

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

SL-394
(62)

Soil Sample: _____

1288

Location: _____

Boring No.: 32 Sample No. UD-1

Sample Depth: 0.05 M - 1.05 M

Specific Gravity, G_s _____

Test No.: _____

Date: 05/05/21

Tested by: _____

Hydrometer No. 152 H 867462

Meniscus Correction: _____

W_s, in g 50 $R_v = 2$

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
6/5	14	49	-3	29							
	12	47			"						
	1	45.5			"						
	2	43			"						
	4	40.5			"						
	8	36			"						
	15	30.5		29							
	30	24			"						
	10:14	60	19.5								
	11:14	120	15		29.5						
	10:14	240	11		"						
	5:04	480	10		"						
7/5	9:20		7		30						
8/5	9:15	A-	5		30						
9/5	9:04	A-	4		30						

SL-394

Chandrasekaran, Sankaray, Lalitha
Department of Civil Engineering, IITB

Views Analysis

Job No.: _____

Soil Sample

Location: _____

Boring No: 32

Sample No.: UD-1

Sample depth:

Container: 12801

Wt. of Container + Soil _____

Wt. of Container: _____

Wt. of Soil 100.0 gm

Performed by:

Date: 5/5/21

D₁₀ =

$$D_{30} =$$

$$D_{60} =$$

$C_0 = i$

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

SL-394.
(61)

Atterberg Limit Test

Soil Sample _____

Test No.: _____

B.H: 32

Date: 3/5/21

Sample: UD-1

Tested by:

Depth: 0.05-1.05 m

	Liquid Limit				
No. of Blows	15	20	25	30	35
Container No.	910	409	100	724	10
Wt. Container, gm	7.13	7.28	7.52	7.43	7.41
Wt. Container + Wet Soil	42.34	42.30	41.56	40.82	43.00
Wt. Container + Dry Soil	31.38	31.71	31.48	31.04	32.73
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Light
Brown
Silty
Clay

	Plastic Limit		
Container No.	781	9023	145
Wt. Container, gm	7.20	10.89	7.09
Wt. Container + Wet Soil	40.68	44.54	44.04
Wt. Container + Dry Soil	33.79	37.50	36.29
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

L+H

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

(2)

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

(EJ)

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

SL-394

Soil Sample: MithamainTest No.: 6/6/21

Location:

Tested by:

Boring No.: 37 Sample No. D-32, 33, 34Hydrometer No. 152 H 867452Sample Depth: 48.0, 49.5, 50

Meniscus Correction:

Specific Gravity, G:

W_s in g 50.0

R822.5

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r}{t}}$ in cm/min	D in mm	N
7/6	1/4	50	-2.5	29							
	1/2	48.5		"							
	1	47.5		"							
	2	46.5		"							
	4	45.5		"							
	8	43.5		"							
	15	40		"							
	30	36		"							
10/6	60	31.5		"							
11/6	120	26		"							
11/6	240	22		"							
5/6	480	18.5		29							
8/6	9:37 Am	15		28							
9/6	9:09 Am	13.5		28.							
10/6	9:05 Am	12.5		28							

SL 394

Civil Engineering by Lekshmi
Department of Civil Engineering, BijuP

Nieve analysis

Job No.: _____

Container 1346/1380

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container _____

Boring No: 37

Wt. of Soil 100.0 gm

Sample No. : D-32, 33, 34

Performed by: _____

Sample depth: _____

Date: 6/6/21

$D_{1c} \approx$

6

$$D_{30} =$$

$$D_{60} =$$

$C_H =$

$$C_7 =$$

F.M. =

1346

**SURVEY2000
SAMPLE TICKET**

Project: Elevated Expressway/Road from Mithamain
Sadar to Karimganj Upazilla
Client: BBA
Location: Mithamain, Kishoreganj

Bore Hole No: 37
Depth: 48' 0M

Sample type: D-32
Signature: *[Signature]*

cont NO = 1346

Mithamain
Civil Engineering Laboratory
Institute of Civil Engineering, BUET

Afwerberg Limit Test

Test No.:

Date: 2/6/21

Tested by:

B.H: 37

Sample: ~~32, 33, 34~~ D-32, 33, 34

Depth: 48.0, 49.5, 51 M

Liquid Limit					
No. of Blows	15	20	25	30	35
Container No.	2004	2284	2123	2008	2162
Wt. Container, gm	9.28	9.70	9.53	8.72	10.39
Wt. Container + Wet Soil	49.21	47.91	44.43	39.73	40.85
Wt. Container + Dry Soil	35.55	35.22	33.19	29.91	31.40
Wt. Water, W _w in gm					
Wt. Dry sol, W _s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	2170	2069	2241
Wt. Container, gm	10.56	11.99	9.03
Wt. Container + Wet Soil	50.41	52.13	50.62
Wt. Container + Dry Soil	42.75	44.52	42.67
Wt. Water, W _w in gm			
Wt. Dry sol, W _s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

SL-394

Department of Civil Engineering, BUET
Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Mithamain

Test No.: _____

Date: _____

Tested by: _____

Hydrometer No. 152H867452

Meniscus Correction: _____

W_s in g 50

Location: _____

Boring No.: 40 Sample No. D-25, 26, 27

Sample Depth: 37.5, 39, 40.5 M

Specific Gravity, G_s _____

Rr = 2.5

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
13/6	1/4	48	-2.5	29							
	1/2	44			11						
	1	38			11						
	2	32			4						
	4	26.5			4						
	8	21			11						
	15	16.5			4						
	30	13.5			11						
10/6	60	10.5			11						
11/6	120	8			29						
11/6	240	6.5			11						
11/6	480	5			11						
14/6	8:58 Am	4.5			29						
15/6	9:04 Am	4.5			28.5						
16/6	9:05 Am	3.5			28						

