

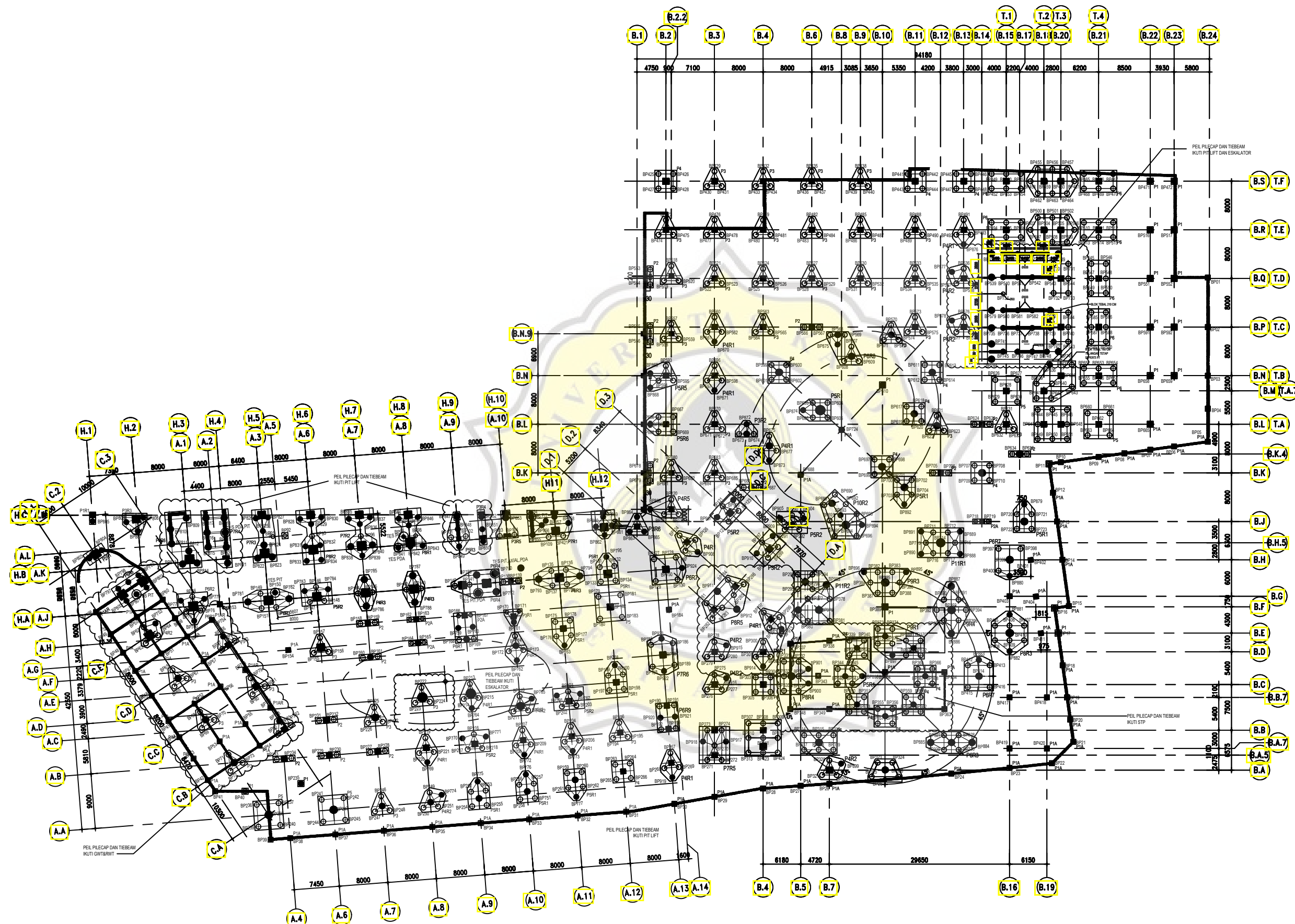
LAMPIRAN



DENAH PONDASI TIANG BOR

L-1





NOTES

R.10	Pergeseran Titik Bore Pile	17-06-21
R.09	Penambahan dan Pengurangan Titik	06-05-21
R.06	Perubahan Elevasi	10-12-20
R.05 TP	Penentuan Titik Test Pile	13-11-20
R.05	Perubahan Elevasi, Pergeseran & Delete titik	19-10-20
R.04	Perubahan Elevasi, Perubahan tipe & tebal PC	01-09-20
	Penambahan titik bored pile	
R.03	Perubahan Elevasi	13-08-20
R.02	Perubahan tipe dan tebal PC	22-07-20
	Penambahan titik bored pile	22-07-20

Proyek : **QUEEN CITY**
 Project : **JL. PEMUDA, SEMARANG - INDONESIA**

Pemberi Tugas : **PT. SRI RATU**
 Owner : **J. PRIMA, SEMARANG**

Konsultan Arsitek : **AIRMAS ASRI**
 Architect Consultant : **AMPTIKS - MITRANS - LANDSCAPE**

Konsultan Struktur : **PT. CIPTA PRIMA SEJAHTERA**
 Structure Consultant : **Jl. Dr. Wahidin No. 67-A, Jember
 Cendekia, Jember, Jawa Timur, 60082
 Telp. (031) 8314435**

Konsultan M & E : **PT. SKEMANIUSA CONSULTAMA TEKNIK**
 M & E Consultant : **Mechanical & Electrical Consulting Engineers
 Jl. Dr. Wahidin No. 67-A, Jember
 Cendekia, Jember, Jawa Timur, 60082
 Telp. (031) 8314435**

Quantity Surveyor : **PT. GRAHA ESTIMATIKA PRADANA**
 Quantity QS : **Jl. Brawijaya Talar (Taman Mawati 4-Buruk)
 Talar Ploso, Tegalrejo, Sukoharjo, 55152**

Manajemen Konstruksi : **PT. CIPTA PRIMA SEJAHTERA**
 Construction Management : **Jl. Dr. Wahidin No. 67-A, Jember
 Cendekia, Jember, Jawa Timur, 60082
 Telp. (031) 8314435**

Kontraktor Pondasi : **PT. PAKUBUMI SEMESTA**
 Foundation & Substructure Contractor : **Jl. Dr. Wahidin No. 67-A, Jember
 Cendekia, Jember, Jawa Timur, 60082
 Telp. (031) 8314435**

Judul Gambar : **DENAH PONDASI BORED PILE**

DIGUNAKAN UNTUK : SHOP DRAWING (R.09)

DIGAMBAR	ANDARS	02-06-2021
DIPERIKSA	PRAST	02-06-2021
DIPERIKSA	NURUDIN	02-06-2021

Disetujui : Approval

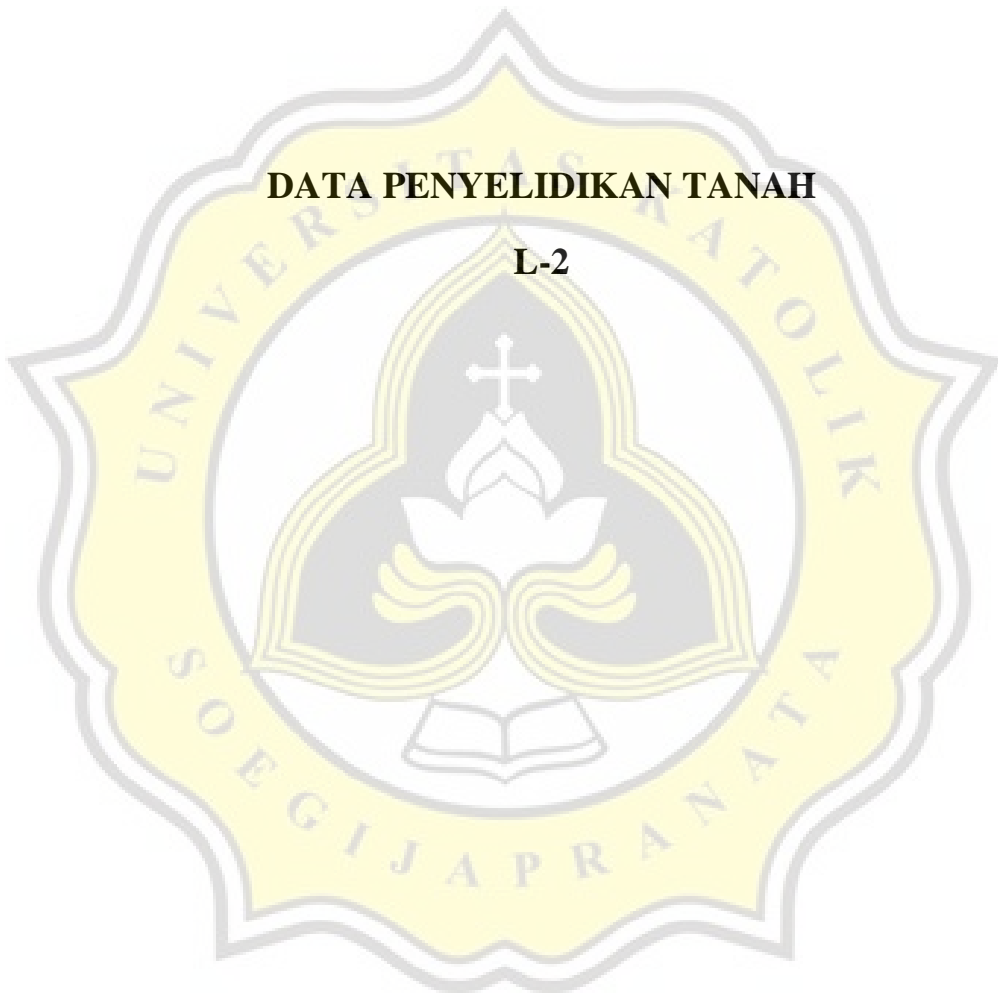
NURUDIN PROJECT MANAGER		TANGGAL
MK / KONSULTAN		TANGGAL
PEMILIK / OWNER		TANGGAL

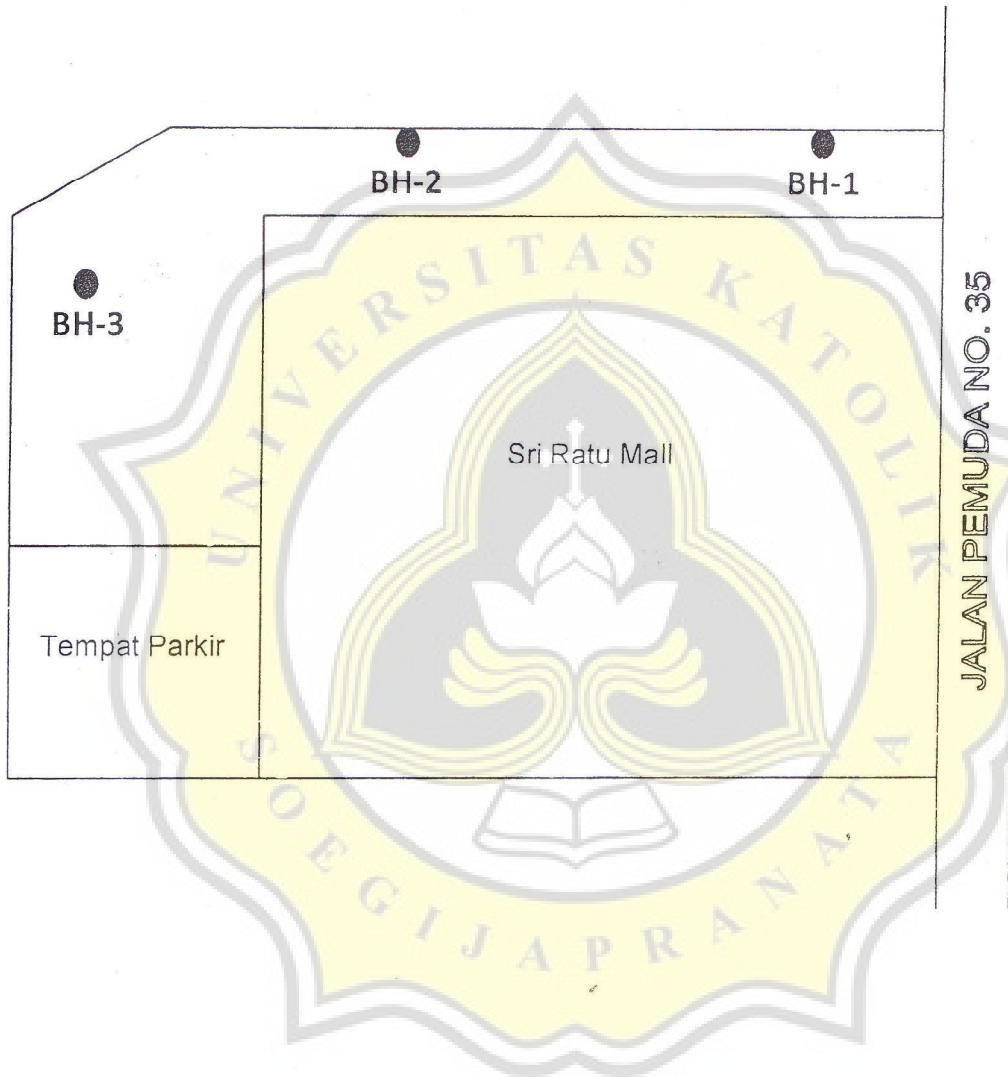
SKALA : **1:650** TANGGAL : 08-07-2021

REFERENSI : SP.14.R (17 JUNI 2021) (FOR CONSTRUCTION) NO. GAMBAR : SD.PBS.01.10.

