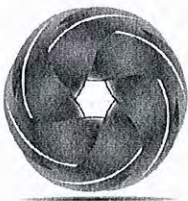


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.12	20.15	20.13	21.23	18.15	18.16
Dry Weight + Tare	(g)	15.89	15.57	15.39	15.51	15.64	15.73
Tare Weight	(g)	6.07	7.39	7.28	6.11	7.54	7.90
Water Content	(%)	53.26	55.99	58.45	60.85	30.99	31.03
Penetration	(mm)	15.65	18.75	21.45	24.25		
LIQUID LIMIT		(%)	57				
PLASTIC LIMIT		(%)	31				
PLASTICITY INDEX		(%)	26				

Soil Description : Light brownish yellow and light red slightly Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH6

Sample No: TW5

Depth: 9.00m-9.70m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

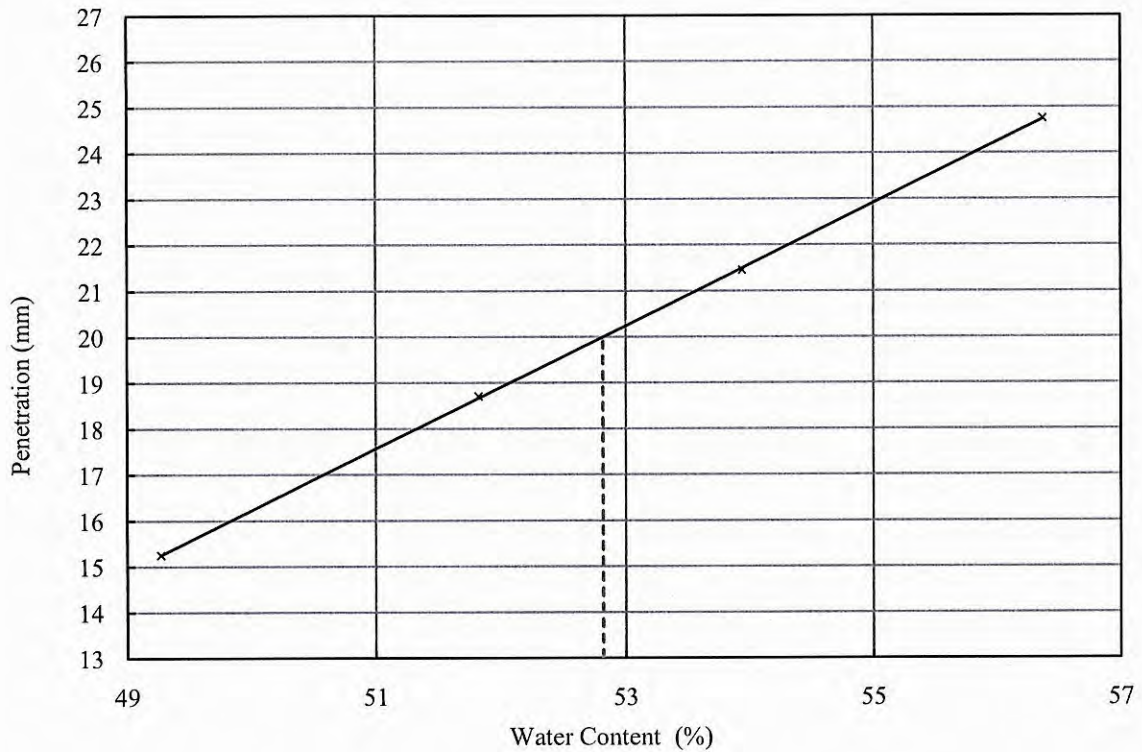


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

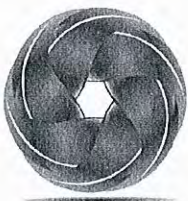


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.21	20.16	21.18	20.10	18.19	18.15
Dry Weight + Tare	(g)	15.50	15.61	15.84	15.32	15.76	15.69
Tare Weight	(g)	5.94	6.83	5.94	6.84	7.63	7.46
Water Content	(%)	49.27	51.82	53.94	56.37	29.89	29.89
Penetration	(mm)	15.25	18.70	21.45	24.75		
LIQUID LIMIT		(%)	53				
PLASTIC LIMIT		(%)	30				
PLASTICITY INDEX		(%)	23				

Soil Description : Light olive brown and reddish orange Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH7

Sample No: TW1

Depth: 1.50m-2.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

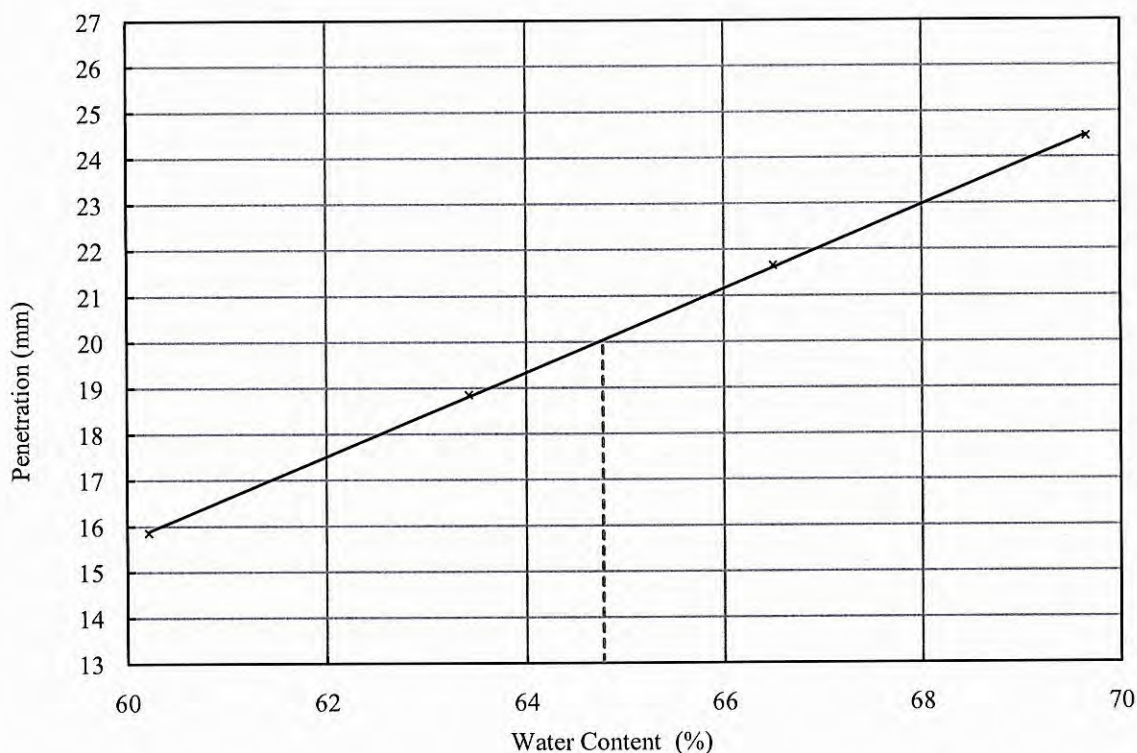
Checked/Approved

Khin Maung Nyunt
Laboratory Manager



ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

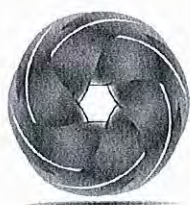


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.11	20.20	20.22	20.19	18.14	18.11
Dry Weight + Tare	(g)	15.57	14.65	15.00	14.29	15.40	15.48
Tare Weight	(g)	6.37	5.90	7.15	5.82	7.48	7.88
Water Content	(%)	60.22	63.43	66.50	69.66	34.60	34.61
Penetration	(mm)	15.85	18.85	21.65	24.45		
LIQUID LIMIT		(%)	65				
PLASTIC LIMIT		(%)	35				
PLASTICITY INDEX		(%)	30				

Soil Description : Dark brownish grey and reddish brown Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH7

Sample No: TW2

Depth: 3.00m-3.60m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

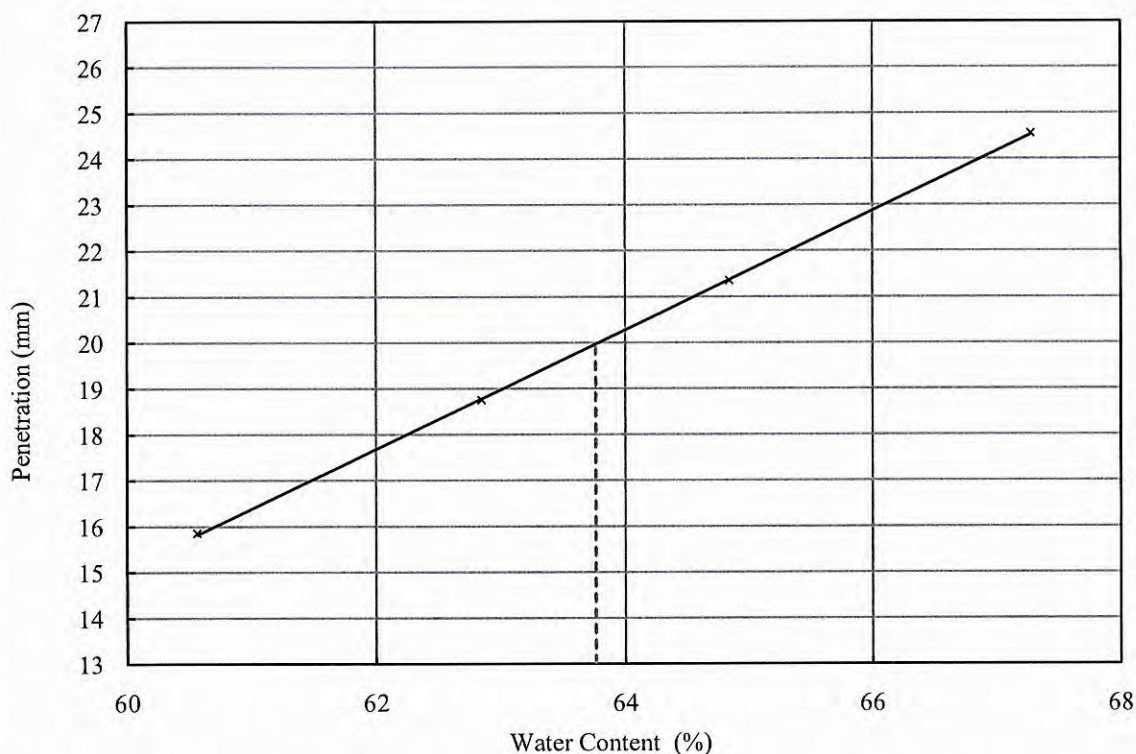
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

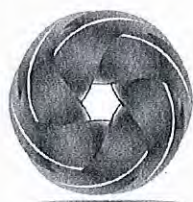


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.15	21.16	20.14	20.21	18.14	18.16
Dry Weight + Tare	(g)	15.33	15.24	14.81	14.66	15.84	15.81
Tare Weight	(g)	5.72	5.82	6.59	6.41	8.06	7.87
Water Content	(%)	60.56	62.85	64.84	67.27	29.56	29.60
Penetration	(mm)	15.85	18.75	21.35	24.55		
LIQUID LIMIT		(%)	64				
PLASTIC LIMIT		(%)	30				
PLASTICITY INDEX		(%)	34				

Soil Description : Light brownish yellow and reddish orange slightly Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH8

Sample No: TW3

Depth: 4.50m-5.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

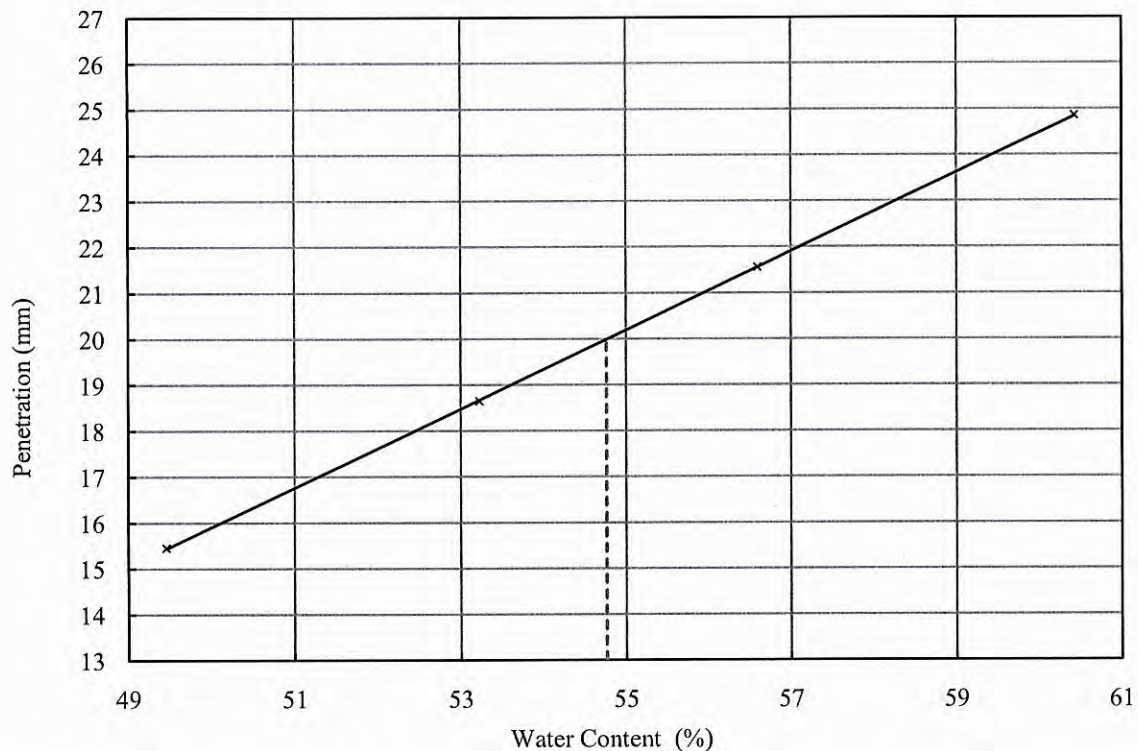
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

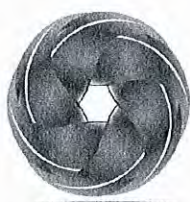


History of sample: ↑ Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.17	20.21	21.20	21.22	18.14	18.10
Dry Weight + Tare	(g)	16.61	15.59	15.88	15.80	15.62	15.63
Tare Weight	(g)	7.39	6.91	6.48	6.83	7.66	7.85
Water Content	(%)	49.46	53.23	56.60	60.42	31.66	31.75
Penetration	(mm)	15.45	18.65	21.55	24.85		
LIQUID LIMIT		(%)	55				
PLASTIC LIMIT		(%)	32				
PLASTICITY INDEX		(%)	23				

Soil Description : Reddish orange and light brownish yellow Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH8

Sample No: TW5

Depth: 9.00m-9.70m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

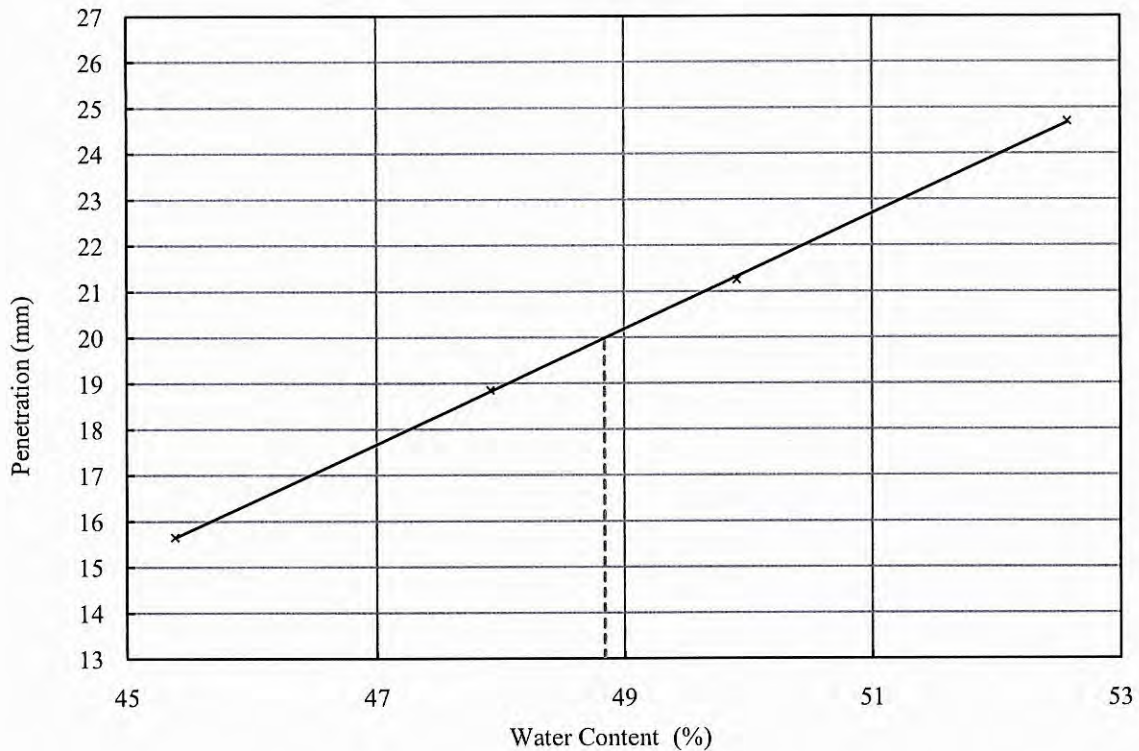


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

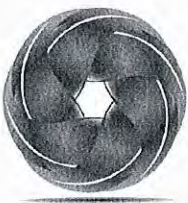


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.16	20.20	22.10	23.11	18.12	18.13
Dry Weight + Tare	(g)	15.78	15.71	16.93	17.38	15.70	15.74
Tare Weight	(g)	6.13	6.34	6.57	6.48	7.67	7.83
Water Content	(%)	45.39	47.92	49.90	52.57	30.14	30.21
Penetration	(mm)	15.65	18.85	21.25	24.70		
LIQUID LIMIT		(%)	49				
PLASTIC LIMIT		(%)	30				
PLASTICITY INDEX		(%)	19				

Soil Description : Light brownish yellow and reddish orange Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH9

Sample No: TW1

Depth: 1.50m-2.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

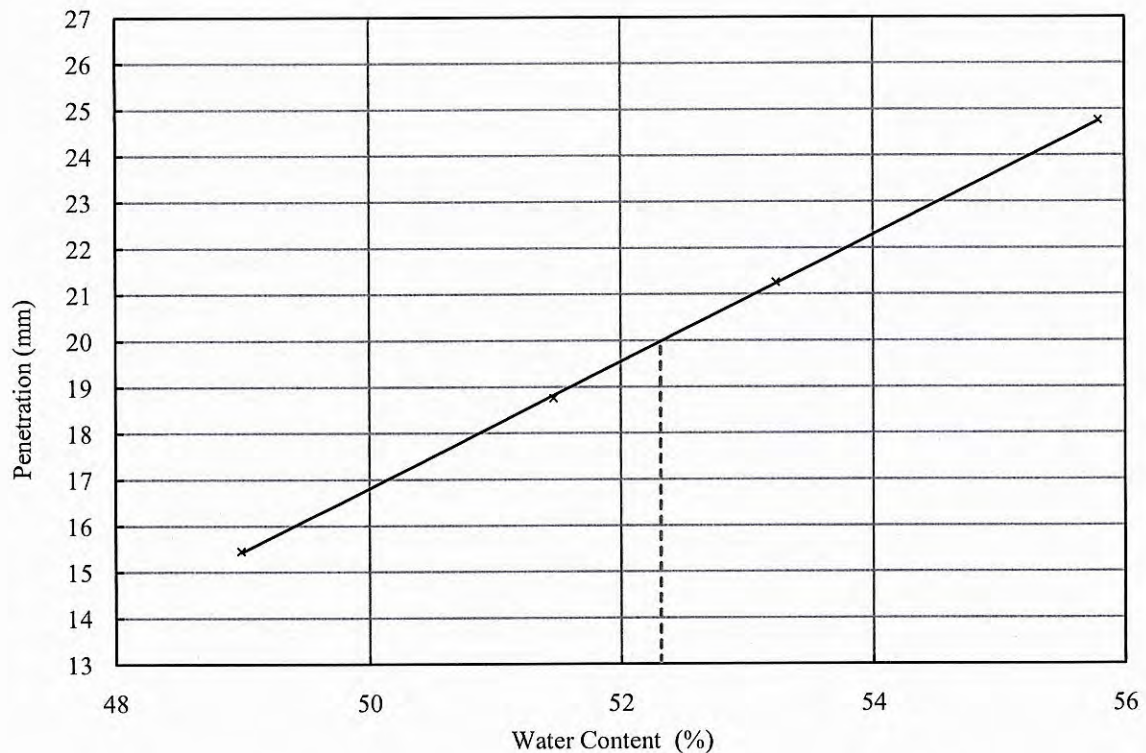
Khin Maung Nyunt
Laboratory Manager



Cert No: LA-2015-0601-B

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

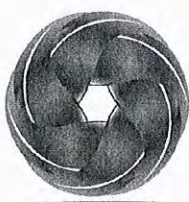


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.05	21.19	21.21	23.15	18.20	18.17
Dry Weight + Tare	(g)	16.68	16.63	16.68	17.90	15.96	15.97
Tare Weight	(g)	7.76	7.77	8.17	8.49	7.65	7.85
Water Content	(%)	48.99	51.47	53.23	55.79	26.96	27.09
Penetration	(mm)	15.45	18.75	21.25	24.75		
LIQUID LIMIT		(%)	52				
PLASTIC LIMIT		(%)	27				
PLASTICITY INDEX		(%)	25				

Soil Description : Reddish orange and brownish yellow slightly Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH9

Sample No: TW2

Depth: 3.00m-3.60m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

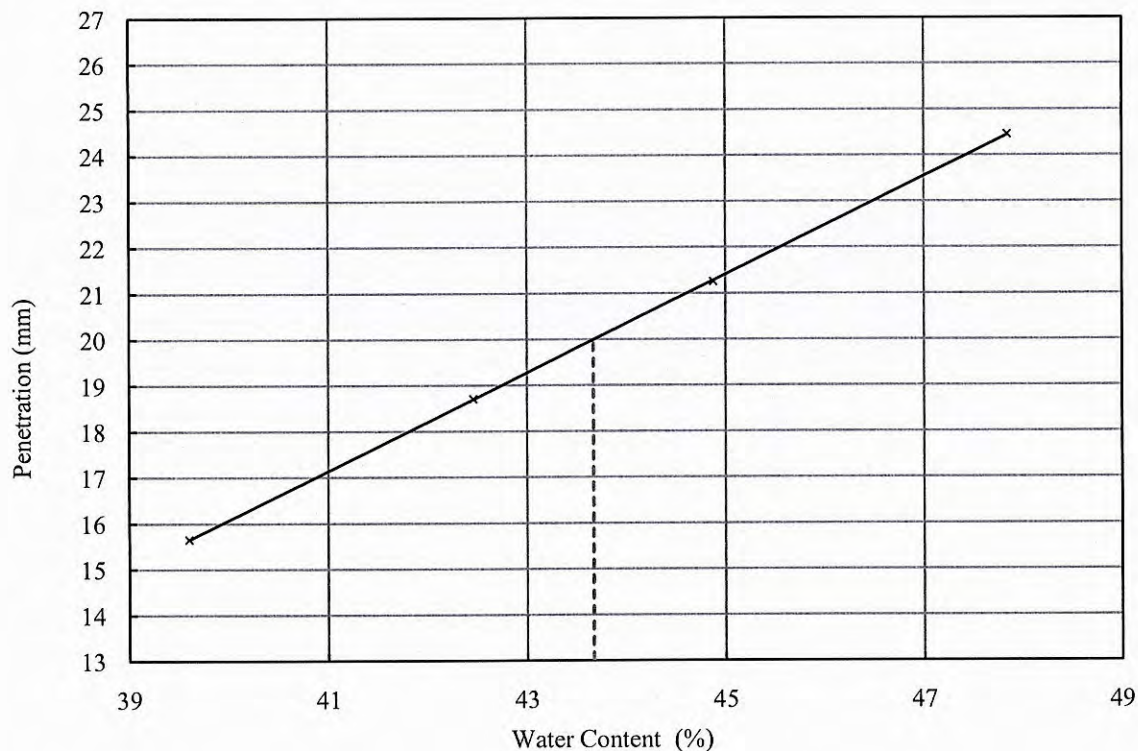


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

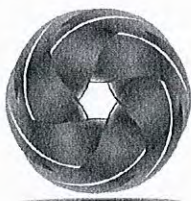


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.14	20.15	20.13	20.18	18.19	18.18
Dry Weight + Tare	(g)	16.95	15.90	16.10	15.53	16.07	16.13
Tare Weight	(g)	6.37	5.89	7.12	5.81	7.50	7.88
Water Content	(%)	39.60	42.46	44.88	47.84	24.74	24.85
Penetration	(mm)	15.65	18.70	21.25	24.45		
LIQUID LIMIT		(%)	44				
PLASTIC LIMIT		(%)	25				
PLASTICITY INDEX		(%)	19				

Soil Description : Reddish brown and brownish yellow slightly Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH10

Sample No: TW1

Depth: 1.50m-2.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

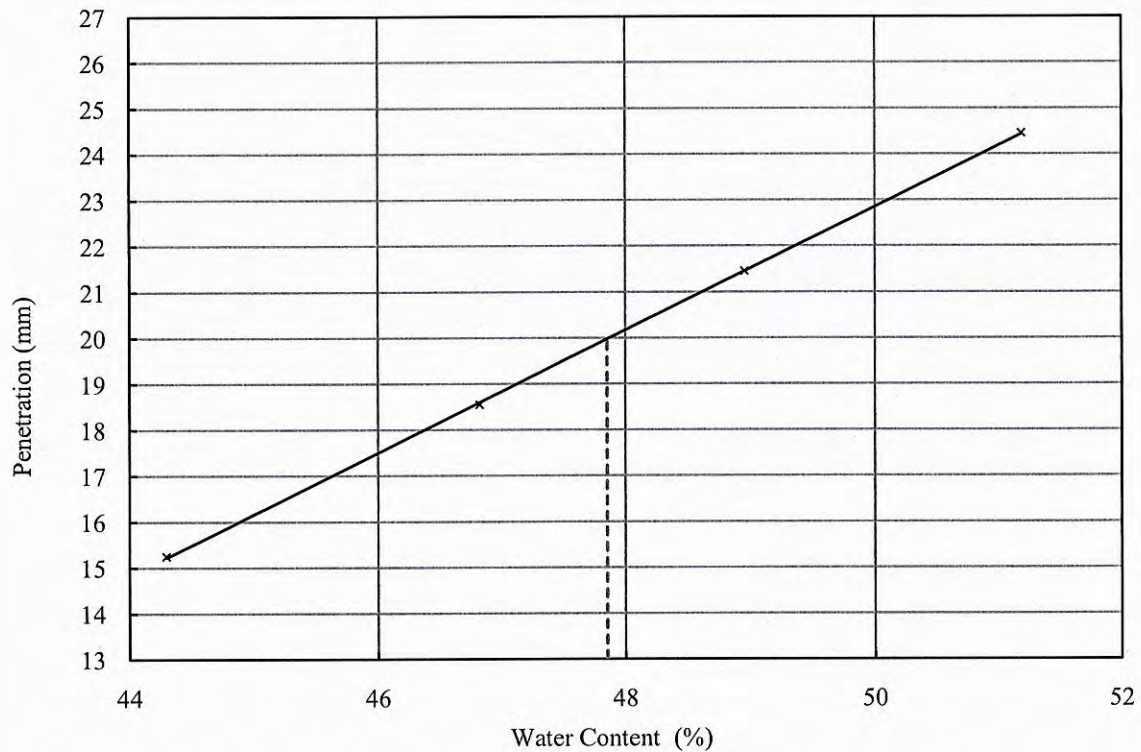


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

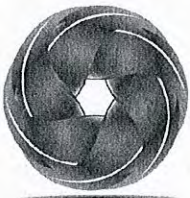


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.16	22.14	22.19	22.15	18.12	18.19
Dry Weight + Tare	(g)	16.24	17.28	17.03	16.97	15.71	15.72
Tare Weight	(g)	7.39	6.90	6.49	6.85	7.64	7.48
Water Content	(%)	44.29	46.82	48.96	51.19	29.86	29.98
Penetration	(mm)	15.25	18.55	21.45	24.45		
LIQUID LIMIT		(%)	48				
PLASTIC LIMIT		(%)	30				
PLASTICITY INDEX		(%)	18				

Soil Description : Light brownish grey and pink slightly Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH10

Checked/Approved

Sample No: U1

Depth: 9.00m-9.50m

Khin Maung Nyunt
Laboratory Manager

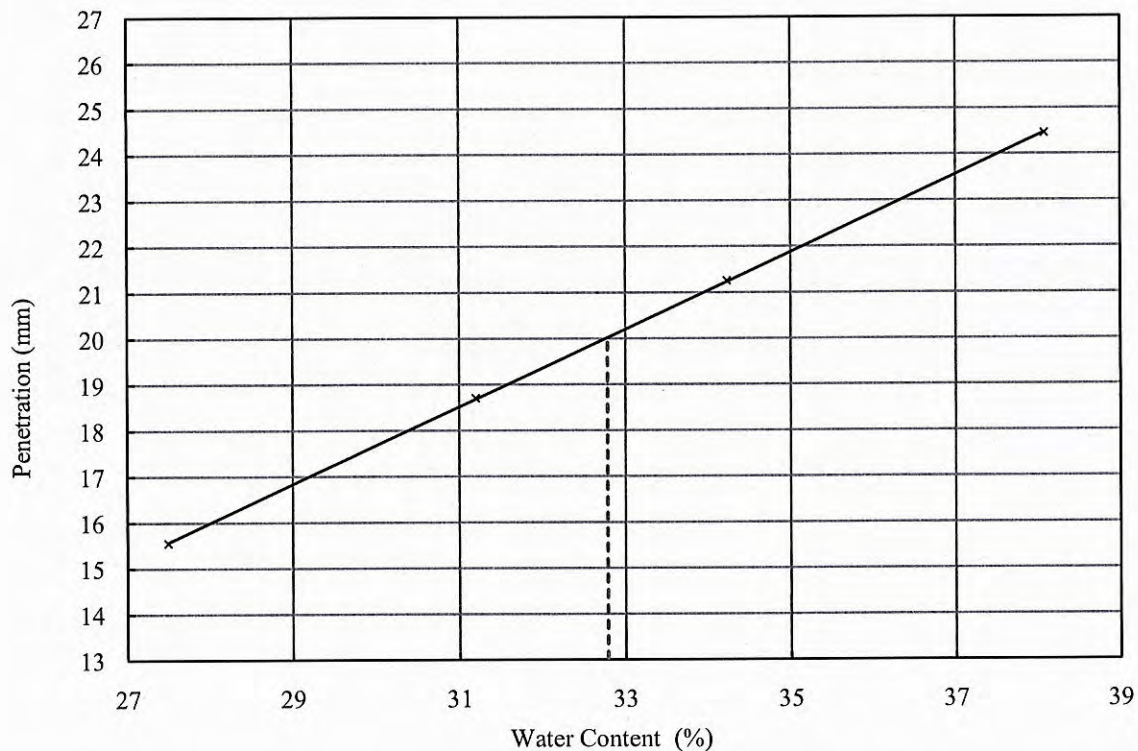
Prepared Date: 25 January, 2023



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.20	20.17	20.16	21.12	18.11	18.17
Dry Weight + Tare	(g)	17.22	17.01	16.60	17.03	15.91	16.04
Tare Weight	(g)	6.38	6.88	6.20	6.29	7.50	7.90
Water Content	(%)	27.49	31.19	34.23	38.08	26.16	26.17
Penetration	(mm)	15.55	18.70	21.25	24.45		

LIQUID LIMIT	(%)	33
PLASTIC LIMIT	(%)	26
PLASTICITY INDEX	(%)	7

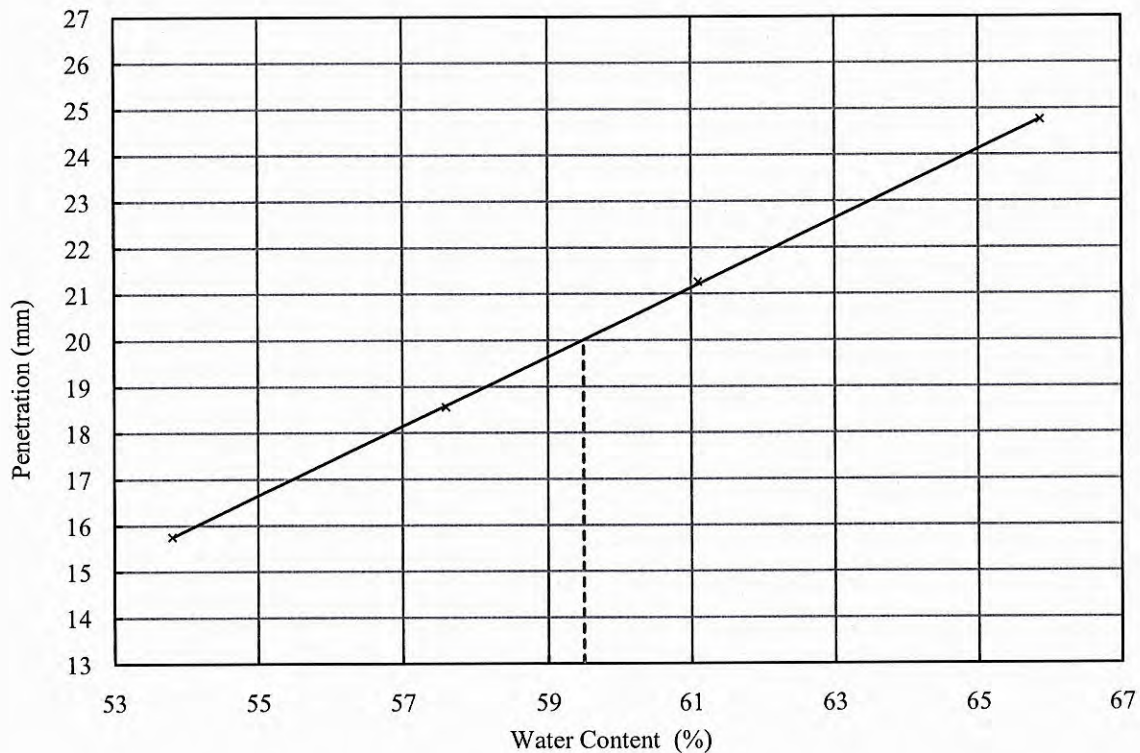
Soil Description : Light yellowish brown and brownish grey Sandy SILT

	Project:	Sungei Tengah Road/Lorong Pasu	
	Job Ref:	SML/345A/2022	Engineer: Si Thu Htun
	Borehole No:	BH11	Checked/Approved
	Sample No:	U1	 Khin Maung Nyunt Laboratory Manager
	Depth:	1.50m-2.00m	
	Prepared Date:	25 January, 2023	
			 Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

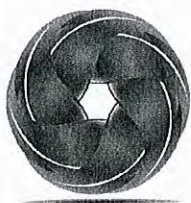


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.15	21.18	21.15	20.14	18.19	18.13
Dry Weight + Tare	(g)	15.98	15.95	15.48	14.64	15.56	15.55
Tare Weight	(g)	6.37	6.87	6.20	6.29	7.68	7.83
Water Content	(%)	53.80	57.60	61.10	65.87	33.38	33.42
Penetration	(mm)	15.75	18.55	21.25	24.75		
LIQUID LIMIT		(%)	59				
PLASTIC LIMIT		(%)	33				
PLASTICITY INDEX		(%)	26				

Soil Description : Light brownish yellow and reddish orange slightly Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH11

Sample No: TW2

Depth: 4.50m-5.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

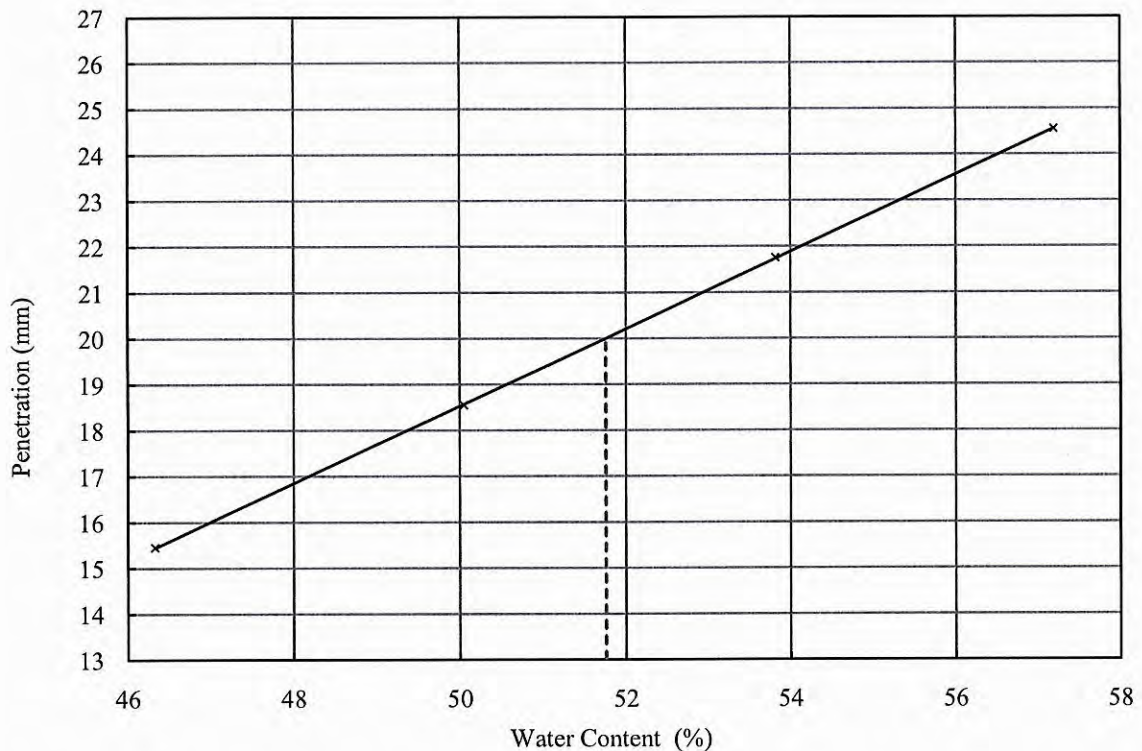
Checked/Approved

Khin Maung Nyunt
Laboratory Manager



ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.22	21.15	21.14	21.14	18.11	18.12
Dry Weight + Tare	(g)	16.62	16.34	15.85	15.61	15.97	15.96
Tare Weight	(g)	6.69	6.73	6.02	5.94	7.95	7.90
Water Content	(%)	46.32	50.05	53.81	57.19	26.68	26.80
Penetration	(mm)	15.45	18.55	21.75	24.55		
LIQUID LIMIT		(%)	52				
PLASTIC LIMIT		(%)	27				
PLASTICITY INDEX		(%)	25				

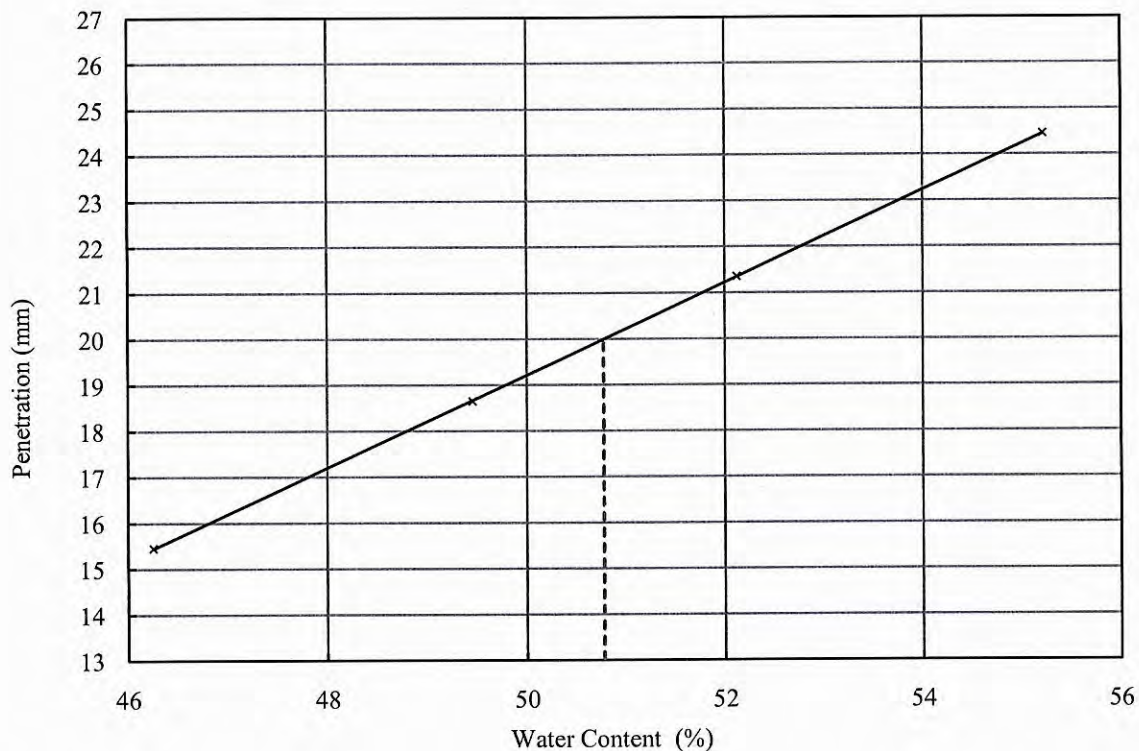
Soil Description : Reddish orange and brownish yellow slightly Sandy CLAY

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun Checked/Approved Khin Maung Nyunt Laboratory Manager
	Job Ref:	SML/345A/2022	
	Borehole No:	BH12	
	Sample No:	TW2	
	Depth:	3.00m-3.60m	
	Prepared Date:	25 January, 2023	
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.11	21.16	20.17	20.14	18.10	18.15
Dry Weight + Tare	(g)	15.67	16.60	15.75	15.16	15.66	15.77
Tare Weight	(g)	6.07	7.38	7.27	6.14	7.55	7.90
Water Content	(%)	46.25	49.46	52.12	55.21	30.09	30.24
Penetration	(mm)	15.45	18.65	21.35	24.45		

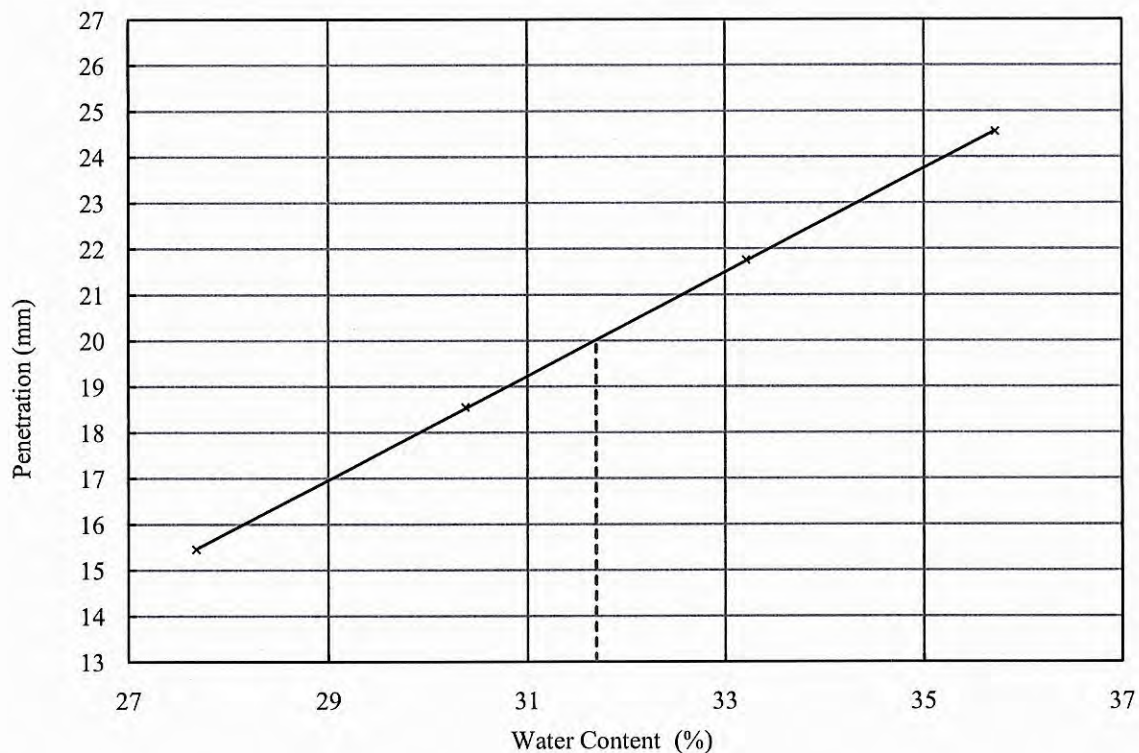
LIQUID LIMIT	(%)	51
PLASTIC LIMIT	(%)	30
PLASTICITY INDEX	(%)	21

Soil Description : Light brown and reddish orange Sandy SILT

	Project: Sungei Tengah Road/Lorong Pasu		Engineer: Si Thu Htun
	Job Ref:	SML/345A/2022	
	Borehole No:	BH12	Checked/Approved Khin Maung Nyunt Laboratory Manager
	Sample No:	TW4	
	Depth:	6.00m-6.70m	
	Prepared Date:	25 January, 2023	
			 Cert No: LA-2015-0601-B

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

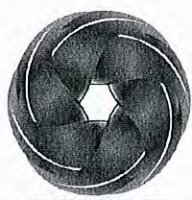


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.22	21.15	21.14	21.14	18.11	18.12
Dry Weight + Tare	(g)	18.07	17.79	17.37	17.14	16.08	16.07
Tare Weight	(g)	6.69	6.73	6.02	5.94	7.95	7.90
Water Content	(%)	27.68	30.38	33.22	35.71	24.97	25.09
Penetration	(mm)	15.45	18.55	21.75	24.55		
LIQUID LIMIT		(%)	32				
PLASTIC LIMIT		(%)	25				
PLASTICITY INDEX		(%)	7				

Soil Description : Reddish brown and light red Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH13

Checked/Approved

Sample No: TW2

Depth: 3.00m-3.60m

Prepared Date: 25 January, 2023

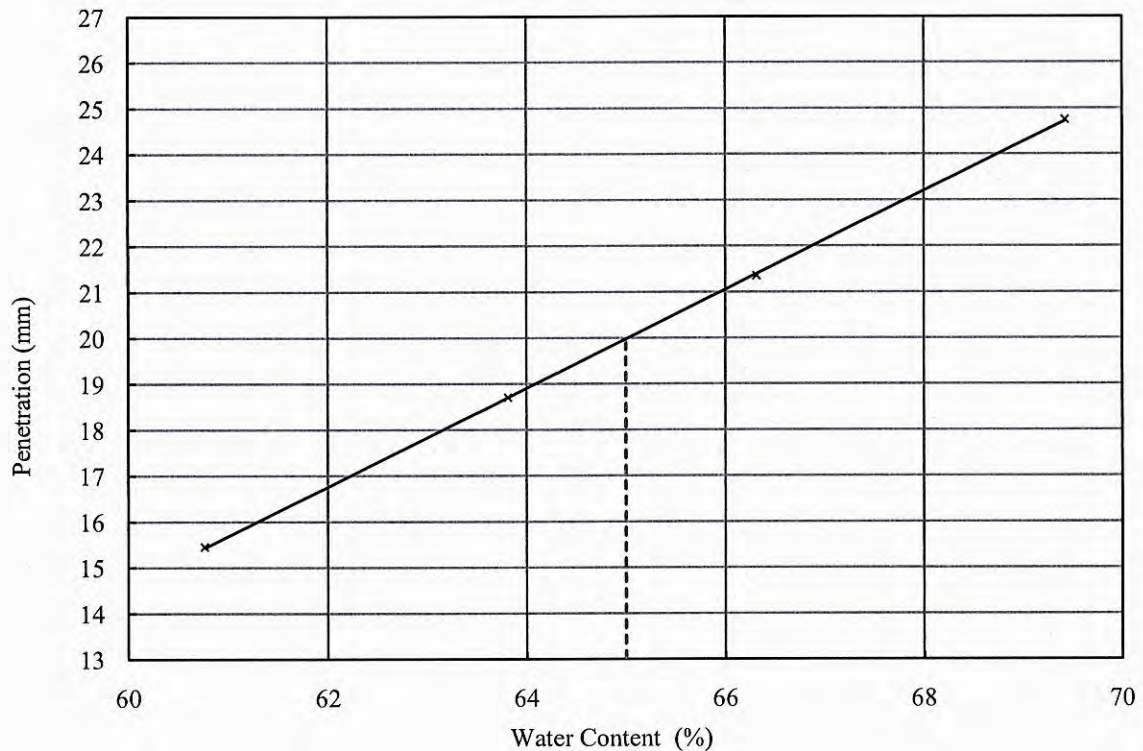
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

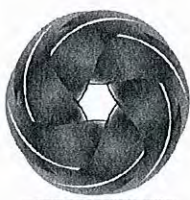


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.11	22.15	20.21	21.19	18.16	18.11
Dry Weight + Tare	(g)	15.38	16.19	14.48	15.13	15.52	15.46
Tare Weight	(g)	5.95	6.85	5.84	6.40	7.94	7.88
Water Content	(%)	60.76	63.81	66.32	69.42	34.83	34.96
Penetration	(mm)	15.45	18.70	21.35	24.75		
LIQUID LIMIT		(%)	65				
PLASTIC LIMIT		(%)	35				
PLASTICITY INDEX		(%)	30				

Soil Description : Light brownish yellow and light grey slightly Sandy SILT

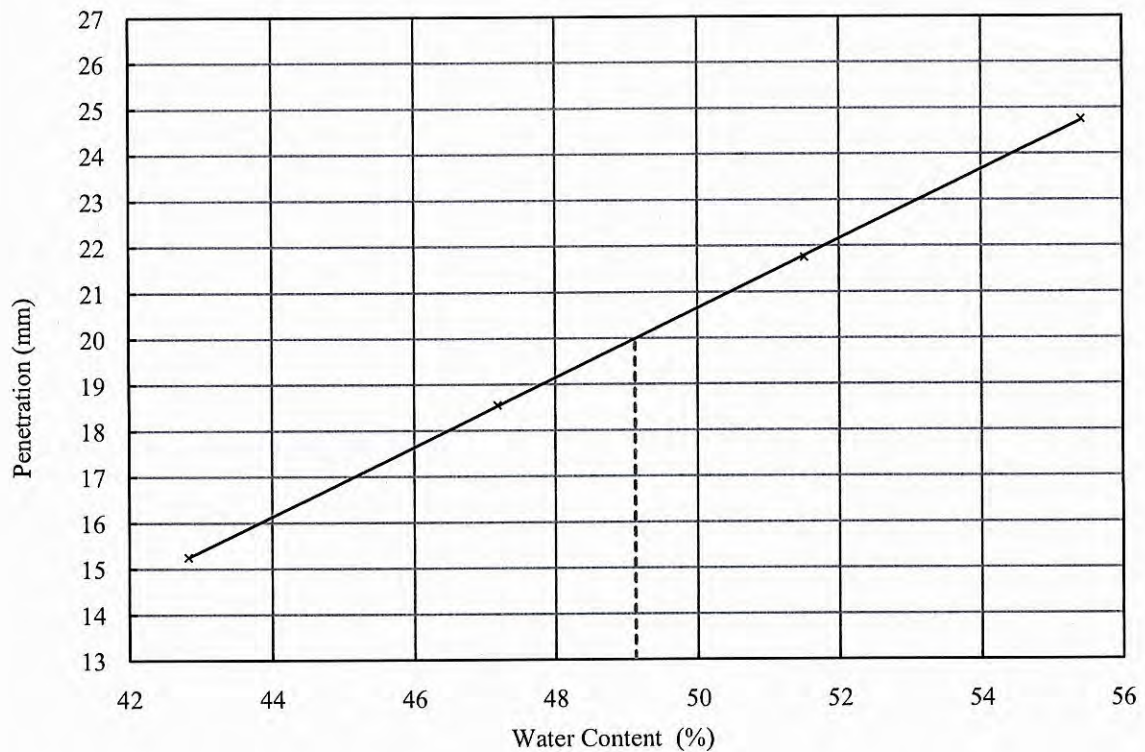


Project:	Sungei Tengah Road/Lorong Pasu	
Job Ref:	SML/345A/2022	Engineer: Si Thu Htun
Borehole No:	BH13	Checked/Approved Khin Maung Nyunt Laboratory Manager
Sample No:	TW4	
Depth:	6.00m-6.70m	
Prepared Date:	25 January, 2023	



ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.15	20.16	21.13	20.20	18.20	18.13
Dry Weight + Tare	(g)	15.94	15.72	16.17	15.28	16.03	15.98
Tare Weight	(g)	6.11	6.31	6.54	6.40	7.73	7.80
Water Content	(%)	42.83	47.18	51.51	55.41	26.14	26.28
Penetration	(mm)	15.25	18.55	21.75	24.75		
LIQUID LIMIT		(%)	49				
PLASTIC LIMIT		(%)	26				
PLASTICITY INDEX		(%)	23				

Soil Description : Reddish yellow and light brown Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH14

Sample No: TW1

Depth: 1.50m-2.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

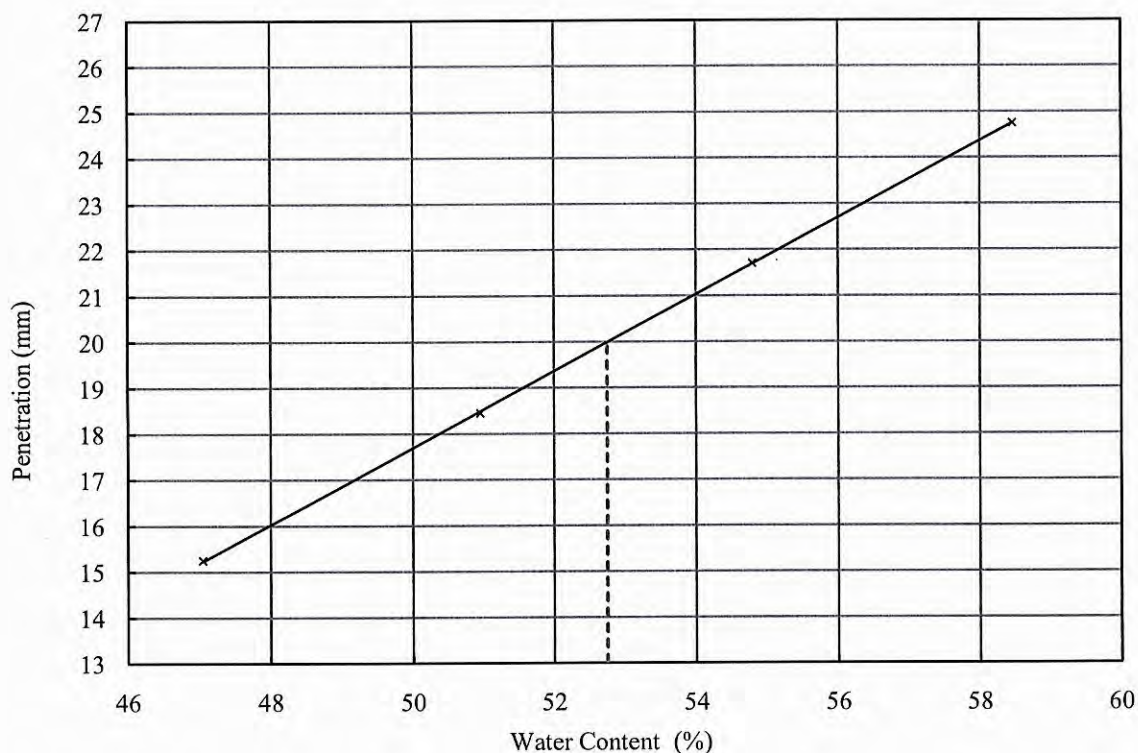
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	22.12	20.17	20.14	21.18	18.14	18.18
Dry Weight + Tare	(g)	16.94	15.65	15.05	15.72	15.91	15.98
Tare Weight	(g)	5.93	6.78	5.76	6.38	7.63	7.85
Water Content	(%)	47.05	50.96	54.79	58.46	26.93	27.06
Penetration	(mm)	15.25	18.45	21.70	24.75		

LIQUID LIMIT	(%)	53
PLASTIC LIMIT	(%)	27
PLASTICITY INDEX	(%)	26

Soil Description : Reddish yellow and light olive brown slightly Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH14

Sample No: TW2

Depth: 3.00m-3.60m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

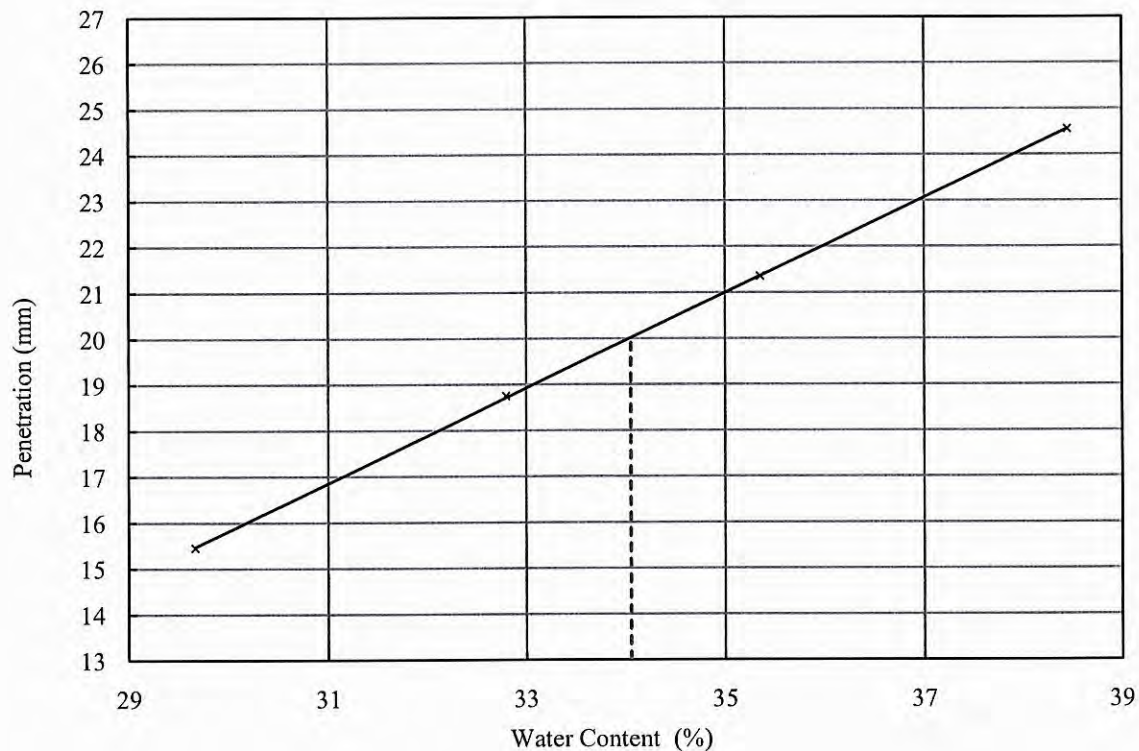
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

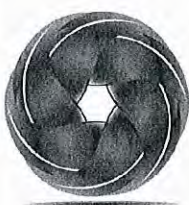


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.20	20.22	20.21	21.10	18.14	18.17
Dry Weight + Tare	(g)	16.94	16.77	16.71	17.49	16.14	16.09
Tare Weight	(g)	5.95	6.25	6.81	8.10	8.05	7.69
Water Content	(%)	29.66	32.79	35.35	38.45	24.72	24.76
Penetration	(mm)	15.45	18.75	21.35	24.55		
LIQUID LIMIT		(%)	34				
PLASTIC LIMIT		(%)	25				
PLASTICITY INDEX		(%)	9				

Soil Description : Reddish orange and reddish brown Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH15

Sample No: U1

Depth: 1.50m-1.80m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

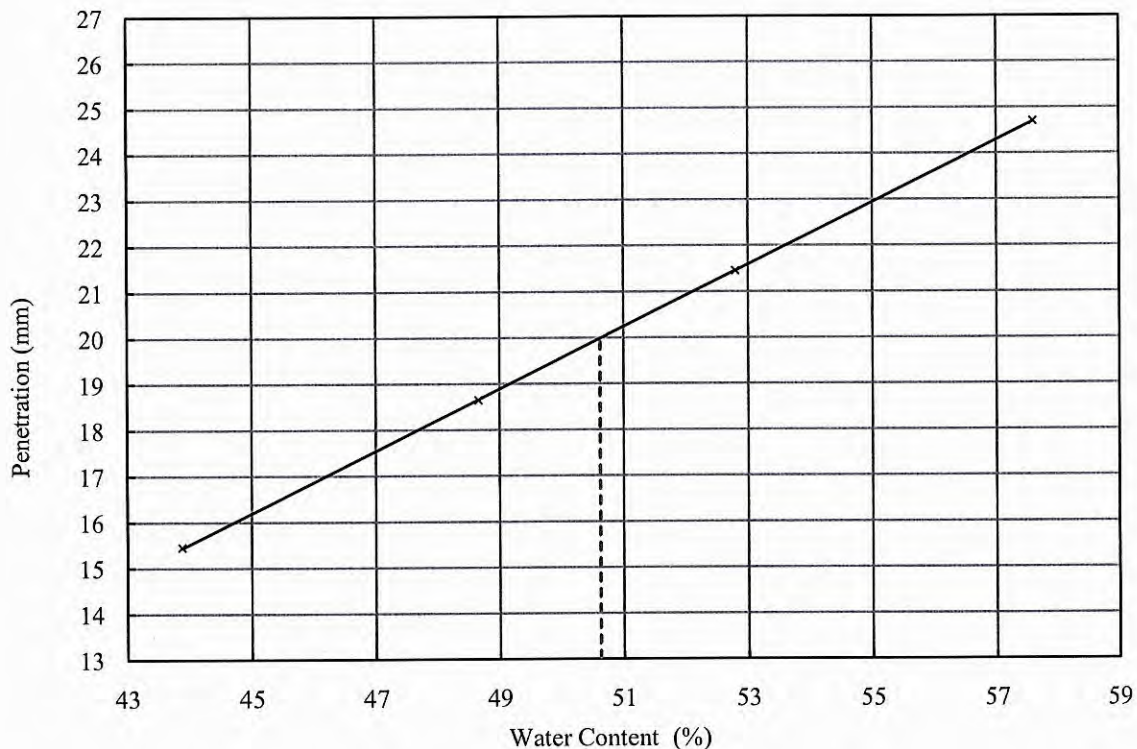


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

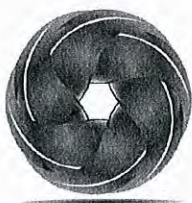


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.14	20.21	20.17	20.14	18.20	18.19
Dry Weight + Tare	(g)	16.66	15.86	15.36	14.87	15.97	16.23
Tare Weight	(g)	6.45	6.92	6.25	5.72	7.67	8.96
Water Content	(%)	43.88	48.66	52.80	57.60	26.87	26.96
Penetration	(mm)	15.45	18.65	21.45	24.70		
LIQUID LIMIT		(%)	51				
PLASTIC LIMIT		(%)	27				
PLASTICITY INDEX		(%)	24				

Soil Description : Reddish brown and reddish orange slightly Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH15

Sample No: TW1

Depth: 4.50m-5.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

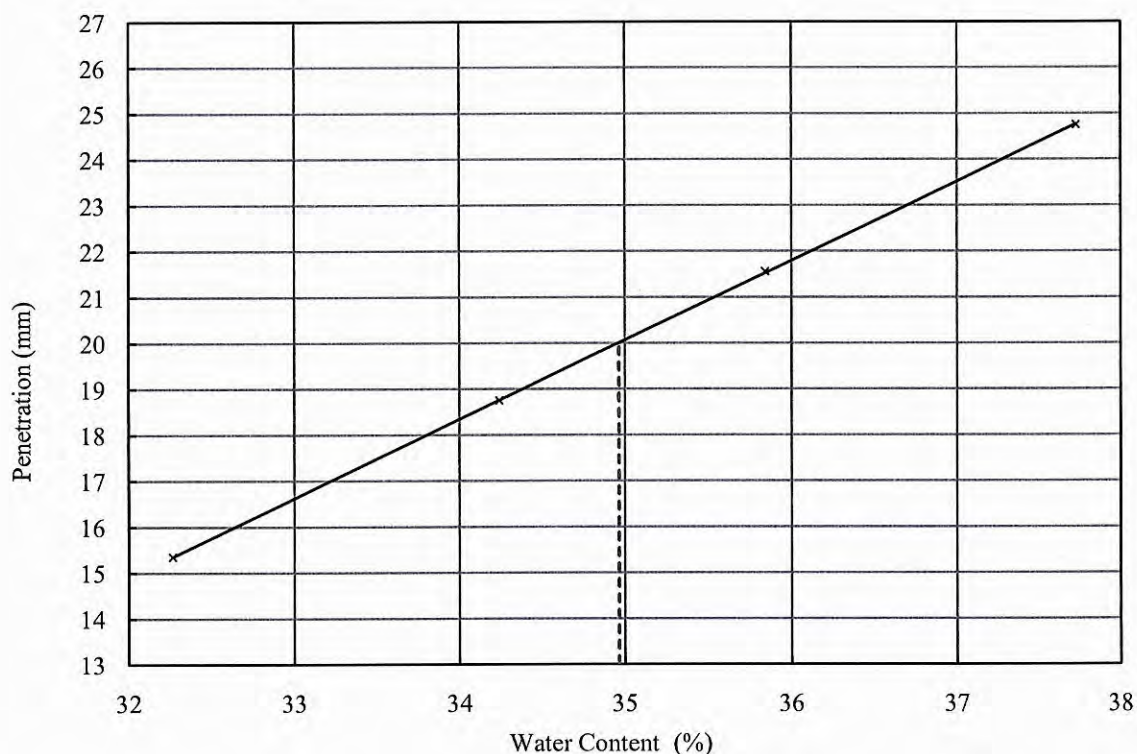


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

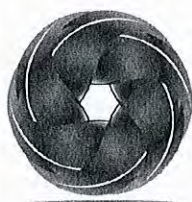


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	23.11	20.21	21.18	20.22	18.18	18.19
Dry Weight + Tare	(g)	18.99	16.81	17.37	16.47	16.38	16.45
Tare Weight	(g)	6.22	6.88	6.74	6.53	7.48	7.85
Water Content	(%)	32.26	34.24	35.84	37.73	20.22	20.23
Penetration	(mm)	15.35	18.75	21.55	24.75		
LIQUID LIMIT		(%)	35				
PLASTIC LIMIT		(%)	20				
PLASTICITY INDEX		(%)	15				

Soil Description : Light olive brown and reddish yellow Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH16

Checked/Approved

Sample No: TW1

Depth: 1.50m-2.10m

Prepared Date: 25 January, 2023

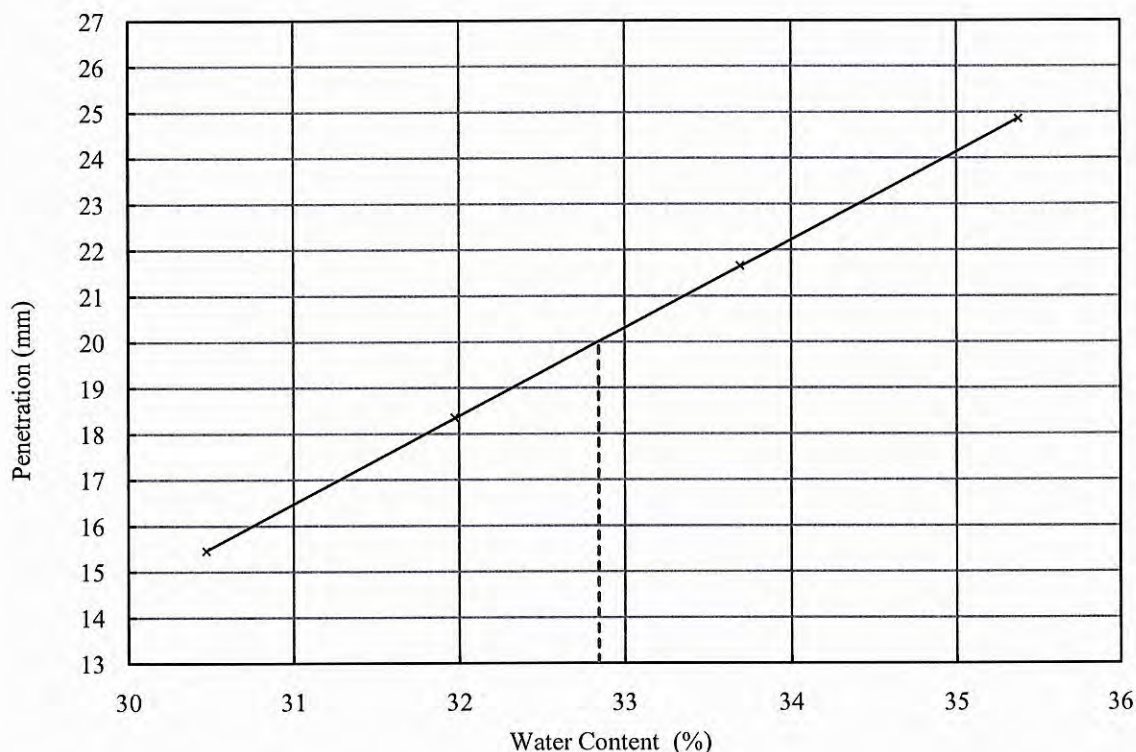
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