SL 394

Graduate of Dayananda Sagar University
Department of Civil Engineering, BPUT

Micro analysis

Job No.: _____

Container: 1348/1350

Soil Sample

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 40

Wt. of Soil = 100.0 gms

Sample No.: D-25,26,27

Performed by: _____

Sample depth: _____

Date: 12/6/21

D₁₀ =

2.3

$$D_{30} =$$

$$D_{60} =$$

$$C_{II} =$$

$C_2 =$

F.M. =

1398

SURVEY 2000
SAMPLE TICKET
Project: Elevated Expressway/Road from Mithamain
Sadar to Karimganj Upazilla
Client: BBA
Location: Mithamain, Kishoreganj

Bore Hole No: 40
Depth: 37.50m

Sample type: D-25
Signature: Shuvra

Cutterberg Limit Test

Cont: 1348

B.H: 40
Sample: D-25, 26, 27
Depth: 37.5, 39, 40.5 M

Test No.:

Date: 06/06/21

Tested by:

Liquid Limit					
No. of Blows					
Container No.	786	867	2239	2258	2221
Wt. Container, gm	1091	7.28	10.23	10.90	9.37
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry soil, W_s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	817	508	2192
Wt. Container, gm	6.62	7.73	9.68
Wt. Container + Wet Soil			
Wt. Container + Dry Soil			
Wt. Water, W_w in gm			
Wt. Dry soil, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

SURVEY2000
SAMPLE TICKET

1210

Project: Elevated Expressway/Road from Mithamain
Sadar to Karmganj Upazilla
Client: BBA
Location: Mithamain, Kishoreganj

Civil Engineering, BUET

Engineering Laboratory

TETER ANALYSIS

Test No.: _____

Date: _____

Tested by: _____

Hydrometer No. 152 #867452

Meniscus Correction: _____

W_s in g 50 gm

Bore Hole No: 41
Depth: 43.5 m

Sample type: D-29
Signature: Shabir

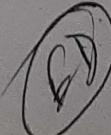
Location: _____

Boring No.: 41 Sample No. D-29, 30, 31

Sample Depth: 43.5, 45, 46.5 M

Specific Gravity, G_s: _____

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
14/8	46	-5	30								
	42				11						
	1	38			11						
	2	33			0						
	4	29			6						
	8	25.5			1						
	15	22.5			1						
	30	19.5			11						
16/8	60	16.5			1						
11:32	120	13			1						
11:32	240	11.5			30						
5:32	480	10			30						
15/8	9:51	9.0			11						
16/8	9:03	A-	7.5		30						
17/8	9:07	A-	7.5		29						



Steve Analysis

SL-394

Job No.: _____

Container: 1210/1380

Soil Sample

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 41

Wt. of Soil 100.0 gm

Sample No. D-29, 30, 31

Performed by _____

Sample depth: 43.5, 45, 46

Date: 11/08/21

$D_{10} =$

$$D_{10} =$$

D₆₀ =

$C_{11} =$

$\gamma =$

FM =

cont NO = 1210

SL-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No.: _____

B.H: 41

Date: 9/8/21

Sample: D-29, 30, 31

Tested by:

Depth: 43.5, 45, 46.5 M

Liquid Limit					
No. of Blows	15	19	24	30	35
Container No.	2146	2085	2126	2226	2127
Wt. Container, gm	9.64	10.53	8.64	9.99	9.95
Wt. Container + Wet Soil	45.45	47.18	40.45	46.69	43.60
Wt. Container + Dry Soil	34.58	36.39	31.29	36.34	34.24
Wt. Water, W _w in gm					
Wt. Dry sol, W _s in gm					
Water content, W, in %					

Plastic Limit					
Container No.	2257	2170	2111		
Wt. Container, gm	9.77	10.54	9.56		
Wt. Container + Wet Soil	51.54	48.48	48.82		
Wt. Container + Dry Soil	43.85	41.51	41.58		
Wt. Water, W _w in gm					
Wt. Dry sol, W _s in gm					
Water content, W, in %					

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

SURVEY2000

SAMPLE TICKET

Project: Elevated Expressway/Road from Mithamain
Sadar to Karimganj Upazilla

Client: BBA

Location: Mithamain, Kishoreganj

Bore Hole No: 42
Depth: 1.5mSample type: D-1
Signature: Shuv

LOCATION:

Boring No.: 42 Sample No. D-1, 2, 3

Sample Depth: 1.5, 3.0, 4.5 M

Specific Gravity, G_s

Engineering Laboratory

TEST ANALYSIS

Test No.: _____

Date: _____

Tested by: _____

Hydrometer No. 152H867452

Meniscus Correction: _____

W_s, in g 50 gm

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
14/8		48	5	30							
		46		"							
		43		"							
		40		"							
		37		"							
		32.5		"							
		28.5		"							
		24		"							
16/8	60	20		"							
11:28	120	15		"							
11:28	240	13.5		30							
5:28	480	11		30							
15/8	9:51	9.0		"							
16/8	9:02 Am	8.5		30							
17/8	9:06 Am	7.5		29							

Electrical Engineering Laboratory
Department of Civil Engineering, BUET

5L-394

Never justify

Job No.: _____

Container: 1390/145

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 42

Wt. of Soil 100.0 gms

Sample No. : D-1, 2, 3

Performed by: _____

Sample depth: _____

Date: 11/08/21

D_{IC} =

1.4

$D_{10} =$

$$D_{60} =$$

$C_{II} =$

$C_2 =$

EM =

cont NO = 1396

SL-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No.: _____

B.H: 42Date: 9/8/21

Sample: D-1, 2, 3

Tested by: _____

Depth: 1.5, 3, 4.5 M

Liquid Limit					
No. of Blows	15	20	25	30	35
Container No.	214	9016	40	200	22.71
Wt. Container, gm	7.33	10.83	10.83	7.35	9.05
Wt. Container + Wet Soil	43.41	42.58	41.74	41.36	41.09
Wt. Container + Dry Soil	32.02	32.84	32.46	31.26	31.72
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Light brown silty clay

Plastic Limit			
Container No.	763	2239	2098
Wt. Container, gm	7.10	10.23	9.80
Wt. Container + Wet Soil	41.97	46.20	43.17
Wt. Container + Dry Soil	34.81	38.83	36.39
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:



Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____

1028

Date: _____

Location: _____

Tested by: _____

Boring No.: 42 Sample No. UD-01

Hydrometer No. 152 H867452

Sample Depth: 2.05 M - 2.55 M

Meniscus Correction: _____

Specific Gravity, G_s _____W_s, in g 50 $R_v = 2$

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
6/5	1/4	48.5	-3	29							
	1/2	45		"							
	1	43		"							
	2	40		"							
	4	37.5		"							
	8	32.5		"							
	15	27		29							
	30	22.5		"							
	10:18	60	19		"						
	11:18	120	15	29.5							
	1:18	240	11.5	29.5							
	5:04	280	10	"							
7/5	9:20		6	30							
8/5	9:16	Am	4.5	30.							
9/5	9:05	Am	3	30							

Review Questions

bv 394

Job No.:

Soil Sample

Location: _____

Boring No: _____

Sample No.: 1

Sample depth: -

Contains

1028/1198

Wt. of Container + Soil

Wt. of Container:

Wt. of Soil -

Performed by

Dalc: 05

$D_{10} =$

$$D_{30} =$$

D₆₀ =

$$C_{II} =$$

$$-C_7 =$$

F.M.

Mithamain Project cont No = 1028
 (62 bore hole).
 Geotechnical Engineering Laboratory
 Department of Civil Engineering, BUET

SL-39A
 (62)

Atterberg Limit Test

Soil Sample _____

Test No.: _____

B.H. 42

Date: 21/5/21

Sample: UD-1

Tested by:

Depth: 2.05 - 2.55 M

No. of Blows	Liquid Limit				
	15	20	24	30	35
Container No.	2089	2201	2169	2074	2038
Wt. Container, gm	9.96	9.82	9.71	9.23	9.16
Wt. Container + Wet Soil	45.26	43.39	42.06	43.51	42.63
Wt. Container + Dry Soil	33.01	32.07	31.40	32.44	32.08
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Gray
 silty
 clay

Plastic Limit			
Container No.	2004	2062	2278
Wt. Container, gm	9.29	9.14	9.12
Wt. Container + Wet Soil	41.36	39.36	39.70
Wt. Container + Dry Soil	34.97	33.28	33.64
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

L+H

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

(V)

SURVEY2000
SAMPLE TICKET

Project: Elevated Expressway/Road from Mithamain
Sadar to Karimganj Upazilla
Client: BBA
Location: Mithamain, Kishoreganj

1190

Engineering, BUET

Engineering Laboratory

METER ANALYSIS

Test No.: _____

Date: _____

Tested by: _____

Hydrometer No. 152 H867452

Meniscus Correction: _____

W_s, in g 50 gmBore Hole No: 42
Depth: 39.0mSample type: D-21
Signature: SW

Boring No.: 42 Sample No. D-26, 27, 28

Sample Depth: 39.0, 40.5, 42 m

Specific Gravity, G_s _____R_r= 0

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
17/8		1/45	-5	30							
		1/42		29							
		1/35		"							
		2/27		"							
		4/22		"							
		8/17		"							
		15/13.5		"							
		30/10.5		29							
10/23	60	8.5		"							
11/23	120	7		29							
1/23	240	5.5		"							
5/23	480	4.5		"							
18/8	9:01	A	4	29							
19/8	9:08	A	4	29							
20/8	9:30	A	4	29							



Structural Engineering Laboratory
Department of Civil Engineering, BHUET

Eleven analysis

51-394

Job No.: _____

Container 1190/1363

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 42

Wt. of Soil 100.0 gm

Sample No.: D-26, 27, 8

Performed by: _____

Sample depth: 39.0, 40.5, 42.0 M

Date: 14/08/21

L+H

Grey

七

May

D₁₀ =

$$D_{30} =$$

$$D_{60} =$$

$C_u =$

C₇ =

F.M. =

SL-394

Conf: 1190

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No.: _____

B.H: 42

Date: 10/08/2021

Sample: D-26, 27, 28

Tested by: _____

Depth: 39.0, 40.5, 42 M

Liquid Limit					
No. of Blows	15	20	24	30	35
Container No.	44	782	101	880	4
Wt. Container, gm	7.42	7.01	7.43	10.75	6.99
Wt. Container + Wet Soil	44.45	47.99	42.68	42.52	44.18
Wt. Container + Dry Soil	34.53	37.25	33.44	34.50	34.82
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Grey
silty
Clay

Plastic Limit			
Container No.	869	751	403
Wt. Container, gm	11.21	6.85	6.77
Wt. Container + Wet Soil	56.76	50.30	48.10
Wt. Container + Dry Soil	48.30	42.27	40.48
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

LTH
Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:



Geotechnical Engineering Laboratory

SL-394

HYDROMETER ANALYSIS

Soil Sample: Mithamain

Test No.: _____

Date: 23/6/21

Tested by: _____

Hydrometer No. 152H867452

Meniscus Correction: _____

W_s in g 50.0 gm

Location: _____

Boring No.: 43 Sample No. UD-1Sample Depth: 5.10 - 5.55 MSpecific Gravity, G_s _____R_f=1

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
24/6	14	46	-4	28							
	12	40		"							
	1	36		"							
	2	31		"							
	4	26		"							
	8	23		"							
	15	20		"							
	30	15		28							
10:07	60	12.5		"							
11:07	120	9.5		"							
1:07	240	8		28.5							
5:07	480	7.5		"							
25/6	9:00 Am	6		28.5							
26/6	9:06 Am	4		29							
27/6	8:58 Am	3.5		"							