DATA PENYELIDIKAN TANAH

L-2





BORING LOG

BH - 1

Depth : 40.00 m

Project : Sri Ratu Mall
 Location : Jalan Pemuda No. 35 - Semarang
 Client : -
 Boring Method : Rotary Core Drilling
 Boring Machine : TDC
 Date Started : November 23, 2019
 Date Finished : November 27, 2019
 Sheet : 1/2
 Surveyor Master : Andri
 Logged by : Adiansah
 Checked by : AM
 X : 436005
 Y : 9229206
 Elevation :
 GWL : -13.20 m

DEPTH (m)	GWL	UDS/SPT	SYMBOL	SOIL DESCRIPTION	STANDARD PENETRATION TEST															
					N1	N2	N3	N	N SPT Graph											
					15	15	15	N	0	10	20	30	40	50						
0.00-1.00 m			[Grid Pattern]	FILL MATERIAL																
1.00-1.70 m			[Diagonal Lines]	CLAY, red, containing with sand, fine grain.																
1.70-7.00 m		SPT	[Dotted Pattern]	SAND, blackish grey, loose, fine grain.	2	2	3	5												
7.00-18.00 m		SPT	[Cross Pattern]	CLAY, dark grey, soft to stiff, containing with clamshell.	3	3	3	6												
18.00-20.00 m		SPT	[Diagonal Lines]	CLAY, blackish dark brown, stiff to very stiff.	1	1	2	3												
		SPT	[Diagonal Lines]		1	1	1	2												
		SPT	[Diagonal Lines]		1	1	1	2												
		SPT	[Diagonal Lines]		1	1	2	3												
		SPT	[Diagonal Lines]		2	2	3	5												
		SPT	[Diagonal Lines]		3	4	6	10												
		SPT	[Diagonal Lines]		7	8	12	20												

BORING LOG

BH - 1

Depth : 40.00 m

Project : Sri Ratu Mall
 Location : Jalan Pemuda No. 35 - Semarang
 Client : -
 Boring Method : Rotary Core Drilling
 Bor Master : Andri
 X : 436005

Date Started : November 23, 2019
 Date Finished : November 27, 2019
 Sheet : 2/2
 Boring Machine : TDC
 Logged by : Adiansah
 Y : 9229206
 Elevation :
 GWL : -13.20 m

DATE	DEPTH (m)	GWL	UDS/SPT	SYMBOL	SOIL DESCRIPTION	STANDARD PENETRATION TEST								
						N1	N2	N3	N	N SPT Graph				
						15	15	15	N	0	10	20	30	40
November 24, 2019	21			[Diagonal Hatching]	20.00-22.00 m CLAY, blackish dark brown, stiff to very stiff.	7	8	12	20	[Graph Point]				
	22		SPT		22.00-24.00 m CLAY, light brown, stiff, containing with sand, fine grain.	4	6	8	14	[Graph Point]				
November 25, 2019	23			[Diagonal Hatching]	24.00-27.50 m CLAY, dark grey, very stiff.	4	4	6	10	[Graph Point]				
	24		SPT		27.50-28.00 m SANDY CLAY, light grey, very stiff, coarse grain.	4	11	16	27	[Graph Point]				
	25				28.00-29.00 m CLAY, dark brown, very stiff.	7	7	11	18	[Graph Point]				
	26		SPT		29.00-31.00 m CLAY, light grey, very stiff.	7	11	13	24	[Graph Point]				
	27				31.00-32.00 m SAND, light grey, dense, fine grain.	9	15	19	34	[Graph Point]				
	28		SPT		32.00-34.00 m CLAY, blackish dark grey, very stiff to hard.	9	14	15	29	[Graph Point]				
	29				34.00-36.00 m CLAY, dark grey, very stiff to very hard.	7	33	17/9	>50	[Graph Point]				
	30		SPT		36.00-39.50 m SAND, dark brown, dense to very dense, fine grain.	13	22	27	49	[Graph Point]				
	31				39.50-40.00 m CLAY, dark brown, very hard.	34	50/5		>50	[Graph Point]				
	32		SPT							[Graph Point]				

BORING LOG

BH - 2

Depth : 40.00 m

Project : Sri Ratu Mall
 Location : Jalan Pemuda No. 35 - Semarang
 Client : -
 Date Started : November 12, 2019
 Date Finished : November 16, 2019
 Sheet : 1/2
 Boring Method : Rotary Core Drilling
 Boring Machine : TDC
 Bor Master : Andri
 Logged by : Adiansah
 Checked by : AM
 X : 435980
 Y : 9229326
 Elevation :
 GWL : -12.50 m

DATE	DEPTH (m)	GWL	UDS/SPT	SYMBOL	SOIL DESCRIPTION	STANDARD PENETRATION TEST										
						N1	N2	N3	N	N SPT Graph						
						15	15	15	N	0	10	20	30	40	50	
	0.00-0.10 m				PAVING											
	0.10-1.50 m				Clayey SAND, red.											
	1.50-2.00 m			▽	Gravelly CLAY, black, soft.											
	2.00-4.00 m		SPT		Clayey SAND, light grey, medium dense.	3	5	8	13							
	4.00-6.00 m		SPT		SAND, black, medium dense, coarse grain.	7	7	9	16							
	6.00-7.50 m		SPT		Sandy CLAY, black, firm, fine grain.	2	2	5	7							
	7.50-10.00 m		SPT		Sandy CLAY, greyish black, soft, fine grain.	1	1	1	2							
	10.00-16.00 m		SPT		CLAY, dark grey, soft to firm.	2	1	1	3							
	16.00-18.00 m		SPT		CLAY, blackish dark grey, firm.	1	1	1	2							
	18.00-20.00 m		SPT		CLAY, greyish black, stiff to very stiff.	1	2	2	4							
			SPT			2	2	3	5							
			SPT			5	7	9	16							
			SPT			4	6	8	14							

November 12, 2019

-12.50 m (Rata - rata)

BORING LOG

BH - 2

Depth : 40.00 m

Project : Sri Ratu Mall
 Location : Jalan Pemuda No. 35 - Semarang
 Client : -

Date Started : November 12, 2019
 Date Finished : November 16, 2019
 Sheet : 2/2

Boring Method : Rotary Core Drilling
 Boring Machine : TDC

Bor Master : Andri
 Logged by : Adiansah
 Checked by : AM

X : 435980
 Y : 9229326
 Elevation :
 GWL : -12.50 m

DATE	DEPTH (m)	GWL	UDS/SPT	SYMBOL	SOIL DESCRIPTION	STANDARD PENETRATION TEST													
						N1	N2	N3	N	N SPT Graph									
						15	15	15		0	10	20	30	40	50				
November 14, 2019	21				20.00-23.00 m CLAY, greyish black, stiff to very stiff.	4	6	8	14										
	22		SPT			6	9	10	19										
	23																		
	24		SPT		23.00-26.00 m CLAY, greysih black, stiff.	4	7	8	15										
	25																		
	26		SPT			3	6	7	13										
	27				26.00-28.00 m Gravelly CLAY, black, stiff to very stiff.														
	28		SPT			9	13	11	24										
	29				28.00-30.00 m CLAY, blackish brown, very stirr to hard.														
	30		SPT			9	16	32	48										
	31				30.00-31.50 m Sandy CLAY, light brown, hard.														
	32		SPT			12	9	13	22										
	33				31.50-34.00 m CLAY, black, very stiff to very hard.														
	34		SPT			15	25	25/5	>50										
35				34.00-35.00 m SAND, black, very dense, fine grain.															
36		SPT			22	23	26	49											
37				35.00-37.50 m Gravelly SAND, black, dense.															
38		SPT			19	24	26/14	>50											
39				37.50-40.00 m Gravelly Sandy CLAY, dark grey, very hard.															
40		SPT			16	50/14		>50											

BORING LOG

BH - 3

Depth : 40.00 m

Object : Sri Ratu Mall
 Location : Jalan Pemuda No. 35 - Semarang
 Sheet : 1/2
 Date Started : November 18, 2019
 Date Finished : November 21, 2019
 Boring Method : Rotary Core Drilling
 Boring Machine : TDC
 Drilling Master : Andri
 Logged by : Adiansah
 Checked by : AM
 X : 435949
 Y : 9229350
 Elevation :
 GWL : -13.00 m

DEPTH (m)	GWL	UDS/SPT	SYMBOL	SOIL DESCRIPTION	STANDARD PENETRATION TEST												
					N1	N2	N3	N	N SPT Graph								
					15	15	15		0	10	20	30	40	50			
1				0.00-1.50 m Gravelly CLAY, red, containing with sand, fine grain.				0									
2		SPT		1.50-5.50 m Sandy CLAY, dark grey, firm.	1	2	2	4									
3																	
4		SPT		5.50-9.00 m CLAY, dark grey, soft.	2	2	4	6									
5																	
6		SPT		9.00-13.00 m CLAY, dark grey, soft, containing with clamshell.	1	1	1	2									
7																	
8		SPT		13.00-17.50 m CLAY, blackish grey, soft to firm	1	1	1	2									
9																	
10		SPT		17.50-20.00 m CLAY, dark brown, stiff to very stiff.	1	1	1	2									
11																	
12		SPT			1	1	1	2									
13																	
14		SPT			1	1	1	2									
15																	
16		SPT			2	2	3	5									
17																	
18		SPT			4	5	6	11									
19																	
20		SPT			7	8	10	18									

-13.00 m (Rata - rata)

BORING LOG

BH - 3

Depth : 40.00 m

Project : Sri Ratu Mall
 Location : Jalan Pemuda No. 35 - Semarang
 Client : -
 Boring Method : Rotary Core Drilling
 Boring Machine : TDC
 Operator Master : Andri
 Logged by : Adiansah
 Checked by : AM
 X : 435949
 Y : 9229350
 Elevation :
 GWL : -13.00 m

