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CHENNAI METROPOLITAN DEVELOPMENT AUTHORITY
'ThalamuthuNatarajan Building', No.1, Gandhi Irwin Road,
Egmore, Chennai-600 008.

PROFESSIONAL REGISTRATION CERTIFICATE

This is to certify that the **Tmt VASANTHI PADMANABAN** has enrolled as **Registered Geo-Technical Engineer (RGTE)** with Chennai Metropolitan Development Authority (CMDA) who has the qualification of **M.Tech.,(Soil Mechanics & Foundation Engg.)** and experience in the relevant field for **6years**.

She has been given the Registration No.**GTE/19/04/016** on **03.04.2019**. She shall be required to comply with the duties and responsibilities prescribed by the Government of Tamil Nadu in Part-V, "Registration of Professionals", Tamil Nadu Combined Development and Building Rules, 2019 approved vide G.O.(Ms) No.18 MAWS (MA1) Dept. dated 04.02.2019.

This Registration is valid upto**02.04.2024**.



R. Shivakumar
03/04/2019

(R.SHIVAKUMAR)

ASSISTANT PLANNER
CHENNAI METROPOLITAN DEVELOPMENT AUTHORITY
CHENNAI - 600 008

Vasanthi P

VASANTHI PADMANABAN, M.Tech.,
Registered Geotechnical Engineer
Reg. No: GTE/19/04/016

Vasanthi

VASANTHI PADMANABAN, M.Tech.
Registered Geotechnical Engineer
Reg. No. GTE/18/04/1016

REPORT ON GEOTECHNICAL INVESTIGATION FOR THE PROPOSED CONSTRUCTION OF : " VATSA AMAZE " PLAN SHOWING THE PROPOSED CONSTRUCTION OF GROUP HOUSING DEVELOPMENT CONSISTING 2 BLOCKS; BLOCK A STILT FLOOR + 5 FLOORS (HEIGHT- 18.30M) RESIDENTIAL BUILDING 20 DWELLING UNITS; BLOCK B- STILT FLOOR +4 FLOORS + 5TH FLOOR (PART - LADIES GYM , GENTS GYM & ASSOCIATION ROOM) (HEIGHT- 18.30M) RESIDENTIAL BUILDING WITH 87 DWELLING UNITS TOTALLY 107 DWELLING UNITS (AFFORDABLE HOUSING) AT VASANTHAPURAM MAIN ROAD, MANGADU, CHENNAI COMPRISED IN S.NO.475/1PART (AS PER DOCUMENT) AND 475/1B (AS PER PATTA) OF MANGADU-B VILLAGE WITHIN THE LIMITS OF MANGADU MUNICIPALITY.

Client:

M/s. Stepsstone Promoters Private Limited

No.1/1, Sakthi Nagar 2nd street,

Choolaimedu, Chennai-600094



MARS SYNERGY GEOTECH Pvt Ltd

An ISO 9001: 2015 Certified Company

NABL Accredited Laboratory

Plot No.145A, 2nd Cross Street, Developed Plots Estate,
Perungudi, Chennai-600 096.

Tele: 044-48563144, 48527555,

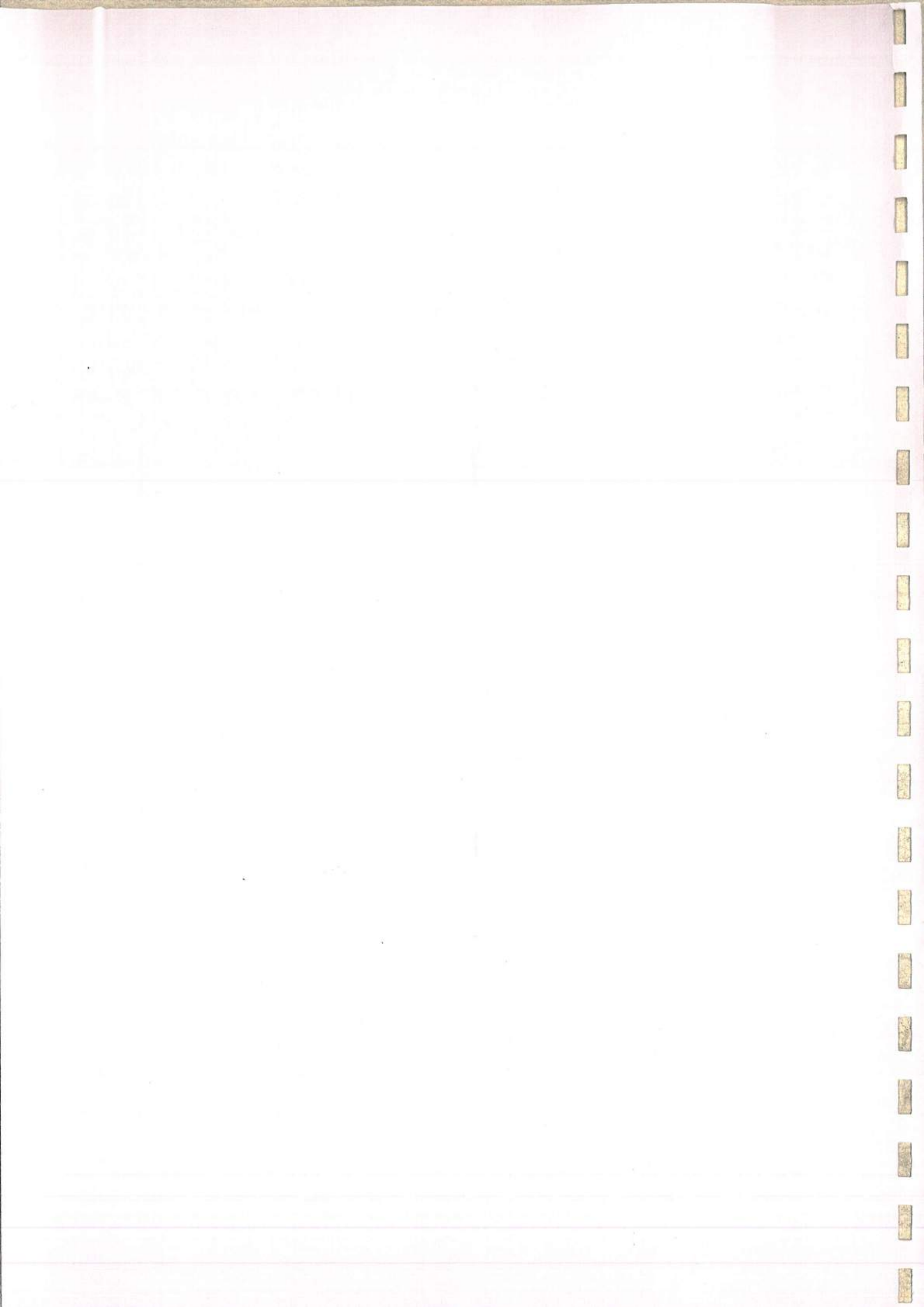
Mail : info@msgitech.com, projects@msgitech.com,

Web: www.msgitech.com

NABL : ULR-TC867823100000213F

Project No: MSGTPL/SI-5915/23-24

Aug-2023



To

29th March 2024

M/s. Stepsstone Promoters Private Limited,

No.1/1, Sakthi Nagar 2nd street,

Choolaimedu, Chennai-600094.

Reg: Proposed construction of " Vatsa Amaze " Plan Showing the Proposed Construction of Group Housing Development Consisting 2 Blocks; Block A Stilt Floor + 5 Floors (Height- 18.30m) Residential Building 20 Dwelling units; Block B- Stilt Floor +4 Floors + 5th Floor (Part - Ladies Gym , Gents Gym & Association Room) (Height- 18.30m) Residential Building with 87 Dwelling Units Totally 107 Dwelling Units (Affordable Housing) at Vasanthapuram Main Road, Mangadu, Chennai Comprised in S.No.475/1part (as per Document) and 475/1B (as per Patta) of Mangadu-B Village Within the Limits of Mangadu Municipality, Tamil Nadu, INDIA.

The **Mars Synergy Geotech Pvt Ltd**, Chennai has completed the geotechnical engineering services for the above referred project.

This geotechnical engineering report presents the results of the subsurface exploration and the recommendations for your proposed structures foundation are presented here in final form together with a summary of field and laboratory data.

We appreciate the opportunity to be of service to you on this project. If you have any comments concerning this report, or if we may be of further services, please contact us/mail.

Note:

1. The test results enclosed are only related to the sample tested by us.
2. The Report shall not be reproduced in full or part without written permission from Mars Synergy Geotech Laboratory.
3. All the lab related tested values are as per the standard conditions followed by the lab.
4. Samples are retained for 30 days from sample received date at lab.

Sincerely,

Mars Synergy Geotech Pvt Ltd.

Vasanthi P

VASANTHI PADMANABAN, M.Tech.,
Registered Geotechnical Engineer
Reg. No: GTE /19/04 /016

ULR-TC867823100000213F

Report No: **MSGTPL/SI-5915/23-24**

Copies Submitted: (2)

Total no of Pages: (74)

Vasanthi

VASANTHI PADMANABAN, M.Tech.
Registered Geotechnical Engineer
Reg. No. 07E1301016

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REPORT ON GEOTECHNICAL INVESTIGATION AND RECOMMENDATION FOR THE PROPOSED CONSTRUCTION OF "VATSA AMAZE" RESIDENTIAL BUILDING.

1.0 INTRODUCTION

M/s. Stepsstone Promoters Private Limited, Chennai, is planning to construct " Vatsa Amaze " Plan Showing the Proposed Construction of Group Housing Development Consisting 2 Blocks; Block A Stilt Floor + 5 Floors (Height- 18.30m) Residential Building 20 Dwelling units; Block B- Stilt Floor +4 Floors + 5th Floor (Part - Ladies Gym , Gents Gym & Association Room) (Height- 18.30m) Residential Building with 87 Dwelling Units Totally 107 Dwelling Units (Affordable Housing) at Vasanthapuram Main Road, Mangadu, Chennai Comprised in S.No.475/1part (as per Document) and 475/1B (as per Patta) of Mangadu-B Village Within the Limits of Mangadu Municipality, Tamil Nadu, INDIA. **M/s. Mars Synergy Geotech Pvt Ltd**, Chennai has carried out this investigation and completed on 29th July 2023 as per the client instructions.

The scope of work includes the following

- Making four (4) numbers of Standard Soil Investigation bore-holes
- Collecting soil samples at regular depth intervals
- Conducting SPTs at every 1.0m/1.50m depth intervals
- Conducting laboratory tests on samples collected
- Submitting report with laboratory test results and recommendation for foundations.

1.1 DESCRIPTION OF STRUCTURE

The proposed structure is a Stilt+5 Floors Residential Apartments. The exact details of columns are not available at the time of preparation of this report. Assuming an approximate column spacing of 4.5x5.5m c/c considering this the central column load works about 200 tones for proposed structure. These loads are assumed for the purpose of foundation only and for the structural design, exact loads are to be estimated based on a suitable structural analysis.

1.2 SOIL INVESTIGATION

The field investigation works were carried out using 1 set of Rotary mechanical drilling Rig. The following activities, carried out in chronological sequence, comprised the field work for the project

- Mobilization of rotary drilling rig, water pump, testing tools and accessories.

- Collection of disturbed samples of non-cohesive soils.
- Sampling and logging of the boreholes. Packing, labeling and dispatching the samples to laboratory.
- Field investigation, tests and laboratory tests conducted as per IS-1892 and IS -2720

1.3 FIELD SAMPLING

Four (4) numbers of standard soil investigation boreholes of 100mm diameter was made at the locations shown in the drawing, **MSGTPL/SI-5915** enclosed. Investigations were conducted up to a maximum of 20.50m depth from existing ground level. SPTs were conducted at every 1.0m/1.5m depth intervals and samples were collected for identification and testing.

1.4 LABORATORY TESTS

The laboratory-testing scheme is so designed to obtain the design parameters for the foundations. The following parameters are evaluated:

- Type of soil and it's gradation properties
- Atterberg Limits
- Specific Gravity
- Natural Moisture Content (NMC)
- Sieve analysis on the coarse-grained soil fraction

All the test results are presented in the tabular forms. Comprehensive field information along with SPT values is presented on separate sheet.

1.5 SOIL PROFILE

Based on visual identification of soil samples and test results (of both field and laboratory tests), the soil profile arrived. Subsoil is made-up of five to eight distinctive layers there are

BH-1

- Medium stiff CLAY up to -1.50m with **SPT's N=6**
- Medium dense SAND -1.50m to -3.50m with **SPT's N=14-20**
- Stiff CLAY -3.50m to -4.50m with **SPT's N=10**
- Medium dense SAND -4.50m to -5.50m with **SPT's N=11**
- Medium stiff CLAY -5.50m to -8.50m with **SPT's N=4-6**
- Very Stiff CLAY -8.50m to -10.50m with **SPT's N=26**
- Dense clayey SAND -10.50m to 12.0m with **SPT's N=31**
- Hard CLAY -12.0m to -19.0m with **SPT's N=43->50**

BH-2

- (i) Stiff CLAY up to -1.50m with **SPT's N=11**
- (ii) Medium dense SAND -1.50m to -3.50m with **SPT's N=12-14**
- (iii) Medium stiff CLAY -3.50m to -8.50m with **SPT's N=4-9**
- (iv) Stiff to Very Stiff CLAY -8.50m to -14.50m with **SPT's N=13-26**
- (v) Hard CLAY -14.50m to -20.50m with **SPT's N= 36->50**

BH-3

- (i) Medium stiff CLAY up to -1.50m with **SPT's N=8**
- (ii) Medium dense SAND -1.50m to -3.50m with **SPT's N=10-15**
- (iii) Medium stiff to stiff CLAY -3.50m to -10.50m with **SPT's N=8-16**
- (iv) Very dense clayey SAND -10.50m to -12.0m with **SPT's N=64**
- (v) Very Stiff CLAY -12.0m to -13.50m with **SPT's N=28**
- (vi) Hard CLAY -13.50m to -20.50m with **SPT's N=63 - >50**

BH-4

- (i) Medium stiff CLAY up to -1.50m with **SPT's N=7**
- (ii) Medium dense SAND -1.50m to -2.50m with **SPT's N=12**
- (iii) Stiff CLAY -2.50m to -3.50m with **SPT's N=10**
- (iv) Medium dense clayey SAND -3.50m to -4.50m with **SPT's N=18**
- (v) Medium stiff CLAY -4.50m to -7.0m with **SPT's N=4-6**
- (vi) Loose clayey SAND -7.0m to -8.50m with **SPT's N=4**
- (vii) Stiff to very stiff CLAY -8.50m to -13.50m with **SPT's N=19-20**
- (viii) Hard CLAY -13.50m to -20.50m with **SPT's N=40->50**

The soil profile details are presented in the bore-chart.

1.6 GROUND WATER TABLE

At the time of Soil Investigation (27/07/2023 to 29/07/2023) at site, ground water table was recorded at **(-)1.0m** depth from the local source.

1.7 DISCUSSION ON FOUNDATION

At this site four borehole were drilled up to 20.50m depth, the proposed structure is a six-storied residential apartments, the column loads are high it is about 200 Tones.

Due to the presence of medium stiff clay and loose sand at these four boreholes between 3.50 and 8.50m depth, and SPT values of 4 to 9, shallow foundation is not appropriate; therefore, deep foundation, such as drilled cast In-situ pile foundation, is proposed for Six storied Residential Building.

Soil strata more or less uniform out of these 4 boreholes BH-2 is a weaker borehole. Based on this borehole (BH-2) soil design parameters are arrived and same as used for foundation.

Soil Design Parameters									
From (m)	To (m)	Thickness (m)	Soil Type	Avg SPT 'N'	γ' (kN/m ³)	C (T/sq.m)	α	Φ (deg)	K
0	1.5	1.5	Stiff CLAY	11	8	6.0	0.7	-	-
1.5	3.5	2.0	Medium dense SAND	11	8	-	-	29	1.0
3.5	8.5	5.0	Medium stiff CLAY	6	8	3.0	1.0	-	-
8.5	14.5	6.0	Stiff to very Stiff CLAY	20	9	100	0.45	-	-
14.5	20.5	6.0	Hard CLAY	36->50	10	20-30	0.3	-	-

1.8 RECOMMENDATIONS

- ✓ Considering that this structure is a six storied Residential Apartments, pile foundation is recommended up to **20.0m depth** from existing Ground level.
- ✓ The pile bore may be terminated at a depth of minimum three times diameter of the pile in to hard strata (where three consecutive SPT 'N' values of more than 50 are obtained in each test at depth intervals of one pile diameter).
- ✓ To satisfy the above criterion the pile length may be about **20.0m** from the existing ground level.

- ✓ The pile capacities for varying diameters are provided below for the proposed structure.

Bored Cast In-situ Pile Capacities as per IS-2911 Part-1 Sec-2 :2010					
Pile Termination Level Below EGL (m)	Pile Dia (mm)	Safe Vertical Capacity (Tones)	Safe Uplift Capacity (Tones)	Safe Lateral Capacity wrt 5mm Ddeflection	
				Free Head (Tones)	Fixed Head* (Tones)
20.0	450	64	45	1.3	3.3
	500	75	50	1.5	3.9
	600	95	60	2.0	5.2
*Note: Apply 0.75 for Group efficiency for lateral capacities					

- The proposed project site is situated in Mangadu B Village which falls under Seismic Zone III as per IS 1893 (Part 1) - 2002. Structure should be design against Earth quake resistance
- Pile Cut of level is considered 1.0m below EGL.
- Use minimum M25 Grade of concrete
- Centre to centre spacing of piles shall not be less than 3 times of the diameter of the pile shaft.
- The above safe loads suggested are only tentative and these have to be confirmed by conducting through pile load tests conducted as per I.S-2911part –IV:2013

Vasanthi P
VASANTHI PADMANABAN, M.Tech.,
Registered Geotechnical Engineer
Reg. No: GTE/19/04/016

ESTIMATION OF VERTICAL CAPACITY OF PILE

Project No:	5915, "VATSA AMAZE" Residential Building
Location:	
Reference BH's	BH-1 To BH-4

$$Q_u = A_p (1/2 \sum_{i=1}^n \gamma_i N_i + P_{Bq}) + \sum_{i=1}^n K_i P_{Bq} \tan \delta_i A_{si}$$

$$Q_u = A_p N_c c_p + \sum_{i=1}^n \alpha_i c_i A_{si}$$

Dia of Pile	600	mm
Elevation	0	m
Pile Cut off Level (Below E.G.L)	1.0	m
Pile termination level below G.L	20	m
Total Length of Pile	19.0	m
Factor of safety	2.5	
$P_{Di} =$	72	kN/Sq.m

Soil Design Parameters

Layer.No	From (m)	To (m)	Thickness (m)	Soil Type	Avg 'N' (kN/m ²)	C (kN/m ²)	α	ϕ (Deg)	K	Pdi (kN/m ²)
1	0	1.5	1.5	Stiff CLAY	11	60	0.7	-	-	6.0
2	1.5	3.5	2	Medium dense SAND	11	-	-	29	1	20.0
3	3.5	8.5	5	Medium Stiff CLAY	6	30	1	-	-	48.0
4	8.5	14.5	6	Stiff to very Stiff CLAY	20	100	0.45	-	-	95.0
5	14.5	20.5	6	Hard CLAY	36->50	200-300	0.3	-	-	152.0

Pile Calculations As per IS-2911 part-1/Sec-2-2010

Layer.No	From (m)	To (m)	Thickness (m)	γ' (kN/m ³)	Pdi (kN/m ²)	C (kN/m ²)	α	ϕ (Deg)	K	Asi	Sf (kN)	Sfi (kN)
1	1.0	1.5	0.5	8.0	2.0	60	0.7	-	-	0.94	39.58	39.6
2	1.5	3.5	2	8.0	12.0	-	-	29	1.00	3.77	25.08	64.7
3	3.5	8.5	5	8.0	40.0	30	1	-	-	9.42	282.74	347.4
4	8.5	14.5	6	9.0	87.0	100	0.45	-	-	11.31	508.94	856.3
5	14.5	20	5.5	10.0	141.5	250	0.3	-	-	10.37	777.54	1633.9

End Bearing Strata

Dia of Pile(m)	Ap (m ²)	γ' (kN/m ³)	Very Dense SAND	Pdi	ϕ (Deg)	Nq	N γ	Nc	C (kN/m ²)	Qp (kN)	Quit (kN)	Qallow (kN)
0.6	0.28274	11.00	72	-	-	-	-	9	300	763.4	2397	958.92

Safe Vertical Capacity of Single Pile

96 Tones

Lateral Pile Capacity Calculation

Project Title : 5915, "VATSA AMAZE" Residential Building

Site :

BH: BH-1 to BH-4

As Per IS-2911(Part-1/Sec-2):2010

$\text{Deflection, } y = \frac{H(e + Z_f)^3}{3EI} \times 10^3 \quad \dots \text{for free head pile}$	$\text{Deflection, } y = \frac{H(e + Z_f)^3}{12EI} \times 10^3 \quad \dots \text{for fixed head pile}$
--	--

Input

Soil	Medium sand (Submerged)	
Diameter of Pile	= 600 mm	
Length of Pile Below FGL, (L)	= 20 m	
Length of Pile Above FGL, (L1=e)	= 0 m	
Grade of Concrete	= 25	
Allowable Deflection, (y)	= 5 mm	
Young's modulus of pile material, (E)	= 25000.00 MN/m ²	
Moment Inertia of the Pile Cross section (I)	= 0.0064 m ⁴	

For CLAY		Stiffness factor R , in m = $\sqrt[3]{\frac{EI}{KB}}$
$k_1 =$	MN/m ²	L1/R = #DIV/0!
$K =$	MN/m ³	L1/R (Free Head) = 1.9
$R =$	#DIV/0! m	L1/R (Fixed Head) = 2.2
For SAND		Stiffness factor T , in m = $\sqrt[3]{\frac{EI}{\eta_b}}$
$\eta_b =$	1.4 MN/m ³	L1/T (Free Head) = 1.9
$T =$	2.58 m	L1/T (Fixed Head) = 2.2
$L_1/T =$	0	