5L-394

Sieve analysis

Job No.: _____

Container: 13041 1191

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container _____

Boring No: 43

Wt of Soil 100.0 gms

Sample No.: UD-1

Performed by: _____

Sample depth: _____

Date: 22/06/21

$D_{1G} =$

$$D_{10} =$$

$$D_{60} =$$

C_m =

$C_2 =$

E.M. =

cont No = 1304

SL-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____
0.41 43

Test No.: _____

Date: 19/6/21

Sample: UD-1

Tested by: _____

Depth: 5.10 - 5.55 m

Liquid Limit					
No. of Blows	15	20	24	30	35
Container No.	2172	2204	2034	2073	2258
Wt. Container, gm	9.92	10.70	9.41	10.30	10.84
Wt. Container + Wet Soil	50.75	51.84	49.41	50.02	50.54
Wt. Container + Dry Soil	38.50	39.88	37.94	38.84	39.52
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	2171	2135	2081
Wt. Container, gm	9.95	9.17	9.63
Wt. Container + Wet Soil	43.80	43.82	45.41
Wt. Container + Dry Soil	36.32	36.14	37.49
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

SURVEY 2000
SAMPLE TICKET
743
 Project: Elevated Expressway/Road from Mithamain
 Sadar to Karimganj Upazilla
 Client: BBA
 Location: Mithamain, Kishoreganj

Bore Hole No: 43
 Depth: 46.5 m

Sample type: B-31
 Signature: *Anis*

Boring No.: 43 Sample No. D-31, 32, 33

Sample Depth: 46.5, 48, 49.5 m

Specific Gravity, G_s _____

Civil Engineering, BCB

Engineering Laboratory

TEST ANALYSIS

Test No.: _____

Date: _____

Tested by: _____

Hydrometer No. 152 H867452

Meniscus Correction: _____

W_s , in g 50 gm

RF=0

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R_w = 1000(r_w-1)	Temp. in °C	R-R_w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
14/8		43	-5	30							
		52	38	"							
		1	31.5	"							
		2	25.5	"							
		4	21.5	"							
		8	18.5	"							
		15	16.5	"							
		30	14	"							
10:20		60	12	"							
11:20		120	10	"							
11:20	290	9	"								
5:20	480	7.5	30								
15/8	9:50	6.5	"								
16/8	9:01	An	5.5	30.							
17/8	9:05	An	5.5	29							



Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Review analysis

52-394

Job No.: _____

Container: 743/1357

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 43

Wt. of Soil 100.0 gm

Sample No.: D-31, 32, 3

Performed by: _____

Sample depth: _____

Date: 11/08/21

$D_{1C} =$

$$D_{30} =$$

$$D_{60} =$$

$$C_{II} =$$

$C_7 =$

FM:

S.S.-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No.: _____

B.H: 43

Date: 09/08/21

Sample: D-31, 32, 33

Tested by:

Depth: 46.5, 48, 49.5 M

Liquid Limit					
No. of Blows	15	20	25	30	35
Container No.	2044	2086	2169	2134	2118
Wt. Container, gm	9.45	11.01	9.71	10.37	9.30
Wt. Container + Wet Soil	46.40	43.08	40.84	45.15	43.18
Wt. Container + Dry Soil	36.31	34.44	32.62	36.06	34.33
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Gray
silty
clay

Plastic Limit			
Container No.	2053	2069	2025
Wt. Container, gm	10.16	11.97	9.62
Wt. Container + Wet Soil	44.89	46.46	47.69
Wt. Container + Dry Soil	38.25	39.84	40.38
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:



Project: Elevated Expressway/Road from Mithamain
Sadar to Karmganj Upazilla
Client: BBA
Location: Mithamain, Kishoreganj

Bore Hole No: 44 Sample type: D-29
Depth: 43.5 m Signature: *[Signature]*

Boring No.: 44 Sample No. D - 29, 30

Sample Depth: 43.5, 45 M

Specific Gravity, G_s _____

TEST ANALYSIS

Test No.: _____

Date: _____

Tested by: _____

Hydrometer No. 152 H 8674 S2

Meniscus Correction: _____

W_s in g 50 gm

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
14/8	4	46 - 5	30								
	1/2	41.5		"							
	1	36.5		"							
	2	32		"							
	4	28.5		"							
	8	24.5		"							
	15	22		"							
	30	19.5		"							
10:16	60	15.5		"							
11:16	120	14		"							
11:16	240	13		"							
5:16	480	11	30								
15/8	9:50	9.5		"							
16/8	9:00 Am	8.5	30								
17/8	9:04 Am	8	29								

Steve Analysis

5L-394

Job No.: _____

Container: E-31/1351

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

WT of Container: _____

Boring No: 44

Wt. of Soil 100.0 g

Sample No.: D-29,30

Performed by: _____

Sample depth: _____

Date: 17/08/21

D_{1C} =

$$D_{30} =$$

$$D_{60} =$$

$C_0 =$

$C_7 =$

F.M. =

8.394

cont: E-31

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No. _____

B.H.I 44

Date: 09/08/21

Sample: D-~~28~~, 29, 30

Tested by: _____

Depth: 41.0, 43.5, 45 M

Liquid Limit					
No. of Blows	16	21	26	30	35
Container No.	2017	2278	2245	2217	2321
Wt. Container, gm	9.84	9.12	9.91	10.25	10.10
Wt. Container + Wet Soil	48.70	49.45	44.10	47.46	45.66
Wt. Container + Dry Soil	37.90	38.56	34.99	37.71	36.46
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	2063	2130	2256
Wt. Container, gm	9.31	9.64	8.56
Wt. Container + Wet Soil	53.03	50.80	51.18
Wt. Container + Dry Soil	45.48	43.67	43.81
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

L+H
Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:



SI-39A

Department of Civil Engineering, BUET
Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____

Date: _____

Tested by: _____

Hydrometer No. 152 H 867452

Meniscus Correction: _____

W_s , in g 50

Location: _____

Boring No.: 45 Sample No. UD-1

Sample Depth: 2.10 - 2.55 M

Specific Gravity, G_s _____

Date	Time	Elapsed Time in min.	R = 1000(r-1)	$R_w = 1000(r_w-1)$	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
19/4	7	46	-3	30							
	12	42		30							
	1	33		4							
	2	26		1							
	4	21.5		1							
	8	16.5		11							
	15	12.5		1							
	30	10		4							
10:58	60	8.5		30.5							
11:58	120	7		11							
11:58	240	5.5		31							
5:58	480	5.0		11							
20/4	9:26 Am	4.5		1							
21/4	9:21 Am	3.5		31.							
22/4	9:20 Am	3.5		30							