DATE	DEPTH (m)	GWL	UDS/SPT	SYMBOL	SOIL DESCRIPTION	STANDARD PENETRATION TEST											
						N1	N2	N3	N	N SPT Graph							
						15	15	15		0	10	20	30	40	50		
NOVEMBER 15, 2019	21				20.00-22.00 m CLAY, dark brown, stiff to very stiff.	7	8	10	18								
	22		SPT			4	6	8	14								
	23				22.00-24.00 m CLAY, blackish grey, stiff.												
	24		SPT			4	5	8	13								
	25				24.00-25.00 m CLAY, dark brown, stiff.												
	26		SPT		25.00-26.00 m CLAY, dark grey, stiff.	9	8	9	17								
	27				26.00-27.50 m CLAY, light brown, very stiff.												
	28		SPT		27.50-29.00 m CLAY, dark grey, very stiff.	6	8	11	19								
	29																
	30		SPT		29.00-32.00 m Sandy CLAY, blackish grey, hard.	15	21	14	35								
	31																
	32		SPT			8	12	12	24								
	33				32.00-34.50 m CLAY, dark grey, very stiff to hard.												
	34		SPT			11	21	25	46								
	35																
	36		SPT		34.50-40.00 m Sandy CLAY, dark grey, hard to very hard.	14	15	30	45								
	37																
	38		SPT			16	27	23	50								
	39																
	40		SPT			8	26	24/13	>50								

DATA UJI BEBAN STATIS AKSIAL TEKAN

L-3





RECORD OF PILE TEST

Project : QUEEN CITY MALL
 Test Pile No. : BP. 718. Location : GEMARANG.
 Dated Installed : 15 DECEMBER 2020 Date of Testing : 13-01-2021.
 Size of Pile : Ø 60 Cm
 Working Load : 175 Tons Test Load : 350 (200%) Tons
 Length of Pile : 37.9 M Ground Level : _____ M
 Description of Test : Axial Test / Lateral Test / Tension Test
 Kentledge System / Reaction System

Date / Time	Test Load (Tons)	SETTLEMENT / MOVEMENT READINGS (MM)				LEVEL READ		Average Settlement / Movement (MM)
		Dial No. 1	Dial No. 2	Dial No. 3	Dial No. 4	Scale A	Scale B	
		0	0	0	0	0.25	0.25	
19 20	25%	0.78	0.80	0.70	1.14	0.25	0.25	0.85
30	43.75T	0.78	0.80	0.70	1.14	0.25	0.25	0.85
40	87.5PSI	0.78	0.80	0.70	1.14	0.25	0.25	0.85
50		0.78	0.80	0.70	1.14	0.25	0.25	0.85
20 00		0.78	0.80	0.70	1.14	0.25	0.25	0.85
10		0.78	0.80	0.70	1.14	0.25	0.25	0.85
20		0.78	0.80	0.70	1.14	0.25	0.25	0.85
22	50%	1.98	2.13	2.92	2.14	24.62	25.28	2.29
32	87.50T	1.98	2.13	2.92	2.14	24.56	25.28	2.29
42	1.70250	1.98	2.13	2.92	2.14	24.56	25.28	2.29
52	.951	1.98	2.13	2.92	2.14	24.56	25.28	2.29
21 02		1.98	2.13	2.92	2.14	24.56	25.28	2.29
12		1.98	2.13	2.92	2.14	24.56	25.28	2.29
22		1.98	2.13	2.92	2.14	24.96	25.28	2.29
23	25%	1.36	1.45	1.25	1.14	24.54	25.12	1.30
33	43.75T	1.36	1.45	1.25	1.14	24.54	25.12	1.30
43	87.5PSI	1.36	1.45	1.25	1.14	24.54	25.12	1.30
44	0%	0.19	0.20	0.12	0.12	24.76	25.09	0.16
54		0.10	0.10	0.05	0.04	24.79	24.94	0.08
22 04		0.09	0.09	0.05	0.04	24.79	24.94	0.07
14		0.09	0.09	0.05	0.04	24.79	24.94	0.07
24		0.05	0.05	0.05	0.04	24.79	24.94	0.04
34		0.04	0.04	0.05	0.03	24.79	24.94	0.04
44		0.03	0.03	0.04	0.02	24.79	24.94	0.03

Date / Time	Test Load (Tons)	SETTLEMENT / MOVEMENT READINGS (MM)				LEVEL READ		Average Settlement / Movement (MM)
		Dial No. 1	Dial No. 2	Dial No. 3	Dial No. 4	Scale A	Scale B	
22.46	50%	2.03	2.15	1.90	1.26	24.55	25.15	1.84
50	87.50T.	2.03	2.15	1.90	1.26	24.55	25.15	1.84
23.06	1703.50	2.03	2.16	1.91	1.26	24.55	25.15	1.84
	PSI							
08	75%	3.09	3.50	3.42	3.56	24.44	25.43	3.40
18	131.25.	3.10	3.53	3.49	3.56	24.44	25.43	3.41
28	255.25.	3.14	3.55	3.48	3.56	24.44	25.43	3.43
38	PSI	3.15	3.56	3.49	3.56	24.44	25.43	3.44
48		3.17	3.59	3.52	3.56	24.44	25.43	3.46
58		3.18	3.60	3.52	3.57	24.44	25.43	3.47
00.08		3.20	3.62	3.53	3.57	24.44	25.43	3.48
10	100%	5.82	5.41	4.37	4.05	24.38	25.43	5.13
20	175.00T	5.85	5.45	4.43	4.07	24.38	25.43	5.17
30	340.01	5.87	5.47	4.45	4.08	24.38	25.43	5.19
40	PSI	5.90	5.50	4.48	5.08	24.38	25.43	5.21
50		5.91	5.52	4.50	5.10	24.38	25.43	5.26
00.08		5.92	5.53	4.51	5.11	24.38	25.43	5.27
10		5.92	5.53	4.51	5.12	24.38	25.43	5.27
11	75%	5.17	4.75	3.75	4.88	24.38	25.27	4.64
21	131.25T	5.17	4.74	3.75	4.88	24.38	25.27	4.64
31	255.25	5.16	4.73	3.73	4.86	24.38	25.27	4.62
	PSI							
32	50%	3.88	3.24	3.04	3.85	24.41	25.17	3.51
42	87.50T.	3.86	3.22	3.04	3.84	24.41	25.17	3.49
52	1703.50	3.84	3.20	3.02	3.81	24.41	25.17	3.47
	PSI							
53	0%	1.37	0.51	0.62	0.62	24.67	25.42	0.78
02.02		1.21	0.36	0.42	0.45	24.67	25.42	0.61
12		1.18	0.33	0.40	0.43	24.67	25.42	0.59
22		1.15	0.25	0.38	0.40	24.67	25.42	0.52
32		1.12	0.23	0.35	0.37	24.67	25.42	0.51
42		0.98	0.20	0.21	0.22	24.67	25.42	0.40
52		0.97	0.18	0.18	0.19	24.67	25.42	0.38

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Date / Time	Test Load (Tons)	SETTLEMENT / MOVEMENT READINGS (MM)				LEVEL READ		Average Settlement / Movement (MM)	
		Dial No. 1	Dial No. 2	Dial No. 3	Dial No. 4	Scale A	Scale B		
02	50%	2.71	2.31	2.17	2.23	24.47	25.65	2.34	
03	87.50T	2.74	2.35	2.18	2.23	24.47	25.65	2.38	
	1703.50	2.74	2.35	2.18	2.23	24.47	25.65	2.38	
	PSI								
17	100%	5.90	5.50	4.42	4.98	24.47	25.64	5.20	
27	175.00T	5.91	5.52	4.43	4.98	24.47	25.64	5.21	
37	340.01	5.93	5.54	4.45	4.99	24.47	25.64	5.23	
	PSI								
39	125%	7.57	7.43	8.01	7.70	24.38	26.09	7.68	
49	218.75T	7.62	7.43	8.05	7.73	24.38	26.09	7.71	
59	425.8.78	7.68	7.50	8.10	7.78	24.38	26.09	7.76	
04	07	PSI	7.73	7.56	8.16	7.82	24.38	26.09	7.82
19	175.00	7.75	7.58	8.18	7.84	24.38	26.09	7.84	
29		7.78	7.60	8.21	7.87	24.38	26.09	7.86	
39		7.78	7.61	8.23	7.89	24.38	26.09	7.88	
41	150%	9.53	9.54	10.27	8.46	24.31	26.24	9.46	
51	262.50T	9.71	9.69	10.29	8.48	24.31	26.24	9.55	
05	01	5110.51	9.78	9.70	10.37	8.49	24.31	26.24	9.58
11	PSI	9.83	9.80	10.45	8.51	24.31	26.24	9.69	
21		9.85	9.82	10.47	8.53	24.31	26.24	9.67	
31		9.87	9.84	10.49	8.55	24.31	26.24	9.68	
41		9.90	9.86	10.51	8.57	24.31	26.24	9.71	
								reading	
42	125%	9.37	9.22	9.81	8.46	24.18	26.04	9.22	
52	218.75T	9.36	9.18	9.81	8.41	24.18	26.04	9.19	
06	02	425.878	9.36	9.18	9.81	8.41	24.18	26.04	9.17
	PSI							PT. CPS	
03	100%	8.42	9.13	9.68	7.46	24.26	26.47	8.67	
13	175.00T	8.38	9.10	9.80	7.48	24.26	26.47	8.42	
23	340.01	8.38	9.10	9.80	7.42	24.26	26.47	8.42	
	PSI								
24	50%	5.74	6.13	6.57	5.56	24.16	26.60	6.00	
34	87.50T	5.66	6.07	6.53	5.52	24.16	26.60	5.93	
44	1703.50	5.64	6.03	6.52	5.52	24.16	26.60	5.93	
	PSI								

Date / Time	Test Load (Tons)	SETTLEMENT / MOVEMENT READINGS (MM)				LEVEL READ		Average Settlement / Movement (MM)
		Dial No. 1	Dial No. 2	Dial No. 3	Dial No. 4	Scale A	Scale B	
6. 45	0%	2. 71	2. 87	3. 66	2. 83	24. 55	25. 66	3. 02
55		2. 58	2. 67	3. 42	2. 68	24. 55	25. 66	2. 81
7. 05		2. 56	2. 64	3. 37	2. 66	24. 55	25. 66	2. 81
15		2. 55	2. 62	3. 36	2. 65	24. 55	25. 66	2. 79
25		2. 55	2. 60	3. 34	2. 64	24. 55	25. 66	2. 78
35		2. 55	2. 59	3. 31	2. 62	24. 55	25. 66	2. 77
45		2. 53	2. 57	3. 28	2. 60	24. 55	25. 66	2. 74
47	50%	5. 47	4. 66	4. 15	3. 53	24. 36	25. 50	4. 45
57	87.50T	5. 49	4. 70	4. 20	3. 53	24. 36	25. 50	4. 48
8. 07	1709.50 Psi.	5. 50	4. 71	4. 24	3. 54	24. 36	25. 50	4. 50
09	100%	7. 01	7. 63	7. 37	6. 39	24. 46	25. 50	7. 10
19	175.00T	7. 07	7. 69	7. 44	6. 40	24. 46	25. 50	7. 15
29	3407.01 Psi	7. 10	7. 73	7. 48	6. 42	24. 46	25. 50	7. 18
31	150%	9. 77	10. 74	8. 48	9. 88	24. 23	25. 18	9. 72
41	262.50T	9. 88	10. 84	8. 48	9. 75	24. 23	25. 18	9. 79
51	540.51 Psi	9. 94	10. 90	8. 51	9. 97	24. 23	25. 18	9. 83
53	175%	11. 41	11. 97	12. 54	10. 66	24. 38	25. 60	11. 94
9. 07	306.25T	11. 61	11. 69	13. 74	11. 82	24. 38	25. 60	12. 21
13	5.96226	11. 67	11. 77	13. 79	11. 88	24. 31	25. 73	12. 27
23	Psi	11. 74	11. 82	13. 85	11. 92	24. 31	25. 78	12. 33
33		11. 78	11. 86	13. 91	11. 98	24. 31	25. 78	12. 38
43		11. 83	11. 91	13. 95	12. 02	24. 31	25. 78	12. 43
53		11. 86	11. 94	13. 85	12. 06	24. 31	25. 78	12. 45
57	200%	13. 64	14. 98	15. 37	13. 39	24. 34	25. 32	14. 74
10. 05	350T	13. 80	15. 10	15. 52	13. 39	24. 34	25. 32	14. 75
15	6814G1	13. 91	15. 18	15. 60	13. 39	24. 20	25. 52	14. 52
25		13. 98	15. 25	15. 66	13. 39	24. 17	25. 58	14. 57
35		14. 06	15. 31	15. 71	13. 39	24. 13	25. 63	14. 62
45		14. 11	15. 35	15. 76	13. 39	24. 13	25. 63	14. 66
55		14. 16	15. 40	15. 81	13. 39	24. 11	25. 65	14. 69
11. 05		14. 20	15. 44	15. 85	13. 41	24. 11	25. 65	14. 72
15		14. 24	15. 45	15. 87	13. 41	24. 11	25. 65	14. 75

Date / Time	Test Load (Tons)	SETTLEMENT / MOVEMENT READINGS (MM)				LEVEL READ		Average Settlement / Movement (MM)
		Dial No. 1	Dial No. 2	Dial No. 3	Dial No. 4	Scale A	Scale B	
11. 25		14. 25	15. 17	15. 91	13. 41	24. 10	25. 74	14. 68
35		14. 26	15. 49	15. 91	13. 41	24. 10	25. 74	14. 77
45		14. 27	15. 50	15. 92	13. 41	24. 10	25. 74	14. 78
55		14. 30	15. 52	15. 93	13. 41	24. 10	25. 74	14. 77
12. 55	200%	14. 35	15. 57	15. 94	13. 41	24. 07	25. 76	14. 81
13. 55		14. 37	15. 59	16. 02	13. 41	24. 07	25. 85	14. 85
14. 55		14. 43	15. 65	16. 05	13. 41	24. 04	25. 82	14. 88
15. 55		14. 50	15. 70	16. 10	13. 41	24. 04	25. 82	14. 93
16. 55		14. 50	15. 70	16. 10.	13. 41	24. 04	25. 92	14. 92
17. 55		14. 51	15. 72	16. 11	13. 41	24. 03	25. 92	14. 94
18. 55		14. 52	15. 73	16. 12	13. 41	24. 03	25. 92	14. 95
19. 55		14. 55	15. 74	16. 15	13. 41	24. 03	25. 92	14. 96
20. 55		14. 56	15. 75	16. 16	13. 41	24. 03	25. 92	14. 97
21. 55		14. 58	15. 77	16. 18	13. 41	24. 03	25. 92	14. 98
21. 56	150%	13. 82	14. 78	15. 01	12. 78	24. 85	26. 02	14. 09
22. 06	262.50 T	13. 81	14. 77	15. 01	12. 76	24. 85	26. 02	14. 08
16	510.51	13. 78	14. 75	15. 01	12. 74	24. 85	26. 02	14. 07
26	PSI	13. 77	14. 73	15. 01	12. 74	24. 85	26. 02	14. 06
36		13. 76	14. 72	15. 01	12. 74	24. 85	26. 02	14. 05
46		13. 74	14. 70	15. 01	12. 72	24. 85	26. 02	14. 04
56		13. 72	14. 67	15. 00	12. 70	24. 85	26. 02	14. 02
57	100%	11. 31	11. 80	12. 73	10. 99	24. 51	26. 31	11. 71
23. 07	175.00 T	11. 26	11. 75	12. 68	10. 94	24. 51	26. 31	11. 66
17	340.01	11. 25	11. 74	12. 67	10. 93	24. 51	26. 31	11. 65
27	PSI	11. 22	11. 72	12. 65	10. 91	24. 51	26. 31	11. 62
37		11. 20	11. 70	12. 65	10. 89	24. 51	26. 31	11. 62
47		11. 18	11. 67	12. 63	10. 87	24. 51	26. 31	11. 59
57		11. 16	11. 65	12. 61	10. 85	24. 51	26. 31	11. 57
58	50%	8. 25	8. 44	8. 99	7. 69	24. 15	25. 92	8. 59
00. 08	87.50 T	8. 21	8. 37	8. 91	7. 62	24. 15	25. 92	8. 53
18	170.50	8. 19	8. 35	8. 88	7. 60	24. 15	25. 92	8. 50
28	PSI	8. 17	8. 33	8. 86	7. 57	24. 15	25. 92	8. 49
38		8. 15	8. 31	8. 84	7. 55	24. 15	25. 92	8. 46
48		8. 13	8. 29	8. 81	7. 54	24. 15	25. 92	8. 44
58		8. 10	8. 27	8. 78	7. 51	24. 15	25. 92	8. 41

DATA UJI BEBAN DINAMIS

L-4



TARUMANEGARA Bumiayasa

QUEEN CITY

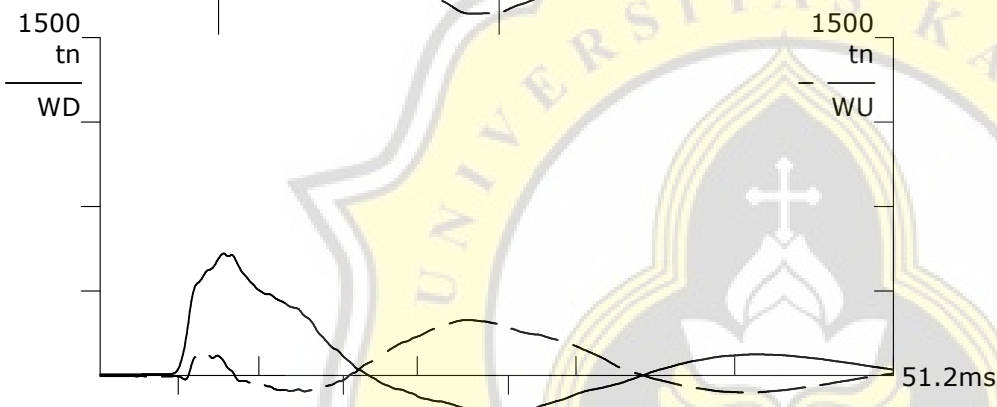
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PILE DRIVING ANALYZER ®

Version 2016.125

BP 539

BOREDPILE 1000, DROP HAMMER

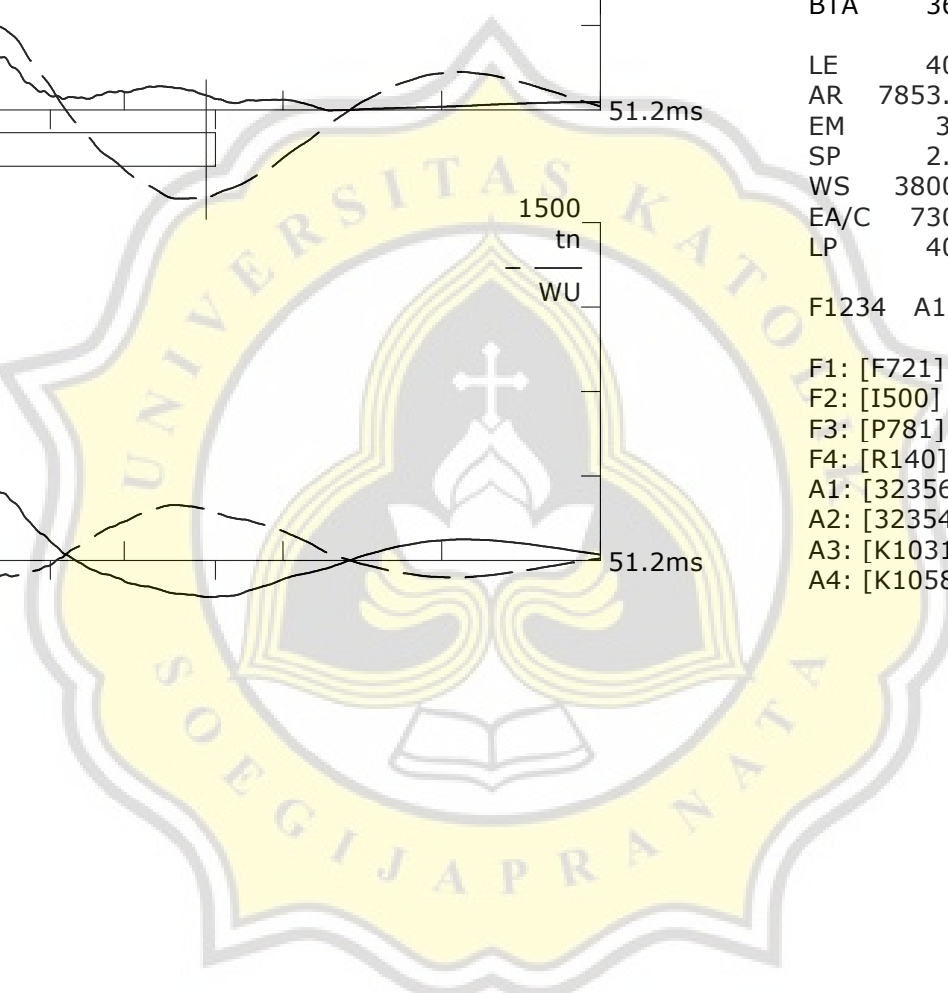


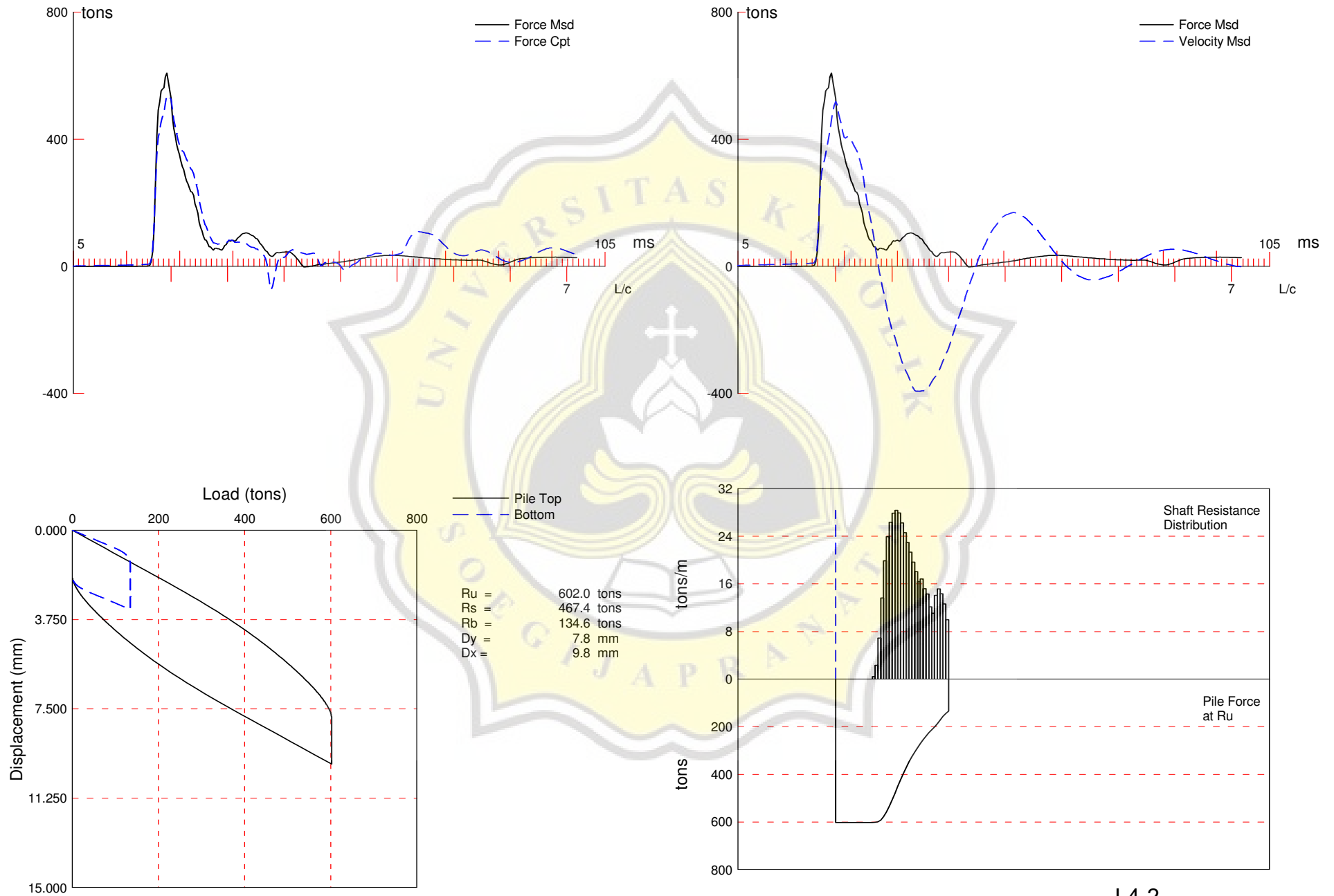
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 4/8/2021 4:12:28 PM
 RMX 447 tn
 RSU 797 tn
 STK 0.0 m
 EMX 1.84 tn-m
 CSX 7.6 MPa
 TSX 3.0 MPa
 DMX 5 mm
 DFN 2 mm
 BTA 36.0 (%)

LE 40.4 m
 AR 7853.98 cm²
 EM 353 t/cm²
 SP 2.40 t/m³
 WS 3800.0 m/s
 EA/C 730.4 tn-s/m
 LP 40.1 m

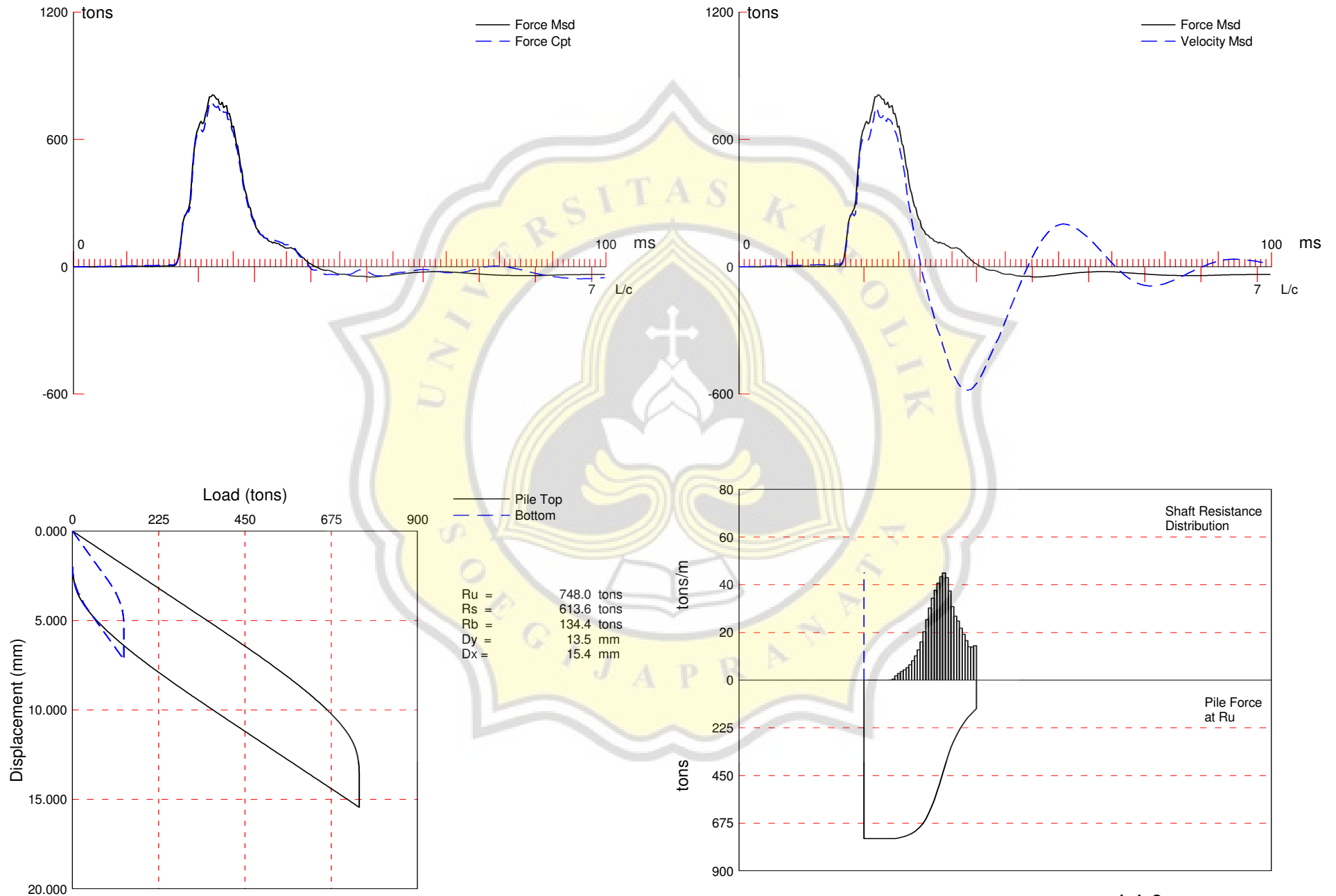
F1234 A1234

F1: [F721] 97.8 (1.15)
 F2: [I500] 98.1 (1.15)
 F3: [P781] 145.8 (1.15)
 F4: [R140] 149.7 (1.15)
 A1: [32356] 1070 g's/v (0.85)
 A2: [32354] 1190 g's/v (0.85)
 A3: [K10318] 350 mv/5000g's (0.85)
 A4: [K10583] 390 mv/5000g's (0.85)

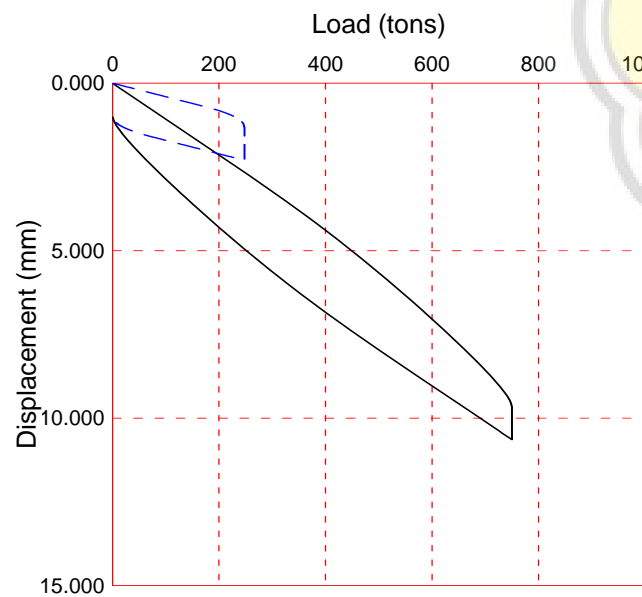
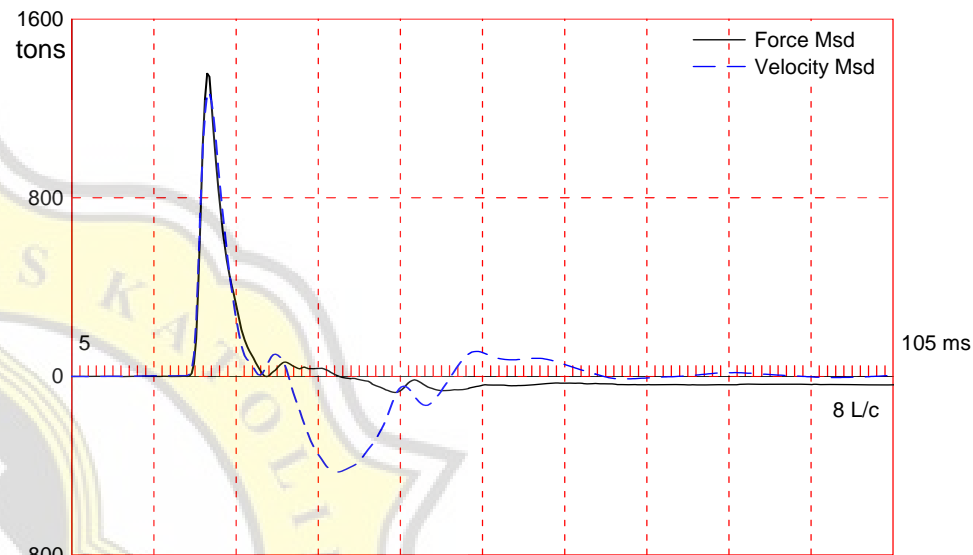
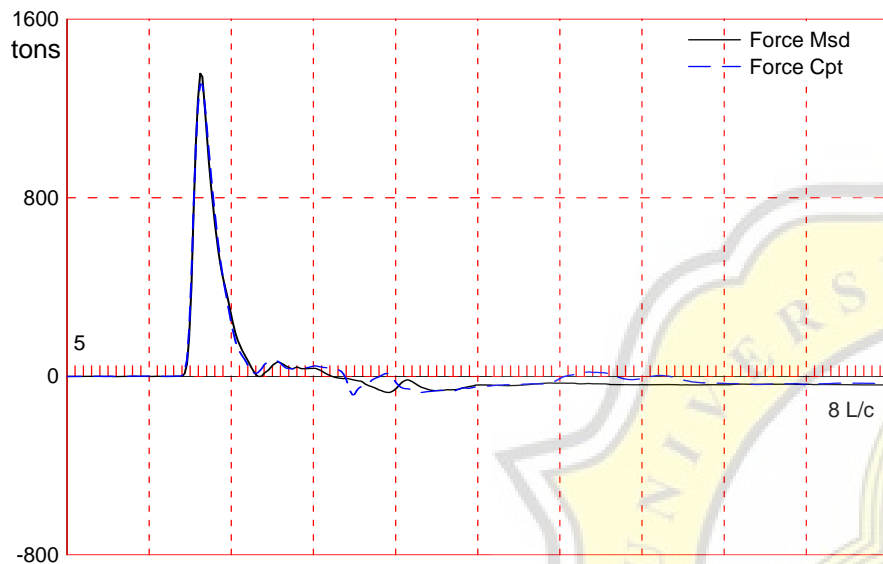




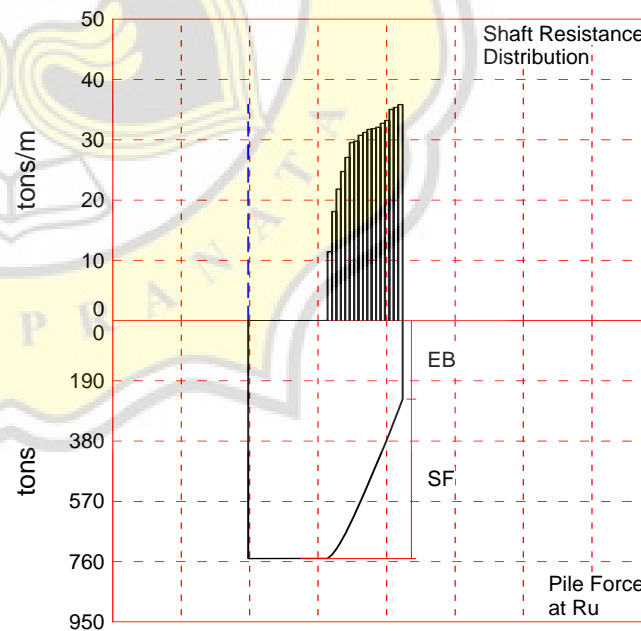
L4-2



L4-3

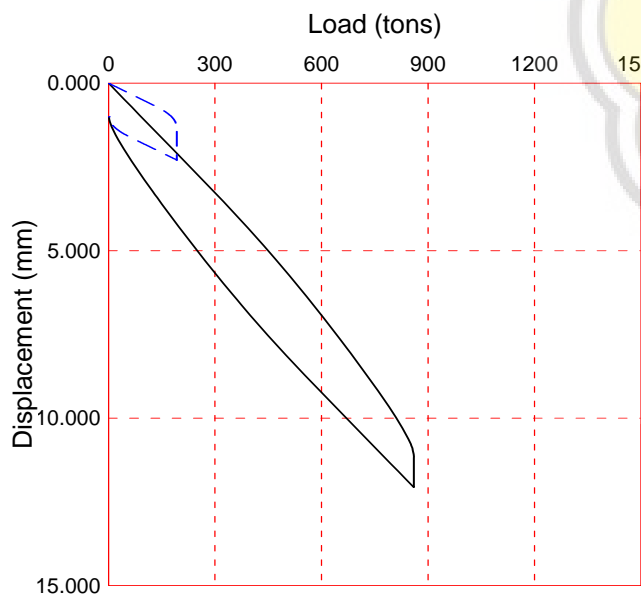
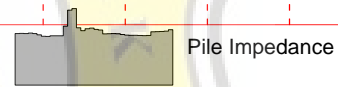
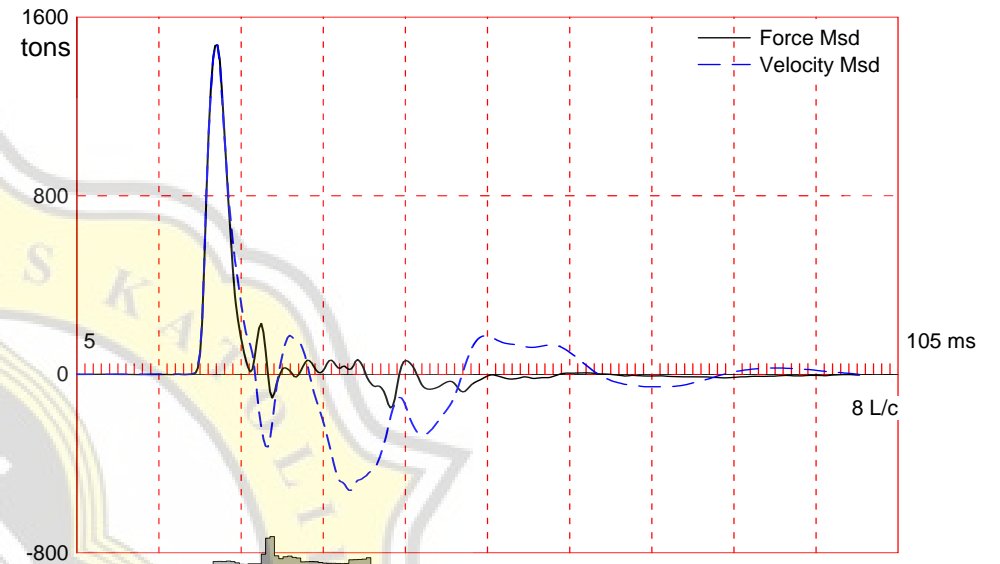
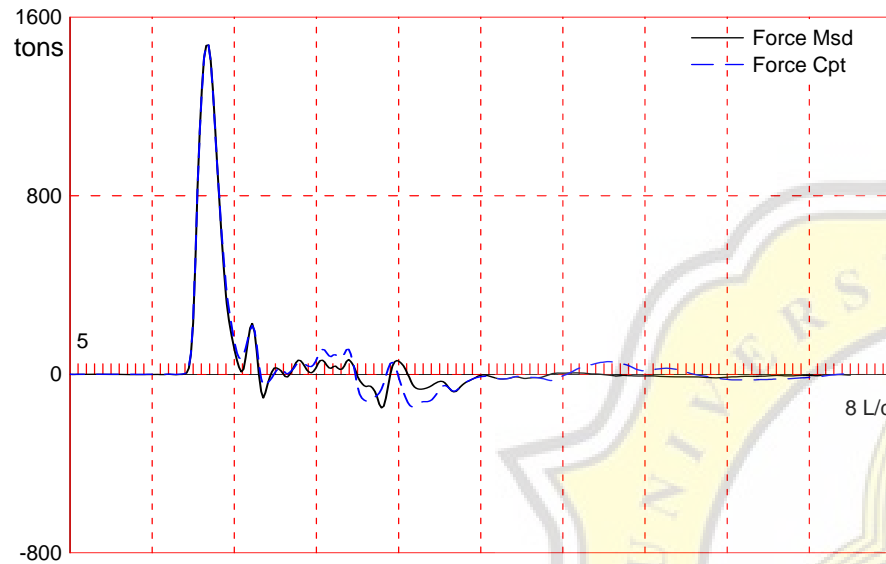


Pile Top
 Pile Bottom
 RU = 750 tons
 SF = 502 tons
 EB = 248 tons
 Dy = 9.646 mm
 Dx = 10.645 mm
 SET/BI = 1.000 mm

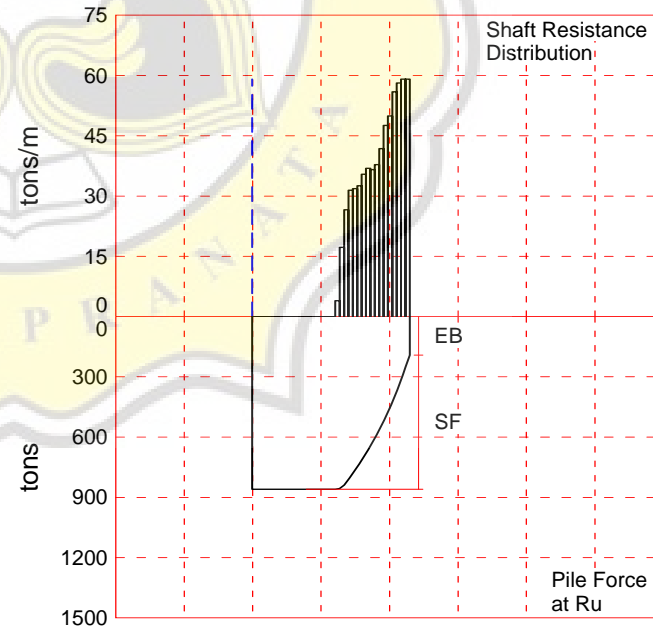


Length b. Sensors	35.7 m
Embedment	35.4 m
Top Area	0.79 m ²
End Bearing Area	0.79 m ²
Top Perimeter	3.14 m
Top E-Modulus	354 tons/cm ²
Top Spec. Weight	2.4 tons/m ³
Top Wave Spd.	3800 m/s
Overall W.S.	3798 m/s
Match Quality	3.36
Top Compr. Stress	0.2 tons/cm ²
Max Compr. Stress	0.2 tons/cm ²
Max Tension Stress	-0.03 tons/cm ²
Avg. Shaft Quake	1.000 mm
Toe Quake	1.000 mm
Avg. Shaft Smith Dpg.	1.17 s/m
Toe Smith Damping	1.31 s/m

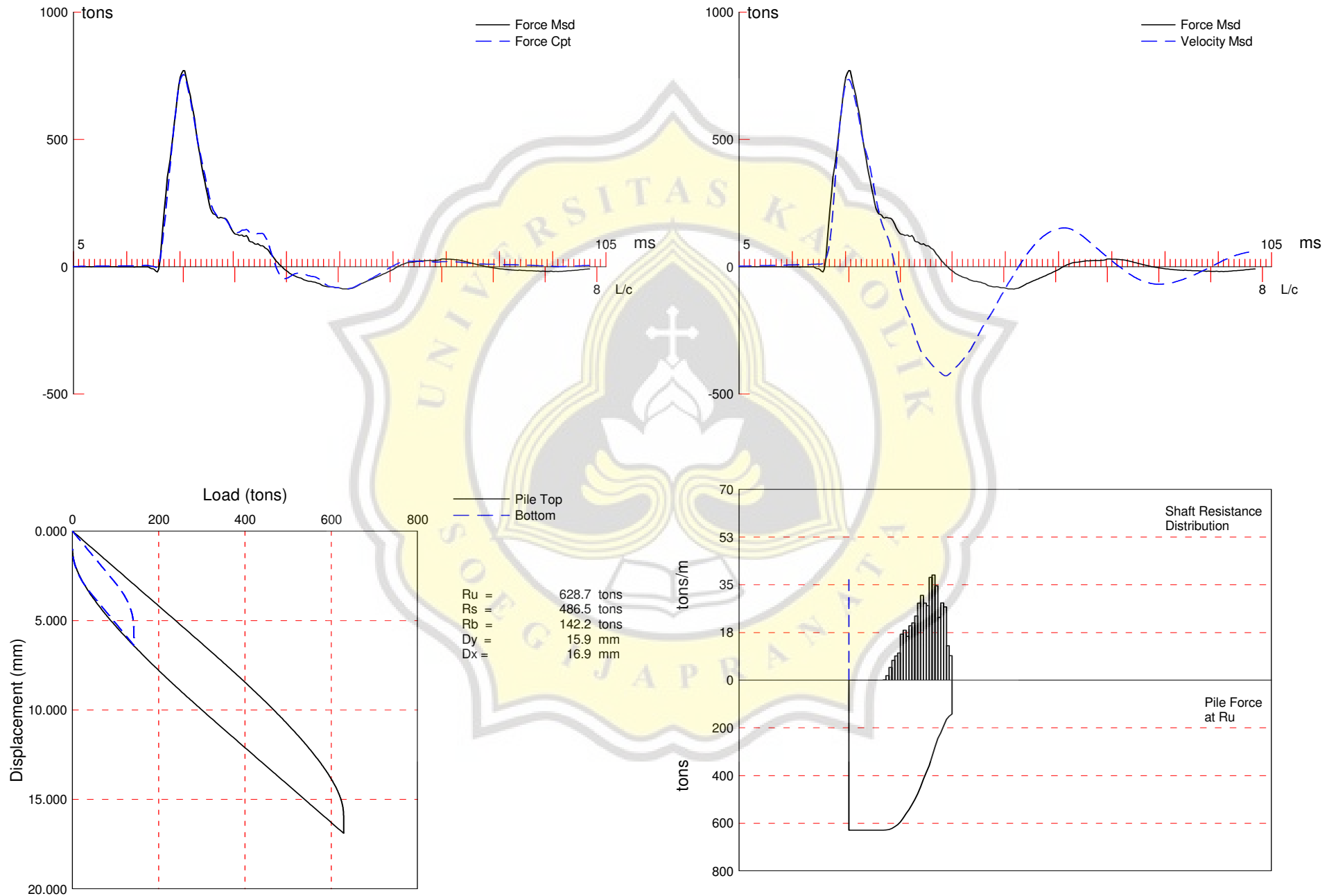
L4-4



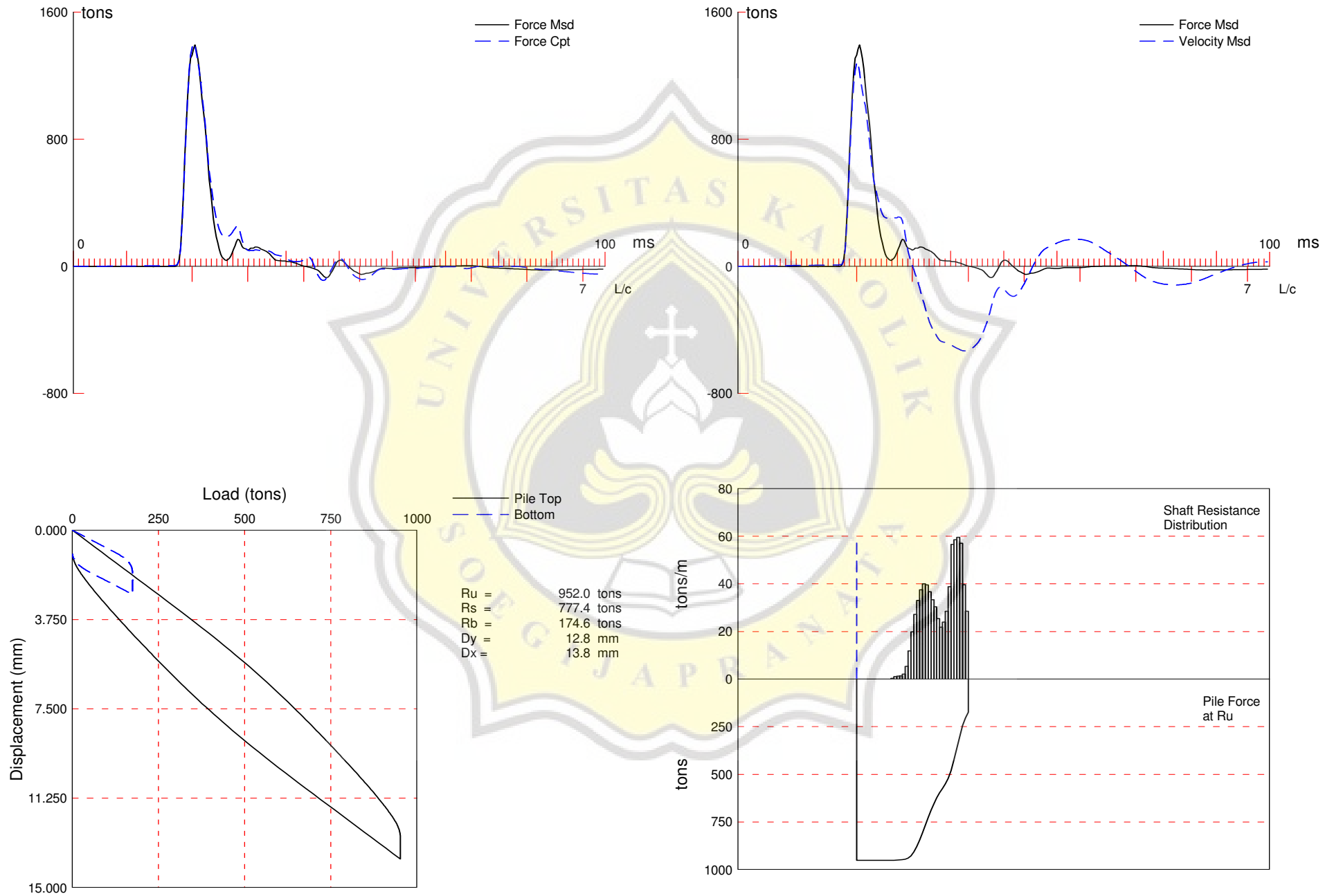
RU = 860 tons
 SF = 668 tons
 EB = 192 tons
 Dy = 11.079 mm
 Dx = 12.069 mm
 SET/BI = 1.000 mm

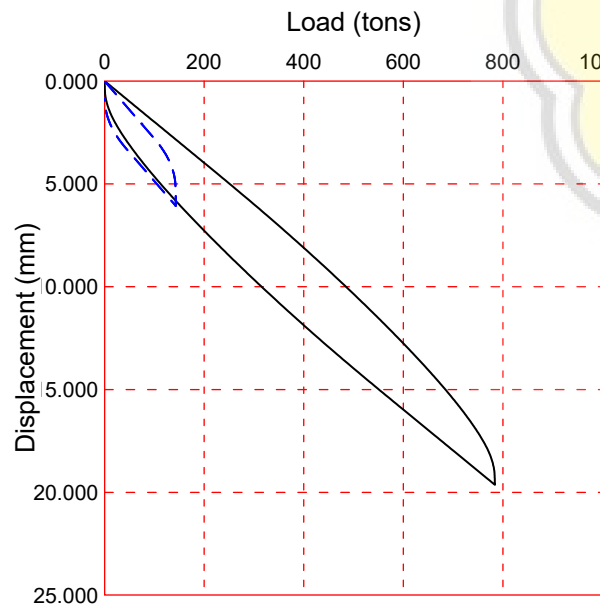
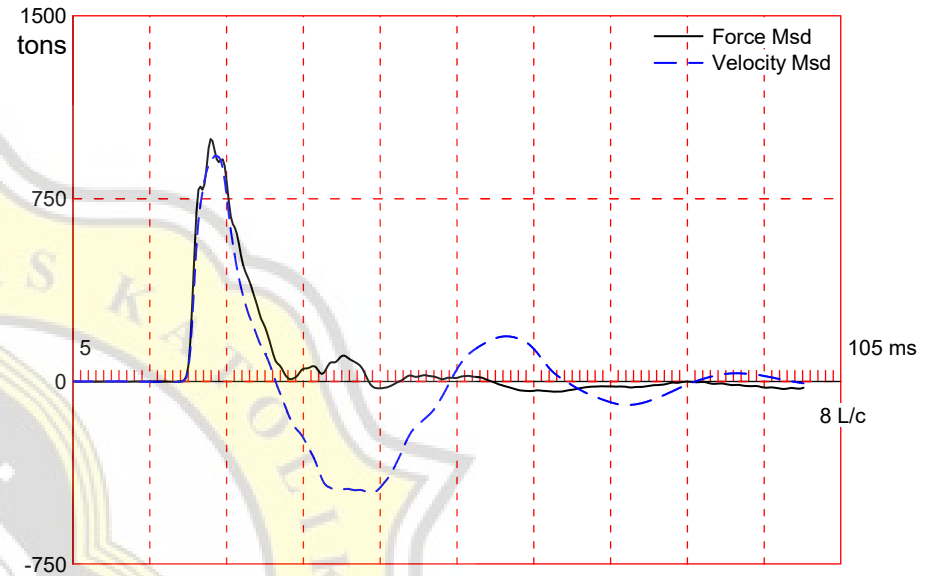
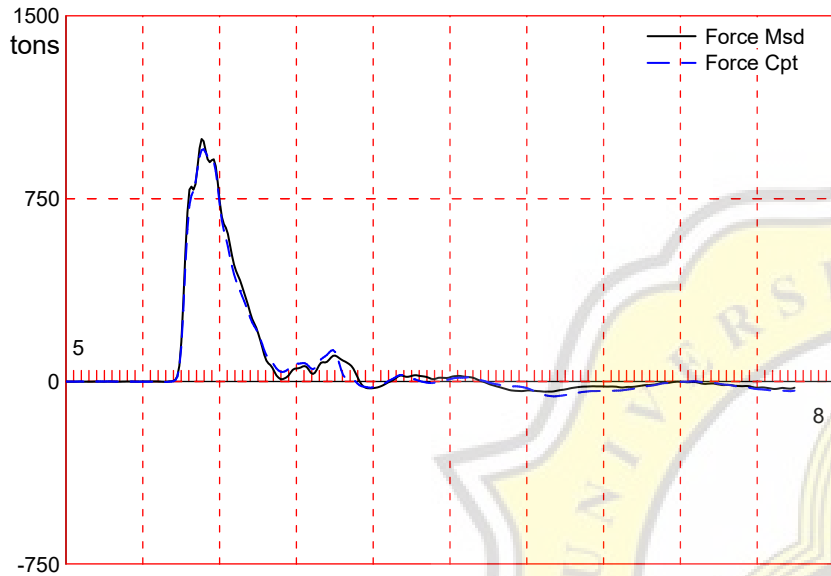


Length b. Sensors	36.3 m
Embedment	36.0 m
Top Area	0.79 m ²
End Bearing Area	0.79 m ²
Top Perimeter	3.14 m
Top E-Modulus	354 tons/cm ²
Top Spec. Weight	2.4 tons/m ³
Top Wave Spd.	3800 m/s
Overall W.S.	3781 m/s
Match Quality	4.05
Top Compr. Stress	0.2 tons/cm ²
Max Compr. Stress	0.2 tons/cm ²
Max Tension Stress	-0.04 tons/cm ²
Avg. Shaft Quake	1.000 mm
Toe Quake	1.000 mm
Avg. Shaft Smith Dpg.	1.19 s/m
Toe Smith Damping	1.31 s/m

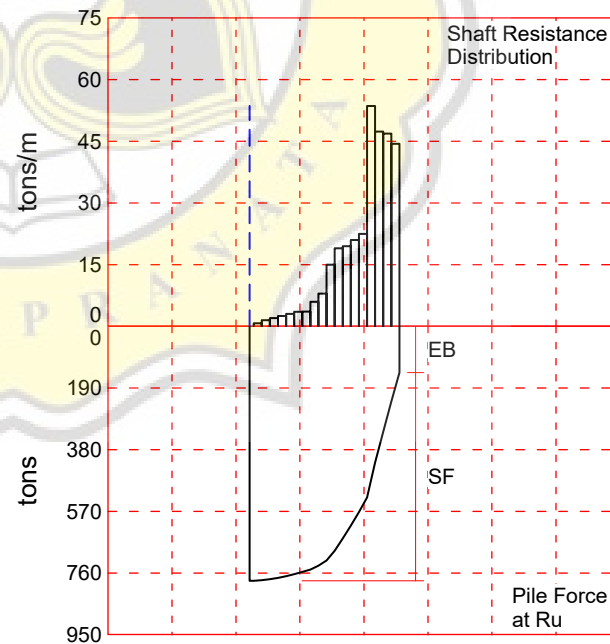


L4-6



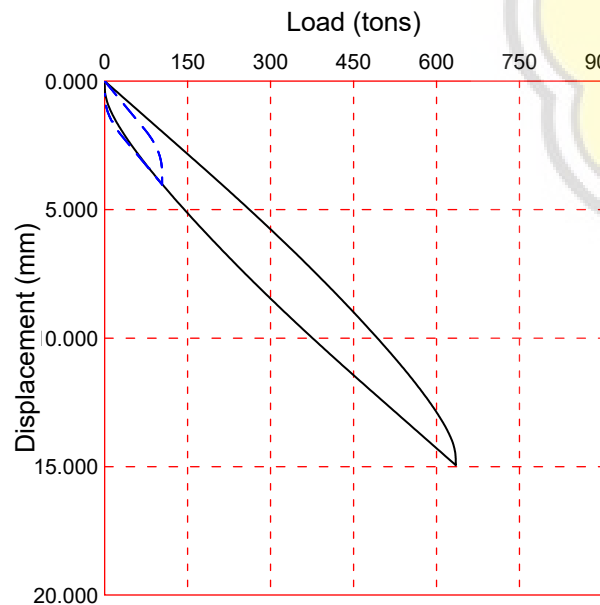
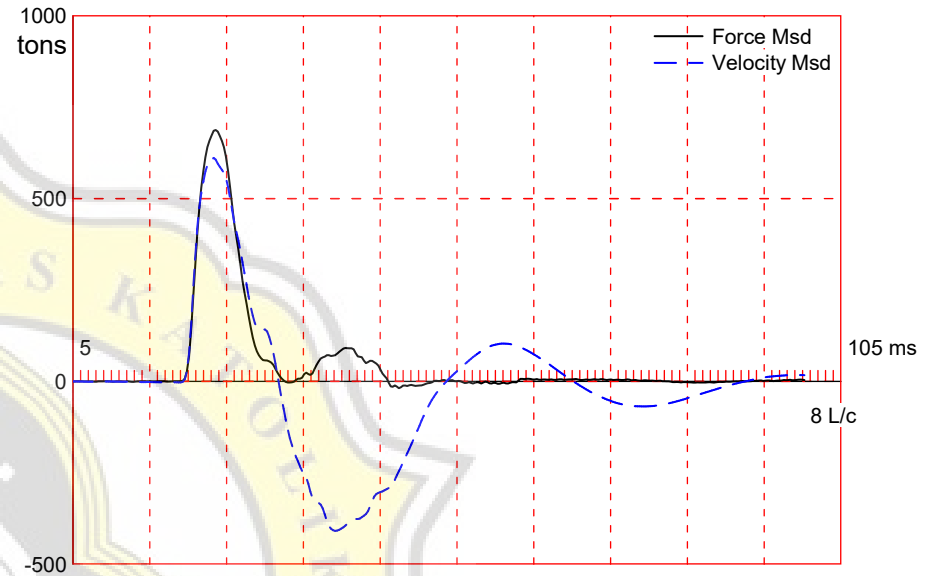
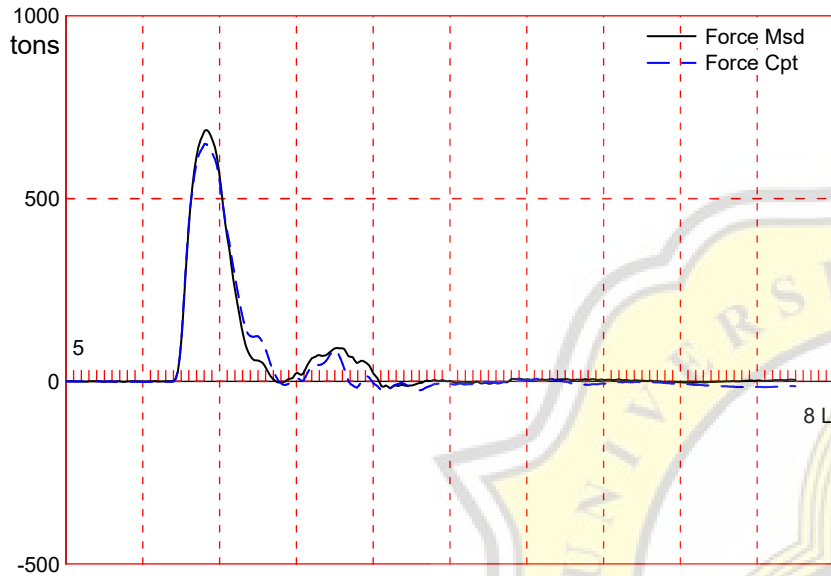


RU = 784 tons
 SF = 641 tons
 EB = 143 tons
 Dy = 19.542 mm
 Dx = 19.632 mm
 SET/BI = 0.100 mm

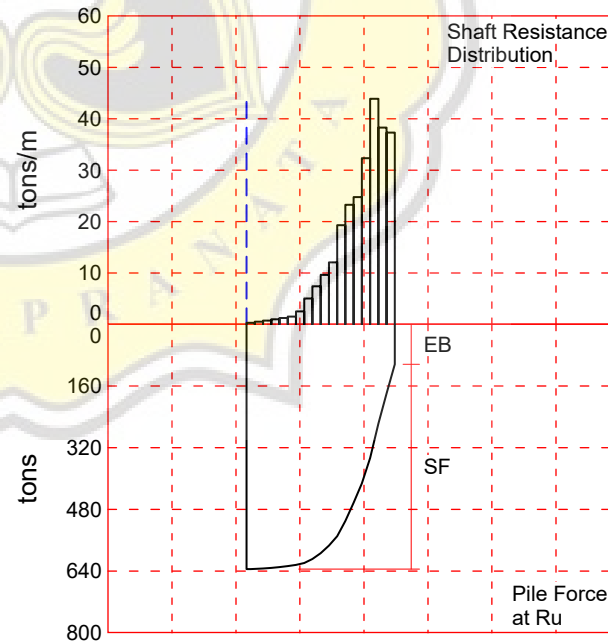


Length b. Sensors	37.0 m
Embedment	36.7 m
Top Area	0.50 m ²
End Bearing Area	0.50 m ²
Top Perimeter	2.51 m
Top E-Modulus	354 tons/cm ²
Top Spec. Weight	2.4 tons/m ³
Top Wave Spd.	3800 m/s
Overall W.S.	3795 m/s
Match Quality	3.31
Top Compr. Stress	0.2 tons/cm ²
Max Compr. Stress	0.2 tons/cm ²
Max Tension Stress	-0.04 tons/cm ²
Avg. Shaft Quake	4.584 mm
Toe Quake	4.000 mm
Avg. Shaft Smith Dpg.	1.00 s/m
Toe Smith Damping	1.31 s/m

L4-8



RU = 635 tons
 SF = 531 tons
 EB = 104 tons
 Dy = 14.855 mm
 Dx = 14.945 mm
 SET/BI = 0.100 mm



Length b. Sensors Embedment	36.6 m
Top Area	0.50 m ²
End Bearing Area	0.50 m ²
Top Perimeter	2.51 m
Top E-Modulus	354 tons/cm ²
Top Spec. Weight	2.4 tons/m ³
Top Wave Spd.	3800 m/s
Overall W. S.	3793 m/s
Match Quality	4.91
Top Compr. Stress	0.1 tons/cm ²
Max Compr. Stress	0.1 tons/cm ²
Max Tension Stress	-0.03 tons/cm ²
Avg. Shaft Quake	3.025 mm
Toe Quake	2.700 mm
Avg. Shaft Smith Dpg.	1.16 s/m
Toe Smith Damping	1.31 s/m

L4-9

PETA GEOLOGI

L-5





PEMERINTAH KOTA SEMARANG

RENCANA TATA RUANG WILAYAH KOTA SEMARANG TAHUN 2011 - 2031

PETA STRUKTUR GEOLOGI

- KETERANGAN**
- | | |
|-----------------------|-------------------------------|
| ADMINISTRASI | STRUKTUR GEOLOGI |
| — Batas Provinsi | ■ Batuan Breksi Sedimen Dasar |
| - - - Batas Kabupaten | ■ Batuan Sedimentasi |
| — Batas Kecamatan | ■ Breksi Vulkanik |
| - - - Batas Kelurahan | ■ Batuan Vulkanik |
| JALAN | ■ Endapan Permukaan Alluvium |
| — Arteri Primer | ■ Endapan Vulkanik |
| — Arteri Sekunder | ■ Gunung Ungaran |
| — Kolektor Primer | ■ Endapan Vulkanik |
| — Kolektor Sekunder | ■ Lahar Gunung |
| — Lokal | ■ Lapisan Marin |
| — Rel KA | |
| PERAIRAN | |
| — Sungai | |
| — Garis Pantai | |



SKALA

0 500 1000 1500 2000 2500 3000 Meter

ORIENTASI

N
W E

NO. PETA

HALAMAN

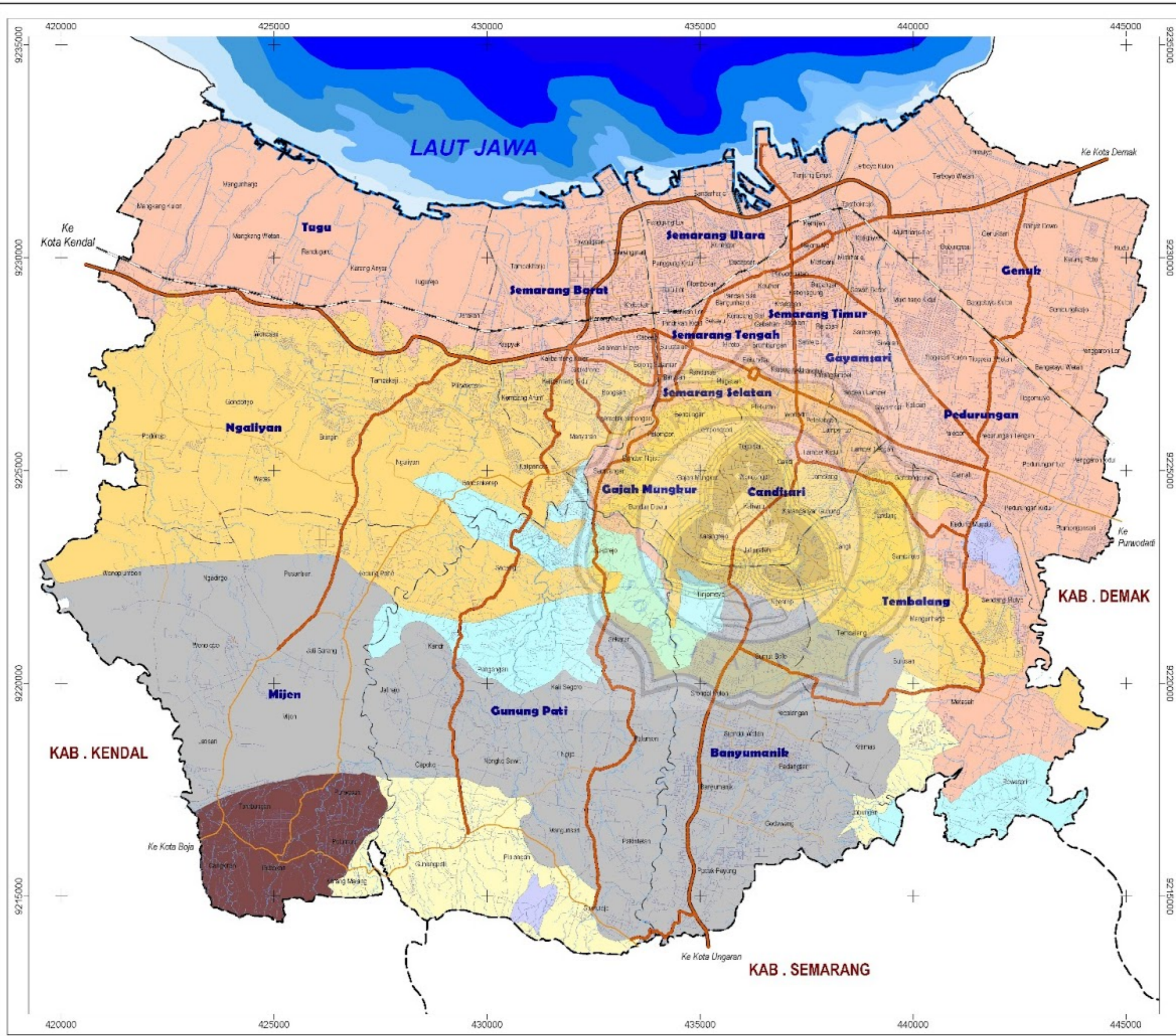
SUMBER :

PETA DASAR

- Foto Rupa Bumi (RSB) Kota Semarang Skala 1:25.000, BAKOSURTANAL Tahun 2001
- Citra Satelit Quikdip Kota Semarang Kecepatan 133 Meter, BAPPCOA Kota Semarang Tahun 2008
- Data Teknik Kota Semarang, BAPPCOA Kota Semarang Tahun 2009
- Sistem Koordinat, UTM Zone 48, Southern Hemisphere (WGS 1984, EPSG: 32748)

PETA TEMATIK

- Foto Geologi Teknik Lempur Semarang-Humpang Skala 1:100.000, Sedibyo dik Tahun 1967
- BAPPCOA Kota Semarang dan Badan Pertanahan Nasional Kota Semarang
- Web Site Atlas Geologi Skala 1:100.000, BAPPCOA Kota Semarang Tahun 2008





4.52% PLAGIARISM
APPROXIMATELY

Report #14304713

BAB 1 PENDAHULUAN Latar Belakang Bangunan bertingkat di Indonesia semakin banyak digunakan untuk berbagai keperluan, seperti perkantoran dan rumah sakit. Bangunan bertingkat sangat erat kaitannya dengan pembangunan perkotaan. Situasi ini merupakan jawaban yang wajar untuk peningkatan jumlah penduduk, kelangkaan lahan dan kenaikan harga tanah. Indonesia adalah negara kepulauan yang terdiri dari 17.508 pulau dengan lima pulau terbesar yaitu Sumatra, Jawa, Kalimantan, Sulawesi dan Papua serta tersebar di nusantara (Undang-Undang nomor 6, 1996). Wilayah yang terletak pada garis khatulistiwa mengakibatkan iklim tropika basah yang dapat mempermudah proses perubahan batuan menjadi tanah. Keragaman batuan pembentuk tanah membuat sifat dan jenis tanah yang terbentuk menjadi beragam (Subardja dkk, 2016). Keberagaman jenis tanah berpengaruh pada perencanaan pondasi suatu bangunan bertingkat. **8 9 40** Pondasi adalah bagian paling bawah dari bangunan yang meneruskan beban bangunan ke tanah atau batuan yang berada dibawahnya. **8 9 40 67** Terdapat dua