Output for SANDY Soil

Z_f (Free Head) / Depth of Fixity = 4.90 m

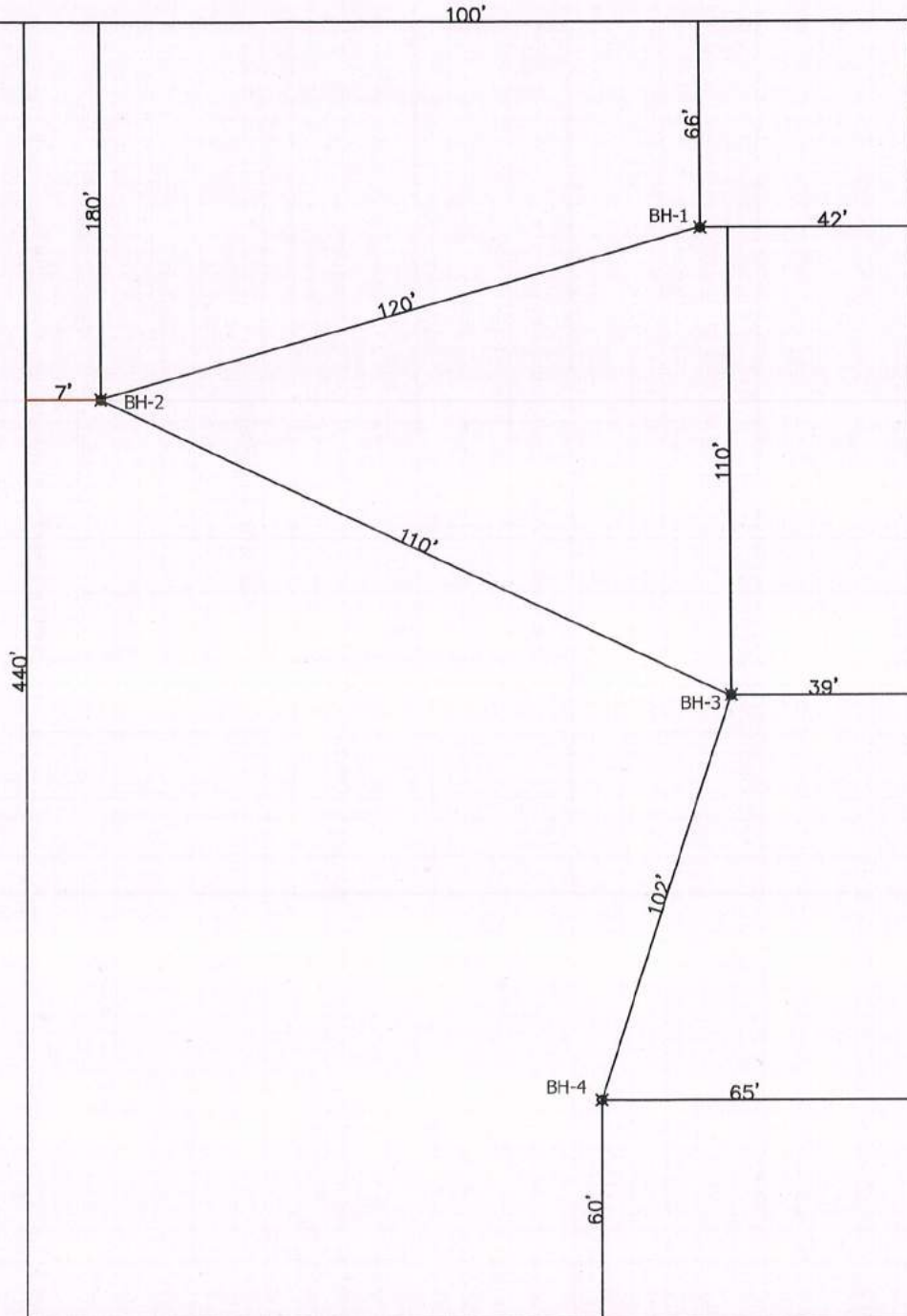
Z_l (Fixed Head) / Depth of Fixity = 5.67 m

Result

Lateral Load Free Head = 2.03 Tones

Lateral Load Fixed Head = 5.24 Tones

VASANTHAPURAM MAIN ROAD MANGADU B VILLAGE



TITLE: DRAWING SHOWING THE SOIL INVESTIGATION BORE HOLE LOCATIONS

PROJECT: PROPOSED CONSTRUCTION OF "VATSA AMAZE" RESIDENTIAL BUILDING

LEGEND:

BH: BORE HOLE ✕ -SOIL TEST LOCATION

ACTIVITY	EXECUTED BY	SCALE: N T S
FOREMEN	RAJESH	
DRAFTING	JB	



MARS SYNERGY GEOTECH Pvt Ltd
(An ISO 9001: 2015 Certified Company)
Engineering Survey & Soil Investigation
Plot No:145A, Developed Plots Estate,
Perungudi, Chennai-600 096,
Mobile: 94440 51563 / 94441 22047

DRAWING NO: MSGTPL/SI-5915/23-24

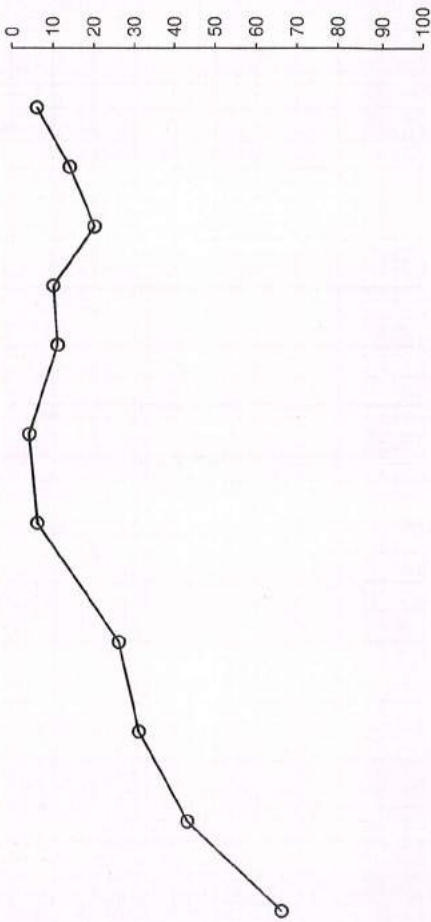
BOREHOLE LOG

Project No: MSGTPL/SI-5915/23-24

Project: Proposed Construction of "VATSA AMAZE" Residential Building

Location	
Ground R.L	Nil
Drilling	Rotary

Borehole No	BH-1
G.W.T (m)	(-)1.0 (Bore well Near by Source)
Date of Start	27-Jul-2023
Date of Complete	27-Jul-2023
Dia of Bore (mm)	100
Termination Depth (m)	19.00
Sheet	1 of 1

Depth below EGL (m)	Layer Thickness	Soil Layers Description	Soil Symbol	IS-Classification	Type Field Test	Test Depth (m)	SPT Values Record 0 to 45cm				SPT- N Value	Graphical Representation of SPT
0.0												
0.5	1.0	Medium Stiff Brownish CLAY		CH								
1.0					SPT	1.0	2	3	3	6		
1.5												
2.0	2.0	Medium Dense Brownish Fine to Medium SAND		SM								
2.5					SPT	2.0	5	6	8	14		
3.0					SPT	3.0	6	9	11	20		
3.5												
4.0	1.0	Stiff Greyish CLAY		CH								
4.5					SPT	4.0	3	5	5	10		
5.0	1.0	Medium Dense Greyish Clayey SAND		SC								
5.5					SPT	5.0	3	4	7	11		
6.0												
6.5	3.0	Medium Stiff Greyish CLAY		CH								
7.0					SPT	6.5	2	2	2	4		
7.5												
8.0					SPT	8.0	2	3	3	6		
8.5												
9.0	2.0	Very Stiff Greyish CLAY		CI								
9.5												
10.0					SPT	10.0	6	12	14	26		
10.5												
11.0	1.5	Dense Greyish Clayey SAND		SC								
11.5					SPT	11.5	9	13	18	31		
12.0												
12.5												
13.0	3.5	Hard Brownish CLAY		CH								
13.5					SPT	13.0	10	19	24	43		
14.0												
14.5					SPT	14.5	16	24	42	66		
15.0												

Borehole Termination Depth (m) 19.0

EGL- Existing Ground Level

R.L- Reduced Level

GWT- Ground Water Table

SPT- Standard Penetration Test

UDS- Undisturbed Sample

VST- Vane Shear Test

DS- Disturbed Sample

CR- Core Recovery

RQD- Rock Quality Designation

BOREHOLE LOG

Project No: MSGTPL/SI-5915/23-24

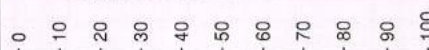
Project: Proposed Construction of "VATSA AMAZE" Residential Building

Location	
Ground R.L.	Nil
Drilling	Rotary

Borehole No	BH-1
G.W.T (m)	(-) 1.0 (Bore well Near by Source)
Date of Start	27-Jul-2023
Date of Complete	27-Jul-2023
Dia of Bore (mm)	100
Termination Depth (m)	19.00

Depth below EGL (m)	Layer Thickness	Soil Layers Description	Soil Symbol	IS-Classification	Type Field Test	Test Depth (m)	SPT Values Record 0 to 45cm	SPT- N- Value
15.5	3.5	Hard Brownish CLAY	CH					
16.0					SPT	16.0	26 38	50 Blows for 13Cm
16.5								
17.0								
17.5					SPT	17.5	29 38	50 Blows for 12Cm
18.0								
18.5								
19.0					SPT	19.0	31 43	50 Blows for 10Cm
19.5								
20.0								
20.5								
21.0								
21.5								
22.0								
22.5								
23.0								
23.5								
24.0								
24.5								
25.0								
25.5								
26.0								
26.5								
27.0								
27.5								
28.0								
28.5								
29.0								
29.5								
30.0								

Graphical Representation of SPT



Borehole Termination Depth (m) 19.0

EGL- Existing Ground Level

R.L- Reduced Level

GWT- Ground Water Table

SPT- Standard Penetration Test

UDS- Undisturbed Sample

VST- Vane Shear Test

DS- Disturbed Sample

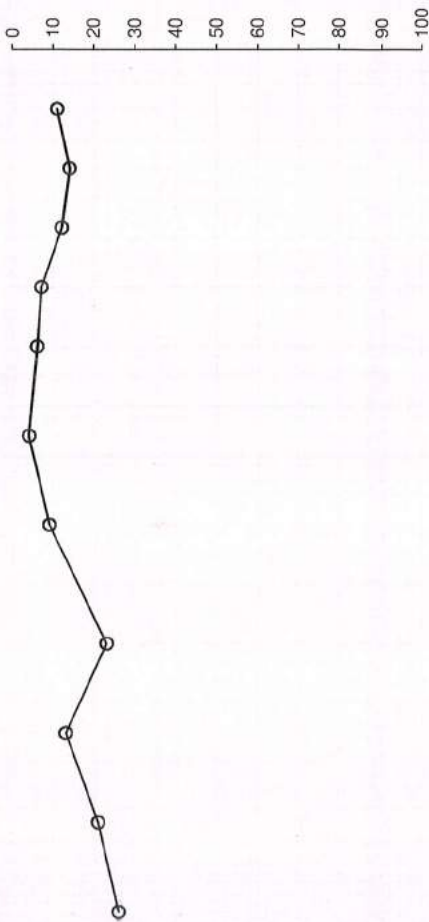
CR- Core Recovery

RQD- Rock Quality Designation

BOREHOLE LOG**Project No: MSGTPL/SI-5915/23-24****Project: Proposed Construction of "VATSA AMAZE" Residential Building**

Location	
Ground R.L	Nil
Drilling	Rotary

Borehole No	BH-2
G.W.T (m)	(-)1.0 (Bore well Near by Source)
Date of Start	28-Jul-2023
Date of Complete	29-Jul-2023
Dia of Bore (mm)	100
Termination Depth (m)	20.50
	Sheet 1 of 1

Depth below EGL (m)	Layer Thickness	Soil Layers Description	Soil Symbol	IS-Classification	Type Field Test	Test Depth (m)	SPT Values Record 0 to 45cm				SPT- N- Value	Graphical Representation of SPT
0.0												
0.5	1.0	Stiff Brownish CLAY		CH								
1.0					SPT	1.0	4	5	6	11		
1.5	1.0	Medium Dense Brownish Clayey SAND		SC								
2.0					SPT	2.0	3	5	9	14		
2.5	1.0	Medium Dense Brownish Fine to Medium SAND		SM								
3.0					SPT	3.0	5	5	7	12		
3.5												
4.0					SPT	4.0	2	3	4	7		
4.5												
5.0					SPT	5.0	2	3	3	6		
5.5	5.0	Medium Stiff to Stiff Greyish CLAY		CH								
6.0												
6.5					SPT	6.5	2	2	2	4		
7.0												
7.5												
8.0					SPT	8.0	3	4	5	9		
8.5												
9.0												
9.5												
10.0	2.0	Very Stiff Greyish CLAY		CH								
10.5					SPT	10.0	5	10	13	23		
11.0	1.5	Stiff Reddish & Light Greyish CLAY		CH								
11.5					SPT	11.5	3	5	8	13		
12.0												
12.5												
13.0	3.0	Very Stiff Brownish CLAY		CH								
13.5					SPT	13.0	7	10	11	21		
14.0												
14.5					SPT	14.5	9	12	14	26		
15.0												

Borehole Termination Depth (m) 20.5

EGL- Existing Ground Level

R.L- Reduced Level

GWT- Ground Water Table

SPT- Standard Penetration Test

UDS- Undisturbed Sample

VST- Vane Shear Test

DS- Disturbed Sample

CR- Core Recovery

RQD- Rock Quality Designation

BOREHOLE LOG

Project No: MSGTPL/SI-5915/23-24

Project: Proposed Construction of "VATSA AMAZE" Residential Building

Location	
Ground R.L	Nil
Drilling	Rotary

Borehole No	BH-2	
G.W.T (m)	(-)1.0 (Bore well Near by Source)	
Date of Start	28-Jul-2023	
Date of Complete	29-Jul-2023	
Dia of Bore (mm)	100	Sheet
Termination Depth (m)	20.50	1 of 1

Depth below EGL (m)	Layer Thickness	Soil Layers Description	Soil Symbol	IS-Classification	Type Field Test	Test Depth (m)	SPT Values Record 0 to 45cm	SPT- N- Value	Graphical Representation of SPT
15.5									
16.0					SPT	16.0	13	16	36
16.5									
17.0									
17.5					SPT	17.5	23	32	
18.0	5.5	Hard Brownish & Light Greyish CLAY		CH				50 Blows for 13Cm	
18.5									
19.0					SPT	19.0	19	33	50 Blows for 11Cm
19.5									
20.0									
20.5					SPT	20.5	26	37	50 Blows for 8Cm
21.0									
21.5									
22.0									
22.5									
23.0									
23.5									
24.0									
24.5									
25.0									
25.5									
26.0									
26.5									
27.0									
27.5									
28.0									
28.5									
29.0									
29.5									
30.0									

Borehole Termination Depth (m) 20.5

EGL- Existing Ground Level

R.L- Reduced Level

GWT- Ground Water Table

SPT- Standard Penetration Test

UDS- Undisturbed Sample

VST- Vane Shear Test

DS- Disturbed Sample

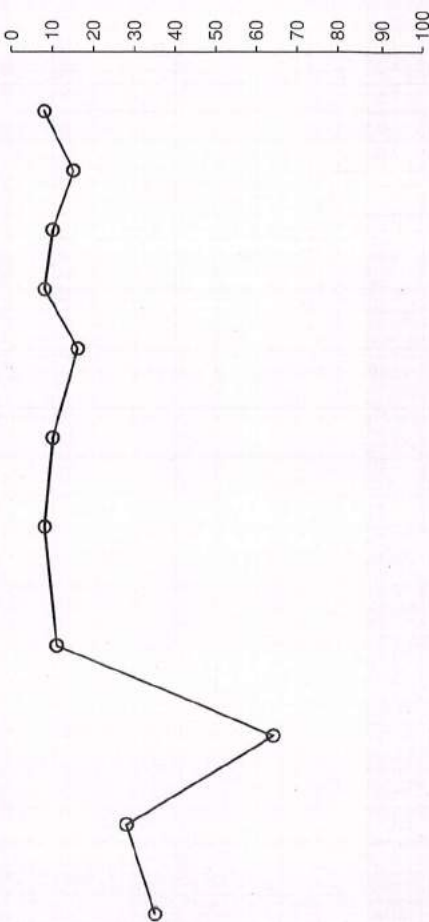
CR- Core Recovery

RQD- Rock Quality Designation

BOREHOLE LOG**Project No: MSGTPL/SI-5915/23-24****Project: Proposed Construction of "VATSA AMAZE" Residential Building**

Location	
Ground R.L	Nil
Drilling	Rotary

Borehole No	BH-3
G.W.T (m)	(-)1.0 (Bore well Near by Source)
Date of Start	29-Jul-2023
Date of Complete	29-Jul-2023
Dia of Bore (mm)	100
Termination Depth (m)	20.50
	Sheet 1 of 1

Depth below EGL (m)	Layer Thickness	Soil Layers Description	Soil Symbol	IS-Classification	Type Field Test	Test Depth (m)	SPT Values Record 0 to 45cm				SPT- N- Value	Graphical Representation of SPT
0.0												
0.5	1.0	Medium Stiff Brownish CLAY		CH								
1.0					SPT	1.0	3	4	4	8		
1.5												
2.0	2.0	Medium Dense Brownish Fine to Medium SAND		SW- SM	SPT	2.0	5	6	9	15		
2.5												
3.0					SPT	3.0	5	5	5	10		
3.5												
4.0	1.0	Medium Stiff Greyish CLAY		CH	SPT	4.0	2	3	5	8		
4.5												
5.0	1.0	Medium Dense Brownish Clayey Fine SAND		SC	SPT	5.0	4	6	10	16		
5.5												
6.0												
6.5					SPT	6.5	3	4	6	10		
7.0												
7.5												
8.0	5.0	Stiff Greyish CLAY		CI	SPT	8.0	3	3	5	8		
8.5												
9.0												
9.5												
10.0					SPT	10.0	5	5	6	11		
10.5												
11.0	1.5	Very Dense Reddish & Light Greyish Clayey SAND		SC								
11.5					SPT	11.5	15	27	37	64		
12.0												
12.5	1.5	Very Stiff Brownish & Light Greyish CLAY		CH								
13.0					SPT	13.0	8	13	15	28		
13.5												
14.0	2.0	Hard Brownish & Light Greyish CLAY		CH								
14.5					SPT	14.5	11	16	19	35		
15.0												

Borehole Termination Depth (m) 20.5

EGL- Existing Ground Level

R.L- Reduced Level

GWT- Ground Water Table

SPT- Standard Penetration Test

UDS- Undisturbed Sample

VST- Vane Shear Test

DS- Disturbed Sample

CR- Core Recovery

RQD- Rock Quality Designation

BOREHOLE LOG

Project No: MSGTPL/SI-5915/23-24

Project: Proposed Construction of "VATSA AMAZE" Residential Building

Location	
Ground R.L	Nil
Drilling	Rotary

Borehole No	BH-3
G.W.T (m)	(-)1.0 (Bore well Near by Source)
Date of Start	29-Jul-2023
Date of Complete	29-Jul-2023
Dia of Bore (mm)	100
Termination Depth (m)	20.50

Depth below EGL (m)	Layer Thickness	Soil Layers Description	Soil Symbol	IS-Classification	Type Field Test	Test Depth (m)	SPT Values Record 0 to 45cm	SPT- N- Value	Graphical Representation of SPT
15.5									
16.0					SPT	16.0	18 27 36	63	
16.5									
17.0									
17.5									
18.0	5.0	Hard Brownish & Light Greyish CLAY		CH	SPT	17.5	16 34	50 Blows for 12Cm	
18.5									
19.0									
19.5					SPT	19.0	26 37	50 Blows for 10Cm	
20.0									
20.5					SPT	20.5	34	50 Blows for 8Cm	
21.0									
21.5									
22.0									
22.5									
23.0									
23.5									
24.0									
24.5									
25.0									
25.5									
26.0									
26.5									
27.0									
27.5									
28.0									
28.5									
29.0									
29.5									
30.0									

Borehole Termination Depth (m) 20.5

EGL- Existing Ground Level
 R.L- Reduced Level
 GWT- Ground Water Table

SPT- Standard Penetration Test
 UDS- Undisturbed Sample
 VST- Vane Shear Test

DS- Disturbed Sample
 CR- Core Recovery
 RQD- Rock Quality Designation

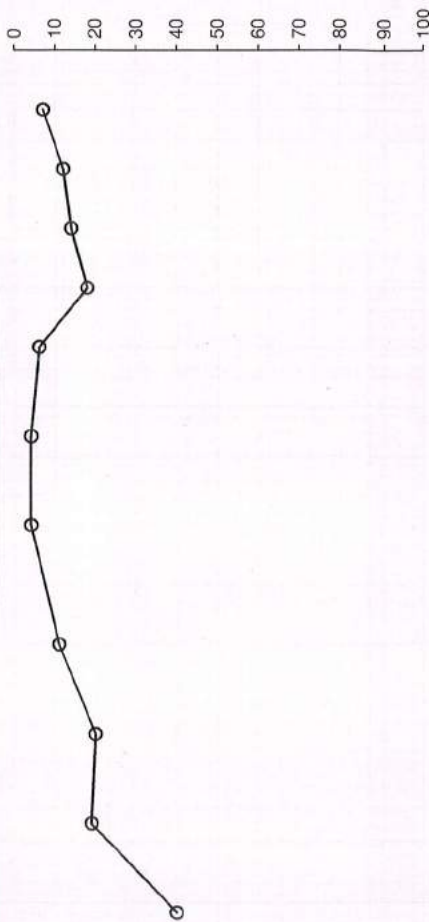
BOREHOLE LOG

Project No: MSGTPL/SI-5915/23-24

Project: Proposed Construction of "VATSA AMAZE" Residential Building

Location	
Ground R.L	Nil
Drilling	Rotary

Borehole No	BH-4	
G.W.T (m)	(-)1.0 (Bore well Near by Source)	
Date of Start	29-Jul-2023	
Date of Complete	29-Jul-2023	
Dia of Bore (mm)	100	Sheet
Termination Depth (m)	20.50	1 of 1

Depth below EGL (m)	Layer Thickness	Soil Layers Description	Soil Symbol	IS-Classification	Type Field Test	Test Depth (m)	SPT Values Record 0 to 45cm				SPT- N- Value	Graphical Representation of SPT
0.0												
0.5	1.0	Medium Stiff Brownish CLAY		CH								
1.0					SPT	1.0	3	3	4	7		
1.5	1.0	Medium Dense Brownish Fine SAND		SM								
2.0					SPT	2.0	5	6	6	12		
2.5	1.0	Stiff Brownish CLAY		CH								
3.0					SPT	3.0	5	7	7	14		
3.5	1.0	Medium Dense Light Greyish Clayey SAND		SC								
4.0					SPT	4.0	7	8	10	18		
4.5	1.0	Medium Stiff Brownish CLAY		CH								
5.0					SPT	5.0	3	3	3	6		
5.5	1.5	Soft Brownish CLAY		CH								
6.0					SPT	6.5	3	2	2	4		
6.5	1.5	Loose Brownish Clayey SAND		SC								
7.0					SPT	8.0	1	2	2	4		
7.5	2.0	Stiff Light Greyish CLAY		CH								
8.0					SPT	10.0	5	5	6	11		
8.5	3.0	Very Stiff Brownish CLAY		CH								
9.0					SPT	11.5	7	9	11	20		
9.5	2.0	Hard Brownish & Light Greyish CLAY		CH								
10.0					SPT	13.0	5	8	11	19		
10.5					SPT	14.5	10	17	23	40		
11.0												
11.5												
12.0												
12.5												
13.0												
13.5												
14.0												
14.5												
15.0												

Borehole Termination Depth (m) 20.5

EGL- Existing Ground Level

R.L- Reduced Level

GWT- Ground Water Table

SPT- Standard Penetration Test

UDS- Undisturbed Sample

VST- Vane Shear Test

DS- Disturbed Sample

CR- Core Recovery

RQD- Rock Quality Designation

BOREHOLE LOG

Project No: MSGTPL/SI-5915/23-24

Project: Proposed Construction of "VATSA AMAZE" Residential Building

Location	
Ground R.L	Nil
Drilling	Rotary

Borehole No	BH-4	
G.W.T (m)	(-)1.0 (Bore well Near by Source)	
Date of Start	29-Jul-2023	
Date of Complete	29-Jul-2023	
Dia of Bore (mm)	100	Sheet
Termination Depth (m)	20.50	1 of 1

Depth below EGL (m)	Layer Thickness	Soil Layers Description	Soil Symbol	IS-Classification	Type Field Test	Test Depth (m)	SPT Values Record 0 to 45cm	SPT- N- Value	Graphical Representation of SPT
15.5	5.5	Hard Brownish & Light Greyish CLAY		CH	SPT	16.0	13 20 32	52	
16.0									
16.5									
17.0									
17.5					SPT	17.5	20 34	50 Blows for 13Cm	
18.0									
18.5									
19.0					SPT	19.0	25 37	50 Blows for 11Cm	
19.5									
20.0									
20.5					SPT	20.5	33	50 Blows for 9Cm	
21.0									
21.5									
22.0									
22.5									
23.0									
23.5									
24.0									
24.5									
25.0									
25.5									
26.0									
26.5									
27.0									
27.5									
28.0									
28.5									
29.0									
29.5									
30.0									

Borehole Termination Depth (m) 20.5

 EGL- Existing Ground Level
 R.L- Reduced Level
 GWT- Ground Water Table

 SPT- Standard Penetration Test
 UDS- Undisturbed Sample
 VST- Vane Shear Test

 DS- Disturbed Sample
 CR- Core Recovery
 RQD- Rock Quality Designation

6.0 SUMMARY OF TEST RESULTS

Project No: MSGTPL/SI-5915/23-24																		
Project : Proposed Construction of "VATSA AMAZE" Residential Building																		
BH No		1	Ground Water Level:(~)1.0m (Bore Well Near by Source)					Termination Depth:19.0m										
SUMMARY OF TEST RESULTS																		
N Value	Layer Thickness	Depth (m)	Soil Description	IS Classification	Index Properties (%)					Specific Gravity	Grain Size Analysis (%)							
					NMC	W _p	I _p	I _c	FreeSwell		Gravel	Coarse Sand	Medium Sand	Fine Sand	Silt & Clay			
	1.0	0.00	Medium Stiff Brownish CLAY	CH														
6		1.00			22	56	19	37			2.60							
	2.0	2.00	Medium Dense Brownish Fine to Medium SAND	SM	18						0	0	25	64	11			
20		3.00			16							2.63	0	2	37	48	13	
	1.0	4.00	Stiff Greyish CLAY	CH	30	62	18	44										
11	1.0	5.00	Medium Dense Greyish Clayey SAND	SC	23						2.63	0	2	3	55	40		
	3.0	6.50	Medium Stiff Greyish CLAY	CH	43	55	17	38										
6		8.00			37	50	17	32			2.62							
	2.0	10.00	Very Stiff Greyish CLAY	CI	30	48	17	31										
31	1.5	11.50	Dense Greyish Clayey SAND	SC	25						2.60	0	0	21	30	49		
	7.5	13.00	Hard Brownish CLAY	CH	30	71	30	40										
43																		
		14.50			34	73	31	42			2.61							
66																		
>100		16.00			30	73	27	46										
	>100				24	64	26	38			2.59							
		17.50																
>100		19.00	25	63	25	39												

Project No: MSGTPL/SI-5915/23-24															
Project : Proposed Construction of "VATSA AMAZE" Residential Building															
BH No	2	Ground Water Level:(-)1.0m (Bore Well Near by Source)				Termination Depth:20.50m									
SUMMARY OF TEST RESULTS															
N Value	Layer Thickness	Depth (m)	Soil Description	IS Classification	Index Properties (%)				Specific Gravity	Grain Size Analysis (%)					
					NMC	W _p	I _p	FreeSwell		Gravel	Coarse Sand	Medium Sand	Fine Sand	Silt & Clay	
	1.0	0.00	Stiff Brownish CLAY	CH											
11		1.00			25	55	18	37							
14	1.0	2.00	Medium Dense Brownish Clayey SAND	SC	19										
12	1.0	3.00	Medium Dense Brownish Fine to Medium SAND	SM	15					2.62	0	0	11	50	39
		4.00			31										
7										2.61	0	0	20	27	53
6	5.0	5.00	Medium Stiff to Stiff Greyish CLAY	CH	41	65	20	44							
4		6.50			39	60	21	39		2.60					
9		8.00			38										
23	2.0	10.00	Very Stiff Greyish CLAY	CH	35					2.61					
13	1.5	11.50	Stiff Reddish & Light Greyish CLAY	CH	22										
21	3.0	13.00	Very Stiff Brownish CLAY	CH	26	71	25	45		2.62					
26		14.50			27										
36		16.00			35					2.62					
>100	7.0	17.50	Hard Brownish & Light Greyish CLAY	CH	31										
>100		19.00			30					2.61					
>100		20.50			28	73	33	40							

6.0 SUMMARY OF TEST RESULTS

Project No: MSGTPL/SI-5915/23-24																	
Project : Proposed Construction of "VATSA AMAZE" Residential Building																	
BH No	3	Ground Water Level:(-1.0m (Bore Well Near by Source)					Termination Depth:20.50m										
SUMMARY OF TEST RESULTS																	
N Value	Layer Thickness	Depth (m)	Soil Description	IS Classification	Index Properties (%)				Specific Gravity	Grain Size Analysis (%)							
					NMC	W _p	I _p	FreeSwell		Gravel	Coarse Sand	Medium Sand	Fine Sand	Silt & Clay			
	1.0	0.00	Medium Stiff Brownish CLAY	CH													
8		1.00				23	55	19	36		2.61						
15	2.0	2.00			Medium Dense Brownish Fine to Medium SAND	SW-SM	19						0	1	58	29	12
10		3.00	15								2.64	0	1	65	32	2	
8	1.0	4.00	Medium Stiff Greyish CLAY	CH			30	56	17	39							
16	1.0	5.00	Medium Dense Brownish Clayey Fine SAND	SC	18					2.62	0	1	21	53	25		
10		6.50	Stiff Greyish CLAY	CI	35												
8	5.0	8.00			29	48	17	30		2.60							
11		10.00			28												
64	1.5	11.50			Very Dense Reddish & Light Greyish Clayey SAND	SC	10										
28	1.5	13.00	Very Stiff Brownish & Light Greyish CLAY	CH	24					2.70	15	12	19	27	27		
35		14.50	Hard Brownish & Light Greyish CLAY	CH	31	68	22	46		2.63							
63		16.00			29												
>100	7.5	17.50			29						2.60						
>100		19.00			27												
>100		20.50			24						2.61						

BMQR



ULR-TC867823100000213F

Project No: MSGTPL/SI-5915/23-24

Project :Proposed Construction of "VATSA AMAZE" Residential Building

Method: IS-2720 P-2

Natural Moisture Content Data Sheet

BH.No/ Pit no	1		1		1		1		1		1	
Depth (m)	1.0		2.0		3.0		4.0		5.0		6.5	
Tare No	288	60	49	231	237	262	46	274	81	123	75	157
Wt of Tare (gr)	30.00	29.48	30.14	27.05	29.68	31.53	29.74	29.59	29.11	29.28	28.42	30.38
Tare + Soil (gr)	54.39	58.14	68.75	52.39	55.35	59.62	54.14	56.42	56.45	57.96	57.47	52.96
Tare+Dry soil (gr)	49.93	52.90	62.80	48.61	51.74	55.65	48.45	50.22	51.34	52.64	48.72	46.16
Wt of Water (gr)	4.46	5.24	5.95	3.78	3.61	3.97	5.69	6.20	5.11	5.32	8.75	6.80
Wt Dry soil (gr)	19.93	23.42	32.66	21.56	22.06	24.12	18.71	20.63	22.23	23.36	20.30	15.78
Water Content (%)	22.38	22.37	18.22	17.53	16.36	16.46	30.41	30.05	22.99	22.77	43.10	43.09
Average Water Content (%)	22		18		16		30		23		43	



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ULR-TC867823100000213F

Project No: MSGTPL/SI-5915/23-24
Project :Proposed Construction of "VATSA AMAZE" Residential Building

Method: IS-2720 P-2

Natural Moisture Content Data Sheet

BH.No/ Pit no	1		1		1		1		1		1		1		1	
Depth (m)	8.0		10.0		11.5		13.0		14.5		16.0					
Tare No	112	62	150	16	82	269	87	152	271	235	20	275				
Wt of Tare (gr)	27.87	29.56	29.43	29.72	29.80	30.01	29.53	30.46	29.44	29.01	29.53	28.91				
Tare + Soil (gr)	50.39	55.47	48.94	53.12	53.01	54.27	57.17	59.00	55.33	51.45	48.93	55.76				
Tare+Dry soil (gr)	44.25	48.45	44.42	47.70	48.30	49.36	50.75	52.35	48.72	45.72	44.40	49.50				
Wt of Water (gr)	6.14	7.02	4.52	5.42	4.71	4.91	6.42	6.65	6.61	5.73	4.53	6.26				
Wt Dry soil (gr)	16.38	18.89	14.99	17.98	18.50	19.35	21.22	21.89	19.28	16.71	14.87	20.59				
Water Content (%)	37.48	37.16	30.15	30.14	25.46	25.37	30.25	30.38	34.28	34.29	30.46	30.40				
Average Water Content (%)	37		30		25		30		34		30					



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ULR-TC867823100000213F

Project No: MSGTPL/SI-5915/23-24

Project :Proposed Construction of "VATSA AMAZE" Residential Building

Method: IS-2720 P-2

Natural Moisture Content Data Sheet

BH.No/ Pit no	1				2				2			
	17.5				1.0				2.0			
	244	168	124	41	152	269	62	16	86	238	87	150
Depth (m)	19.0				2.0				3.0			
Tare No	29.99	29.40	29.29	29.37	30.46	30.01	29.56	29.72	29.30	27.59	29.53	29.43
Wt of Tare (gr)	56.63	55.47	53.67	53.34	49.72	47.05	53.44	54.54	55.44	50.65	49.03	50.23
Tare + Soil (gr)	51.43	50.35	48.77	48.50	45.82	43.64	49.60	50.52	51.95	47.58	44.37	45.25
Tare+Dry soil (gr)	5.20	5.12	4.90	4.84	3.90	3.41	3.84	4.02	3.49	3.07	4.66	4.98
Wt of Water (gr)	21.44	20.95	19.48	19.13	15.36	13.63	20.04	20.80	22.65	19.99	14.84	15.82
Wt Dry soil (gr)	24.25	24.44	25.15	25.30	25.39	25.02	19.16	19.33	15.41	15.36	31.40	31.48
Water Content (%)	24				25				15			
Average Water Content (%)	25				19				31			



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ULR-TC867823100000213F

Project No: MSGTPL/SI-5915/23-24

Project :Proposed Construction of "VATSA AMAZE" Residential Building

Method: IS-2720 P-2

Natural Moisture Content Data Sheet

BH.No/ Pit no	2		2		2		2		2		2	
	5.0		6.5		8.0		10.0		11.5		13.0	
Depth (m)												
Tare No	116	66	275	235	104	136	276	255	75	24	46	274
Wt of Tare (gr)	30.08	28.38	28.91	29.01	29.89	29.57	29.47	28.66	28.42	29.92	29.74	29.59
Tare + Soil (gr)	48.26	46.64	49.05	50.75	52.04	47.21	49.90	46.18	46.98	53.33	52.45	51.99
Tare+Dry soil (gr)	42.99	41.32	43.36	44.60	45.90	42.33	44.60	41.60	43.67	49.10	47.70	47.30
Wt of Water (gr)	5.27	5.32	5.69	6.15	6.14	4.88	5.30	4.58	3.31	4.23	4.75	4.69
Wt Dry soil (gr)	12.91	12.94	14.45	15.59	16.01	12.76	15.13	12.94	15.25	19.18	17.96	17.71
Water Content (%)	40.82	41.11	39.38	39.45	38.35	38.24	35.03	35.39	21.70	22.05	26.45	26.48
Average Water Content (%)	41		39		38		35		22		26	



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ULR-TC867823100000213F

Project No: MSGTPL/SI-5915/23-24

Project :Proposed Construction of "VATSA AMAZE" Residential Building

Method: IS-2720 P-2

Natural Moisture Content Data Sheet

BH.No/ Pit no	2		2		2		2		2		2		3	
Depth (m)	14.5		16.0		17.5		19.0		20.5		1.0			
Tare No	141	28	37	167	118	69	171	27	192	57	135	11		
Wt of Tare (gr)	30.41	28.33	29.38	27.19	29.57	29.42	29.54	29.63	30.35	29.25	29.06	29.03		
Tare + Soil (gr)	52.37	46.79	53.13	48.83	51.72	50.75	50.40	46.73	48.92	48.58	48.46	44.56		
Tare+Dry soil (gr)	47.74	42.86	46.94	43.20	46.44	45.70	45.60	42.80	44.88	44.39	44.80	41.62		
Wt of Water (gr)	4.63	3.93	6.19	5.63	5.28	5.05	4.80	3.93	4.04	4.19	3.66	2.94		
Wt Dry soil (gr)	17.33	14.53	17.56	16.01	16.87	16.28	16.06	13.17	14.53	15.14	15.74	12.59		
Water Content (%)	26.72	27.05	35.25	35.17	31.30	31.02	29.89	29.84	27.80	27.68	23.25	23.35		
Average Water Content (%)	27		35		31		30		28		23			



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ULR-TC867823100000213F

Project No: MSGTPL/SI-5915/23-24
Project :Proposed Construction of "VATSA AMAZE" Residential Building

Method: IS-2720 P-2

Natural Moisture Content Data Sheet

BH.No/ Pit no	3			3			3			3		
	2.0			4.0			5.0			6.5		
Depth (m)												
Tare No	64	128	196	22	123	137	231	252	73	259	140	272
Wt of Tare (gr)	29.13	30.45	28.71	29.87	29.28	30.20	27.50	29.81	28.86	31.05	28.02	30.82
Tare + Soil (gr)	59.44	51.54	50.74	47.61	49.95	52.36	55.24	54.70	54.49	54.48	49.60	45.32
Tare+Dry soil (gr)	54.60	48.13	47.85	45.25	45.15	47.20	51.06	50.83	47.81	48.40	44.71	42.05
Wt of Water (gr)	4.84	3.41	2.89	2.36	4.80	5.16	4.18	3.87	6.68	6.08	4.89	3.27
Wt Dry soil (gr)	25.47	17.68	19.14	15.38	15.87	17.00	23.56	21.02	18.95	17.35	16.69	11.23
Water Content (%)	19.00	19.29	15.10	15.34	30.25	30.35	17.74	18.41	35.25	35.04	29.30	29.12
Average Water Content (%)	19			15			30			35		
							18			29		



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ULR-TC867823100000213F

Project No: MSGTPL/SI-5915/23-24

Project :Proposed Construction of "VATSA AMAZE" Residential Building

Method: IS-2720 P-2

Natural Moisture Content Data Sheet

BH.No/ Pit no	3			3			3			3		
Depth (m)	10.0			11.5			13.0			14.5		
Tare No	97	68	247	157	168	88	262	49	159	41	20	60
Wt of Tare (gr)	29.50	28.27	30.38	30.38	29.40	29.38	31.53	30.14	30.51	29.37	29.53	29.48
Tare + Soil (gr)	49.62	46.59	57.81	56.36	50.81	51.13	53.70	50.83	48.30	49.39	49.94	48.56
Tare+Dry soil (gr)	45.26	42.62	55.30	53.98	46.63	46.93	48.40	45.90	44.27	44.93	45.40	44.28
Wt of Water (gr)	4.36	3.97	2.51	2.38	4.18	4.20	5.30	4.93	4.03	4.46	4.54	4.28
Wt Dry soil (gr)	15.76	14.35	24.92	23.60	17.23	17.55	16.87	15.76	13.76	15.56	15.87	14.80
Water Content (%)	27.66	27.67	10.07	10.08	24.26	23.93	31.42	31.28	29.29	28.66	28.61	28.92
Average Water Content (%)	28			10			24			31		
										29		
										29		



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ULR-TC867823100000213F

Project No: MSGTPL/SI-5915/23-24
Project :Proposed Construction of "VATSA AMAZE" Residential Building
Method: IS-2720 P-2

Natural Moisture Content Data Sheet

BH.No/ Pit no	3			4			4			4		
	19.0			20.5			1.0			2.0		
Depth (m)												
Tare No	55	129		109	30	233	42	61	266	117	273	56
Wt of Tare (gr)	29.40	28.47		29.34	28.12	31.14	30.29	29.68	29.82	29.57	29.73	30.13
Tare + Soil (gr)	45.53	53.30		49.57	43.88	50.81	52.29	52.94	53.61	55.34	55.05	53.83
Tare+Dry soil (gr)	42.09	48.00		45.65	40.79	46.46	47.45	49.00	49.64	49.50	49.29	50.04
Wt of Water (gr)	3.44	5.30		3.92	3.09	4.35	4.84	3.94	3.97	5.84	5.76	3.79
Wt Dry soil (gr)	12.69	19.53		16.31	12.67	15.32	17.16	19.32	19.82	19.93	19.56	19.91
Water Content (%)	27.11	27.14		24.03	24.39	28.39	28.21	20.39	20.03	29.30	29.45	19.04
Average Water Content (%)	27			24			28			20		
										29		
										19		



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Project No: MSGTPL/SI-5915/23-24

Project :Proposed Construction of "VATSA AMAZE" Residential Building

Method: IS-2720 P-2

Natural Moisture Content Data Sheet

BH.No/ Pit no	4				4				4				4			
Depth (m)	5.0				8.0				10.0				11.5			
Tare No	45	170	292	246	91	173	183	3	39	263	158	233	39	263	158	233
Wt of Tare (gr)	30.42	30.47	30.78	28.81	29.69	30.17	31.18	28.55	28.51	29.92	27.80	31.14	28.51	29.92	27.80	31.14
Tare + Soil (gr)	51.54	56.04	52.61	49.62	60.37	52.38	51.52	47.93	47.16	48.85	54.02	57.36	47.16	48.85	54.02	57.36
Tare+Dry soil (gr)	46.63	50.10	47.25	44.50	53.30	47.26	46.00	42.74	42.45	44.00	48.50	51.86	42.45	44.00	48.50	51.86
Wt of Water (gr)	4.91	5.94	5.36	5.12	7.07	5.12	5.52	5.19	4.71	4.85	5.52	5.50	4.71	4.85	5.52	5.50
Wt Dry soil (gr)	16.21	19.63	16.47	15.69	23.61	17.09	14.82	14.19	13.94	14.08	20.70	20.72	13.94	14.08	20.70	20.72
Water Content (%)	30.29	30.26	32.54	32.63	29.94	29.96	37.25	36.58	33.79	34.45	26.67	26.54	33.79	34.45	26.67	26.54
Average Water Content (%)	30				33				37				34			
					30				37				34			



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Project No: MSGTPL/Sl-5915/23-24
Project :Proposed Construction of "VATSA AMAZE" Residential Building
Method: IS-2720 P-2

Natural Moisture Content Data Sheet

BH.No/ Pit no	4				4				4			
	14.5				16.0				17.5			
Depth (m)	19.0				20.5				21.5			
Tare No	29				31.57				30.04			
Wt of Tare (gr)	29.80				54.55				52.50			
Tare + Soil (gr)	54.55				48.90				47.55			
Tare+Dry soil (gr)	48.90				5.65				4.95			
Wt of Water (gr)	5.65				19.10				17.51			
Wt Dry soil (gr)	19.10				30.28				28.27			
Water Content (%)	29.58				28				28.21			
Average Water Content (%)	26				27				28			



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SPECIFIC GRAVITY TEST
Project No:MSGTPL/SI-5915/23-24
Project : Proposed Construction of "VATSA AMAZE" Residential Building

BH.No	1
Depth(m)	1.0
Pycnometer number	
Weight of bottle	w ₁
Weight of bottle + soil	w ₂
Weight of bottle + soil + water	w ₃
Weight of bottle full of water	w ₄
Weight of soil	w ₂ -w ₁
Specific gravity	$\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$
Average value G _s	2.60

BH.No	1
Depth(m)	3.0
Pycnometer number	
Weight of bottle	w ₁
Weight of bottle + soil	w ₂
Weight of bottle + soil + water	w ₃
Weight of bottle full of water	w ₄
Weight of soil	w ₂ -w ₁
Specific gravity	$\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$
Average value G _s	2.63

BH.No	1
Depth(m)	3.0
Pycnometer number	
Weight of bottle	w ₁
Weight of bottle + soil	w ₂
Weight of bottle + soil + water	w ₃
Weight of bottle full of water	w ₄
Weight of soil	w ₂ -w ₁
Specific gravity	$\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$
Average value G _s	2.63



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SPECIFIC GRAVITY TEST

Project No:MSGTPL/SI-5915/23-24

Project : Proposed Construction of "VATSA AMAZE" Residential Building

BH.No	1
Depth(m)	5.0
Pycnometer number	
Weight of bottle	
Weight of bottle + soil	
Weight of bottle + soil + water	
Weight of bottle full of water	
Weight of soil	
Specific gravity	
Average value G_s	

		28	58
w_1	g	34.2800	34.6300
w_2	g	56.0300	53.3700
w_3	g	99.7300	97.4900
w_4	g	86.2400	85.8600
w_2-w_1	g	21.7500	18.7400
w_2-w_1 (w_4-w_1)-(w3-w2)		2.63317	2.63572
Average value G_s		2.63	

BH.No	1
Depth(m)	8.0
Pycnometer number	
Weight of bottle	
Weight of bottle + soil	
Weight of bottle + soil + water	
Weight of bottle full of water	
Weight of soil	
Specific gravity	
Average value G_s	

		10	5
w_1	g	34.3400	28.5300
w_2	g	47.0600	40.3900
w_3	g	94.7100	86.8400
w_4	g	86.8400	79.5000
w_2-w_1	g	12.7200	11.8600
w_2-w_1 (w_4-w_1)-(w3-w2)		2.62268	2.62389
Average value G_s		2.62	



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SPECIFIC GRAVITY TEST

Project No:MSGTPL/SI-5915/23-24

Project : Proposed Construction of "VATSA AMAZE" Residential Building

BH.No	1
Depth(m)	11.5
Pycnometer number	
Weight of bottle	w ₁
Weight of bottle + soil	w ₂
Weight of bottle + soil + water	w ₃
Weight of bottle full of water	w ₄
Weight of soil	w ₂ -w ₁
Specific gravity	$\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$
Average value G _s	2.60

BH.No	1
Depth(m)	14.5
Pycnometer number	
Weight of bottle	w ₁
Weight of bottle + soil	w ₂
Weight of bottle + soil + water	w ₃
Weight of bottle full of water	w ₄
Weight of soil	w ₂ -w ₁
Specific gravity	$\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$
Average value G _s	2.61



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SPECIFIC GRAVITY TEST

Project No:MSGTPL/SI-5915/23-24

Project : Proposed Construction of "VATSA AMAZE" Residential Building

BH.No	1
Depth(m)	17.5
Pycnometer number	
Weight of bottle	w ₁
Weight of bottle + soil	w ₂
Weight of bottle + soil + water	w ₃
Weight of bottle full of water	w ₄
Weight of soil	w ₂ -w ₁
Specific gravity	$\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$
Average value G _s	2.59

BH.No	2
Depth(m)	2.0
Pycnometer number	
Weight of bottle	w ₁
Weight of bottle + soil	w ₂
Weight of bottle + soil + water	w ₃
Weight of bottle full of water	w ₄
Weight of soil	w ₂ -w ₁
Specific gravity	$\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$
Average value G _s	2.62



Project No:MSGTPL/SI-5915/23-24
Project : Proposed Construction of "VATSA AMAZE" Residential Building

BH.No	2			
Depth(m)	6.5			
Pycnometer number				
Weight of bottle	w ₁	g	20	55
Weight of bottle + soil	w ₂	g	44.5900	34.3400
Weight of bottle + soil + water	w ₃	g	89.1100	47.4400
Weight of bottle full of water	w ₄	g	80.9300	95.2900
Weight of soil	w ₂ -w ₁	g	13.2800	87.2200
Specific gravity	w ₂ -w ₁		2.60392	13.1000
	(w ₄ -w ₁)-(w ₃ -w ₂)			
Average value G _s				2.60437
				2.60



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SPECIFIC GRAVITY TEST

Project No:MSGTPL/SI-5915/23-24
Project : Proposed Construction of "VATSA AMAZE" Residential Building

BH.No	2
Depth(m)	10.0
Pycnometer number	
Weight of bottle	
Weight of bottle + soil	
Weight of bottle + soil + water	
Weight of bottle full of water	
Weight of soil	
Specific gravity	
Average value G_s	

		6	58
w_1	g	34.5400	34.6500
w_2	g	47.5800	45.9200
w_3	g	95.3100	92.8400
w_4	g	87.2600	85.8800
w_2-w_1	g	13.0400	11.2700
$\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$		2.61323	2.61485
Average value G_s		2.61	

BH.No	2
Depth(m)	13.0
Pycnometer number	
Weight of bottle	
Weight of bottle + soil	
Weight of bottle + soil + water	
Weight of bottle full of water	
Weight of soil	
Specific gravity	
Average value G_s	

		84	26
w_1	g	34.6400	35.0400
w_2	g	46.6600	46.5600
w_3	g	94.5200	94.3600
w_4	g	87.0800	87.2300
w_2-w_1	g	12.0200	11.5200
$\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$		2.62445	2.62415
Average value G_s		2.62	



Project No:MSGTPL/SI-5915/23-24
Project : Proposed Construction of "VATSA AMAZE" Residential Building

BH.No	2			
Depth(m)	19.0			
Pycnometer number				
Weight of bottle	w ₁	g	35.5900	41
Weight of bottle + soil	w ₂	g	46.1200	39.4200
Weight of bottle + soil + water	w ₃	g	93.6600	49.7000
Weight of bottle full of water	w ₄	g	87.1600	99.3600
Weight of soil	w ₂ -w ₁	g	10.5300	93.0100
Specific gravity	w ₂ -w ₁		2.61290	10.2800
	(w ₄ -w ₁)-(w ₃ -w ₂)		2.61578	
Average value G _s				2.61



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SPECIFIC GRAVITY TEST

Project No:MSGTPL/SI-5915/23-24

Project : Proposed Construction of "VATSA AMAZE" Residential Building

BH.No	3
Depth(m)	1.0

Pycnometer number		85	75
Weight of bottle	w_1	34.8600	34.9300
Weight of bottle + soil	w_2	46.9200	46.0100
Weight of bottle + soil + water	w_3	93.9500	94.1300
Weight of bottle full of water	w_4	86.5100	87.2900
Weight of soil	w_2-w_1	12.0600	11.0800
Specific gravity	$\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$	2.61039	2.61321
Average value G_s		2.61	

BH.No	3
Depth(m)	3.0

Pycnometer number		77	35
Weight of bottle	w_1	34.2500	34.5700
Weight of bottle + soil	w_2	46.5000	46.4000
Weight of bottle + soil + water	w_3	93.9300	95.0400
Weight of bottle full of water	w_4	86.3200	87.6900
Weight of soil	w_2-w_1	12.2500	11.8300
Specific gravity	$\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$	2.64009	2.64063
Average value G_s		2.64	



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SPECIFIC GRAVITY TEST

Project No:MSGTPL/SI-5915/23-24

Project : Proposed Construction of "VATSA AMAZE" Residential Building

BH.No	3
Depth(m)	5.0
Pycnometer number	
Weight of bottle	
Weight of bottle + soil	
Weight of bottle + soil + water	
Weight of bottle full of water	
Weight of soil	
Specific gravity	
Average value G_s	

			14	30
	w_1	g	35.5700	34.7000
	w_2	g	49.3000	47.7500
	w_3	g	94.5000	93.4100
	w_4	g	86.0100	85.3300
	w_2-w_1	g	13.7300	13.0500
	w_2-w_1 $(w_4-w_1)-(w_3-w_2)$		2.62023	2.62575
Average value G_s			2.62	

BH.No	3
Depth(m)	8.0
Pycnometer number	
Weight of bottle	
Weight of bottle + soil	
Weight of bottle + soil + water	
Weight of bottle full of water	
Weight of soil	
Specific gravity	
Average value G_s	

			28	25
	w_1	g	34.3100	35.4300
	w_2	g	45.6800	46.8000
	w_3	g	93.2600	94.1300
	w_4	g	86.2600	87.1300
	w_2-w_1	g	11.3700	11.3700
	w_2-w_1 $(w_4-w_1)-(w_3-w_2)$		2.60183	2.60183
Average value G_s			2.60	

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SPECIFIC GRAVITY TEST

Project No:MSGTPL/SI-5915/23-24

Project : Proposed Construction of "VATSA AMAZE" Residential Building

BH.No	3
Depth(m)	11.5
Pycnometer number	
Weight of bottle	
Weight of bottle + soil	
Weight of bottle + soil + water	
Weight of bottle full of water	
Weight of soil	
Specific gravity	
Average value G_s	

		59	5
	w_1	34.6100	28.5400
	w_2	48.9100	45.6000
	w_3	96.8100	98.3000
	w_4	87.8000	87.5500
	w_2-w_1	14.3000	17.0600
	$\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$	2.70321	2.70365
Average value G_s		2.70	

BH.No	3
Depth(m)	14.5
Pycnometer number	
Weight of bottle	
Weight of bottle + soil	
Weight of bottle + soil + water	
Weight of bottle full of water	
Weight of soil	
Specific gravity	
Average value G_s	

		71	63
	w_1	36.3500	33.0300
	w_2	48.4400	46.4000
	w_3	95.0000	93.8300
	w_4	87.5000	85.5400
	w_2-w_1	12.0900	13.3700
	$\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$	2.63399	2.63189
Average value G_s		2.63	



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SPECIFIC GRAVITY TEST
Project No:MSGTPL/SI-5915/23-24
Project : Proposed Construction of "VATSA AMAZE" Residential Building

BH.No	3
Depth(m)	17.5
Pycnometer number	
Weight of bottle	
Weight of bottle + soil	
Weight of bottle + soil + water	
Weight of bottle full of water	
Weight of soil	
Specific gravity	
Average value G_s	

BH.No	3				
Depth(m)	17.5				
Pycnometer number			10	86	
Weight of bottle	w_1	g	34.3600	35.3600	
Weight of bottle + soil	w_2	g	43.4000	45.1200	
Weight of bottle + soil + water	w_3	g	92.4000	92.4900	
Weight of bottle full of water	w_4	g	86.8300	86.4800	
Weight of soil	w_2-w_1	g	9.0400	9.7600	
Specific gravity	w_2-w_1		2.60519	2.60267	
	$(w_4-w_1)-(w_3-w_2)$				
Average value G_s					2.60

BH.No	3
Depth(m)	20.5
Pycnometer number	
Weight of bottle	
Weight of bottle + soil	
Weight of bottle + soil + water	
Weight of bottle full of water	
Weight of soil	
Specific gravity	
Average value G_s	

BH.No	3				
Depth(m)	20.5				
Pycnometer number			52	7	
Weight of bottle		w_1	g	35.4000	33.9900
Weight of bottle + soil		w_2	g	45.8000	45.8100
Weight of bottle + soil + water		w_3	g	93.2100	94.5000
Weight of bottle full of water		w_4	g	86.7900	87.2000
Weight of soil		w_2-w_1	g	10.4000	11.8200
Specific gravity		w_2-w_1		2.61307	2.61504
		$(w_4-w_1)-(w_3-w_2)$			
Average value G_s					2.61



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SPECIFIC GRAVITY TEST
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Project : Proposed Construction of "VATSA AMAZE" Residential Building

BH.No	4
Depth(m)	2.0
Pycnometer number	
Weight of bottle	
Weight of bottle + soil	
Weight of bottle + soil + water	
Weight of bottle full of water	
Weight of soil	
Specific gravity	
Average value G_s	

		50	27
w_1	g	34.4800	35.1400
w_2	g	47.7100	49.0400
w_3	g	95.5900	96.3200
w_4	g	87.3900	87.7000
w_2-w_1	g	13.2300	13.9000
w_2-w_1 (w_4-w_1)-(w3-w2)		2.63022	2.63258
Average value G_s		2.63	

BH.No	4
Depth(m)	4.0
Pycnometer number	
Weight of bottle	
Weight of bottle + soil	
Weight of bottle + soil + water	
Weight of bottle full of water	
Weight of soil	
Specific gravity	
Average value G_s	

		46	1
w_1	g	32.7400	33.7600
w_2	g	43.9000	51.1700
w_3	g	94.7000	96.6100
w_4	g	87.7900	85.8400
w_2-w_1	g	11.1600	17.4100
w_2-w_1 (w_4-w_1)-(w3-w2)		2.62588	2.62199
Average value G_s		2.62	



An ISO 9001:2015 Certificate Company



ULR-TC867823100000213F

SPECIFIC GRAVITY TEST
Project No:MSGTPL/SI-5915/23-24
Project : Proposed Construction of "VATSA AMAZE" Residential Building

BH.No	4
Depth(m)	6.5
Pycnometer number	
Weight of bottle	w_1
Weight of bottle + soil	w_2
Weight of bottle + soil + water	w_3
Weight of bottle full of water	w_4
Weight of soil	$w_2 - w_1$
Specific gravity	$\frac{w_2 - w_1}{(w_4 - w_1) - (w_3 - w_2)}$
Average value G_s	2.58

BH.No	4
Depth(m)	10.0
Pycnometer number	
Weight of bottle	w_1
Weight of bottle + soil	w_2
Weight of bottle + soil + water	w_3
Weight of bottle full of water	w_4
Weight of soil	$w_2 - w_1$
Specific gravity	$\frac{w_2 - w_1}{(w_4 - w_1) - (w_3 - w_2)}$
Average value G_s	2.60



ULR-TC867823100000213F

SPECIFIC GRAVITY TEST

Project No:MSGTPL/SI-5915/23-24

Project : Proposed Construction of "VATSA AMAZE" Residential Building

BH.No	4
Depth(m)	13.0
Pycnometer number	
Weight of bottle	
Weight of bottle + soil	
Weight of bottle + soil + water	
Weight of bottle full of water	
Weight of soil	
Specific gravity	
Average value G_s	

Pycnometer number				49	18
Weight of bottle		w_1	g	34.5600	35.9000
Weight of bottle + soil		w_2	g	50.3900	50.3100
Weight of bottle + soil + water		w_3	g	95.5000	97.2800
Weight of bottle full of water		w_4	g	85.7300	88.3900
Weight of soil		w_2-w_1	g	15.8300	14.4100
Specific gravity		w_2-w_1		2.61221	2.61051
		$(w_4-w_1)-(w_3-w_2)$			
Average value G_s					2.61

BH.No	4
Depth(m)	16.0
Pycnometer number	
Weight of bottle	
Weight of bottle + soil	
Weight of bottle + soil + water	
Weight of bottle full of water	
Weight of soil	
Specific gravity	
Average value G_s	

				16	81
Pycnometer number					
Weight of bottle	w_1	g		34.7900	36.5000
Weight of bottle + soil	w_2	g		45.3100	47.4500
Weight of bottle + soil + water	w_3	g		92.9100	94.2500
Weight of bottle full of water	w_4	g		86.4300	87.5100
Weight of soil	w_2-w_1	g		10.5200	10.9500
Specific gravity	w_2-w_1			2.60396	2.60095
	$(w_4-w_1)-(w_3-w_2)$				
Average value G_s					2.60



Project No:MSGTPL/SI-5915/23-24
Project : Proposed Construction of "VATSA AMAZE" Residential Building

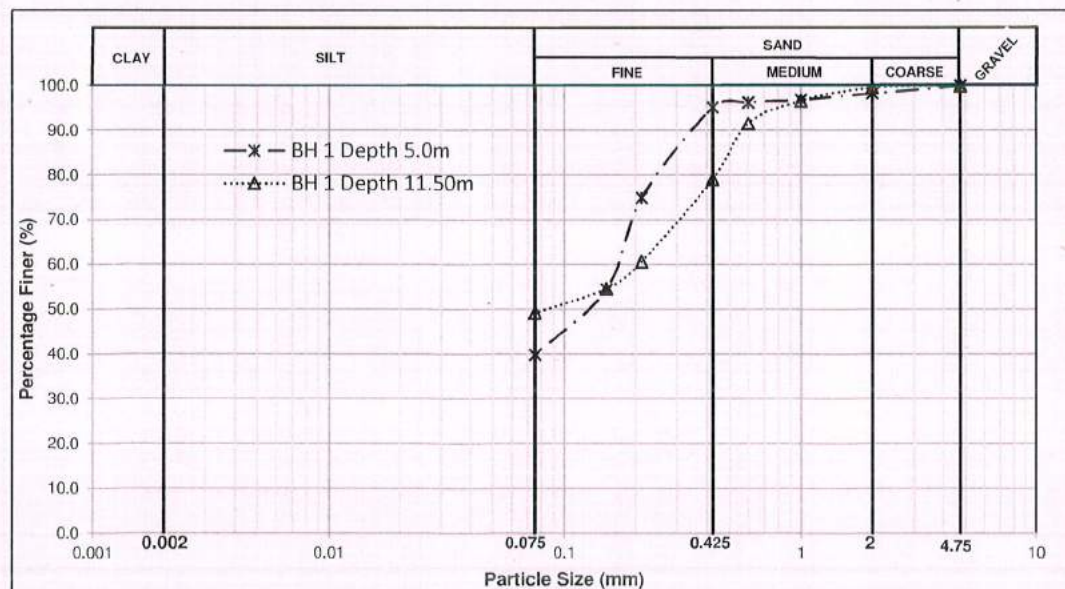
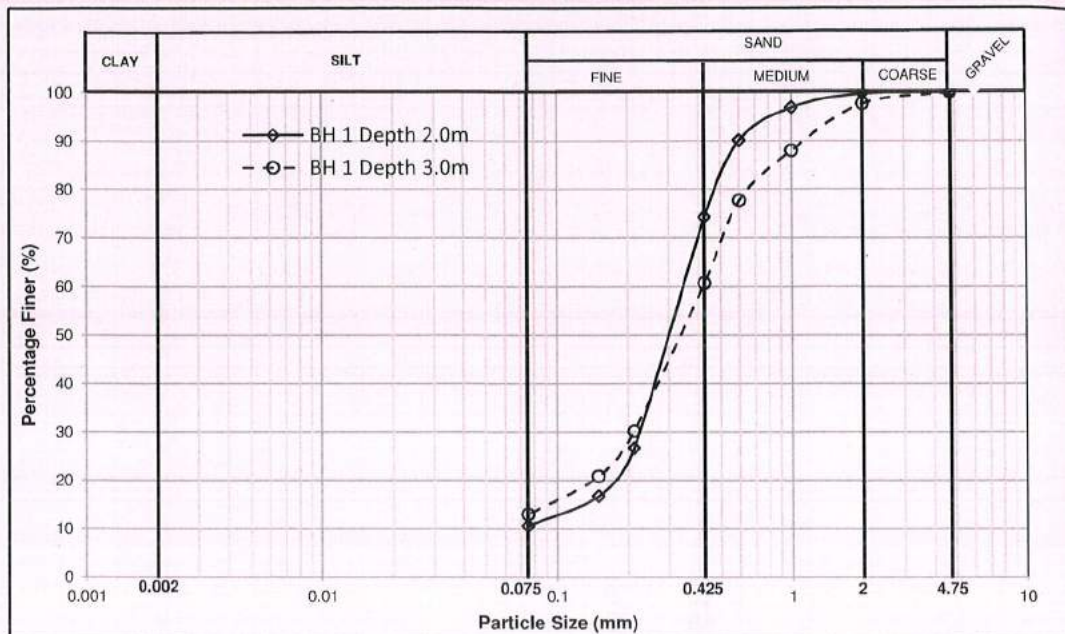
BH.No		4
Depth(m)		19.0
Pycnometer number		
Weight of bottle	w_1	g
Weight of bottle + soil	w_2	g
Weight of bottle + soil + water	w_3	g
Weight of bottle full of water	w_4	g
Weight of soil	$w_2 - w_1$	g
Specific gravity	$\frac{w_2 - w_1}{(w_4 - w_1) - (w_3 - w_2)}$	
Average value G_s		

ULR-TC867823100000213F

Project No: MSGTPL/SI-5915/23-24

Project : Construction of "VATSA AMAZE" Residential Building

GRAIN SIZE ANALYSIS

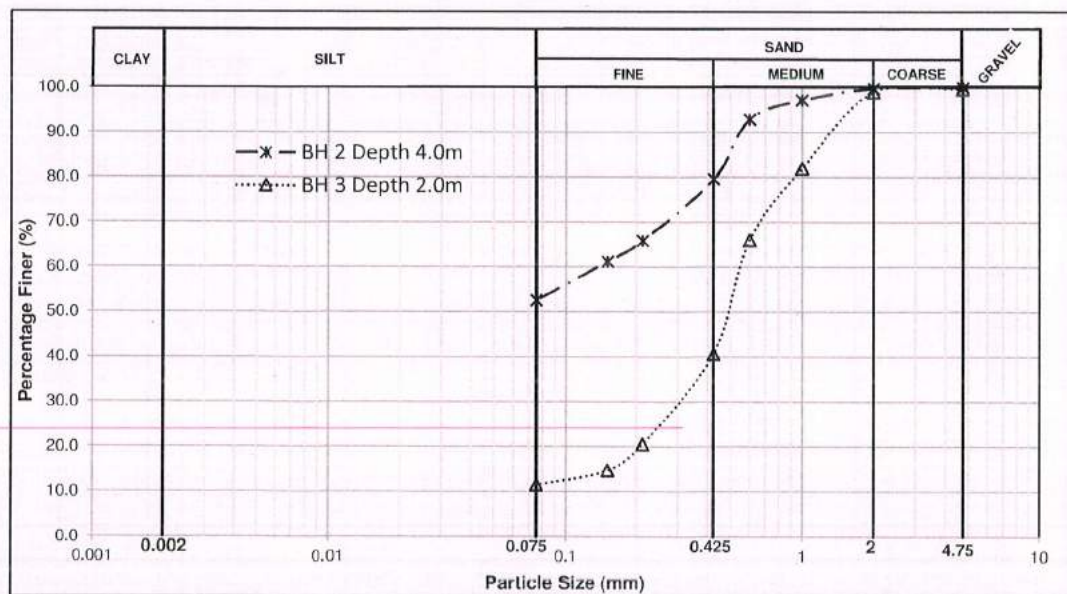
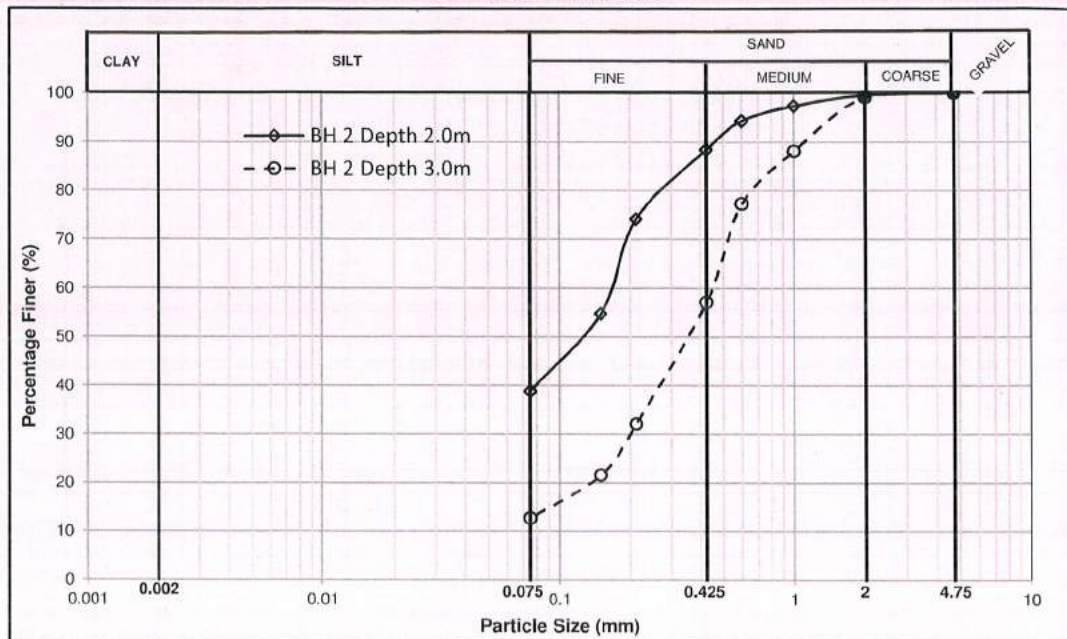


BH-No	Depth (m)	Gravel (%)	SAND (%)			SILT & CLAY (%)	D ₁₀ (mm)	D ₃₀ (mm)	D ₆₀ (mm)	Cu	Cc
			Coarse	Medium	Fine						
1	2.0m	0	0	25	64	11		0.227	0.361	#####	#####
1	3.0m	0	2	37	48	13		0.211	0.420	#####	#####
1	5.0m	0	2	3	55	40			0.142	#####	#####
1	11.50m	0	0	21	30	49			0.205	#####	#####

Project No: MSGTPL/SI-5915/23-24

Project : Construction of "VATSA AMAZE" Residential Building

GRAIN SIZE ANALYSIS



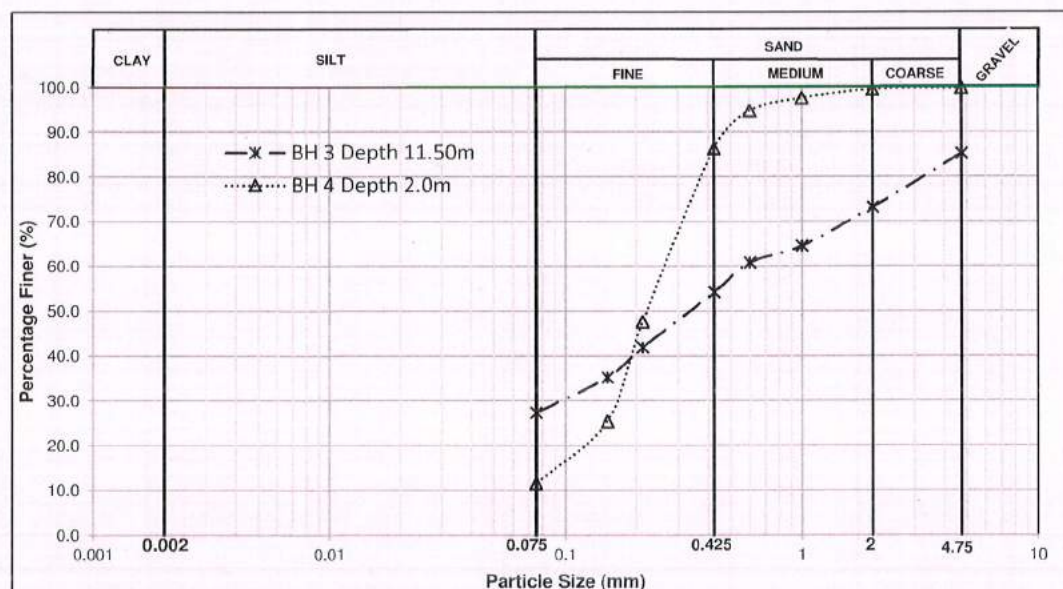
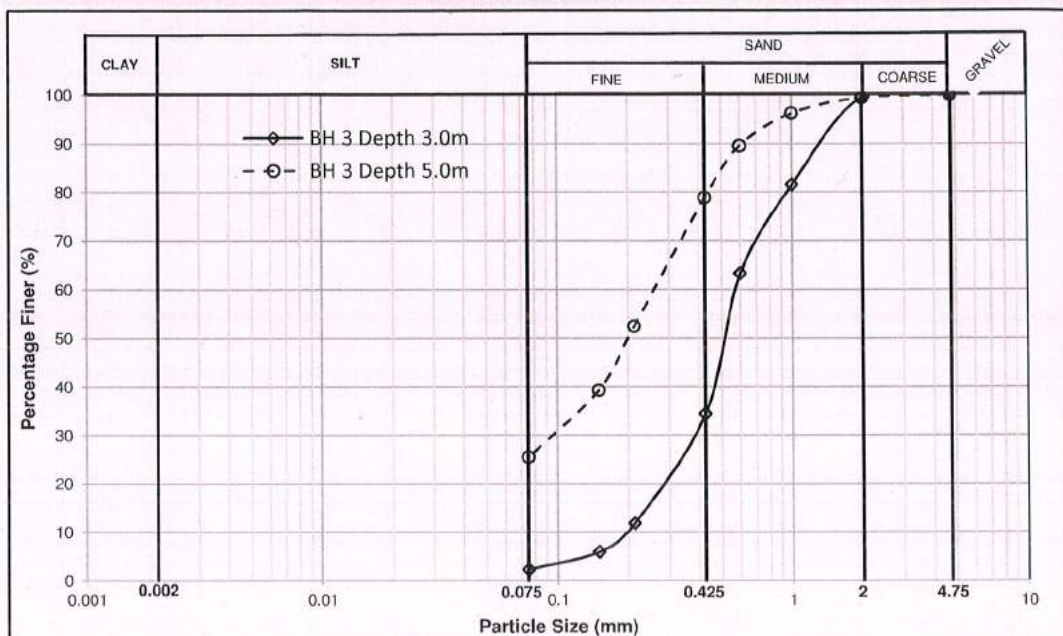
BH-No	Depth (m)	Gravel (%)	SAND (%)			SILT & CLAY (%)	D ₁₀ (mm)	D ₃₀ (mm)	D ₆₀ (mm)	Cu	Cc
			Coarse	Medium	Fine						
2	2.0m	0	0	11	50	39			0.167	#####	#####
2	3.0m	0	1	42	44	13		0.200	0.450	#####	#####
2	4.0m	0	0	20	27	53			0.063	#####	#####
3	2.0m	0	1	58	29	12		0.312	0.559	#####	#####

ULR-TC867823100000213F

Project No: MSGTPL/SI-5915/23-24

Project : Construction of "VATSA AMAZE" Residential Building

GRAIN SIZE ANALYSIS

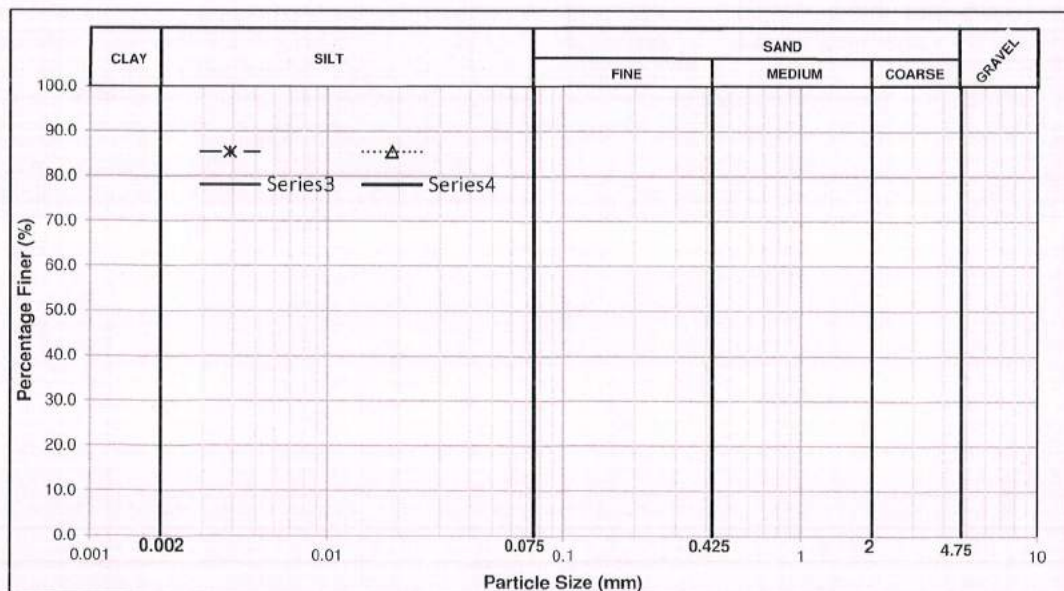
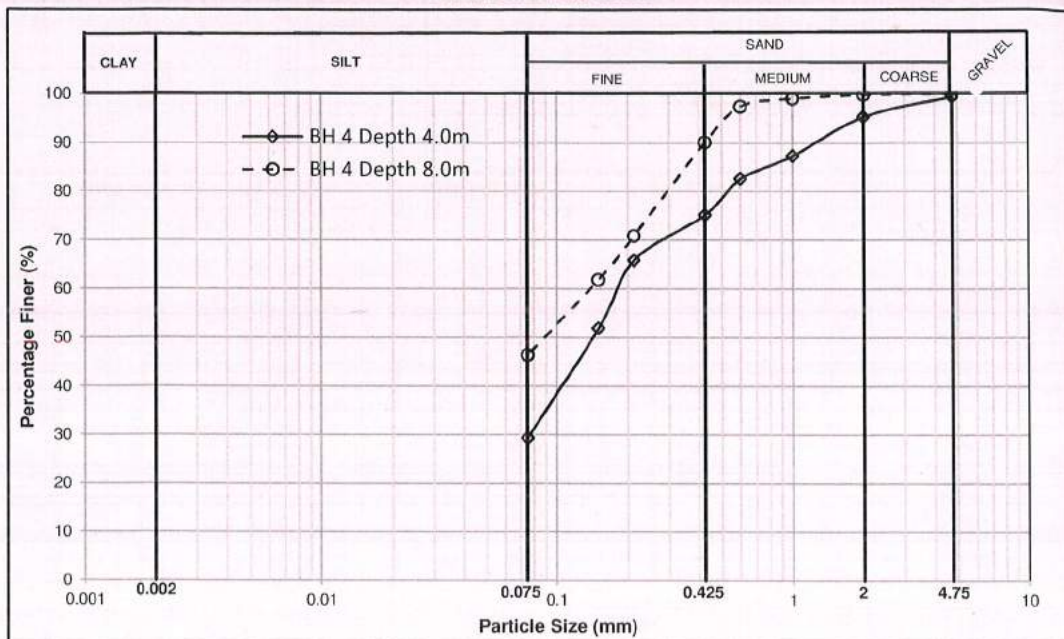


BH-No	Depth (m)	Gravel (%)	SAND (%)			SILT & CLAY (%)	D ₁₀ (mm)	D ₃₀ (mm)	D ₆₀ (mm)	Cu	Cc
			Coarse	Medium	Fine						
3	3.0m	0	1	65	32	2	0.193	0.383	0.580	3.01	1.32
3	5.0m	0	1	21	53	25		0.100	0.273	#####	#####
3	11.50m	15	12	19	27	27		0.065	-0.124	#####	#####
4	2.0m	0	0	13	75	12		0.163	0.280	#####	#####

Project No: MSGTPL/SI-5915/23-24

Project : Construction of "VATSA AMAZE" Residential Building

GRAIN SIZE ANALYSIS



BH-No	Depth (m)	Gravel (%)	SAND (%)			SILT & CLAY (%)	D ₁₀ (mm)	D ₃₀ (mm)	D ₆₀ (mm)	Cu	Cc
			Coarse	Medium	Fine						
4	4.0m	1	4	20	46	29		0.077	0.186	#####	#####
4	8.0m	0	0	10	44	46			0.141	#####	#####

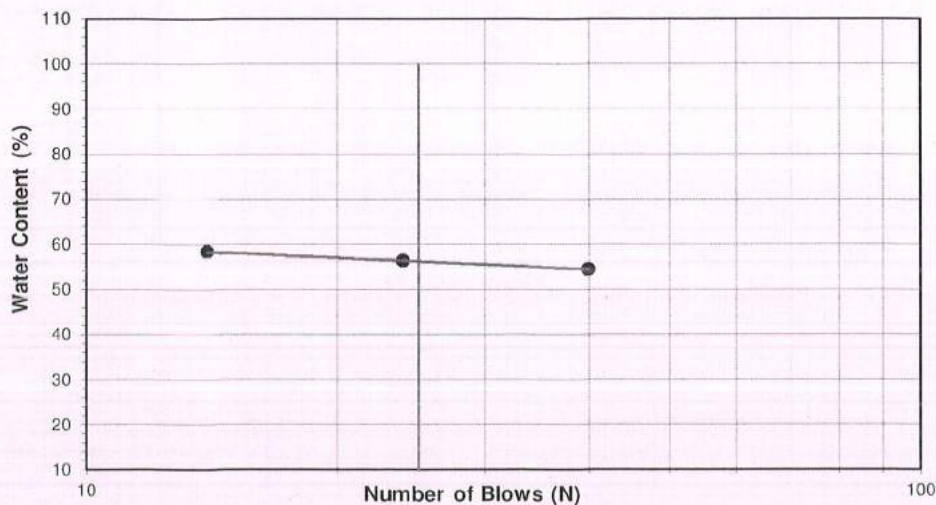
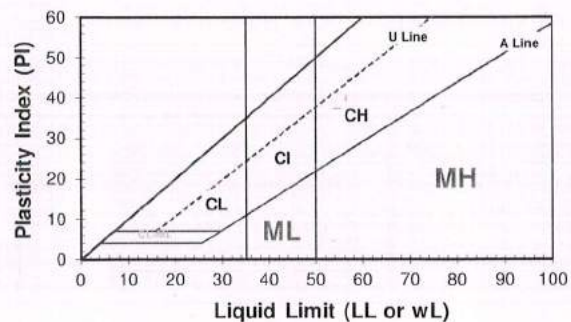
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	1
Sample Depth:	1.0m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	14	24	40					
Tare Number	---	---	42	159	32		246			
Weight of Empty Tare	M _C	(g)	30.29	30.51	29.11		28.81			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	56.74	61.86	53.8		51.03			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	47.00	50.56	45.10		47.5			
Weight of Soil	M _S	(g)	16.71	20.05	15.99		18.69			
Weight of Water	M _W	(g)	9.74	11.30	8.70		3.53			
Water Content	w	(%)	58.3	56.4	54.4		18.9			

Liquid Limit (LL or w_L) (%)	56
Plastic Limit (PL or w_P) (%)	19
Plasticity Index (PI) (%)	37
Soil Classification	CH



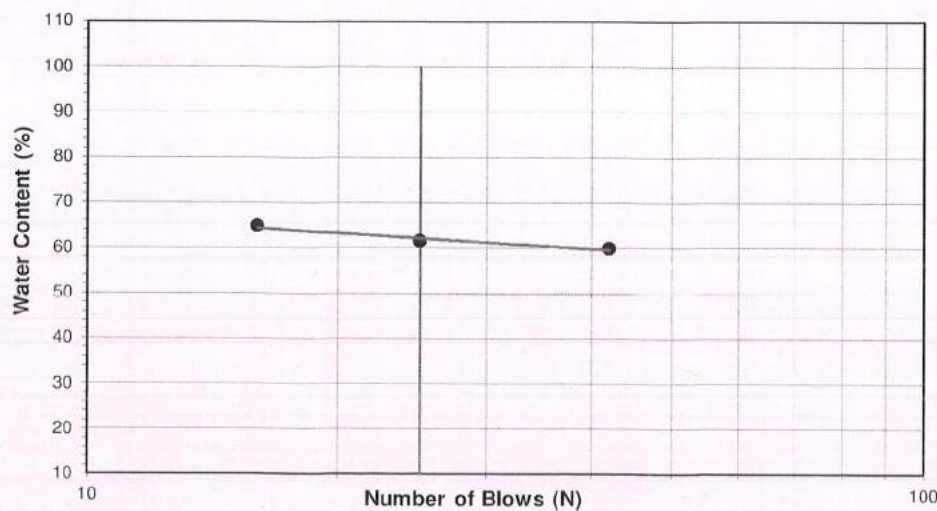
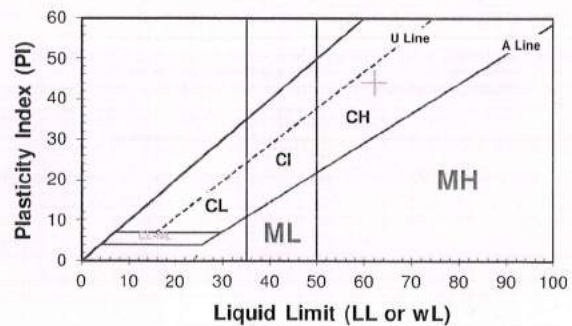
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	1
Sample Depth:	4.0m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	16	25	42					
Tare Number	---	---	128	3	108		69			
Weight of Empty Tare	M _C	(g)	30.45	28.55	29.77		29.42			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	53.73	47.63	52.52		45.21			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	44.58	40.37	44.00		42.82			
Weight of Soil	M _S	(g)	14.13	11.82	14.23		13.40			
Weight of Water	M _W	(g)	9.15	7.26	8.52		2.39			
Water Content	w	(%)	64.8	61.4	59.9		17.8			

Liquid Limit (LL or w _L) (%)	62
Plastic Limit (PL or w _P) (%)	18
Plasticity Index (PI) (%)	44
Soil Classification	CH



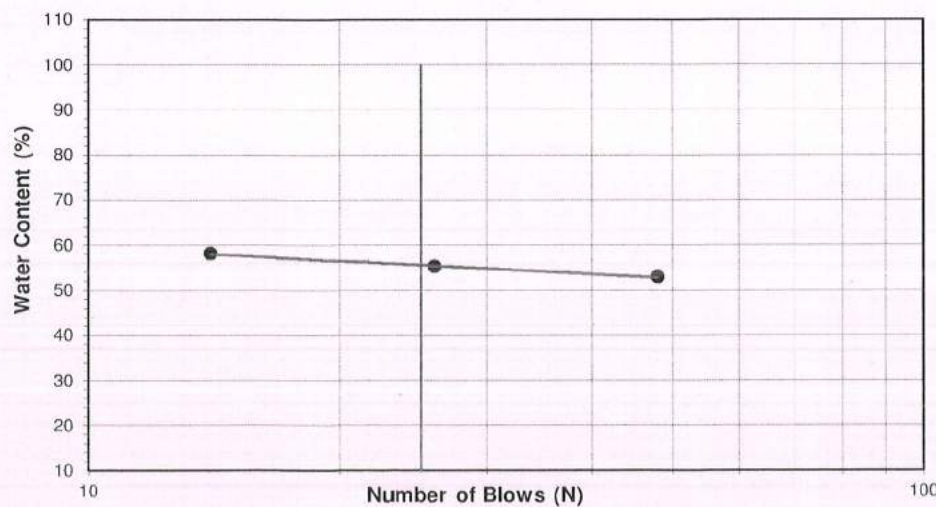
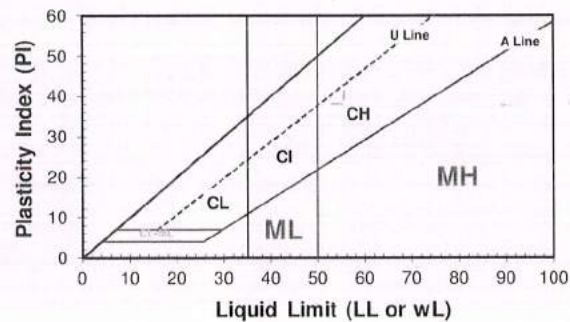
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	1
Sample Depth:	6.50m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	14	26	48					
Tare Number	---	---	266	129	233		140			
Weight of Empty Tare	M _C	(g)	29.82	28.47	31.14		28.02			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	50.13	62.21	58.44		38.31			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	42.67	50.20	49.00		36.81			
Weight of Soil	M _S	(g)	12.85	21.73	17.86		8.79			
Weight of Water	M _W	(g)	7.46	12.01	9.44		1.50			
Water Content	w	(%)	58.1	55.3	52.9		17.1			

Liquid Limit (LL or w_L) (%)	55
Plastic Limit (PL or w_P) (%)	17
Plasticity Index (PI) (%)	38
Soil Classification	CH



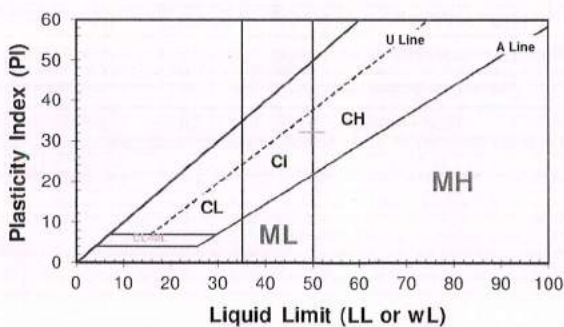
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project : "VATSA AMAZE" Residential Building									
Location:									
Boring No: 1									
Sample Depth: 8.0m									
Project No: MSGTPL/SI-5915/23-24									

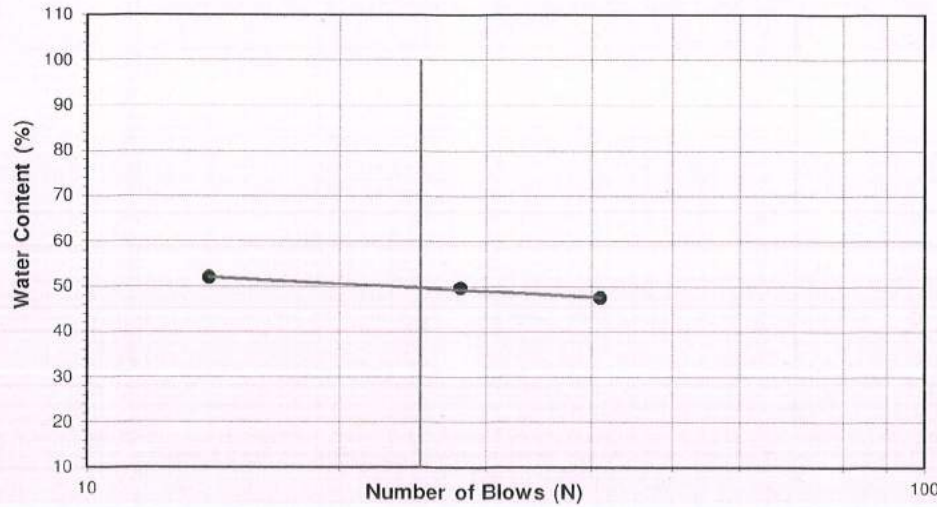
TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	14	28	41					
Tare Number	---	---	252	91	196		192			
Weight of Empty Tare	M _C	(g)	29.81	29.69	28.71		30.35			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	54.01	59.81	56.48		56.61			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	45.74	49.82	47.55		52.72			
Weight of Soil	M _S	(g)	15.93	20.13	18.84		22.37			
Weight of Water	M _W	(g)	8.27	9.99	8.93		3.89			
Water Content	w	(%)	51.9	49.6	47.4		17.4			

Liquid Limit (LL or w_L) (%)	50
Plastic Limit (PL or w_P) (%)	17
Plasticity Index (PI) (%)	32
Soil Classification	CH



Plasticity Index (PI)

Liquid Limit (LL or wL)



Water Content (%)

Number of Blows (N)

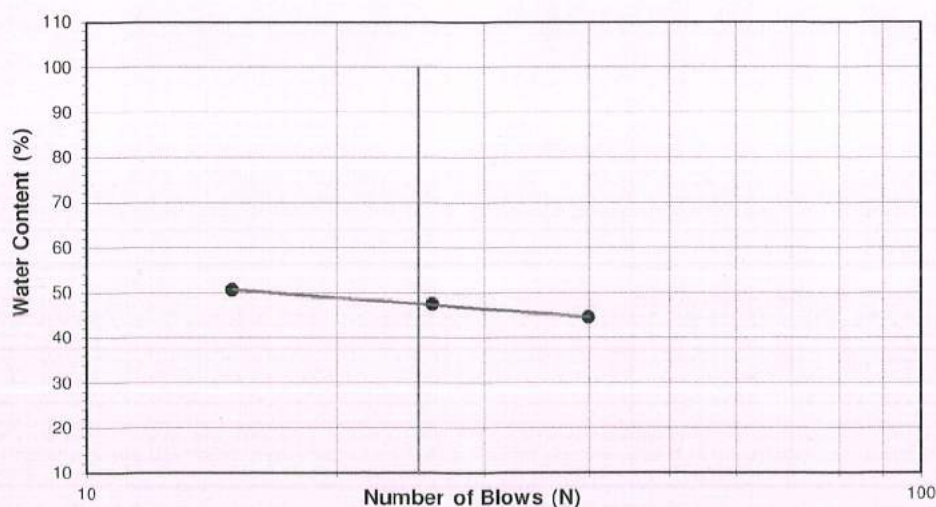
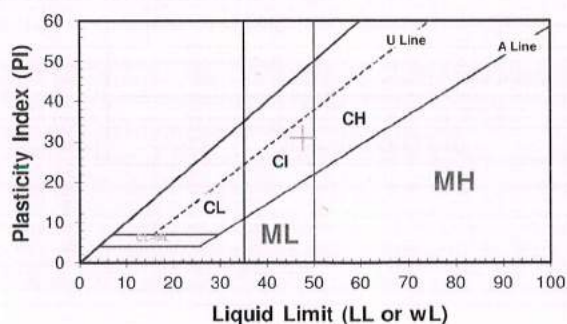
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	1
Sample Depth:	10.0m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	15	26	40					
Tare Number	---	---	170	103	97		39			
Weight of Empty Tare	M _C	(g)	30.47	29.72	29.5		28.51			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	61.83	63.76	58.77		45.51			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	51.30	52.80	49.76		43.1			
Weight of Soil	M _S	(g)	20.83	23.08	20.26		14.59			
Weight of Water	M _W	(g)	10.53	10.96	9.01		2.41			
Water Content	w	(%)	50.6	47.5	44.5		16.5			

Liquid Limit (LL or w_L) (%)	48
Plastic Limit (PL or w_P) (%)	17
Plasticity Index (PI) (%)	31
Soil Classification	CI



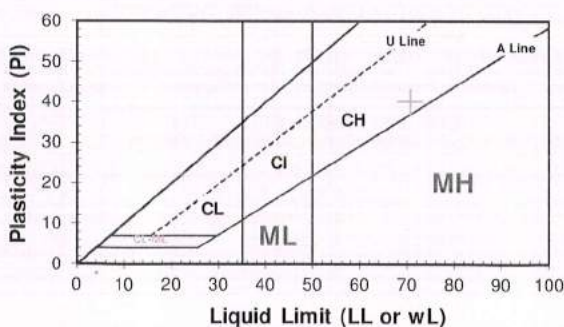
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project : "VATSA AMAZE" Residential Building									
Location:									
Boring No: 1									
Sample Depth: 13.0m									
Project No: MSGTPL/SI-5915/23-24									

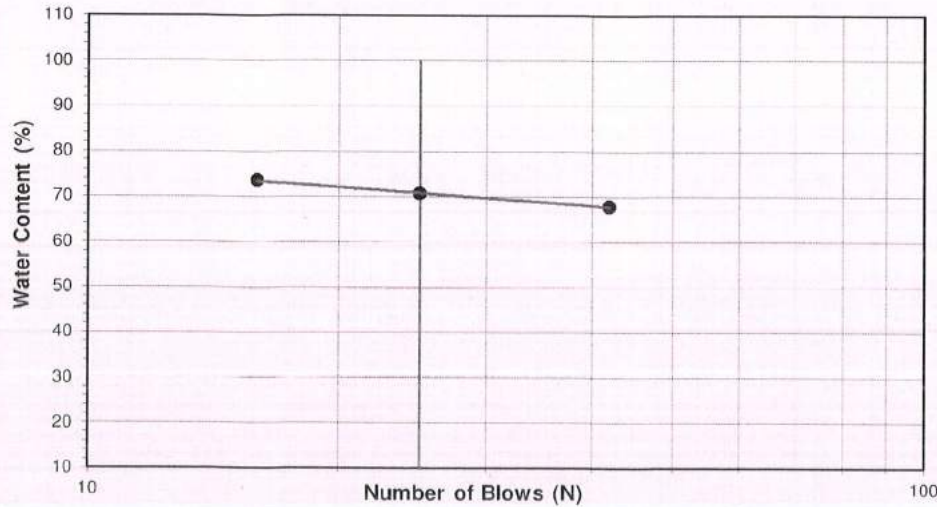
TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	16	25	42					
Tare Number	---	---	56	292	117		27			
Weight of Empty Tare	M _C	(g)	30.13	30.78	29.57		29.63			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	53.24	52.27	48.8		48.85			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	43.45	43.38	41.03		44.37			
Weight of Soil	M _S	(g)	13.32	12.60	11.46		14.74			
Weight of Water	M _W	(g)	9.79	8.89	7.77		4.48			
Water Content	w	(%)	73.5	70.6	67.8		30.4			

Liquid Limit (LL or w_L) (%)	71
Plastic Limit (PL or w_P) (%)	30
Plasticity Index (PI) (%)	40
Soil Classification	CH



Plasticity Index (PI)

Liquid Limit (LL or wL)



Water Content (%)

Number of Blows (N)

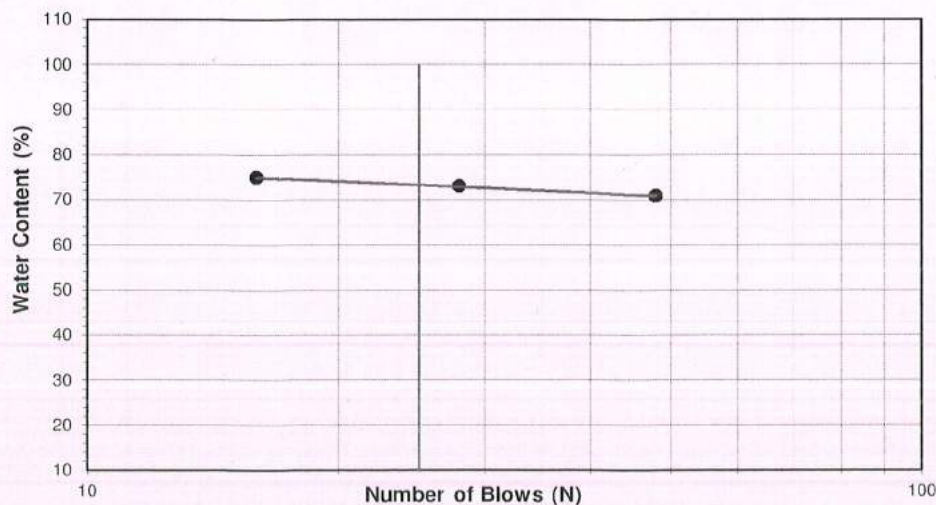
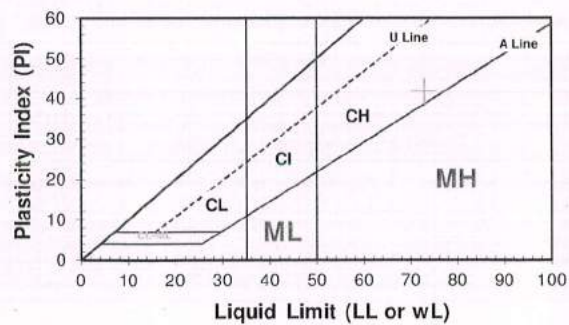
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	1
Sample Depth:	14.50m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	16	28	48					
Tare Number	---	---	68	158	135		183			
Weight of Empty Tare	M _C	(g)	28.27	27.8	29.06		31.18			
Wt of Tare + Soil (Wet)	M _{GMS}	(g)	53.26	57.68	57.82		47.24			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	42.56	45.08	45.90		43.44			
Weight of Soil	M _S	(g)	14.29	17.28	16.84		12.26			
Weight of Water	M _W	(g)	10.70	12.60	11.92		3.80			
Water Content	w	(%)	74.9	72.9	70.8		31.0			

Liquid Limit (LL or w_L) (%)	73
Plastic Limit (PL or w_P) (%)	31
Plasticity Index (PI) (%)	42
Soil Classification	CH



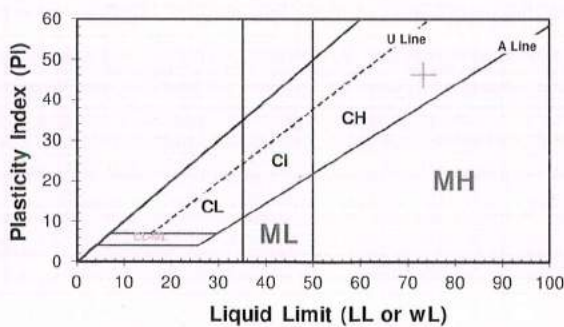
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project : "VATSA AMAZE" Residential Building									
Location:									
Boring No: 1									
Sample Depth: 16.0m									
Project No: MSGTPL/SI-5915/23-24									

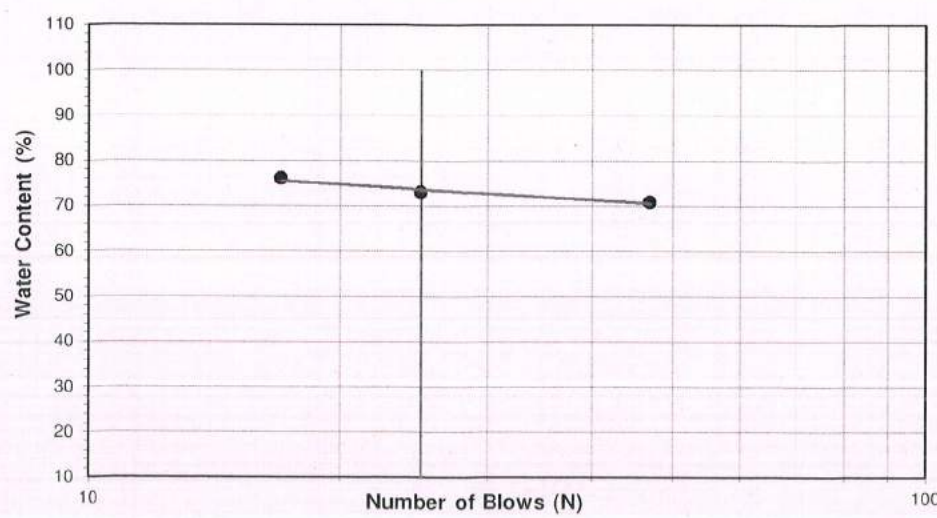
TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	17	25	47					
Tare Number	---	---	263	272	273		171			
Weight of Empty Tare	M _C	(g)	29.92	30.82	29.73		29.54			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	52.75	57.63	58.2		49.47			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	42.90	46.32	46.40		45.24			
Weight of Soil	M _S	(g)	12.98	15.50	16.67		15.70			
Weight of Water	M _W	(g)	9.85	11.31	11.80		4.23			
Water Content	w	(%)	75.9	73.0	70.8		26.9			

Liquid Limit (LL or w_L) (%)	73
Plastic Limit (PL or w_P) (%)	27
Plasticity Index (PI) (%)	46
Soil Classification	CH



Plasticity Index (PI)

Liquid Limit (LL or wL)



Water Content (%)

Number of Blows (N)

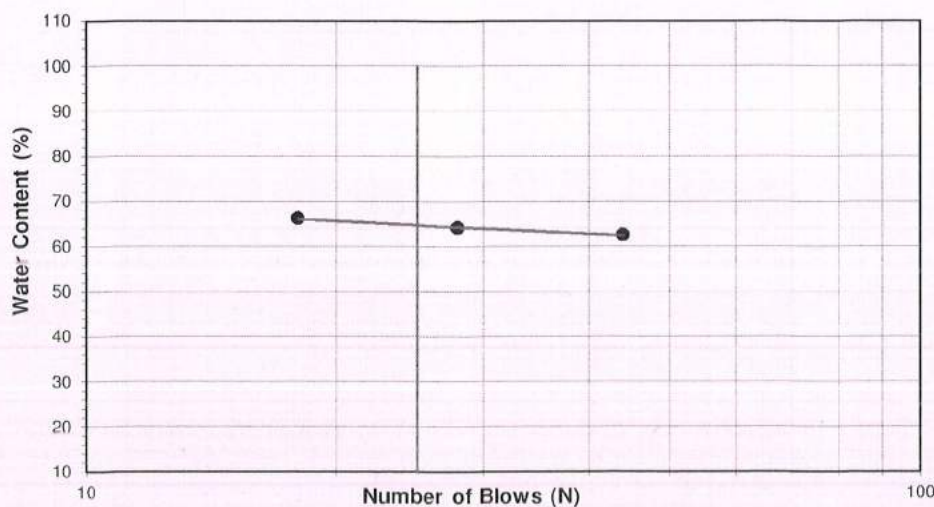
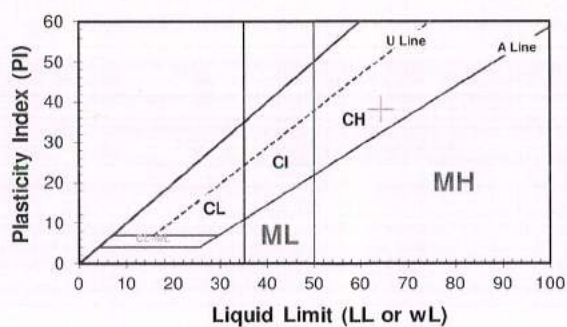
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	1
Sample Depth:	17.50m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	18	28	44					
Tare Number	---	---	233	173	30		22			
Weight of Empty Tare	M _G	(g)	31.14	30.17	28.12		29.87			
Wt of Tare + Soil (Wet)	M _{GMS}	(g)	67.95	64.34	61.67		52.94			
Wt of Tare + Soil (Dry)	M _{GDS}	(g)	53.30	51.00	48.77		48.18			
Weight of Soil	M _S	(g)	22.16	20.83	20.65		18.31			
Weight of Water	M _W	(g)	14.65	13.34	12.90		4.76			
Water Content	w	(%)	66.1	64.0	62.5		26.0			

Liquid Limit (LL or w_L) (%)	64
Plastic Limit (PL or w_P) (%)	26
Plasticity Index (PI) (%)	38
Soil Classification	CH



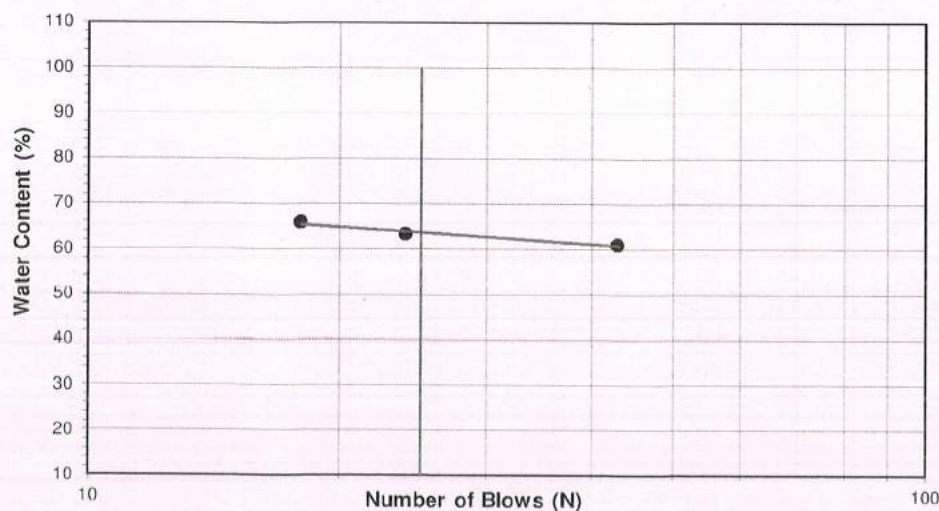
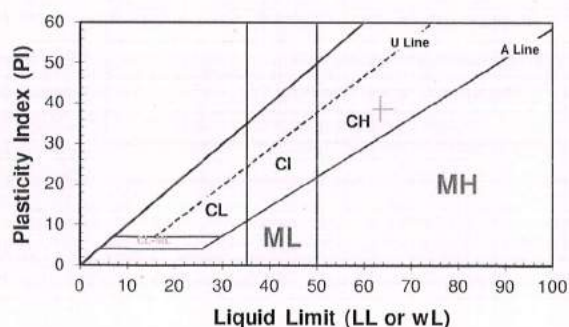
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	1
Sample Depth:	19.0m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	18	24	43					
Tare Number	---	---	45	61	11		109			
Weight of Empty Tare	M _c	(g)	30.42	29.68	29.03		29.34			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	66.71	60.42	57.8		46.03			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	52.30	48.51	46.90		42.73			
Weight of Soil	M _s	(g)	21.88	18.83	17.87		13.39			
Weight of Water	M _w	(g)	14.41	11.91	10.90		3.30			
Water Content	w	(%)	65.9	63.3	61.0		24.6			

Liquid Limit (LL or w_L) (%)	63
Plastic Limit (PL or w_P) (%)	25
Plasticity Index (PI) (%)	39
Soil Classification	CH



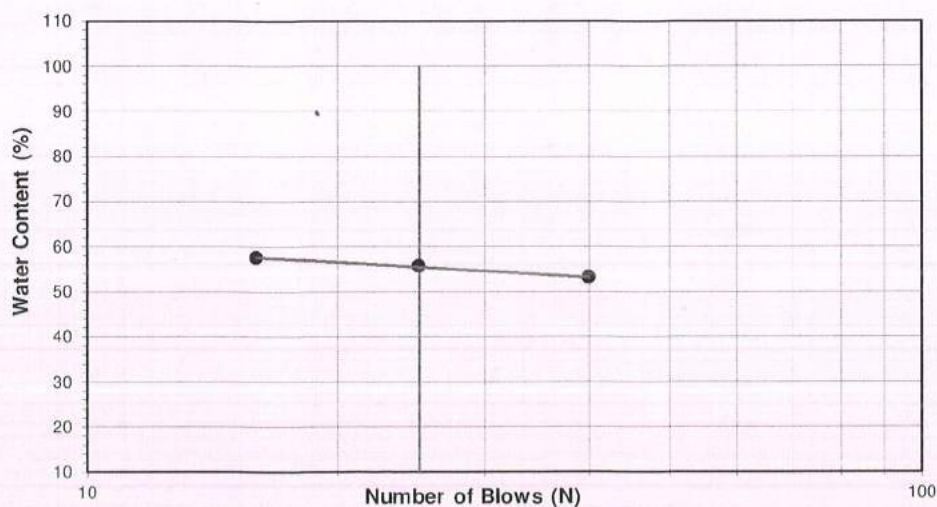
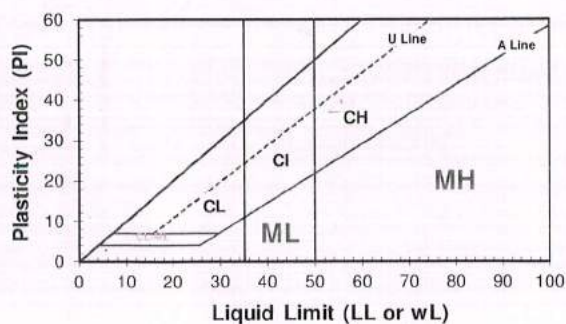
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	2
Sample Depth:	1.0m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	16	25	40					
Tare Number	---	---	140	53	149		241			
Weight of Empty Tare	M_C	(g)	28.02	30.58	29.97		29.09			
Wt of Tare + Soil (Wet)	M_{CMS}	(g)	49.26	57.49	52.98		46.83			
Wt of Tare + Soil (Dry)	M_{CDS}	(g)	41.50	47.88	45.00		44.08			
Weight of Soil	M_S	(g)	13.48	17.30	15.03		14.99			
Weight of Water	M_W	(g)	7.76	9.61	7.98		2.75			
Water Content	w	(%)	57.6	55.5	53.1		18.3			