65-394

Steve's analysis

Job No.:

Container 698/805

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 45

Wt. of Soil 100.0 gm

Sample No.: UD-1

Performed by: _____

Sample depth: 2.10 m to 2.55

Date: 17/04/21

D₁₀ =

$$D_{30} =$$

$$D_{60} =$$

$$C_{\parallel} =$$

$C_7 =$

F.M. =

SI-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample

B.H : 45

Test No.:

Date: 20/04/2021

Sample: UD-1

Tested by:

Depth: 2.10-2.55

Liquid Limit					
No. of Blows					
Container No.	2115	2038	2169	2201	2127
Wt. Container, gm	9.66	9.16	9.70	9.81	9.95
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W , in %					

Grey
Clayey
Sandy
511

Plastic Limit				
Container No.	2097	2039	2267	
Wt. Container, gm	11.30	9.21	16.67	
Wt. Container + Wet Soil				
Wt. Container + Dry Soil				
Wt. Water, W_w in gm				
Wt. Dry sol, W_s in gm				
Water content, W , in %				

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

(ED)

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample:

Mithamai or

Location:

Boring No.: 46 Sample No. D-6

Sample Depth: 9.0 M

Specific Gravity, G_s

Test No.:

Date: 6/6/21

Tested by:

Hydrometer No. 152 H 867452

Meniscus Correction:

W_s, in g 50.0 gm

R_r=2.5

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
7/6	1/4	48.5	-2.5	29							
	1/2	47.5			"						
	1	44.5			"						
	2	40.5			"						
	4	36			"						
	8	30			"						
	15	24			"						
	30	18.5			"						
10:24	60	15.0			"						
11:24	120	11			"						
11:24	240	9			"						
5:24	480	8.0			29						
8/6	9:36 Am	7			28						
9/6	9:09 Am	6			28						
10/6	9:04 Am	5.5			28						



SL-394

Department of Civil Engineering, B.U.F.T.

• *Chrysanthemum*

Job No.: _____

Container 1345 / 1387

Soil Sample

Wt. of Container + Soil _____

Location: _____

Wt. of Container.

Boring No: 46

Wt. of Soil 100.0 gms

Sample No.: D-6

Performed by:

Sample depth:

Date: 6/6/21

D₁₂ =

112

$P_{10} =$

$$D_{60} =$$

$C_1 =$

$C_7 =$

F.M. =

SURVEY 2000
SAMPLE TICKET

1345

Project: Elevated Expressway/Road from Mithamain
 Sadar to Karmanganj Upazilla
 Client: BBA
 Location: Mithamain, Kishoreganj

cont No = 1345

Mithamain

Engineering Laboratory
of Civil Engineering, BUET

Bore Hole No: 16

Sample type: D6
Signature:

Atterberg Limit Test

Test No.:

Date: 26/6/21

Tested by:

D.H: 46

Sample: D-6

Depth: 9.0 M

No. of Blows	Liquid Limit				
	15	19	25	29	35
Container No.	605	869	8	803	9018
Wt. Container, gm	7.32	11.22	7.33	11.21	6.96
Wt. Container + Wet Soil	48.52	48.13	47.35	47.64	46.67
Wt. Container + Dry Soil	35.67	36.89	35.39	37.04	35.45
Wt. Water, W _w in gm					
Wt. Dry sol, W _s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	775	101	33
Wt. Container, gm	7.13	7.47	7.75
Wt. Container + Wet Soil	41.04	41.05	41.70
Wt. Container + Dry Soil	33.90	34.09	34.68
Wt. Water, W _w in gm	33.90		
Wt. Dry sol, W _s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

SI-394

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____

Location: _____

Date: _____

Boring No.: 47 Sample No. D-28, 29, 30

Tested by: _____

Sample Depth: 42, 43.5, 45 m

Hydrometer No. 152H86745L

Specific Gravity, G_s _____

Meniscus Correction: _____

 W_s , in g 50

RF=2

Date	Time	Elapsed Time in min.	$R = 1000(r-1)$	$R_w = 1000(r_w-1)$	Temp. in °C	$R-R_w$	N in %	Z, in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
27/4	4 48	-3	31								
	5 42										
	1 37										
	2 31										
	4 25										
	8 20										
	15 15.5			32							
	30 19.5			"							
10:30	60 9			"							
11:30	120 7			"							
1:30	240 5.5			"							
5:30	480 4.0										
28/4	9:25 Am	3.5		32							
29/4	9:19 Am	3.5		32							
30/4	9:17 Am	3		32							

Department of Civil Engineering Mgmt

Given - analysis

b1 394

Job No.: 1

Container 8911 / 12-10

Soil Sample

Wt. of Container + Soil:

Location: _____

Wt. of Container

Boring No.: _____

Wt of Soil 100.0 g

Sample No. : _____

Performed by: _____

Sample depth: _____

Date: 26/09/21

$D_{1c} \leq$

$P_{10} =$

D₆₀ =

CII

$$C_{\alpha\beta} \equiv$$

E.M. =

Cont No = 8911

Civil Engineering Laboratory
Department of Civil Engineering, DUST

Atterberg Limit Test

Soil Sample _____

Test No.: _____

B.H : 47

Date: 23/4/21

Sample: 28, 29, 30

Tested by:

Depth: 42, 43.5, 45 M

	Liquid Limit				
No. of Blows	15	19	24	30	35
Container No.	2341	2071	2044	2098	2144
Wt. Container, gm	10.78	9.50	9.46	9.88	10.03
Wt. Container + Wet Soil	45.04	41.62	44.29	41.65	43.54
Wt. Container + Dry Soil	35.72	33.08	35.07	33.48	35.11
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

	Plastic Limit		
Container No.	2164	2034	2154
Wt. Container, gm	11.14	9.45	9.19
Wt. Container + Wet Soil	40.37	41.08	34.99
Wt. Container + Dry Soil	34.35	34.69	29.85
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