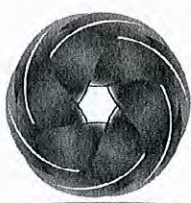


History of sample: ↑ Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.12	21.13	22.16	22.18	18.16	18.12
Dry Weight + Tare	(g)	17.68	17.53	18.12	18.03	16.16	16.10
Tare Weight	(g)	6.39	6.27	6.13	6.30	8.03	7.91
Water Content	(%)	30.47	31.97	33.69	35.38	24.60	24.66
Penetration	(mm)	15.45	18.35	21.65	24.85		
LIQUID LIMIT		(%)	33				
PLASTIC LIMIT		(%)	25				
PLASTICITY INDEX		(%)	8				

Soil Description : Dark brownish yellow Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH16

Sample No: TW2

Depth: 3.00m-3.60m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

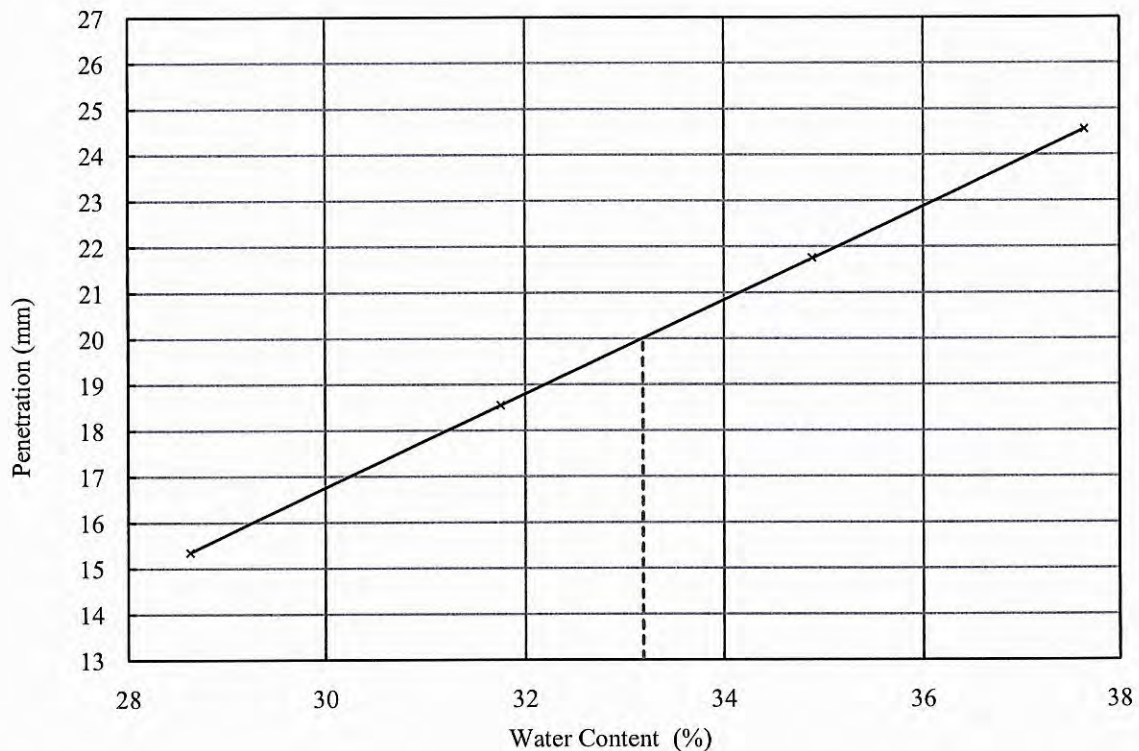
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

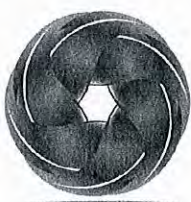


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.17	22.04	20.21	21.15	18.13	18.15
Dry Weight + Tare	(g)	17.17	18.35	16.54	16.99	16.09	16.09
Tare Weight	(g)	6.69	6.73	6.02	5.94	7.94	7.89
Water Content	(%)	28.63	31.76	34.89	37.65	25.03	25.12
Penetration	(mm)	15.35	18.55	21.75	24.55		
LIQUID LIMIT		(%)	33				
PLASTIC LIMIT		(%)	25				
PLASTICITY INDEX		(%)	8				

Soil Description : Light olive brown and reddish orange slightly Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH17

Sample No: TW2

Depth: 3.00m-3.60m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

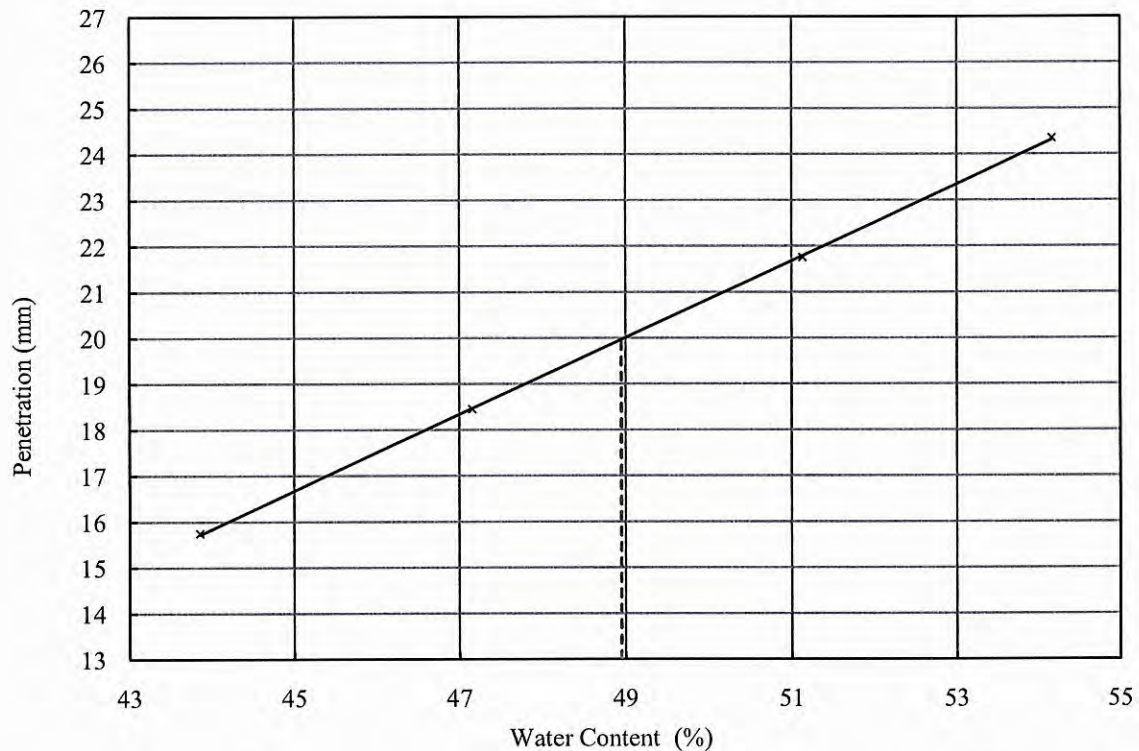
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

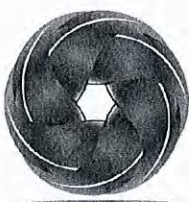


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.20	21.13	21.14	22.17	18.17	18.14
Dry Weight + Tare	(g)	16.99	16.57	16.18	16.77	15.75	15.77
Tare Weight	(g)	7.39	6.90	6.48	6.80	7.66	7.85
Water Content	(%)	43.85	47.16	51.13	54.16	29.91	29.92
Penetration	(mm)	15.75	18.45	21.75	24.35		
LIQUID LIMIT		(%)	49				
PLASTIC LIMIT		(%)	30				
PLASTICITY INDEX		(%)	19				

Soil Description : Light brownish yellow and reddish orange slightly Sandy SILT

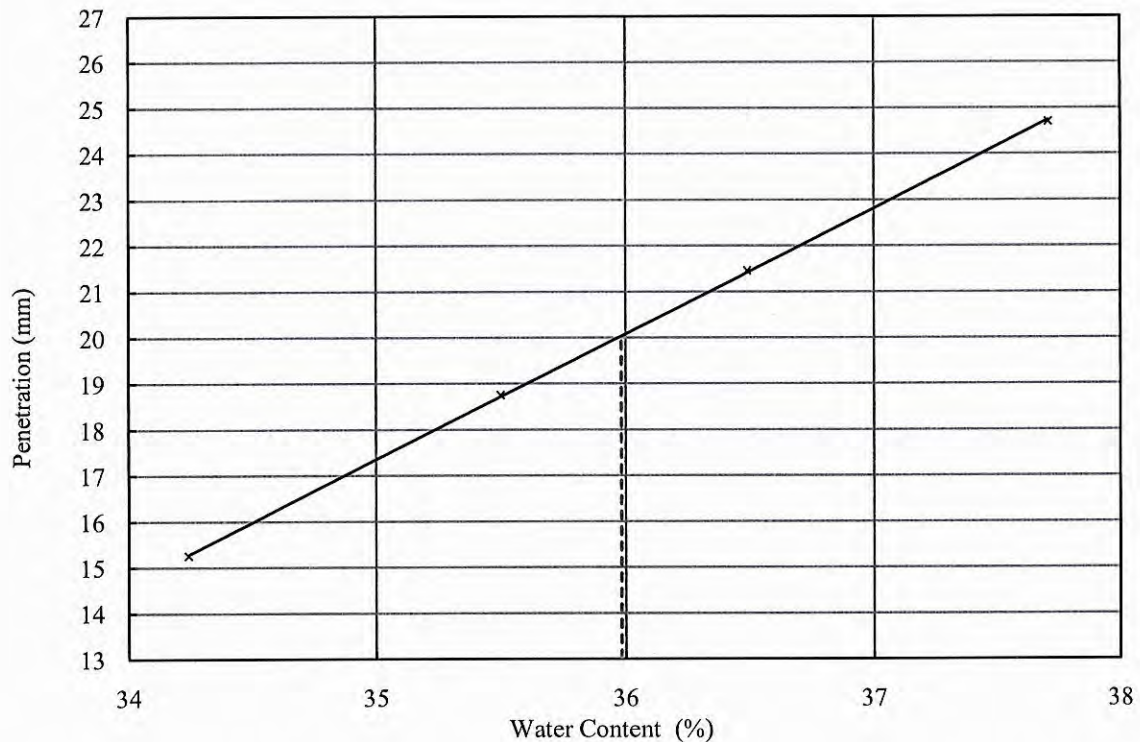


Project:	Sungei Tengah Road/Lorong Pasu	
Job Ref:	SML/345A/2022	Engineer: Si Thu Htun
Borehole No:	BH17	Checked/Approved Khin Maung Nyunt Laboratory Manager
Sample No:	U2	
Depth:	6.00m-6.60m	
Prepared Date:	25 January, 2023	



ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



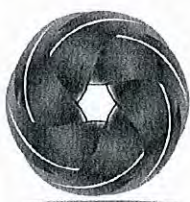
History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.19	23.16	22.21	21.22	18.15	18.18
Dry Weight + Tare	(g)	17.29	18.79	17.97	16.91	16.10	16.00
Tare Weight	(g)	5.90	6.48	6.35	5.48	8.11	7.55
Water Content	(%)	34.24	35.50	36.49	37.71	25.66	25.80
Penetration	(mm)	15.25	18.75	21.45	24.70		

LIQUID LIMIT	(%)	36
PLASTIC LIMIT	(%)	26
PLASTICITY INDEX	(%)	10

Soil Description : Light olive brown and brownish yellow Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH18

Sample No: TW1

Depth: 1.50m-2.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

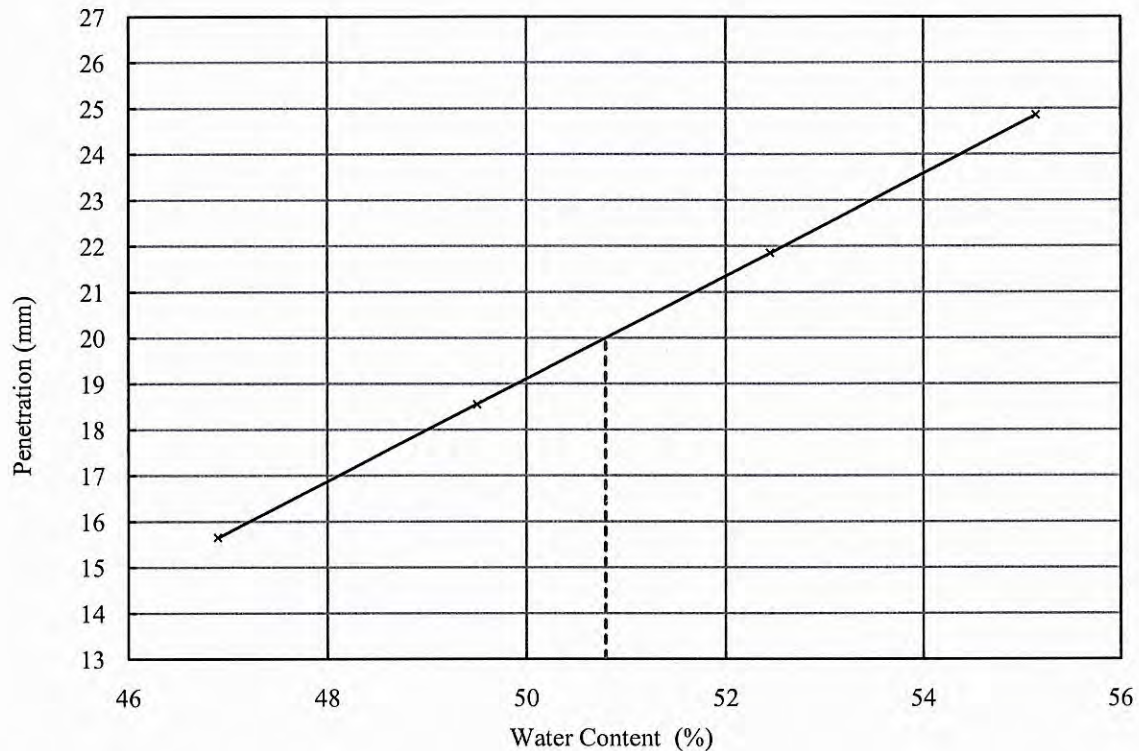


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

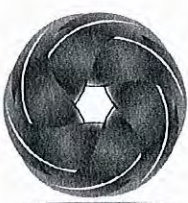


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.19	22.08	20.13	22.23	18.18	18.16
Dry Weight + Tare	(g)	15.73	17.05	15.52	16.65	15.64	15.67
Tare Weight	(g)	6.22	6.89	6.73	6.53	7.65	7.85
Water Content	(%)	46.90	49.51	52.45	55.14	31.79	31.84
Penetration	(mm)	15.65	18.55	21.85	24.85		
LIQUID LIMIT	(%)	51					
PLASTIC LIMIT	(%)	32					
PLASTICITY INDEX	(%)	19					

Soil Description : Light brownish yellow and reddish orange slightly Sandy SILT



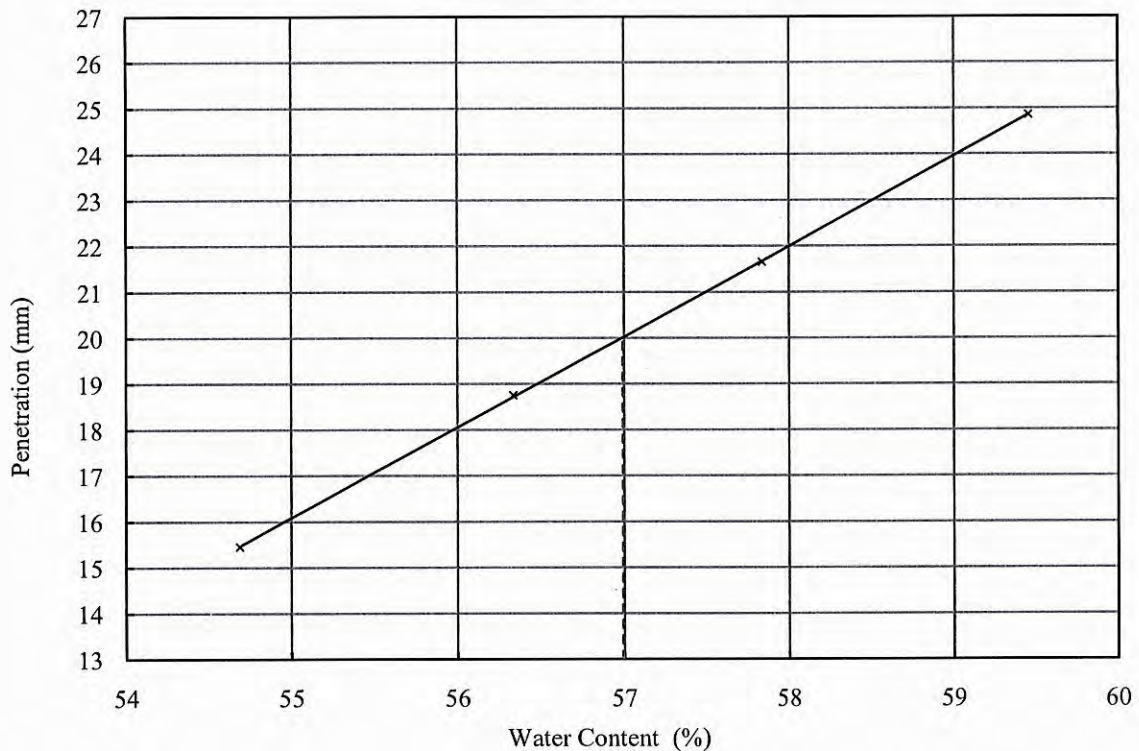
Project:	Sungei Tengah Road/Lorong Pasu	
Job Ref:	SML/345A/2022	Engineer: Si Thu Htun
Borehole No:	BH18	Checked/Approved Khin Maung Nyunt Laboratory Manager
Sample No:	TW3	
Depth:	6.00m-6.70m	
Prepared Date:	25 January, 2023	



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.16	21.20	22.13	21.01	18.18	18.19
Dry Weight + Tare	(g)	15.79	15.82	16.52	16.20	15.72	15.71
Tare Weight	(g)	5.97	6.27	6.82	8.11	7.95	7.89
Water Content	(%)	54.68	56.34	57.84	59.46	31.66	31.71
Penetration	(mm)	15.45	18.75	21.65	24.85		

LIQUID LIMIT	(%)	57
PLASTIC LIMIT	(%)	32
PLASTICITY INDEX	(%)	25

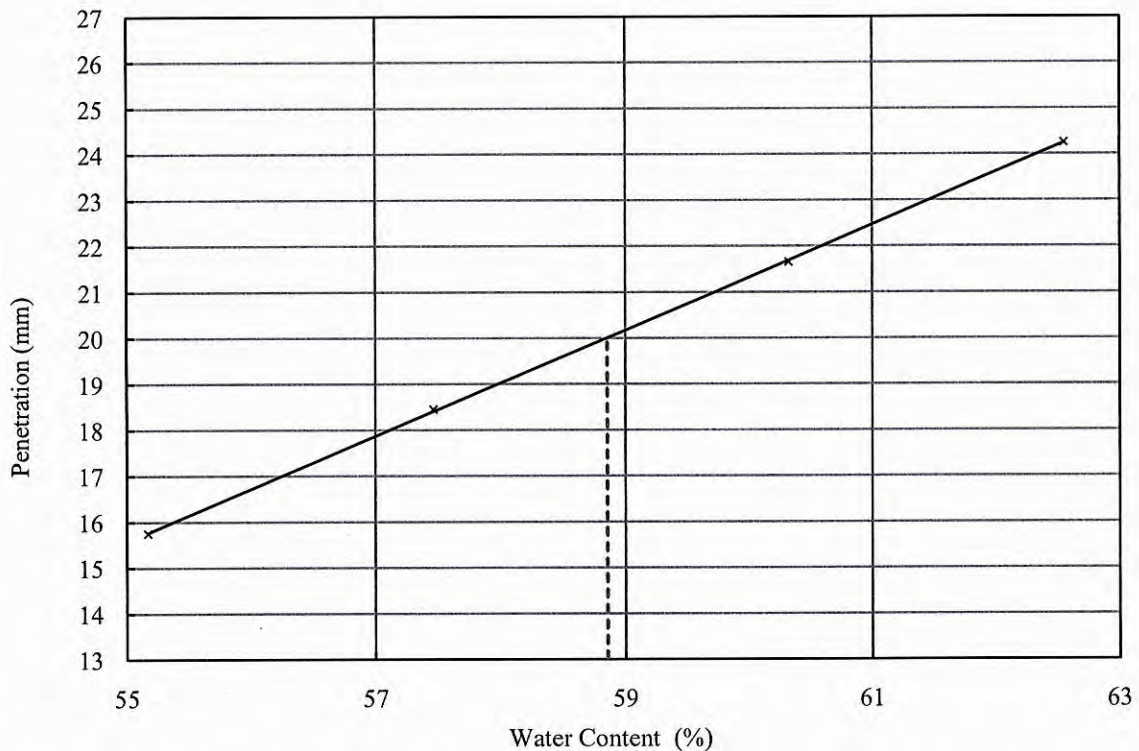
Soil Description : Light brown and reddish orange Sandy SILT

	Project: Sungei Tengah Road/Lorong Pasu		 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B
	Job Ref:	SML/345A/2022	
	Borehole No:	BH19	
	Sample No:	TW1	
	Depth:	1.50m-2.10m	
	Prepared Date:	25 January, 2023	
		Engineer: Si Thu Htun	
		Checked/Approved	
		Khin Maung Nyunt Laboratory Manager	

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

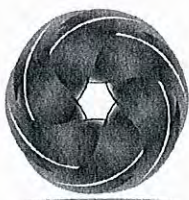


History of sample: ↑ Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	22.15	22.19	21.20	21.13	18.15	18.14
Dry Weight + Tare	(g)	16.55	16.38	15.53	15.42	15.68	15.64
Tare Weight	(g)	6.40	6.27	6.13	6.29	8.01	7.88
Water Content	(%)	55.17	57.47	60.32	62.54	32.20	32.22
Penetration	(mm)	15.75	18.45	21.65	24.25		
LIQUID LIMIT		(%)	59				
PLASTIC LIMIT		(%)	32				
PLASTICITY INDEX		(%)	27				

Soil Description : Brownish yellow and reddish orange Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH19

Sample No: TW2

Depth: 3.00m-3.70m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

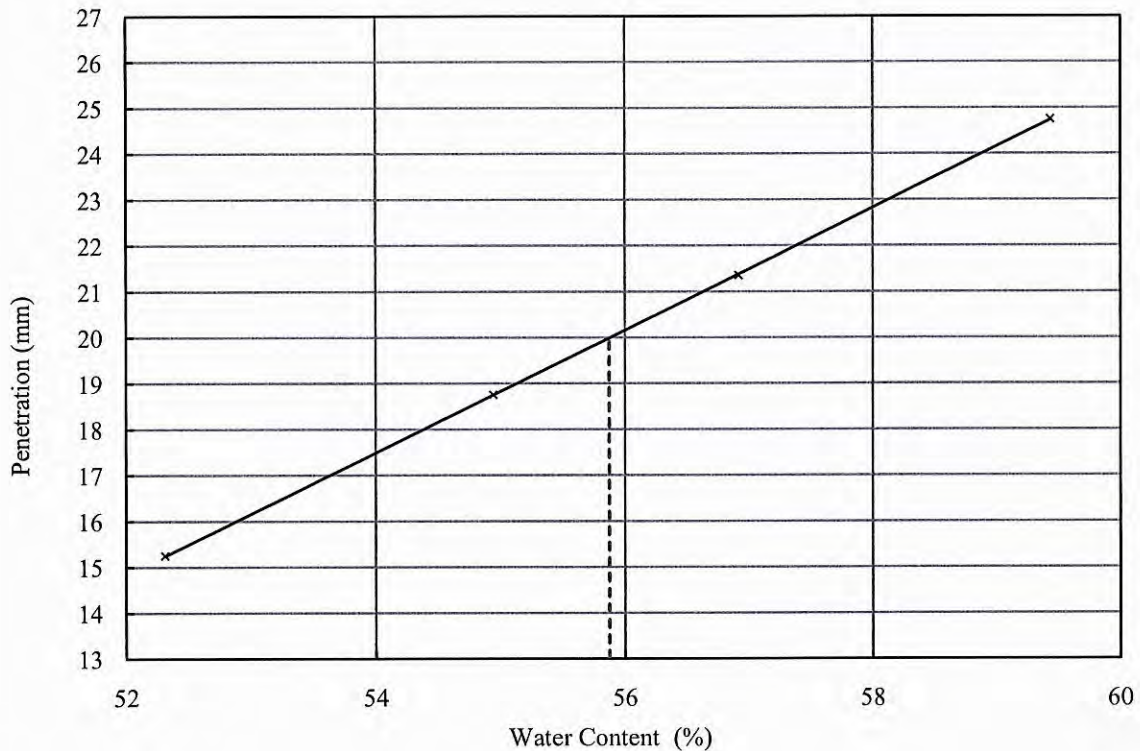


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

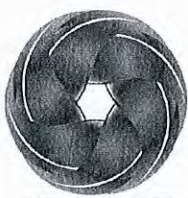


History of sample: ↑ Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.20	22.14	22.19	23.11	18.12	18.12
Dry Weight + Tare	(g)	15.56	16.64	16.18	17.03	15.71	15.68
Tare Weight	(g)	6.69	6.63	5.62	6.80	7.88	7.77
Water Content	(%)	52.31	54.95	56.91	59.43	30.78	30.85
Penetration	(mm)	15.25	18.75	21.35	24.75		
LIQUID LIMIT		(%)	56				
PLASTIC LIMIT		(%)	31				
PLASTICITY INDEX		(%)	25				

Soil Description : Light olive brown and yellowish brown Sandy SILT

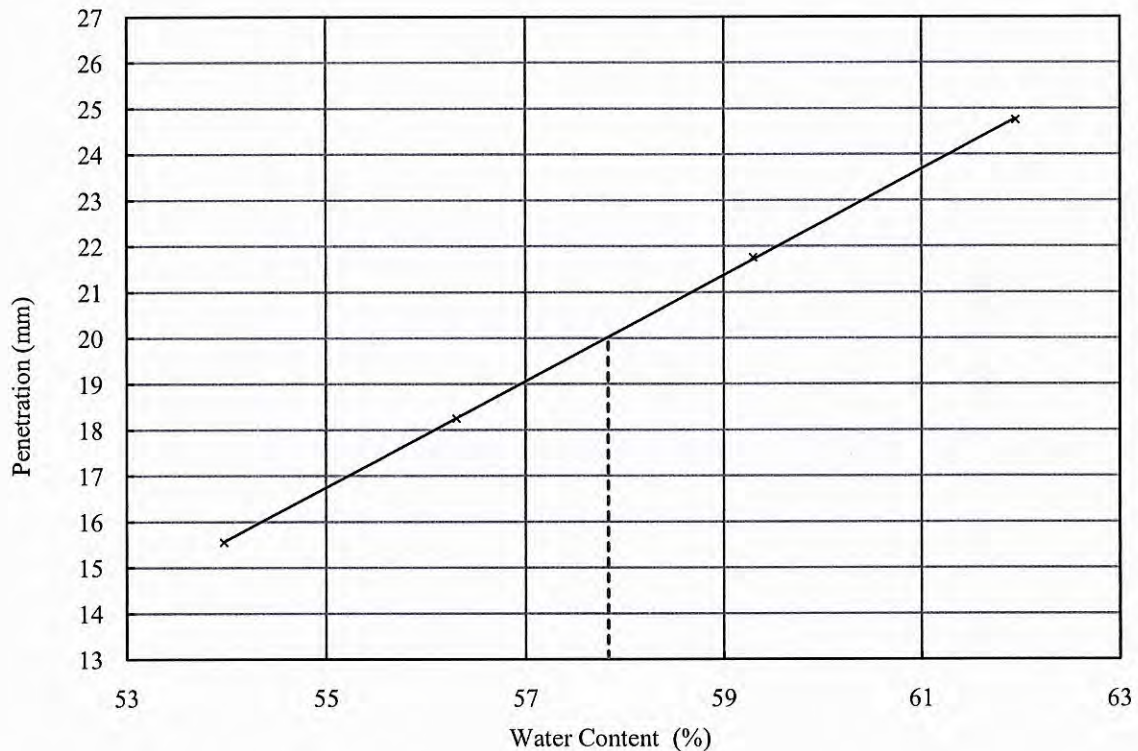


Project:	Sungei Tengah Road/Lorong Pasu	
Job Ref:	SML/345A/2022	Engineer: Si Thu Htun
Borehole No:	BH20	Checked/Approved Khin Maung Nyunt Laboratory Manager
Sample No:	TW1	
Depth:	1.50m-2.10m	
Prepared Date:	25 January, 2023	



ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: ↑ Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	22.22	20.13	22.14	20.23	18.12	18.18
Dry Weight + Tare	(g)	17.27	15.71	17.10	15.46	15.80	15.86
Tare Weight	(g)	8.10	7.86	8.60	7.76	7.87	7.94
Water Content	(%)	53.98	56.31	59.29	61.95	29.26	29.29
Penetration	(mm)	15.55	18.25	21.75	24.75		
LIQUID LIMIT		(%)	58				
PLASTIC LIMIT		(%)	29				
PLASTICITY INDEX		(%)	29				

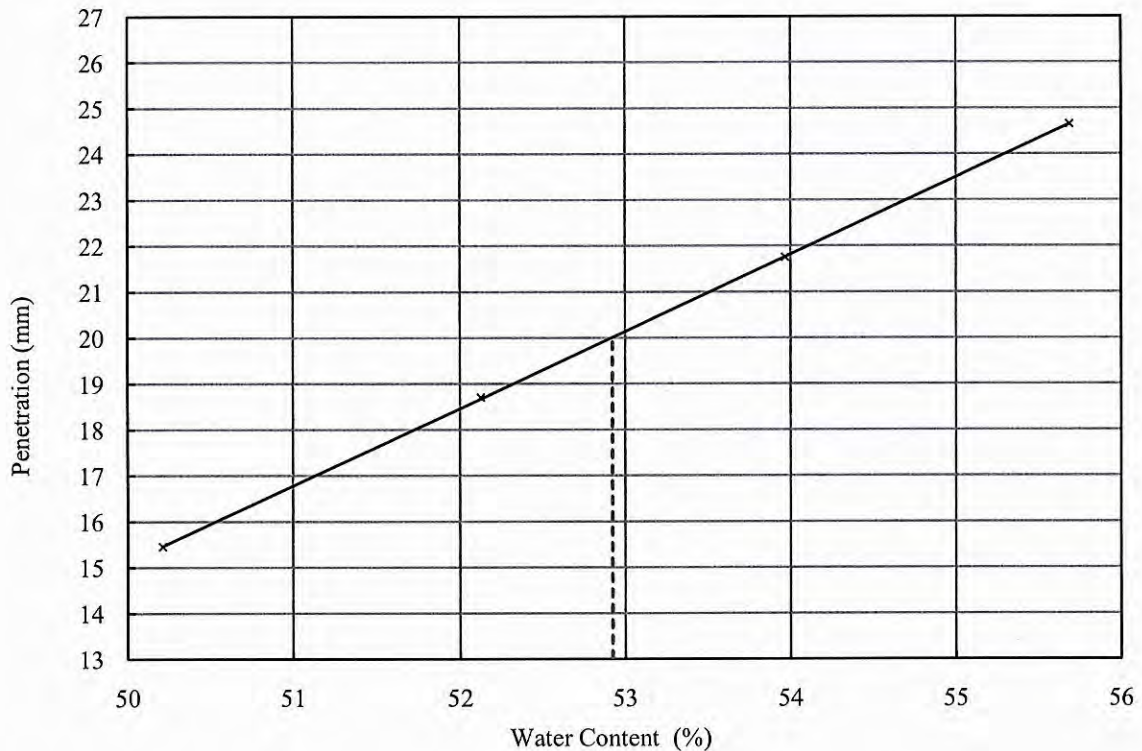
Soil Description : Reddish brown and brownish yellow slightly Sandy CLAY

	Project: Sungei Tengah Road/Lorong Pasu		 Engineer: Si Thu Htun Checked/Approved Khin Maung Nyunt Laboratory Manager
	Job Ref:	SML/345A/2022	
	Borehole No:	BH20	
	Sample No:	TW3	
	Depth:	4.50m-5.10m	
	Prepared Date:	25 January, 2023	
			 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.21	20.15	21.22	21.17	18.13	18.14
Dry Weight + Tare	(g)	16.59	15.61	16.05	16.03	15.76	15.74
Tare Weight	(g)	7.39	6.90	6.47	6.80	7.88	7.78
Water Content	(%)	50.22	52.12	53.97	55.69	30.08	30.15
Penetration	(mm)	15.45	18.70	21.75	24.65		
LIQUID LIMIT		(%)	53				
PLASTIC LIMIT		(%)	30				
PLASTICITY INDEX		(%)	23				

Soil Description : Light brownish yellow and reddish orange Sandy SILT

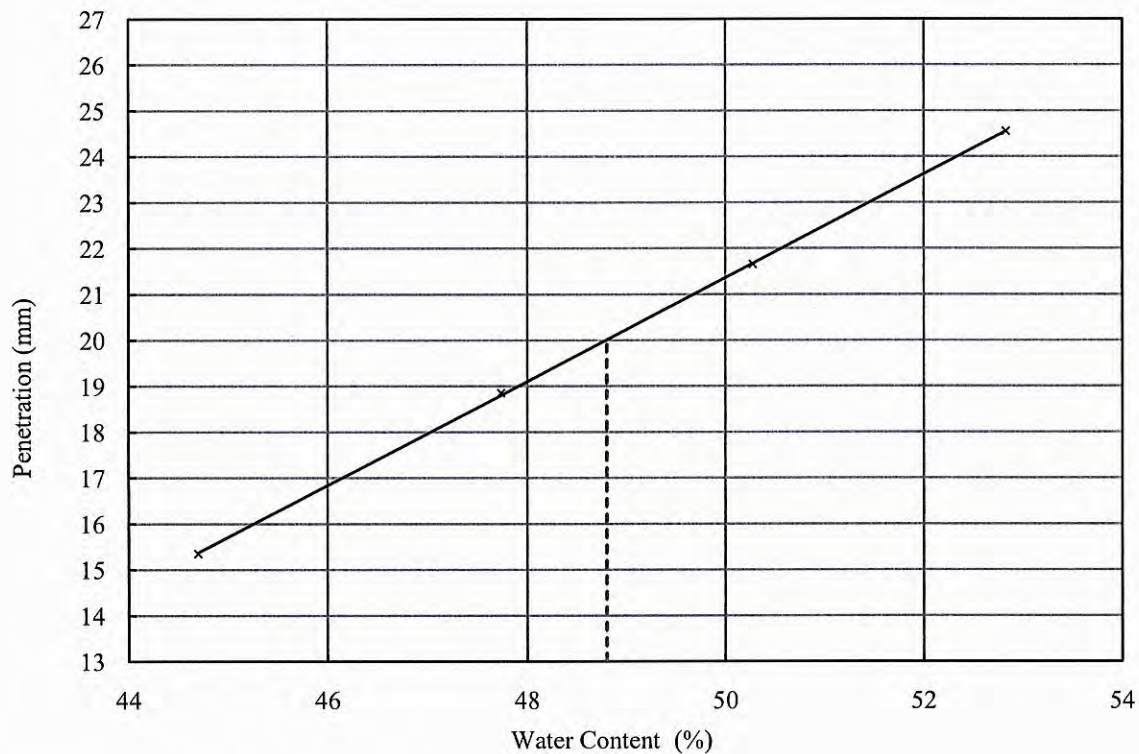


Project:	Sungei Tengah Road/Lorong Pasu	
Job Ref:	SML/345A/2022	Engineer: Si Thu Htun
Borehole No:	BH21	Checked/Approved Khin Maung Nyunt Laboratory Manager
Sample No:	TW3	
Depth:	4.50m-5.10m	
Prepared Date:	25 January, 2023	



ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

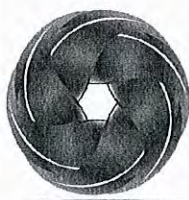


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.18	21.15	20.16	20.21	18.17	18.10
Dry Weight + Tare	(g)	15.71	16.20	15.62	15.44	15.94	15.84
Tare Weight	(g)	5.71	5.83	6.59	6.41	8.06	7.87
Water Content	(%)	44.70	47.73	50.28	52.82	28.30	28.36
Penetration	(mm)	15.35	18.85	21.65	24.55		
LIQUID LIMIT		(%)	49				
PLASTIC LIMIT		(%)	28				
PLASTICITY INDEX		(%)	21				

Soil Description : Reddish brown and brownish yellow slightly Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH21

Sample No: U1

Depth: 9.00m-9.50m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

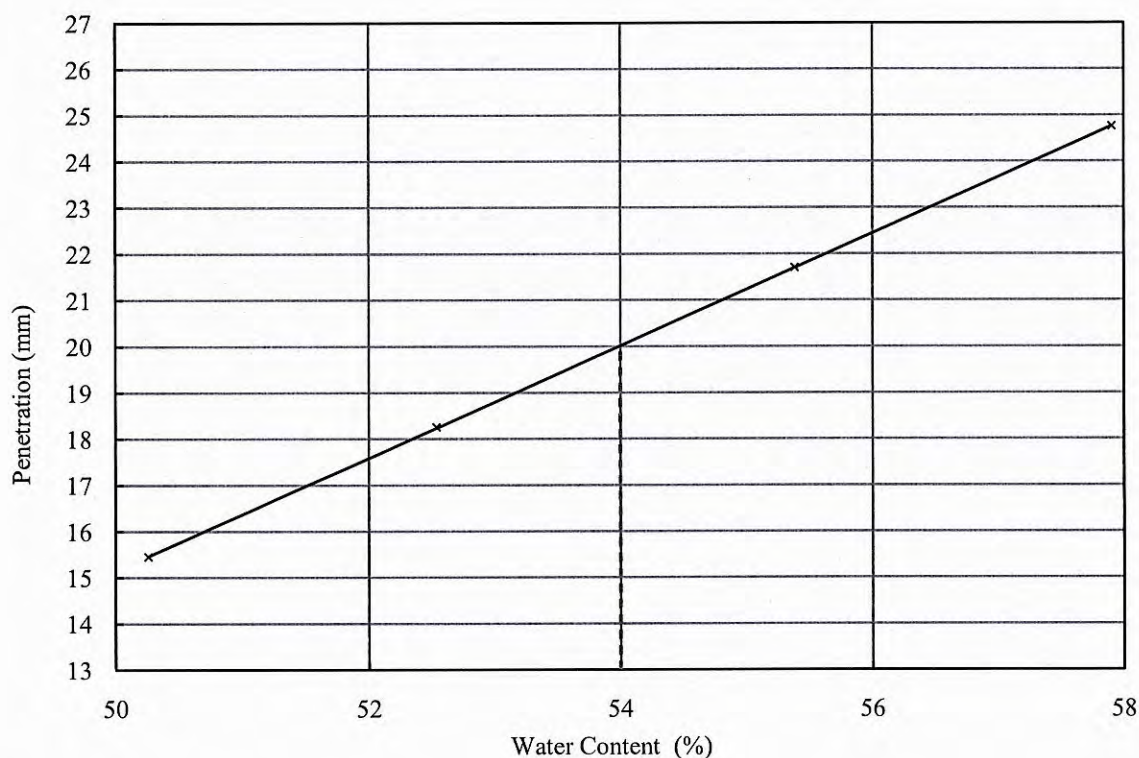


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

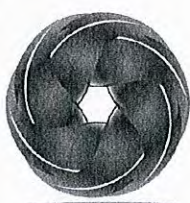


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.20	21.16	21.17	20.13	18.14	18.18
Dry Weight + Tare	(g)	16.35	16.19	15.77	14.93	15.93	15.95
Tare Weight	(g)	6.70	6.73	6.02	5.95	7.95	7.90
Water Content	(%)	50.26	52.54	55.38	57.91	27.69	27.70
Penetration	(mm)	15.45	18.25	21.70	24.75		
LIQUID LIMIT		(%)	54				
PLASTIC LIMIT		(%)	28				
PLASTICITY INDEX		(%)	26				

Soil Description : Reddish orange and yellowish brown slightly gravelly slightly Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH22

Checked/Approved

Sample No: TW1

Depth: 1.50m-2.10m

Prepared Date: 25 January, 2023

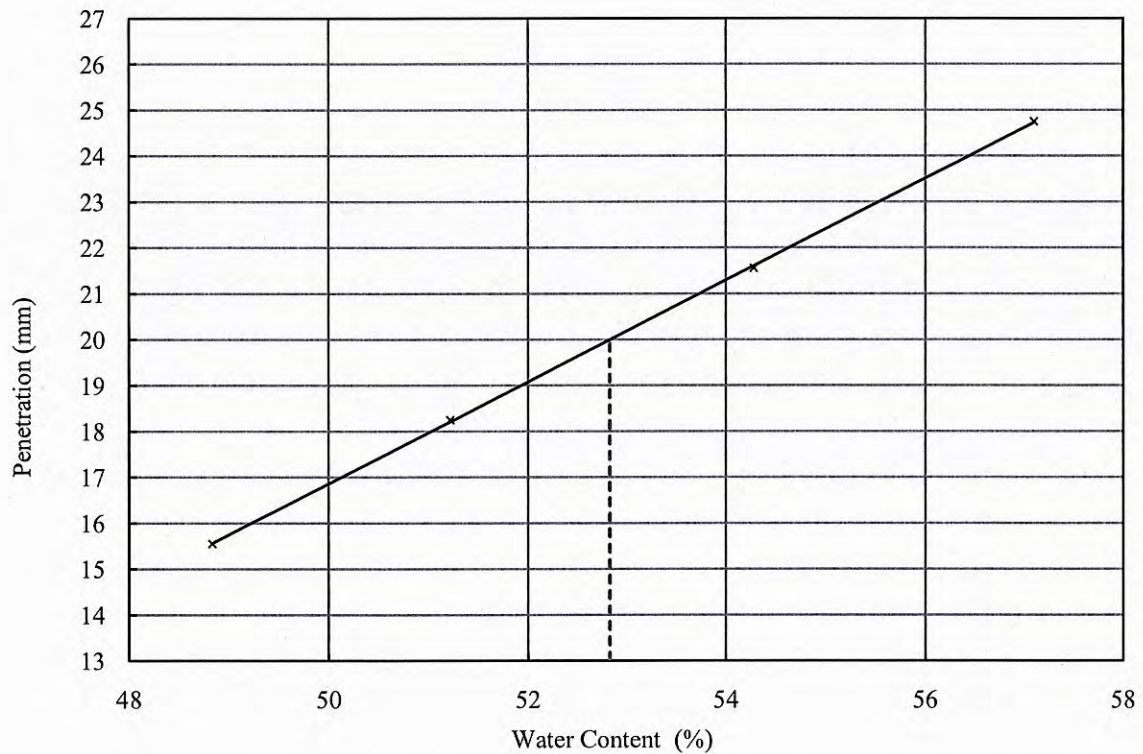
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

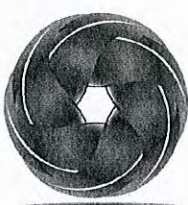


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.21	21.12	20.16	21.12	18.17	18.20
Dry Weight + Tare	(g)	16.20	16.28	15.15	15.93	15.94	15.92
Tare Weight	(g)	5.94	6.83	5.92	6.84	7.64	7.48
Water Content	(%)	48.83	51.22	54.28	57.10	26.87	27.01
Penetration	(mm)	15.55	18.25	21.55	24.75		
LIQUID LIMIT		(%)	53				
PLASTIC LIMIT		(%)	27				
PLASTICITY INDEX		(%)	26				

Soil Description : Light brownish yellow and reddish orange slightly Sandy CLAY



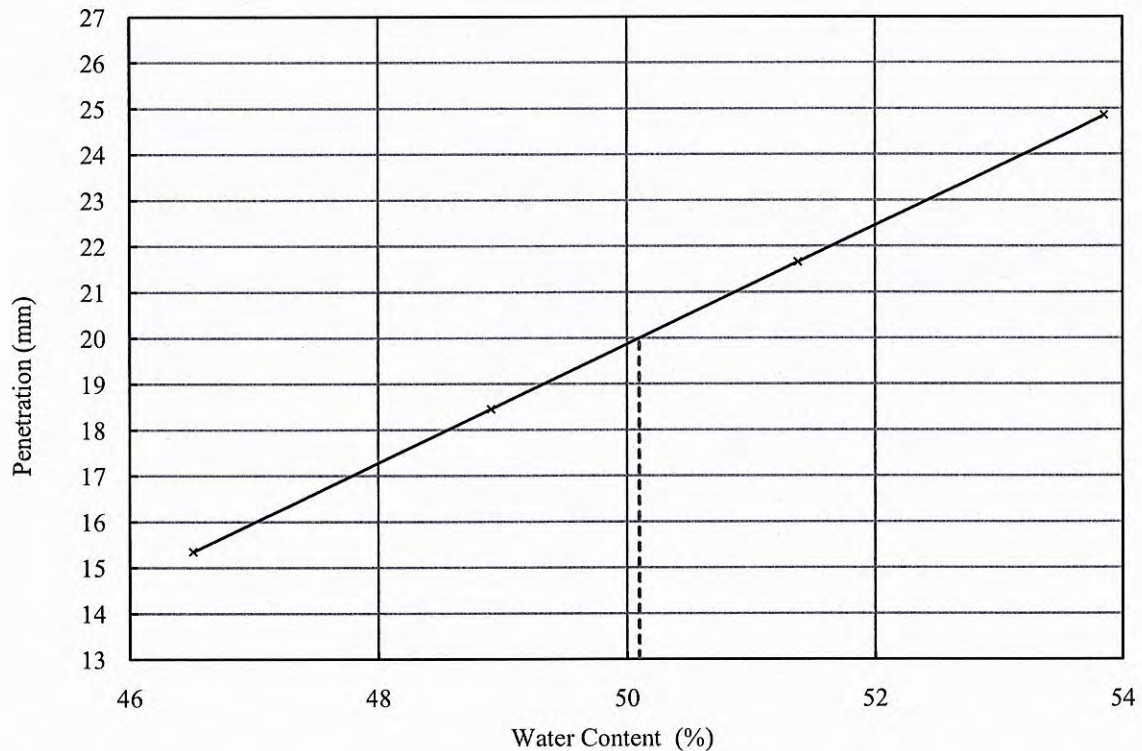
Project:	Sungei Tengah Road/Lorong Pasu	
Job Ref:	SML/345A/2022	Engineer: Si Thu Htun
Borehole No:	BH22	Checked/Approved Khin Maung Nyunt Laboratory Manager
Sample No:	TW3	
Depth:	4.50m-5.10m	
Prepared Date:	25 January, 2023	



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.21	21.16	20.18	20.21	18.14	18.18
Dry Weight + Tare	(g)	16.82	16.47	15.53	15.52	15.68	15.75
Tare Weight	(g)	7.38	6.88	6.48	6.81	7.66	7.86
Water Content	(%)	46.50	48.91	51.38	53.85	30.67	30.80
Penetration	(mm)	15.35	18.45	21.65	24.85		
LIQUID LIMIT		(%)	50				
PLASTIC LIMIT		(%)	31				
PLASTICITY INDEX		(%)	19				

Soil Description : Light red and brownish yellow slightly Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH23

Checked/Approved

Sample No: TW3

Depth: 4.50m-5.10m

Khin Maung Nyunt
Laboratory Manager

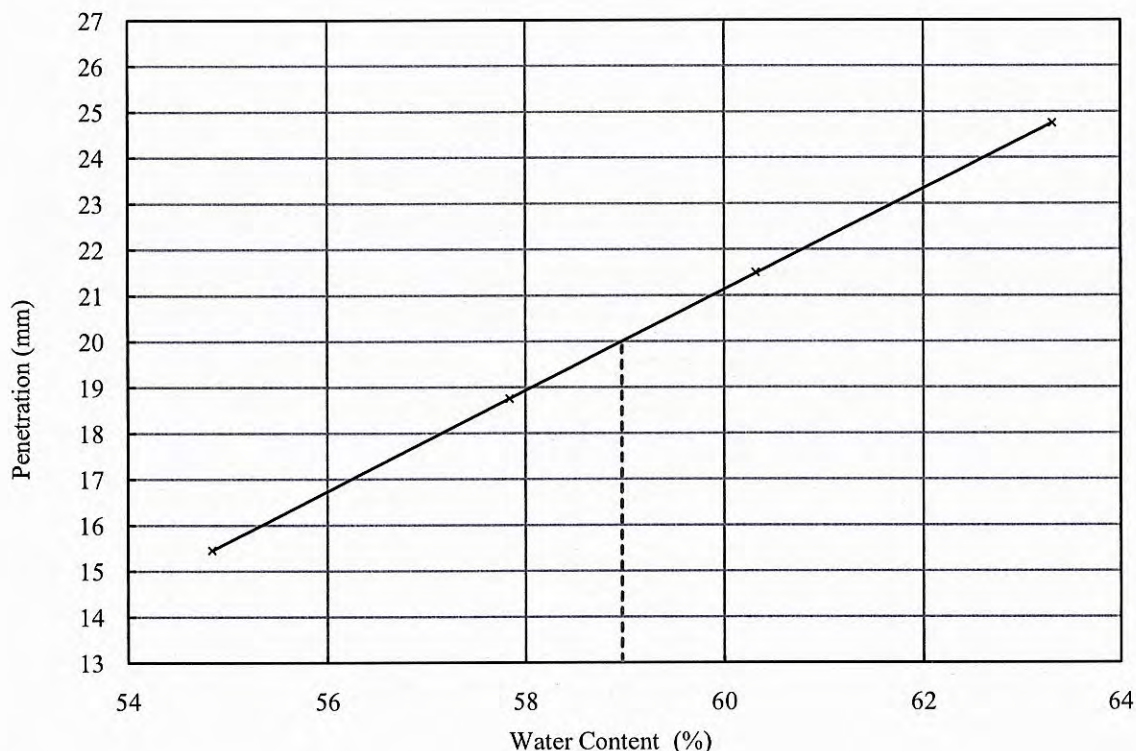
Prepared Date: 25 January, 2023



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

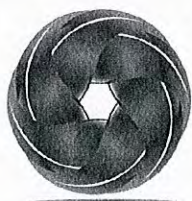


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.14	20.16	20.19	21.15	18.19	18.14
Dry Weight + Tare	(g)	15.92	15.07	14.90	15.39	15.68	15.61
Tare Weight	(g)	6.40	6.27	6.13	6.29	8.01	7.88
Water Content	(%)	54.83	57.84	60.32	63.30	32.72	32.73
Penetration	(mm)	15.45	18.75	21.50	24.75		
LIQUID LIMIT	(%)	59					
PLASTIC LIMIT	(%)	33					
PLASTICITY INDEX	(%)	26					

Soil Description : Light brownish grey slightly Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH23

Sample No: TW5

Depth: 9.00m-9.70m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

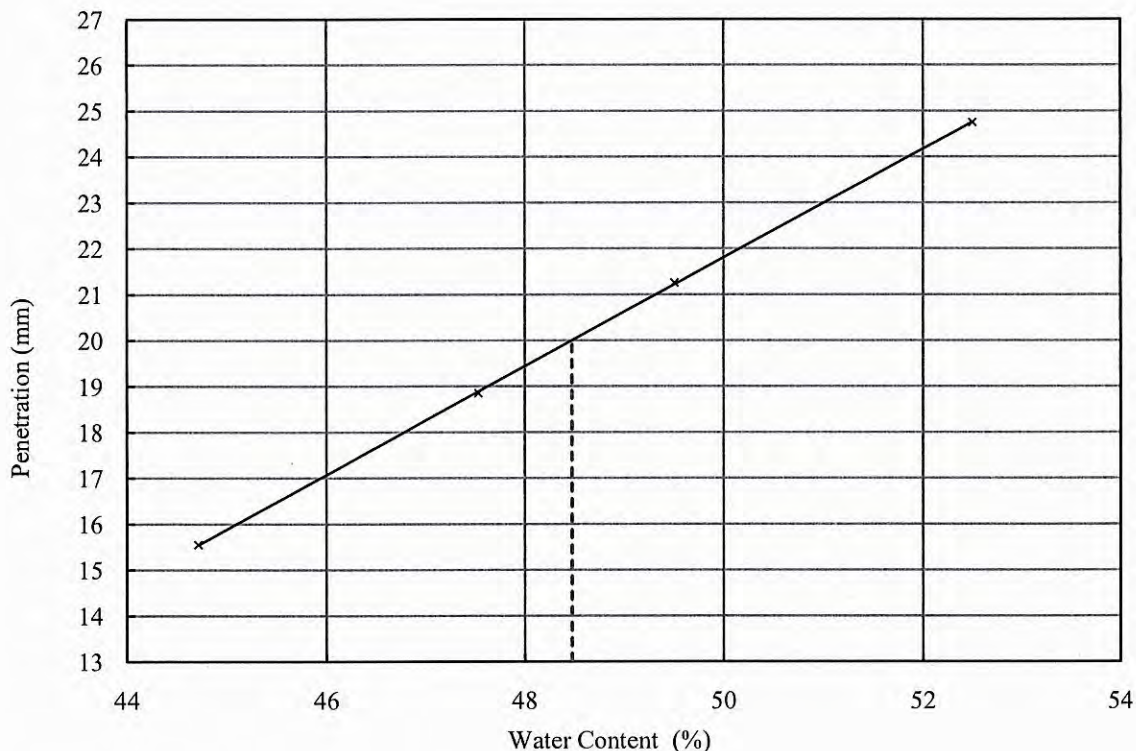


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

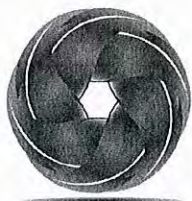


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.21	20.20	20.21	20.15	18.16	18.16
Dry Weight + Tare	(g)	15.73	15.57	15.70	15.42	15.82	15.77
Tare Weight	(g)	5.71	5.83	6.59	6.41	8.07	7.88
Water Content	(%)	44.71	47.54	49.51	52.50	30.19	30.29
Penetration	(mm)	15.55	18.85	21.25	24.75		
LIQUID LIMIT		(%)	48				
PLASTIC LIMIT		(%)	30				
PLASTICITY INDEX		(%)	18				

Soil Description : Light brownish yellow and reddish orange Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH24

Checked/Approved

Sample No: U1

Depth: 3.00m-3.50m

Prepared Date: 25 January, 2023

Khin Maung Nyunt
Laboratory Manager

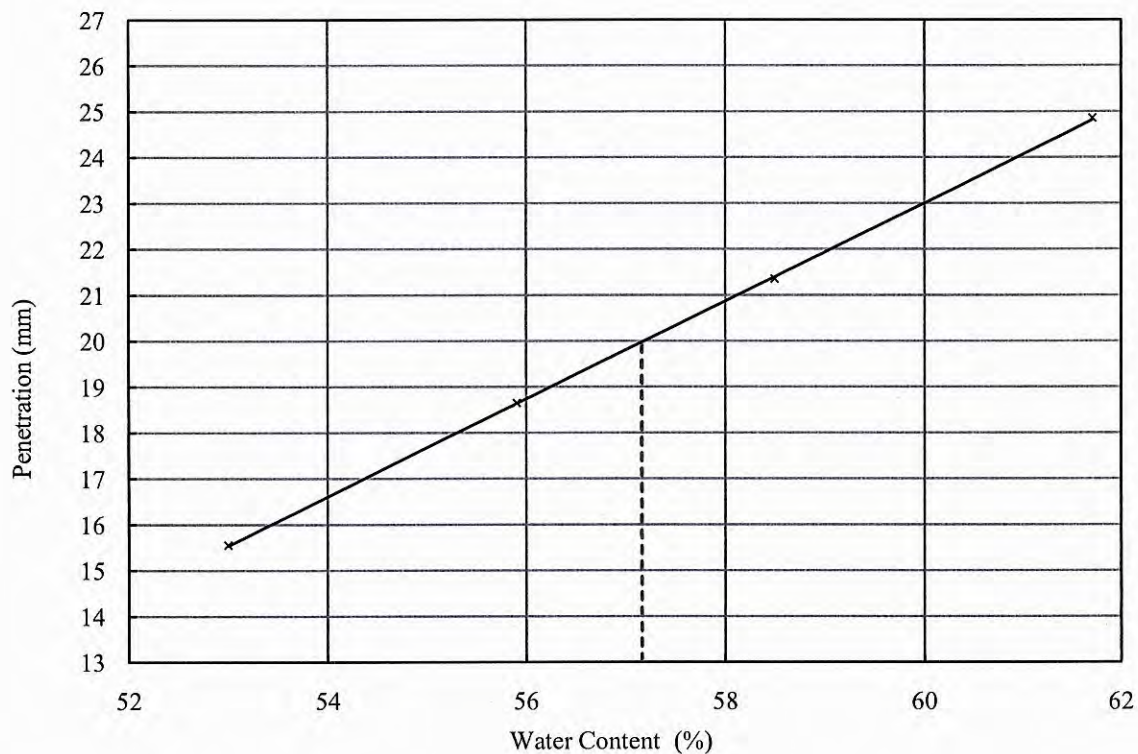


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



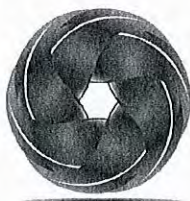
History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.12	21.22	21.16	20.15	18.13	18.17
Dry Weight + Tare	(g)	15.25	16.25	16.03	14.80	15.56	15.67
Tare Weight	(g)	6.06	7.36	7.26	6.13	7.56	7.91
Water Content	(%)	52.99	55.91	58.49	61.71	32.13	32.22
Penetration	(mm)	15.55	18.65	21.35	24.85		

LIQUID LIMIT	(%)	57
PLASTIC LIMIT	(%)	32
PLASTICITY INDEX	(%)	25

Soil Description : Reddish orange and light brownish yellow Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH24

Sample No: TW2

Depth: 6.00m-6.70m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

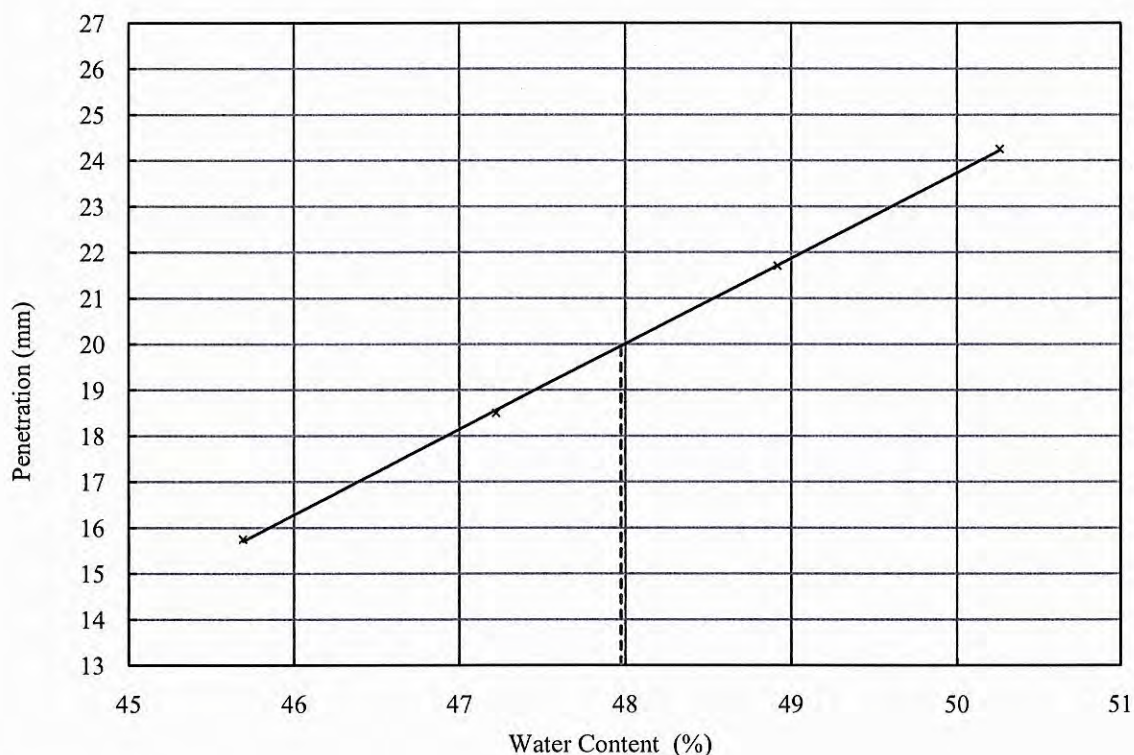


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

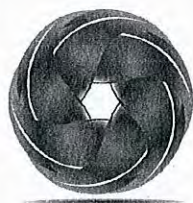


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	22.10	21.21	20.21	21.16	18.14	18.13
Dry Weight + Tare	(g)	17.49	16.62	15.70	16.36	15.98	16.01
Tare Weight	(g)	7.40	6.90	6.48	6.81	7.66	7.85
Water Content	(%)	45.69	47.22	48.92	50.26	25.96	25.98
Penetration	(mm)	15.75	18.50	21.70	24.25		
LIQUID LIMIT	(%)	48					
PLASTIC LIMIT	(%)	26					
PLASTICITY INDEX	(%)	22					

Soil Description : Brownish yellow and reddish orange slightly Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH25

Sample No: TW1

Depth: 1.50m-2.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

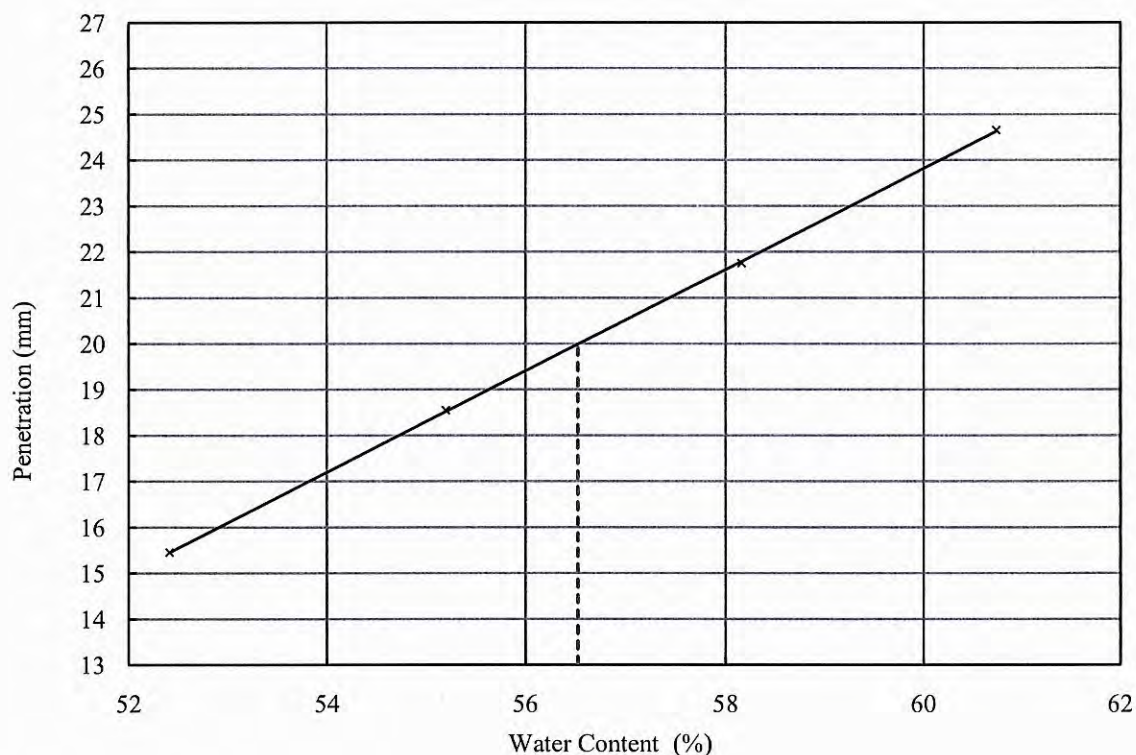
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



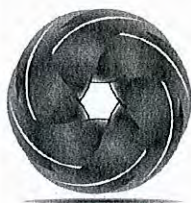
History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.16	21.12	20.22	22.20	18.18	18.16
Dry Weight + Tare	(g)	15.27	16.02	14.91	16.23	15.89	15.91
Tare Weight	(g)	5.94	6.78	5.78	6.40	7.62	7.82
Water Content	(%)	52.41	55.19	58.16	60.73	27.69	27.81
Penetration	(mm)	15.45	18.55	21.75	24.65		

LIQUID LIMIT	(%)	57
PLASTIC LIMIT	(%)	28
PLASTICITY INDEX	(%)	29

Soil Description : Brownish yellow and light red slightly Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH25

Sample No: U1

Depth: 4.50m-5.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

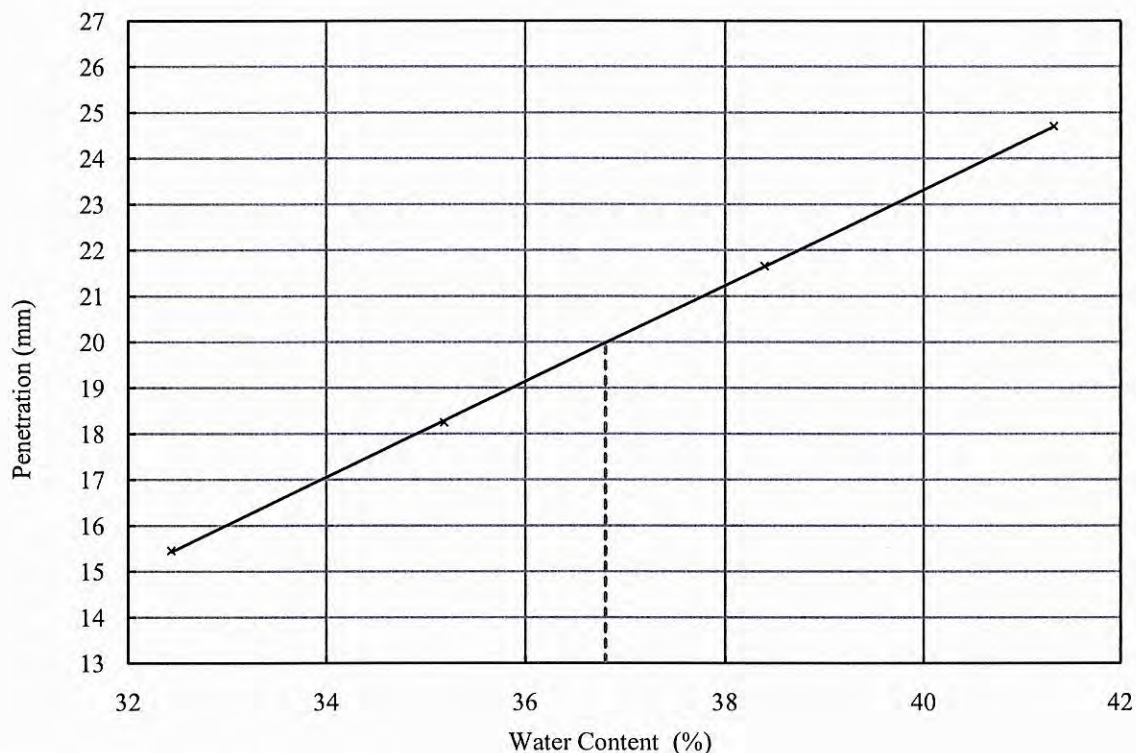


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

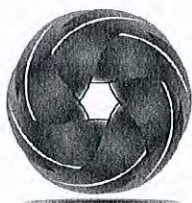


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.18	21.12	21.22	21.12	18.18	18.13
Dry Weight + Tare	(g)	17.44	17.31	17.10	16.55	16.44	16.15
Tare Weight	(g)	5.91	6.48	6.37	5.49	8.69	7.54
Water Content	(%)	32.44	35.18	38.40	41.32	22.45	23.00
Penetration	(mm)	15.45	18.25	21.65	24.70		
LIQUID LIMIT		(%)	37				
PLASTIC LIMIT		(%)	23				
PLASTICITY INDEX		(%)	14				

Soil Description : Light yellowish brown and reddish orange Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH26