Liquid Limit (LL or w_L) (%)	55
Plastic Limit (PL or w_P) (%)	18
Plasticity Index (PI) (%)	37
Soil Classification	CH



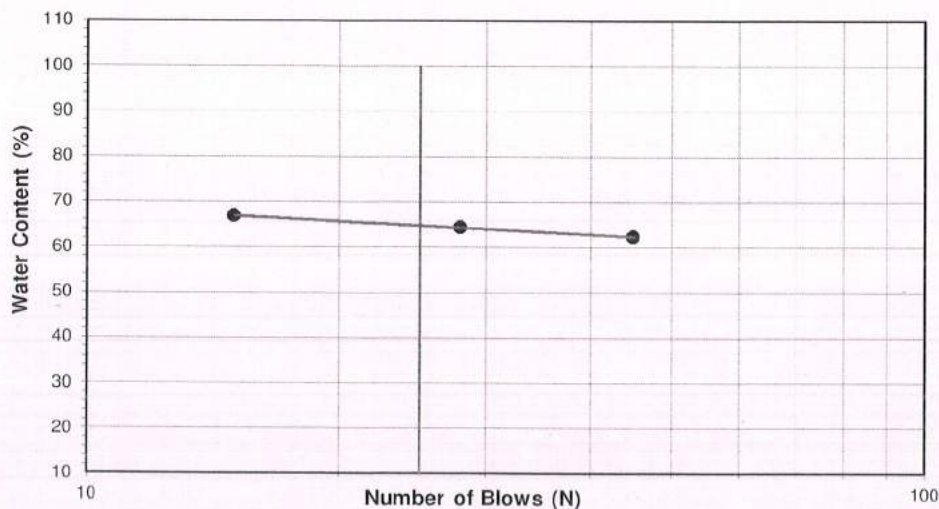
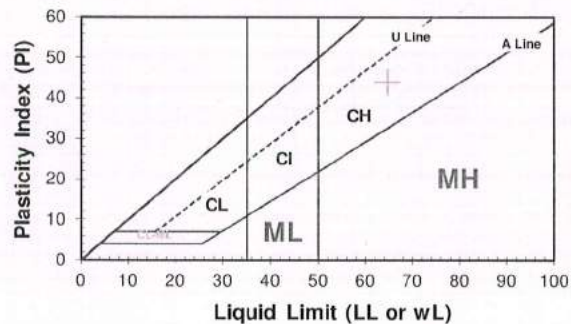
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	2
Sample Depth:	5.0m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	15	28	45					
Tare Number	---	---	2	278	200		143			
Weight of Empty Tare	M _C	(g)	31.01	29.26	29.04		29.52			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	58.52	57.39	58.03		53.96			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	47.50	46.37	46.90		49.81			
Weight of Soil	M _S	(g)	16.49	17.11	17.86		20.29			
Weight of Water	M _W	(g)	11.02	11.02	11.13		4.15			
Water Content	w	(%)	66.8	64.4	62.3		20.5			

Liquid Limit (LL or w_L) (%)	65
Plastic Limit (PL or w_P) (%)	20
Plasticity Index (PI) (%)	44
Soil Classification	CH



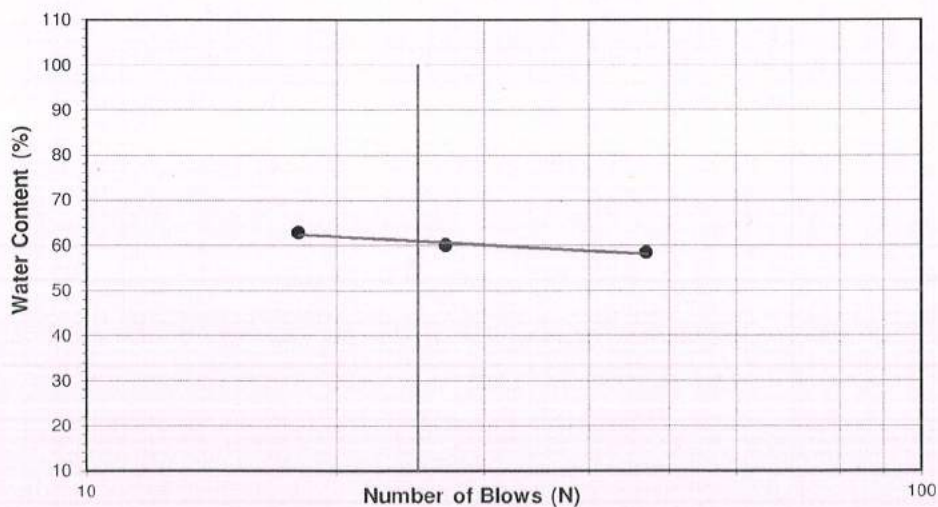
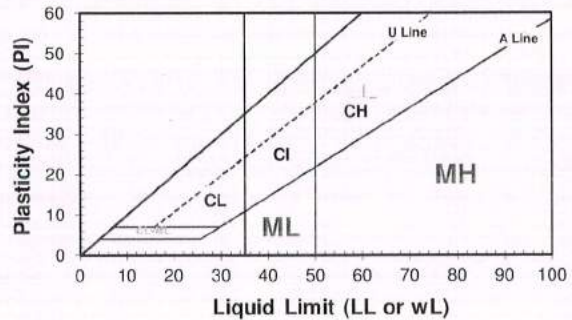
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	2
Sample Depth:	6.50m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	18	27	47					
Tare Number	---	---	234	197	39		299			
Weight of Empty Tare	M _C	(g)	29.13	30.61	28.51		28.07			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	51.21	58.76	53.54		48.68			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	42.70	48.20	44.32		45.05			
Weight of Soil	M _S	(g)	13.57	17.59	15.81		16.98			
Weight of Water	M _W	(g)	8.51	10.56	9.22		3.63			
Water Content	w	(%)	62.7	60.0	58.3		21.4			

Liquid Limit (LL or w_L) (%)	60
Plastic Limit (PL or w_P) (%)	21
Plasticity Index (PI) (%)	39
Soil Classification	CH



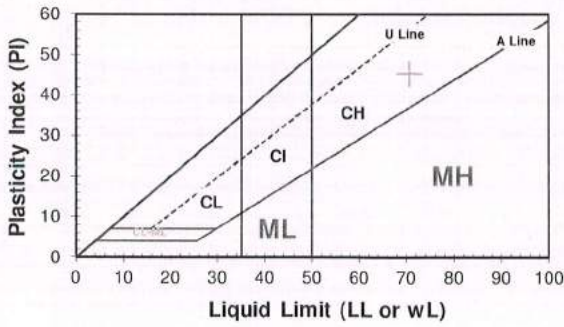
ATTERBERG LIMITS DATA SHEET

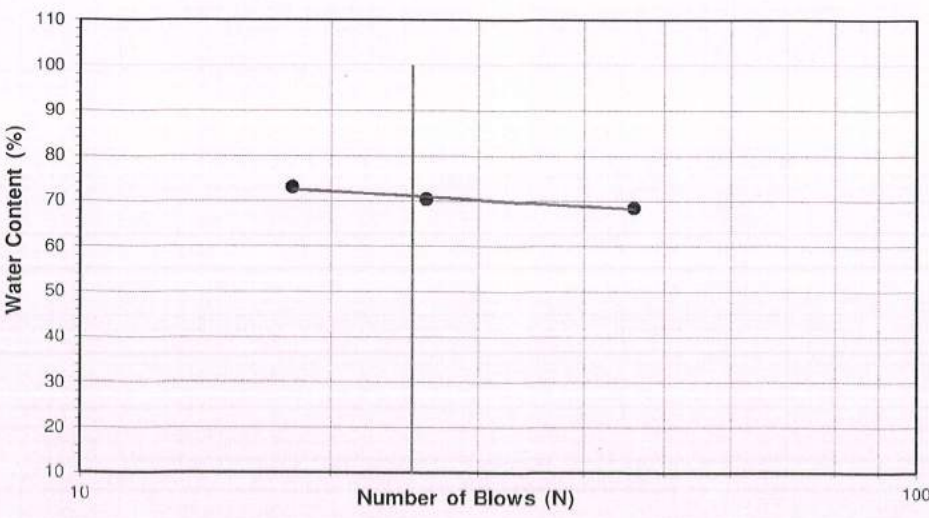
IS-2720-Part-5

Project : "VATSA AMAZE" Residential Building									
Location:									
Boring No: 2									
Sample Depth: 13.0m									
Project No: MSGTPL/SI-5915/23-24									

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	18	26	46					
Tare Number	---	---	89	38	250		110			
Weight of Empty Tare	M _C	(g)	29.32	29.28	29.16		30.87			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	52.42	48.89	51.13		50.26			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	42.68	40.79	42.20		46.35			
Weight of Soil	M _S	(g)	13.36	11.51	13.04		15.48			
Weight of Water	M _W	(g)	9.74	8.10	8.93		3.91			
Water Content	w	(%)	72.9	70.4	68.5		25.3			

Liquid Limit (LL or w_L) (%)	71
Plastic Limit (PL or w_P) (%)	25
Plasticity Index (PI) (%)	45
Soil Classification	CH





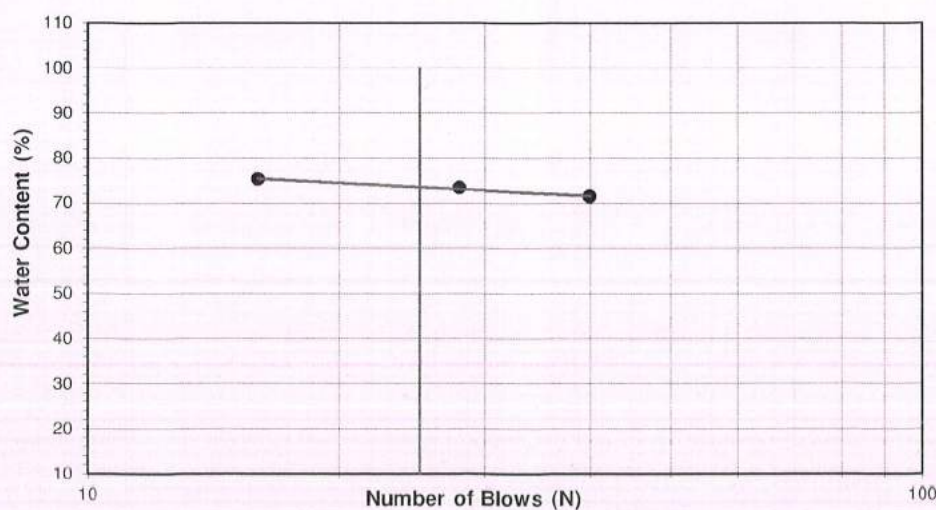
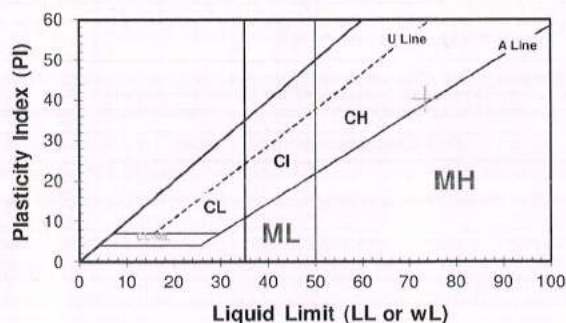
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	2
Sample Depth:	20.50m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	16	28	40					
Tare Number	---	---	33	160	226		248			
Weight of Empty Tare	M _C	(g)	28.55	29.96	29.65		28.76			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	51.25	52.62	58.62		45.5			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	41.50	43.03	46.55		41.35			
Weight of Soil	M _S	(g)	12.95	13.07	16.90		12.59			
Weight of Water	M _W	(g)	9.75	9.59	12.07		4.15			
Water Content	w	(%)	75.3	73.4	71.4		33.0			

Liquid Limit (LL or w_L) (%)	73
Plastic Limit (PL or w_P) (%)	33
Plasticity Index (PI) (%)	40
Soil Classification	CH



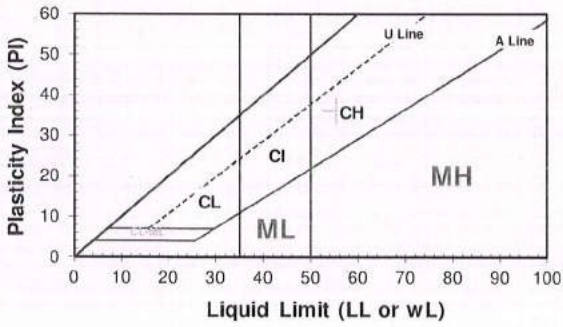
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

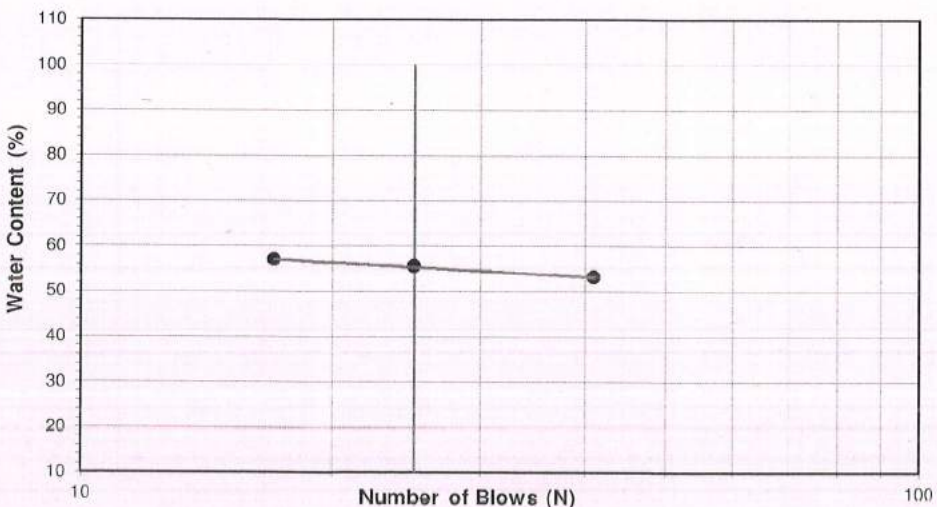
Project : "VATSA AMAZE" Residential Building									
Location:									
Boring No: 3									
Sample Depth: 1.0m									
Project No: MSGTPL/SI-5915/23-24									

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	17	25	41					
Tare Number	---	---	221	254	114		121			
Weight of Empty Tare	M _C	(g)	28.56	29.82	29.4		29.01			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	50.63	56.66	52.21		46.79			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	42.62	47.09	44.30		43.94			
Weight of Soil	M _S	(g)	14.06	17.27	14.90		14.93			
Weight of Water	M _W	(g)	8.01	9.57	7.91		2.85			
Water Content	w	(%)	57.0	55.4	53.1		19.1			

Liquid Limit (LL or w_L) (%)	55
Plastic Limit (PL or w_P) (%)	19
Plasticity Index (PI) (%)	36
Soil Classification	CH



Liquid Limit (LL or w_L)



Number of Blows (N)

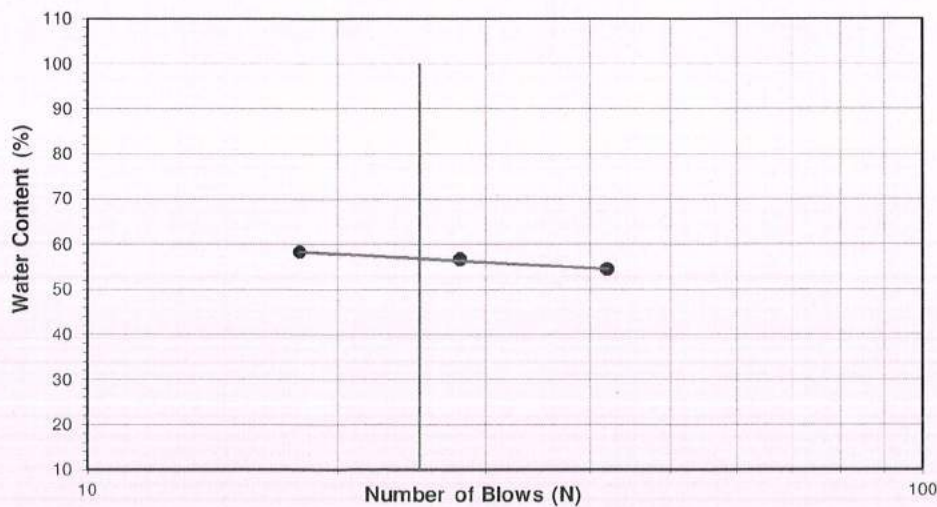
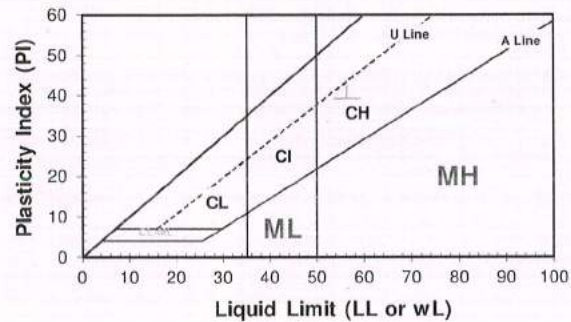
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	3
Sample Depth:	4.0m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	18	28	42					
Tare Number	---	---	8	99	146		86			
Weight of Empty Tare	M _C	(g)	28.89	29.97	28.67		29.3			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	54.64	59.79	59.56		49.02			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	45.17	49.02	48.68		46.14			
Weight of Soil	M _S	(g)	16.28	19.05	20.01		16.84			
Weight of Water	M _W	(g)	9.47	10.77	10.88		2.88			
Water Content	w	(%)	58.2	56.5	54.4		17.1			

Liquid Limit (LL or w_L) (%)	56
Plastic Limit (PL or w_P) (%)	17
Plasticity Index (PI) (%)	39
Soil Classification	CH



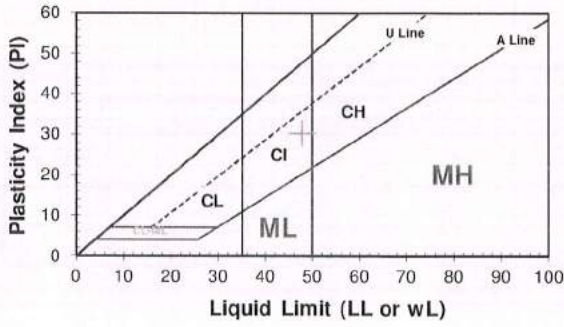
ATTERBERG LIMITS DATA SHEET

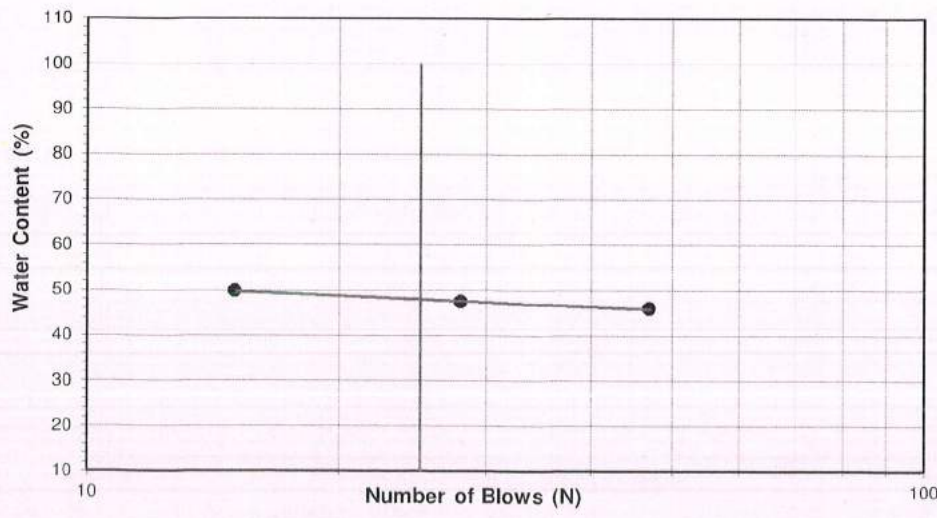
IS-2720-Part-5

Project : "VATSA AMAZE" Residential Building									
Location:									
Boring No: 3									
Sample Depth: 8.0m									
Project No: MSGTPL/SI-5915/23-24									

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	15	28	47					
Tare Number	---	---	282	201	184		202			
Weight of Empty Tare	M_C	(g)	29.44	28.03	28.76		28.63			
Wt of Tare + Soil (Wet)	M_{CMS}	(g)	53.79	52.14	53.06		45.29			
Wt of Tare + Soil (Dry)	M_{CDS}	(g)	45.70	44.39	45.41		42.82			
Weight of Soil	M_S	(g)	16.26	16.36	16.65		14.19			
Weight of Water	M_W	(g)	8.09	7.75	7.65		2.47			
Water Content	w	(%)	49.8	47.4	45.9		17.4			

Liquid Limit (LL or w_L) (%)	48
Plastic Limit (PL or w_P) (%)	17
Plasticity Index (PI) (%)	30
Soil Classification	CI





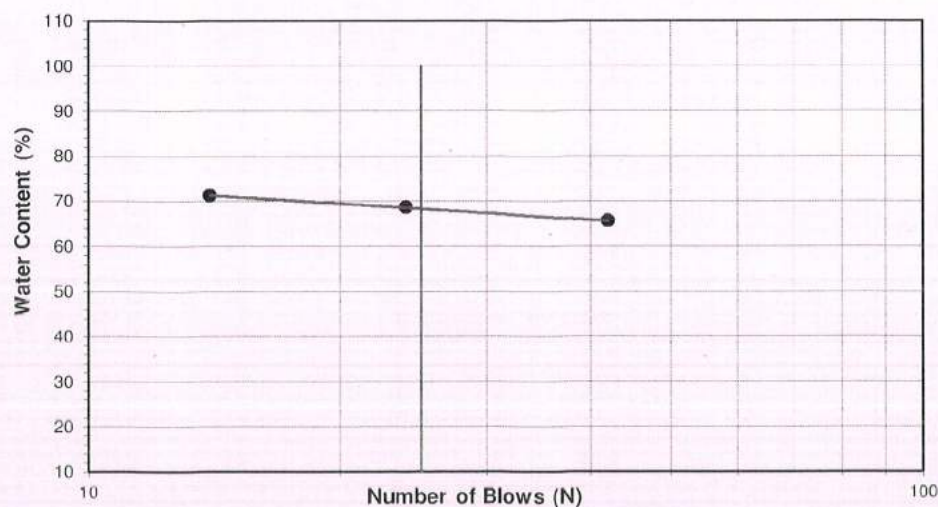
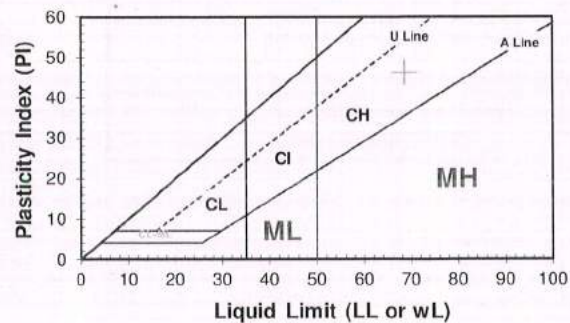
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	3
Sample Depth:	14.50m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	14	24	42					
Tare Number	---	---	168	162	48		26			
Weight of Empty Tare	M _C	(g)	29.4	29.45	28.99		29.08			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	53.35	49.33	50.03		47.97			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	43.39	41.24	41.70		44.55			
Weight of Soil	M _S	(g)	13.99	11.79	12.71		15.47			
Weight of Water	M _W	(g)	9.96	8.09	8.33		3.42			
Water Content	w	(%)	71.2	68.6	65.5		22.1			

Liquid Limit (LL or w_L) (%)	68
Plastic Limit (PL or w_P) (%)	22
Plasticity Index (PI) (%)	46
Soil Classification	CH



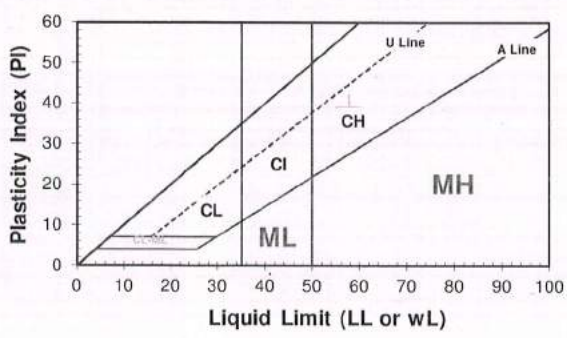
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project : "VATSA AMAZE" Residential Building									
Location:									
Boring No: 4									
Sample Depth: 1.0m									
Project No: MSGTPL/SI-5915/23-24									

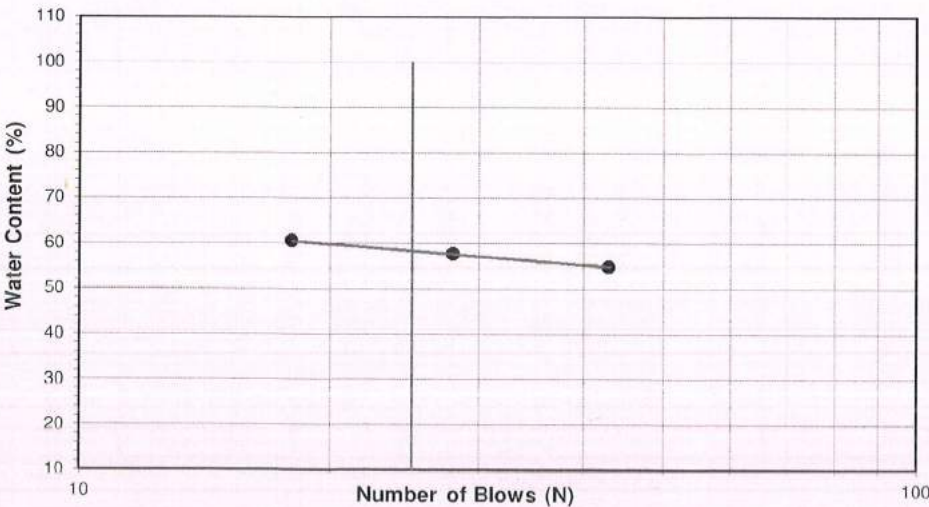
TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	18	28	43					
Tare Number	---	---	117	192	159		211			
Weight of Empty Tare	M _c	(g)	29.57	30.35	30.51		30.11			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	64.28	62.58	57.22		51.69			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	51.20	50.80	47.76		48.33			
Weight of Soil	M _s	(g)	21.63	20.45	17.25		18.22			
Weight of Water	M _w	(g)	13.08	11.78	9.46		3.36			
Water Content	w	(%)	60.5	57.6	54.8		18.4			

Liquid Limit (LL or w_L) (%)	58
Plastic Limit (PL or w_P) (%)	18
Plasticity Index (PI) (%)	39
Soil Classification	CH



Plasticity Index (PI)

Liquid Limit (LL or wL)



Water Content (%)

Number of Blows (N)

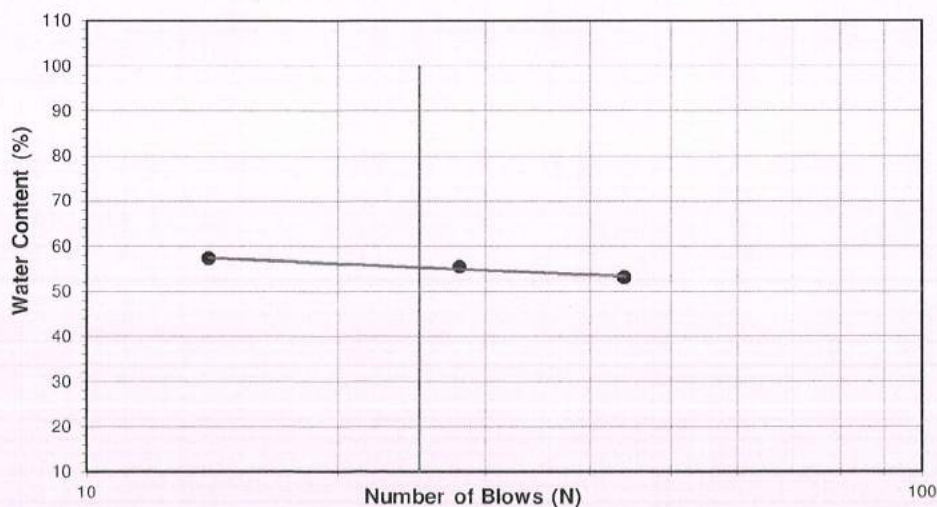
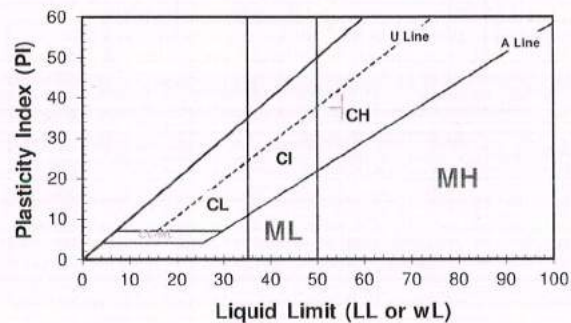
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	4
Sample Depth:	3.0m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	14	28	44					
Tare Number	---	---	150	11	272		235			
Weight of Empty Tare	M _C	(g)	29.43	29.03	30.82		29.01			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	49.65	52.48	54.2		48.41			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	42.29	44.12	46.10		45.51			
Weight of Soil	M _S	(g)	12.86	15.09	15.28		16.50			
Weight of Water	M _W	(g)	7.36	8.36	8.10		2.90			
Water Content	w	(%)	57.2	55.4	53.0		17.6			

Liquid Limit (LL or w_L) (%)	55
Plastic Limit (PL or w_P) (%)	18
Plasticity Index (PI) (%)	38
Soil Classification	CH



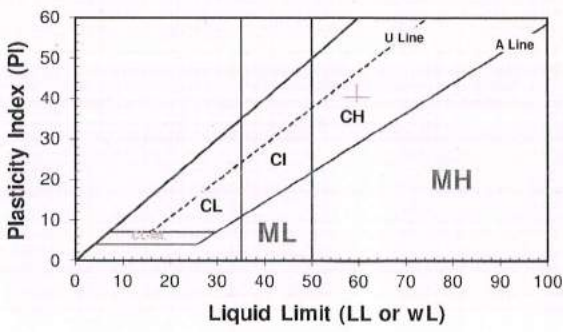
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

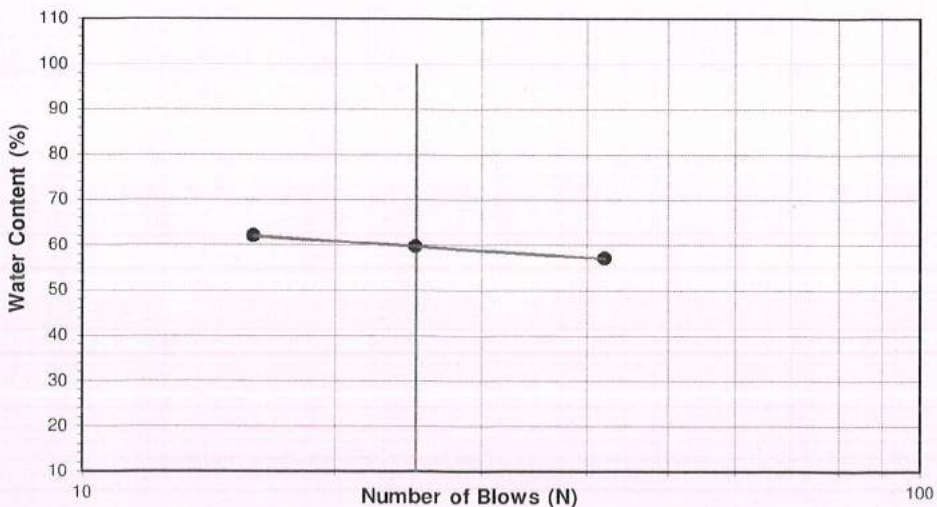
Project : "VATSA AMAZE" Residential Building									
Location:									
Boring No: 4									
Sample Depth: 5.0m									
Project No: MSGTPL/SI-5915/23-24									

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	16	25	42					
Tare Number	---	---	152	118	104		47			
Weight of Empty Tare	M _C	(g)	30.46	29.57	29.89		31.8			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	57.07	53.2	54.25		57.38			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	46.89	44.36	45.40		53.29			
Weight of Soil	M _S	(g)	16.43	14.79	15.51		21.49			
Weight of Water	M _W	(g)	10.18	8.84	8.85		4.09			
Water Content	w	(%)	62.0	59.8	57.1		19.0			

Liquid Limit (LL or w_L) (%)	60
Plastic Limit (PL or w_P) (%)	19
Plasticity Index (PI) (%)	41
Soil Classification	CH



Liquid Limit (LL or w_L)



Number of Blows (N)

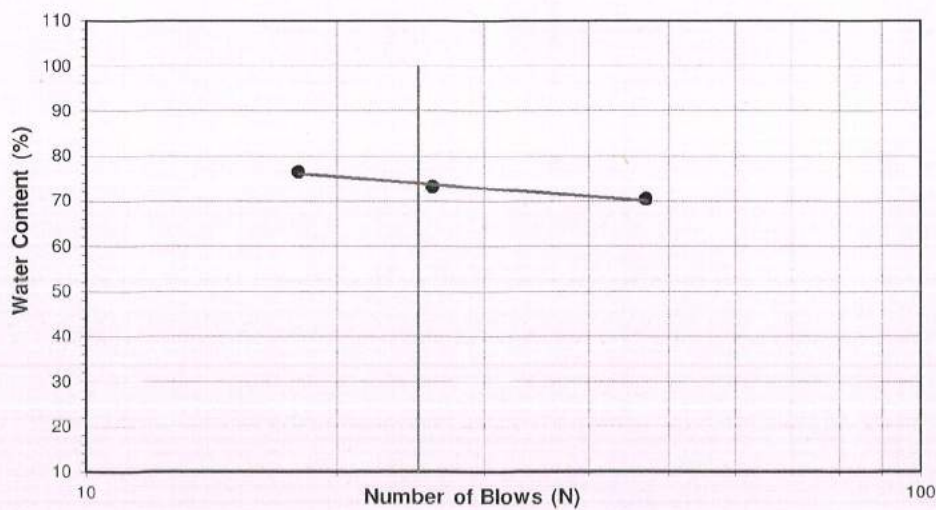
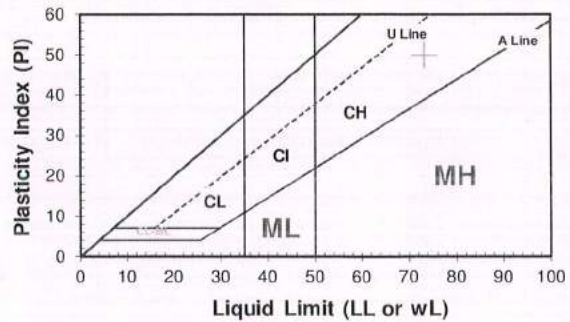
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	4
Sample Depth:	10.0m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	18	26	47					
Tare Number	---	---	131	59	4		249			
Weight of Empty Tare	M _C	(g)	29.56	29.13	29.5		30.2			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	57.68	63.17	58.11		47.22			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	45.50	48.80	46.30		44			
Weight of Soil	M _S	(g)	15.94	19.67	16.80		13.80			
Weight of Water	M _W	(g)	12.18	14.37	11.81		3.22			
Water Content	w	(%)	76.4	73.1	70.3		23.3			

Liquid Limit (LL or w_L) (%)	73
Plastic Limit (PL or w_P) (%)	23
Plasticity Index (PI) (%)	50
Soil Classification	CH



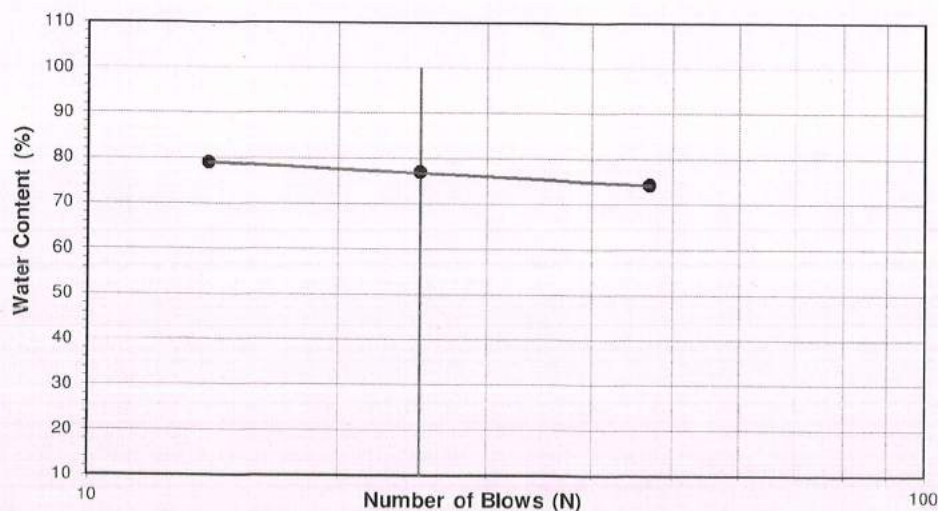
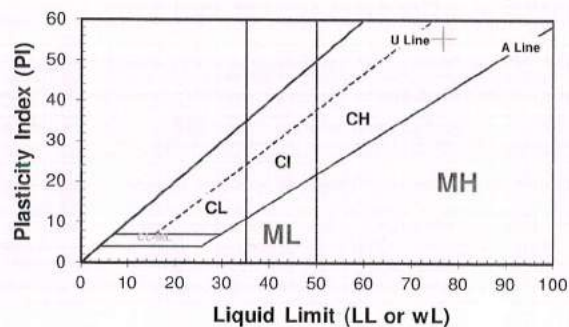
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	4
Sample Depth:	13.0m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	14	25	47					
Tare Number	---	---	46	219	262		187			
Weight of Empty Tare	M _C	(g)	29.74	27.86	31.53		29.61			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	58.3	63.71	49.24		48.06			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	45.70	48.13	41.70		44.85			
Weight of Soil	M _S	(g)	15.96	20.27	10.17		15.24			
Weight of Water	M _W	(g)	12.60	15.58	7.54		3.21			
Water Content	w	(%)	78.9	76.9	74.1		21.1			

Liquid Limit (LL or w_L) (%)	77
Plastic Limit (PL or w_P) (%)	21
Plasticity Index (PI) (%)	56
Soil Classification	CH



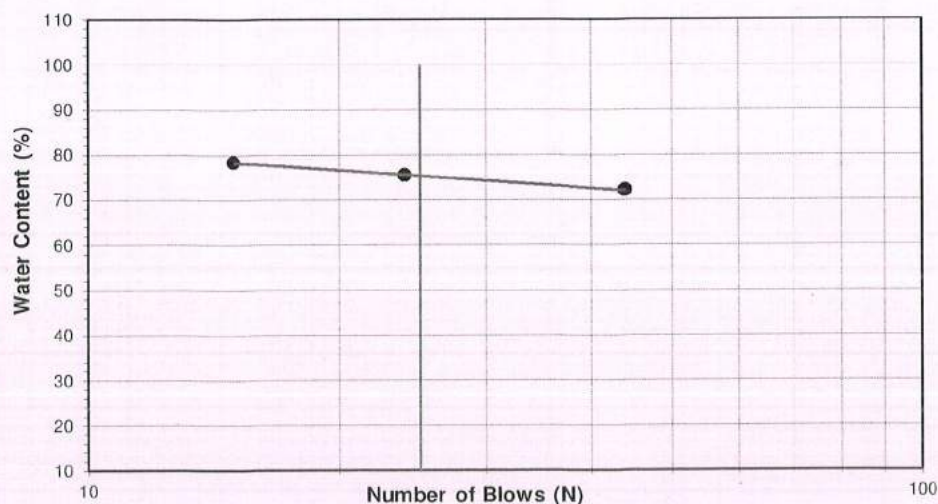
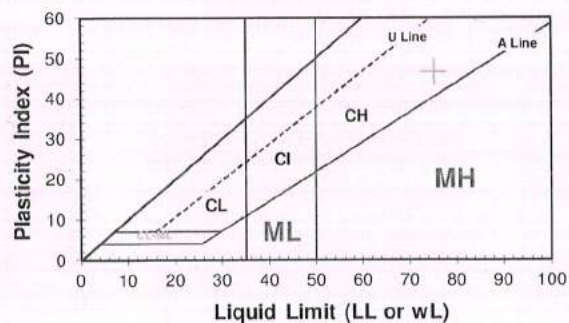
ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

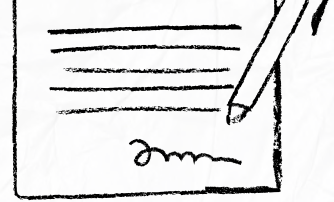
Project :	"VATSA AMAZE" Residential Building
Location:	
Boring No:	4
Sample Depth:	17.50m
Project No:	MSGTPL/SI-5915/23-24

TEST			LIQUID LIMIT				PLASTIC LIMIT			
Variable	NO		1	2	3		1	2		
	Var.	Units								
Number of Blows	N	blows	15	24	44					
Tare Number	---	---	105	163	100		176			
Weight of Empty Tare	M _C	(g)	29.24	29.39	29.13		27.38			
Wt of Tare + Soil (Wet)	M _{CMS}	(g)	58.76	54.95	55.99		46.9			
Wt of Tare + Soil (Dry)	M _{CDS}	(g)	45.80	43.96	44.74		42.55			
Weight of Soil	M _S	(g)	16.56	14.57	15.61		15.17			
Weight of Water	M _W	(g)	12.96	10.99	11.25		4.35			
Water Content	w	(%)	78.3	75.4	72.1		28.7			

Liquid Limit (LL or w_L) (%)	75
Plastic Limit (PL or w_P) (%)	29
Plasticity Index (PI) (%)	47
Soil Classification	CH



.....End of the Report.....



our services doesn't just end there



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Certified EC, Patta, legal opinions, property verification, due diligence, litigation solutions, and legal heir certificates.



Property Development & Approvals

Building plan approvals, construction, layout and sub-division approvals, zone conversion, and occupancy certification.



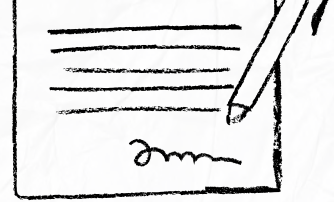
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Escrow Services, Rentals, Litigation Solutions, Property Valuation and Property Management



Compliance & Special Services

Demolition, Vaasthu checks, regularization of unauthorized buildings, and office space solutions.



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Encumbrance Certificate (EC) Search, Find Your SRO, Temple Property Check, WAQF Property Check, View Patta/Chitta, View FMB, Patta Analyzer, EC Analyzer



Zoning & Land Use Analysis

Land Use Zone Finder, CRZ Zone Check, Aquifer Zone Check, CBA Check, EWS Check, Road Width Check, Proposed Road Widening Check, FSI Calculator



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Forms & Templates, Document Generator, Document Translation, Dictionary



Vastu & Property Management Tools

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3/350/2 Mettukuppam,
OMR Thoraipakkam,
Chennai, India

hello@verified.realestate
[+91 9996 12 9996](tel:+919996129996)
www.verified.realestate