SURVEY 2000
SAMPLE TICKET

Project: Elevated Expressway Road from Mithamain
Sadar to Karimganj Upazilla
Client: RBA
Location: Mithamain, Kishoreganj

Engineering Laboratory

TER ANALYSIS

Test No.: _____

Date: _____

Tested by: _____

Hydrometer No. 152-H867452

Meniscus Correction: _____

W_b in g _____

50

Bore Hole No: 48
Depth: 15.0 mSample type: D10
Signature: 

Boring No.: 48 Sample No. D-10, 11, 12

Sample Depth: 15.0, 16.5, 18 m

Specific Gravity, G_s _____

R8-2

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp in °C	RR	N in %	Z _t in cm	$\sqrt{\frac{Z_t \text{ in cm}}{t \text{ in min}}}$	D in mm	N
18/8	47	47	-3	29							
	52	44			11						
	1	41									
	2	34									
	4	27									
	8	21									
	15	17		29							
	30	12.5		"							
10:26	60	9.5		29							
11:26	120	7.5		"							
1:26	240	5.5									
5:26	480	4.5		29							
19/8 9:09	An	4		29							
20/8 9:27	An	3.5		29							
21/8 8:59	An	3		29							



Network analysis

Job No.: _____

Container 716/1175

Soil Sample _____

Wt. of Container + Soil

Location: _____

Wt. of Container

Boring No: 48

Wt. of Soil 100.0 gm.

Sample No.: D-10, 11, 12

performed by

Sample depth:

Date: 17/08/21

DIG =

$$D_{30} =$$

$$D_{60} =$$

$C_{II} =$

$C_1 =$

FM =

Cont: 776

SF-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUBT

Atterberg Limit Test

Soil Sample _____

Test No.: _____

O.H : 48

Date: 10/08/2021

sample : D-10, 11, 12

Tested by: _____

Depth : 15.0, 16.5, 18 M

Liquid Limit						
No. of Blows						
Container No.	403	880	869	751	4	
Wt. Container, gm	6.77	10.75	11.21	6.85	6.99	
Wt. Container + Wet Soil						
Wt. Container + Dry Soil						
Wt. Water, W _w in gm						
Wt. Dry sol, W _s in gm						
Water content, W, in %						

Plastic Limit			
Container No.	101	44	78.2
Wt. Container, gm	7.43	7.42	7.01
Wt. Container + Wet Soil			
Wt. Container + Dry Soil			
Wt. Water, W _w in gm			
Wt. Dry sol, W _s in gm			
Water content, W, in %			

L+H

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____

~~soil sample~~
with sand in it

Date: _____

Location: _____

Tested by: _____
Hydrometer No. 152 H 867452

Boring No.: 52 Sample No. D-10

Meniscus Correction: _____

Sample Depth: 15.0 M

W_s in g 50Specific Gravity, G_s _____

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
13/6	1/4	49	49	-2.5	29						
	1/2	47			"						
	1	42			"						
	2	36			"						
	4	30			"						
	8	23.5			"						
	15	18			"						
	30	16			"						
16/6	60	14			"						
11/28	120	10.5			29						
11/28	240	6.5			"						
5/28	480	5			"						
14/6	8:59 Am	4.5			29						
15/6	9:01 Am	3.5			28.5						
16/6	9:01 Am	2.5			28						



8E 394

Journal of Engineering Mathematics
Department of Civil Engineering, B.I.T.R

Sieve analysis

Job No.: _____

Soil Sample _____

Location: _____

Boring No: 52

Sample No.: D-10

Sample depth: _____

Sample depth: _____

100

Container 1330 11-1

1338 / 1352

Wt. of Container + Soil _____

Wt. of Container: _____

Wt. of Soil 00.092

Performed by: John

Date: 12/6/21

$D_{10} =$

$$D_{30} =$$

$$D_{60} =$$

$$C_1 =$$

$$C_7 = -$$

F.M. =

SURVEY 2000

SAMPLE TICKET

Project Elevated Expressway/Road from Mithamain
 Sadar to Durganjan Upazilla
 : BBA

Location: A. K. M. A. Kishoreganj

Bore Hole No: 52
 Depth: 15.0m

Sample type: D-10
 Signature: 

Soil Sample _____

D.H: 52Sample: D-10Depth: 15.0 M

cont No = 1338

Mithamain.

Civil Engineering Laboratory
Dept. of Civil Engineering, BUET

Atterberg Limit Test

Test No.:

Date: 6/6/21

Tested by:

Liquid Limit					
No. of Blows		20			
Container No.	2068	403	850	31	2245
Wt. Container, gm	8.71	6.78	6.07	11.44	9.90
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W _w in gm					
Wt. Dry sol, W _s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	9015	2108	2142
Wt. Container, gm	7.01	9.86	9.43
Wt. Container + Wet Soil			
Wt. Container + Dry Soil			
Wt. Water, W _w in gm			
Wt. Dry sol, W _s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: MithamaiTest No.: 916121

Location:

Tested by: _____
Hydrometer No. 1524 867452Boring No.: 52 Sample No. D - 32, 33, 34

Meniscus Correction: _____

Sample Depth: 48.0, 49.5, 51 MW_s, in g 50.0Specific Gravity, G_s _____

RY 225

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
10/6	1/4	46	-2.5	29							
	1/2	41			1						
	1	34			4						
	2	29			4						
	4	26			4						
	8	23			4						
	15	20.5			11						
	30	18.5			11						
10/6	32	60	16		11						
11/6	32	120	13.5		11						
11/6	32	240	12.5		29						
11/6	32	480	12.0		11						
11/6	9:33 Am		11		28						
12/6	9:49 Am		9.5		29						
13/6	9:00 Am		8		29						



Review Article

Job No.: _____

Soil Sample _____

Location: _____

Boring No: 52

Sample No. D-32, 33, 34

Sample depth:

Sample depth: _____

Container 1341 / 1362

Wt. of Container + Soil _____

Wt. of Container: _____

Wt. of Soil - 100.0 gm

Performed by: John

Date: 8/6/21

$$D_{10} =$$

$$D_{30} =$$

$$D_{60} =$$

$C_U =$

$$C_7 =$$

F.M. =

1341

SURVEY2000
SAMPLE TICKET

Project: Elevated Expressway/Road from Mithamain
Sadar to Karimganj Upazilla
Client: BBA
Location: Mithamain, Kishoreganj

1341

cont NO = 1341

Bore Hole No: 52
Depth: 48.0m

Sample type: D32
Signature: (Signature)

rain

Engineering Laboratory
Civil Engineering, BUET

Cbrberg Limit Test

Test No.:

Date: 5/6/21

Tested by:

O.H: 52

Sample: D-32, 33, 34

Depth: 48, 49.5, 51 m

Liquid Limit					
No. of Blows	15	20	25	30	35
Container No.	2268	3	839	2081	144
Wt. Container, gm	9.66	7.28	11.01	9.61	7.28
Wt. Container + Wet Soil	49.95	46.32	50.10	48.58	47.47
Wt. Container + Dry Soil	39.55	36.37	40.39	39.01	37.86
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Grey

silky

Clay

Plastic Limit			
Container No.	2096	2111	907
Wt. Container, gm	10.15	9.55	7.59
Wt. Container + Wet Soil	47.88	45.43	47.74
Wt. Container + Dry Soil	41.42	39.30	40.80
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

L+H

D

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

SAMPLE TICKET

Project: Elevated Expressway/Road from Mithamal Engineering Laboratory
 Sadar to Karimganj Upazilla

Client: PBA

METER ANALYSIS

L-H Location: Mithamal, Kishoreganj

Bore Hole No: 56
Depth: 18'0M

D-12 D-12

Sample type: D
Signature: *[Signature]*

Test No.:

Date:

23/10/2021

Tested by:

Hydrometer No. 1524867452

Meniscus Correction:

W_s in g _____

Location: _____

Boring No.: 56 Sample No. D-12

Sample Depth: 18.0M

Specific Gravity, G_s _____

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
23/10	X	48	-3	28							
	X	46			"						
	1	43.5			"						
	2	40.5			"						
	4	35.5			"						
	8	31			"						
	15	26			"						
	30	21.5			"						
10.06	60	17.5			"						
11.06	120	14			"						
11.06	240	11			"						
	5:06	480	9		"						
24/10	8:49 Am	7		29							
25/10	8:58 Am	6.5		29							
26/10	9:02	6.0		"							



Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

SI-394

Sieve Analysis

Job No.: _____

Container: 676 / 8915

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 56

Wt. of Soil 100 gm _____

Sample No. : D-12

Performed by: _____

Sample depth: _____

Date: 23/10/21

Sieve No.	Sieve opening (mm)	Wt. of sieve (gm)	Wt. of sieve+soil (gm)	Wt. of soil retained (gm)	% of soil retained	Cumulative % retained	% Finer
4							
8							
16							
30							
50				1.7			
100				15.2			
200				5.6			
Pan				77.5			
				100			

$D_{10} =$

22.5

$D_{30} =$

$D_{60} =$

$C_u =$

$C_z =$

$F.M. =$

SL-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Cont: 676

Atterberg Limit Test

Soil Sample _____

BH : 56

Sample : D-12

Depth : 18 M

Test No.:

Date: 18/10/2021

Tested by:

Liquid Limit					
No. of Blows	15	19	25	29	34
Container No.	721	101	718	607	824
Wt. Container, gm	7.10	7.45	7.23	7.00	7.36
Wt. Container + Wet Soil	35.70	34.56	34.03	35.34	32.87
Wt. Container + Dry Soil	26.11	25.53	25.17	26.06	24.58
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit					
Container No.	2042	2301	2334		
Wt. Container, gm	10.05	10.22	9.70		
Wt. Container + Wet Soil	38.64	43.90	40.56		
Wt. Container + Dry Soil	32.05	36.18	33.53		
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

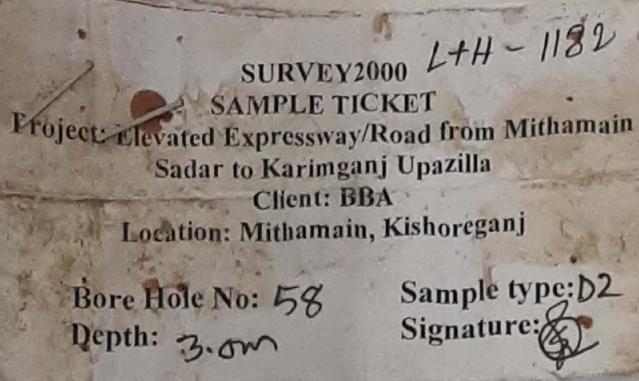
Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:



al Engineering Laboratory

HDMETER ANALYSIS

Test No.: _____

Date: 21/08/2021

Tested by: _____

Hydrometer No. 152 H 867452

Meniscus Correction: _____

W_s , in g 50

118' Location: _____
Boring No.: 58 Sample No. D-2,3,4
Sample Depth: 6, 7.5, 9 M
Specific Gravity, G_s _____

Date	Time	Elapsed Time in min.	$R = 1000(r-1)$	$R_w = 1000(r_w-1)$	Temp. in °C	$R-R_w$	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
22/8	14	44	-3	29							
	K	40		29							
	1	30		"							
	2	21		"							
	4	14.5		"							
	8	11		"							
	15	8		"							
	30	6.5		29							
	10:08	60	5	"							
	11:08	120	4.5	"							
	1:08	240	2.5	29							
	5:08	480	2	"							
23/8	8:59	A	2	29							
24/8	9:07	A	2	29							
25/8	9:16	A	2	29							