Sample No: TW1

Depth: 1.50m-2.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

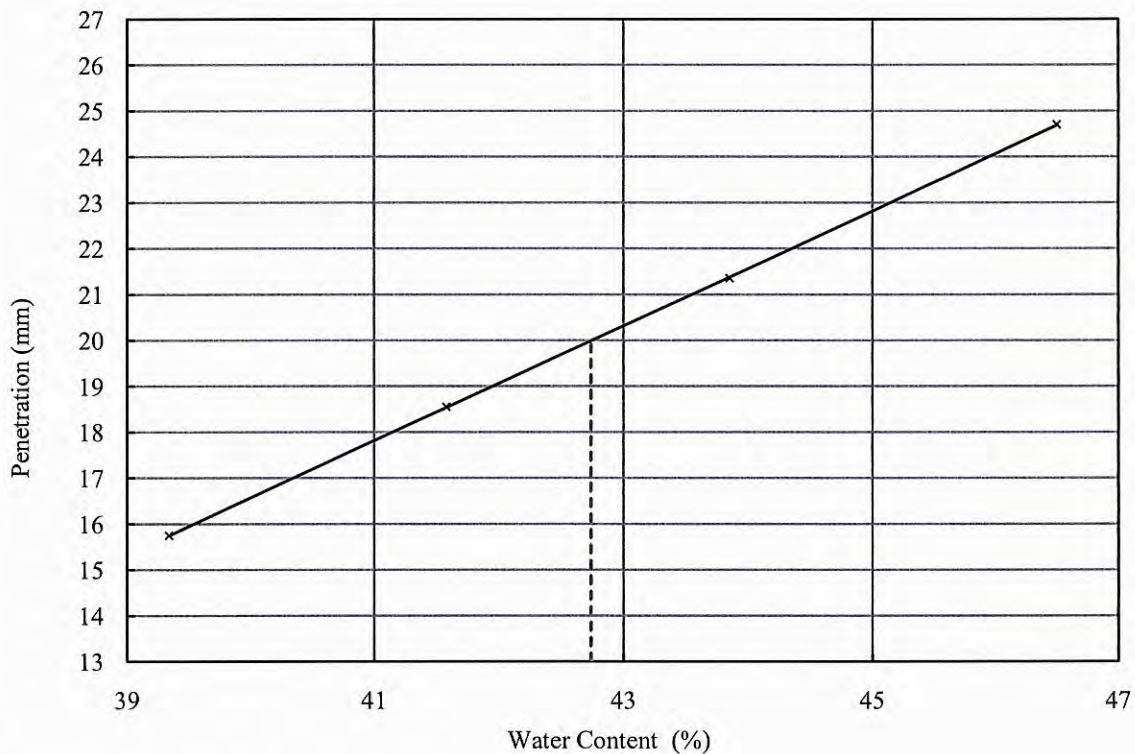
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

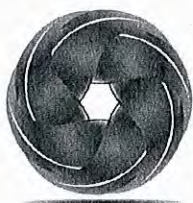


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.21	22.16	20.11	22.16	18.15	18.16
Dry Weight + Tare	(g)	17.02	17.67	15.87	17.12	16.13	16.16
Tare Weight	(g)	6.37	6.87	6.20	6.28	7.67	7.83
Water Content	(%)	39.34	41.57	43.85	46.49	23.88	24.01
Penetration	(mm)	15.75	18.55	21.35	24.70		
LIQUID LIMIT	(%)	43					
PLASTIC LIMIT	(%)	24					
PLASTICITY INDEX	(%)	19					

Soil Description : Light olive brown and reddish orange Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH26

Checked/Approved

Sample No: TW2

Depth: 3.00m-3.60m

Prepared Date: 25 January, 2023

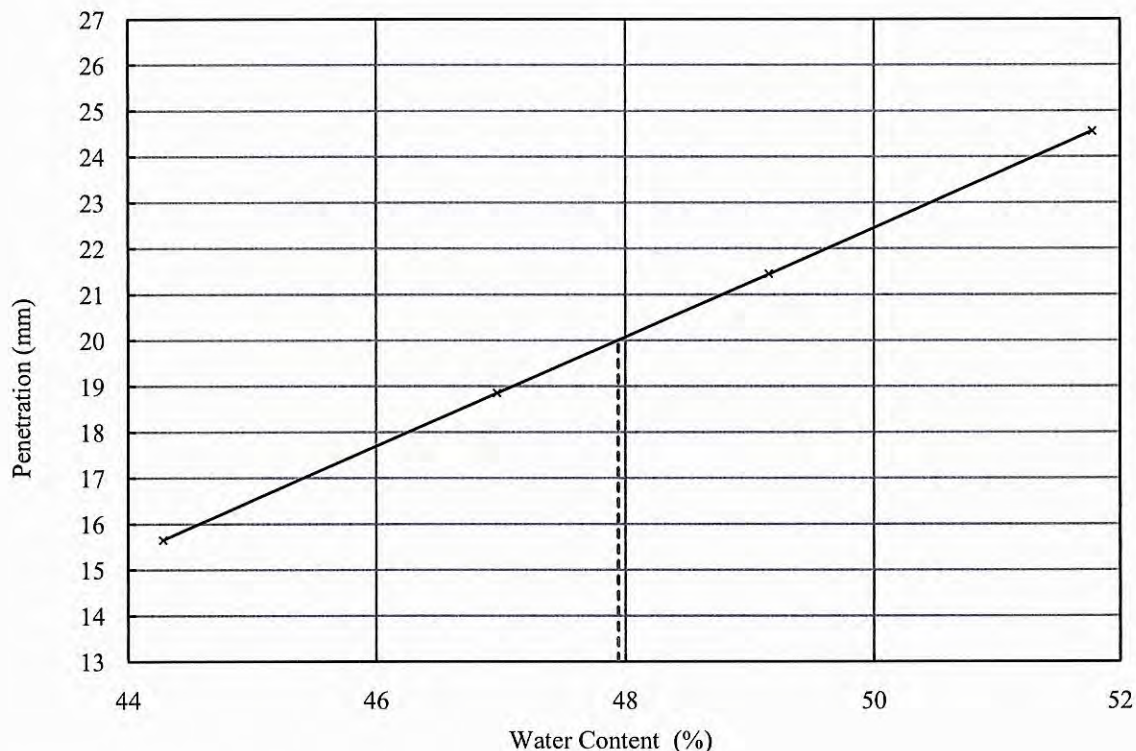
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

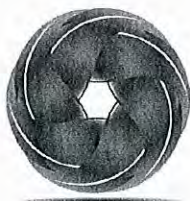


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.20	21.20	20.18	20.17	18.15	18.18
Dry Weight + Tare	(g)	15.98	16.47	15.85	15.50	16.07	16.05
Tare Weight	(g)	6.45	6.40	7.04	6.48	8.05	7.85
Water Content	(%)	44.28	46.97	49.15	51.77	25.94	25.98
Penetration	(mm)	15.65	18.85	21.45	24.55		
LIQUID LIMIT		(%)	48				
PLASTIC LIMIT		(%)	26				
PLASTICITY INDEX		(%)	22				

Soil Description : Light brownish yellow and light red slightly Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH27

Sample No: TW2

Depth: 3.00m-3.60m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

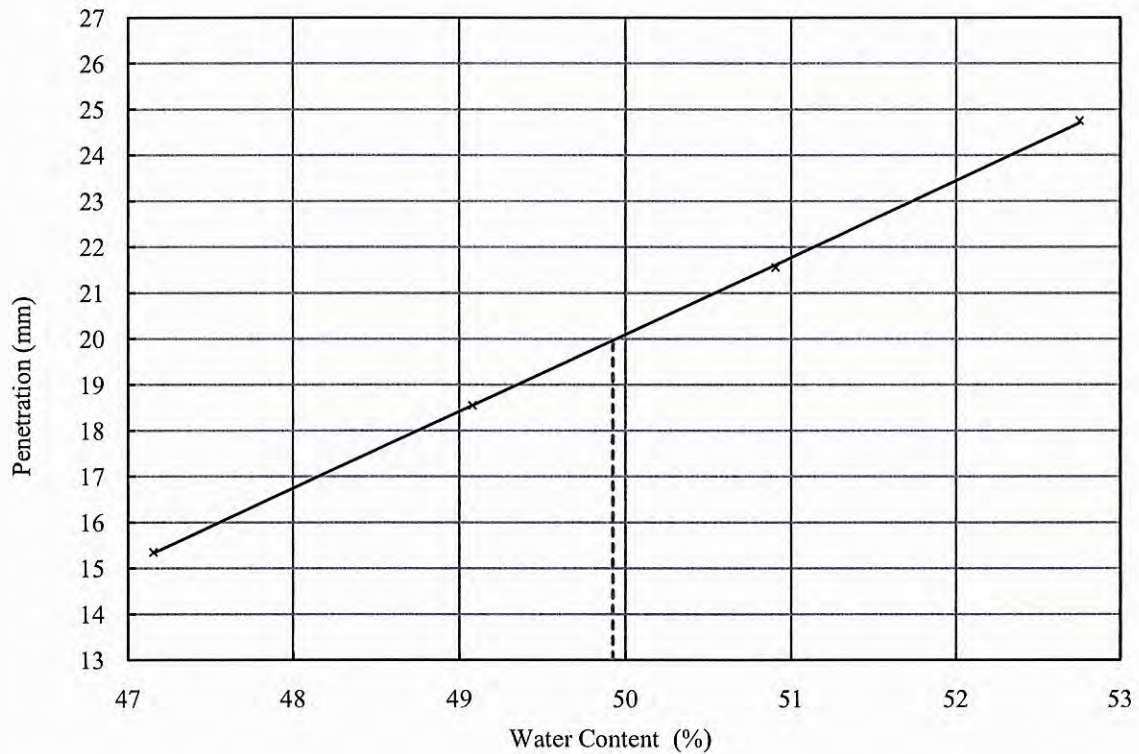


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.14	20.21	22.21	20.18	18.17	18.14
Dry Weight + Tare	(g)	15.58	15.69	16.86	15.10	15.84	15.68
Tare Weight	(g)	5.91	6.48	6.35	5.47	8.11	7.56
Water Content	(%)	47.16	49.08	50.90	52.75	30.14	30.30
Penetration	(mm)	15.35	18.55	21.55	24.75		
LIQUID LIMIT		(%)	50				
PLASTIC LIMIT		(%)	30				
PLASTICITY INDEX		(%)	20				

Soil Description : Light brownish yellow and reddish brown slightly Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH27

Sample No: TW4

Depth: 6.00m-6.70m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

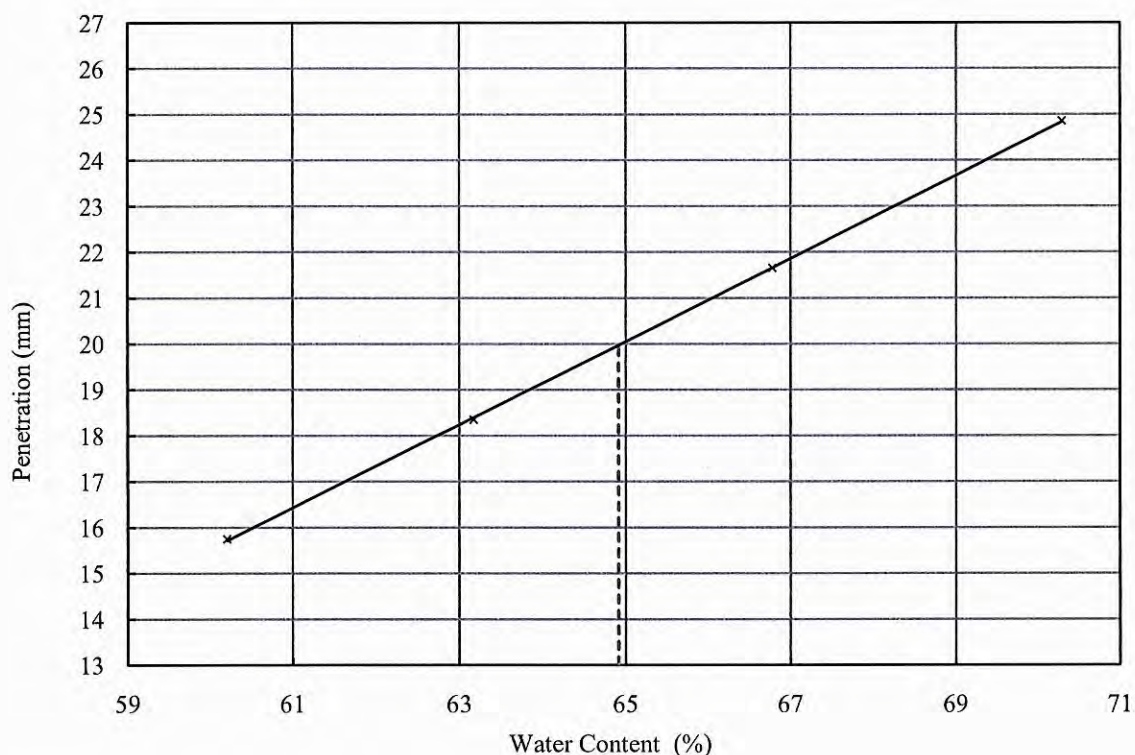


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

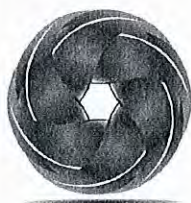


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.20	21.10	21.17	20.21	18.12	18.11
Dry Weight + Tare	(g)	14.83	15.44	15.24	14.13	15.75	15.61
Tare Weight	(g)	5.91	6.48	6.36	5.48	8.09	7.54
Water Content	(%)	60.20	63.17	66.78	70.29	30.94	30.98
Penetration	(mm)	15.75	18.35	21.65	24.85		
LIQUID LIMIT	(%)	65					
PLASTIC LIMIT	(%)	31					
PLASTICITY INDEX	(%)	34					

Soil Description : Reddish yellow and reddish orange slightly Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH28

Checked/Approved

Sample No: TW1

Depth: 1.50m-2.10m

Prepared Date: 25 January, 2023

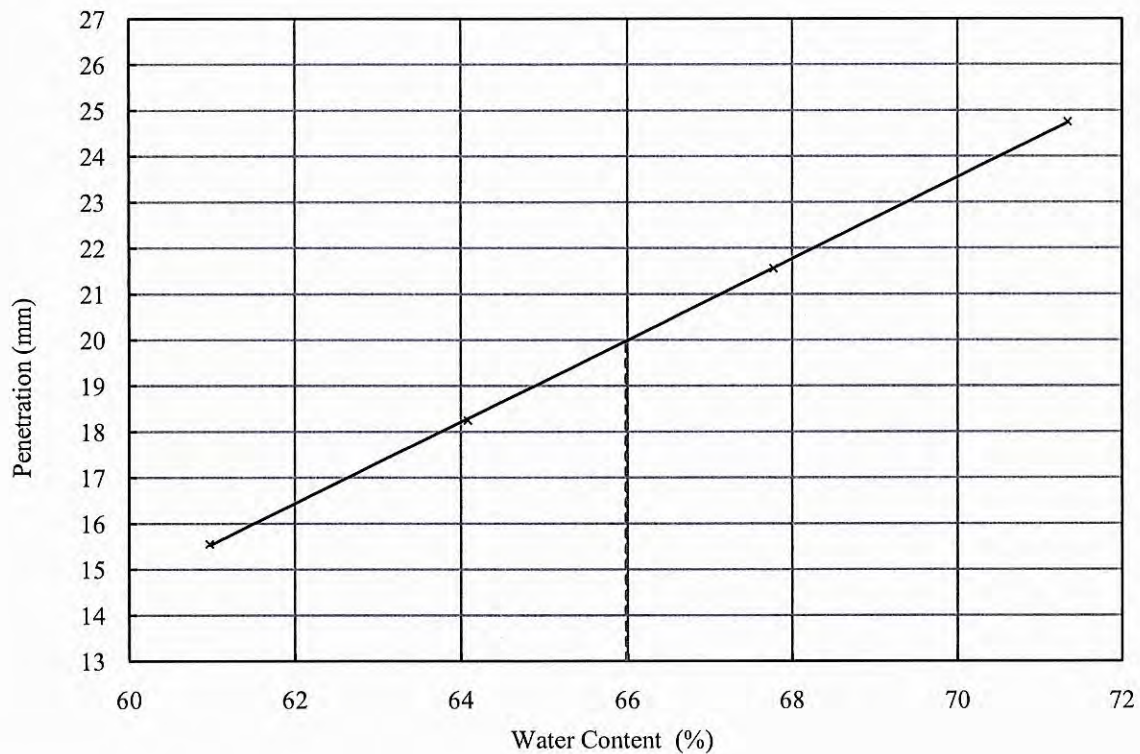
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.21	21.22	22.16	22.13	18.13	18.16
Dry Weight + Tare	(g)	15.43	15.60	15.60	15.76	15.66	15.64
Tare Weight	(g)	5.95	6.83	5.92	6.83	7.64	7.47
Water Content	(%)	60.97	64.08	67.77	71.33	30.80	30.84
Penetration	(mm)	15.55	18.25	21.55	24.75		

LIQUID LIMIT	(%)	66
PLASTIC LIMIT	(%)	31
PLASTICITY INDEX	(%)	35

Soil Description : Light red and brownish yellow slightly Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH28

Sample No: U1

Depth: 4.50m-5.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

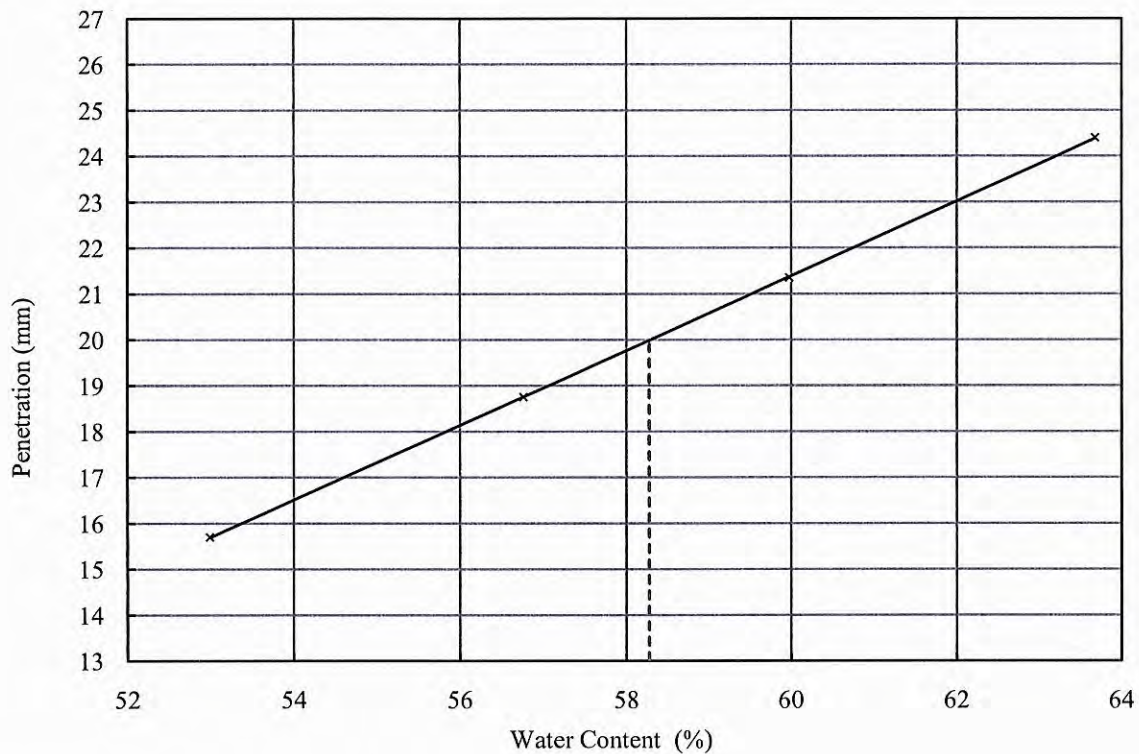


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

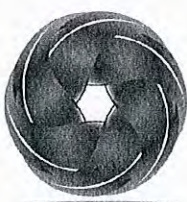


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.15	20.22	21.13	20.19	18.16	18.19
Dry Weight + Tare	(g)	15.92	15.56	15.93	14.72	15.52	15.63
Tare Weight	(g)	6.05	7.35	7.26	6.13	7.54	7.91
Water Content	(%)	52.99	56.76	59.98	63.68	33.08	33.16
Penetration	(mm)	15.70	18.75	21.35	24.40		
LIQUID LIMIT		(%)	58				
PLASTIC LIMIT		(%)	33				
PLASTICITY INDEX		(%)	25				

Soil Description : Light red and reddish orange slightly Sandy SILT



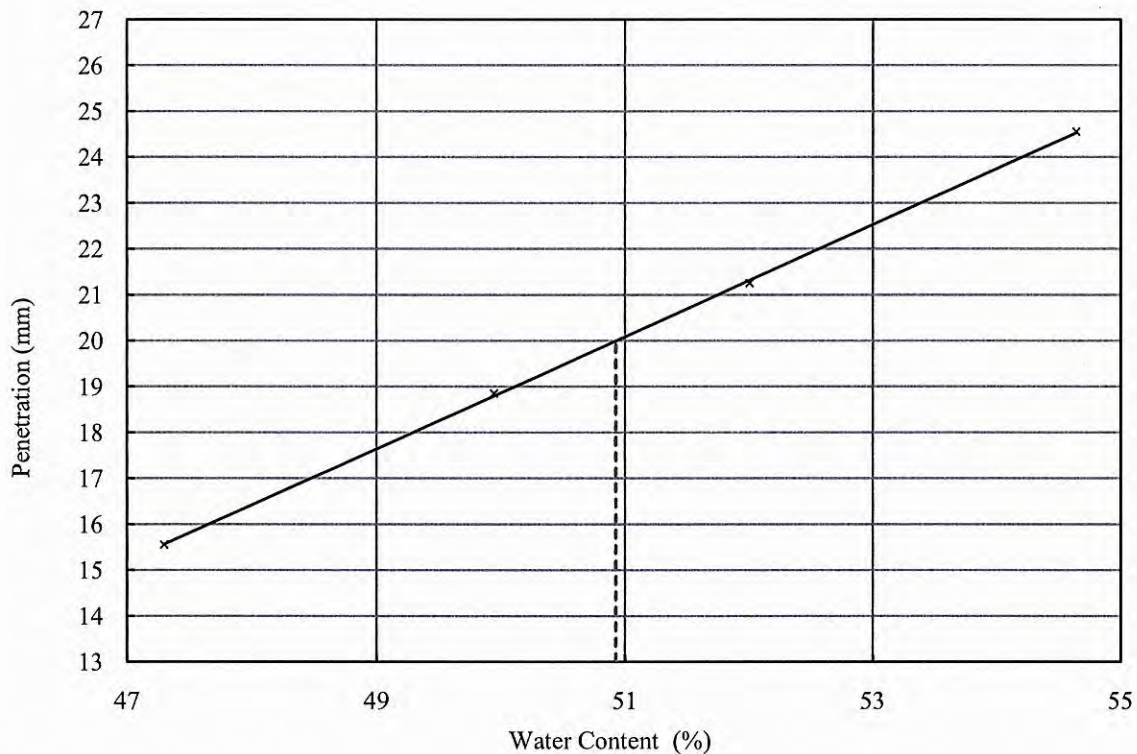
Project:	Sungei Tengah Road/Lorong Pasu	
Job Ref:	SML/345A/2022	Engineer: Si Thu Htun
Borehole No:	BH29	Checked/Approved Khin Maung Nyunt Laboratory Manager
Sample No:	TW2	
Depth:	3.00m-3.60m	
Prepared Date:	25 January, 2023	



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

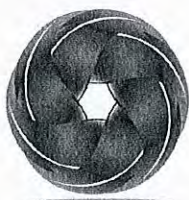


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.17	22.14	22.10	22.20	18.13	18.14
Dry Weight + Tare	(g)	16.88	17.50	17.31	17.43	15.67	15.71
Tare Weight	(g)	7.81	8.21	8.10	8.70	7.67	7.83
Water Content	(%)	47.30	49.95	52.01	54.64	30.75	30.84
Penetration	(mm)	15.55	18.85	21.25	24.55		
LIQUID LIMIT		(%)	51				
PLASTIC LIMIT		(%)	31				
PLASTICITY INDEX		(%)	20				

Soil Description : Light brownish yellow and light grey slightly Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH29

Checked/Approved

Sample No: U1

Depth: 9.00m-9.50m

Prepared Date: 25 January, 2023

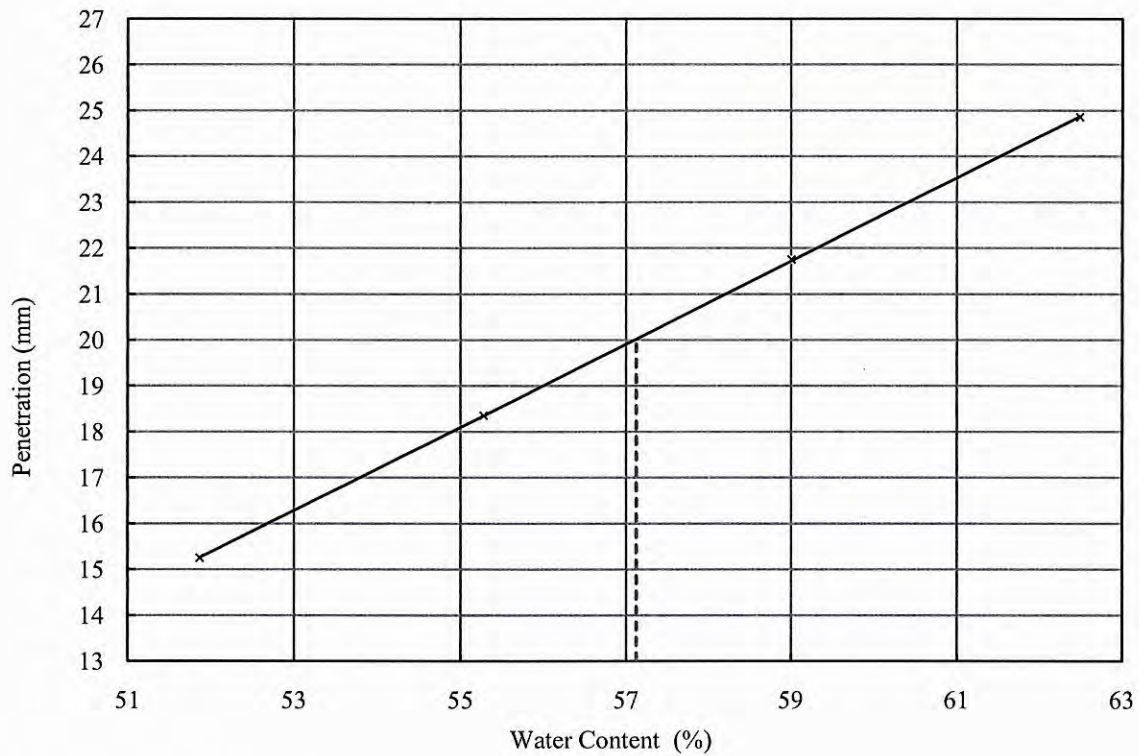
Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

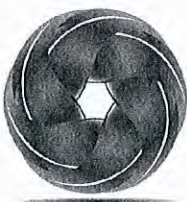


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.22	21.14	20.18	20.16	18.14	18.15
Dry Weight + Tare	(g)	15.50	15.85	14.97	14.83	15.91	15.88
Tare Weight	(g)	6.40	6.28	6.14	6.30	8.03	7.90
Water Content	(%)	51.87	55.28	59.00	62.49	28.30	28.45
Penetration	(mm)	15.25	18.35	21.75	24.85		
LIQUID LIMIT	(%)	57					
PLASTIC LIMIT	(%)	28					
PLASTICITY INDEX	(%)	29					

Soil Description : Light brownish yellow and reddish orange slightly Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH30

Sample No: TW1

Depth: 1.50m-2.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

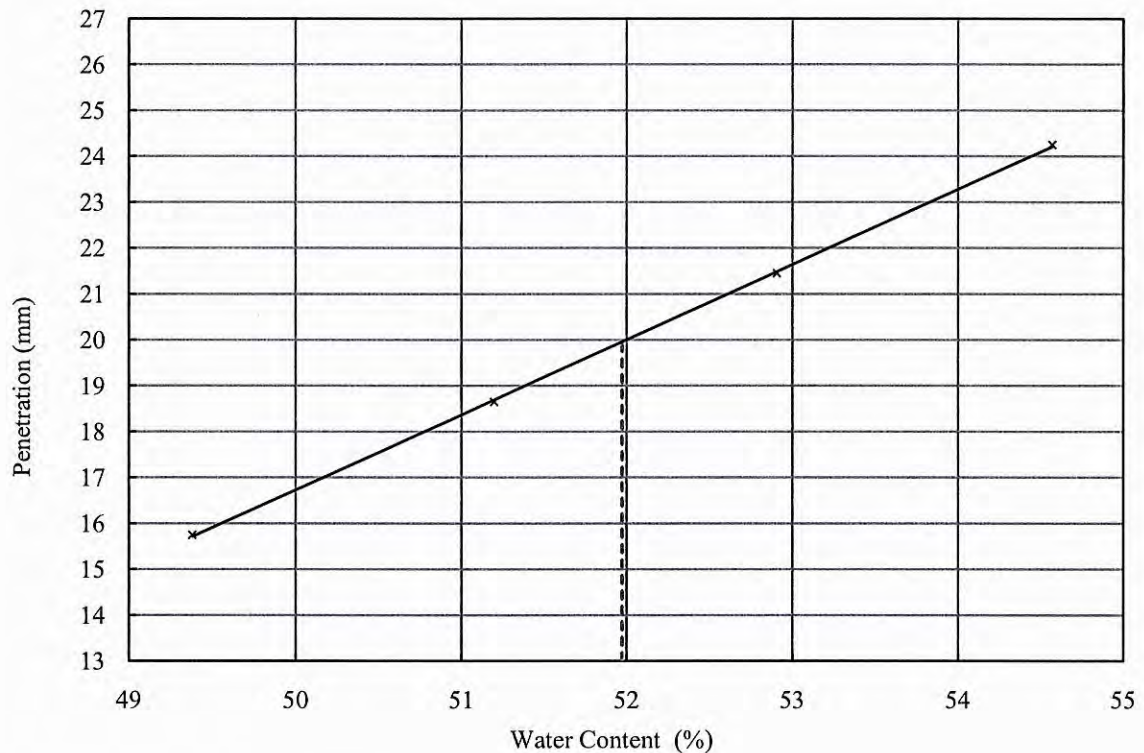


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

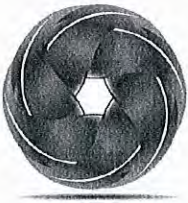


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.14	21.15	20.12	20.19	18.17	18.19
Dry Weight + Tare	(g)	16.37	16.24	15.11	15.47	15.97	15.96
Tare Weight	(g)	6.71	6.65	5.64	6.82	7.87	7.76
Water Content	(%)	49.38	51.20	52.90	54.57	27.16	27.20
Penetration	(mm)	15.75	18.65	21.45	24.25		
LIQUID LIMIT		(%)	52				
PLASTIC LIMIT		(%)	27				
PLASTICITY INDEX		(%)	25				

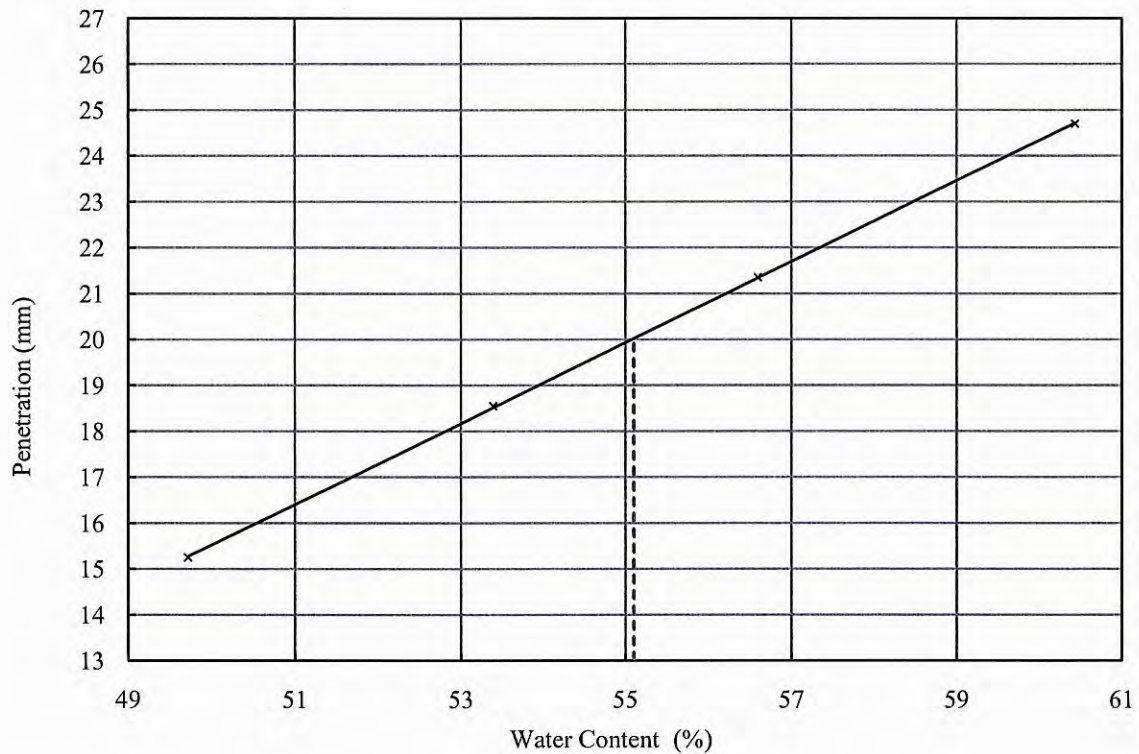
Soil Description : Reddish orange and brownish yellow slightly Sandy CLAY

	Project: Sungei Tengah Road/Lorong Pasu		 Khin Maung Nyunt Laboratory Manager	 Accredited Laboratory SAC-SINGLAS Cert No: LA-2015-0601-B	
	Job Ref:	SML/345A/2022			Engineer: Si Thu Htun
	Borehole No:	BH30			Checked/Approved
	Sample No:	U1			
	Depth:	4.50m-5.10m			
	Prepared Date:	25 January, 2023			

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	22.16	22.20	22.19	21.15	18.13	18.10
Dry Weight + Tare	(g)	16.77	16.85	16.31	15.76	15.86	15.80
Tare Weight	(g)	5.93	6.83	5.92	6.84	7.64	7.47
Water Content	(%)	49.72	53.39	56.59	60.43	27.62	27.61
Penetration	(mm)	15.25	18.55	21.35	24.70		
LIQUID LIMIT		(%)	55				
PLASTIC LIMIT		(%)	28				
PLASTICITY INDEX		(%)	27				

Soil Description : Light brownish yellow and reddish orange slightly Sandy CLAY



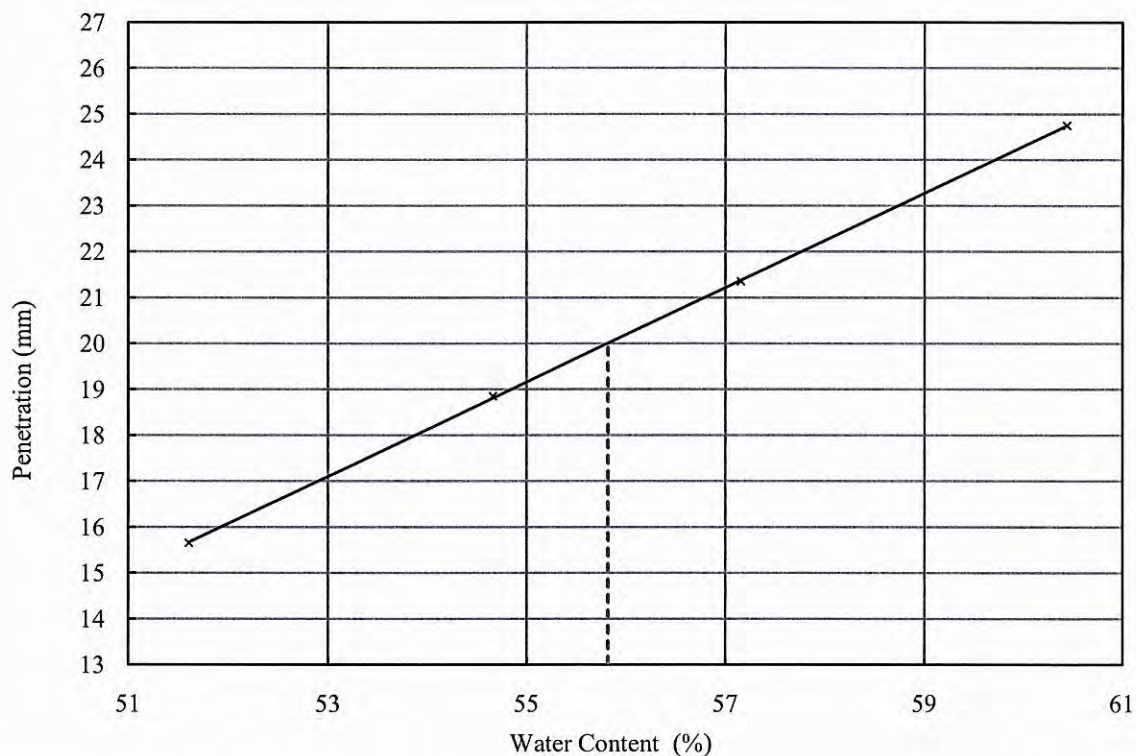
Project:	Sungei Tengah Road/Lorong Pasu	
Job Ref:	SML/345A/2022	Engineer: Si Thu Htun
Borehole No:	BH31	Checked/Approved Khin Maung Nyunt Laboratory Manager
Sample No:	TW2	
Depth:	3.00m-3.60m	
Prepared Date:	25 January, 2023	



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

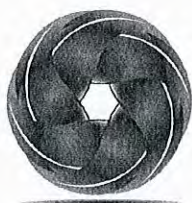


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	22.14	21.15	23.06	20.20	18.17	18.12
Dry Weight + Tare	(g)	16.67	16.28	17.31	14.90	15.65	15.69
Tare Weight	(g)	6.07	7.37	7.25	6.13	7.55	7.91
Water Content	(%)	51.60	54.66	57.16	60.43	31.11	31.23
Penetration	(mm)	15.65	18.85	21.35	24.75		
LIQUID LIMIT		(%)	56				
PLASTIC LIMIT		(%)	31				
PLASTICITY INDEX		(%)	25				

Soil Description : Light brownish grey and reddish brown slightly Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Engineer: Si Thu Htun

Borehole No: BH31

Checked/Approved

Sample No: U1

Depth: 6.00m-6.70m

Khin Maung Nyunt
Laboratory Manager

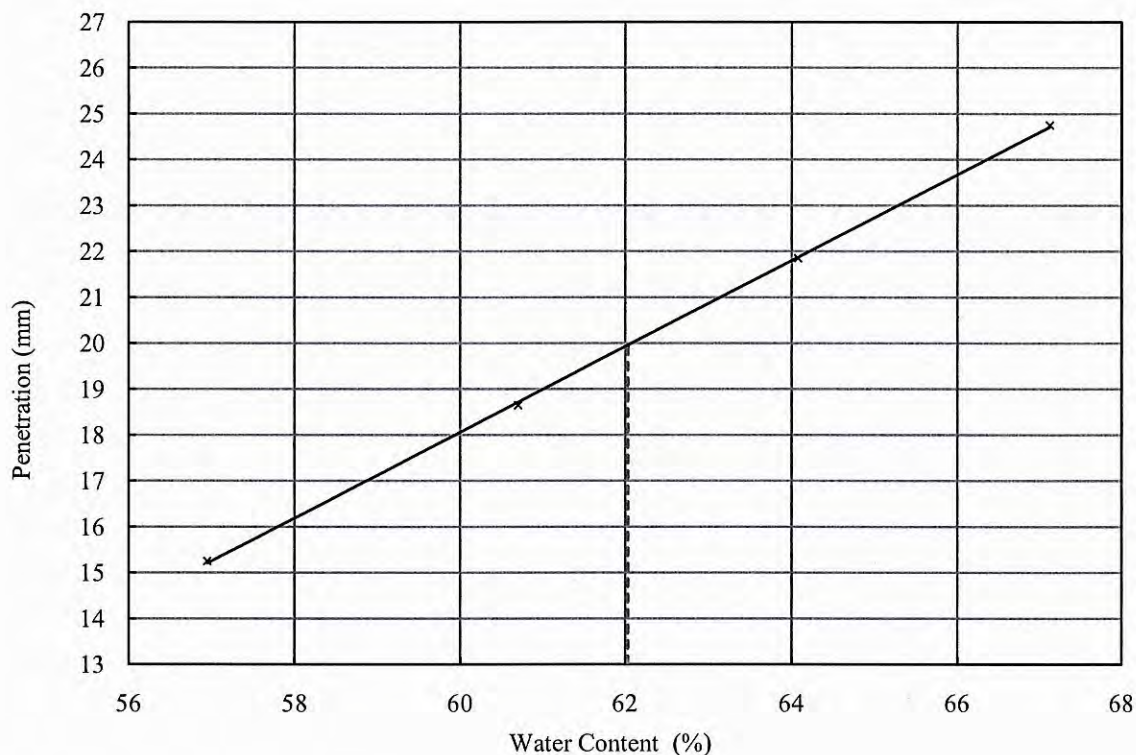
Prepared Date: 25 January, 2023



SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

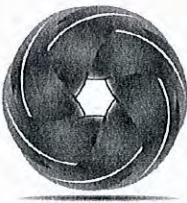


History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.15	20.16	21.17	21.22	18.18	18.18
Dry Weight + Tare	(g)	15.15	15.14	15.32	15.22	15.69	15.52
Tare Weight	(g)	6.37	6.87	6.19	6.28	7.67	7.83
Water Content	(%)	56.95	60.70	64.07	67.11	31.05	34.59
Penetration	(mm)	15.25	18.65	21.85	24.75		
LIQUID LIMIT	(%)	62					
PLASTIC LIMIT	(%)	33					
PLASTICITY INDEX	(%)	29					

Soil Description : Light brownish yellow and reddish orange slightly Sandy SILT

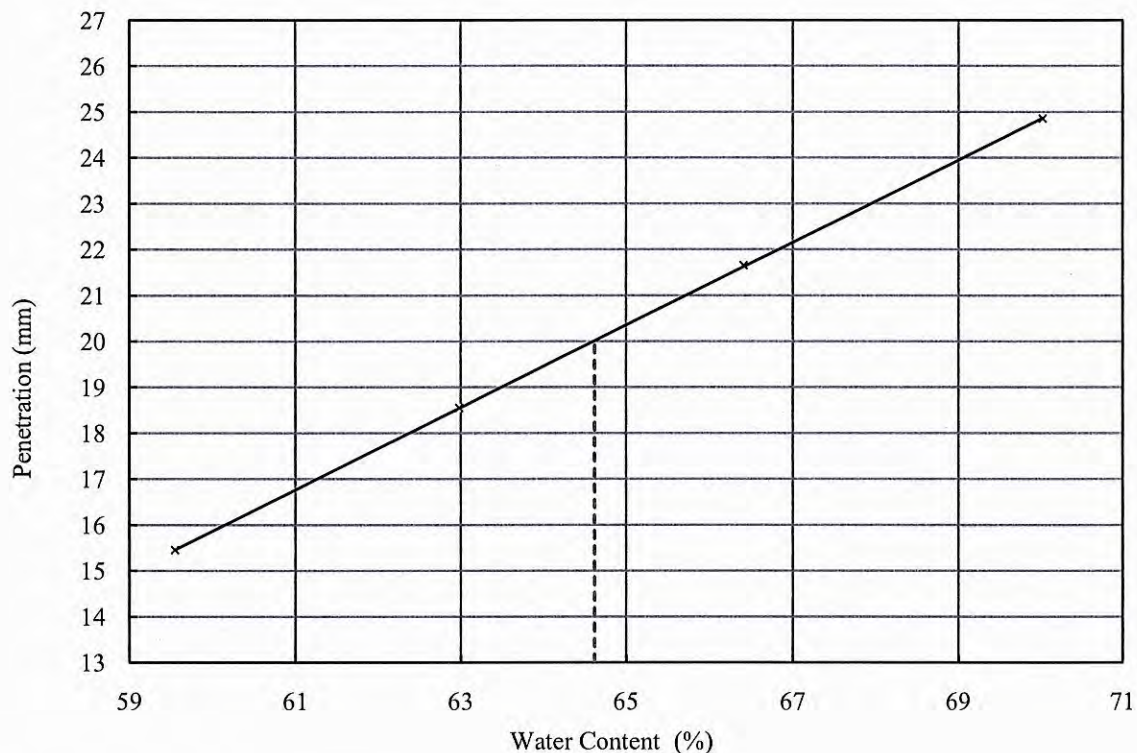
	Project: Sungei Tengah Road/Lorong Pasu		
	Job Ref: SML/345A/2022	Engineer: Si Thu Htun	
	Borehole No: BH32	Checked/Approved	
	Sample No: U1		
	Depth: 4.50m-5.00m		
	Prepared Date: 25 January, 2023		

Khin Maung Nyunt
Laboratory Manager

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

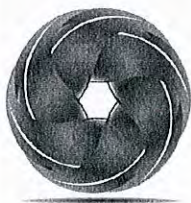


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.20	21.16	21.20	21.18	18.14	18.17
Dry Weight + Tare	(g)	15.68	15.41	15.19	15.06	15.52	15.51
Tare Weight	(g)	6.41	6.28	6.14	6.32	8.02	7.90
Water Content	(%)	59.55	62.98	66.41	70.02	34.93	34.95
Penetration	(mm)	15.45	18.55	21.65	24.85		
LIQUID LIMIT		(%)	65				
PLASTIC LIMIT		(%)	35				
PLASTICITY INDEX		(%)	30				

Soil Description : Pink and light brownish yellow slightly Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH32

Sample No: TW4

Depth: 9.00m-9.70m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

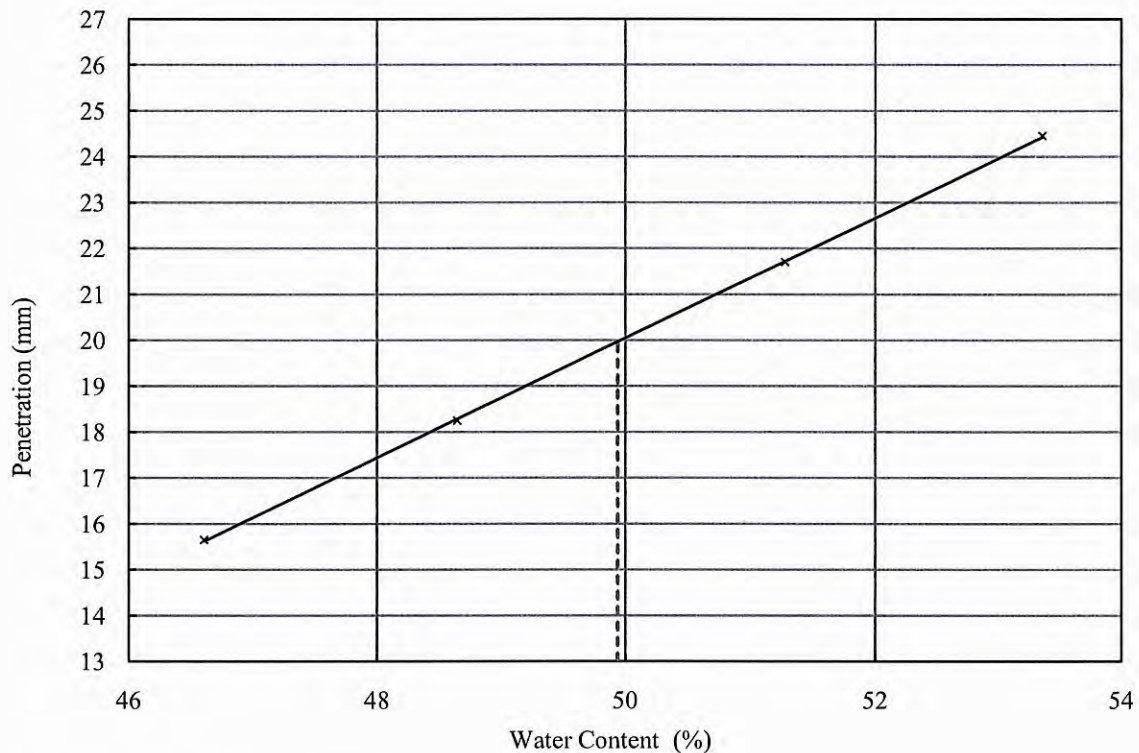


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

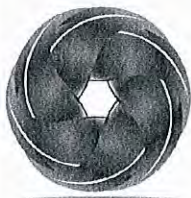


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.18	20.20	20.15	20.21	18.16	18.11
Dry Weight + Tare	(g)	15.79	15.52	15.74	15.20	15.96	15.98
Tare Weight	(g)	6.37	5.90	7.14	5.81	8.06	7.87
Water Content	(%)	46.60	48.65	51.28	53.35	27.85	26.26
Penetration	(mm)	15.65	18.25	21.70	24.45		
LIQUID LIMIT		(%)	50				
PLASTIC LIMIT		(%)	27				
PLASTICITY INDEX		(%)	23				

Soil Description : Light brownish yellow and reddish orange slightly Sandy CLAY



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH33

Sample No: TW1

Depth: 3.00m-3.60m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

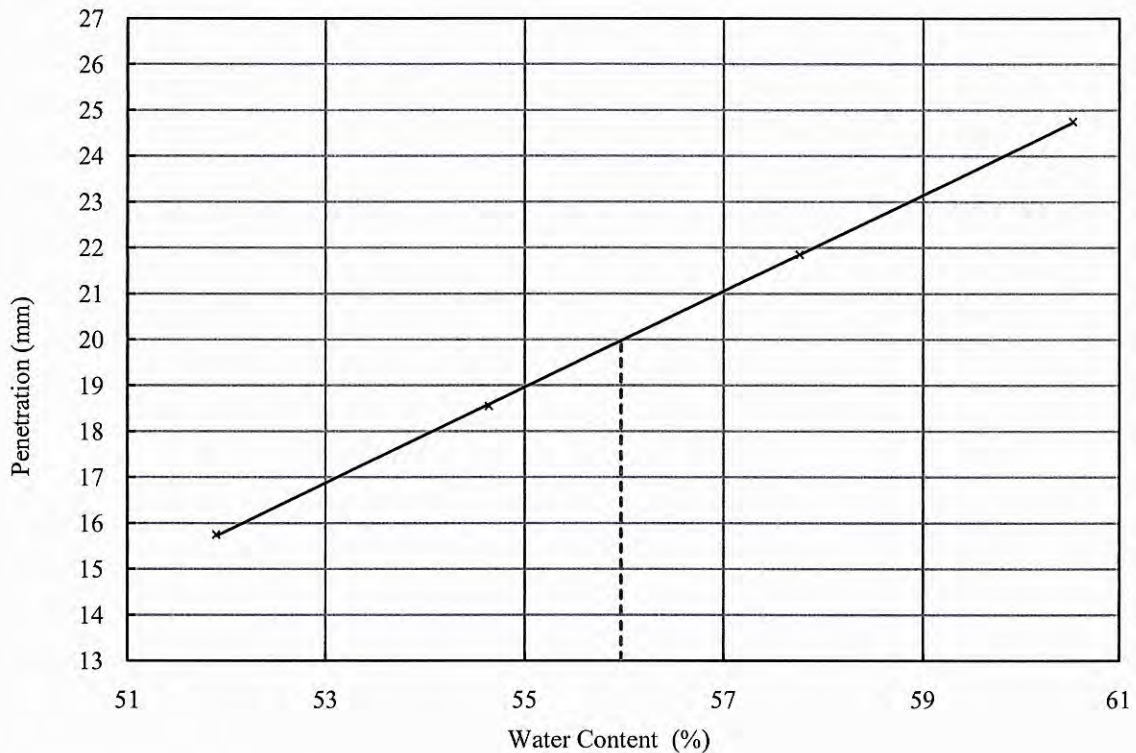


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]



History of sample: 1 Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.18	22.17	20.12	21.22	18.15	18.19
Dry Weight + Tare	(g)	15.24	16.40	15.17	15.64	15.62	15.69
Tare Weight	(g)	5.72	5.84	6.60	6.42	7.63	7.83
Water Content	(%)	51.89	54.64	57.76	60.52	31.66	31.81
Penetration	(mm)	15.75	18.55	21.85	24.75		
LIQUID LIMIT	(%)	56					
PLASTIC LIMIT	(%)	32					
PLASTICITY INDEX	(%)	24					

Soil Description : Light brownish yellow and reddish brown slightly Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH33

Sample No: TW3

Depth: 6.00m-6.70m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

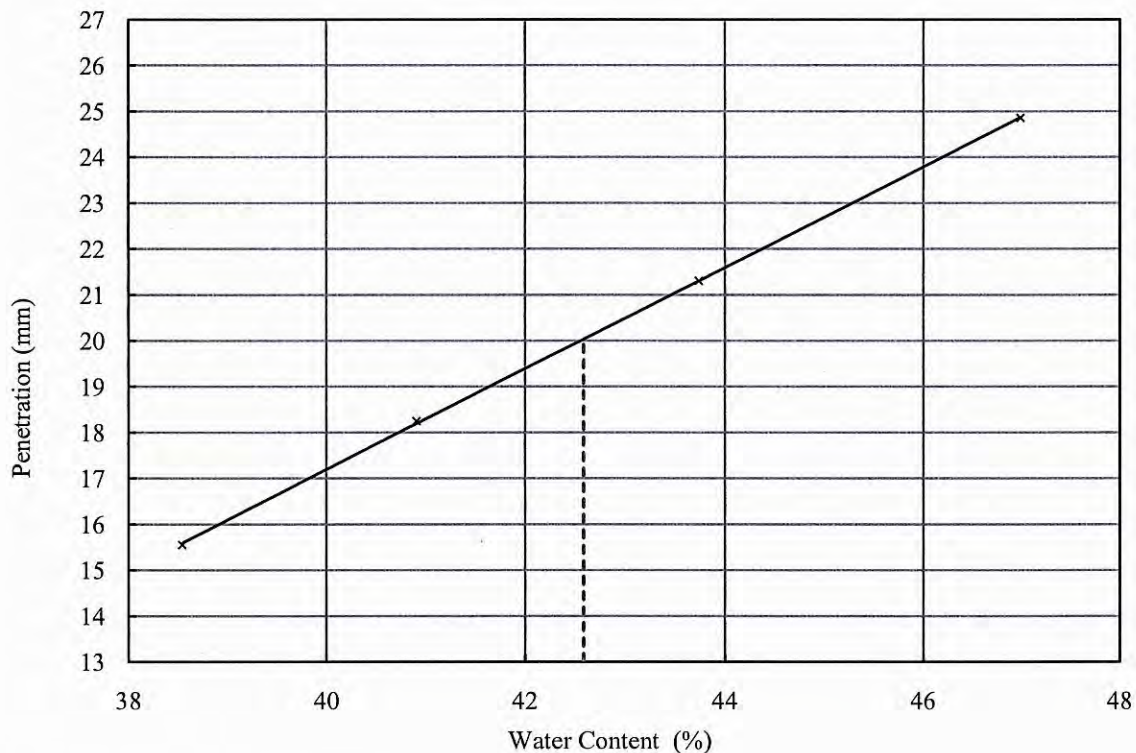


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

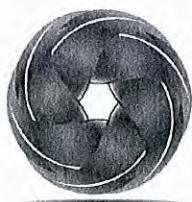


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	20.15	20.17	20.16	22.20	18.11	18.18
Dry Weight + Tare	(g)	16.20	16.30	15.83	17.29	15.84	15.86
Tare Weight	(g)	5.95	6.84	5.93	6.84	7.64	7.48
Water Content	(%)	38.54	40.91	43.74	46.99	27.68	27.68
Penetration	(mm)	15.55	18.25	21.30	24.85		
LIQUID LIMIT		(%)	43				
PLASTIC LIMIT		(%)	28				
PLASTICITY INDEX		(%)	15				

Soil Description : Light reddish brown and reddish orange Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH34

Sample No: TW1

Depth: 1.50m-2.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager

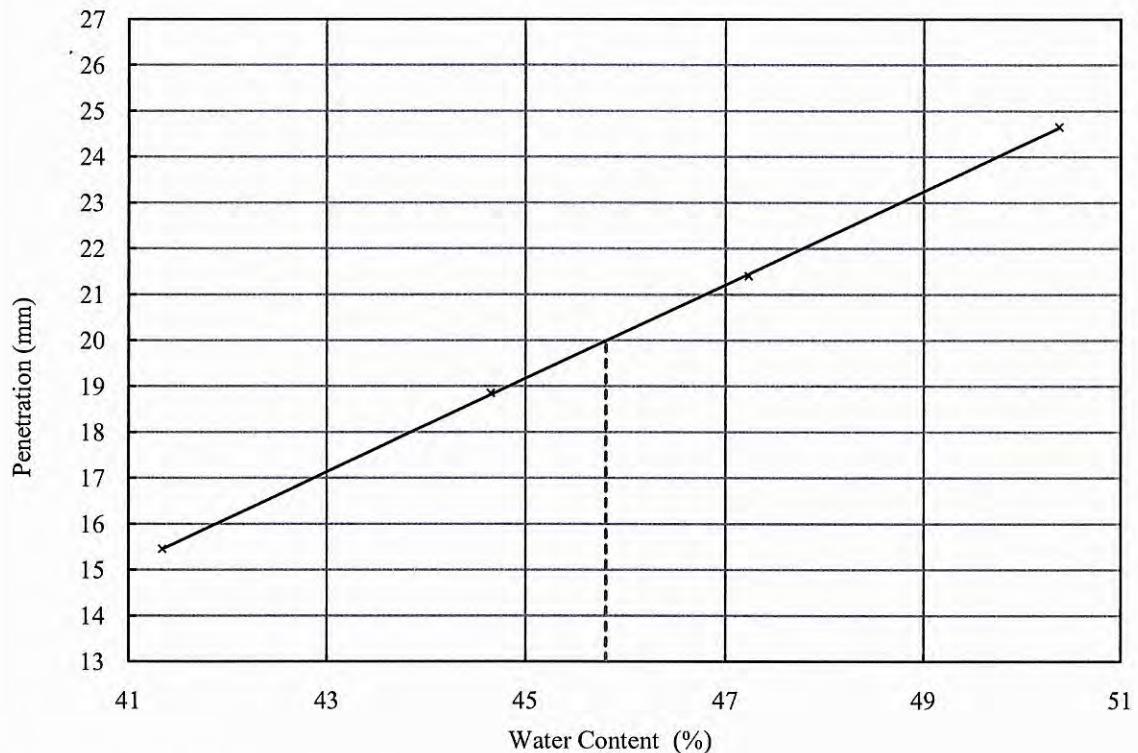


Cert No: LA-2015-0601-B

SOIL MATERIALS LABORATORY PTE LTD

ATTERBERG LIMIT BY CONE PENETROMETER METHOD

[TEST METHOD - BS 1377:1990-PART 2]

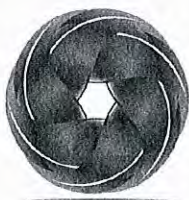


History of sample: † Natural

Percentage of Passing 0.425mm B.S.Sieve: N.A

		Liquid Limit (%)				Plastic Limit (%)	
Wet Weight + Tare	(g)	21.15	20.10	20.16	20.13	18.19	18.13
Dry Weight + Tare	(g)	16.83	15.72	15.98	15.33	15.78	15.82
Tare Weight	(g)	6.38	5.91	7.13	5.80	7.49	7.89
Water Content	(%)	41.34	44.65	47.23	50.37	29.07	29.13
Penetration	(mm)	15.45	18.85	21.40	24.65		
LIQUID LIMIT	(%)	46					
PLASTIC LIMIT	(%)	29					
PLASTICITY INDEX	(%)	17					

Soil Description : Light brownish yellow and pink Sandy SILT



Project: Sungei Tengah Road/Lorong Pasu

Job Ref: SML/345A/2022

Borehole No: BH34

Sample No: TW3

Depth: 4.50m-5.10m

Prepared Date: 25 January, 2023

Engineer: Si Thu Htun

Checked/Approved

Khin Maung Nyunt
Laboratory Manager



SOIL MATERIALS LABORATORY PTE LTD

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 1.50m-2.10m
Description: Olive brown and brownish yellow Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	171.4	176.5	180.1
Bulk Density ρ (Mg/m ³)	1.99	2.05	2.09
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

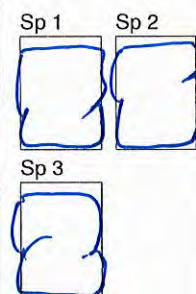
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	25	23	21
Dry Density ρ_{d0} (Mg/m ³)	1.58	1.66	1.73
Voids Ratio e_0	0.67	0.59	0.53
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	143.42	159.28	182.58
Membrane Correction σ_{mb} (kPa)	1.73	1.73	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	141.69	157.55	180.58
Strain at Failure ϵ_f %	16.16	16.37	20.05
Shear Strength c_u (kPa)	70.84	78.78	90.29
Moisture Content w_f %	25	23	21
Dry Density ρ_{df} (Mg/m ³)	1.58	1.66	1.73
Voids Ratio e_f	0.67	0.59	0.53
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 12/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: TW1
Borehole: BH2

Operator:

[Signature]

Checked:

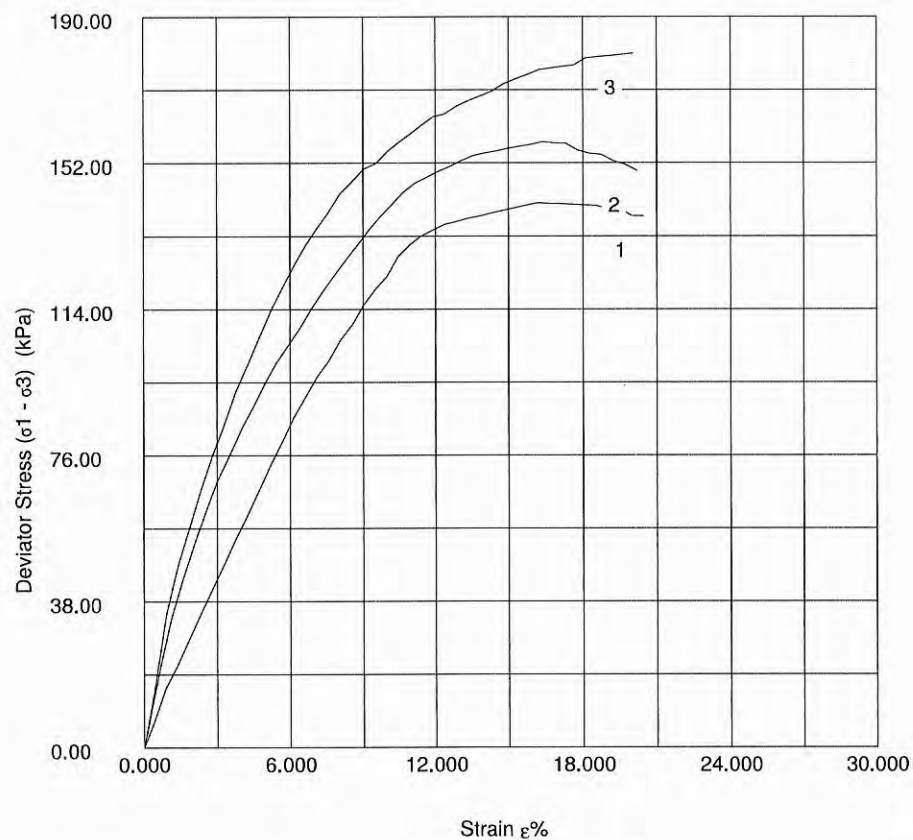
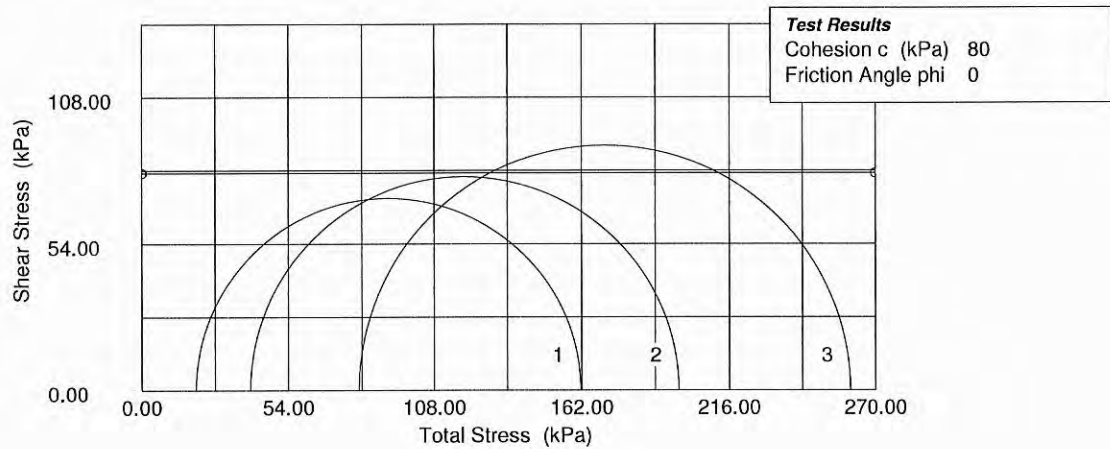
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Approved:

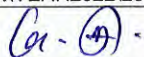
[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	12/01/23
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW1
	Jobfile:	W:\YEAR2022\2022\SML345AA.JOB	Borehole:	BH2
Operator:		Checked:	Approved:	
				

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 9.00m-9.30m
Description: Light brownish yellow and reddish yellow Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	170.2	171.6	172.7
Bulk Density ρ (Mg/m ³)	1.97	1.99	2.00
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

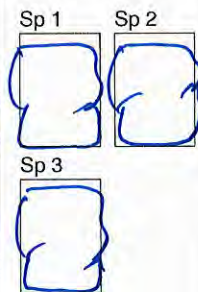
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	50.00	100.00	200.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	37	36	36
Dry Density ρ_{d0} (Mg/m ³)	1.44	1.46	1.47
Voids Ratio e_0	0.85	0.82	0.80
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	185.54	199.88	212.92
Membrane Correction σ_{mh} (kPa)	1.82	2.00	1.82
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	183.72	197.88	211.10
Strain at Failure ϵ_f %	17.16	20.46	17.30
Shear Strength c_u (kPa)	91.86	98.94	105.55
Moisture Content w_f %	37	36	36
Dry Density ρ_{df} (Mg/m ³)	1.44	1.46	1.47
Voids Ratio e_f	0.85	0.82	0.80
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 12/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: U2
Borehole: BH2

Operator:

Gr. A.

Checked:

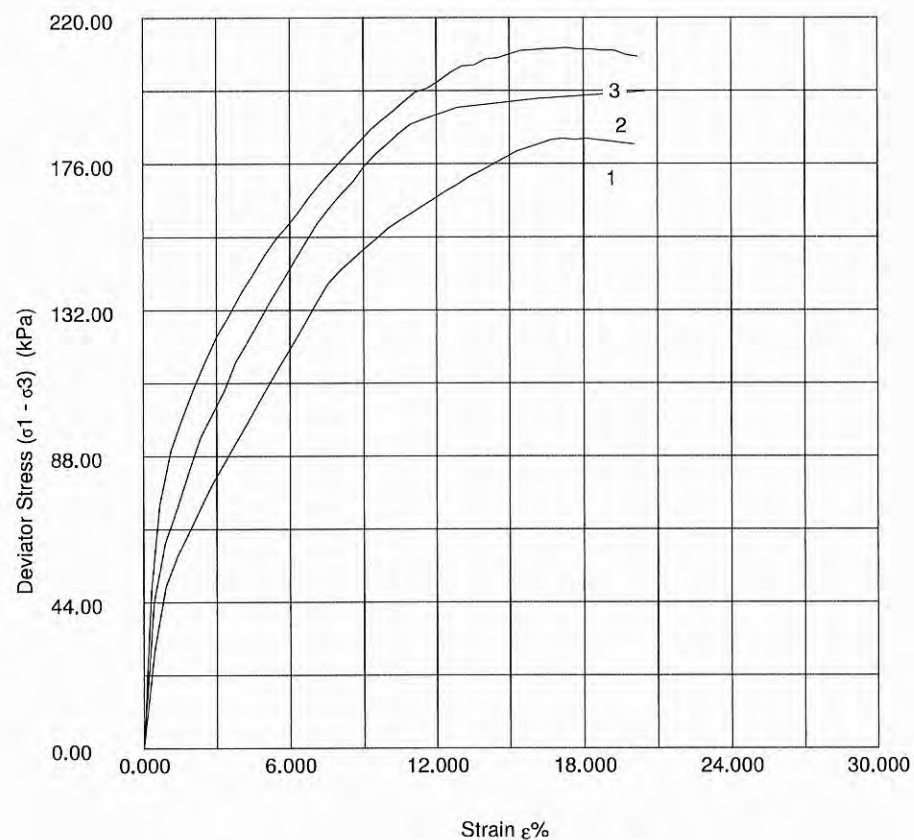
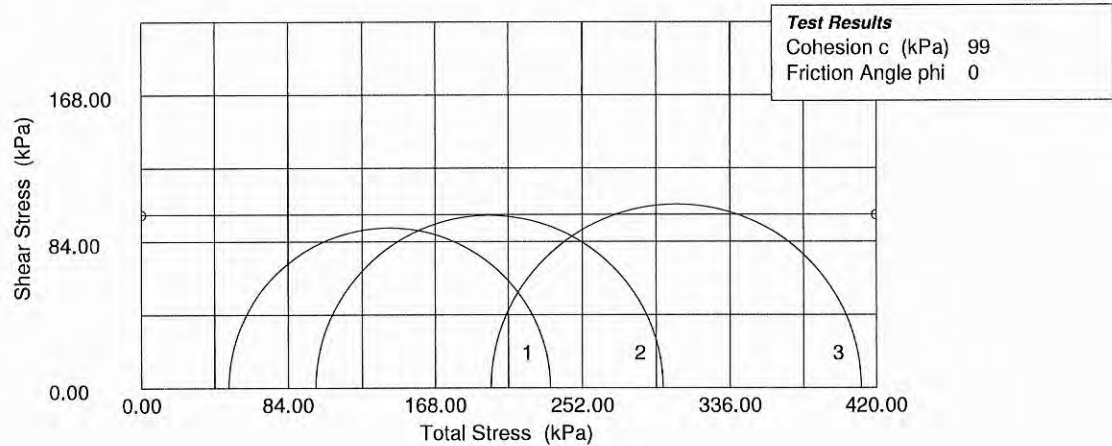
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	12/01/23
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	U2
	Jobfile:	W:\YEAR2022\2022\SML345AA.JOB	Borehole:	BH2
Operator:		Checked:	Approved:	

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.60m
Description: Brownish yellow and olive brown Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	169.3	171.4	176.5
Bulk Density ρ (Mg/m ³)	1.96	1.99	2.05
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

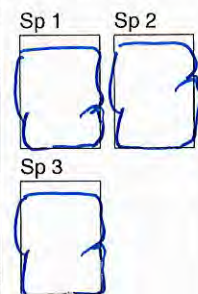
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	30	28	27
Dry Density ρ_{d0} (Mg/m ³)	1.51	1.55	1.61
Voids Ratio e_0	0.75	0.71	0.65
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	43.01	59.32	66.08
Membrane Correction σ_{mh} (kPa)	2.00	2.00	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	41.01	57.32	64.08
Strain at Failure ϵ_f %	20.03	19.91	20.28
Shear Strength c_u (kPa)	20.51	28.66	32.04
Moisture Content w_f %	30	28	27
Dry Density ρ_{df} (Mg/m ³)	1.51	1.55	1.61
Voids Ratio e_f	0.75	0.71	0.65
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 03/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: TW1
Borehole: BH3

Operator:

Gr. M.

Checked:

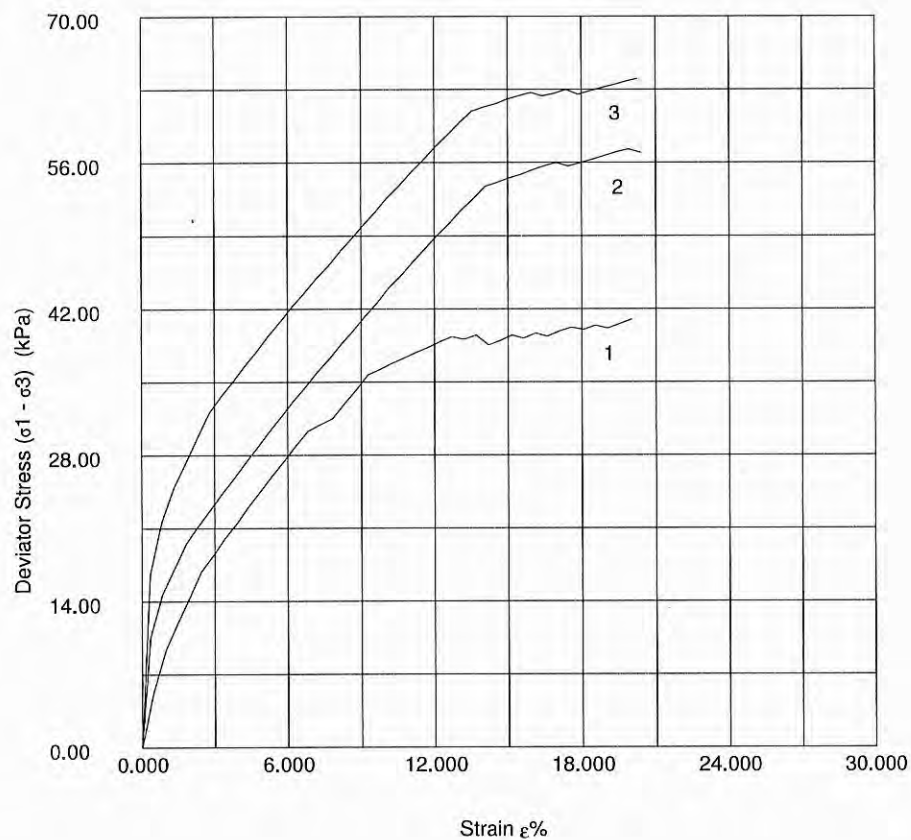
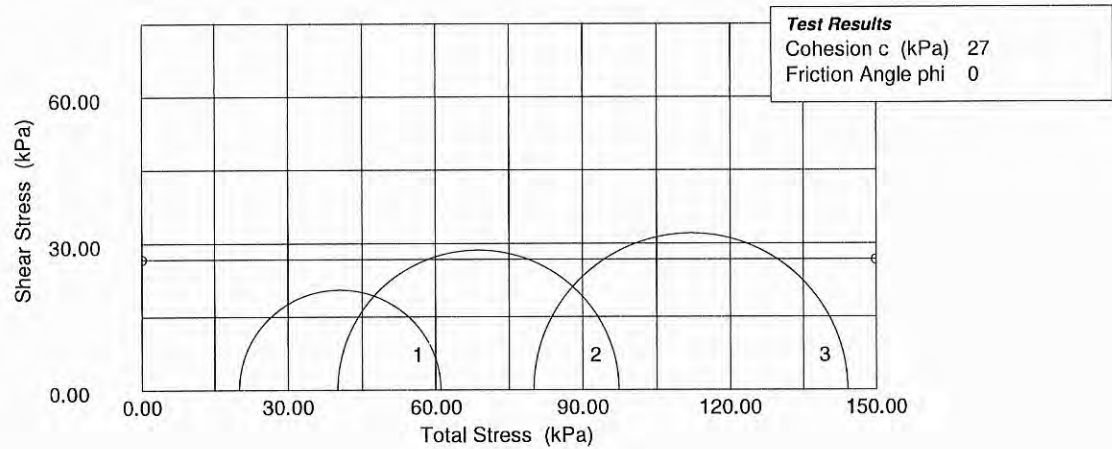
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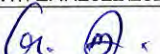
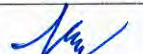
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Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	03/01/23
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW1
	Jobfile:	W:\YEAR2022\2022\SML345AA.JOB	Borehole:	BH3
Operator:		Checked:	Approved:	
				

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 6.00m-6.50m
Description: Light brownish yellow and reddish orange slightly Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	162.5	163.6	172.3
Bulk Density ρ (Mg/m ³)	1.89	1.90	2.00
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

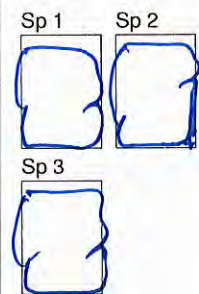
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	30.00	60.00	120.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	36	35	30
Dry Density ρ_{d0} (Mg/m ³)	1.38	1.41	1.54
Voids Ratio e_0	0.92	0.88	0.72
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	136.21	150.36	170.68
Membrane Correction σ_{mb} (kPa)	1.90	1.30	1.40
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	134.31	149.06	169.28
Strain at Failure ϵ_f %	17.83	11.18	12.01
Shear Strength c_u (kPa)	67.16	74.53	84.64
Moisture Content w_f %	36	35	30
Dry Density ρ_{df} (Mg/m ³)	1.38	1.41	1.54
Voids Ratio e_f	0.92	0.88	0.72
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



(Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)

Test name UU (SS, MS)
Date of Test: 03/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: U2
Borehole: BH3

Operator:

Gr. A.

Checked:

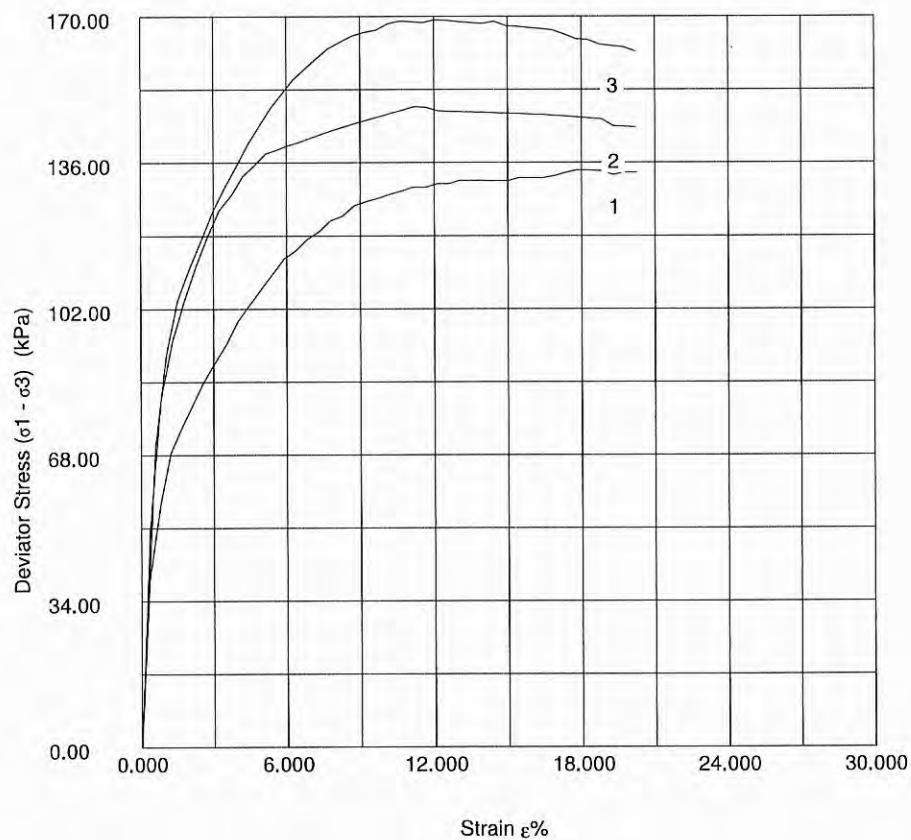
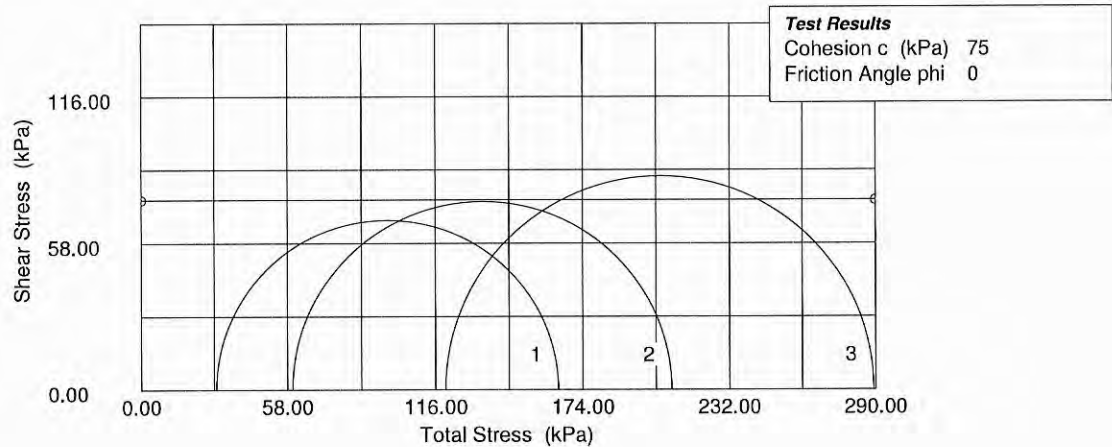
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 03/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: U2
Borehole: BH3

Operator:

Operator Signature

Checked:

Checked Signature

Approved:

Approved Signature

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.60m
Description: Light yellowish brown and light red Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	171.6	172.3	173.1
Bulk Density ρ (Mg/m ³)	1.99	2.00	2.01
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

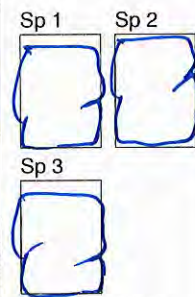
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	43	41	40
Dry Density ρ_{d0} (Mg/m ³)	1.39	1.41	1.44
Voids Ratio e_0	0.90	0.88	0.84
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	50.69	55.52	62.36
Membrane Correction σ_{mh} (kPa)	1.90	1.82	1.90
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	48.79	53.70	60.46
Strain at Failure ϵ_f %	17.88	17.14	17.76
Shear Strength c_u (kPa)	24.39	26.85	30.23
Moisture Content w_f %	43	41	40
Dry Density ρ_{df} (Mg/m ³)	1.39	1.41	1.44
Voids Ratio e_f	0.90	0.88	0.84
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



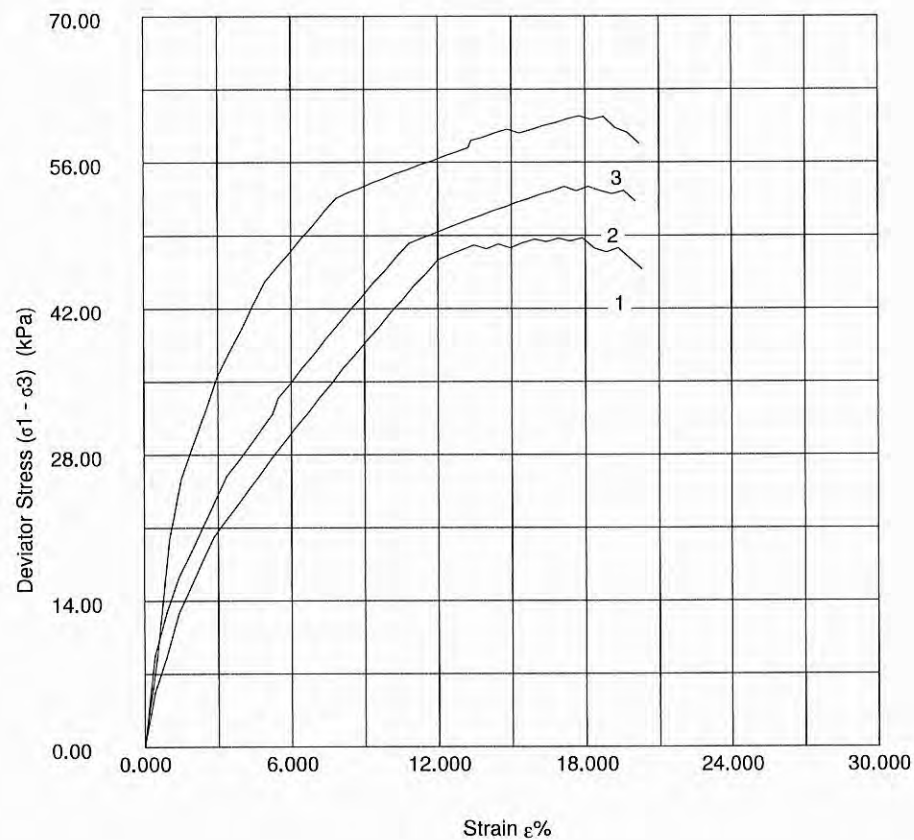
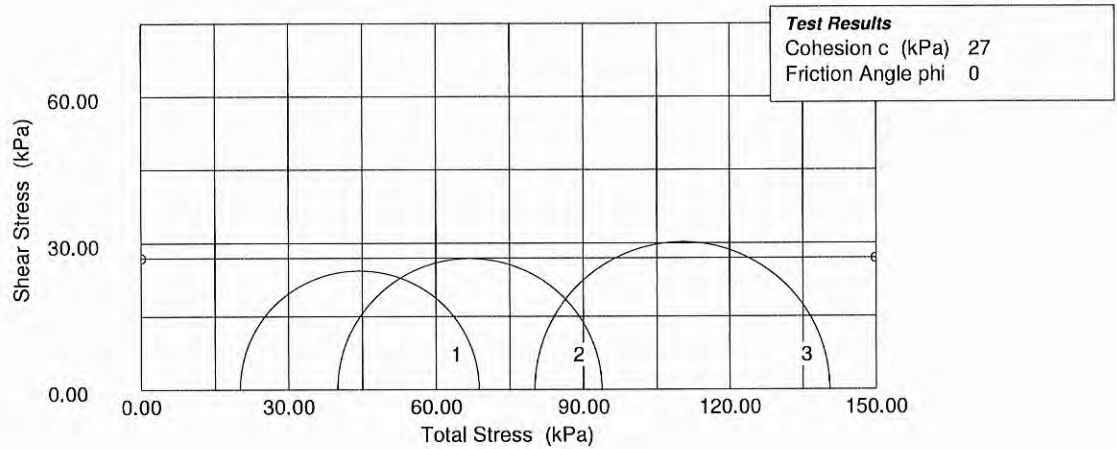
Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	07/01/23
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW2
	Jobfile:	W:\YEAR2022\2022\SML345AA.JOB	Borehole:	BH4
	Operator:		Checked:	
			Approved:	

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 07/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: TW2
Borehole: BH4

Operator:

G. A.

Checked:

S

Approved:

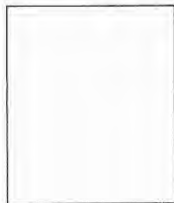
N

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 9.00m-9.50m
Description: Reddish brown and brownish yellow Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	166.4	167.2	175.8
Bulk Density ρ (Mg/m ³)	1.93	1.94	2.04
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

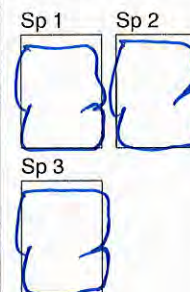
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	50.00	100.00	200.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	33	32	34
Dry Density ρ_{d0} (Mg/m ³)	1.45	1.46	1.52
Voids Ratio e_0	0.83	0.81	0.74
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	189.42	202.88	236.92
Membrane Correction σ_{mb} (kPa)	1.82	1.90	1.30
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	187.60	200.98	235.62
Strain at Failure ϵ_f %	16.74	18.12	11.03
Shear Strength c_u (kPa)	93.80	100.49	117.81
Moisture Content w_f %	33	32	34
Dry Density ρ_{df} (Mg/m ³)	1.45	1.46	1.52
Voids Ratio e_f	0.83	0.81	0.74
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 07/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: U3
Borehole: BH4

Operator:

G. D.

Checked:

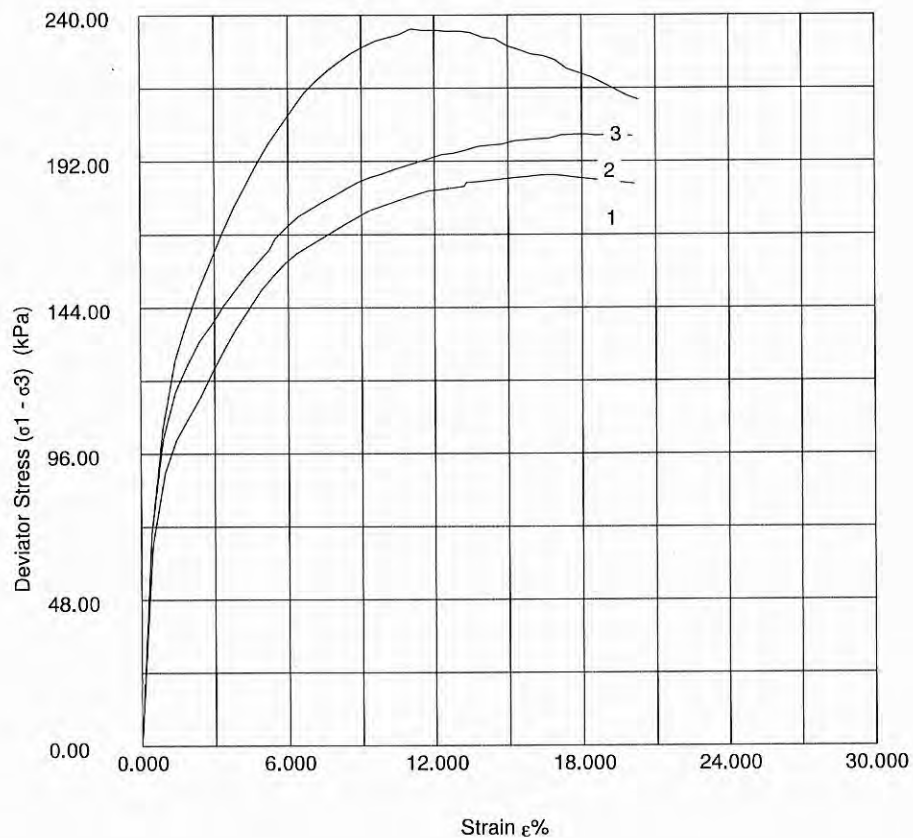
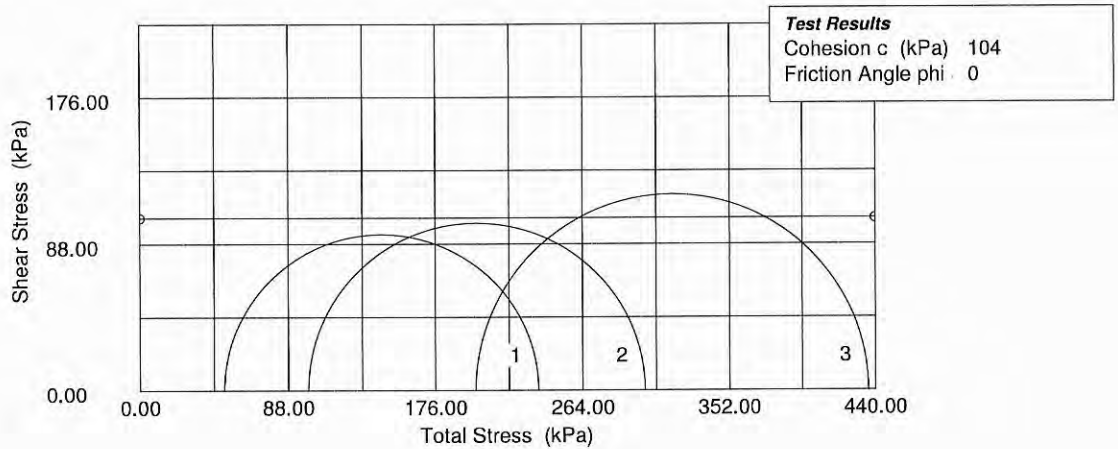
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Operator:

Ch. A.

Checked:

[Signature]

Test name UU (SS, MS)
Date of Test: 07/01/23

Sample: U3
Borehole: BH4

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth: 1.50m-2.10m
Description: Light olive brown and brownish grey very Silty SAND

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	173.1	174.5	175.3
Bulk Density ρ (Mg/m ³)	2.01	2.02	2.03
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

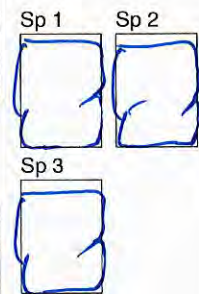
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	15
Load Channel	18	18	16
Moisture Content w_0 %	17	16	15
Dry Density ρ_{d0} (Mg/m ³)	1.71	1.74	1.76
Voids Ratio e_0	0.55	0.52	0.50
Deg of Saturation S_0 %	83.40	83.03	81.29

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	88.68	98.40	105.72
Membrane Correction σ_{mb} (kPa)	1.20	1.40	1.40
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	87.48	97.00	104.32
Strain at Failure ϵ_f %	10.20	12.13	11.84
Shear Strength c_u (kPa)	43.74	48.50	52.16
Moisture Content w_f %	17	16	15
Dry Density ρ_{df} (Mg/m ³)	1.71	1.74	1.76
Voids Ratio e_f	0.55	0.52	0.50
Deg of Saturation S_f %	83.40	83.03	81.29

Notes:

Failure Sketch



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name: UU (SS, MS)
Date of Test: 09/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: TW1
Borehole: BH5

Operator:

Ger - A

Checked:

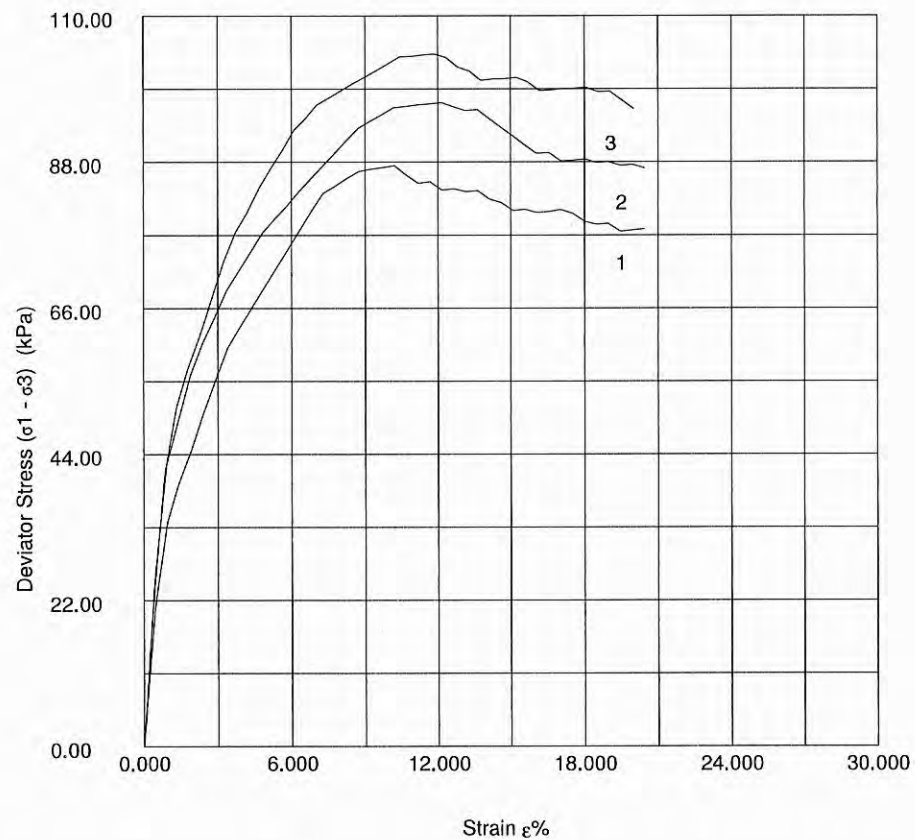
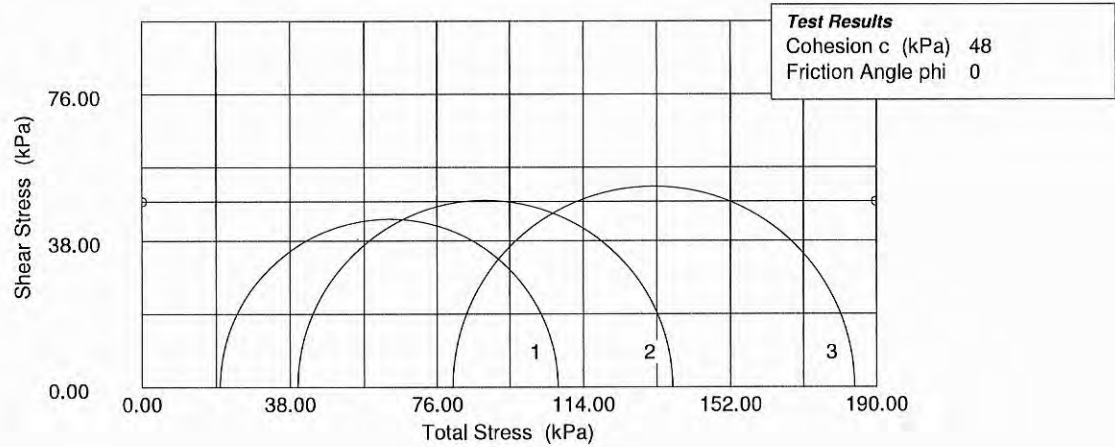
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Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)	
			Date of Test: 09/01/23	
	Site Reference: Sungei Tengah Road/Lorong Pasu		Sample: TW1	
	Jobfile: W:\YEAR2022\2022\SML345AA.JOB		Borehole: BH5	
Operator:		Checked:		Approved:

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 6.00m-6.70m
Description: Light brownish yellow and reddish orange Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	158	158.8	161.4
Bulk Density ρ (Mg/m ³)	1.83	1.84	1.87
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

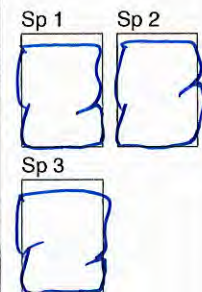
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	30.00	60.00	120.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	39	39	40
Dry Density ρ_{d0} (Mg/m ³)	1.32	1.33	1.34
Voids Ratio e_0	1.01	0.99	0.98
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	111.10	133.70	157.10
Membrane Correction σ_{mh} (kPa)	1.73	1.95	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	109.37	131.75	155.10
Strain at Failure ϵ_f %	16.00	19.34	20.46
Shear Strength c_u (kPa)	54.68	65.88	77.55
Moisture Content w_f %	39	39	40
Dry Density ρ_{df} (Mg/m ³)	1.32	1.33	1.34
Voids Ratio e_f	1.01	0.99	0.98
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 09/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: TW4
Borehole: BH5

Operator:

[Signature]

Checked:

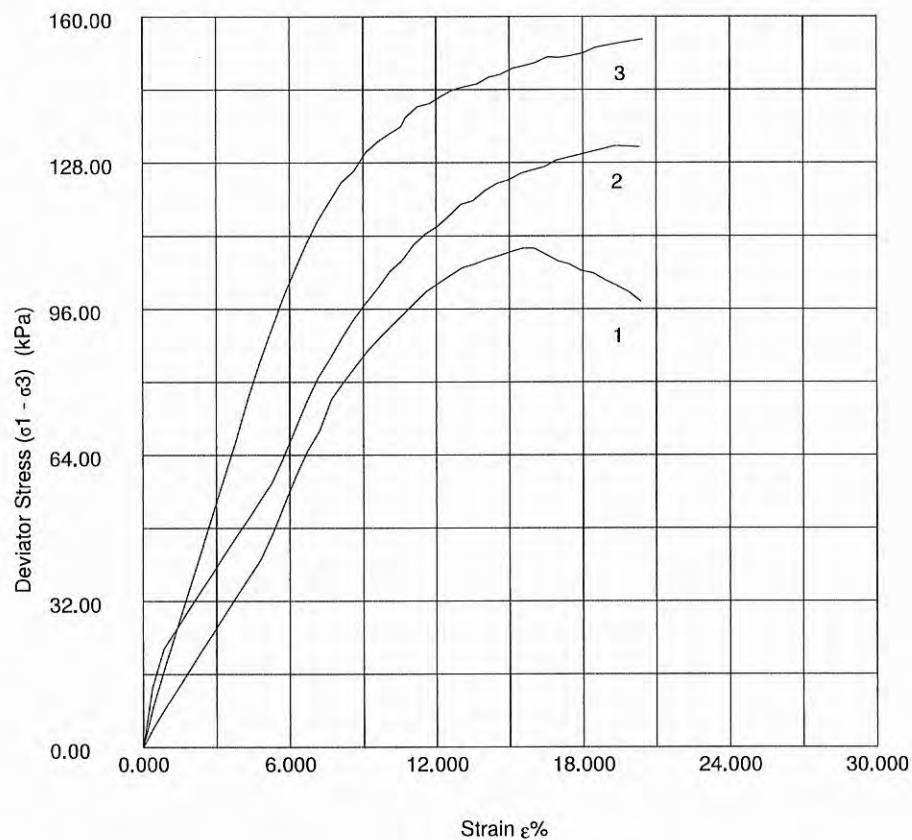
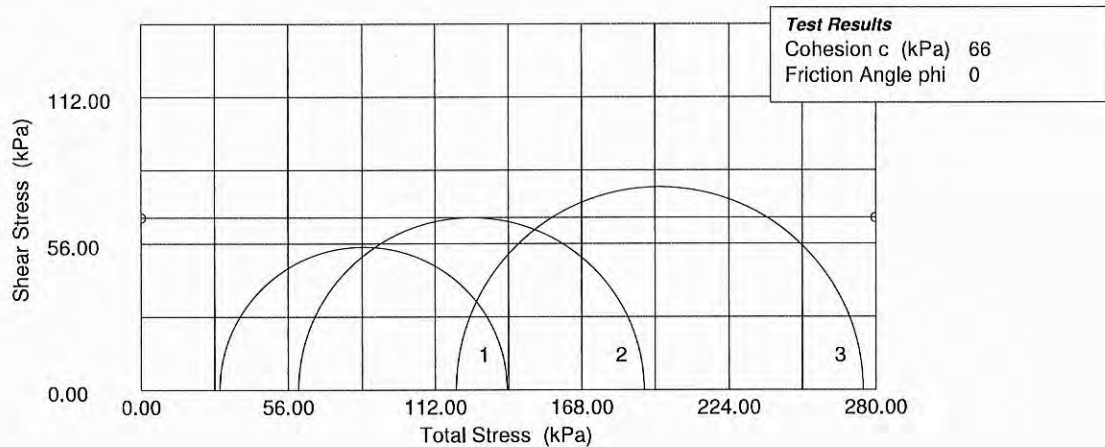
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Approved:

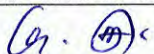
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Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)	
			Date of Test: 09/01/23	
	Site Reference: Sungei Tengah Road/Lorong Pasu		Sample: TW4	
	Jobfile: W:\YEAR2022\2022\SML345AA.JOB		Borehole: BH5	
Operator: 		Checked: 		Approved: 

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.60m
Description: Light olive brown Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	163.5	163.5	171.7
Bulk Density ρ (Mg/m ³)	1.90	1.90	1.99
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

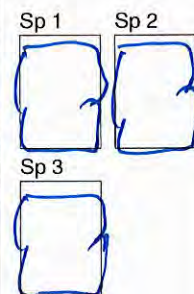
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	38	35	33
Dry Density ρ_{d0} (Mg/m ³)	1.38	1.40	1.50
Voids Ratio e_0	0.92	0.89	0.77
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	61.39	68.73	73.70
Membrane Correction σ_{mh} (kPa)	1.95	1.82	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	59.44	66.91	71.70
Strain at Failure ϵ_f %	19.04	17.08	20.39
Shear Strength c_u (kPa)	29.72	33.45	35.85
Moisture Content w_f %	38	35	33
Dry Density ρ_{df} (Mg/m ³)	1.38	1.40	1.50
Voids Ratio e_f	0.92	0.89	0.77
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 05/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: TW2
Borehole: BH6

Operator:

[Signature]

Checked:

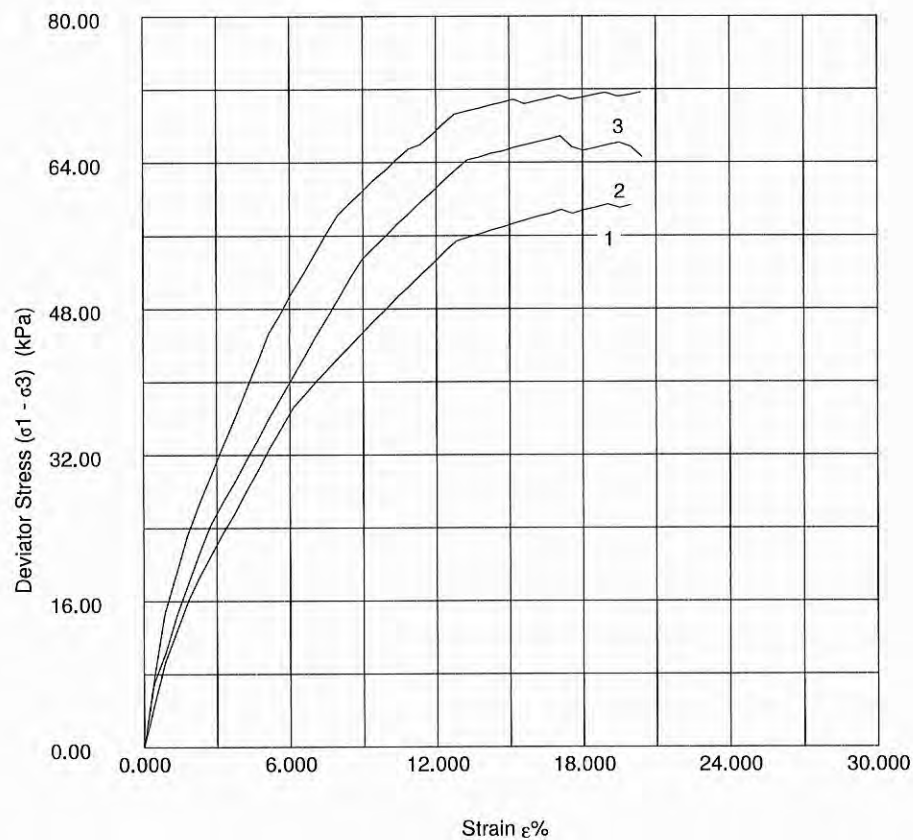
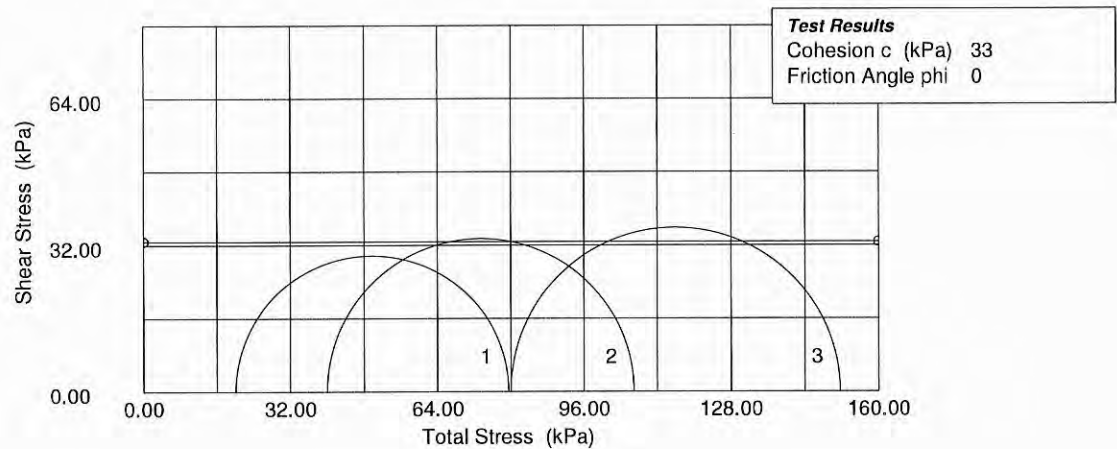
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 05/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: TW2
Borehole: BH6

Operator:

(Signature)

Checked:

(Signature)

Approved:

(Signature)

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth	4.50m-5.10m		
Description:	Reddish orange and brownish yellow Sandy SILT		
Type	Specimen 1	Specimen 2	Specimen 3
	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	164.5	167.2	170.7
Bulk Density ρ (Mg/m ³)	1.91	1.94	1.98
Particle Density ρ_s	2.65	2.65	2.65
	(assumed)	(assumed)	(assumed)

Initial Conditions

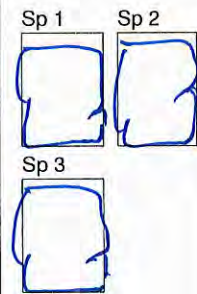
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	30.00	60.00	120.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	33	32	31
Dry Density ρ_{d0} (Mg/m ³)	1.43	1.47	1.51
Voids Ratio e_0	0.85	0.80	0.75
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	110.00	131.93	143.83
Membrane Correction σ_{mh} (kPa)	1.73	1.58	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	108.27	130.35	141.83
Strain at Failure ϵ_f %	16.28	14.50	20.04
Shear Strength c_u (kPa)	54.13	65.18	70.91
Moisture Content w_f %	33	32	31
Dry Density ρ_{df} (Mg/m ³)	1.43	1.47	1.51
Voids Ratio e_f	0.85	0.80	0.75
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 05/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: TW3
Borehole: BH6

Operator:

Lee D.

Checked:

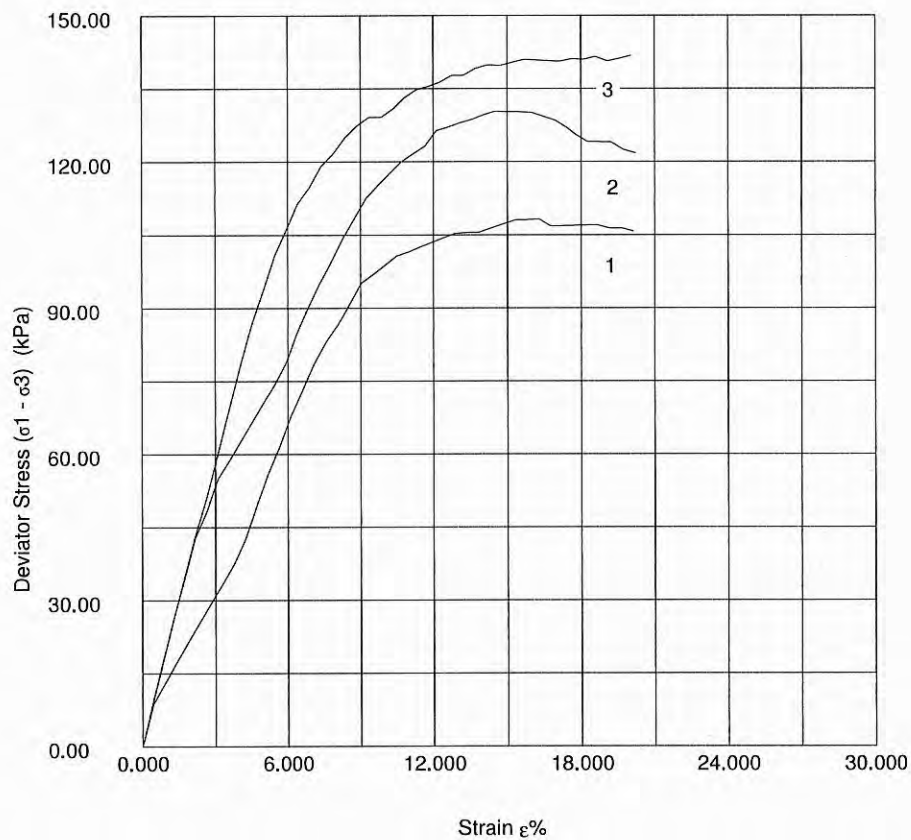
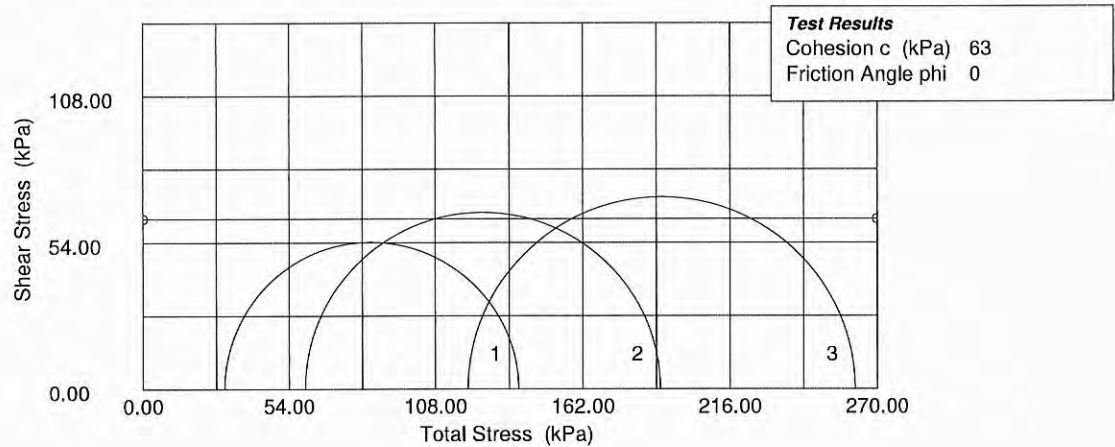
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Approved:

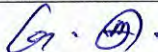
[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)	
			Date of Test: 05/01/23	
	Site Reference: Sungei Tengah Road/Lorong Pasu		Sample: TW3	
	Jobfile: W:\YEAR2022\2022\SML345AA.JOB		Borehole: BH6	
Operator: 		Checked: 		Approved: 

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 1.50m-2.10m
Description: Light olive brown and reddish orange Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	160.5	161.6	162.3
Bulk Density ρ (Mg/m ³)	1.86	1.87	1.88
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

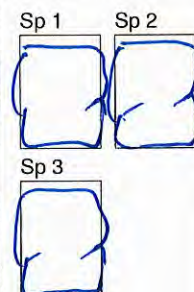
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	35	34	32
Dry Density ρ_{d0} (Mg/m ³)	1.37	1.40	1.42
Voids Ratio e_0	0.93	0.89	0.86
Deg of Saturation S_0 %	100.00	100.00	99.43

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	97.58	104.86	110.73
Membrane Correction σ_{mh} (kPa)	1.90	1.90	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	95.68	102.96	108.73
Strain at Failure ϵ_f %	18.03	17.99	20.01
Shear Strength c_u (kPa)	47.84	51.48	54.36
Moisture Content w_f %	35	34	32
Dry Density ρ_{df} (Mg/m ³)	1.37	1.40	1.42
Voids Ratio e_f	0.93	0.89	0.86
Deg of Saturation S_f %	100.00	100.00	99.43

Notes:

Failure Sketch



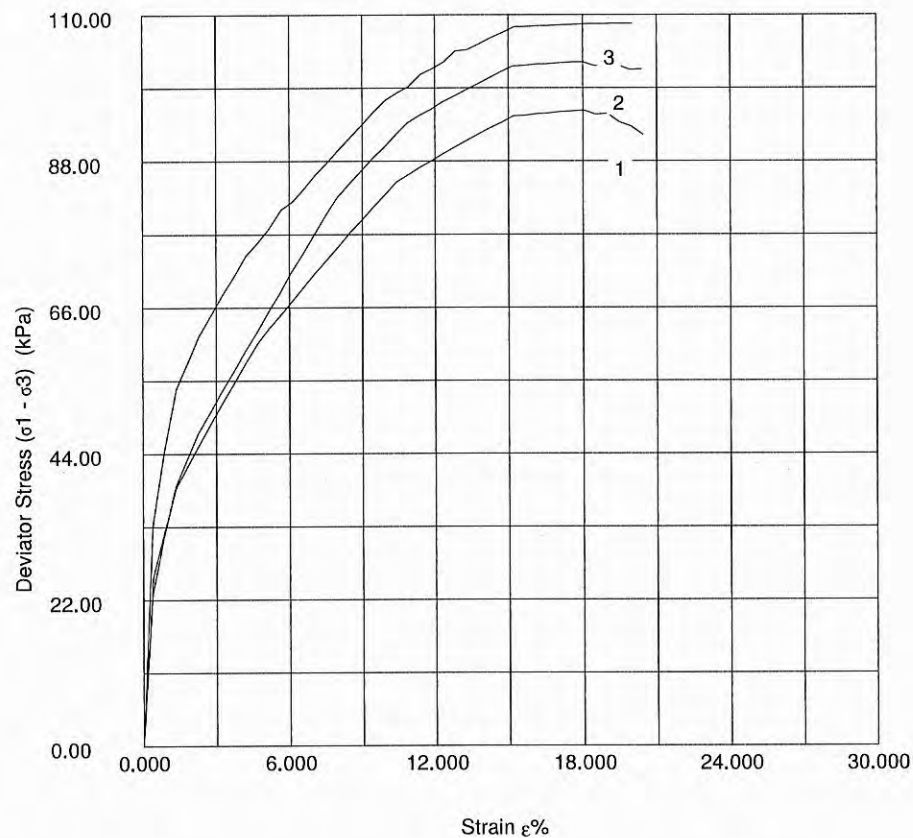
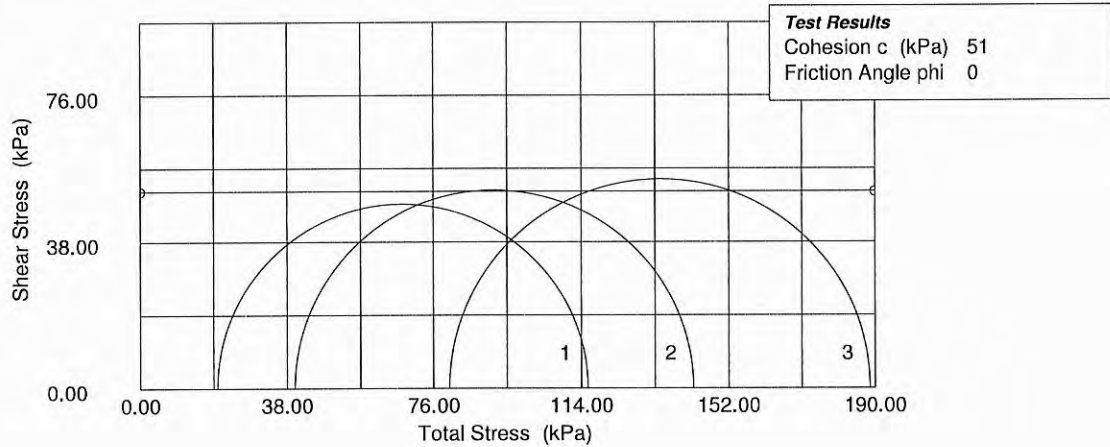
Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)	
			Date of Test: 05/01/23	
	Site Reference: Sungei Tengah Road/Lorong Pasu		Sample: TW1	
	Jobfile: W:\YEAR2022\2022\SML345AA.JOB		Borehole: BH7	
Operator:		Checked:		Approved:

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 05/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: TW1
Borehole: BH7

Operator: *[Signature]*

Checked: *[Signature]*

Approved: *[Signature]*

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.60m
Description: Dark brownish grey and reddish brown Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	142	142.3	149.5
Bulk Density ρ (Mg/m ³)	1.65	1.65	1.73
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

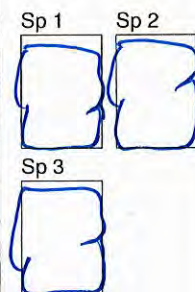
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	48	48	46
Dry Density ρ_{d0} (Mg/m ³)	1.11	1.12	1.19
Voids Ratio e_0	1.38	1.37	1.23
Deg of Saturation S_0 %	92.19	92.40	99.05

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	83.22	90.98	107.13
Membrane Correction σ_{mh} (kPa)	1.58	2.00	1.95
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	81.64	88.98	105.18
Strain at Failure ϵ_f %	14.20	20.01	19.00
Shear Strength c_u (kPa)	40.82	44.49	52.59
Moisture Content w_f %	48	48	46
Dry Density ρ_{df} (Mg/m ³)	1.11	1.12	1.19
Voids Ratio e_f	1.38	1.37	1.23
Deg of Saturation S_f %	92.19	92.40	99.05

Notes:

Failure Sketch



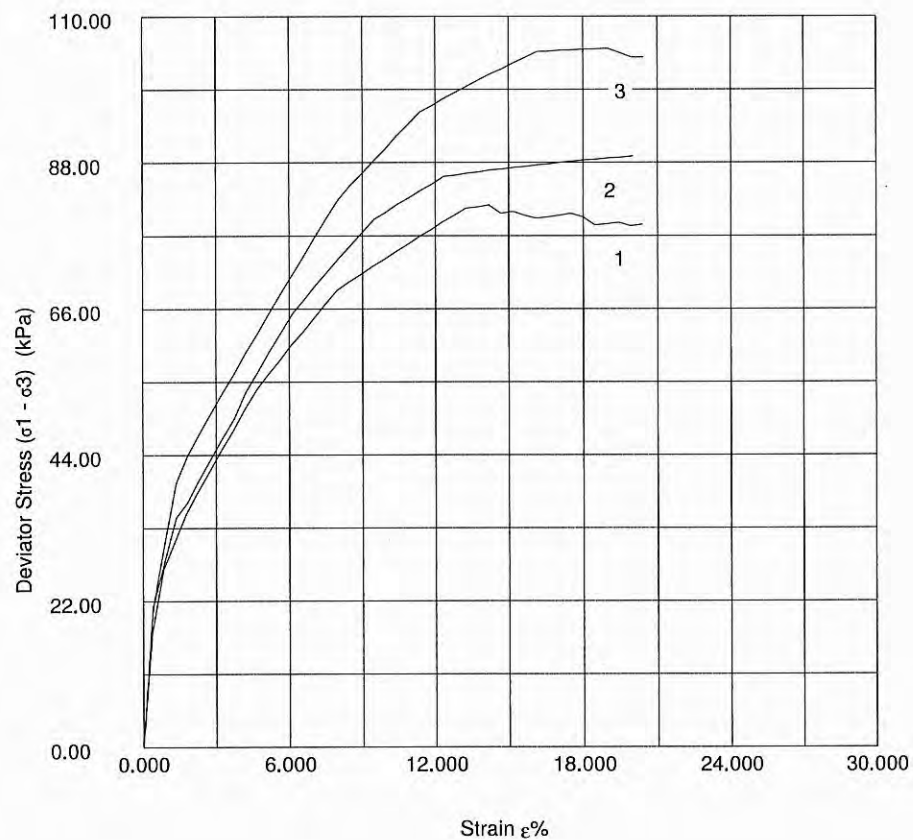
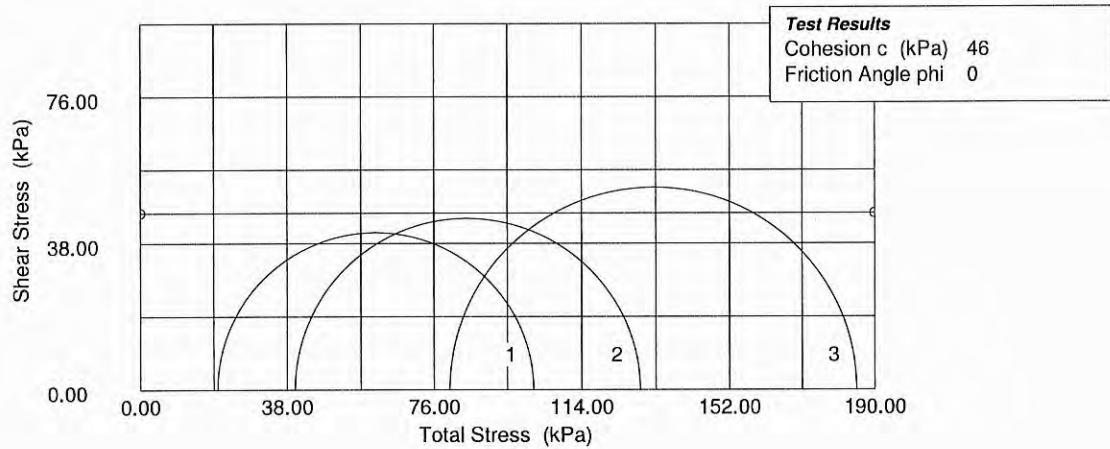
Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	05/01/23
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW2
	Jobfile:	W:\YEAR2022\2022\SML345AA.JOB	Borehole:	BH7
Operator:		Checked:	Approved:	

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 05/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: TW2
Borehole: BH7

Operator: *[Signature]*

Checked: *[Signature]*

Approved: *[Signature]*

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 4.50m-5.10m
Description: Light brownish yellow and reddish orange slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	147	147.5	151.6
Bulk Density ρ (Mg/m ³)	1.71	1.71	1.76
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

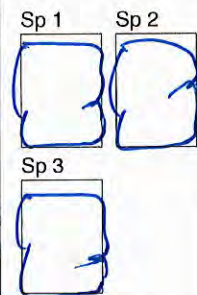
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	52	51	50
Dry Density ρ_{d0} (Mg/m ³)	1.12	1.13	1.17
Voids Ratio e_0	1.36	1.34	1.26
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	157.17	172.60	189.95
Membrane Correction σ_{mh} (kPa)	1.20	1.30	1.10
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	155.97	171.30	188.85
Strain at Failure ϵ_f %	9.97	10.62	9.49
Shear Strength c_u (kPa)	77.99	85.65	94.42
Moisture Content w_f %	52	51	50
Dry Density ρ_{df} (Mg/m ³)	1.12	1.13	1.17
Voids Ratio e_f	1.36	1.34	1.26
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 09/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: TW3
Borehole: BH8

Operator:

Chen - (A)

Checked:

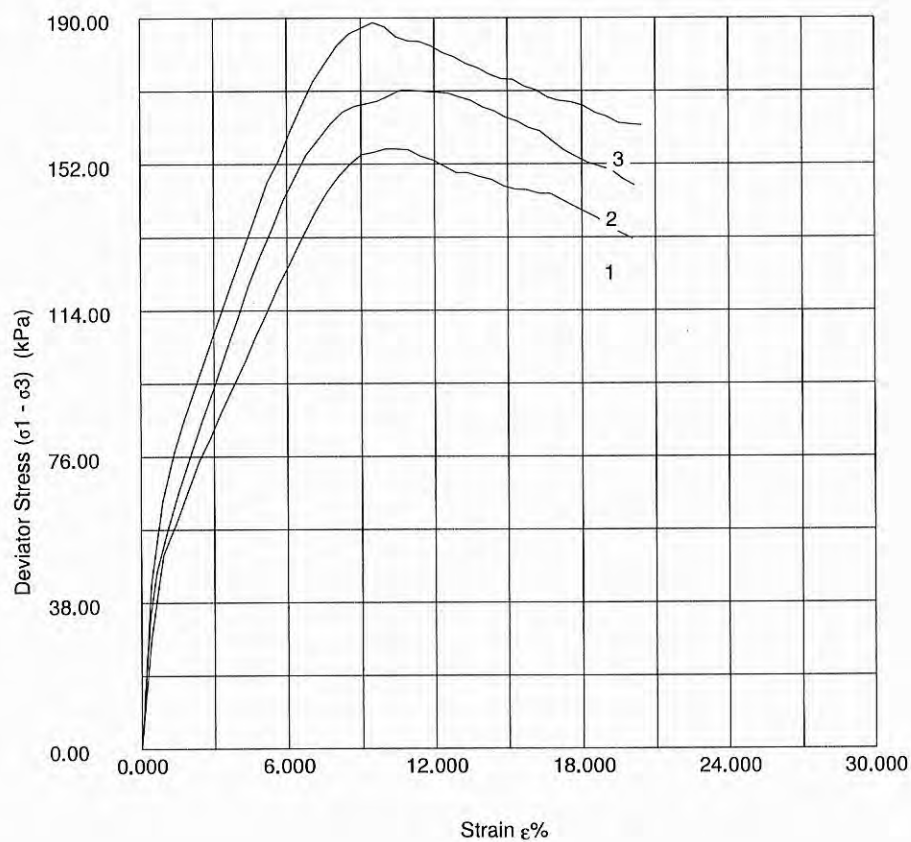
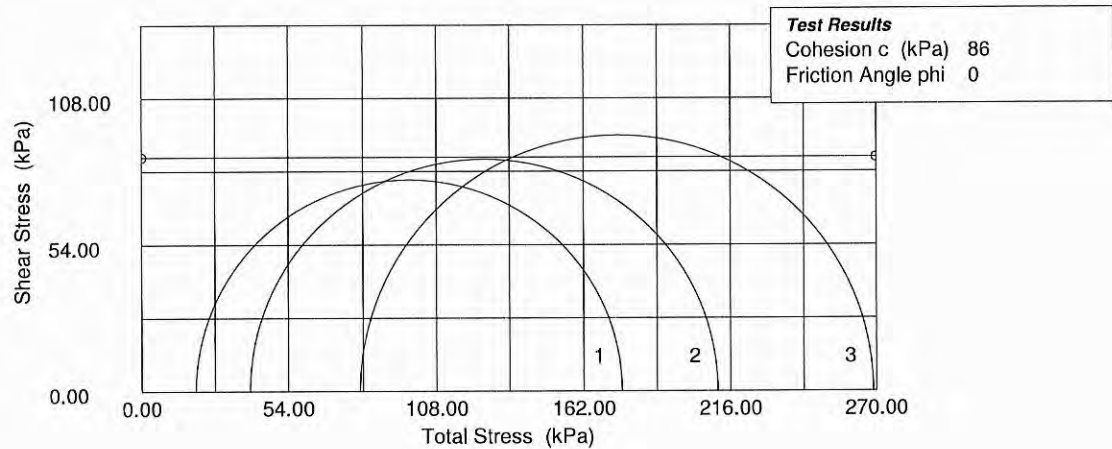
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



(Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)

Test name UU (SS, MS)
Date of Test: 09/01/23

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: TW3
Borehole: BH8

Operator:

Q. M.

Checked:

S

Approved:

N

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 9.00m-9.70m
Description: Reddish orange and light brownish yellow Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	156.2	158.8	162.7
Bulk Density ρ (Mg/m ³)	1.81	1.84	1.89
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

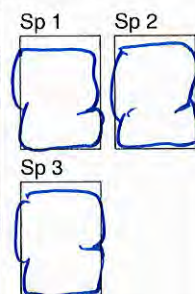
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	40.00	80.00	160.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	41	40	40
Dry Density ρ_{d0} (Mg/m ³)	1.29	1.32	1.35
Voids Ratio e_0	1.06	1.01	0.96
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	93.31	106.52	116.44
Membrane Correction σ_{mh} (kPa)	2.00	1.95	1.90
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	91.31	104.57	114.54
Strain at Failure ϵ_f %	20.43	19.46	18.49
Shear Strength c_u (kPa)	45.65	52.29	57.27
Moisture Content w_f %	41	40	40
Dry Density ρ_{df} (Mg/m ³)	1.29	1.32	1.35
Voids Ratio e_f	1.06	1.01	0.96
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 09/01/23

Site Reference: Sungai Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345AA.JOB

Sample: TW5
Borehole: BH8

Operator:

[Signature]

Checked:

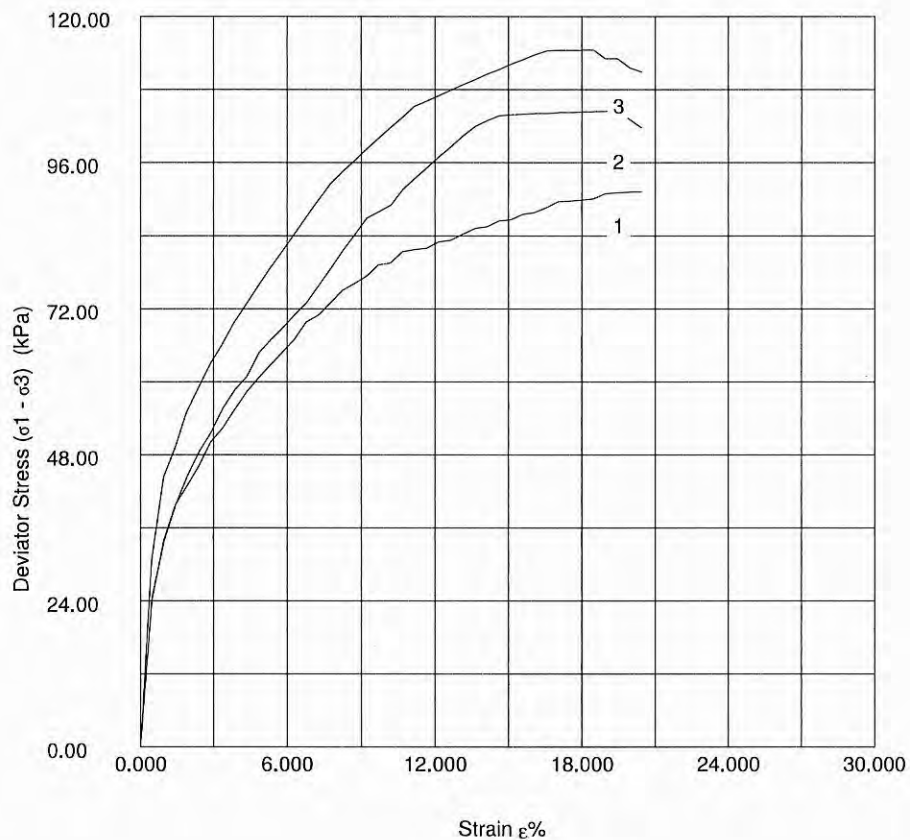
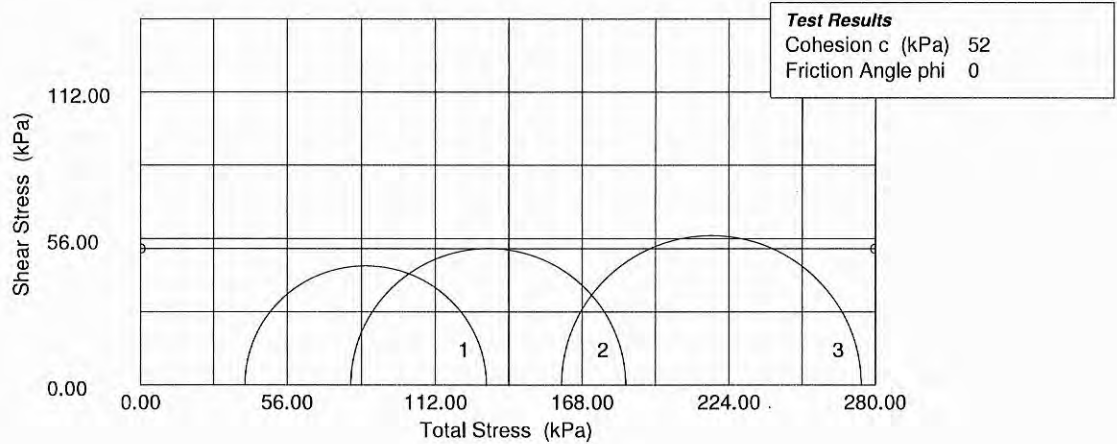
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Approved:

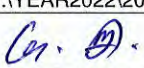
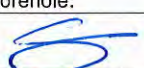
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Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	09/01/23
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW5
	Jobfile:	W:\YEAR2022\2022\SML345AA.JOB	Borehole:	BH8
Operator:		Checked:	Approved:	
				

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth	1.50m-2.10m		
Description:	Light brownish yellow and reddish orange Sandy SILT		
Type	Specimen 1	Specimen 2	Specimen 3
	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	154.7	155.3	157.7
Bulk Density ρ (Mg/m ³)	1.79	1.80	1.83
Particle Density ρ_s	2.65	2.65	2.65
	(assumed)	(assumed)	(assumed)

Initial Conditions

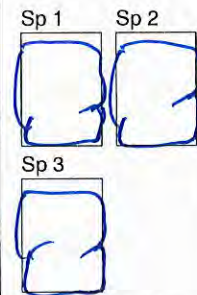
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	44	43	44
Dry Density ρ_{d0} (Mg/m ³)	1.24	1.26	1.27
Voids Ratio e_0	1.13	1.10	1.09
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	53.22	63.68	68.79
Membrane Correction σ_{mh} (kPa)	2.00	1.82	1.90
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	51.22	61.86	66.89
Strain at Failure ϵ_f %	19.53	16.99	17.88
Shear Strength c_u (kPa)	25.61	30.93	33.44
Moisture Content w_f %	44	43	44
Dry Density ρ_{df} (Mg/m ³)	1.24	1.26	1.27
Voids Ratio e_f	1.13	1.10	1.09
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch

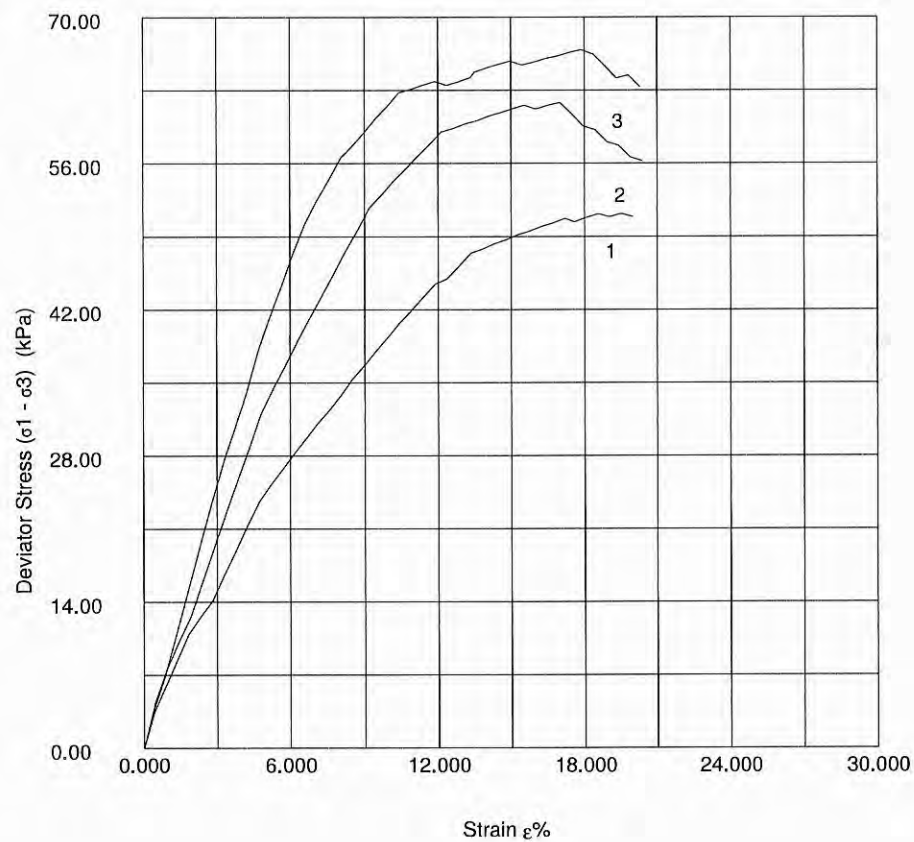
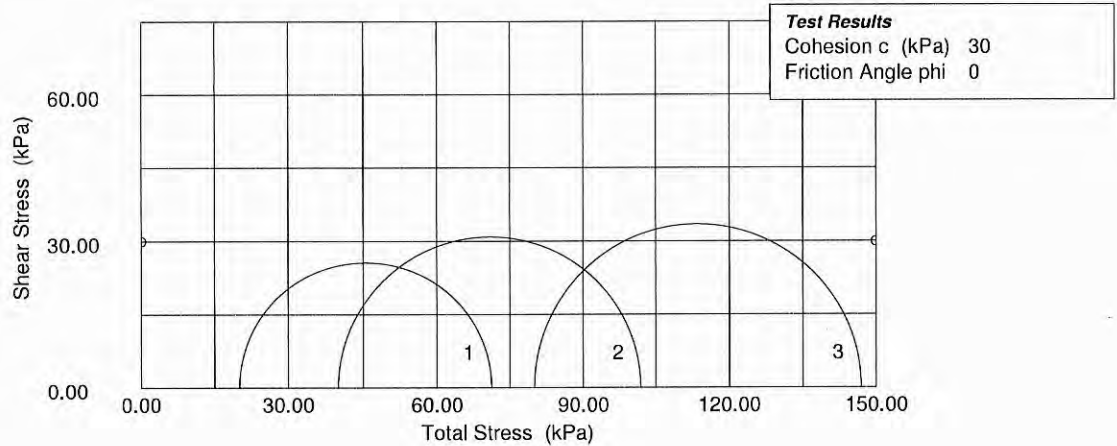


SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	12/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW1
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH9
Operator:		Checked:		Approved:

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	12/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW1
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH9
Operator:		Checked:	Approved:	

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.60m
Description: Reddish orange and brownish yellow slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	150.7	154.2	155.3
Bulk Density ρ (Mg/m ³)	1.75	1.79	1.80
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

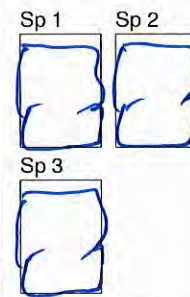
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	46	45	45
Dry Density ρ_{d0} (Mg/m ³)	1.20	1.23	1.24
Voids Ratio e_0	1.21	1.15	1.13
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	125.77	151.09	187.69
Membrane Correction σ_{mb} (kPa)	1.73	2.00	1.95
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	124.04	149.09	185.74
Strain at Failure ϵ_f %	16.09	19.55	19.07
Shear Strength c_u (kPa)	62.02	74.54	92.87
Moisture Content w_f %	46	45	45
Dry Density ρ_{df} (Mg/m ³)	1.20	1.23	1.24
Voids Ratio e_f	1.21	1.15	1.13
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 12/12/22

Site Reference: Sungai Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH9

Operator:

[Signature]

Checked:

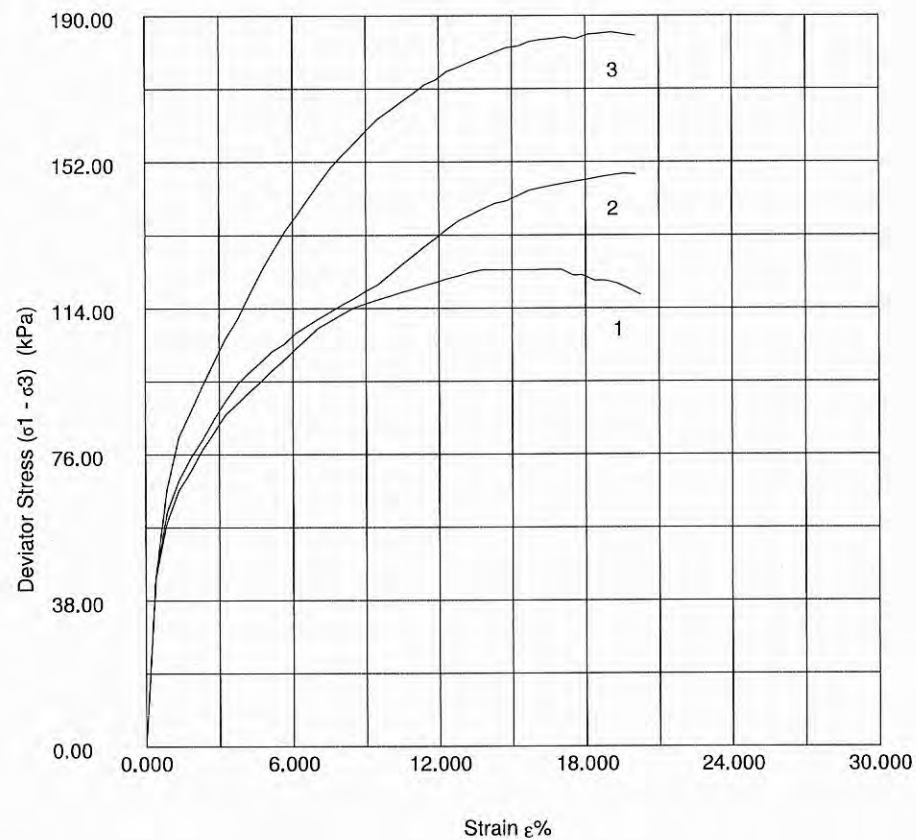
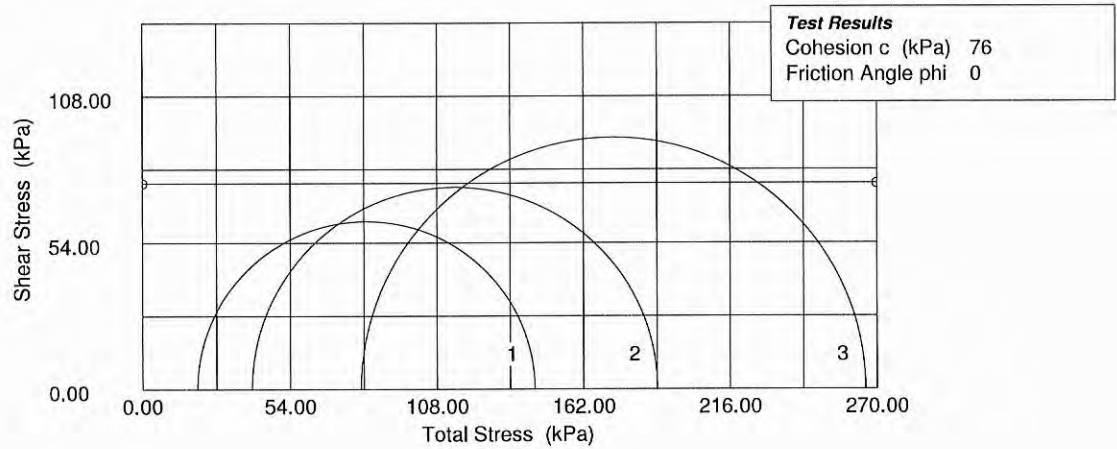
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 12/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH9

Operator:

[Signature]

Checked:

[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 1.50m-2.10m
Description: Reddish brown and brownish yellow slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	156.6	157.7	172.5
Bulk Density ρ (Mg/m ³)	1.82	1.83	2.00
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

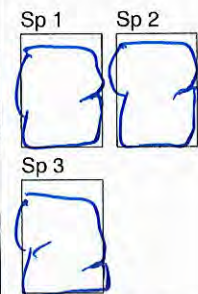
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	17	17
Load Channel	16	18	18
Moisture Content w_0 %	39	38	26
Dry Density ρ_{d0} (Mg/m ³)	1.31	1.32	1.59
Voids Ratio e_0	1.03	1.01	0.67
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	65.09	73.97	84.34
Membrane Correction σ_{mh} (kPa)	1.65	1.40	1.48
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	63.44	72.57	82.86
Strain at Failure ϵ_f %	15.14	11.70	13.04
Shear Strength c_u (kPa)	31.72	36.28	41.43
Moisture Content w_f %	39	38	26
Dry Density ρ_{df} (Mg/m ³)	1.31	1.32	1.59
Voids Ratio e_f	1.03	1.01	0.67
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 06/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH10

Operator:

Cen. A.

Checked:

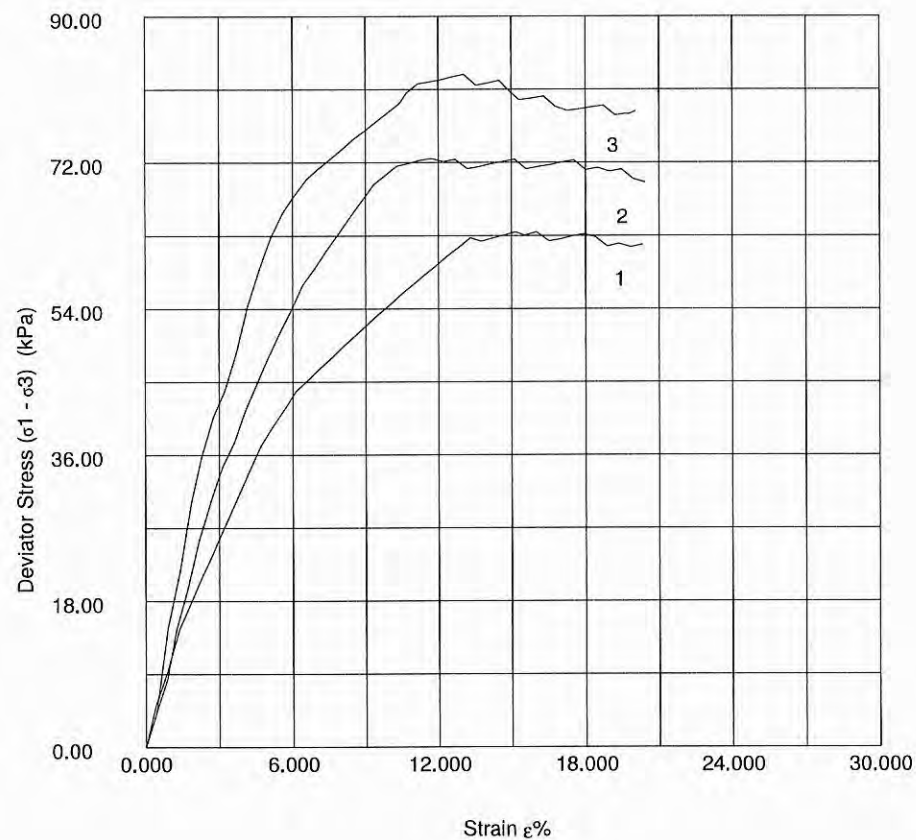
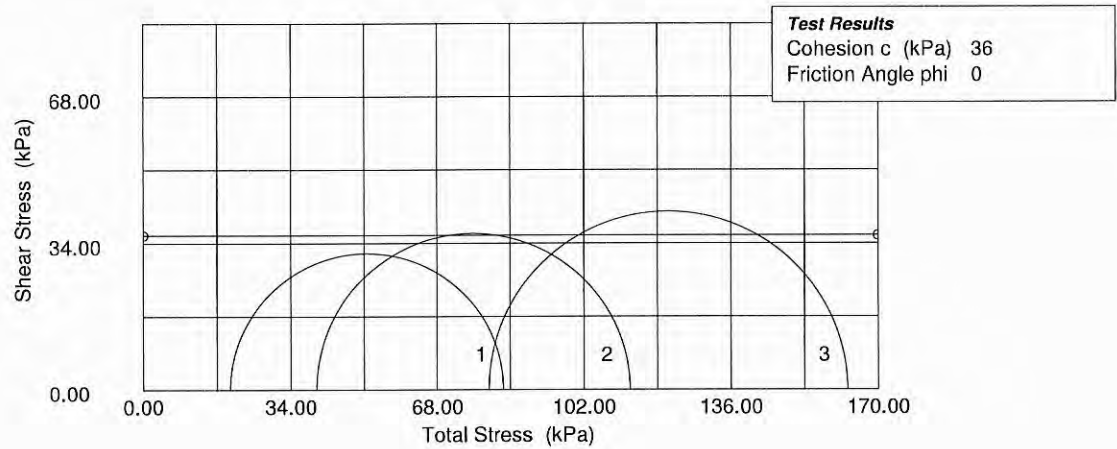
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 06/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH10

Operator:

Gr. M.

Checked:

S

Approved:

N

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 9.00m-9.50m
Description: Light brownish grey and pink slightly Sandy SILT

	Specimen 1	Specimen 2
Type	Undisturbed	Undisturbed
Height H_0 (mm)	76	76
Diameter D_0 (mm)	38	38
Weight W_0 (gr)	158.6	160.3
Bulk Density ρ (Mg/m ³)	1.84	1.86
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)

Initial Conditions

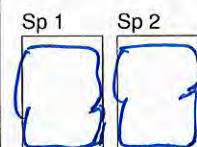
	Specimen 1	Specimen 2
Cell Pressure σ_3 (kPa)	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520
No. of Membranes	1	1
Total Thickness (mm)	0.2	0.2
Strain Channel	17	17
Load Channel	18	18
Moisture Content w_0 %	41	40
Dry Density ρ_{d0} (Mg/m ³)	1.31	1.33
Voids Ratio e_0	1.03	0.99
Deg of Saturation S_0 %	100.00	100.00

Final Condition

	Specimen 1	Specimen 2
Max Deviator Stress (kPa)	294.32	323.12
Membrane Correction σ_{mh} (kPa)	1.65	1.65
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	292.67	321.47
Strain at Failure ϵ_f %	14.63	15.37
Shear Strength c_u (kPa)	146.33	160.73
Moisture Content w_f %	41	40
Dry Density ρ_{df} (Mg/m ³)	1.31	1.33
Voids Ratio e_f	1.03	0.99
Deg of Saturation S_f %	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 06/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH10

Operator:

Gr. A.

Checked:

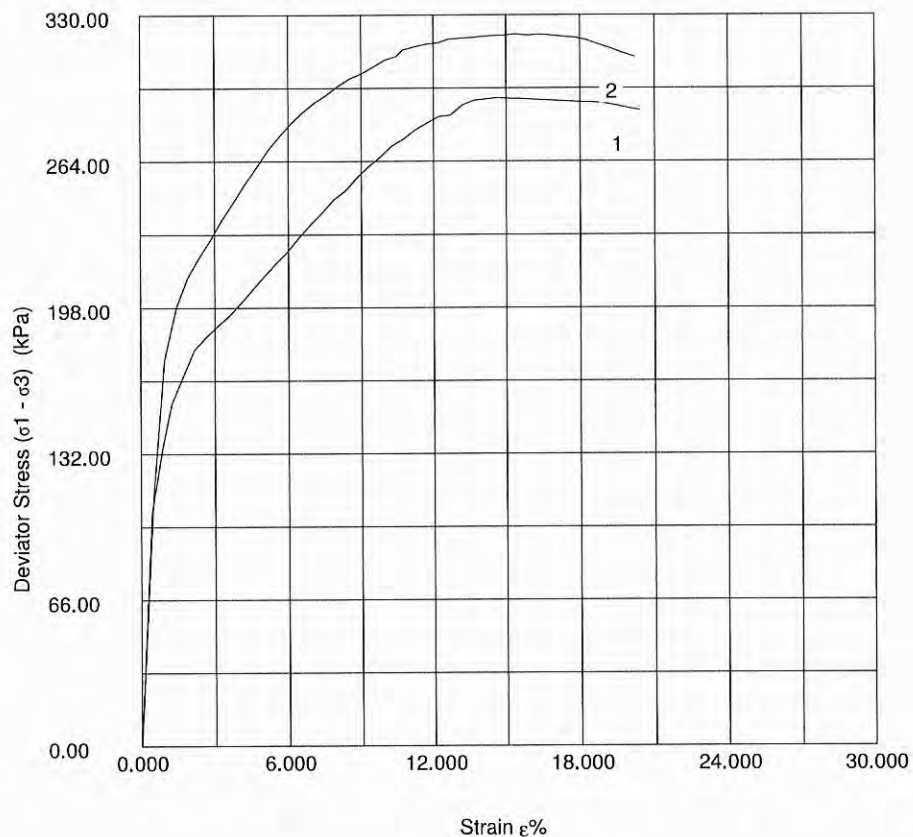
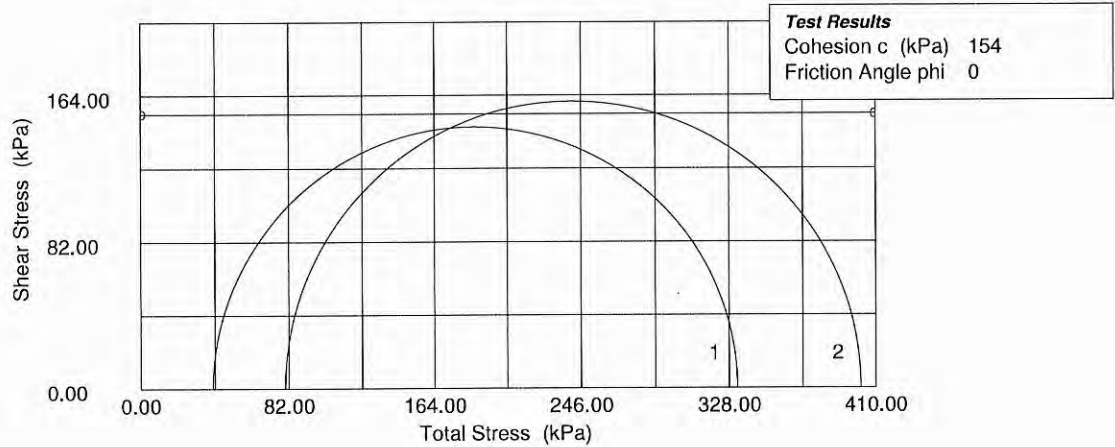
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Approved:

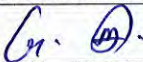
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Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	06/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	U1
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH10
Operator:		Checked:	Approved:	
				

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 1.50m-2.00m
Description: Light yellowish brown and brownish grey Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	183.2	184.3	185.7
Bulk Density ρ (Mg/m ³)	2.13	2.14	2.15
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

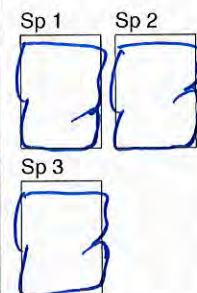
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	15	15	15
Dry Density ρ_{d0} (Mg/m ³)	1.85	1.86	1.87
Voids Ratio e_0	0.43	0.43	0.42
Deg of Saturation S_0 %	91.89	93.88	96.60

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	139.51	164.07	191.33
Membrane Correction σ_{mb} (kPa)	2.00	1.58	1.90
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	137.51	162.49	189.43
Strain at Failure ϵ_f %	20.09	13.86	18.12
Shear Strength c_u (kPa)	68.75	81.24	94.71
Moisture Content w_f %	15	15	15
Dry Density ρ_{df} (Mg/m ³)	1.85	1.86	1.87
Voids Ratio e_f	0.43	0.43	0.42
Deg of Saturation S_f %	91.89	93.88	96.60

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 02/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH11

Operator:

[Signature]

Checked:

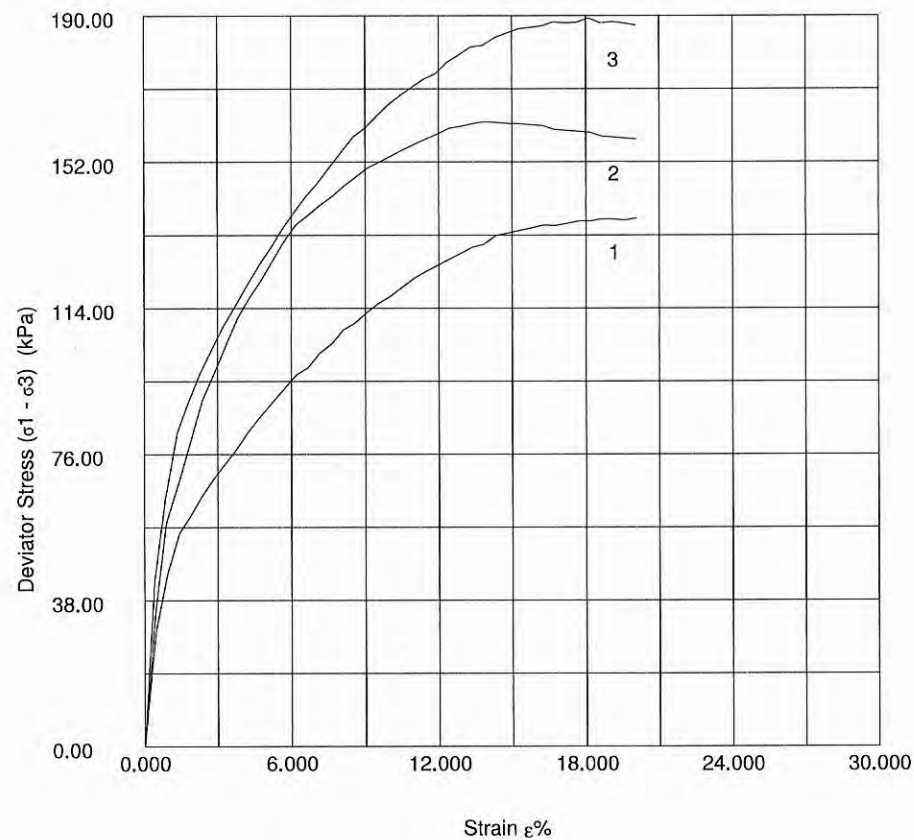
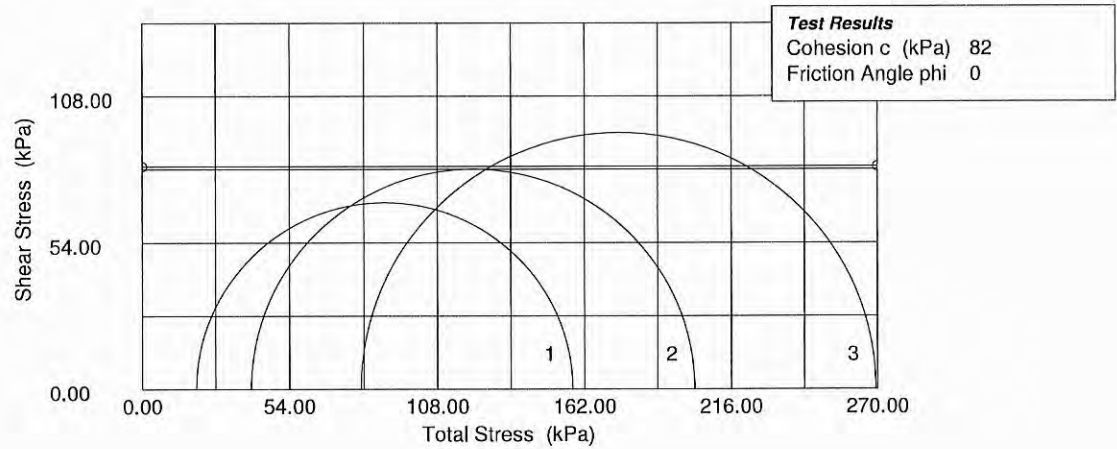
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Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 02/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH11

Operator: *[Signature]*

Checked: *[Signature]*

Approved: *[Signature]*

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 4.50m-5.10m
Description: Light brownish yellow and reddish orange slightly Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	151.8	153.4	157.3
Bulk Density ρ (Mg/m ³)	1.76	1.78	1.82
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

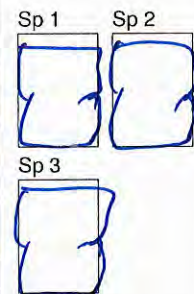
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	49	46	44
Dry Density ρ_{d0} (Mg/m ³)	1.19	1.22	1.27
Voids Ratio e_0	1.23	1.17	1.09
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	123.84	150.57	173.29
Membrane Correction σ_{mb} (kPa)	1.48	1.82	1.58
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	122.36	148.75	171.71
Strain at Failure ϵ_f %	12.76	17.11	13.80
Shear Strength c_u (kPa)	61.18	74.37	85.85
Moisture Content w_f %	49	46	44
Dry Density ρ_{df} (Mg/m ³)	1.19	1.22	1.27
Voids Ratio e_f	1.23	1.17	1.09
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 02/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH11

Operator:

[Signature]

Checked:

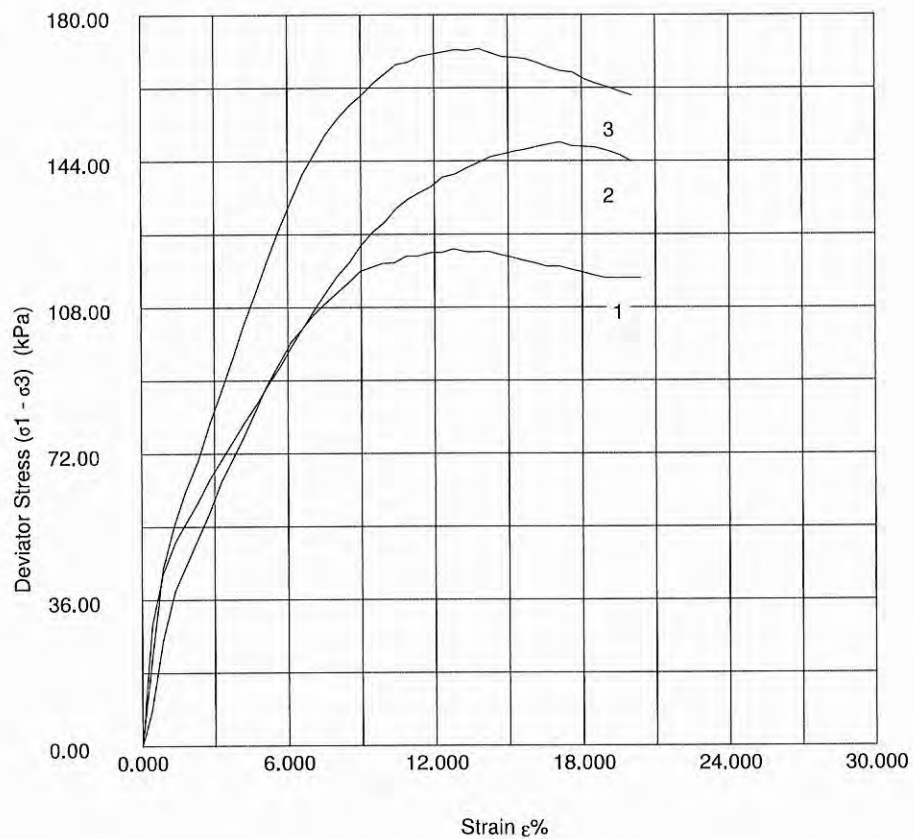
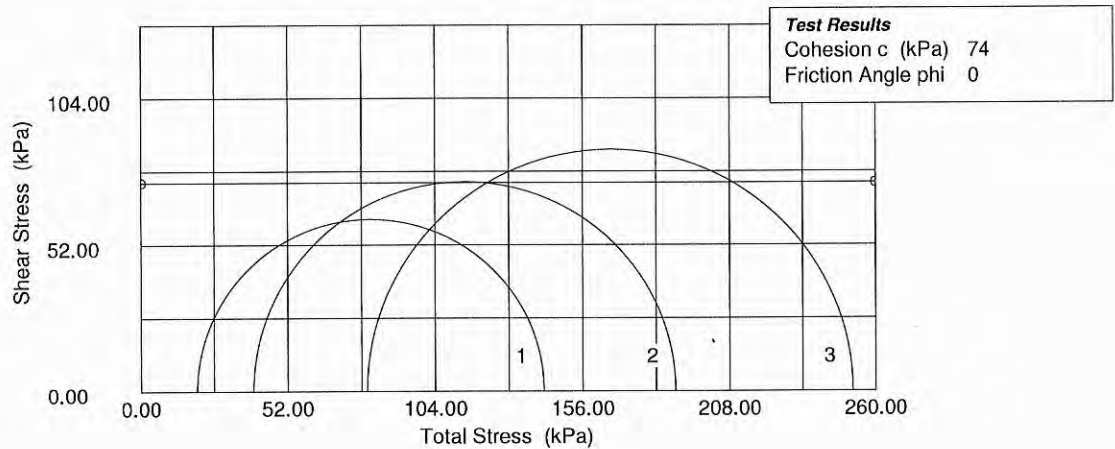
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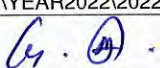
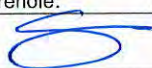
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Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	02/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW2
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH11
Operator:		Checked:	Approved:	
				

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.60m
Description: Reddish orange and brownish yellow slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	154.4	157.1	159.3
Bulk Density ρ (Mg/m ³)	1.79	1.82	1.85
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

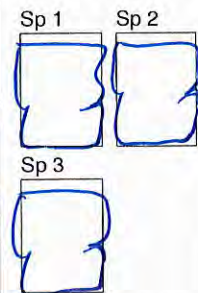
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	38	38	37
Dry Density ρ_{d0} (Mg/m ³)	1.29	1.32	1.35
Voids Ratio e_0	1.05	1.01	0.97
Deg of Saturation S_0 %	97.10	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	79.07	91.61	99.66
Membrane Correction σ_{mh} (kPa)	1.95	2.00	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	77.12	89.61	97.66
Strain at Failure ϵ_f %	19.21	20.08	19.84
Shear Strength c_u (kPa)	38.56	44.81	48.83
Moisture Content w_f %	38	38	37
Dry Density ρ_{df} (Mg/m ³)	1.29	1.32	1.35
Voids Ratio e_f	1.05	1.01	0.97
Deg of Saturation S_f %	97.10	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 06/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH12

Operator:

Gy. (A)

Checked:

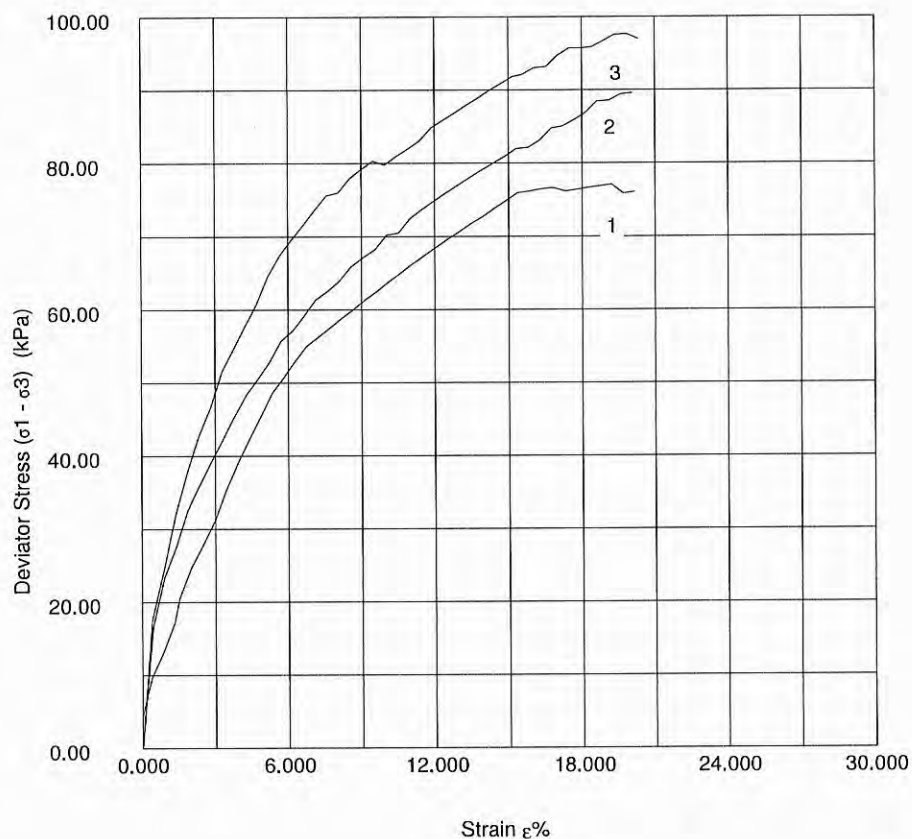
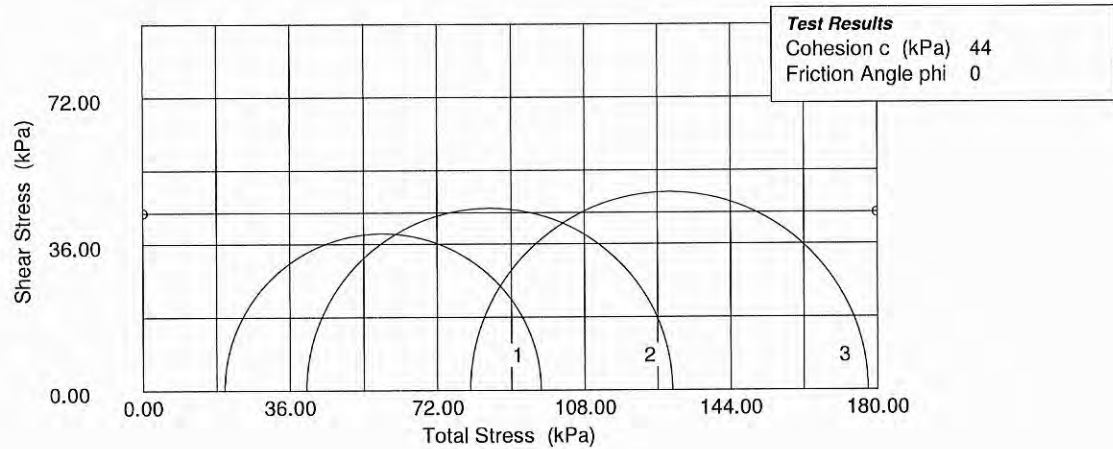
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Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 06/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH12

Operator:

G. A.

Checked:

S

Approved:

N

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 6.00m-6.70m
Description: Light brown and reddish orange Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	158.3	159.4	161.6
Bulk Density ρ (Mg/m ³)	1.84	1.85	1.87
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

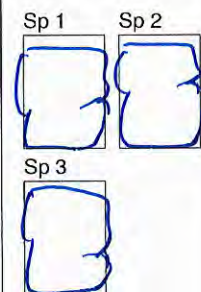
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	30.00	60.00	120.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	37	36	36
Dry Density ρ_{d0} (Mg/m ³)	1.34	1.36	1.38
Voids Ratio e_0	0.98	0.95	0.92
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	154.73	169.08	186.95
Membrane Correction σ_{mh} (kPa)	1.65	1.73	1.48
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	153.08	167.35	185.47
Strain at Failure ϵ_f %	14.82	15.53	13.46
Shear Strength c_u (kPa)	76.54	83.67	92.73
Moisture Content w_f %	37	36	36
Dry Density ρ_{df} (Mg/m ³)	1.34	1.36	1.38
Voids Ratio e_f	0.98	0.95	0.92
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



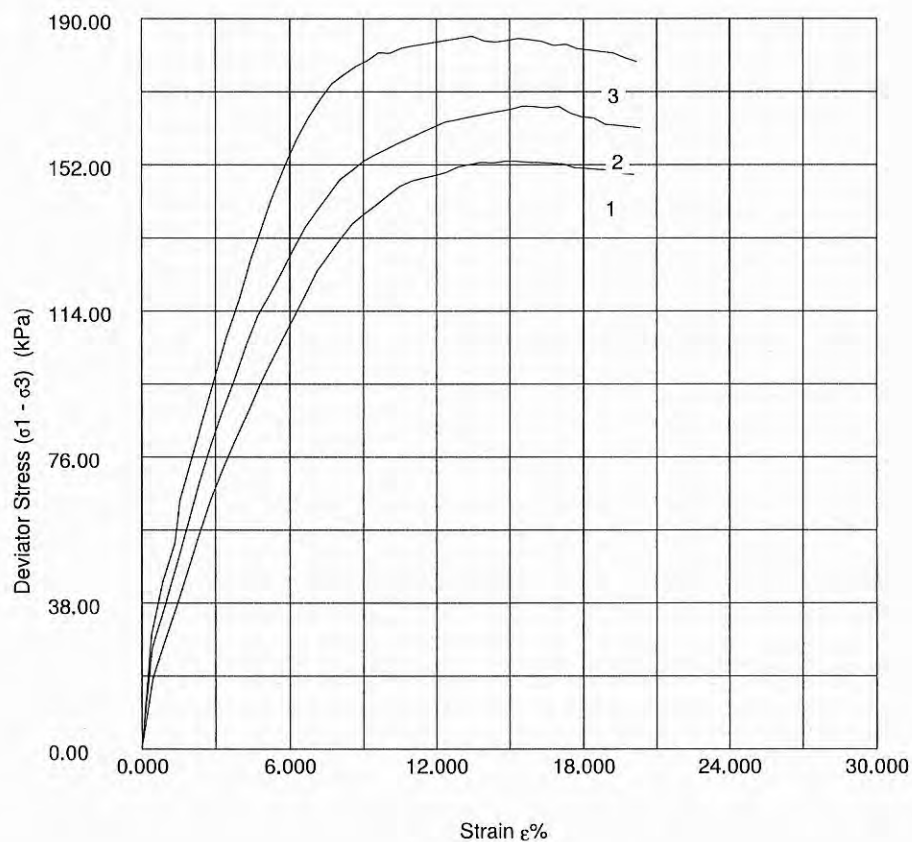
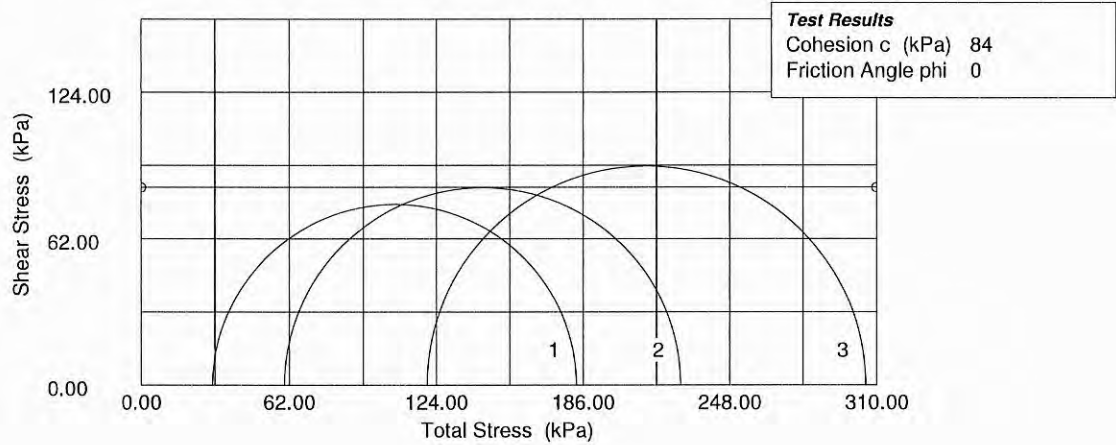
Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)	
			Date of Test:	06/12/22	
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW4	
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH12	
	Operator:		Checked:		Approved:

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Operator:

Cer. (M)

Checked:

Test name UU (SS, MS)
Date of Test: 06/12/22

Sample: TW4
Borehole: BH12

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.60m
Description: Reddish brown and light red Sandy SILT

	Specimen 1	Specimen 2
Type	Undisturbed	Undisturbed
Height H_0 (mm)	76	76
Diameter D_0 (mm)	38	38
Weight W_0 (gr)	168.5	193.6
Bulk Density ρ (Mg/m ³)	1.95	2.25
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)

Initial Conditions

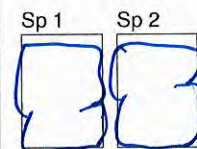
	Specimen 1	Specimen 2
Cell Pressure σ_3 (kPa)	20.00	40.00
Machine Speed d_r (mm/min)	1.520	1.520
No. of Membranes	1	1
Total Thickness (mm)	0.2	0.2
Strain Channel	15	17
Load Channel	16	18
Moisture Content w_0 %	20	12
Dry Density ρ_{d0} (Mg/m ³)	1.63	2.01
Voids Ratio e_0	0.62	0.32
Deg of Saturation S_0 %	84.20	98.82

Final Condition

	Specimen 1	Specimen 2
Max Deviator Stress (kPa)	317.44	364.09
Membrane Correction σ_{mh} (kPa)	1.00	0.90
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	316.44	363.19
Strain at Failure ϵ_f %	8.39	6.79
Shear Strength c_u (kPa)	158.22	181.60
Moisture Content w_f %	20	12
Dry Density ρ_{df} (Mg/m ³)	1.63	2.01
Voids Ratio e_f	0.62	0.32
Deg of Saturation S_f %	84.20	98.82

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 06/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH13

Operator:

Operator Signature

Checked:

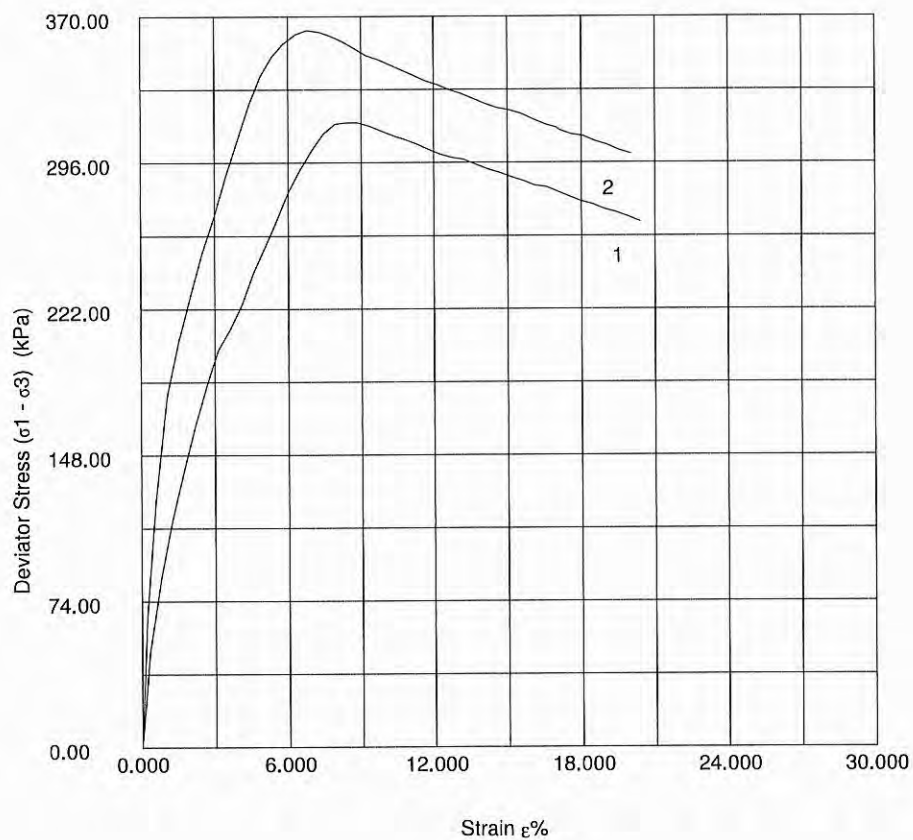
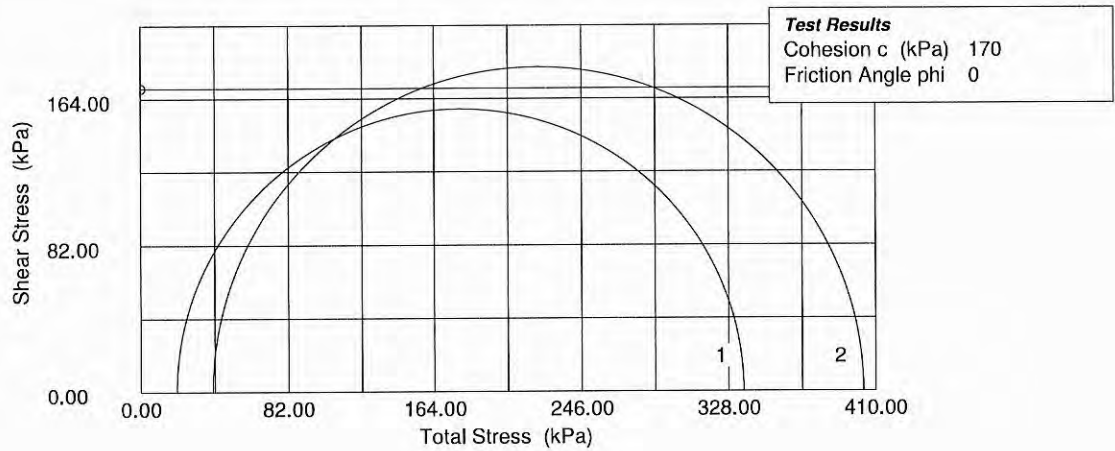
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Approved:

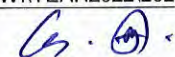
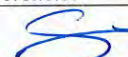
Approved Signature

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	06/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW2
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH13
Operator:		Checked:	Approved:	
				

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 6.00m-6.70m
Description: Light brownish yellow and light grey slightly Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	149.4	150	150.2
Bulk Density ρ (Mg/m ³)	1.73	1.74	1.74
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

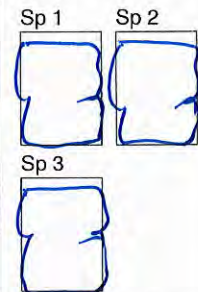
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	30.00	60.00	120.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	49	49	49
Dry Density ρ_{d0} (Mg/m ³)	1.16	1.17	1.17
Voids Ratio e_0	1.28	1.27	1.27
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	149.84	174.21	212.81
Membrane Correction σ_{mh} (kPa)	1.65	1.48	1.58
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	148.19	172.73	211.23
Strain at Failure ϵ_f %	14.61	13.34	13.80
Shear Strength c_u (kPa)	74.09	86.37	105.62
Moisture Content w_f %	49	49	49
Dry Density ρ_{df} (Mg/m ³)	1.16	1.17	1.17
Voids Ratio e_f	1.28	1.27	1.27
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 02/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW4
Borehole: BH13

Operator:

Car. (M)

Checked:

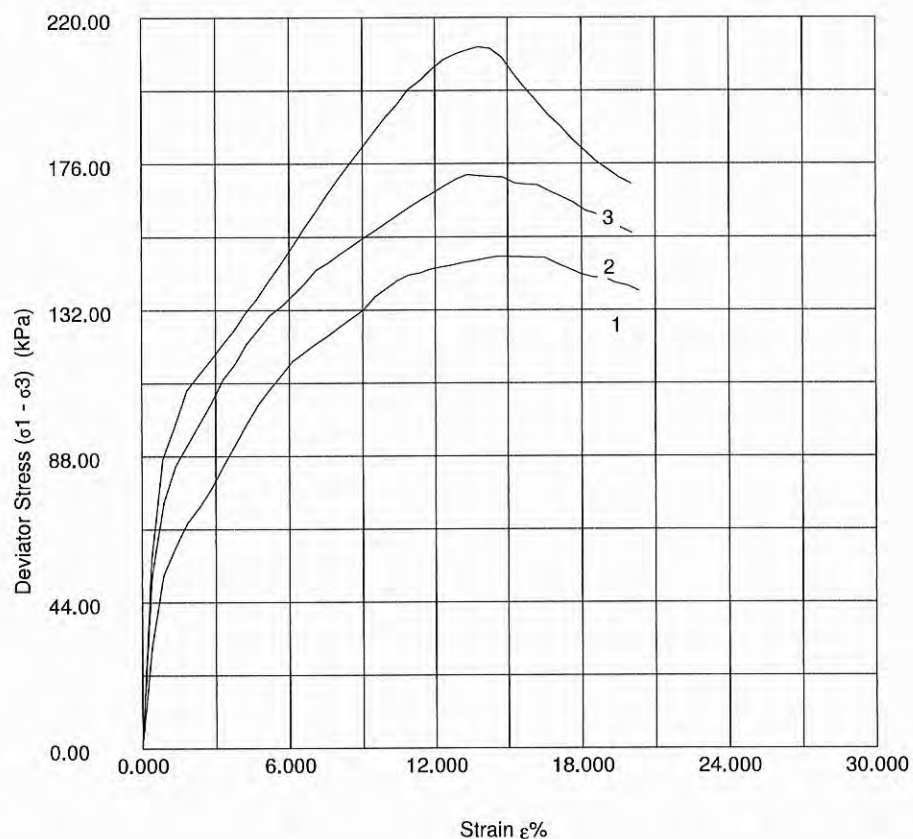
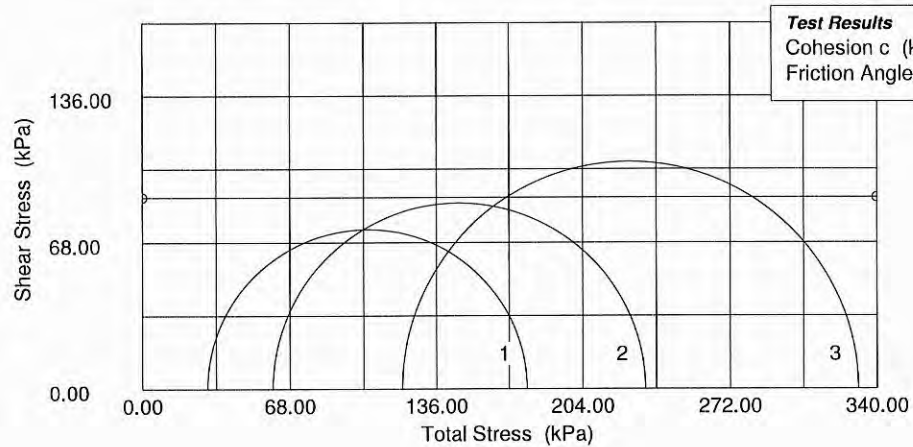
S

Approved:

Nm

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 02/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW4
Borehole: BH13

Operator: *[Signature]*

Checked: *[Signature]*

Approved: *[Signature]*

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth	1.50m-2.10m		
Description:	Reddish yellow and light brown Sandy CLAY		
Type	Specimen 1	Specimen 2	Specimen 3
Height H_0 (mm)	Undisturbed	Undisturbed	Undisturbed
Diameter D_0 (mm)	76	76	76
Weight W_0 (gr)	38	38	38
Bulk Density ρ (Mg/m ³)	161.7	162.3	165.1
Particle Density ρ_s	1.88	1.88	1.92
	2.65	2.65	2.65
	(assumed)	(assumed)	(assumed)

Initial Conditions

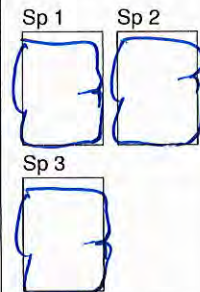
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	33	32	29
Dry Density ρ_{d0} (Mg/m ³)	1.41	1.43	1.48
Voids Ratio e_0	0.88	0.86	0.79
Deg of Saturation S_0 %	99.80	98.96	98.58

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	103.65	119.98	142.10
Membrane Correction σ_{mh} (kPa)	1.30	1.30	1.10
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	102.35	118.68	141.00
Strain at Failure ϵ_f %	10.95	11.07	9.46
Shear Strength c_u (kPa)	51.17	59.34	70.50
Moisture Content w_f %	33	32	29
Dry Density ρ_{df} (Mg/m ³)	1.41	1.43	1.48
Voids Ratio e_f	0.88	0.86	0.79
Deg of Saturation S_f %	99.80	98.96	98.58

Notes:

Failure Sketch



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)

Test name UU (SS, MS)
Date of Test: 28/11/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH14

Operator:

Car. M.

Checked:

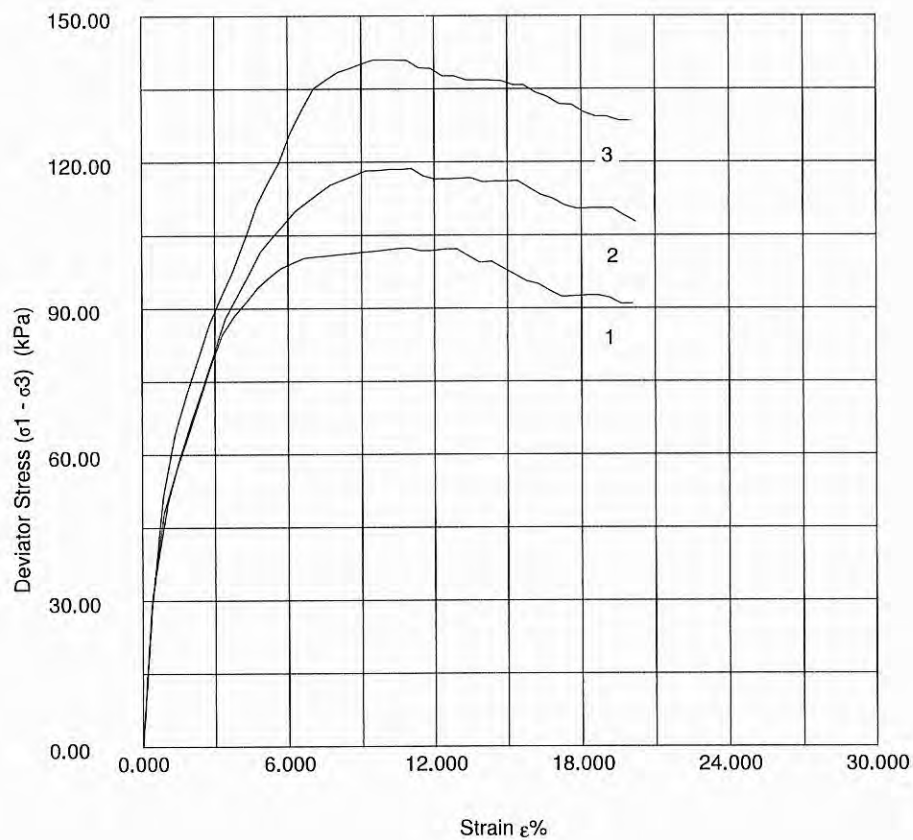
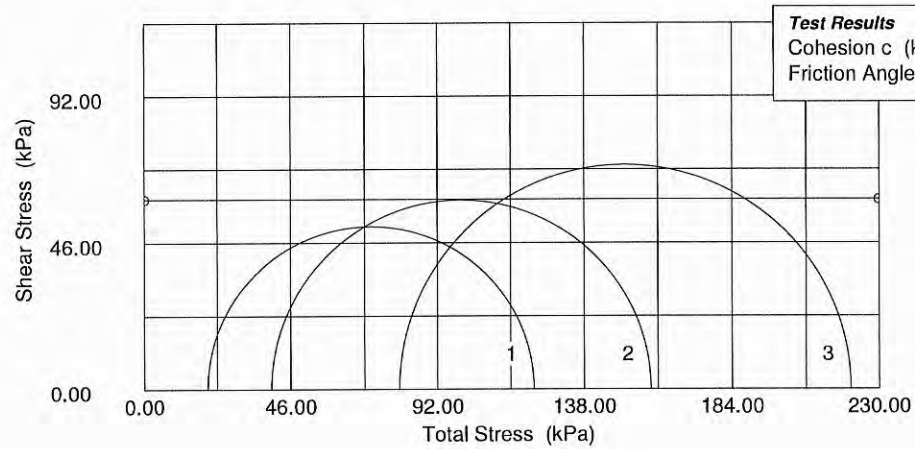
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 28/11/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH14

Operator:

[Signature]

Checked:

[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.60m
Description: Reddish yellow and light olive brown slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	150.2	152.3	152.5
Bulk Density ρ (Mg/m ³)	1.74	1.77	1.77
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

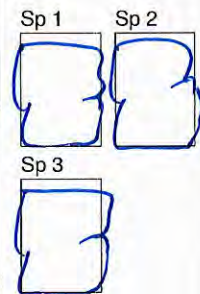
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	45	47	46
Dry Density ρ_{d0} (Mg/m ³)	1.20	1.20	1.21
Voids Ratio e_0	1.21	1.20	1.19
Deg of Saturation S_0 %	99.34	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	114.15	121.79	137.80
Membrane Correction σ_{mh} (kPa)	1.90	1.65	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	112.25	120.14	135.80
Strain at Failure ϵ_f %	17.54	15.26	20.26
Shear Strength c_u (kPa)	56.13	60.07	67.90
Moisture Content w_f %	45	47	46
Dry Density ρ_{df} (Mg/m ³)	1.20	1.20	1.21
Voids Ratio e_f	1.21	1.20	1.19
Deg of Saturation S_f %	99.34	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 26/11/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH14

Operator:

[Signature]

Checked:

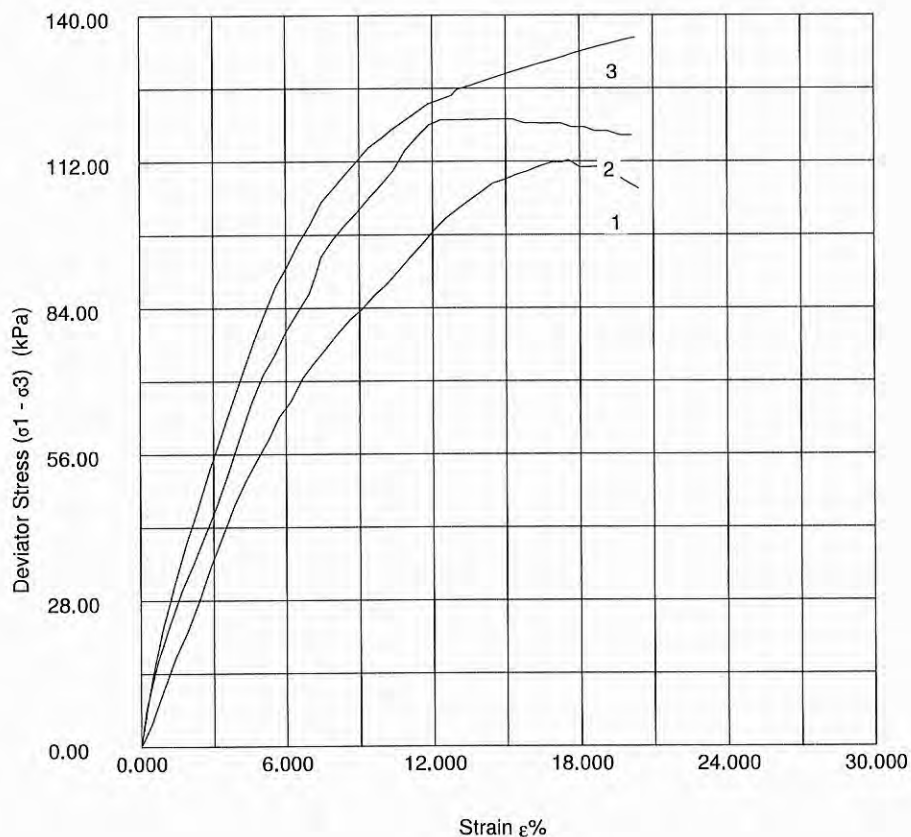
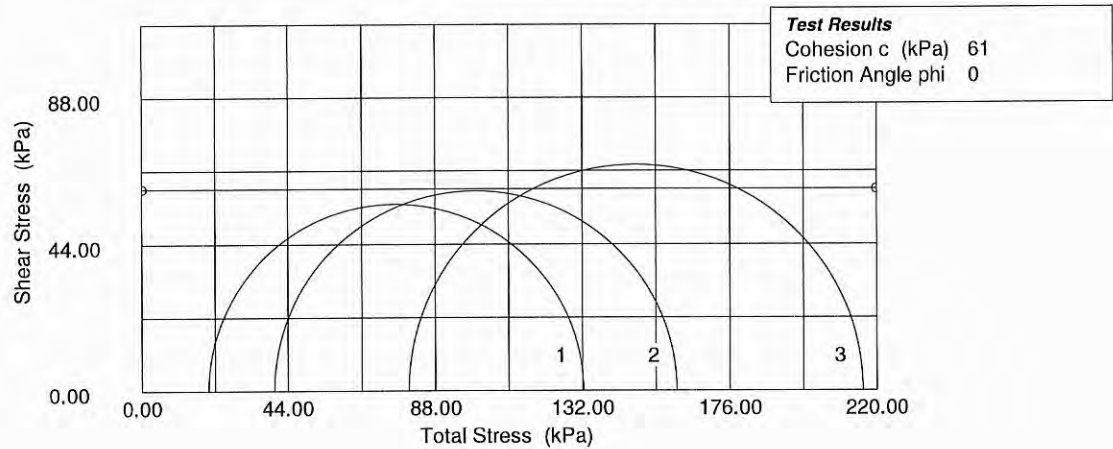
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Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 26/11/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH14

Operator:

[Signature]

Checked:

[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 1.50m-1.80m
Description: Reddish orange and reddish brown Sandy SILT

	Specimen 1	Specimen 2
Type	Undisturbed	Undisturbed
Height H_0 (mm)	76	76
Diameter D_0 (mm)	38	38
Weight W_0 (gr)	191.2	199.6
Bulk Density ρ (Mg/m ³)	2.22	2.32
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)

Initial Conditions

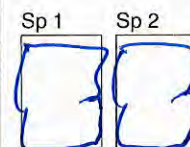
	Specimen 1	Specimen 2
Cell Pressure σ_3 (kPa)	20.00	40.00
Machine Speed d_r (mm/min)	1.520	1.520
No. of Membranes	1	1
Total Thickness (mm)	0.2	0.2
Strain Channel	17	17
Load Channel	18	18
Moisture Content w_0 %	14	12
Dry Density ρ_{d0} (Mg/m ³)	1.95	2.07
Voids Ratio e_0	0.36	0.28
Deg of Saturation S_0 %	100.00	100.00

Final Condition

	Specimen 1	Specimen 2
Max Deviator Stress (kPa)	447.38	662.03
Membrane Correction σ_{mb} (kPa)	1.58	0.60
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	445.80	661.43
Strain at Failure ϵ_f %	13.71	3.99
Shear Strength c_u (kPa)	222.90	330.72
Moisture Content w_f %	14	12
Dry Density ρ_{df} (Mg/m ³)	1.95	2.07
Voids Ratio e_f	0.36	0.28
Deg of Saturation S_f %	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 25/11/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH15

Operator:

[Signature]

Checked:

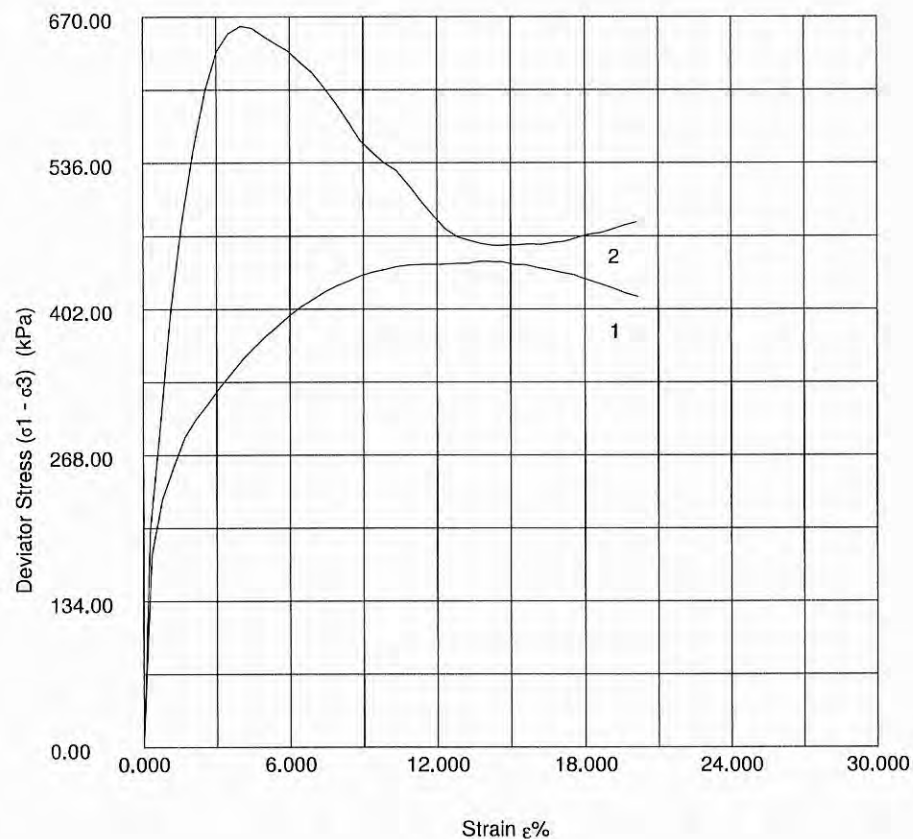
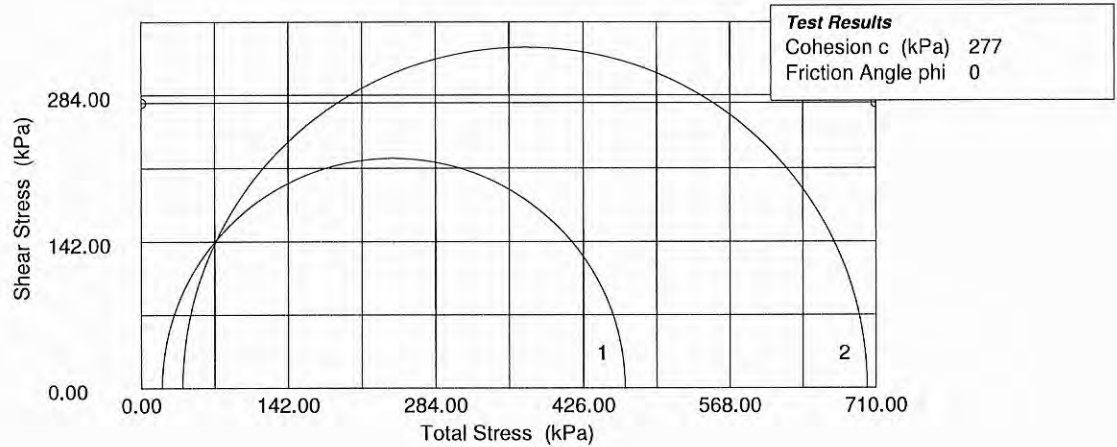
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Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 25/11/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH15

Operator:

[Signature]

Checked:

[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 4.50m-5.10m
Description: Reddish brown and reddish orange slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	158.2	158.5	159.3
Bulk Density ρ (Mg/m ³)	1.84	1.84	1.85
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

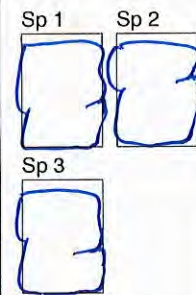
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	40	40	40
Dry Density ρ_{d0} (Mg/m ³)	1.31	1.31	1.32
Voids Ratio e_0	1.03	1.02	1.01
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	87.56	99.34	119.76
Membrane Correction σ_{mh} (kPa)	2.00	2.00	1.73
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	85.56	97.34	118.03
Strain at Failure ϵ_f %	19.92	19.53	16.16
Shear Strength c_u (kPa)	42.78	48.67	59.02
Moisture Content w_f %	40	40	40
Dry Density ρ_{df} (Mg/m ³)	1.31	1.31	1.32
Voids Ratio e_f	1.03	1.02	1.01
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 25/11/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH15

Operator:

[Signature]

Checked:

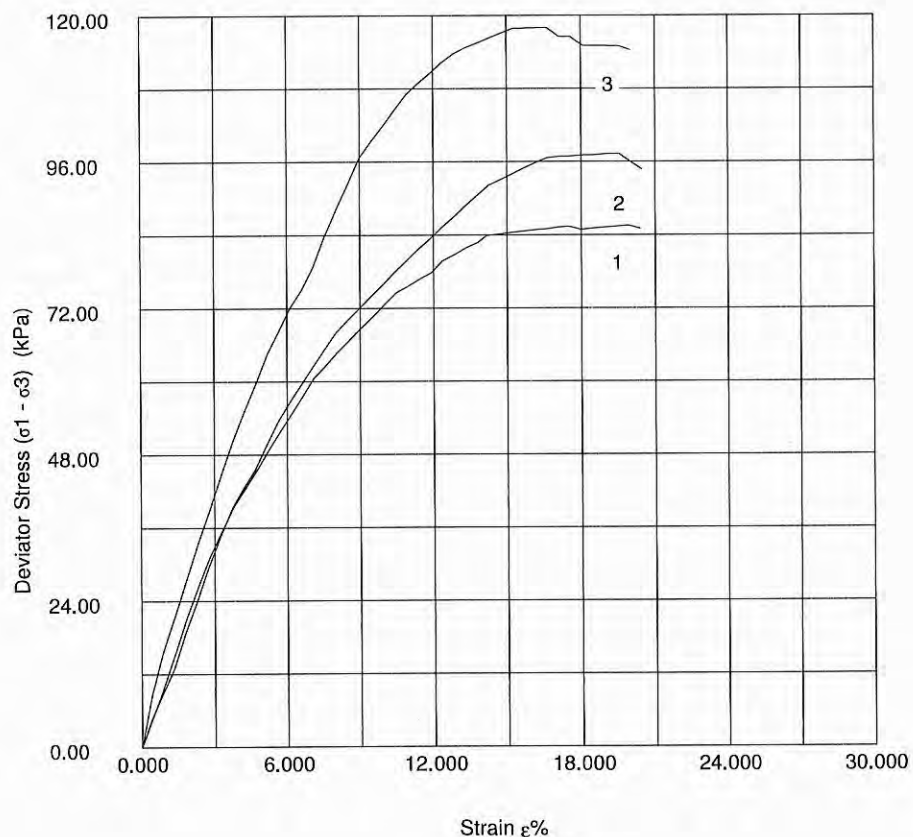
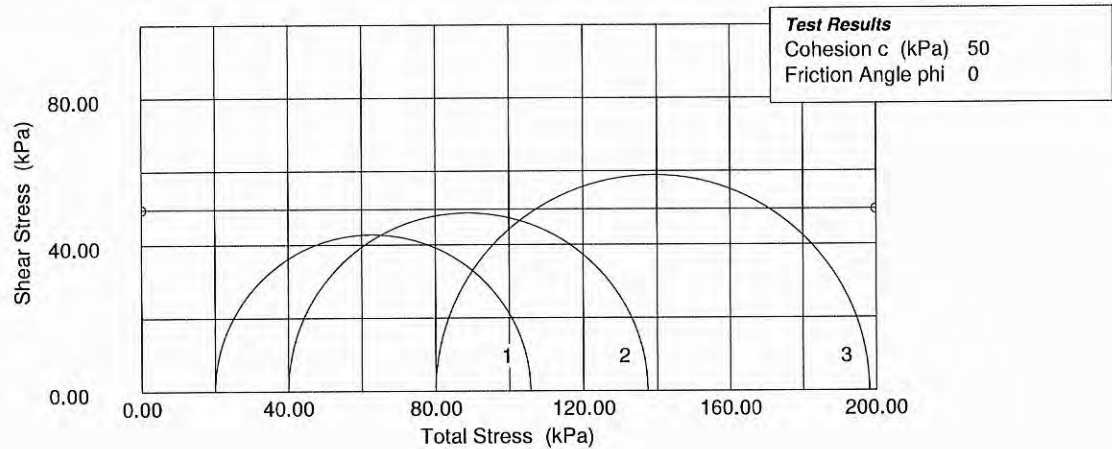
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Approved:

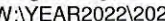
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Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)	
			Date of Test:	25/11/22	
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW1	
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH15	
	Operator:		Checked:		Approved:

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 1.50m-2.10m
Description: Light olive brown and reddish yellow Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	168.5	174.5	177.3
Bulk Density ρ (Mg/m ³)	1.95	2.02	2.06
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

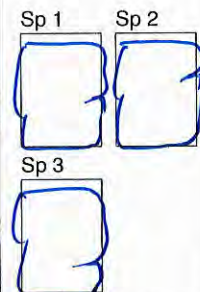
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	27	24	24
Dry Density ρ_{d0} (Mg/m ³)	1.55	1.64	1.65
Voids Ratio e_0	0.71	0.62	0.60
Deg of Saturation S_0 %	98.25	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	74.11	96.91	112.27
Membrane Correction σ_{mb} (kPa)	1.95	1.48	1.48
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	72.16	95.43	110.79
Strain at Failure ϵ_f %	19.18	13.46	13.38
Shear Strength c_u (kPa)	36.08	47.71	55.40
Moisture Content w_f %	27	24	24
Dry Density ρ_{df} (Mg/m ³)	1.55	1.64	1.65
Voids Ratio e_f	0.71	0.62	0.60
Deg of Saturation S_f %	98.25	100.00	100.00

Notes:

Failure Sketch



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 27/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH16

Operator:

G. A.

Checked:

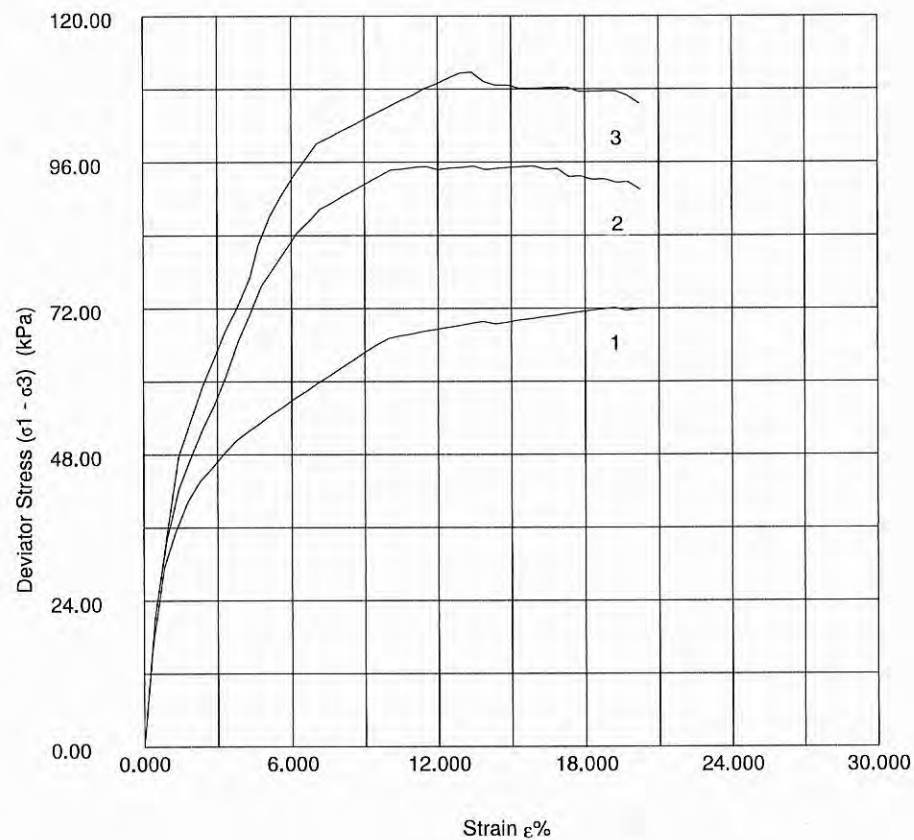
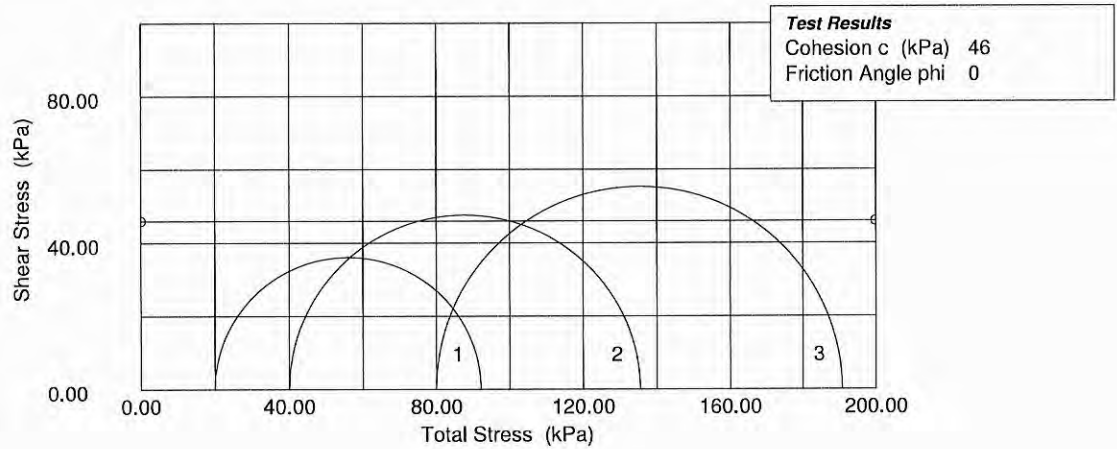
S

Approved:

N

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	27/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW1
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH16
Operator:		Checked:	Approved:	

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 4.50m-5.10m
Description: Light olive brown Silty SAND

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	179.4	181.7	184.3
Bulk Density ρ (Mg/m ³)	2.08	2.11	2.14
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

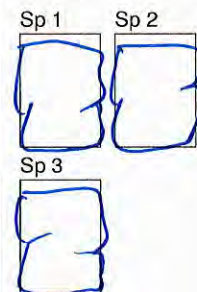
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	30.00	60.00	120.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	22	21	20
Dry Density ρ_{d0} (Mg/m ³)	1.71	1.74	1.78
Voids Ratio e_0	0.55	0.52	0.49
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	63.29	77.78	97.03
Membrane Correction σ_{mb} (kPa)	2.00	1.20	1.48
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	61.29	76.58	95.55
Strain at Failure ϵ_f %	20.25	9.99	13.36
Shear Strength c_u (kPa)	30.64	38.29	47.77
Moisture Content w_f %	22	21	20
Dry Density ρ_{df} (Mg/m ³)	1.71	1.74	1.78
Voids Ratio e_f	0.55	0.52	0.49
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)

Date of Test: 27/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW3
Borehole: BH16

Operator:

Car. M.

Checked:

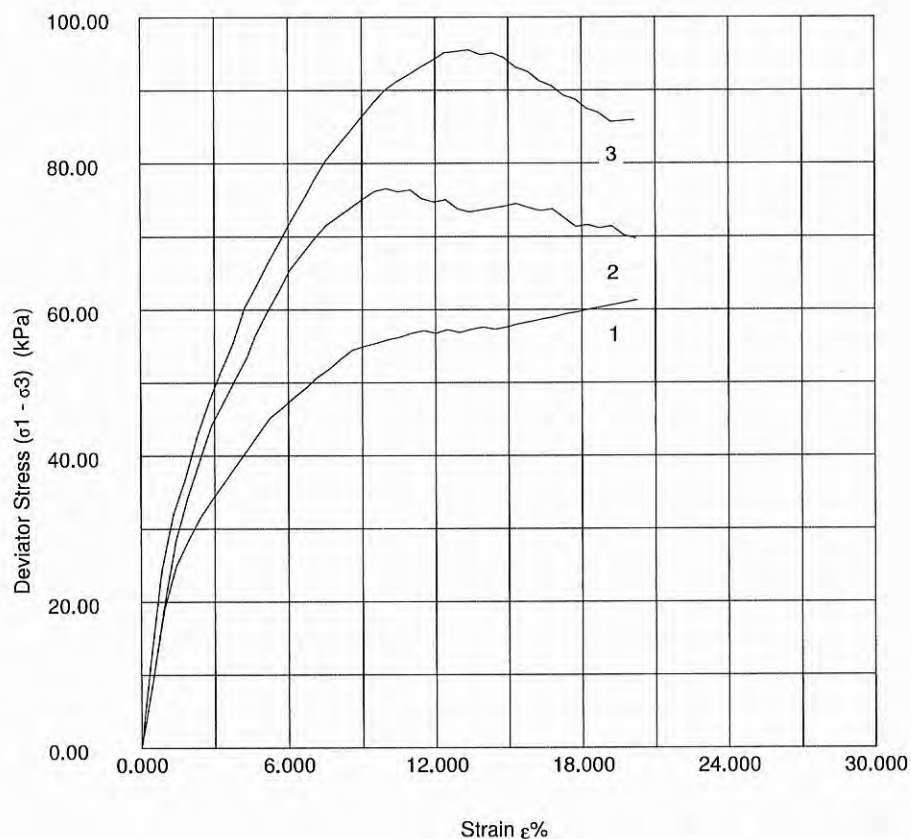
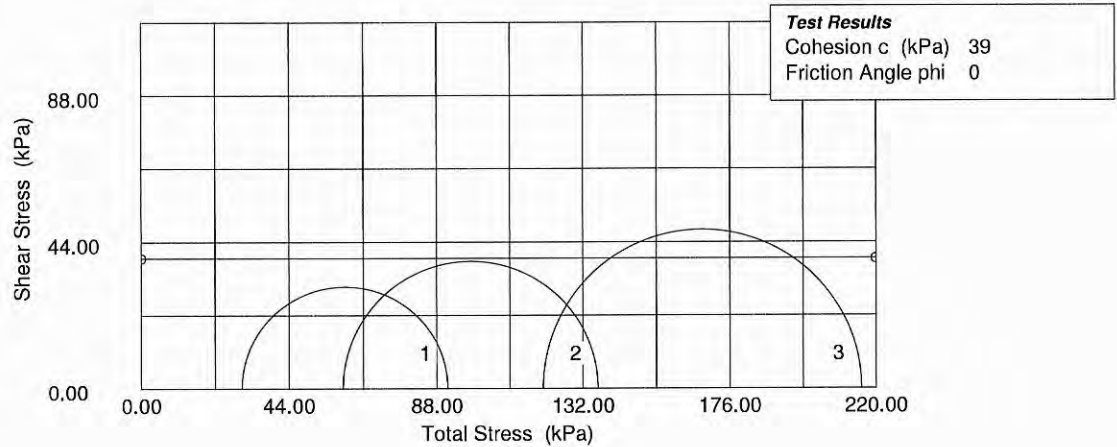
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 27/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW3
Borehole: BH16

Operator: *Ger. M.*

Checked: *[Signature]*

Approved: *[Signature]*

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.60m
Description: Light olive brown and reddish orange slightly Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	205.3	206.7	207.2
Bulk Density ρ (Mg/m ³)	2.38	2.40	2.40
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

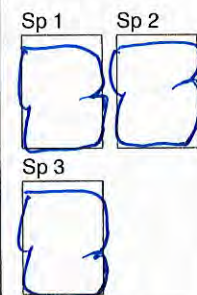
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	20	20	19
Dry Density ρ_{d0} (Mg/m ³)	1.98	2.00	2.01
Voids Ratio e_0	0.34	0.32	0.32
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	136.14	169.97	189.67
Membrane Correction σ_{mh} (kPa)	1.82	1.48	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	134.32	168.49	187.67
Strain at Failure ϵ_f %	17.43	12.78	20.33
Shear Strength c_u (kPa)	67.16	84.24	93.84
Moisture Content w_f %	20	20	19
Dry Density ρ_{df} (Mg/m ³)	1.98	2.00	2.01
Voids Ratio e_f	0.34	0.32	0.32
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 30/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH17

Operator:

[Signature]

Checked:

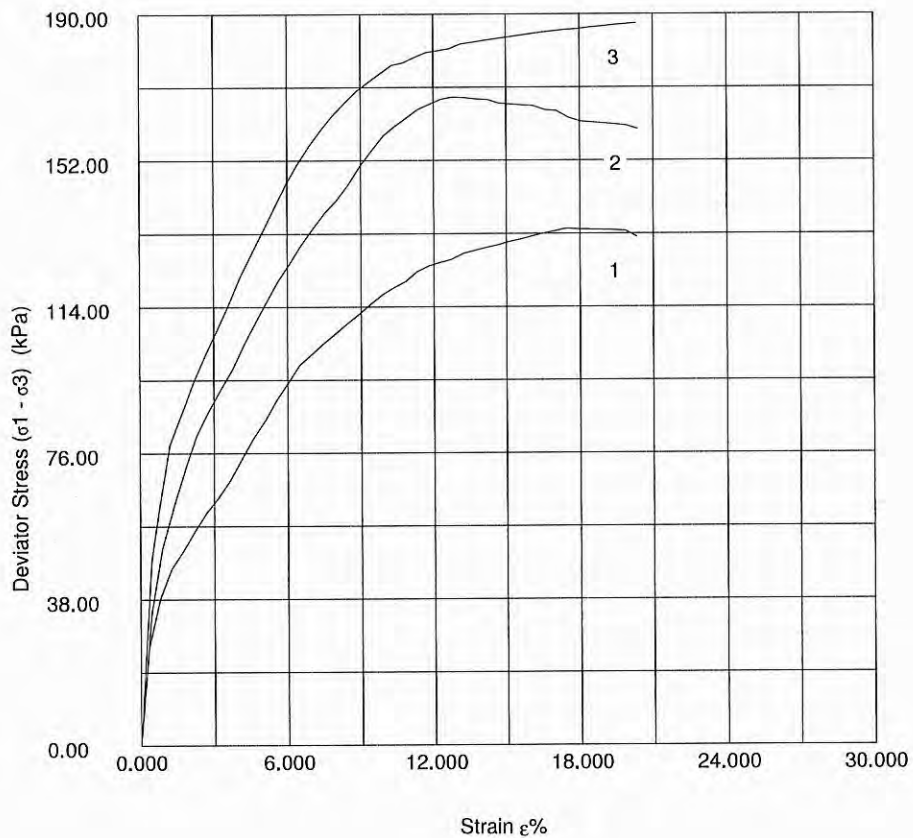
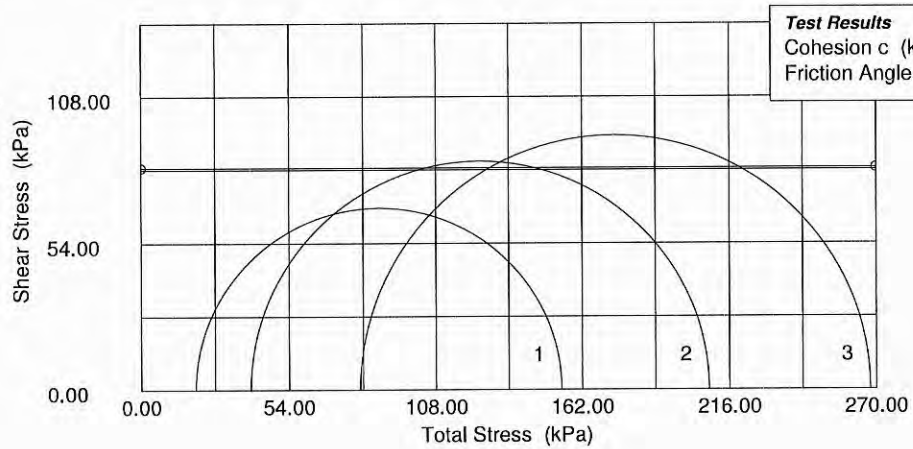
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 30/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH17

Operator:

[Signature]

Checked:

[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 6.00m-6.60m
Description: Light brownish yellow and reddish orange slightly Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	169.6	171	173.5
Bulk Density ρ (Mg/m ³)	1.97	1.98	2.01
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

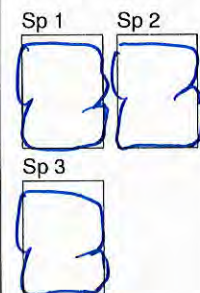
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	40.00	80.00	160.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	32	32	30
Dry Density ρ_{d0} (Mg/m ³)	1.49	1.51	1.55
Voids Ratio e_0	0.78	0.76	0.71
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	234.74	250.04	270.12
Membrane Correction σ_{mh} (kPa)	1.40	1.40	1.48
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	233.34	248.64	268.64
Strain at Failure ϵ_f %	11.55	11.66	13.46
Shear Strength c_u (kPa)	116.67	124.32	134.32
Moisture Content w_f %	32	32	30
Dry Density ρ_{df} (Mg/m ³)	1.49	1.51	1.55
Voids Ratio e_f	0.78	0.76	0.71
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 30/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U2
Borehole: BH17

Operator:

[Signature]

Checked:

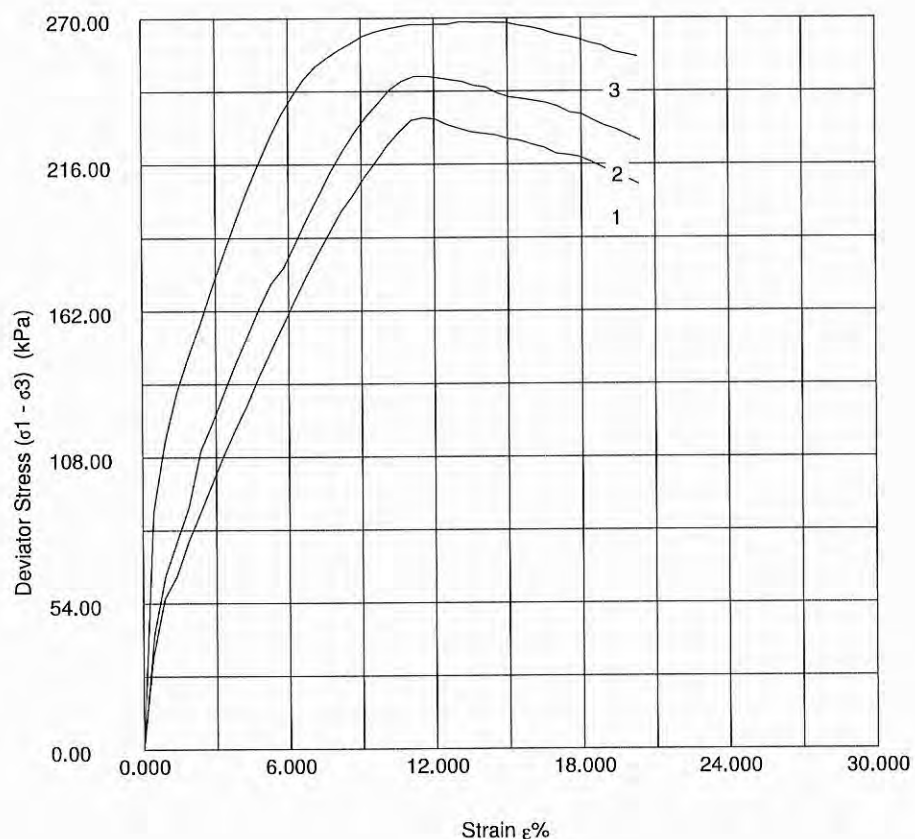
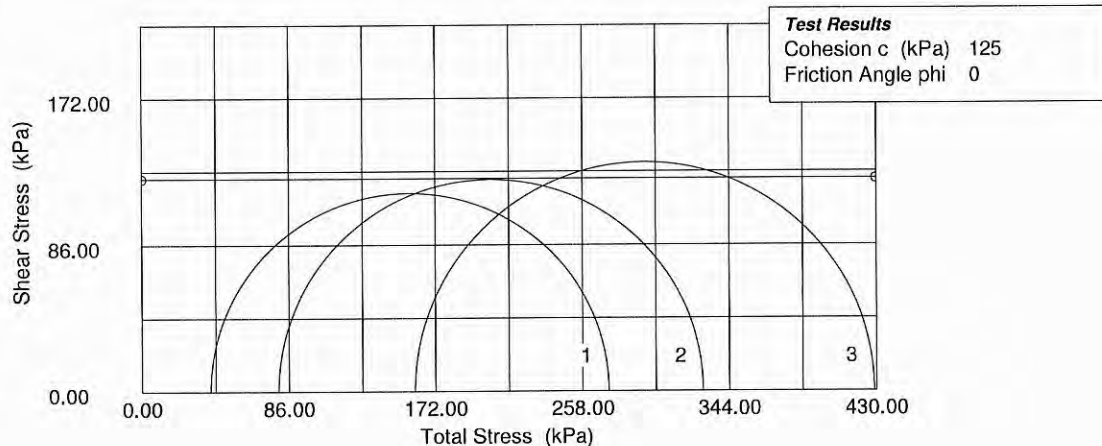
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Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 30/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U2
Borehole: BH17

Operator:

Ch. A.

Checked:

[Signature]

Approved:

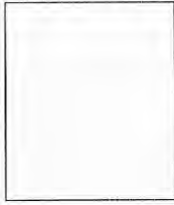
[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth: 1.50m-2.10m
Description: Light olive brown and brownish yellow Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	163.7	165.5	166.4
Bulk Density ρ (Mg/m ³)	1.90	1.92	1.93
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

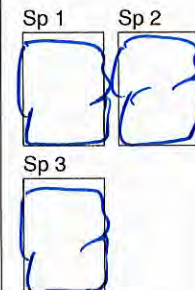
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	27	27	27
Dry Density ρ_{d0} (Mg/m ³)	1.50	1.51	1.52
Voids Ratio e_0	0.77	0.76	0.75
Deg of Saturation S_0 %	92.33	95.59	96.65

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	35.84	43.53	55.55
Membrane Correction σ_{mh} (kPa)	1.82	2.00	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	34.02	41.53	53.55
Strain at Failure ϵ_f %	17.04	20.38	20.25
Shear Strength c_u (kPa)	17.01	20.76	26.78
Moisture Content w_f %	27	27	27
Dry Density ρ_{df} (Mg/m ³)	1.50	1.51	1.52
Voids Ratio e_f	0.77	0.76	0.75
Deg of Saturation S_f %	92.33	95.59	96.65

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name: UU (SS, MS)
Date of Test: 28/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH18

Operator:

[Signature]

Checked:

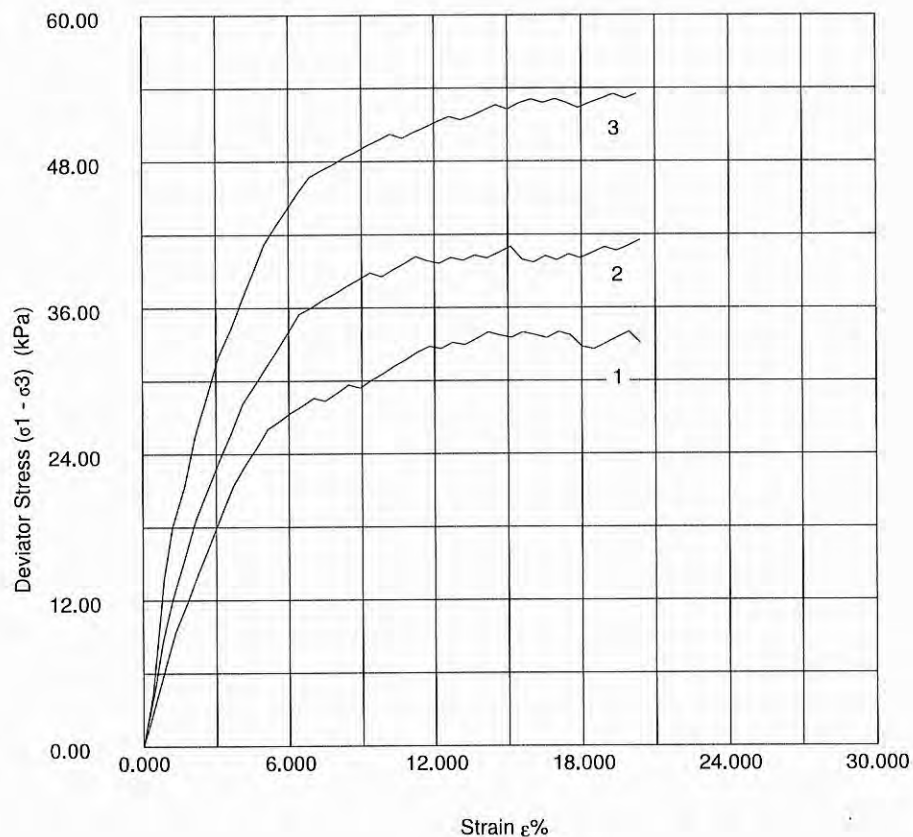
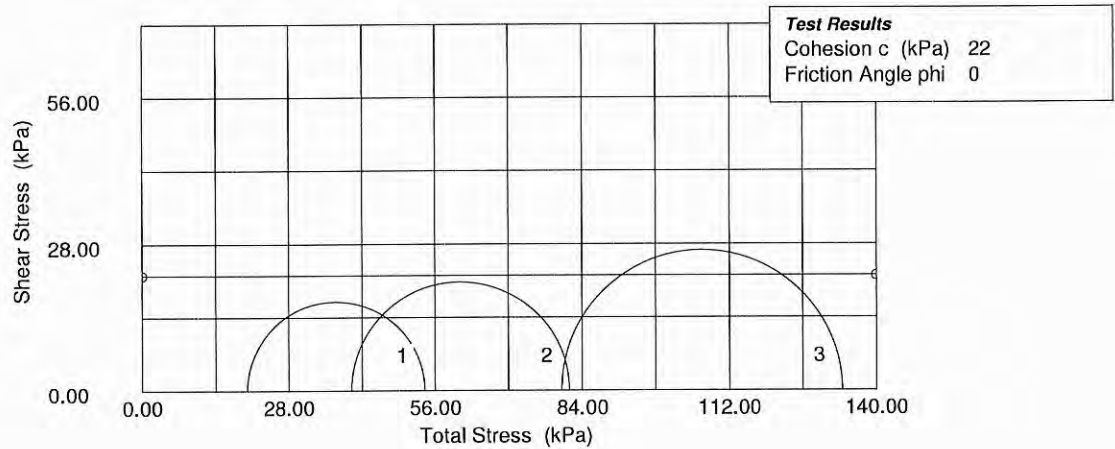
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Approved:

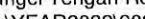
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Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

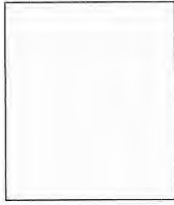
	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	28/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW1
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH18
	Operator:		Checked:	
			Approved:	

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 6.00m-6.70m
Description: Light brownish yellow and reddish orange slightly Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	157.3	158.4	162.7
Bulk Density ρ (Mg/m ³)	1.82	1.84	1.89
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

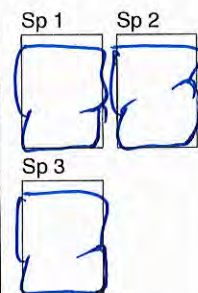
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	30.00	60.00	120.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	40	37	38
Dry Density ρ_{d0} (Mg/m ³)	1.31	1.34	1.37
Voids Ratio e_0	1.03	0.97	0.93
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	124.22	162.32	196.89
Membrane Correction σ_{mb} (kPa)	1.65	1.82	1.95
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	122.57	160.50	194.94
Strain at Failure ϵ_f %	15.13	17.08	18.80
Shear Strength c_u (kPa)	61.29	80.25	97.47
Moisture Content w_f %	40	37	38
Dry Density ρ_{df} (Mg/m ³)	1.31	1.34	1.37
Voids Ratio e_f	1.03	0.97	0.93
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 28/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW3
Borehole: BH18

Operator:

[Signature]

Checked:

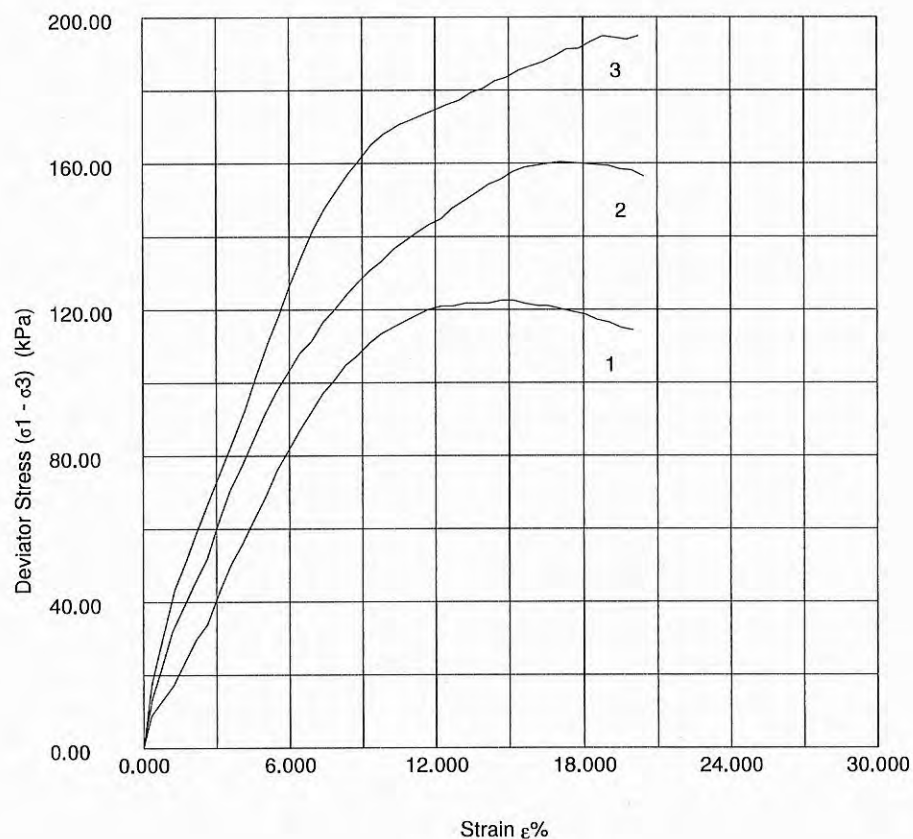
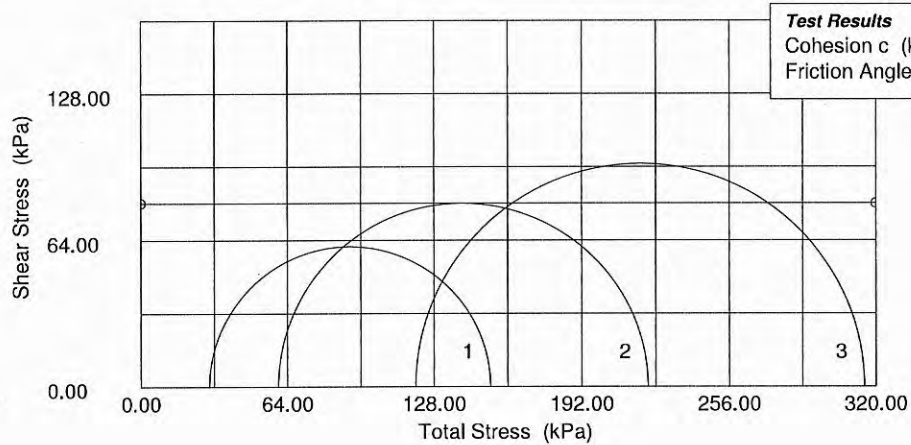
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 28/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW3
Borehole: BH18

Operator:

[Signature]

Checked:

[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth	1.50m-2.10m		
Description:	Light brown and reddish orange Sandy SILT		
Type	Specimen 1	Specimen 2	Specimen 3
	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	163	164.7	165.3
Bulk Density ρ (Mg/m ³)	1.89	1.91	1.92
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

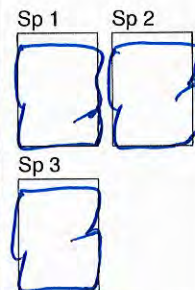
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	41	40	39
Dry Density ρ_{d0} (Mg/m ³)	1.35	1.36	1.37
Voids Ratio e_0	0.97	0.94	0.93
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	57.37	62.11	71.90
Membrane Correction σ_{mh} (kPa)	1.48	1.82	1.48
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	55.89	60.29	70.42
Strain at Failure ϵ_f %	13.25	17.13	13.25
Shear Strength c_u (kPa)	27.94	30.14	35.21
Moisture Content w_f %	41	40	39
Dry Density ρ_{df} (Mg/m ³)	1.35	1.36	1.37
Voids Ratio e_f	0.97	0.94	0.93
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 30/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH19

Operator:

Ch. A.

Checked:

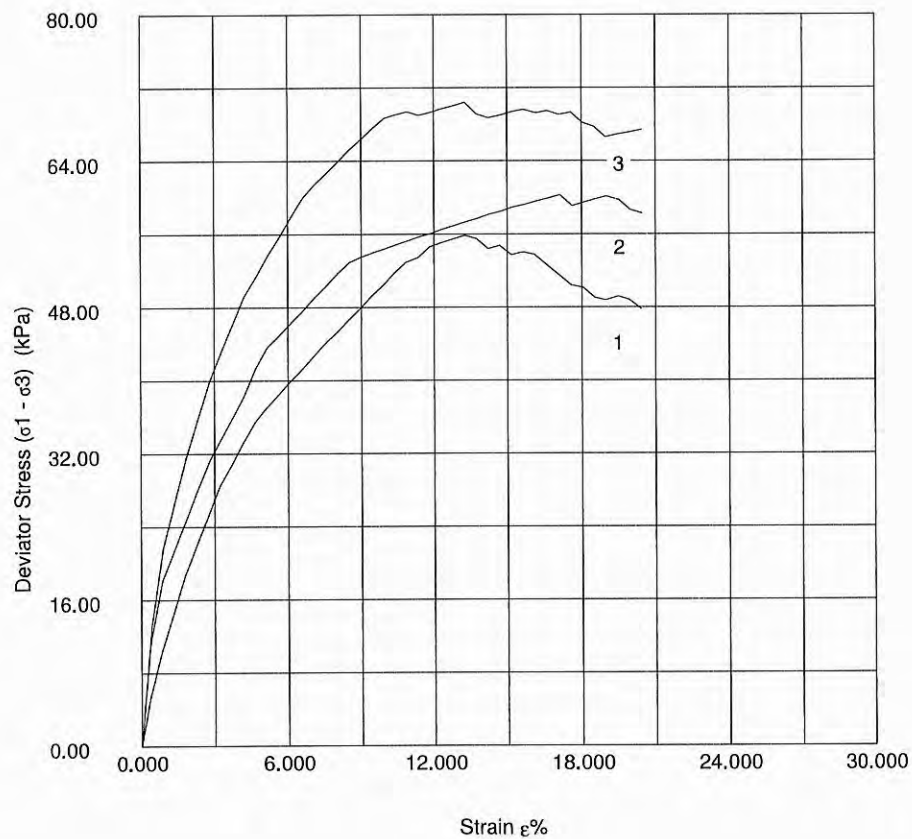
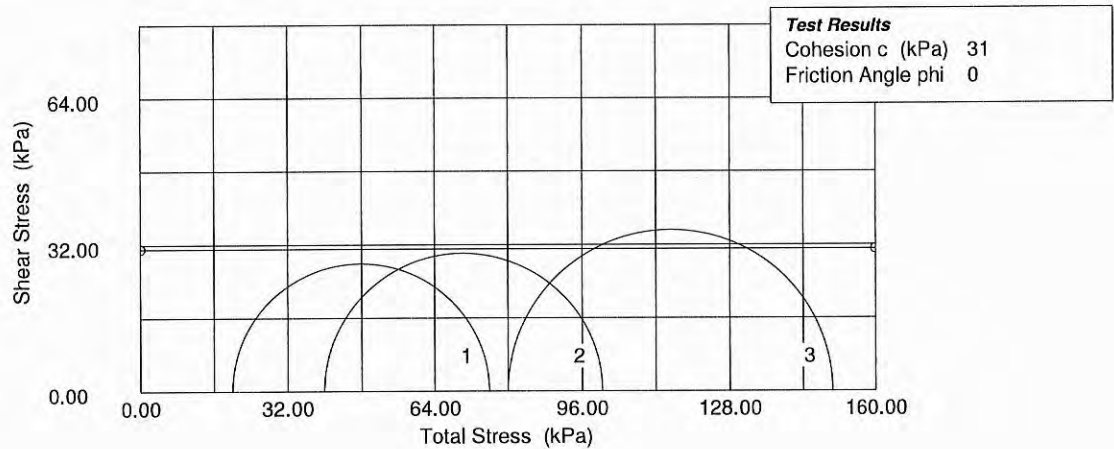
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Approved:

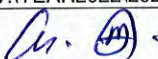
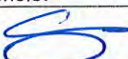
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Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	30/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW1
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH19
Operator:		Checked:	Approved:	
				

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.70m
Description: Brownish yellow and reddish orange Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	158.4	159.2	160.6
Bulk Density ρ (Mg/m ³)	1.84	1.85	1.86
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

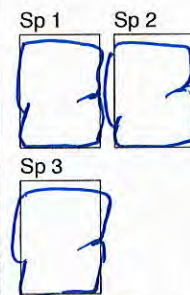
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	44	43	43
Dry Density ρ_{d0} (Mg/m ³)	1.27	1.29	1.30
Voids Ratio e_0	1.08	1.06	1.03
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	96.24	104.11	116.52
Membrane Correction σ_{mh} (kPa)	2.00	1.82	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	94.24	102.29	114.52
Strain at Failure ϵ_f %	20.33	17.43	20.39
Shear Strength c_u (kPa)	47.12	51.14	57.26
Moisture Content w_f %	44	43	43
Dry Density ρ_{df} (Mg/m ³)	1.27	1.29	1.30
Voids Ratio e_f	1.08	1.06	1.03
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 30/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH19

Operator:

[Signature]

Checked:

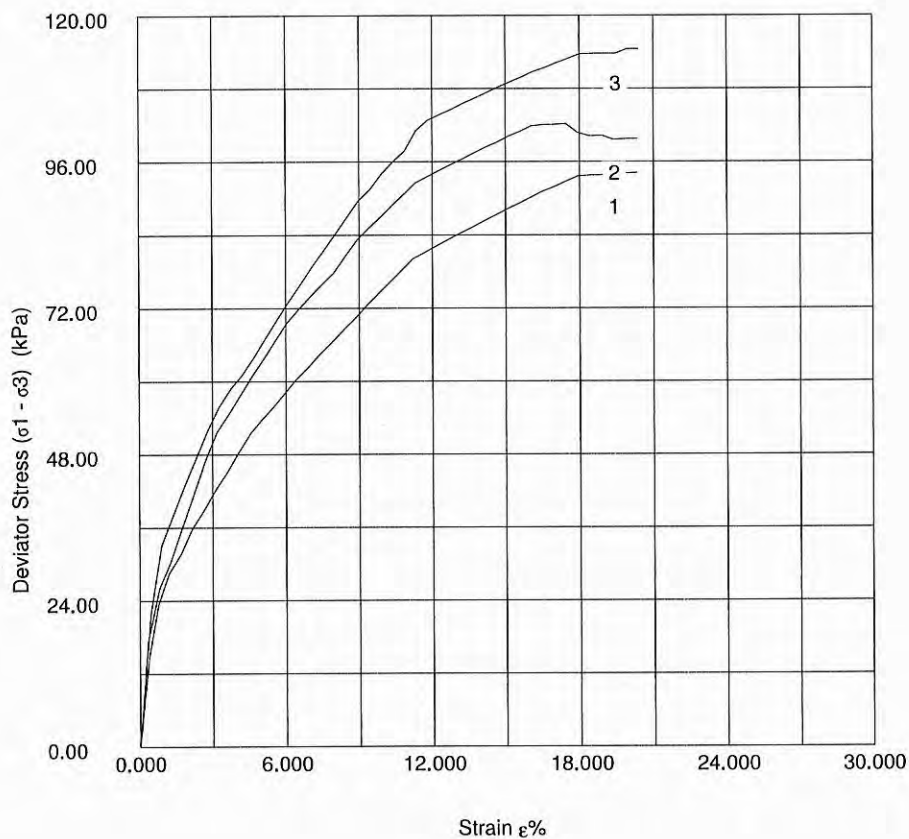
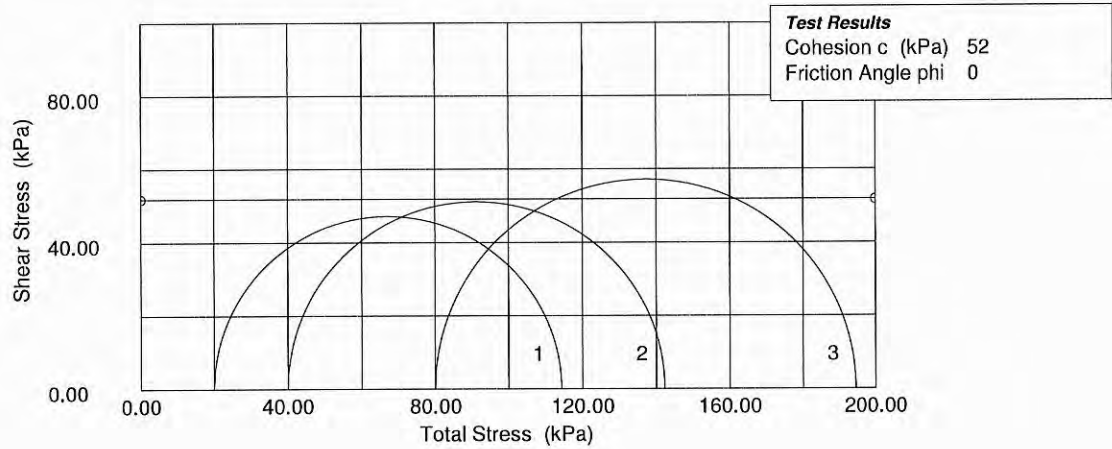
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 30/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH19

Operator:

Signature

Checked:

Signature

Approved:

Signature

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 1.50m-2.10m
Description: Light olive brown and yellowish brown Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	162.1	163.6	165.7
Bulk Density ρ (Mg/m ³)	1.88	1.90	1.92
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

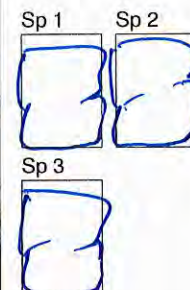
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	35	34	32
Dry Density ρ_{d0} (Mg/m ³)	1.40	1.41	1.45
Voids Ratio e_0	0.90	0.87	0.82
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	61.59	72.65	82.41
Membrane Correction σ_{mh} (kPa)	1.10	1.10	1.30
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	60.49	71.55	81.11
Strain at Failure ϵ_f %	9.29	9.46	10.99
Shear Strength c_u (kPa)	30.24	35.77	40.56
Moisture Content w_f %	35	34	32
Dry Density ρ_{df} (Mg/m ³)	1.40	1.41	1.45
Voids Ratio e_f	0.90	0.87	0.82
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 23/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH20

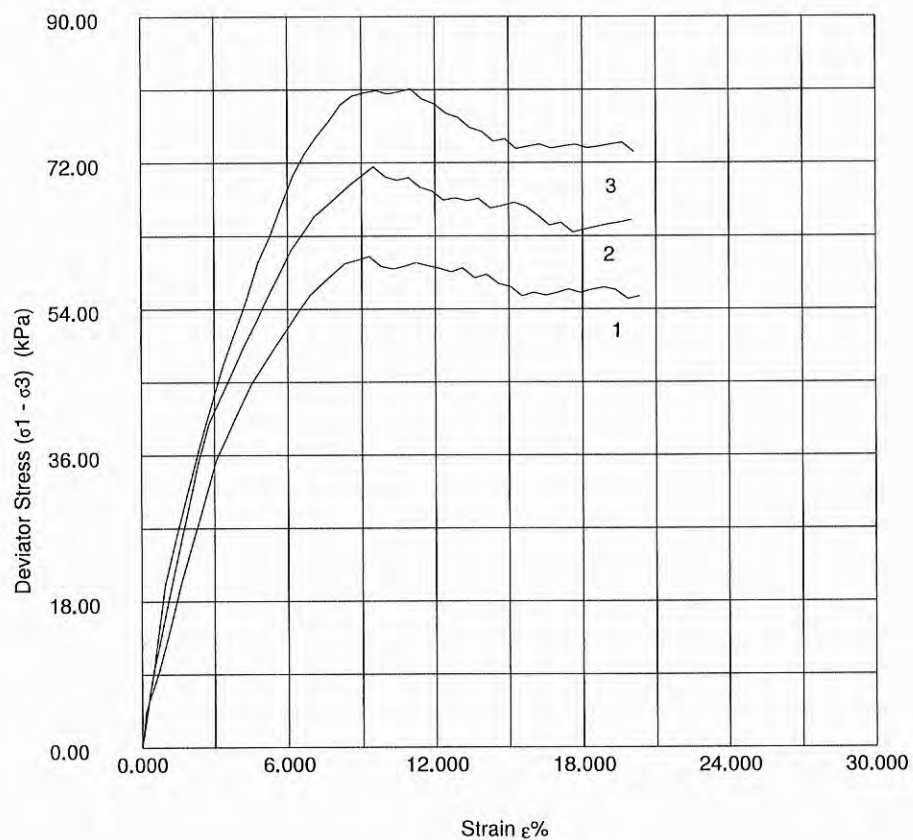
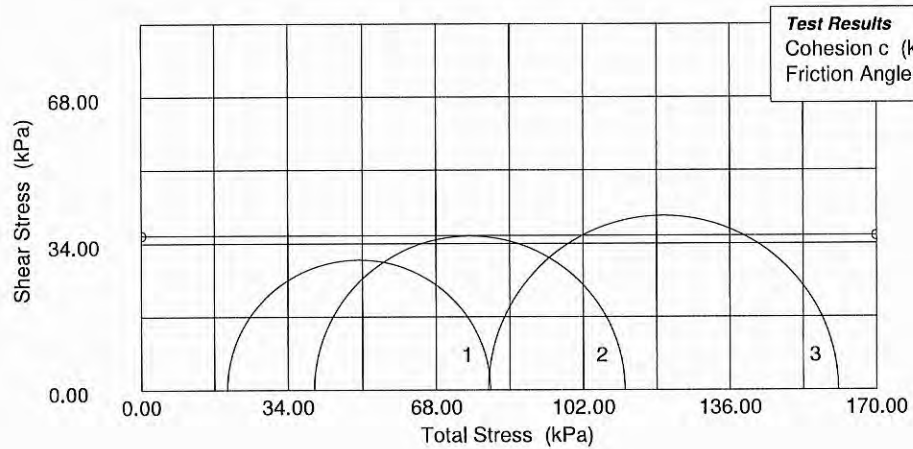
Operator:

Checked:

Approved:

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 23/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH20

Operator:

[Signature]

Checked:

[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 4.50m-5.10m
Description: Reddish brown and brownish yellow slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	156.6	157.4	169.6
Bulk Density ρ (Mg/m ³)	1.82	1.83	1.97
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

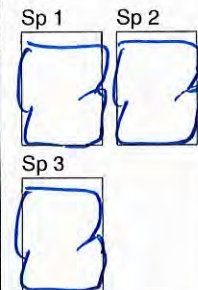
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	44	43	35
Dry Density ρ_{d0} (Mg/m ³)	1.26	1.28	1.45
Voids Ratio e_0	1.10	1.07	0.82
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	133.39	149.75	163.07
Membrane Correction σ_{mh} (kPa)	2.00	1.82	1.58
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	131.39	147.93	161.49
Strain at Failure ϵ_f %	20.38	16.75	14.38
Shear Strength c_u (kPa)	65.69	73.96	80.74
Moisture Content w_f %	44	43	35
Dry Density ρ_{df} (Mg/m ³)	1.26	1.28	1.45
Voids Ratio e_f	1.10	1.07	0.82
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 23/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW3
Borehole: BH20

Operator:

[Signature]

Checked:

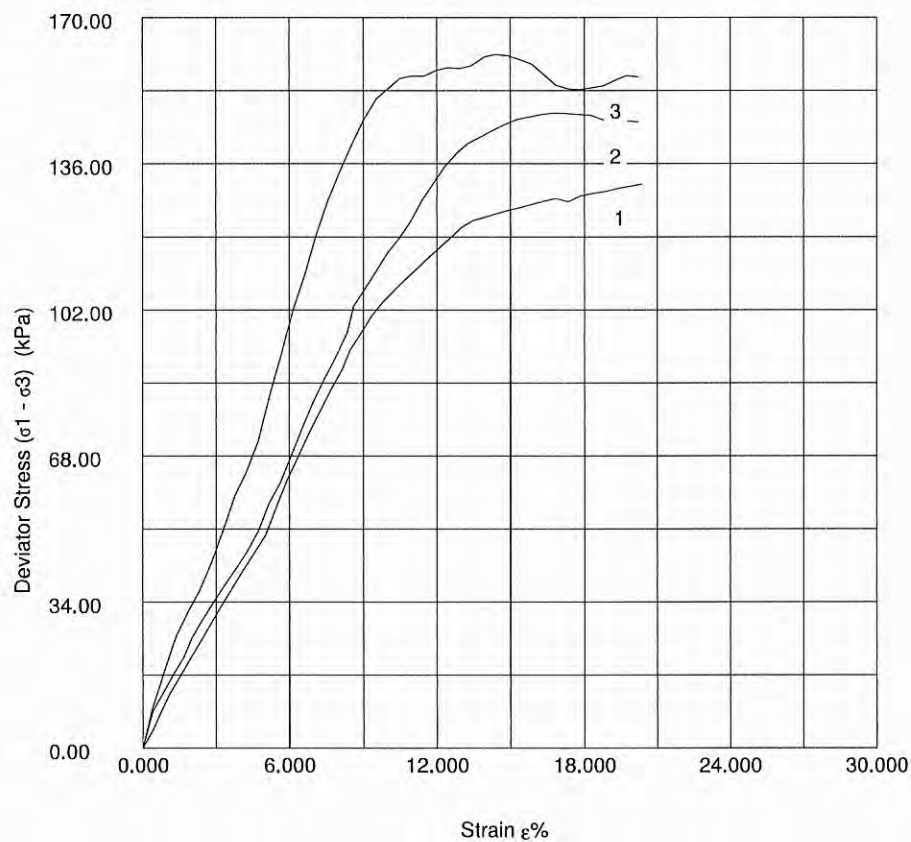
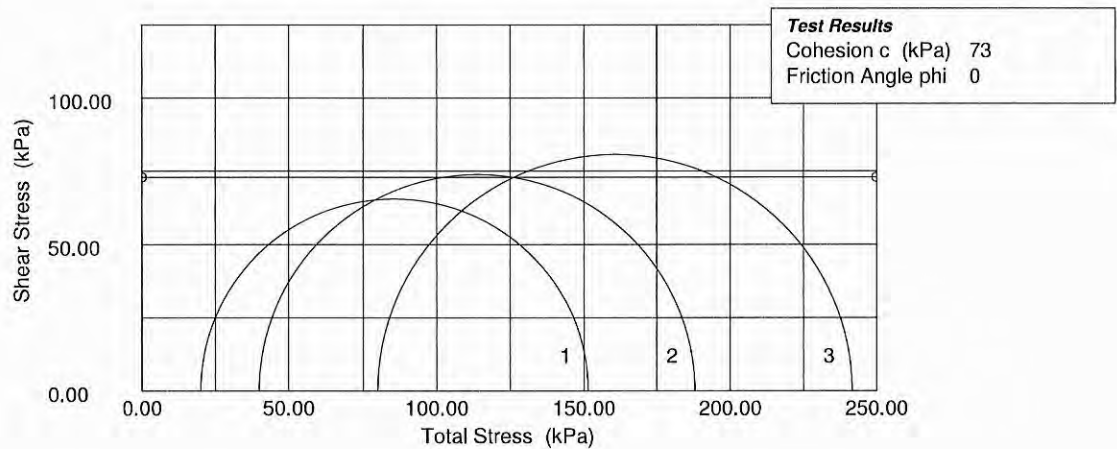
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Approved:

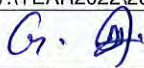
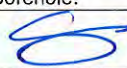
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Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)	
			Date of Test: 23/12/22	
	Site Reference: Sungei Tengah Road/Lorong Pasu	Sample: TW3		
	Jobfile: W:\YEAR2022\2022\SML345A.JOB	Borehole: BH20		
Operator: 		Checked: 	Approved: 	

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 4.50m-5.10m
Description: Light brownish yellow and reddish orange Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	157.4	159.9	162
Bulk Density ρ (Mg/m ³)	1.83	1.86	1.88
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

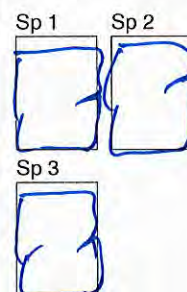
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	36	36	37
Dry Density ρ_{d0} (Mg/m ³)	1.34	1.36	1.37
Voids Ratio e_0	0.98	0.94	0.93
Deg of Saturation S_0 %	98.49	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	171.13	181.00	197.70
Membrane Correction σ_{mh} (kPa)	1.48	1.73	1.73
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	169.65	179.27	195.97
Strain at Failure ϵ_f %	13.36	15.53	15.71
Shear Strength c_u (kPa)	84.83	89.63	97.98
Moisture Content w_f %	36	36	37
Dry Density ρ_{df} (Mg/m ³)	1.34	1.36	1.37
Voids Ratio e_f	0.98	0.94	0.93
Deg of Saturation S_f %	98.49	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 08/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW3
Borehole: BH21

Operator:

[Signature]

Checked:

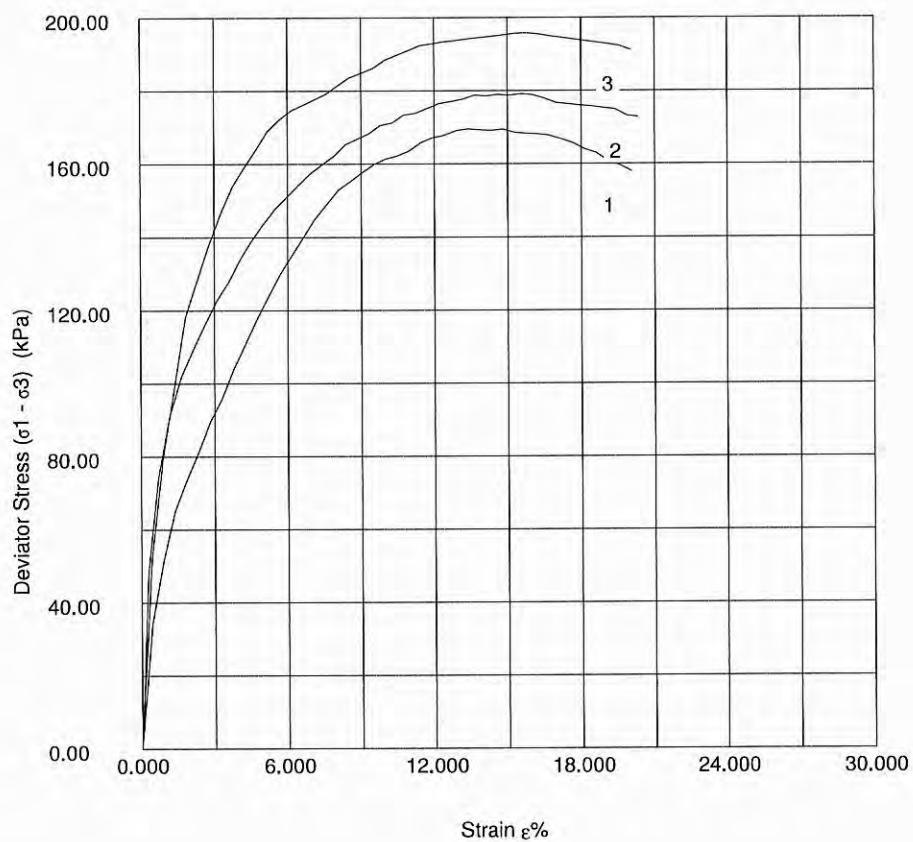
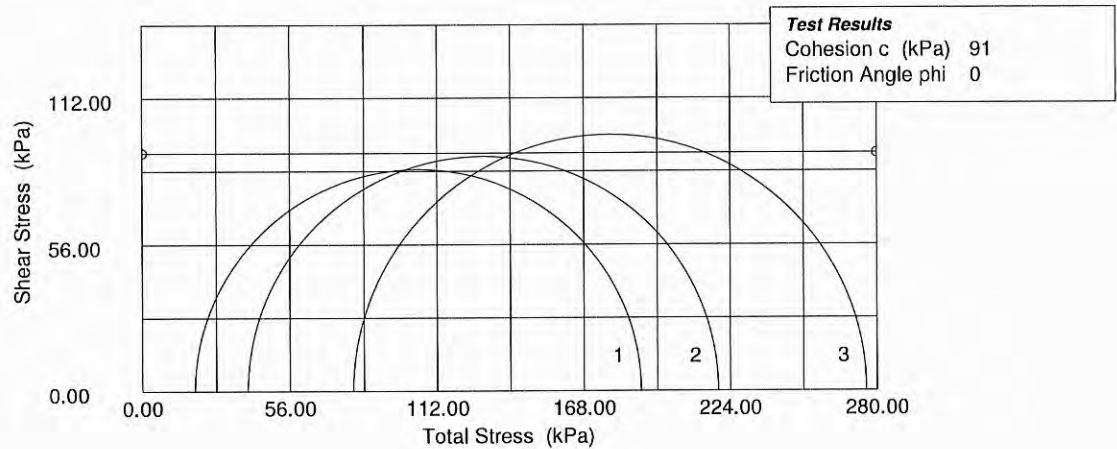
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Approved:

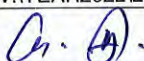
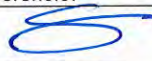
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Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	08/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW3
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH21
Operator:		Checked:	Approved:	
				

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth	9.00m-9.50m		
Description:	Reddish brown and brownish yellow slightly Sandy SILT		
Type	Specimen 1	Specimen 2	Specimen 3
Height H_0 (mm)	Undisturbed	Undisturbed	Undisturbed
Diameter D_0 (mm)	76	76	76
Weight W_0 (gr)	38	38	38
Bulk Density ρ (Mg/m ³)	161.2	165.5	167.8
Particle Density ρ_s	1.87	1.92	1.95
	2.65	2.65	2.65
	(assumed)	(assumed)	(assumed)

Initial Conditions

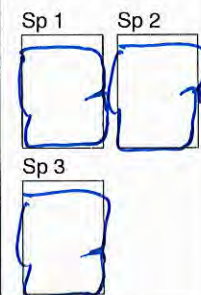
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	40.00	80.00	160.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	34	31	30
Dry Density ρ_{d0} (Mg/m ³)	1.40	1.47	1.50
Voids Ratio e_0	0.89	0.81	0.77
Deg of Saturation S_0 %	99.64	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	163.34	174.26	191.03
Membrane Correction σ_{mb} (kPa)	1.40	1.65	1.95
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	161.94	172.61	189.08
Strain at Failure ϵ_f %	11.79	14.82	18.55
Shear Strength c_u (kPa)	80.97	86.30	94.54
Moisture Content w_f %	34	31	30
Dry Density ρ_{df} (Mg/m ³)	1.40	1.47	1.50
Voids Ratio e_f	0.89	0.81	0.77
Deg of Saturation S_f %	99.64	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 08/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH21

Operator:

Ch. D.

Checked:

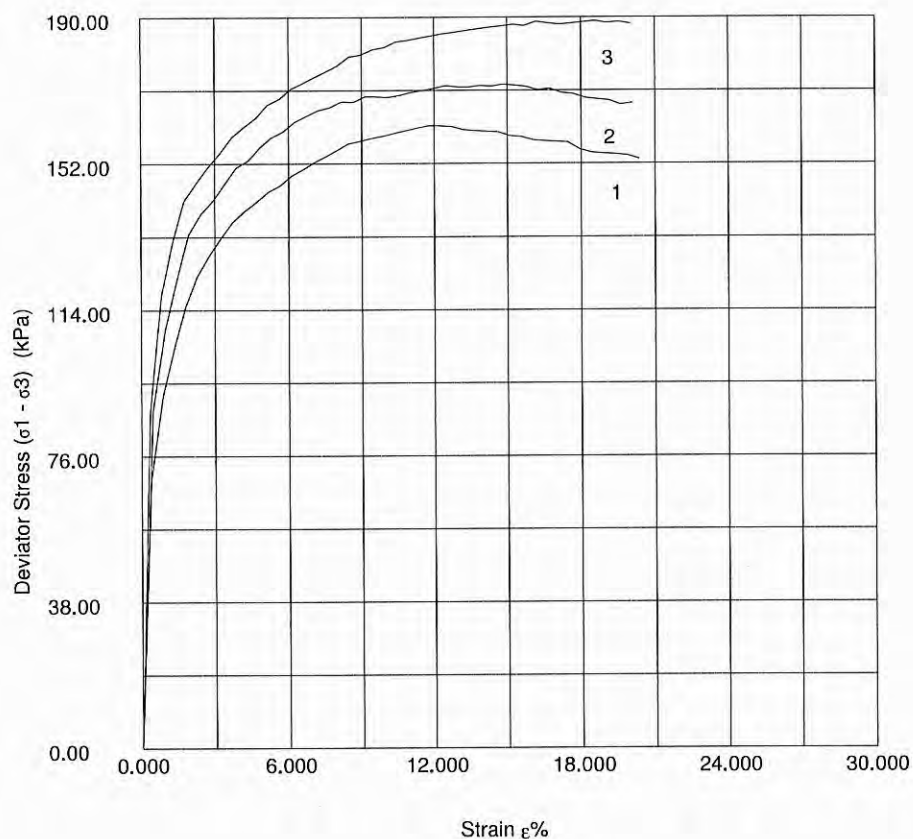
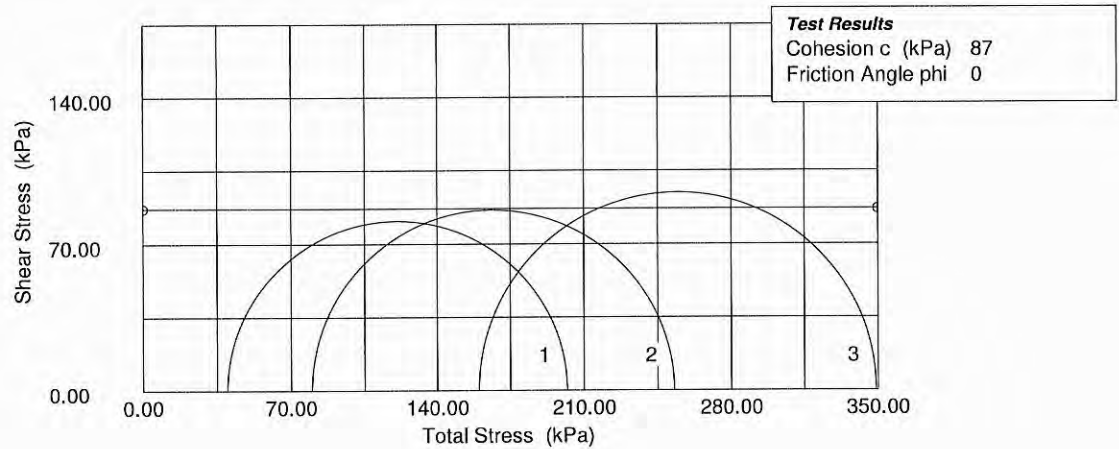
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Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 08/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH21

Operator:

[Signature]

Checked:

[Signature]

Approved:

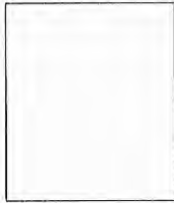
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Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth	1.50m-2.10m		
Description:	Reddish orange and yellowish brown slightly gravelly slightly Sandy CLAY		
Type	Specimen 1	Specimen 2	Specimen 3
	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	157.1	160.5	164.2
Bulk Density ρ (Mg/m ³)	1.82	1.86	1.91
Particle Density ρ_s	2.65	2.65	2.65
	(assumed)	(assumed)	(assumed)

Initial Conditions

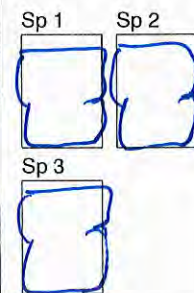
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	40	39	40
Dry Density ρ_{d0} (Mg/m ³)	1.31	1.34	1.36
Voids Ratio e_0	1.03	0.98	0.94
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	143.42	160.51	175.95
Membrane Correction σ_{mb} (kPa)	1.73	1.90	1.95
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	141.69	158.61	174.00
Strain at Failure ϵ_f %	15.72	17.63	18.55
Shear Strength c_u (kPa)	70.84	79.30	87.00
Moisture Content w_f %	40	39	40
Dry Density ρ_{df} (Mg/m ³)	1.31	1.34	1.36
Voids Ratio e_f	1.03	0.98	0.94
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



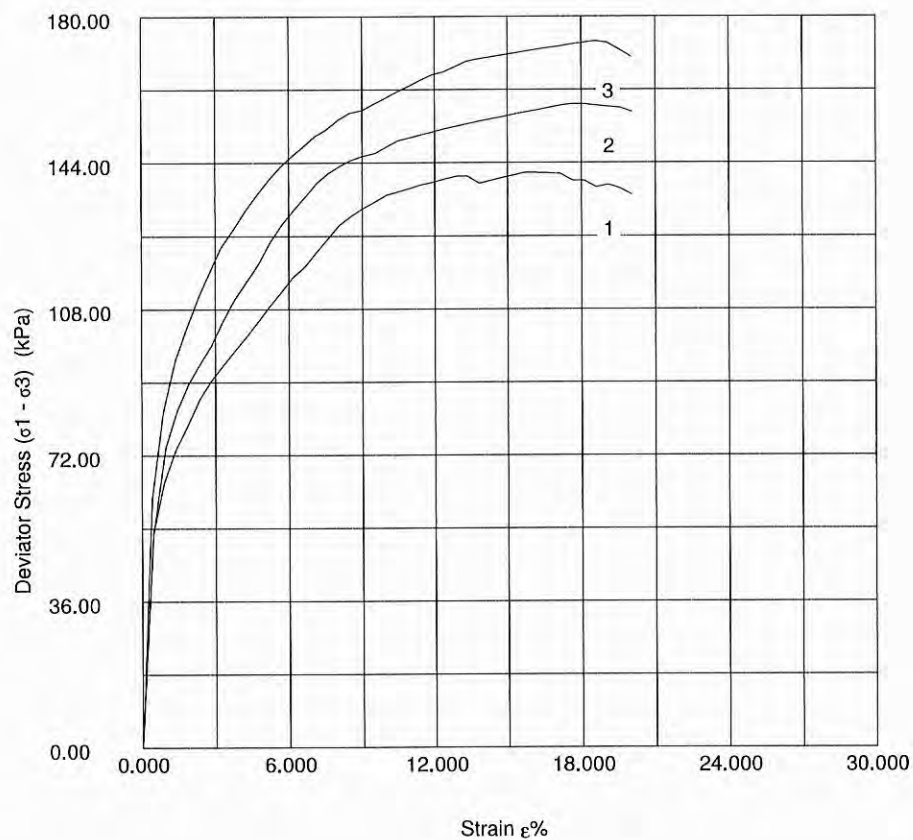
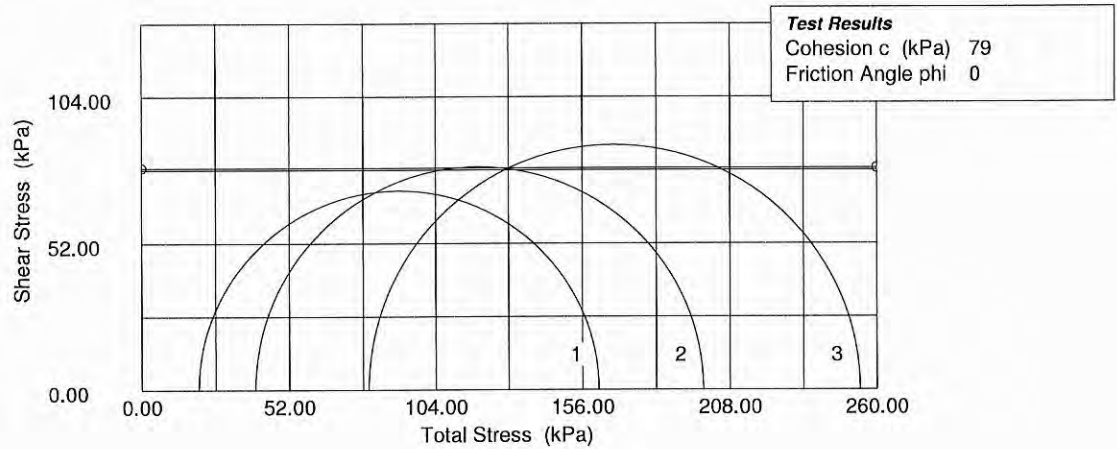
Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD

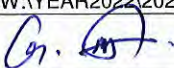
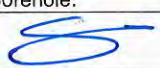
	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	14/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW1
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH22
Operator:	Cor. A.	Checked:	Approved:	

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	14/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW1
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH22
Operator: 		Checked: 		Approved: 

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 4.50m-5.10m
Description: Light brownish yellow and reddish orange slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	156.8	157.4	159.9
Bulk Density ρ (Mg/m ³)	1.82	1.83	1.86
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

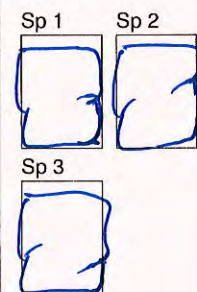
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	39	38	39
Dry Density ρ_{d0} (Mg/m ³)	1.31	1.32	1.34
Voids Ratio e_0	1.02	1.00	0.98
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	166.22	184.74	212.37
Membrane Correction σ_{mh} (kPa)	1.73	1.73	1.40
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	164.49	183.01	210.97
Strain at Failure ϵ_f %	15.84	15.86	11.78
Shear Strength c_u (kPa)	82.25	91.51	105.48
Moisture Content w_f %	39	38	39
Dry Density ρ_{df} (Mg/m ³)	1.31	1.32	1.34
Voids Ratio e_f	1.02	1.00	0.98
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 14/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW3
Borehole: BH22

Operator:

As. M.

Checked:

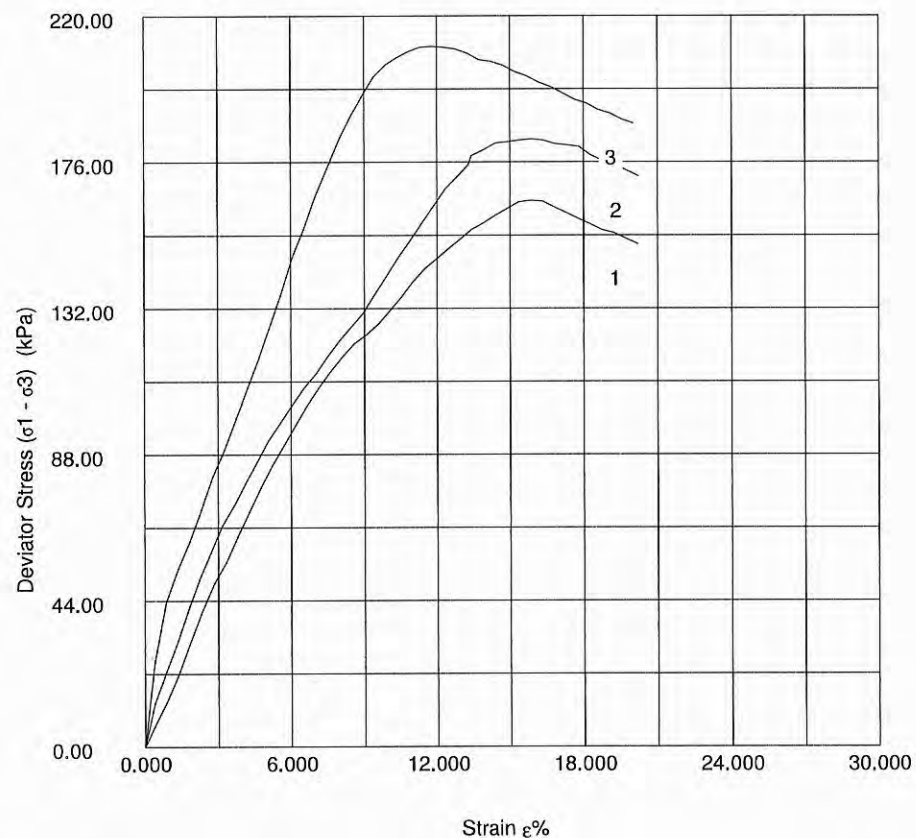
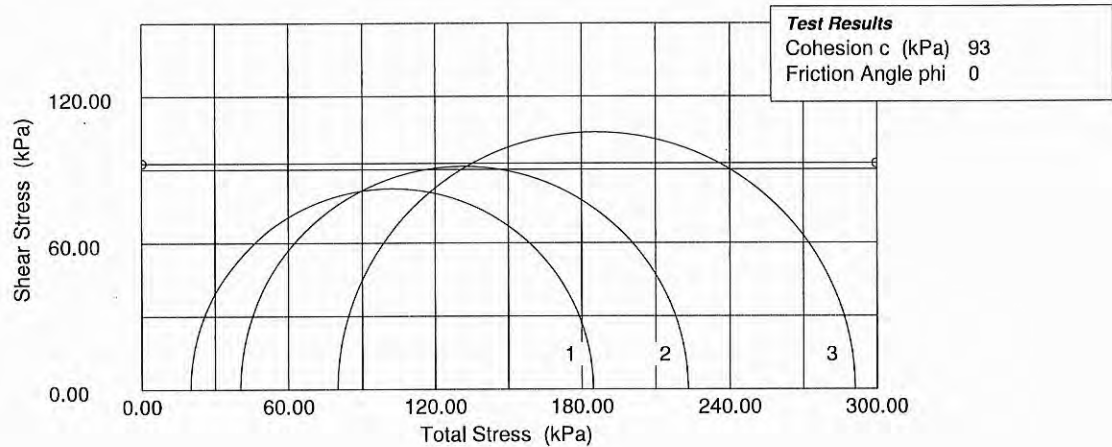
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 14/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW3
Borehole: BH22

Operator: *Ar. A.*

Checked: *[Signature]*

Approved: *[Signature]*

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 4.50m-5.10m
Description: Light red and brownish yellow slightly Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	161.2	161.5	166.3
Bulk Density ρ (Mg/m ³)	1.87	1.87	1.93
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

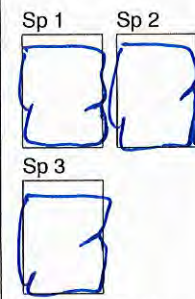
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	38	38	36
Dry Density ρ_{d0} (Mg/m ³)	1.36	1.36	1.42
Voids Ratio e_0	0.96	0.95	0.87
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	183.67	202.32	249.75
Membrane Correction σ_{mh} (kPa)	1.48	1.40	1.65
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	182.19	200.92	248.10
Strain at Failure ϵ_f %	12.84	12.42	14.68
Shear Strength c_u (kPa)	91.10	100.46	124.05
Moisture Content w_f %	38	38	36
Dry Density ρ_{df} (Mg/m ³)	1.36	1.36	1.42
Voids Ratio e_f	0.96	0.95	0.87
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 19/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW3
Borehole: BH23

Operator:

[Signature]

Checked:

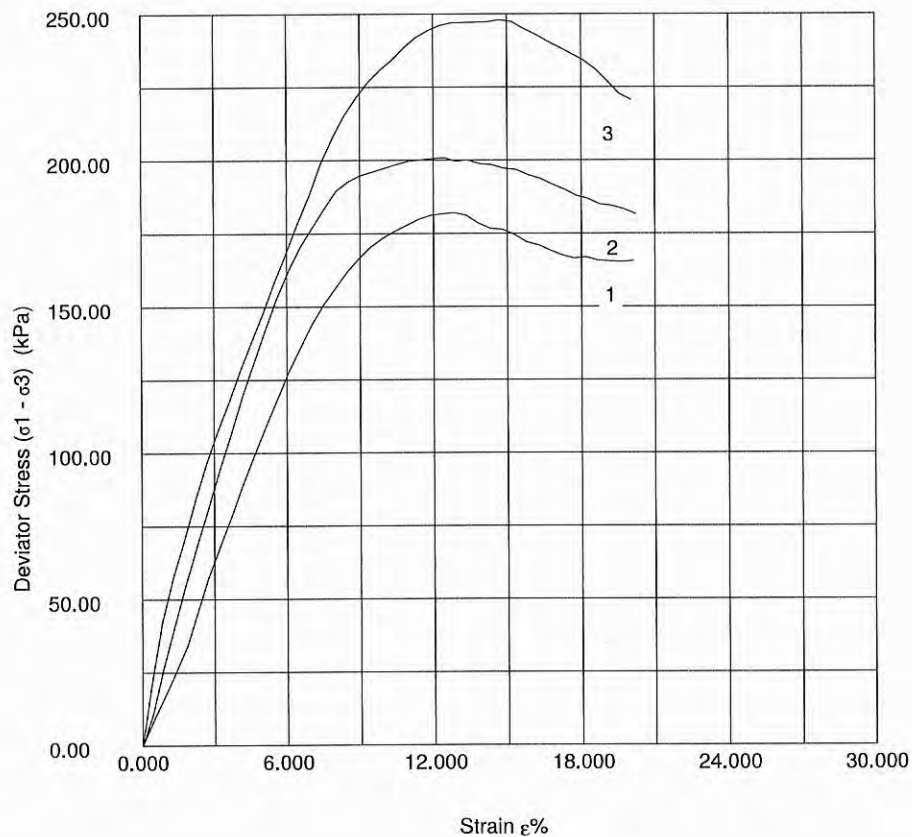
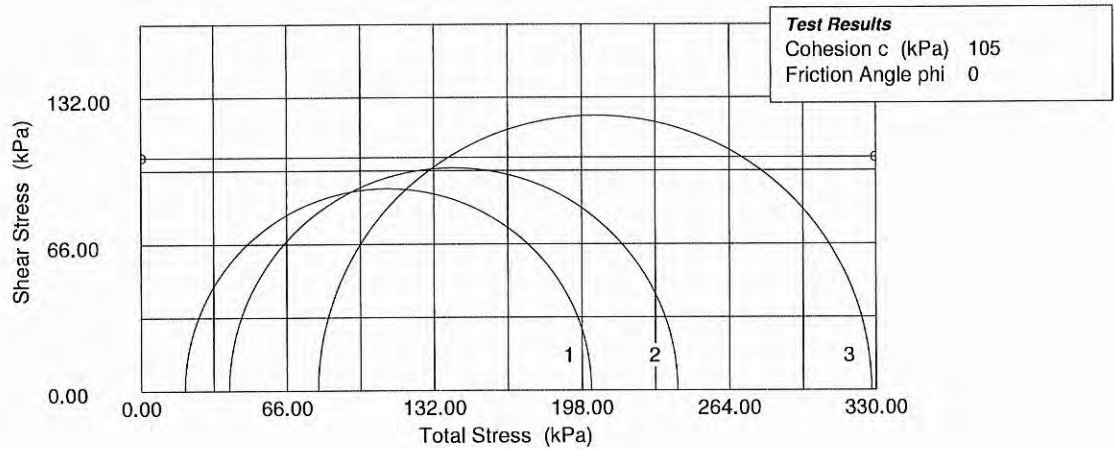
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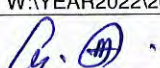
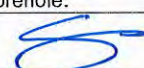
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Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	19/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW3
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH23
Operator:		Checked:	Approved:	
				

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 9.00m-9.70m
Description: Light brownish grey slightly Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	150.4	151.2	153.5
Bulk Density ρ (Mg/m ³)	1.74	1.75	1.78
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

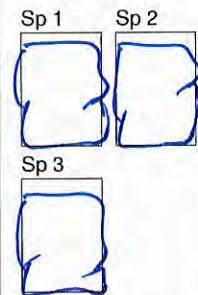
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	40.00	80.00	160.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	51	47	49
Dry Density ρ_{d0} (Mg/m ³)	1.16	1.19	1.19
Voids Ratio e_0	1.29	1.22	1.22
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	69.58	86.58	100.82
Membrane Correction σ_{mh} (kPa)	1.58	1.73	1.58
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	68.00	84.85	99.24
Strain at Failure ϵ_f %	14.22	16.08	14.03
Shear Strength c_u (kPa)	34.00	42.42	49.62
Moisture Content w_f %	51	47	49
Dry Density ρ_{df} (Mg/m ³)	1.16	1.19	1.19
Voids Ratio e_f	1.29	1.22	1.22
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 19/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW5
Borehole: BH23

Operator:

[Signature]

Checked:

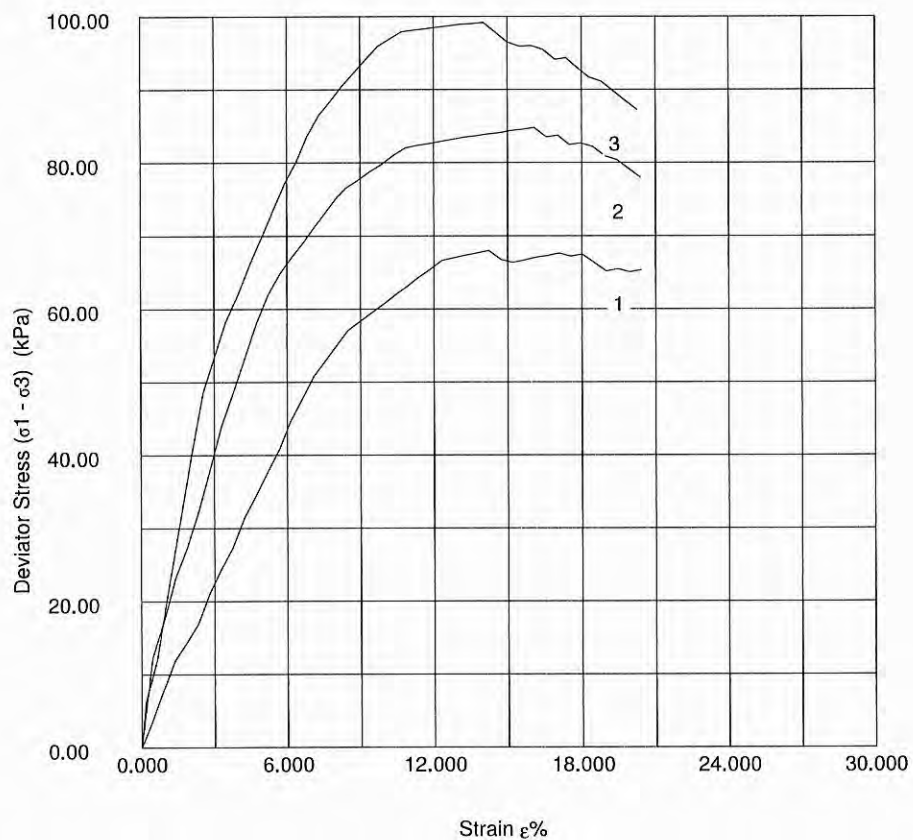
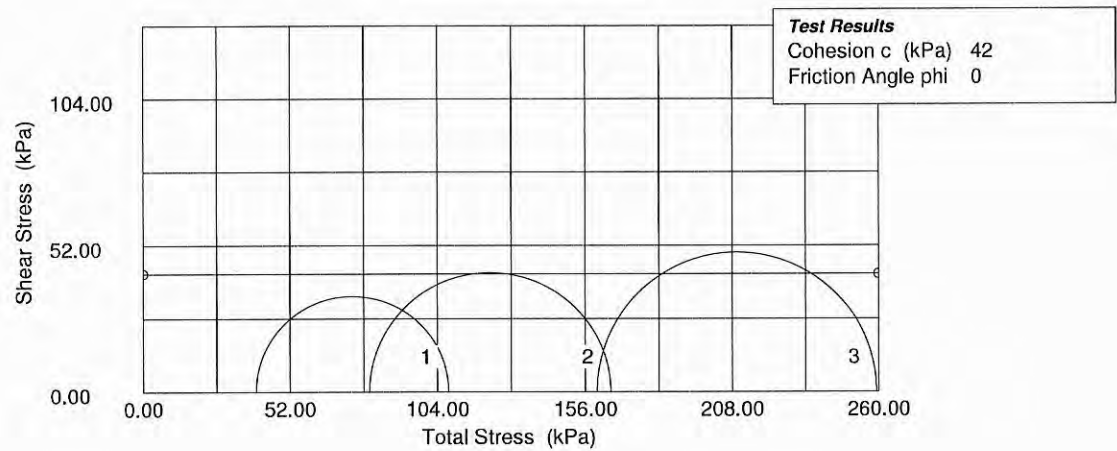
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Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 19/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW5
Borehole: BH23

Operator:

[Signature]

Checked:

[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.50m
Description: Light brownish yellow and reddish orange Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	164	164.7	175.1
Bulk Density ρ (Mg/m ³)	1.90	1.91	2.03
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

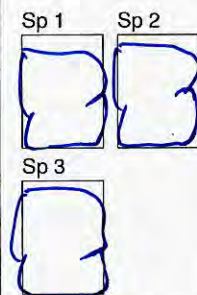
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	38	38	33
Dry Density ρ_{d0} (Mg/m ³)	1.38	1.39	1.53
Voids Ratio e_0	0.92	0.91	0.74
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	118.28	189.86	303.92
Membrane Correction σ_{mh} (kPa)	1.82	1.82	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	116.46	188.04	301.92
Strain at Failure ϵ_f %	16.68	17.18	20.03
Shear Strength c_u (kPa)	58.23	94.02	150.96
Moisture Content w_f %	38	38	33
Dry Density ρ_{df} (Mg/m ³)	1.38	1.39	1.53
Voids Ratio e_f	0.92	0.91	0.74
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



(Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)

Test name UU (SS, MS)
Date of Test: 19/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH24

Operator:

[Signature]

Checked:

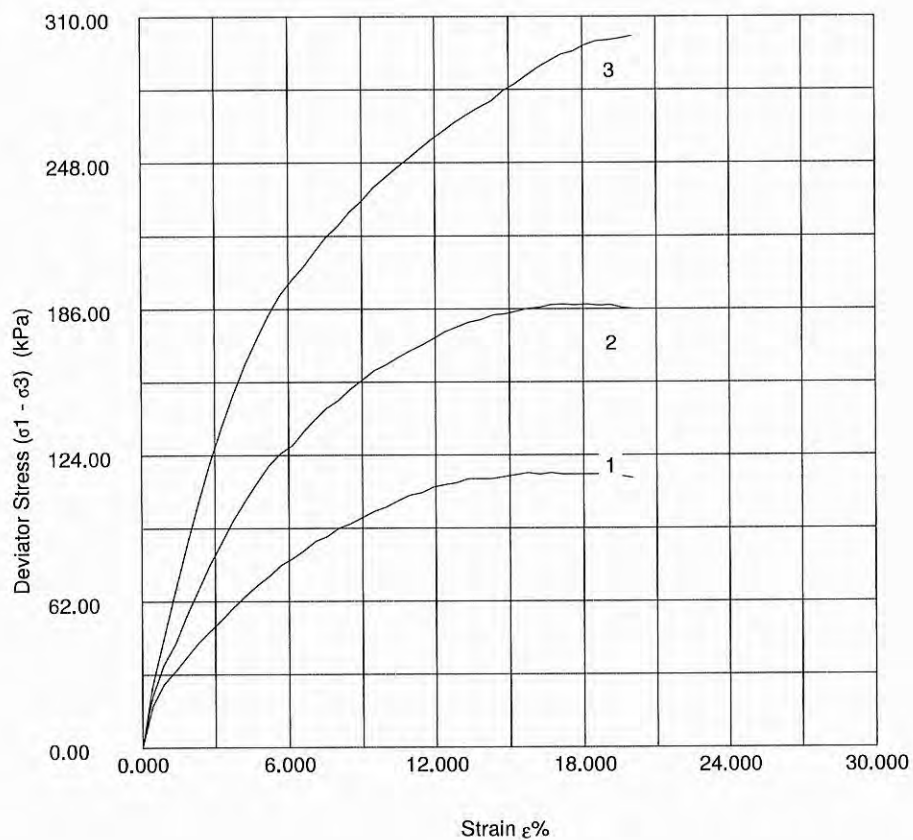
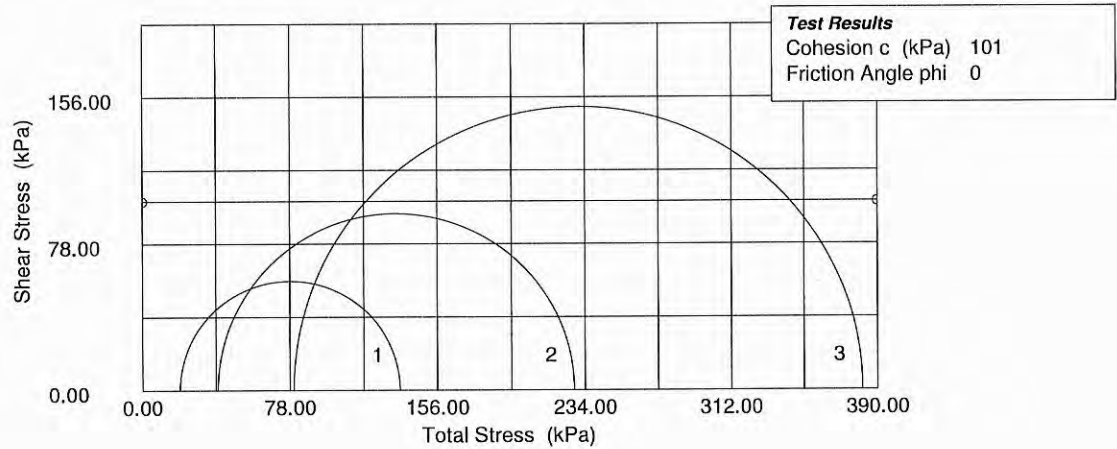
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)	
			Date of Test: 19/12/22	
	Site Reference: Sungei Tengah Road/Lorong Pasu		Sample: U1	
	Jobfile: W:\YEAR2022\2022\SML345A.JOB		Borehole: BH24	
Operator:		Checked:		Approved:

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 6.00m-6.70m
Description: Reddish orange and light brownish yellow Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	153.4	157.2	157.5
Bulk Density ρ (Mg/m ³)	1.78	1.82	1.83
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

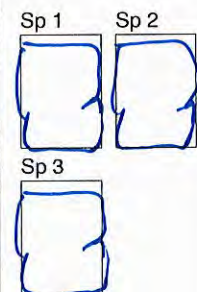
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	30.00	60.00	120.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	41	41	41
Dry Density ρ_{d0} (Mg/m ³)	1.26	1.29	1.29
Voids Ratio e_0	1.10	1.05	1.05
Deg of Saturation S_0 %	98.53	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	92.49	113.79	122.13
Membrane Correction σ_{mh} (kPa)	1.95	1.73	1.90
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	90.54	112.06	120.23
Strain at Failure ϵ_f %	19.32	16.20	17.55
Shear Strength c_u (kPa)	45.27	56.03	60.12
Moisture Content w_f %	41	41	41
Dry Density ρ_{df} (Mg/m ³)	1.26	1.29	1.29
Voids Ratio e_f	1.10	1.05	1.05
Deg of Saturation S_f %	98.53	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 19/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH24

Operator:

[Signature]

Checked:

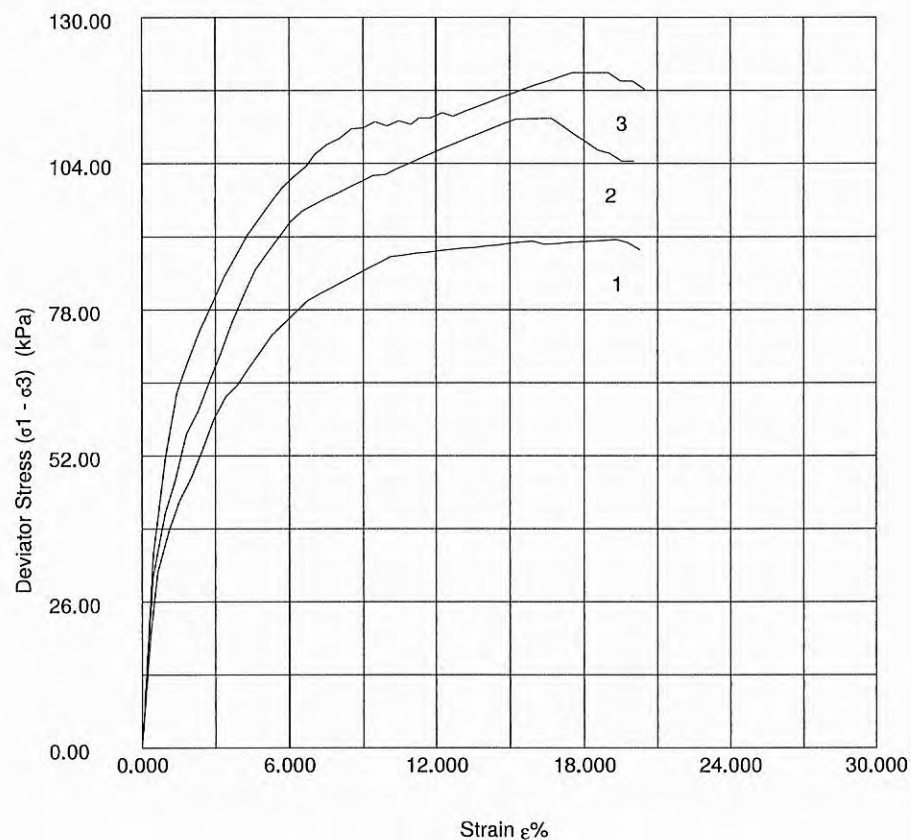
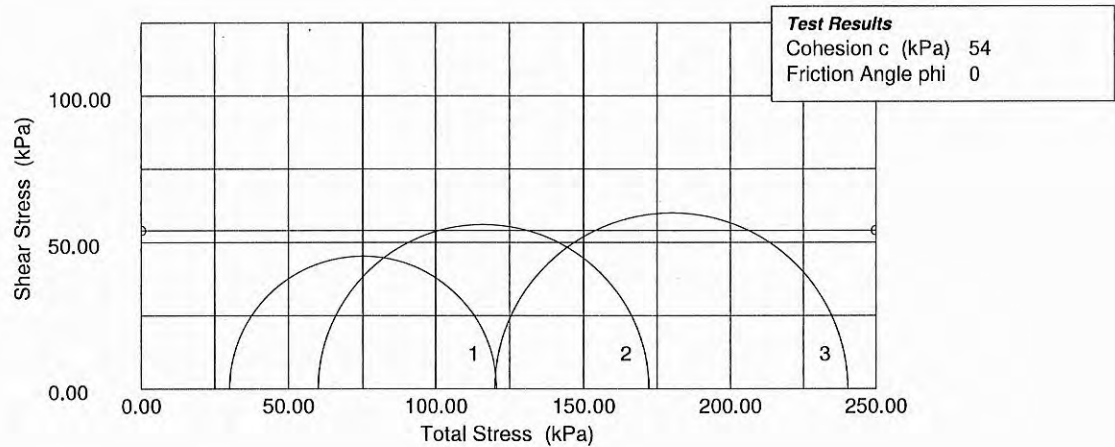
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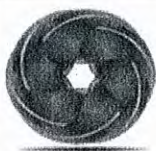
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Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 19/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH24

Operator:

Ar. D.

Checked:

S

Approved:

M

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 1.50m-2.10m
Description: Brownish yellow and reddish orange slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	161.7	161.9	167.8
Bulk Density ρ (Mg/m ³)	1.88	1.88	1.95
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

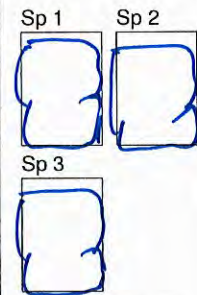
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	40	39	37
Dry Density ρ_{d0} (Mg/m ³)	1.34	1.35	1.42
Voids Ratio e_0	0.98	0.96	0.87
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	179.81	212.12	233.13
Membrane Correction σ_{mh} (kPa)	1.95	1.82	1.82
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	177.86	210.30	231.31
Strain at Failure ϵ_f %	19.08	17.33	17.12
Shear Strength c_u (kPa)	88.93	105.15	115.65
Moisture Content w_f %	40	39	37
Dry Density ρ_{df} (Mg/m ³)	1.34	1.35	1.42
Voids Ratio e_f	0.98	0.96	0.87
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



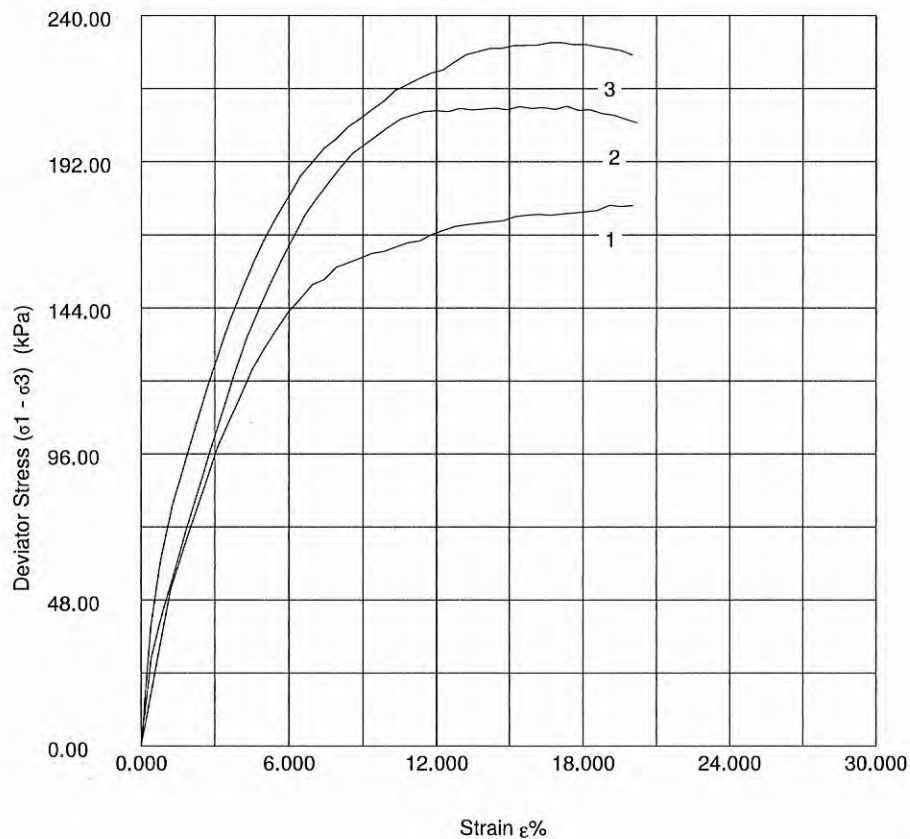
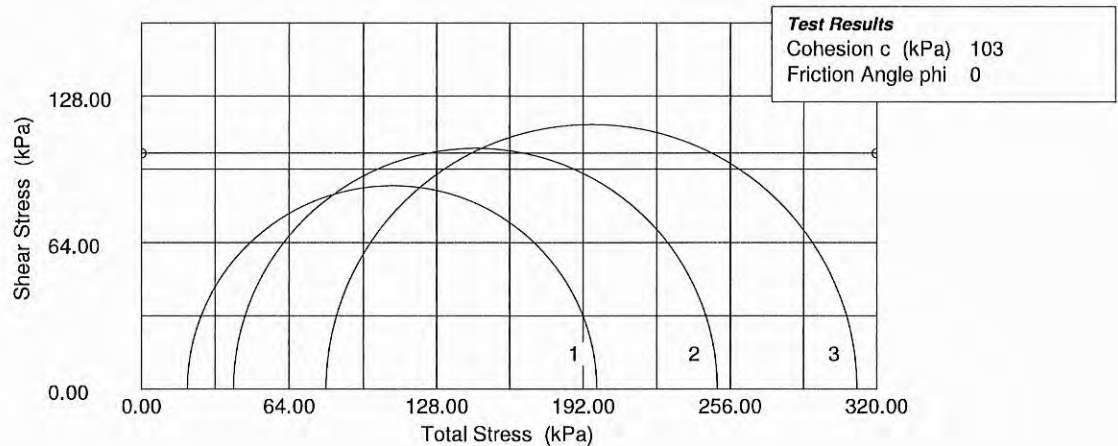
Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD

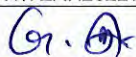
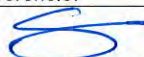
	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)	
			Date of Test:	15/12/22	
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW1	
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH25	
Operator:		Checked:		Approved:	

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)	
	Date of Test: 15/12/22			
	Site Reference: Sungei Tengah Road/Lorong Pasu	Sample: TW1		
	Jobfile: W:\YEAR2022\2022\SML345A.JOB	Borehole: BH25		
Operator: 		Checked: 		Approved: 

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 4.50m-5.10m
Description: Brownish yellow and light red slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	155.2	158.4	158.6
Bulk Density ρ (Mg/m ³)	1.80	1.84	1.84
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

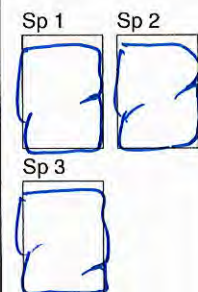
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	43	42	40
Dry Density ρ_{d0} (Mg/m ³)	1.26	1.30	1.31
Voids Ratio e_0	1.10	1.04	1.02
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	128.08	147.32	203.64
Membrane Correction σ_{mh} (kPa)	1.10	1.40	1.40
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	126.98	145.92	202.24
Strain at Failure ϵ_f %	8.64	12.07	11.51
Shear Strength c_u (kPa)	63.49	72.96	101.12
Moisture Content w_f %	43	42	40
Dry Density ρ_{df} (Mg/m ³)	1.26	1.30	1.31
Voids Ratio e_f	1.10	1.04	1.02
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



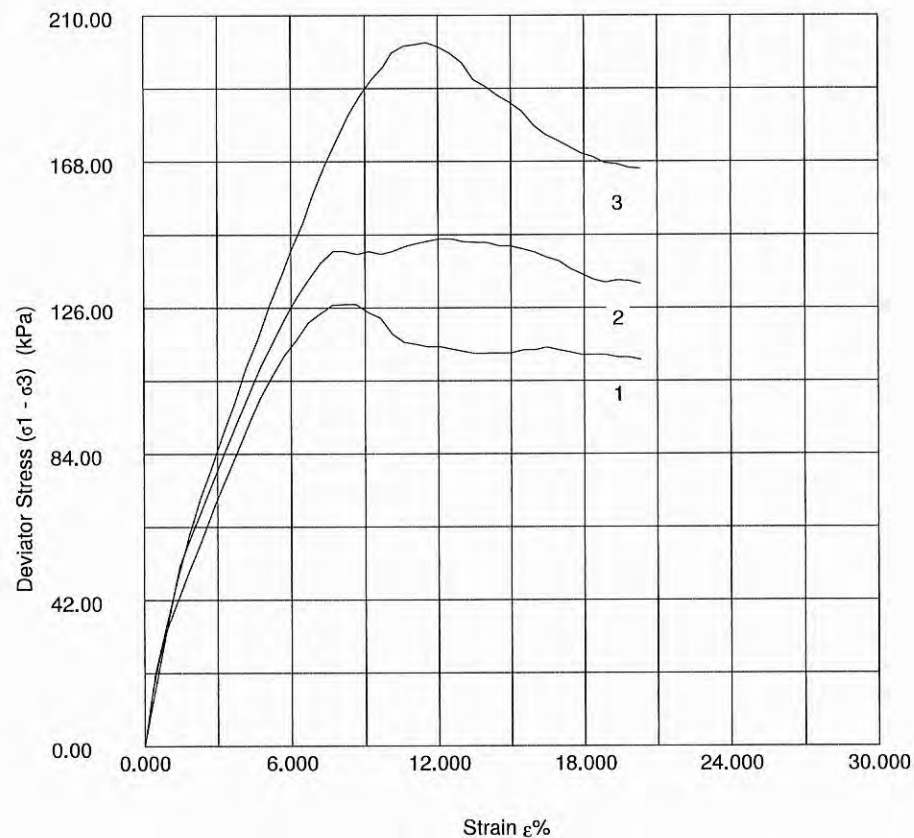
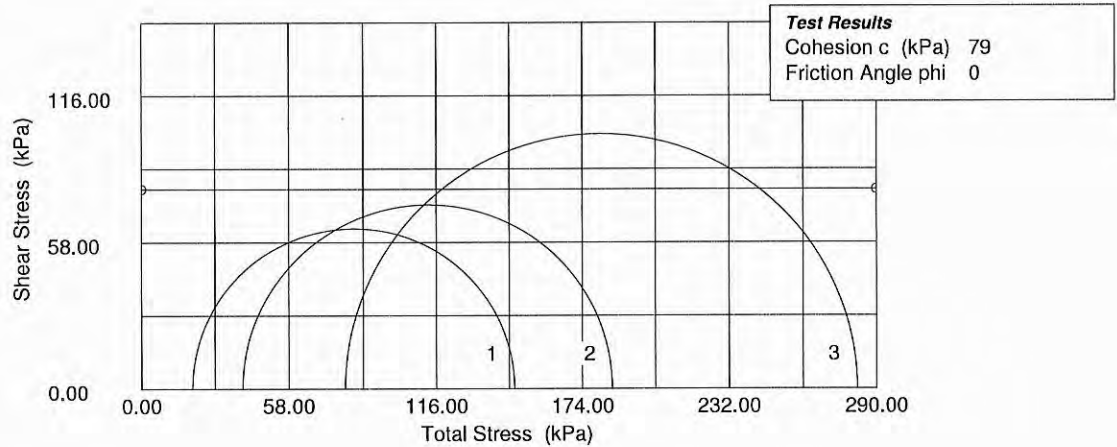
Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD

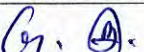
	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)
			Date of Test: 15/12/22
	Site Reference: Sungei Tengah Road/Lorong Pasu	Sample: U1	
	Jobfile: W:\YEAR2022\2022\SML345A.JOB	Borehole: BH25	
Operator:	Checked:	Approved:	

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	15/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	U1
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH25
Operator: 		Checked: 		Approved: 

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 1.50m-2.10m
Description: Light yellowish brown and reddish orange Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	195.1	196.5	199.3
Bulk Density ρ (Mg/m ³)	2.26	2.28	2.31
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

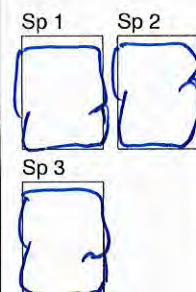
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	21	21	20
Dry Density ρ_{d0} (Mg/m ³)	1.87	1.89	1.93
Voids Ratio e_0	0.42	0.40	0.37
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	60.75	65.17	81.15
Membrane Correction σ_{mh} (kPa)	1.48	1.30	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	59.27	63.87	79.15
Strain at Failure ϵ_f %	12.79	10.95	19.97
Shear Strength c_u (kPa)	29.63	31.94	39.57
Moisture Content w_f %	21	21	20
Dry Density ρ_{df} (Mg/m ³)	1.87	1.89	1.93
Voids Ratio e_f	0.42	0.40	0.37
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 22/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH26

Operator:

G. A.

Checked:

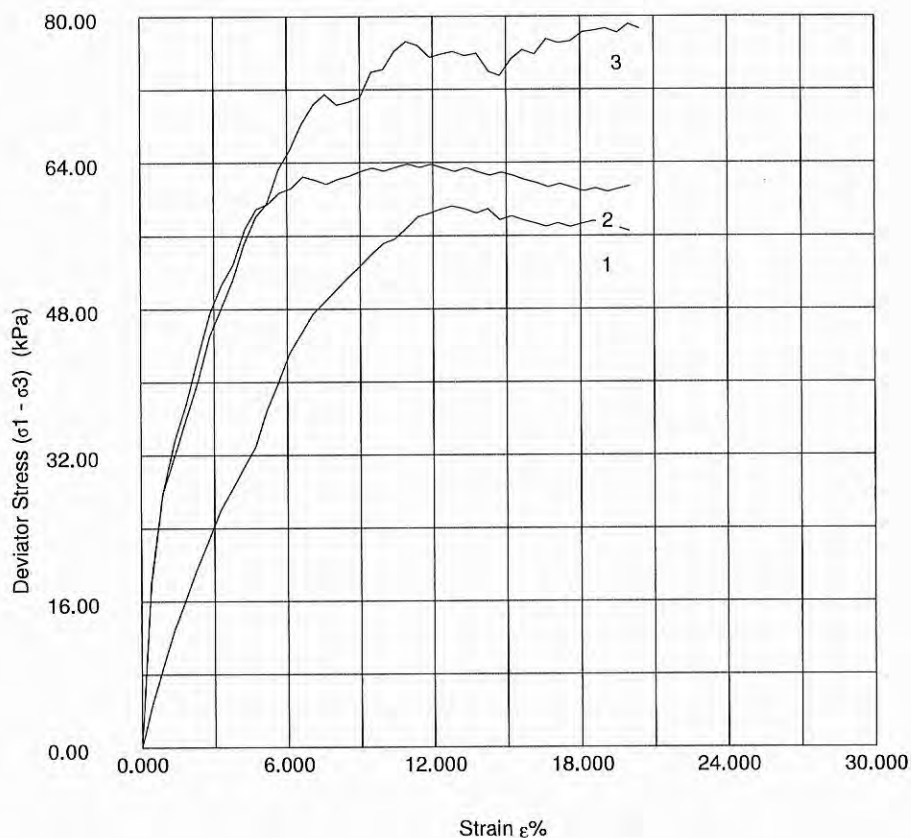
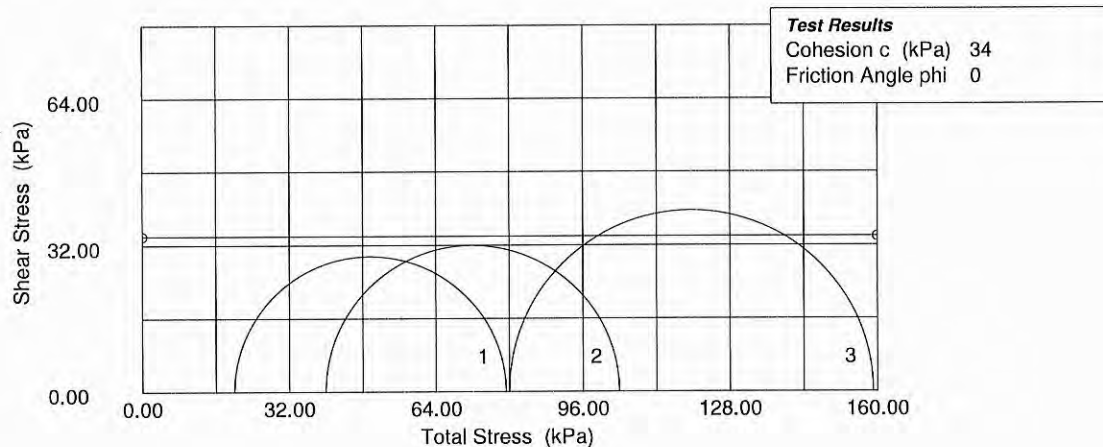
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)	
			Date of Test: 22/12/22	
	Site Reference: Sungei Tengah Road/Lorong Pasu		Sample: TW1	
	Jobfile: W:\YEAR2022\2022\SML345A.JOB		Borehole: BH26	
	Operator: 		Checked: 	
		Approved: 		

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.60m
Description: Light olive brown and reddish orange Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	165	166.1	176.5
Bulk Density ρ (Mg/m ³)	1.91	1.93	2.05
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

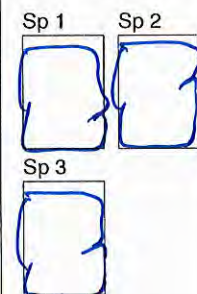
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	28	27	28
Dry Density ρ_{d0} (Mg/m ³)	1.49	1.52	1.60
Voids Ratio e_0	0.77	0.75	0.65
Deg of Saturation S_0 %	96.47	96.01	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	170.09	193.95	215.64
Membrane Correction σ_{mh} (kPa)	1.73	1.58	1.40
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	168.36	192.37	214.24
Strain at Failure ϵ_f %	15.76	14.08	12.34
Shear Strength c_u (kPa)	84.18	96.18	107.12
Moisture Content w_f %	28	27	28
Dry Density ρ_{df} (Mg/m ³)	1.49	1.52	1.60
Voids Ratio e_f	0.77	0.75	0.65
Deg of Saturation S_f %	96.47	96.01	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 23/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH26

Operator:

Cer. A.

Checked:

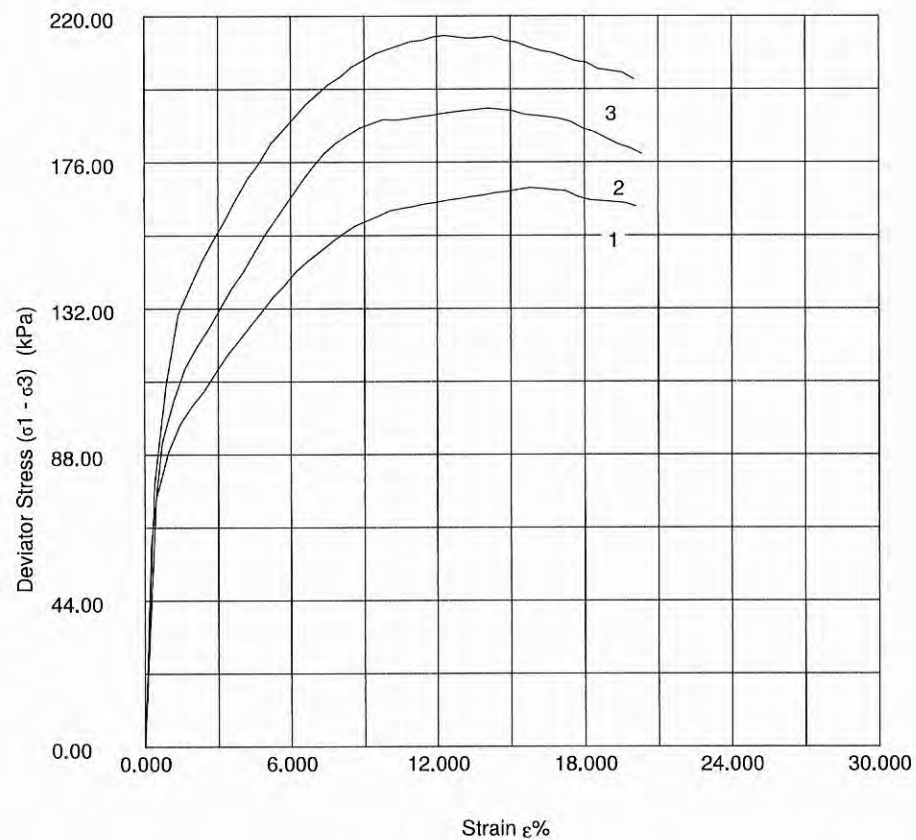
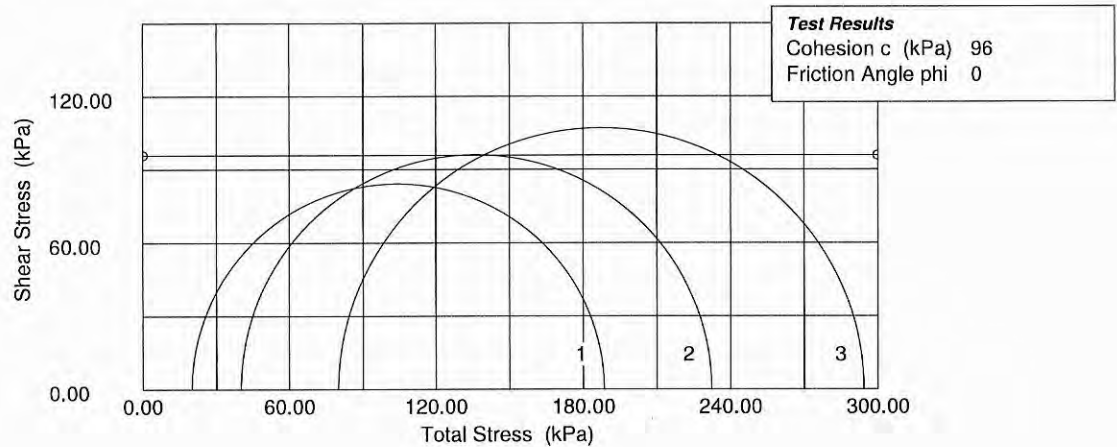
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 23/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH26

Operator:

G. A.

Checked:

S

Approved:

M

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.60m
Description: Light brownish yellow and light red slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	156.2	157.3	157.7
Bulk Density ρ (Mg/m ³)	1.81	1.82	1.83
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

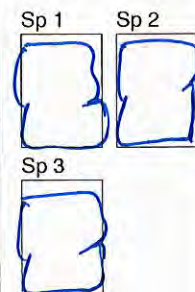
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	40	40	40
Dry Density ρ_{d0} (Mg/m ³)	1.29	1.30	1.31
Voids Ratio e_0	1.05	1.04	1.02
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	190.76	213.60	242.47
Membrane Correction σ_{mh} (kPa)	1.90	1.90	1.82
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	188.86	211.70	240.65
Strain at Failure ϵ_f %	18.05	18.16	16.67
Shear Strength c_u (kPa)	94.43	105.85	120.32
Moisture Content w_f %	40	40	40
Dry Density ρ_{df} (Mg/m ³)	1.29	1.30	1.31
Voids Ratio e_f	1.05	1.04	1.02
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



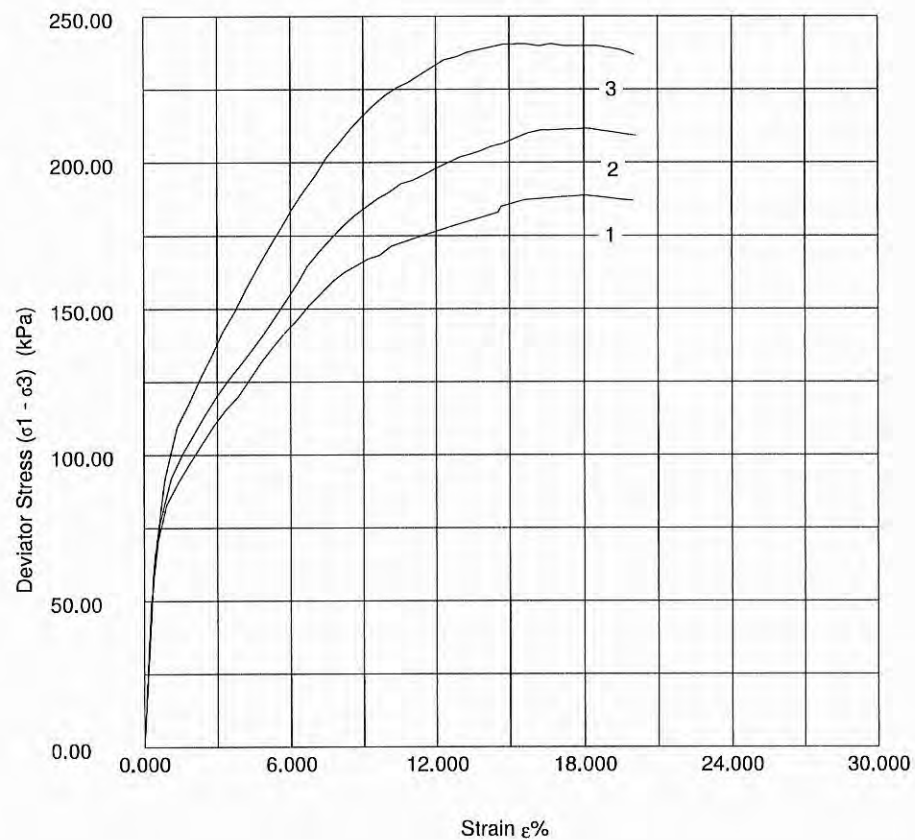
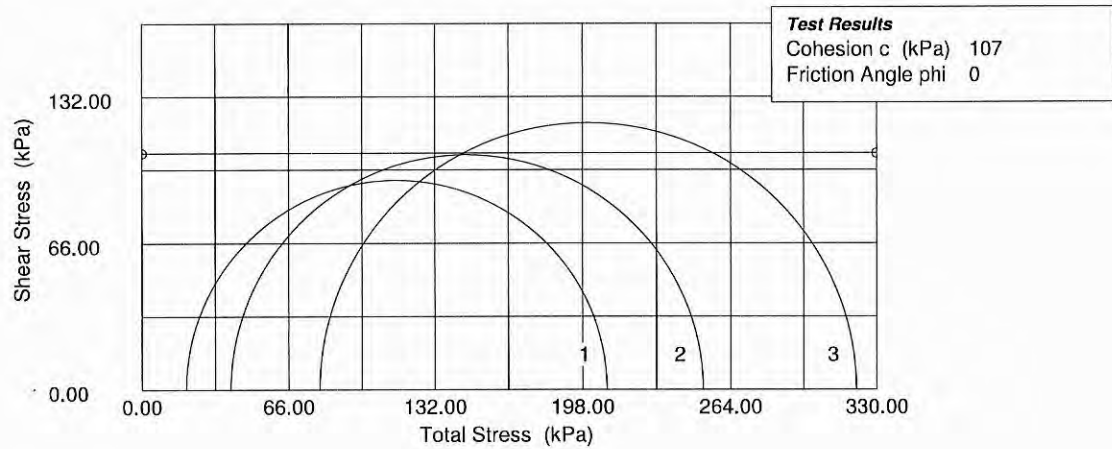
Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)	
			Date of Test:	12/12/22	
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW2	
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH27	
Operator:		Checked:		Approved:	

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)	
			Date of Test: 12/12/22	
	Site Reference: Sungei Tengah Road/Lorong Pasu		Sample: TW2	
	Jobfile: W:\YEAR2022\2022\SML345A.JOB		Borehole: BH27	
Operator:		Checked:		Approved:

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 6.00m-6.70m
Description: Light brownish yellow and reddish brown slightly Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	153.6	154.3	155.8
Bulk Density ρ (Mg/m ³)	1.78	1.79	1.81
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

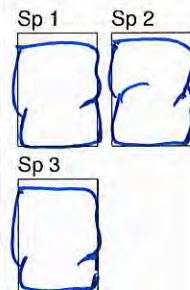
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	30.00	60.00	120.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	44	41	42
Dry Density ρ_{d0} (Mg/m ³)	1.23	1.27	1.27
Voids Ratio e_0	1.15	1.09	1.08
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	141.32	160.82	181.00
Membrane Correction σ_{mh} (kPa)	1.73	1.40	1.40
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	139.59	159.42	179.60
Strain at Failure ϵ_f %	15.64	12.32	12.28
Shear Strength c_u (kPa)	69.80	79.71	89.80
Moisture Content w_f %	44	41	42
Dry Density ρ_{df} (Mg/m ³)	1.23	1.27	1.27
Voids Ratio e_f	1.15	1.09	1.08
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 12/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW4
Borehole: BH27

Operator:

Ger. A.

Checked:

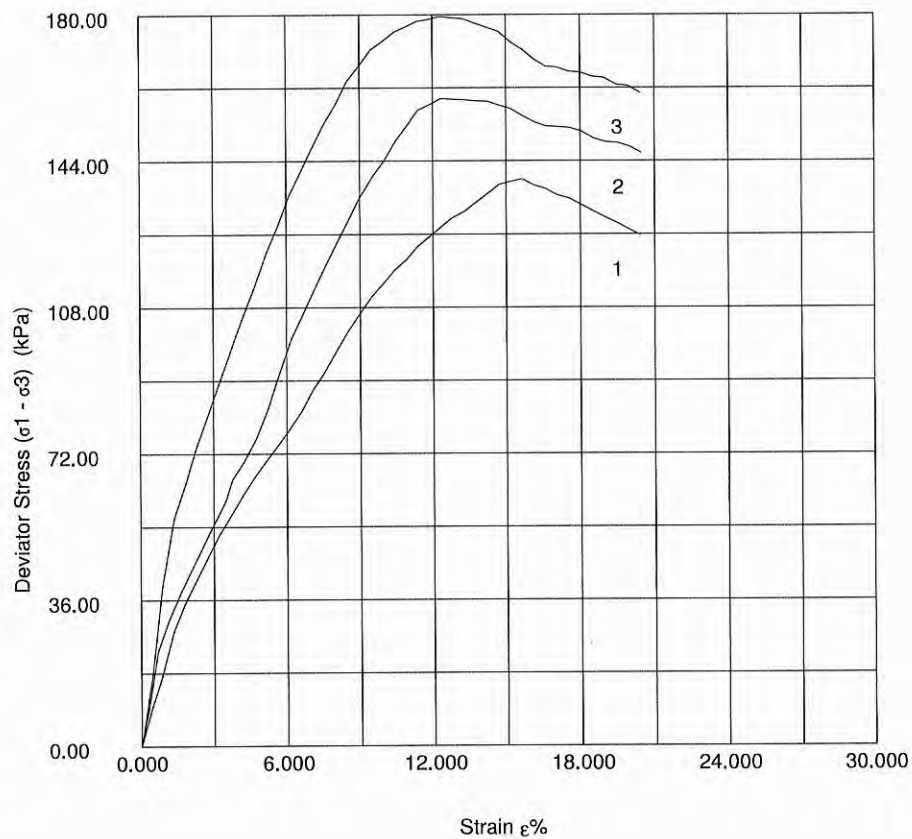
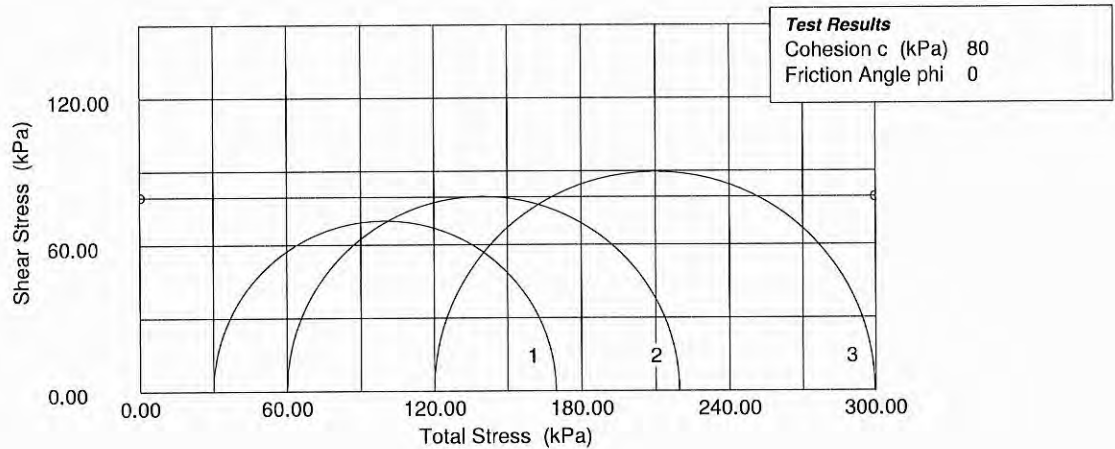
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Approved:

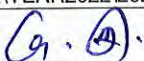
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Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

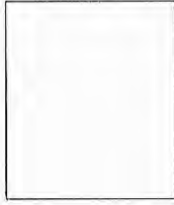
	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	12/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW4
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH27
Operator:		Checked:	Approved:	
				

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 1.50m-2.10m
Description: Reddish yellow and reddish orange slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	152.1	152.7	159.4
Bulk Density ρ (Mg/m ³)	1.76	1.77	1.85
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

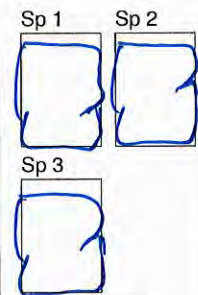
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	50	49	45
Dry Density ρ_{d0} (Mg/m ³)	1.17	1.19	1.27
Voids Ratio e_0	1.26	1.23	1.08
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	101.03	107.87	122.09
Membrane Correction σ_{mh} (kPa)	1.90	2.00	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	99.13	105.87	120.09
Strain at Failure ϵ_f %	17.57	19.51	20.42
Shear Strength c_u (kPa)	49.57	52.94	60.05
Moisture Content w_f %	50	49	45
Dry Density ρ_{df} (Mg/m ³)	1.17	1.19	1.27
Voids Ratio e_f	1.26	1.23	1.08
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



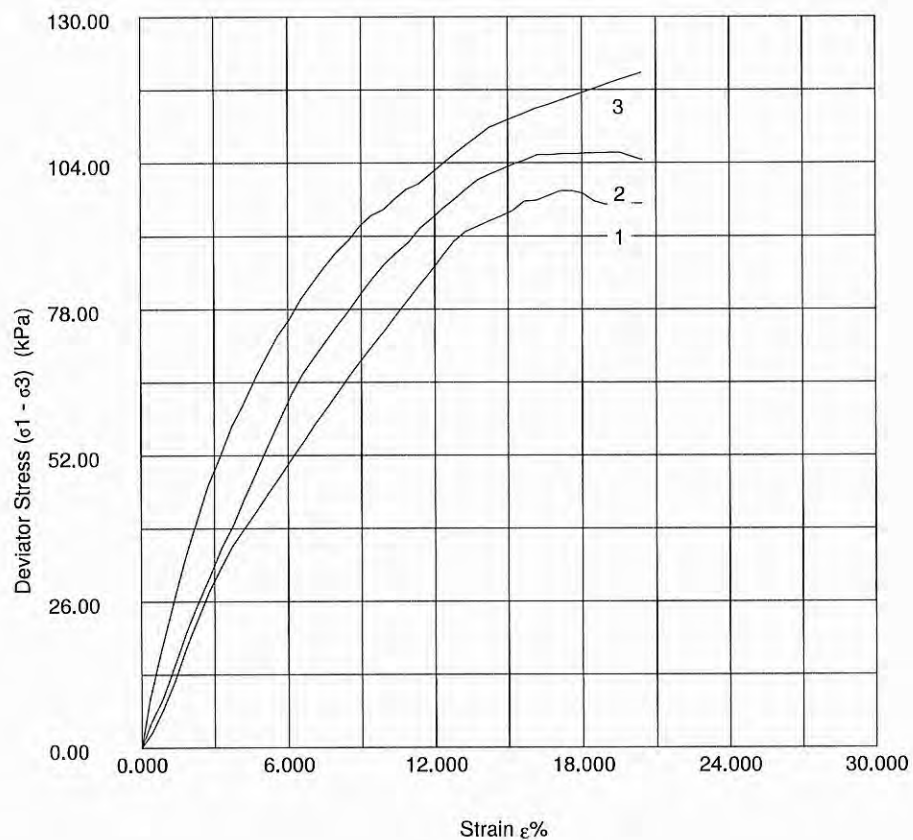
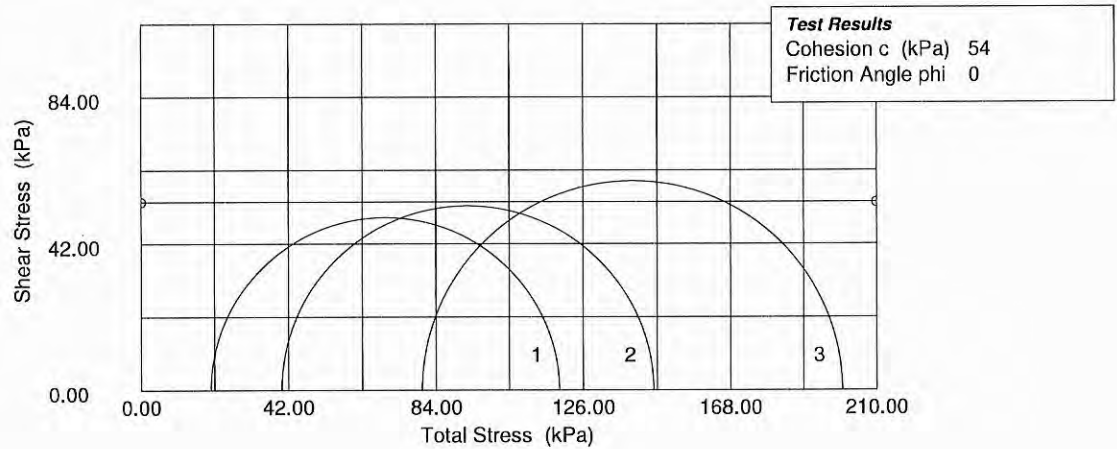
Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)	
			Date of Test:	30/12/22	
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW1	
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH28	
Operator:		Checked:		Approved:	

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 30/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH28

Operator:

G. A.

Checked:

[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 4.50m-5.10m
Description: Light red and brownish yellow slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	150.5	152.3	153.2
Bulk Density ρ (Mg/m ³)	1.75	1.77	1.78
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

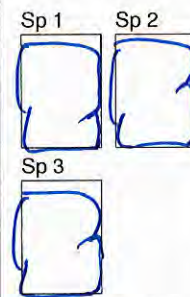
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	49	50	49
Dry Density ρ_{d0} (Mg/m ³)	1.18	1.18	1.19
Voids Ratio e_0	1.25	1.24	1.22
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	134.62	149.54	167.84
Membrane Correction σ_{mh} (kPa)	1.48	1.40	1.10
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	133.14	148.14	166.74
Strain at Failure ϵ_f %	13.25	11.67	8.92
Shear Strength c_u (kPa)	66.57	74.07	83.37
Moisture Content w_f %	49	50	49
Dry Density ρ_{df} (Mg/m ³)	1.18	1.18	1.19
Voids Ratio e_f	1.25	1.24	1.22
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 30/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH28

Operator:

(Signature)

Checked:

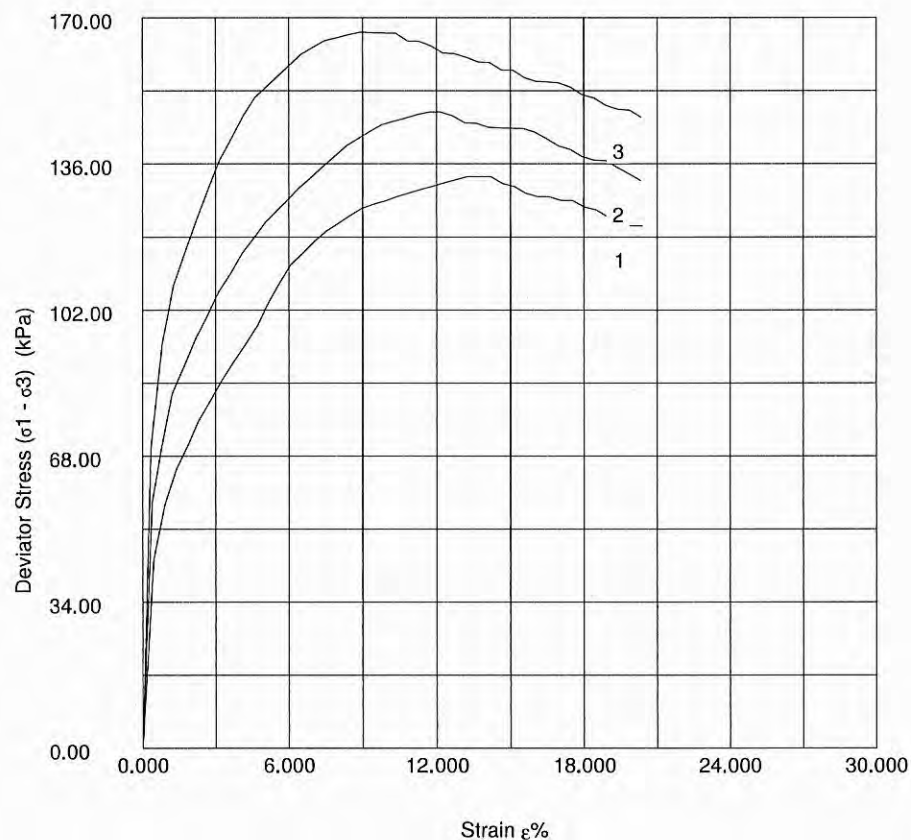
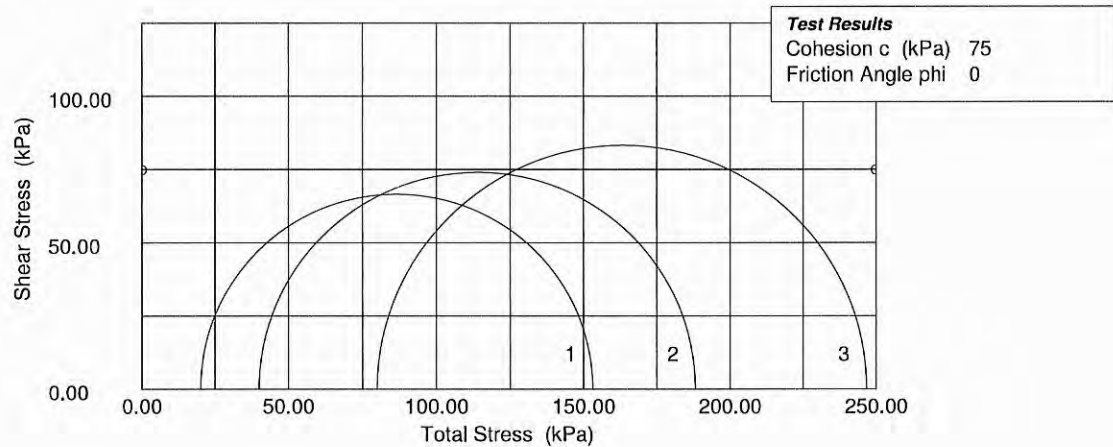
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Approved:

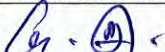
(Signature)

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)	
			Date of Test: 30/12/22	
	Site Reference: Sungei Tengah Road/Lorong Pasu		Sample: U1	
	Jobfile: W:\YEAR2022\2022\SML345A.JOB		Borehole: BH28	
Operator: 		Checked: 		Approved: 

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.60m
Description: Light red and reddish orange slightly Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	156.6	159.5	160.3
Bulk Density ρ (Mg/m ³)	1.82	1.85	1.86
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

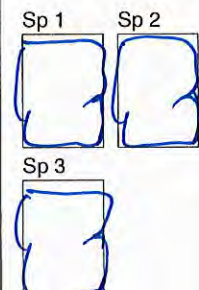
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	46	43	40
Dry Density ρ_{d0} (Mg/m ³)	1.24	1.30	1.32
Voids Ratio e_0	1.13	1.04	1.00
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	159.92	175.26	202.01
Membrane Correction σ_{mh} (kPa)	2.00	2.00	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	157.92	173.26	200.01
Strain at Failure ϵ_f %	19.75	19.53	19.89
Shear Strength c_u (kPa)	78.96	86.63	100.00
Moisture Content w_f %	46	43	40
Dry Density ρ_{df} (Mg/m ³)	1.24	1.30	1.32
Voids Ratio e_f	1.13	1.04	1.00
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 27/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH29

Operator:

Handwritten signature

Checked:

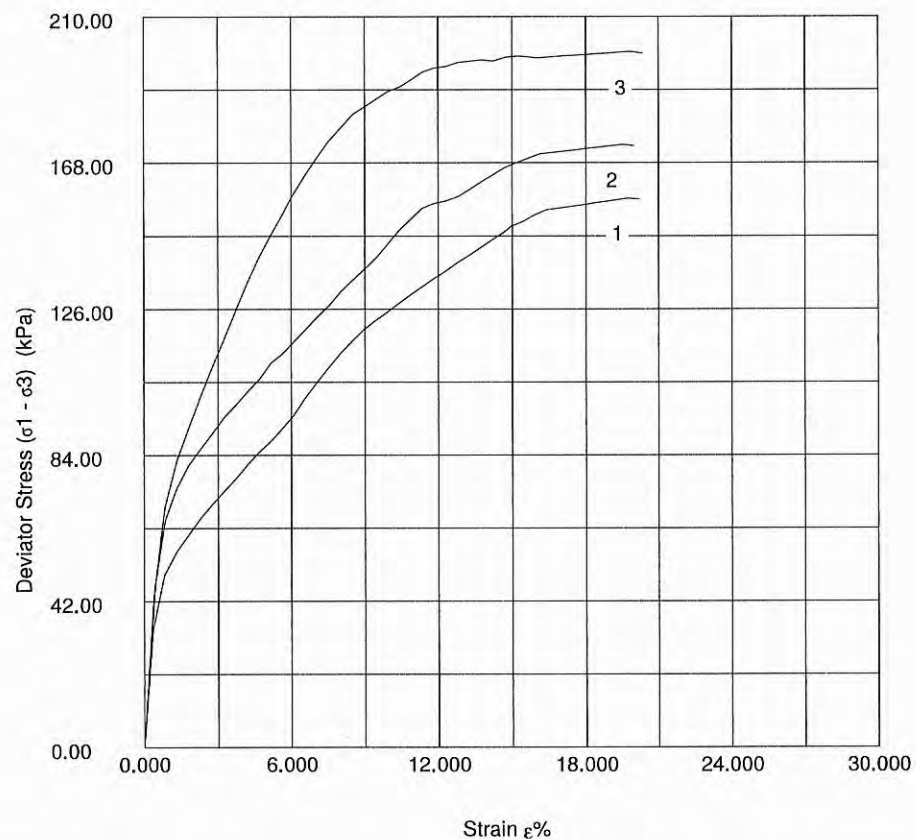
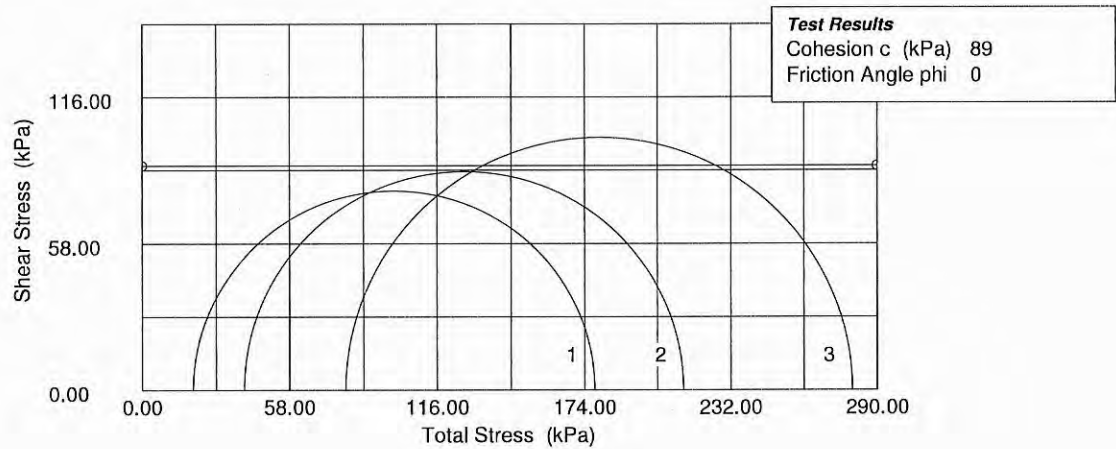
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Approved:

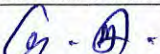
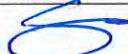
Handwritten signature

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)	
			Date of Test: 27/12/22	
	Site Reference: Sungei Tengah Road/Lorong Pasu		Sample: TW2	
	Jobfile: W:\YEAR2022\2022\SML345A.JOB		Borehole: BH29	
Operator: 		Checked: 		Approved: 

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 9.00m-9.50m
Description: Light brownish yellow and light grey slightly Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	160.2	161.3	164.3
Bulk Density ρ (Mg/m ³)	1.86	1.87	1.91
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

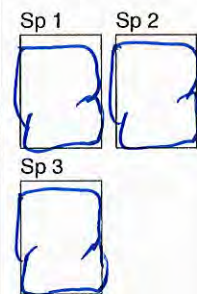
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	40.00	80.00	160.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	39	39	37
Dry Density ρ_{d0} (Mg/m ³)	1.34	1.34	1.40
Voids Ratio e_0	0.98	0.97	0.90
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	293.83	309.62	329.74
Membrane Correction σ_{mb} (kPa)	1.20	1.20	0.80
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	292.63	308.42	328.94
Strain at Failure ϵ_f %	10.42	10.42	6.04
Shear Strength c_u (kPa)	146.31	154.21	164.47
Moisture Content w_f %	39	39	37
Dry Density ρ_{df} (Mg/m ³)	1.34	1.34	1.40
Voids Ratio e_f	0.98	0.97	0.90
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 29/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH29

Operator:

[Signature]

Checked:

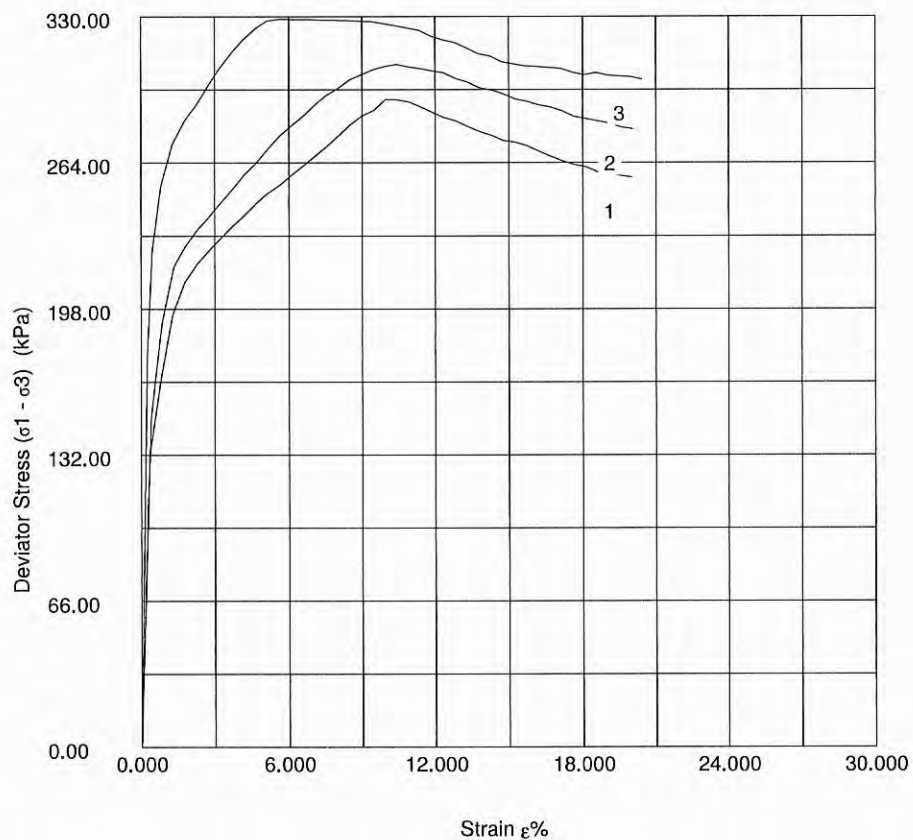
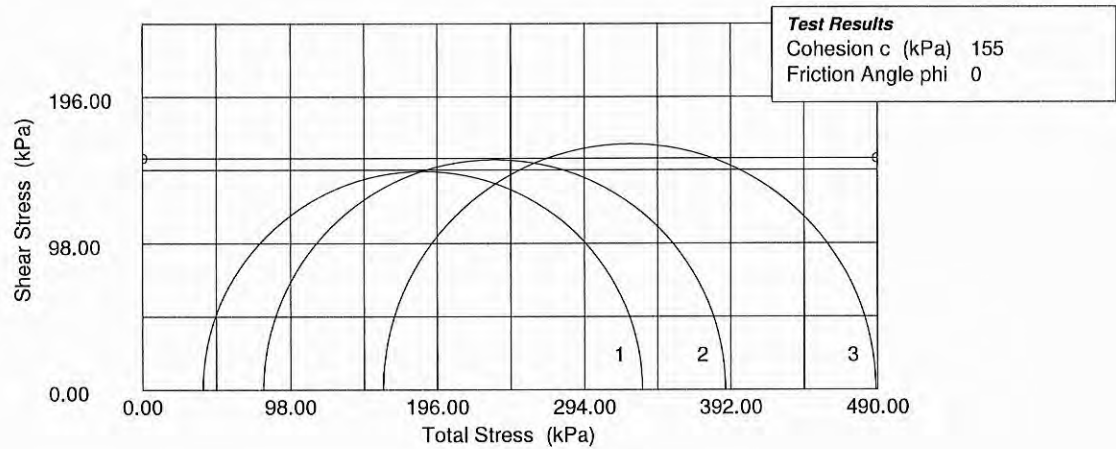
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 29/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH29

Operator:

G. A.

Checked:

S.

Approved:

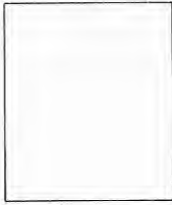
N.

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth: 1.50m-2.10m
Description: Light brownish yellow and reddish orange slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	156	158.5	159
Bulk Density ρ (Mg/m ³)	1.81	1.84	1.84
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

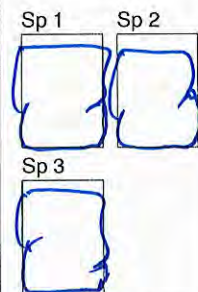
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	39	39	39
Dry Density ρ_{d0} (Mg/m ³)	1.30	1.33	1.33
Voids Ratio e_0	1.04	1.00	0.99
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	108.28	135.10	147.26
Membrane Correction σ_{mb} (kPa)	1.90	2.00	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	106.38	133.10	145.26
Strain at Failure ϵ_f %	18.13	20.20	20.47
Shear Strength c_u (kPa)	53.19	66.55	72.63
Moisture Content w_f %	39	39	39
Dry Density ρ_{df} (Mg/m ³)	1.30	1.33	1.33
Voids Ratio e_f	1.04	1.00	0.99
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name: UU (SS, MS)
Date of Test: 15/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH30

Operator:

G. M.

Checked:

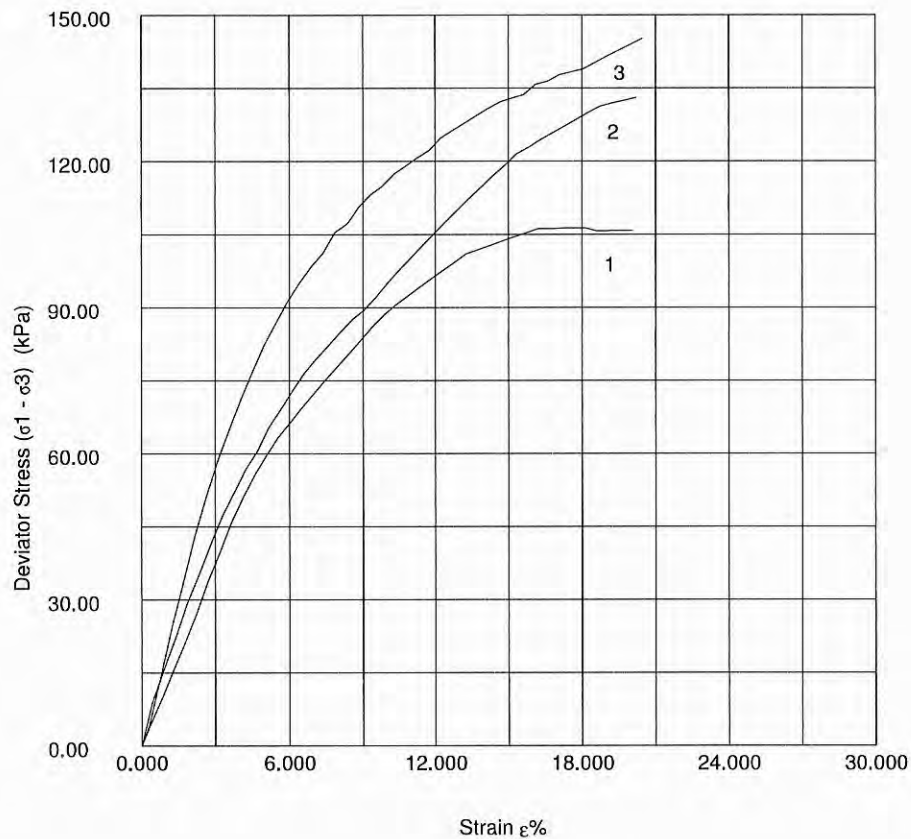
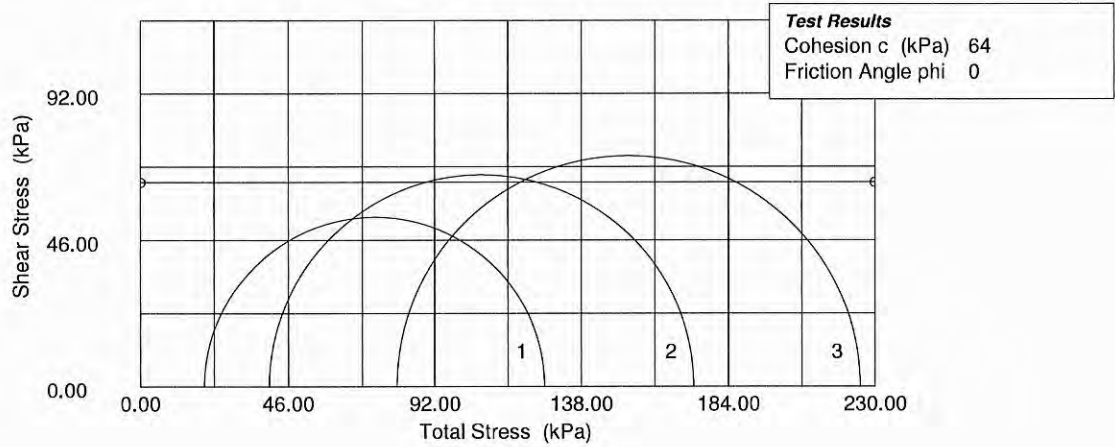
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 15/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH30

Operator:

G. A.

Checked:

S

Approved:

N

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 4.50m-5.10m
Description: Reddish orange and brownish yellow slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	160.5	160.6	161.1
Bulk Density ρ (Mg/m ³)	1.86	1.86	1.87
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

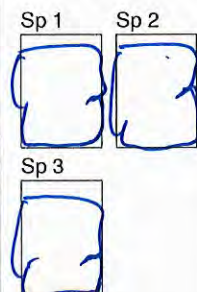
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	39	36	36
Dry Density ρ_{d0} (Mg/m ³)	1.34	1.37	1.37
Voids Ratio e_0	0.98	0.93	0.93
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	147.81	159.10	209.78
Membrane Correction σ_{mh} (kPa)	1.10	1.48	1.48
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	146.71	157.62	208.30
Strain at Failure ϵ_f %	8.89	13.25	13.17
Shear Strength c_u (kPa)	73.35	78.81	104.15
Moisture Content w_f %	39	36	36
Dry Density ρ_{df} (Mg/m ³)	1.34	1.37	1.37
Voids Ratio e_f	0.98	0.93	0.93
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



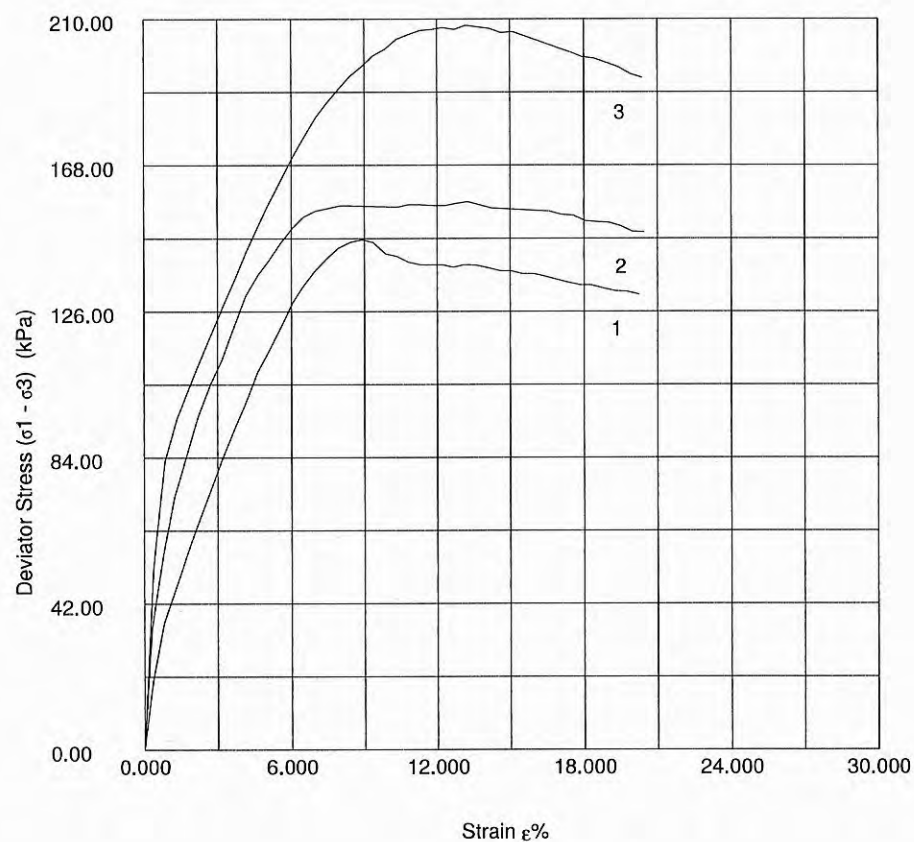
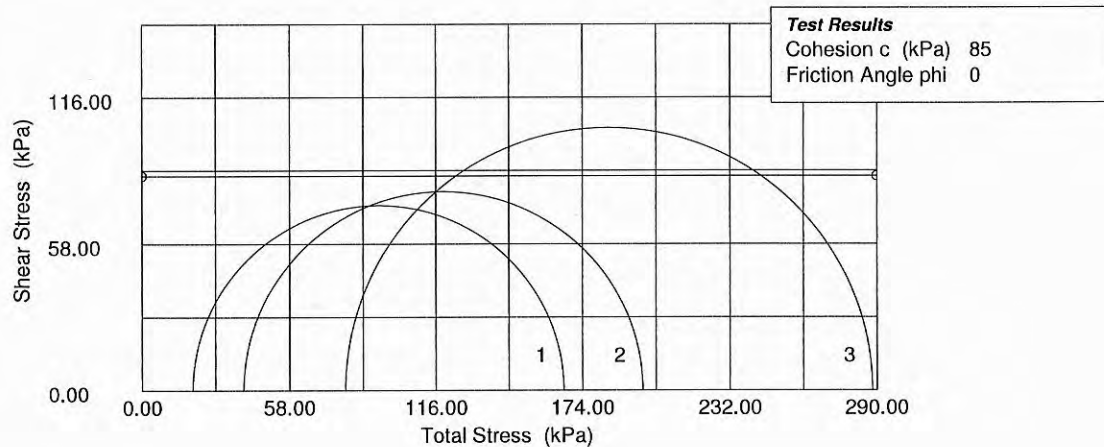
Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	15/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	U1
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH30
Operator:		Checked:	Approved:	

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



(Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)

Test name UU (SS, MS)
Date of Test: 15/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH30

Operator:

G. A.

Checked:

[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.60m
Description: Light brownish yellow and reddish orange slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	157.7	158.2	158.5
Bulk Density ρ (Mg/m ³)	1.83	1.84	1.84
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

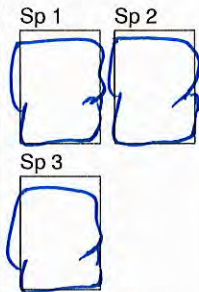
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_f (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	39	38	38
Dry Density ρ_{d0} (Mg/m ³)	1.32	1.33	1.33
Voids Ratio e_0	1.01	0.99	0.99
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	188.28	212.03	238.85
Membrane Correction σ_{mb} (kPa)	2.00	1.82	1.73
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	186.28	210.21	237.12
Strain at Failure ϵ_f %	20.03	17.08	16.39
Shear Strength c_u (kPa)	93.14	105.11	118.56
Moisture Content w_f %	39	38	38
Dry Density ρ_{df} (Mg/m ³)	1.32	1.33	1.33
Voids Ratio e_f	1.01	0.99	0.99
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 19/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH31

Operator:

G. M.

Checked:

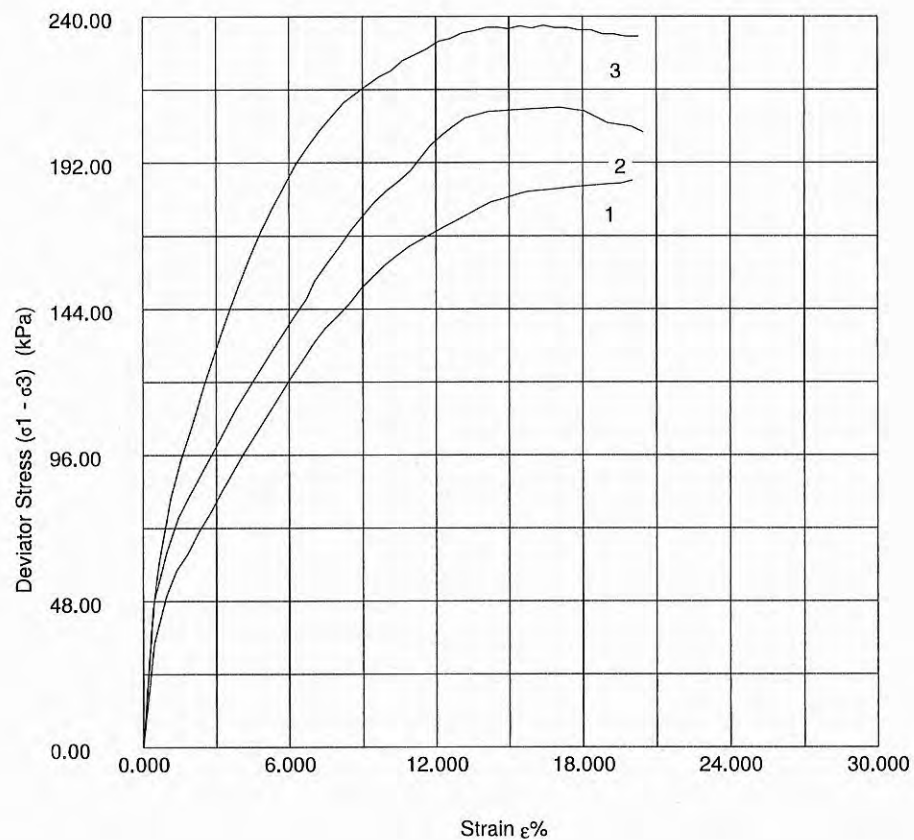
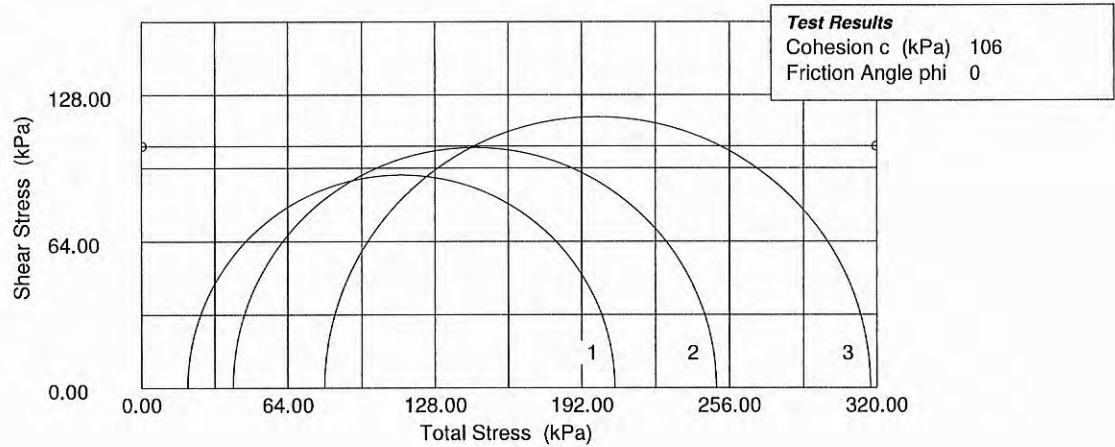
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Approved:

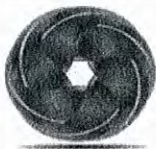
M

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 19/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW2
Borehole: BH31

Operator: *G. A.*

Checked: *[Signature]*

Approved: *[Signature]*

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 6.00m-6.70m
Description: Light brownish grey and reddish brown slightly Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	156.6	157.3	159.5
Bulk Density ρ (Mg/m ³)	1.82	1.82	1.85
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

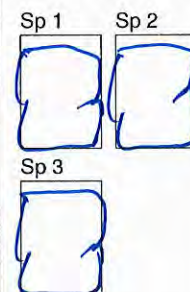
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	30.00	60.00	120.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	44	39	38
Dry Density ρ_{d0} (Mg/m ³)	1.26	1.32	1.34
Voids Ratio e_0	1.11	1.01	0.98
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	174.61	186.49	233.73
Membrane Correction σ_{mh} (kPa)	1.73	1.82	1.48
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	172.88	184.67	232.25
Strain at Failure ϵ_f %	16.09	17.38	12.80
Shear Strength c_u (kPa)	86.44	92.34	116.13
Moisture Content w_f %	44	39	38
Dry Density ρ_{df} (Mg/m ³)	1.26	1.32	1.34
Voids Ratio e_f	1.11	1.01	0.98
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



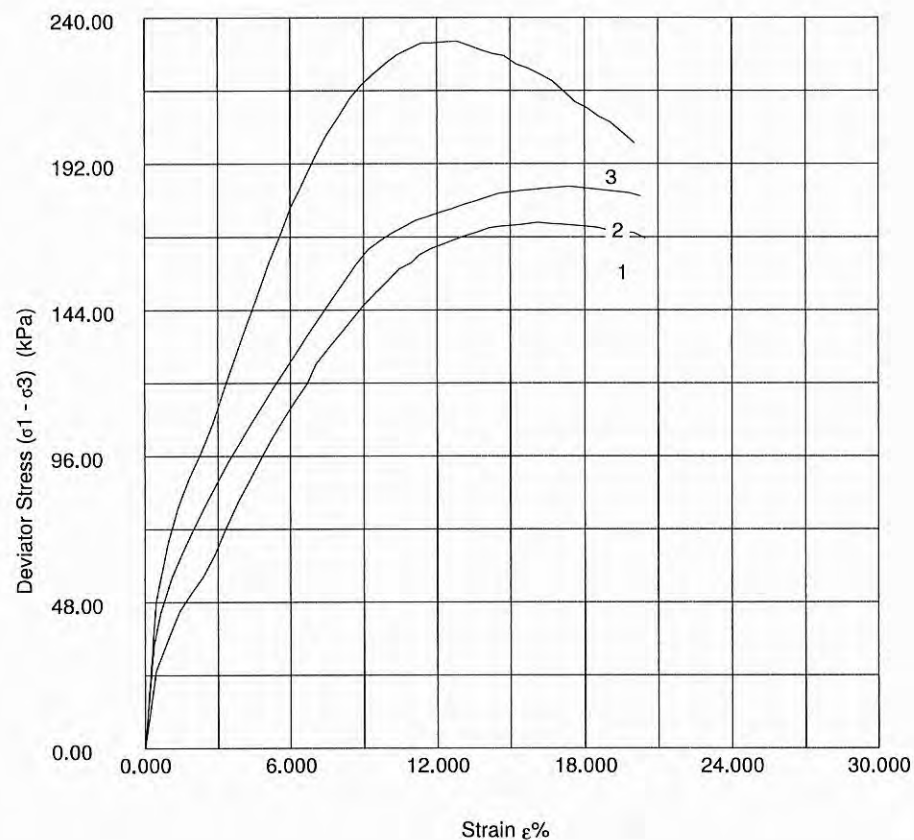
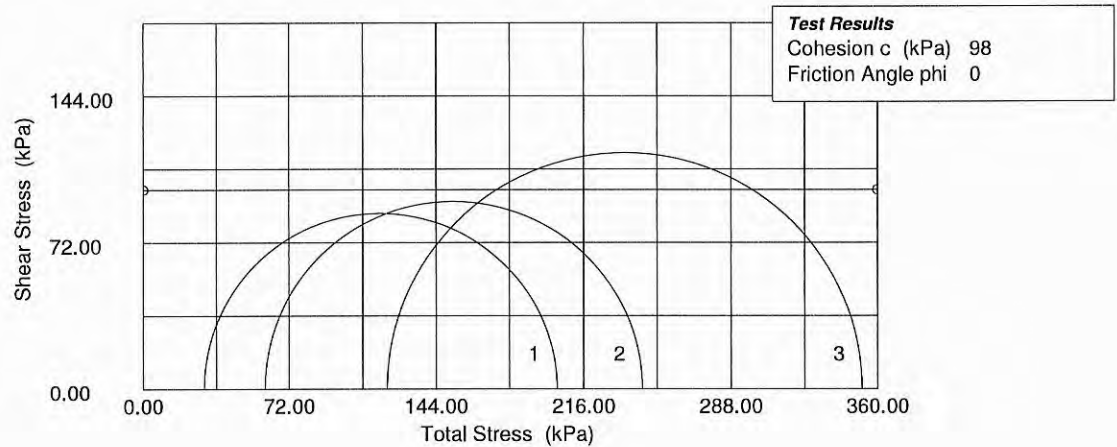
Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	19/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	U1
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH31
Operator:		Checked:		Approved:

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 19/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH31

Operator: *[Signature]*

Checked: *[Signature]*

Approved: *[Signature]*

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 4.50m-5.00m
Description: Light brownish yellow and reddish orange slightly Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	150.4	158.6	159.3
Bulk Density ρ (Mg/m ³)	1.74	1.84	1.85
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

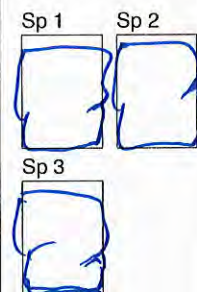
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	52	48	43
Dry Density ρ_{d0} (Mg/m ³)	1.15	1.25	1.29
Voids Ratio e_0	1.30	1.12	1.05
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	296.26	336.76	347.32
Membrane Correction σ_{mh} (kPa)	1.73	1.48	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	294.53	335.28	345.32
Strain at Failure ϵ_f %	15.58	13.00	20.26
Shear Strength c_u (kPa)	147.27	167.64	172.66
Moisture Content w_f %	52	48	43
Dry Density ρ_{df} (Mg/m ³)	1.15	1.25	1.29
Voids Ratio e_f	1.30	1.12	1.05
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 30/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH32

Operator:

Car. A.

Checked:

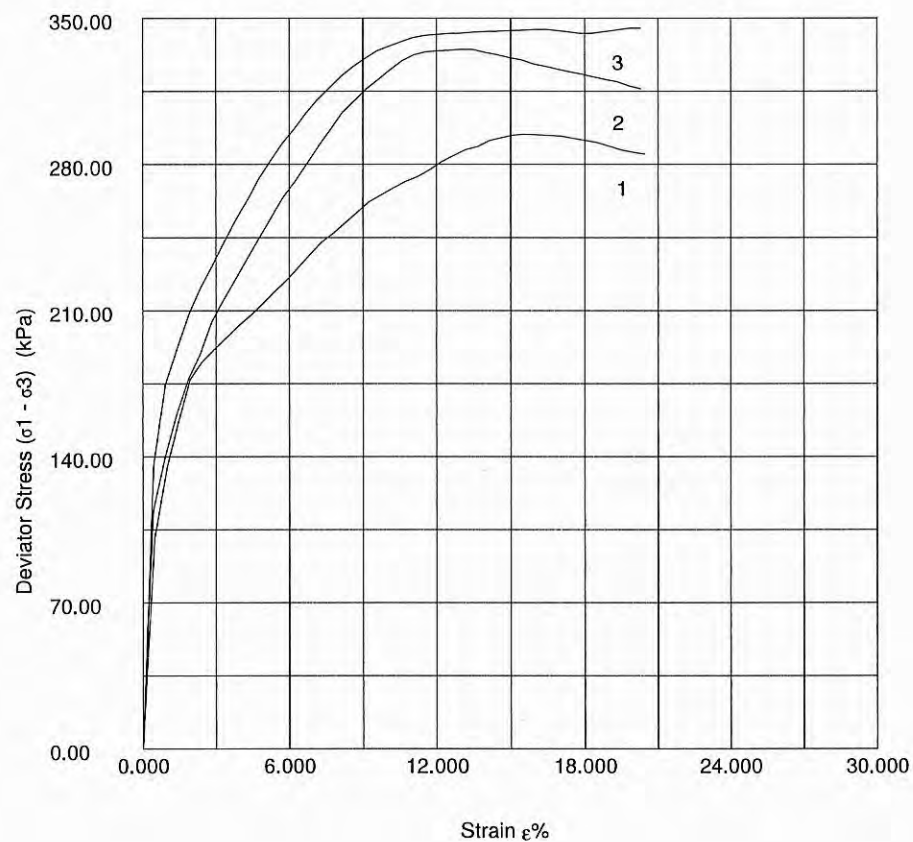
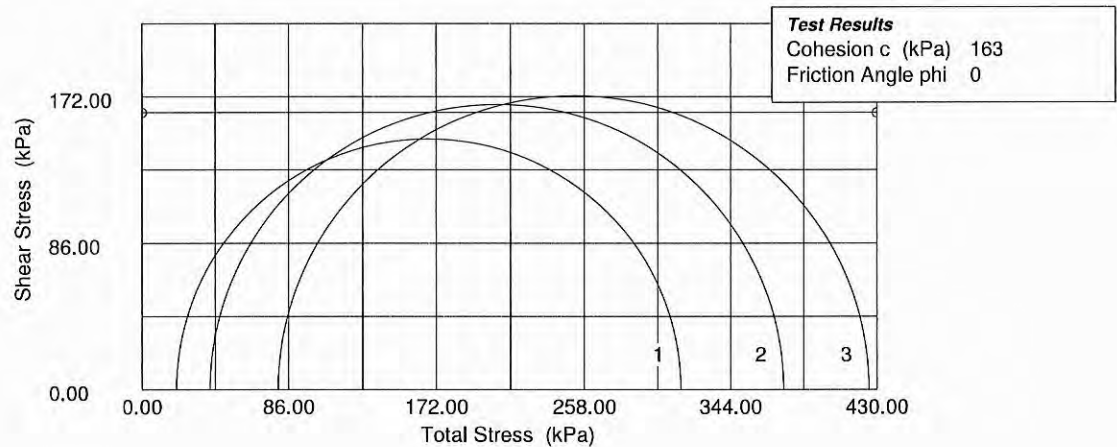
[Signature]

Approved:

[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 30/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: U1
Borehole: BH32

Operator: *Ch. A.*

Checked: *[Signature]*

Approved: *[Signature]*

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth	9.00m-9.70m		
Description:	Pink and light brownish yellow slightly Sandy SILT		
Type	Specimen 1	Specimen 2	Specimen 3
	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	142.1	146.5	148.2
Bulk Density ρ (Mg/m ³)	1.65	1.70	1.72
Particle Density ρ_s	2.65	2.65	2.65
	(assumed)	(assumed)	(assumed)

Initial Conditions

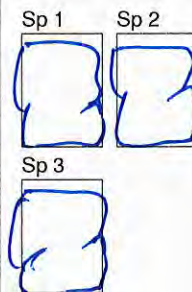
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	40.00	80.00	160.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	57	54	55
Dry Density ρ_{d0} (Mg/m ³)	1.05	1.10	1.11
Voids Ratio e_0	1.53	1.40	1.39
Deg of Saturation S_0 %	99.39	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	143.39	166.94	182.38
Membrane Correction σ_{mb} (kPa)	1.90	2.00	2.00
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	141.49	164.94	180.38
Strain at Failure ϵ_f %	17.87	19.78	20.45
Shear Strength c_u (kPa)	70.74	82.47	90.19
Moisture Content w_f %	57	54	55
Dry Density ρ_{df} (Mg/m ³)	1.05	1.10	1.11
Voids Ratio e_f	1.53	1.40	1.39
Deg of Saturation S_f %	99.39	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 30/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW4
Borehole: BH32

Operator:

[Signature]

Checked:

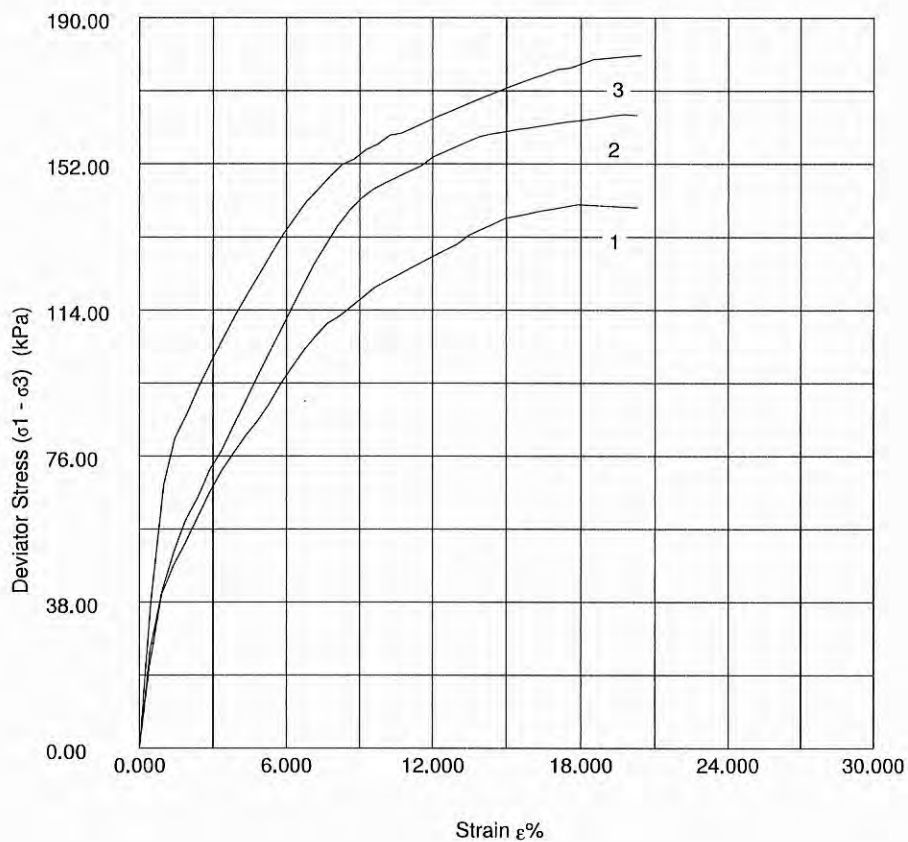
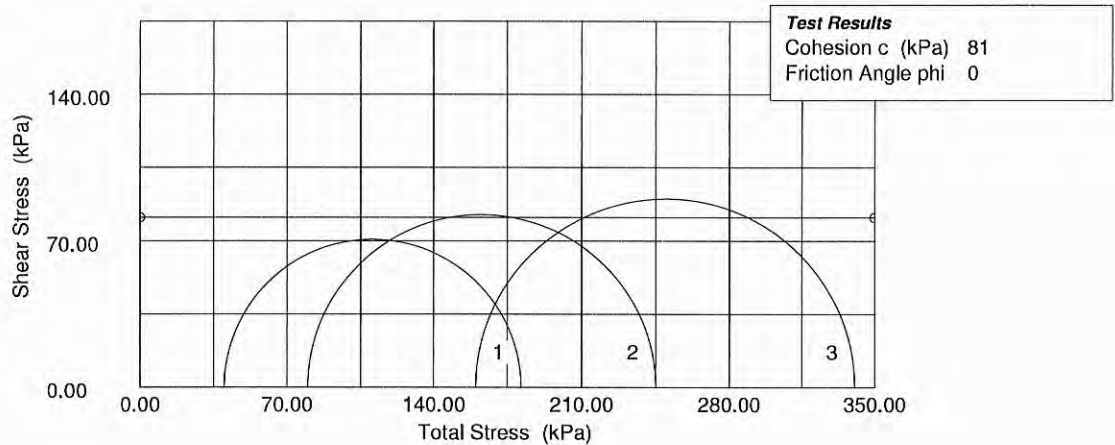
[Signature]

Approved:

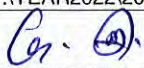
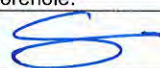
[Signature]

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)	
			Date of Test: 30/12/22	
	Site Reference: Sungei Tengah Road/Lorong Pasu		Sample: TW4	
	Jobfile: W:\YEAR2022\2022\SML345A.JOB		Borehole: BH32	
Operator: 		Checked: 		Approved: 

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 3.00m-3.60m
Description: Light brownish yellow and reddish orange slightly Sandy CLAY

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	158.2	159.4	161.8
Bulk Density ρ (Mg/m ³)	1.84	1.85	1.88
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

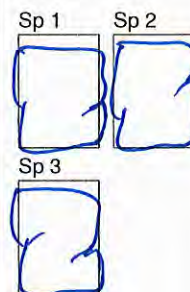
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	36	36	35
Dry Density ρ_{d0} (Mg/m ³)	1.35	1.36	1.39
Voids Ratio e_0	0.96	0.95	0.91
Deg of Saturation S_0 %	99.04	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	114.97	135.69	145.69
Membrane Correction σ_{mb} (kPa)	1.82	1.65	1.82
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	113.15	134.04	143.87
Strain at Failure ϵ_f %	17.47	15.45	16.55
Shear Strength c_u (kPa)	56.58	67.02	71.93
Moisture Content w_f %	36	36	35
Dry Density ρ_{df} (Mg/m ³)	1.35	1.36	1.39
Voids Ratio e_f	0.96	0.95	0.91
Deg of Saturation S_f %	99.04	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 28/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH33

Operator:

Ch. A

Checked:

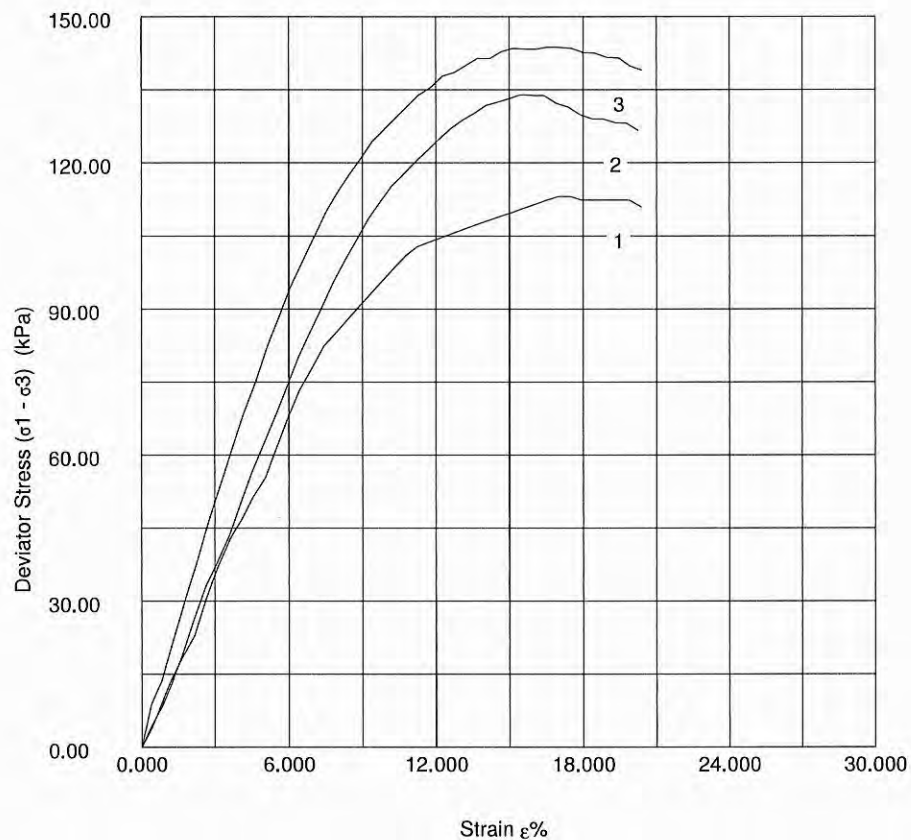
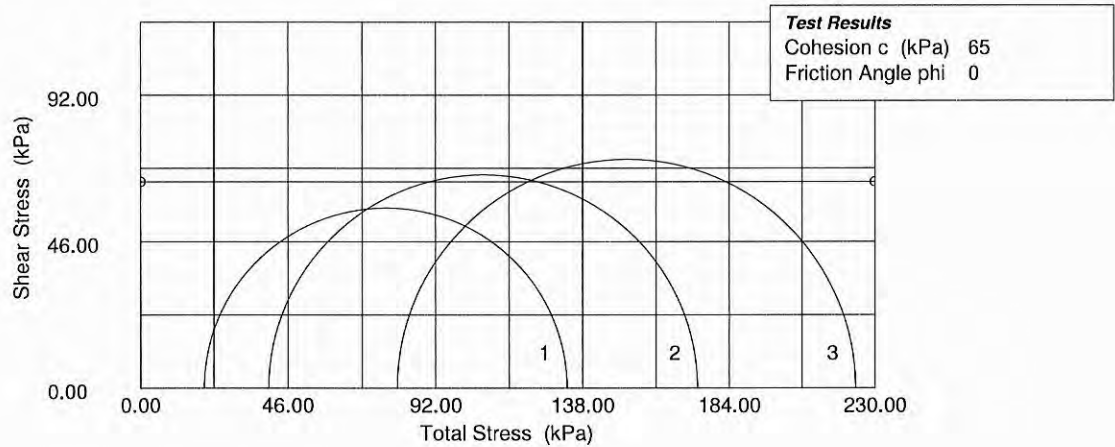
S

Approved:

N

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 28/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW1
Borehole: BH33

Operator: *Ch. A.*

Checked: *[Signature]*

Approved: *[Signature]*

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 6.00m-6.70m
Description: Light brownish yellow and reddish brown slightly Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	157	157.3	159.4
Bulk Density ρ (Mg/m ³)	1.82	1.82	1.85
Particle Density ρ_s	2.65	2.65	2.65
	(assumed)	(assumed)	(assumed)

Initial Conditions

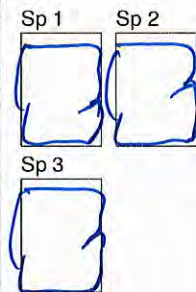
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	30.00	60.00	120.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	39	39	39
Dry Density ρ_{d0} (Mg/m ³)	1.31	1.32	1.33
Voids Ratio e_0	1.02	1.01	0.99
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	152.14	169.78	184.48
Membrane Correction σ_{mb} (kPa)	1.58	1.58	1.48
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	150.56	168.20	183.00
Strain at Failure ϵ_f %	14.16	14.42	13.18
Shear Strength c_u (kPa)	75.28	84.10	91.50
Moisture Content w_f %	39	39	39
Dry Density ρ_{df} (Mg/m ³)	1.31	1.32	1.33
Voids Ratio e_f	1.02	1.01	0.99
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 28/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW3
Borehole: BH33

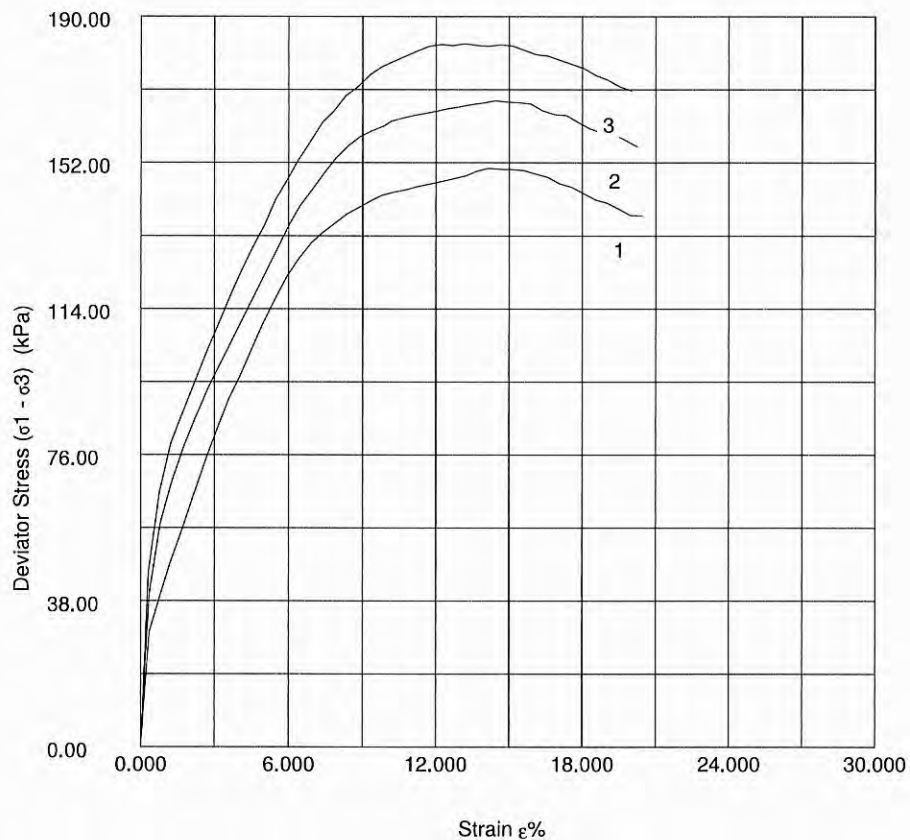
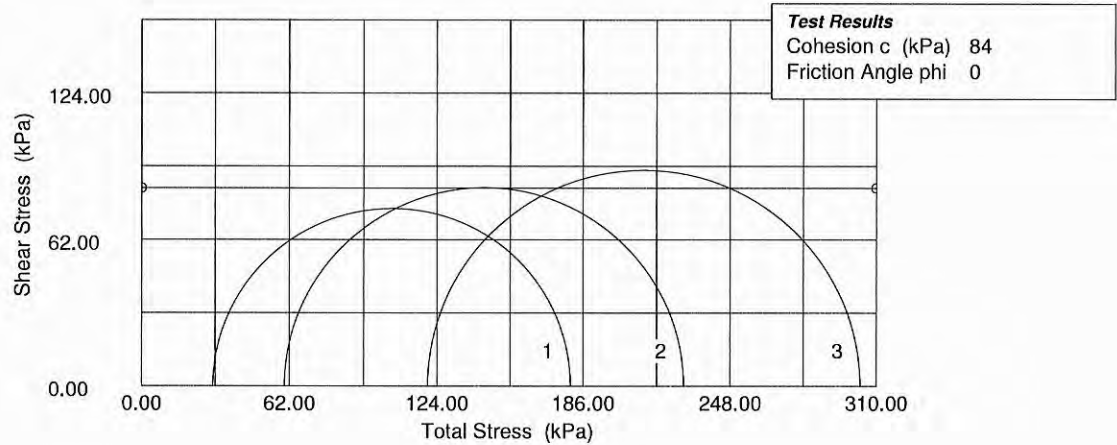
Operator: *Am. A.*

Checked: *[Signature]*

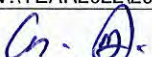
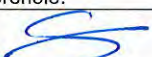
Approved: *[Signature]*

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)	
			Date of Test: 28/12/22	
	Site Reference: Sungei Tengah Road/Lorong Pasu		Sample: TW3	
	Jobfile: W:\YEAR2022\2022\SML345A.JOB		Borehole: BH33	
Operator: 		Checked: 		Approved: 

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth	1.50m-2.10m		
Description:	Light reddish brown and reddish orange Sandy SILT		
Type	Specimen 1	Specimen 2	Specimen 3
	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	171.4	172.6	173.5
Bulk Density ρ (Mg/m ³)	1.99	2.00	2.01
Particle Density ρ_s	2.65	2.65	2.65
	(assumed)	(assumed)	(assumed)

Initial Conditions

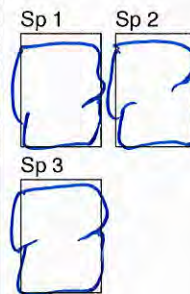
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	15	15	15
Load Channel	16	16	16
Moisture Content w_0 %	33	32	29
Dry Density ρ_{d0} (Mg/m ³)	1.50	1.52	1.56
Voids Ratio e_0	0.77	0.75	0.70
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	28.06	55.01	95.25
Membrane Correction σ_{mb} (kPa)	2.00	2.00	1.48
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	26.06	53.01	93.77
Strain at Failure ϵ_f %	20.43	20.01	12.88
Shear Strength c_u (kPa)	13.03	26.51	46.89
Moisture Content w_f %	33	32	29
Dry Density ρ_{df} (Mg/m ³)	1.50	1.52	1.56
Voids Ratio e_f	0.77	0.75	0.70
Deg of Saturation S_f %	100.00	100.00	100.00

Notes:

Failure Sketch



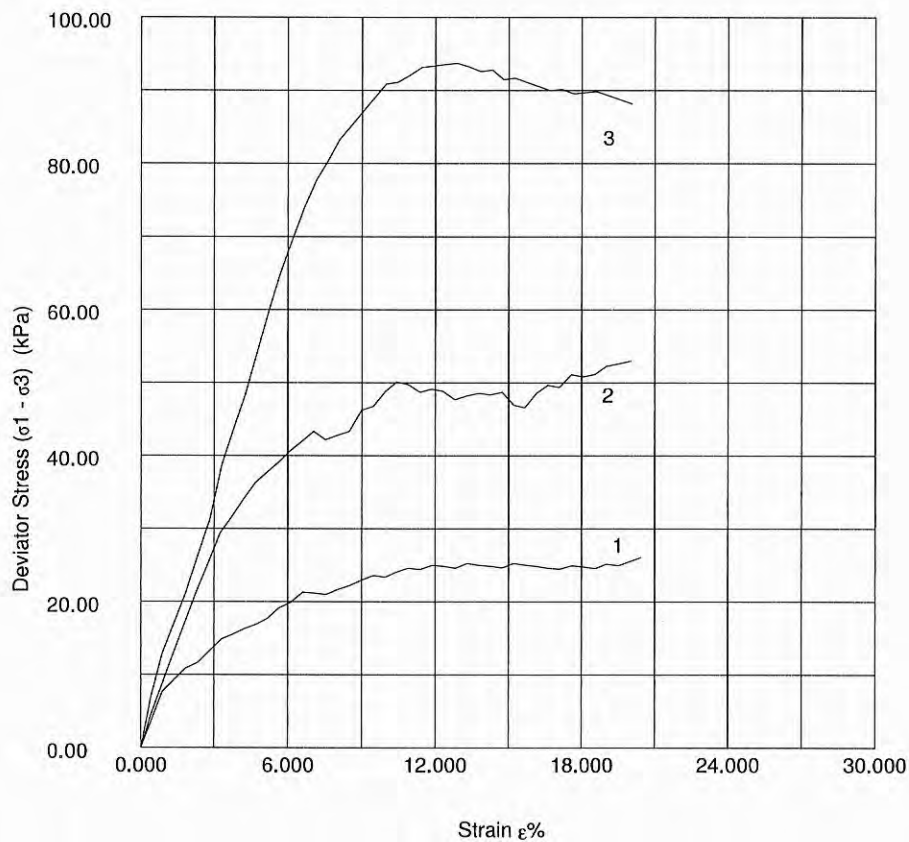
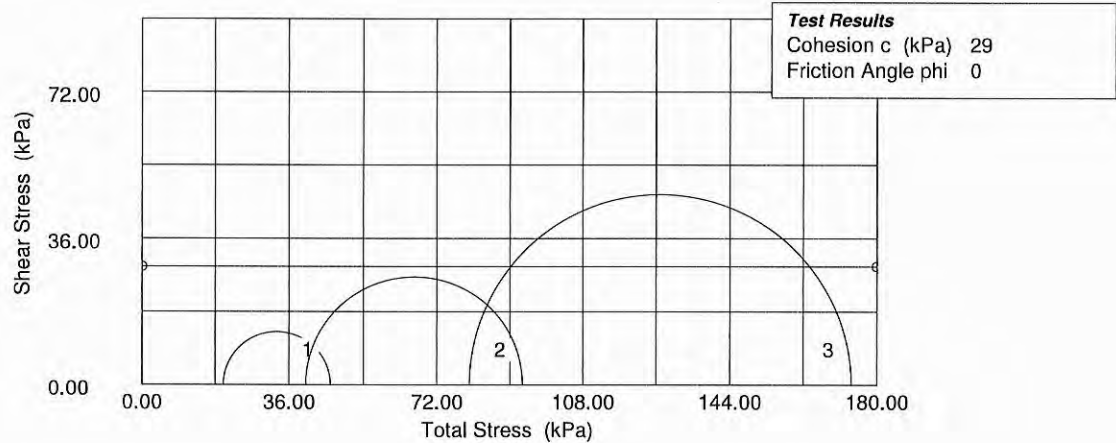
Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD

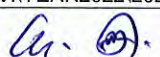
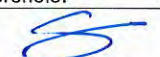
	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)	
			Date of Test:	22/12/22	
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW1	
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH34	
Operator:			Checked:		
			Approved:		

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name UU (SS, MS)	
			Date of Test: 22/12/22	
	Site Reference: Sungei Tengah Road/Lorong Pasu		Sample: TW1	
	Jobfile: W:\YEAR2022\2022\SML345A.JOB		Borehole: BH34	
Operator: 		Checked: 		Approved: 

Total Stress Triaxial Compression

Unconsolidated Undrained

Sample details

Sketch showing specimen location in original Sample



Depth 4.50m-5.10m
Description: Light brownish yellow and pink Sandy SILT

	Specimen 1	Specimen 2	Specimen 3
Type	Undisturbed	Undisturbed	Undisturbed
Height H_0 (mm)	76	76	76
Diameter D_0 (mm)	38	38	38
Weight W_0 (gr)	162.5	163.2	164.6
Bulk Density ρ (Mg/m ³)	1.89	1.89	1.91
Particle Density ρ_s	2.65 (assumed)	2.65 (assumed)	2.65 (assumed)

Initial Conditions

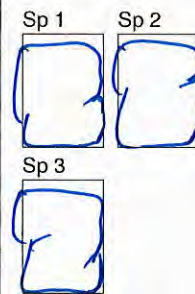
	Specimen 1	Specimen 2	Specimen 3
Cell Pressure σ_3 (kPa)	20.00	40.00	80.00
Machine Speed d_r (mm/min)	1.520	1.520	1.520
No. of Membranes	1	1	1
Total Thickness (mm)	0.2	0.2	0.2
Strain Channel	17	17	17
Load Channel	18	18	18
Moisture Content w_0 %	33	33	34
Dry Density ρ_{d0} (Mg/m ³)	1.42	1.42	1.43
Voids Ratio e_0	0.87	0.86	0.86
Deg of Saturation S_0 %	100.00	100.00	100.00

Final Condition

	Specimen 1	Specimen 2	Specimen 3
Max Deviator Stress (kPa)	166.60	185.58	203.86
Membrane Correction σ_{mb} (kPa)	1.95	2.00	1.65
Corr Stress $(\sigma_1 - \sigma_3)_c$ (kPa)	164.65	183.58	202.21
Strain at Failure ϵ_f %	18.91	20.28	15.00
Shear Strength c_u (kPa)	82.33	91.79	101.10
Moisture Content w_f %	33	33	34
Dry Density ρ_{df} (Mg/m ³)	1.42	1.42	1.43
Voids Ratio e_f	0.87	0.86	0.86
Deg of Saturation S_f %	100.00	100.00	100.00

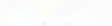
Notes:

Failure Sketch



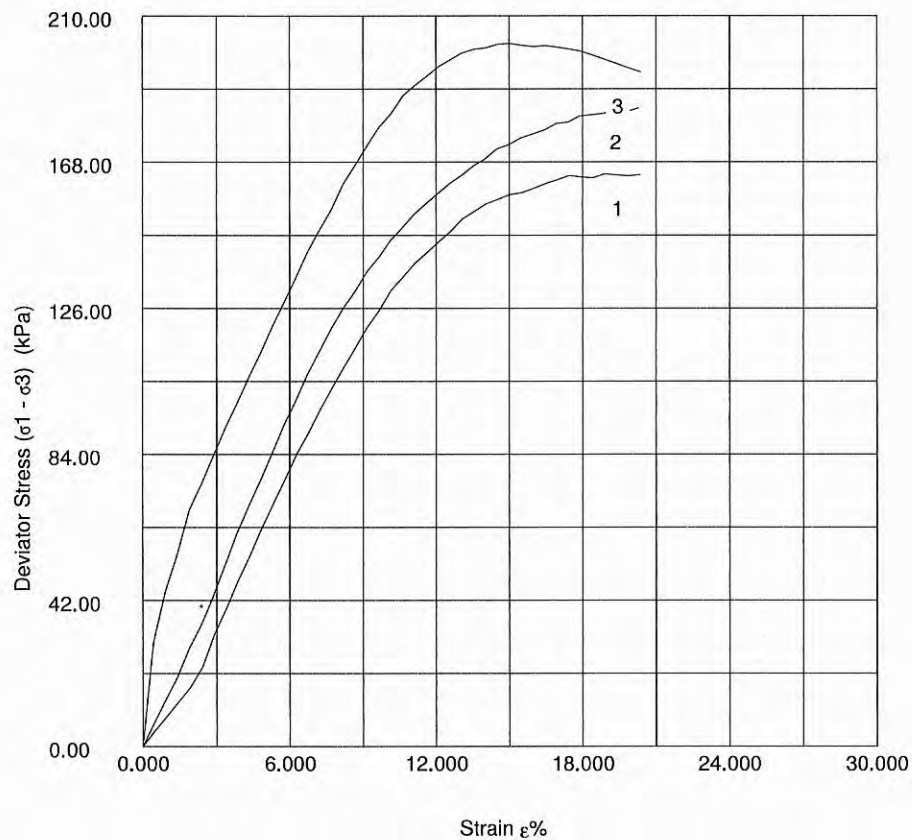
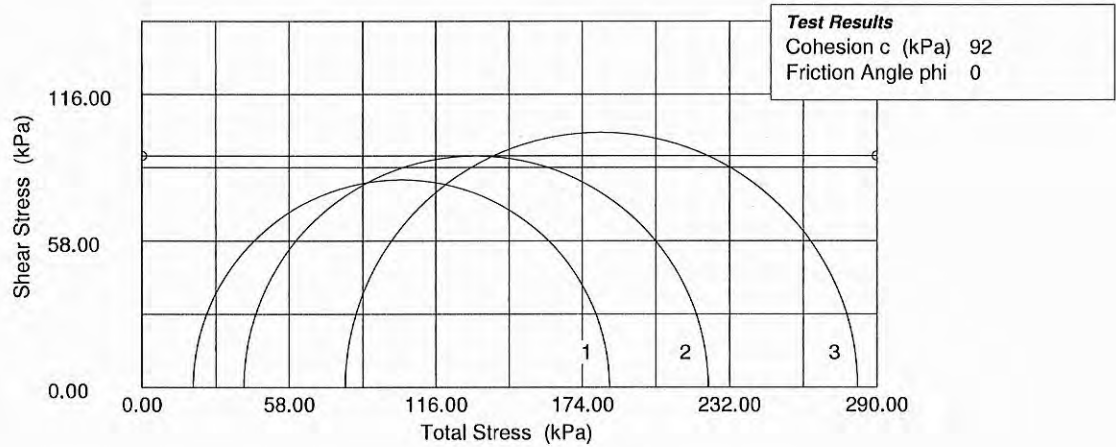
Surface Inclination

SOIL MATERIALS LABORATORY PTE LTD

	[Test Method : BS1377 : Part 7 : 1990 : 8/9* (* delete as appropriate)]		Test name	UU (SS, MS)
			Date of Test:	22/12/22
	Site Reference:	Sungei Tengah Road/Lorong Pasu	Sample:	TW3
	Jobfile:	W:\YEAR2022\2022\SML345A.JOB	Borehole:	BH34
	Operator:		Checked:	
		Approved:		

Total Stress Triaxial Compression

Unconsolidated Undrained



SOIL MATERIALS LABORATORY PTE LTD



[Test Method : BS1377 : Part 7 : 1990 : 8/9*
(* delete as appropriate)]

Test name UU (SS, MS)
Date of Test: 22/12/22

Site Reference: Sungei Tengah Road/Lorong Pasu
Jobfile: W:\YEAR2022\2022\SML345A.JOB

Sample: TW3
Borehole: BH34

Operator:

Checked:

Approved:

APPENDIX E

CALIBRATION CERTIFICATES



APS ASIA PDA ENTERPRISE PTE LTD

No. 65 Ubi Crescent, #02-01 HOLA Centre

Singapore 408559

Tel: 68968826 Email: info@aps-instrument.com

Co. Registration No. : 200601680E



CERTIFICATE OF CALIBRATION

Certificate Number : APS/SPT/0024/2022

Instrument : **Standard Penetration Test (SPT)**

Client : **Geospecs Pte Ltd**

Serial No : **H-214**

SPT Ram Energy Transfer Ratio : **69%**

Calibration Date : **26 February 2022**

Recalibration Date : **25 February 2023**

Calibration Remarks:

Please refer to Calibration Test Report : APS/SPT/2022/024 for detailed summary and analysis.

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APS ASIA PDA ENTERPRISE PTE LTD

No. 65 Ubi Crescent, #02-01 Hola Centre

Singapore 408559

Tel: 68968826 Email: info@aps-instrument.com

Co. Registration No. : 200601680E



CERTIFICATE OF CALIBRATION

Certificate Number : APS/SPT/0026/2022

Instrument : **Standard Penetration Test (SPT)**

Client : **Geospecs Pte Ltd**

Serial No : **H-216**

SPT Ram Energy Transfer Ratio : **70%**

Calibration Date : **26 February 2022**

Recalibration Date : **25 February 2023**

Calibration Remarks:

Please refer to Calibration Test Report : APS/SPT/2022/026 for detailed summary and analysis.

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APS ASIA PDA ENTERPRISE PTE LTD

No. 65 Ubi Crescent, #02-01 Hola Centre

Singapore 408559

Tel: 68968826 Email: info@aps-instrument.com

Co. Registration No. : 200601680E



CERTIFICATE OF CALIBRATION

Certificate Number : APS/SPT/0029/2022

Instrument : **Standard Penetration Test (SPT)**

Client : **Geospecs Pte Ltd**

Serial No : **H-219**

SPT Ram Energy Transfer Ratio : **68%**

Calibration Date : **26 February 2022**

Recalibration Date : **25 February 2023**

Calibration Remarks:

Please refer to Calibration Test Report : APS/SPT/2022/029 for detailed summary and analysis.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