Civil Engineering Laboratory
Department of Civil Engineering, BUET

~~SX-394~~

Movie Analysis

Job No.: _____

Container: 1184625

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 58

Wt. of Soil 100.0 gm

Sample No.: D-2,3,4

Performed by: John

Sample depth: _____

Date: 21/08/21

D_{1G} =

$$D_{10} =$$

$$D_{60} =$$

$C_{\alpha} =$

5

E.M. =

Cont: 1182

~~8-394~~
Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No.: _____

D.H: 58

Date: 11/08/2021

Sample: D-2, 3, 4

Tested by: _____

Depth: 6.0, 7.5, 9.0 M

Liquid Limit					
No. of Blows					
Container No.	2192	2347	2315	2183	007
Wt. Container, gm	9.68	9.72	8.86	10.16	7.18
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry soil, W_d in gm					
Water content, W, in %					

Plastic Limit			
Container No.	850	295	2154
Wt. Container, gm	6.95	10.30	9.20
Wt. Container + Wet Soil			
Wt. Container + Dry Soil			
Wt. Water, W_w in gm			
Wt. Dry soil, W_d in gm			
Water content, W, in %			

Shrinkage Limit test:

L+H

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:



SURVEY 2000 LTH-1015

SAMPLE TICKET

Project: Elevated Expressway/Road from Mithamain
Sadar to Karimganj Upazilla

Client: BBA

Location: Mithamain, Kishoreganj

Bore Hole No. 1015 Hole No: 58 Sample type: D-25
Depth: 39.37.5 m Signature: 

1015 Location: _____
Boring No.: 58 Sample No. D-25, 26, 27
Sample Depth: 37.5, 39, 40.5 M
Specific Gravity, G_s _____

Civil Engineering, BULU
Engineering Laboratory
TER ANALYSIS

Test No.:

Date: 21/08/2021

Tested by: _____

Hydrometer No. 152 H 867452

Meniscus Correction: _____

W_s, in g 50

R_w = 2

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
22/8		4	47	-3	29						
		5	44.5		29						
		1	41.5		"						
		2	36		"						
		4	30		"						
		8	23.5		"						
		15	18		"						
		30	13		29						
23/8	9:52	60	100.5		"						
24/8	10:52	120	8.5		"						
24/8	12:52	240	6		29						
	4:52	480	5		"						
25/8	8:57	A-	4		29						
25/8	9:06	A-	3.5		29						
25/8	9:14	A-	3.5		29						

88-394

Department of Civil Engineering, Laboratory

Movie Analysis

Job No.: _____

Container: 1015/1392

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 58

Wt. of Soil = 100.0 gm

Sample No.: D-25, 26, 27

Performed by: _____

Sample depth: _____

Date: 21/08/21

$D_{1c} =$

$$D_{30} =$$

$$D_{60} =$$

$C_1 =$

C₂ =

FM =

SL-394

Cont: 1015

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No.: _____

D.L: 58

Date: 11/08/2021

Sample: D-25, 26, 27

Tested by:

Depth: 37.5, 39.0, 40.5 M

Liquid Limit					
No. of Blows					
Container No.	2111	2098	2044	2170	2239
Wt. Container, gm	9.57	9.81	9.46	10.54	10.24
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry soil, W_d in gm					
Water content, W, in %					

Plastic Limit					
Container No.	2130	2257	2063		
Wt. Container, gm	9.67	9.79	9.35		
Wt. Container + Wet Soil					
Wt. Container + Dry Soil				N	P
Wt. Water, W_w in gm					
Wt. Dry soil, W_d in gm					
Water content, W, in %					

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:



Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

SL-394

Soil Sample: Mithamain
Mithamain

Test No.: _____

Date: _____

Tested by: _____

Hydrometer No. 152H867452

Meniscus Correction: _____

W_s in g 50

Location: _____

Boring No.: 59 Sample No. D-25, 26, 27Sample Depth: 37.5, 39, 40.5 MSpecific Gravity, G_s _____

1342

R_f=2.5

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
13/6	14	48.5	48.5 - 2.5	29							
	1/2	46			11						
	1	41.5			11						
	2	37			11						
	4	32			11						
	8	26.5			11						
	15	20			11						
	30	16.5			11						
16/6	60	12.5			11						
11:32	120	10			29						
11:32	240	8.5			11						
5:32	480	7			11						
14/6	9:00 Am	6.5			29						
15/6	9:01 Am	5.0			28.5						
16/6	9:00 Pm	4.0			28						

SL-394

Linear Analysis

Job No.: _____

Container: 13421334

Soil Sample _____

Wt. of Container + Soil _____ :

Location: _____

Wt. of Container: _____

Boring No: 59 Wt. of Soil 100.0 gm

Wt. of Soil 100.0 gm

Sample No.: D-25, 26, 27

Performed by: _____

Samples death:

Date: 12/16/21

Sample depth: _____

Date: 12/01/21

D_{1c} =

$$D_{30} =$$

$$D_{60} =$$

$$C_{II} =$$

C =

F.M. =

SURVEY2000

SAMPLE TICKET

Project: Elevated Expressway/Road from Mithamain
Sadar to Karimganj Upazilla
Client: BBA
Location: Mithamain, Kishoreganj

Cont: 1342

Engineering Laboratory
of Civil Engineering, BUET

Bore Hole No: 59 Sample type: D-25
Depth: 37.5 m Signature: *[Signature]*

Cerberg Limit Test

Test No.:

Date: 06/06/2021

Tested by:

B.H: 59

Sample: D-25, 26, 27

Depth: 37.5, 39, 40.5 M

Liquid Limit					
No. of Blows	15	19	24	30	34
Container No.	786	867	2221	2239	2258
Wt. Container, gm	10.91	7.28	9.37	10.23	10.90
Wt. Container + Wet Soil	49.23	40.92	43.42	45.84	48.82
Wt. Container + Dry Soil	38.35	31.44	34.10	36.28	38.68
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit					
Container No.	508	2192	817		
Wt. Container, gm	7.73	9.68	6.62		
Wt. Container + Wet Soil	42.51	47.83	41.82		
Wt. Container + Dry Soil	35.38	40.00	34.65		
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks: