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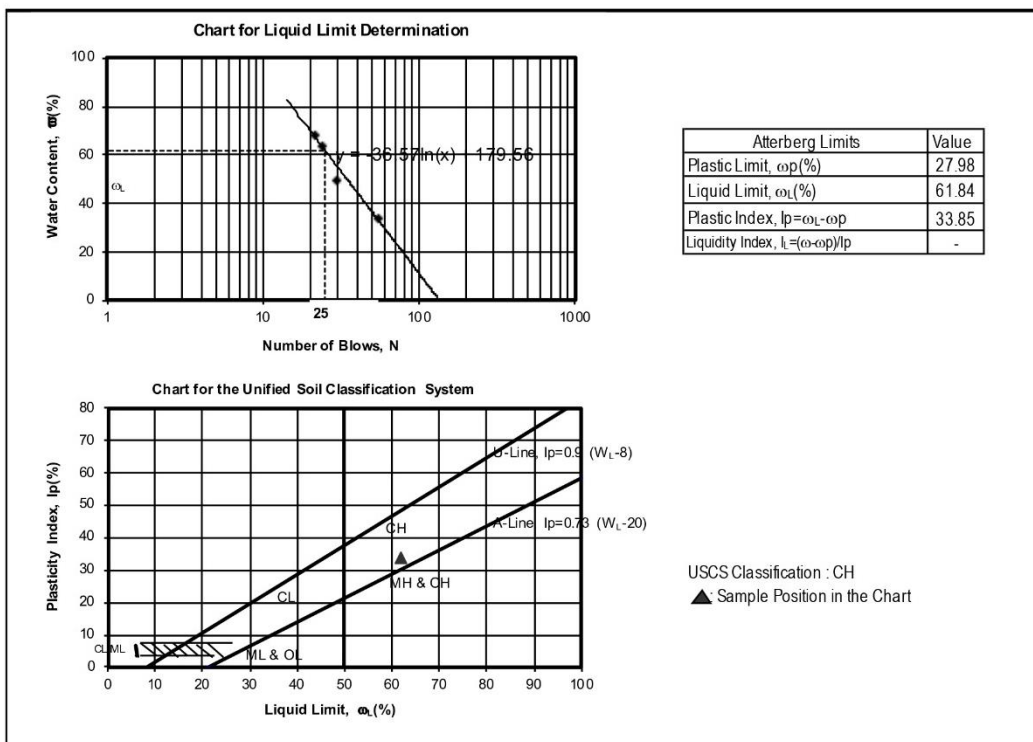
Lampiran 2 Data Hasil Pengujian *Unit Weight*

TEST RESULTS OF GENERAL PROPERTIES (Wet Density, Water Content, Dry Density, Porosity, & Degree of Saturation)											
PROJECT	: JEC-ORBITA										
LOCATION	: JL MESJID RAYA										
BORING NUMBER	: BH-2										
BORING DEPTH	Meter							TESTED BY : Firmansyah Yusuf			
TESTING METHOD	: ASTM D 2216-(98), D 2937-(71), AASHTO T100-71							DATE : Juni 2020			
Bore Hole No.	-	BH-2			BH-2			BH-2			KETERANGAN
Sample	-	1			2			3			
Sample Depth & Inclination	m	5,00 - 5,50			10,00 -10,50			15,00 - 15,50			
Ring / Container Number	-	1	2	2	1	2	3	1	2	3	
Weight of Ring, (1)	Gram	66.21	66.21	66.21	66.21	66.21	66.21	66.21	66.21	66.21	
Weight of Container, (2)	Gram	13.17	14.76	10.80	12.56	11.56	11.57	8.79	10.89	13.29	
Weight of Ring+Container+Wet Soil, (3)	Gram	191.80	193.57	194.50	175.67	170.96	173.93	168.64	171.47	173.64	
Weight of Wet Soil, (4)={(3)-(2)-(1)}	Gram	112.42	112.60	117.49	96.90	93.19	96.15	93.64	94.37	94.14	
Volume of Soil or Ring, (5)	cm <sup>3</sup>	62.34	62.34	62.34	62.34	62.34	62.34	62.34	62.34	62.34	
Weight of Container+Dry Soil, (6)	Gram	24.23	29.77	25.87	21.26	18.37	19.35	13.50	16.59	18.56	
Weight of Dry Soil, (7)={(6)-(2)}	Gram	11.06	15.01	15.07	8.70	6.81	7.78	4.71	5.70	5.27	
Weight of Water, (8)=(4)-(7)	Gram	2.62	3.65	3.87	2.24	1.43	1.55	0.80	1.41	0.94	
Specific Gravity, G <sub>s</sub>	-	2.648	2.648	2.648	2.708	2.708	2.708	2.716	2.716	2.716	
Volume of Dry Soil, (9)=(7)/G <sub>s</sub>	cm <sup>3</sup>	32.40	32.19	32.98	26.57	27.18	28.43	28.62	26.15	28.48	
Volume of Pore, (10)=(5)-(9)	cm <sup>3</sup>	29.94	30.15	29.36	35.78	35.16	33.91	33.72	36.19	33.86	
Wet Density, $\gamma_{wet} = (4)/(5)$	Gr/cm <sup>3</sup>	1.80	1.81	1.88	1.55	1.49	1.54	1.50	1.51	1.51	
Water Content, $w=(8)/(7)*100\%$	%	23.69	24.32	25.68	25.75	21.00	19.92	16.99	24.74	17.84	
Dry Density, $\gamma_d = \gamma_{wet}/(1+w)$	Gr/cm <sup>3</sup>	1.46	1.45	1.50	1.24	1.24	1.29	1.28	1.21	1.28	
Porosity, $n=(10)/(5)*100\%$	%	48.03	48.37	47.10	57.39	56.40	54.40	54.09	58.05	54.31	
Degree of Saturation, $S_r=(8)/(10)*100\%$	%	88.94	90.80	92.49	69.73	55.66	56.49	47.16	64.51	49.59	

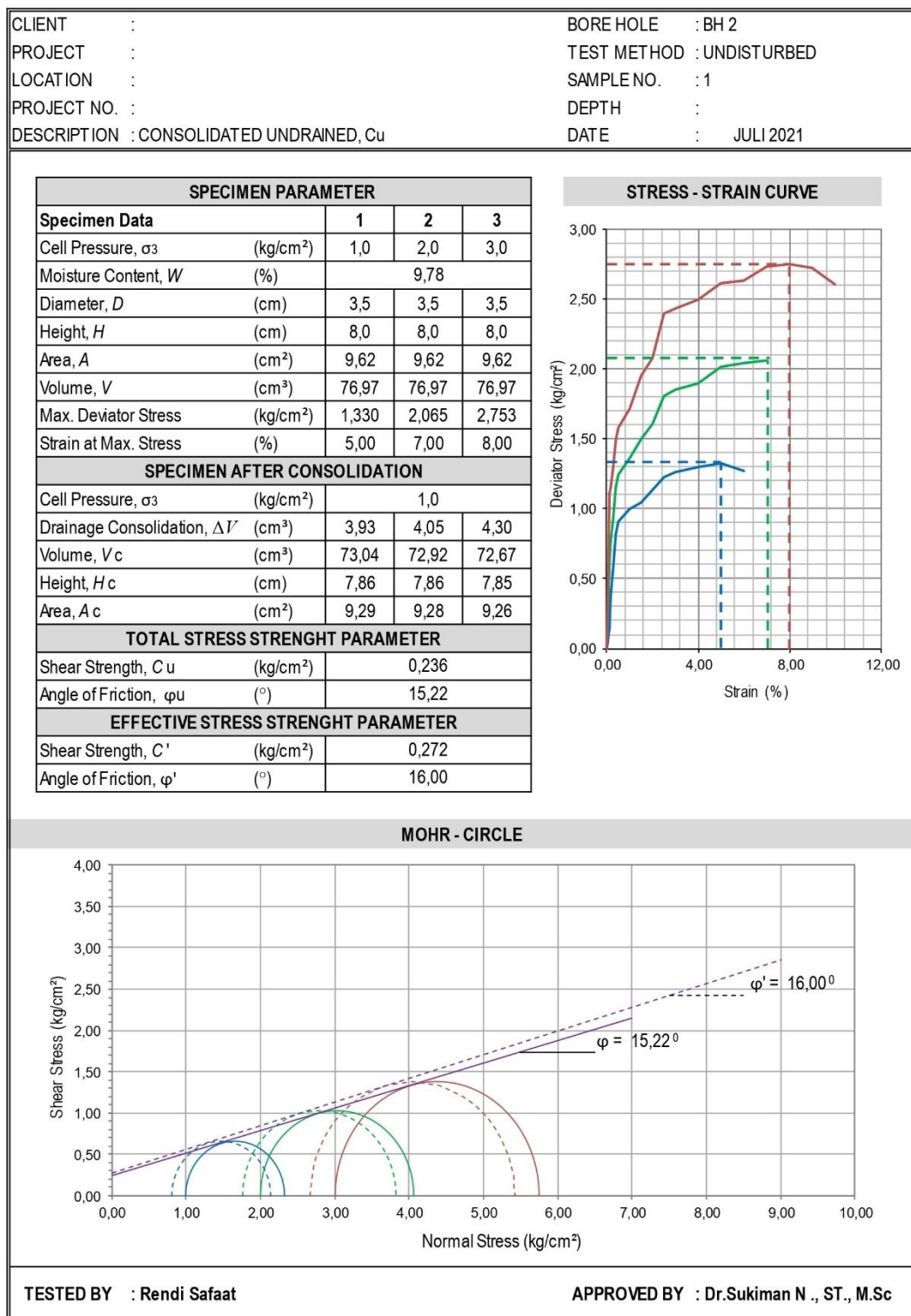
TEST RESULTS OF GENERAL PROPERTIES (Wet Density, Water Content, Dry Density, Porosity, & Degree of Saturation)				
PROJECT	: JEC-ORBITA			
LOCATION	: JL MESJID RAYA			
BORING NUMBER	: BH-2			
BORING DEPTH	Meter			: Firmansyah Yusuf
TESTING METHOD	: ASTM D 2216-(98), D 2937-(71), AASHTO T100-71		: Juni 2020	
Bore Hole No.	-	BH-2		
Sample	-	4		
Sample Depth & Inclination	m	20 - 20,50		
Ring / Container Number	-	1	2	2
Weight of Ring, (1)	Gram	66.21	66.21	66.21
Weight of Container, (2)	Gram	8.82	8.15	8.76
Weight of Ring+Container+Wet Soil, (3)	Gram	190.40	186.22	184.46
Weight of Wet Soil, (4)={(3)-(2)-(1)}	Gram	115.37	111.86	109.49
Volume of Soil or Ring, (5)	cm <sup>3</sup>	62.34	62.34	62.34
Weight of Container+Dry Soil, (6)	Gram	20.00	15.93	19.60
Weight of Dry Soil, (7)={(6)-(2)}	Gram	11.18	7.78	10.84
Weight of Water, (8)=(4)-(7)	Gram	3.90	3.03	3.53
Specific Gravity, G <sub>s</sub>	-	2.734	2.734	2.734
Volume of Dry Soil, (9)=(7)/G <sub>s</sub>	cm <sup>3</sup>	27.47	24.98	27.00
Volume of Pore, (10)=(5)-(9)	cm <sup>3</sup>	34.87	37.36	35.34
Wet Density, $\gamma_{wet} = (4)/(5)$	Gr/cm <sup>3</sup>	1.85	1.79	1.76
Water Content, $w=(8)/(7)*100\%$	%	34.88	38.95	32.56
Dry Density, $\gamma_d = \gamma_{wet}/(1+w)$	Gr/cm <sup>3</sup>	1.37	1.29	1.32
Porosity, $n=(10)/(5)*100\%$	%	55.93	59.94	56.69
Degree of Saturation, $S_r=(8)/(10)*100\%$	%	98.10	95.61	98.88

Lampiran 3 Data Hasil Pengujian *Atterberg Limits*

<b>ATTERBERG LIMITS TEST RESULTS</b> <b>(Unified Soil Classification System Chart)</b>									
PROJECT		: JEC-ORBITA							
LOCATION		: BH-2 JL MESJID RAYA							
BORING NUMBER		:							
BORING DEPTH		: Meter 20,00 - 20,50				TESTED BY		: Firmansyah Yusuf	
TESTING METHOD		: ASTM D 424-59, D 4318-(00), AASHTO T89/T90				DATE		: Juni 2020	
Sample No.	3								
Depth of Sample	7,00 -7,55								
	Unit	Plastic Limit		Liquid Limit					
Test Number	-	1	2	1	2	3	4		
Number of Blows	N	-	-	55.0	30.0	24.0			
Container No. or Can No.	-	A	B	1	2	3	4		
Weight of Wet Soil+Can, W1	gram	16.78	18.10	25.14	19.32	21.42	21.51		
Weight of Dry Soil+Can, W2	gram	15.02	16.10	20.91	15.76	16.46	16.28		
Weight of Water, Ww=W1-W2	gram	1.76	2.00	4.23	3.56	4.96	5.23		
Weight of Can, W3	gram	8.75	8.93	8.68	8.68	8.76	8.68		
Weight of Dry Soil, Ws=W2-W3	gram	6.27	7.17	12.23	7.08	7.70	7.60		
Water Content, $\omega = Ww/Ws \times 100\%$	%	28.07	27.89	34.59	50.28	64.42	68.82		
Average of Water Content, w	%	27.98		34.59	50.28	64.42	68.82		

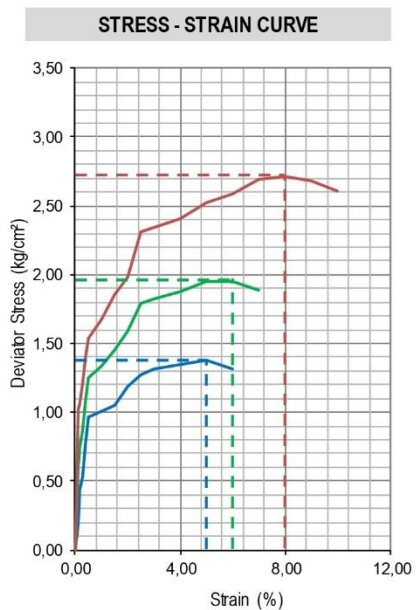


Lampiran 4 Data Hasil Pengujian *Triaxial* (CU)

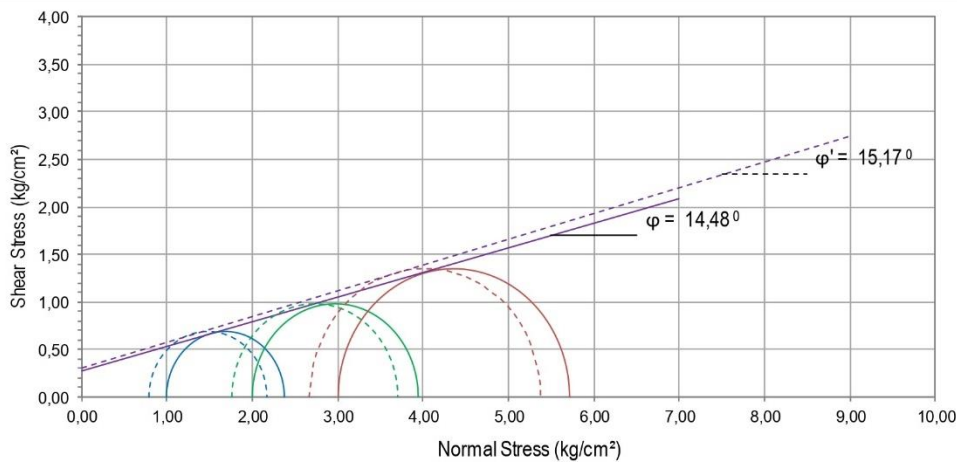


CLIENT :	BORE HOLE : BH 2
PROJECT :	TEST METHOD : UNDISTURBED
LOCATION :	SAMPLE NO. : 2
PROJECT NO. :	DEPTH :
DESCRIPTION : CONSOLIDATED UNDRAINED, Cu	DATE : JULI 2021

SPECIMEN PARAMETER				
<b>Specimen Data</b>		<b>1</b>	<b>2</b>	<b>3</b>
Cell Pressure, $\sigma_3$	(kg/cm <sup>2</sup> )	1,0	2,0	3,0
Moisture Content, $W$	(%)	10,49		
Diameter, $D$	(cm)	3,5	3,5	3,5
Height, $H$	(cm)	8,0	8,0	8,0
Area, $A$	(cm <sup>2</sup> )	9,62	9,62	9,62
Volume, $V$	(cm <sup>3</sup> )	76,97	76,97	76,97
Max. Deviator Stress	(kg/cm <sup>2</sup> )	1,376	1,951	2,709
Strain at Max. Stress	(%)	5,00	6,00	8,00
SPECIMEN AFTER CONSOLIDATION				
Cell Pressure, $\sigma_3$	(kg/cm <sup>2</sup> )	1,0		
Drainage Consolidation, $\Delta V$	(cm <sup>3</sup> )	4,05	4,17	4,30
Volume, $V_c$	(cm <sup>3</sup> )	72,92	72,80	72,67
Height, $H_c$	(cm)	7,86	7,85	7,85
Area, $A_c$	(cm <sup>2</sup> )	9,28	9,27	9,26
TOTAL STRESS STRENGTH PARAMETER				
Shear Strength, $C_u$	(kg/cm <sup>2</sup> )	0,275		
Angle of Friction, $\phi_u$	(°)	14,48		
EFFECTIVE STRESS STRENGTH PARAMETER				
Shear Strength, $C'$	(kg/cm <sup>2</sup> )	0,312		
Angle of Friction, $\phi'$	(°)	15,17		



**MOHR - CIRCLE**



TESTED BY : Rendi Safaat

APPROVED BY : Dr.Sukiman N., ST., M.Sc



## Lampiran 5 Summary Data Hasil Uji Laboratorium

SUMMARY OF LABORATORY TEST RESULTS						
<b>PROJECT</b>		: JEC ORBITA				
<b>LOCATION</b>		: JL. MASJID RAYA MAKASSAR				
<b>BORING NUMBER</b>		: BH 2				
<b>BORING DEPTH</b>		: Varies				
Bore Hole No.	-	BH 2	BH 2	BH 2	BH 2	Remark
Sample	-	1	2	3	4	
Sample Depth	m	5.00 - 5.50 m	10.00 - 10.50 m	15.00 - 15.50 m	20.00 - 20.50 m	
Specific Gravity (Gs)	-	2.65	2.71	2.72	2.73	
Dry Density ( $\gamma_d$ )	gr/cm <sup>3</sup>	1.47	1.25	1.28	1.30	
Natural States (Undisturbed)	Water Content (w)	%	24.56	22.22	17.41	34.82
	Wet Density ( $\gamma_{wet}$ )	gr/cm <sup>3</sup>	1.83	1.53	1.51	1.75
	Void ratio (e)	-	0.92	1.28	1.18	1.42
	Porosity (n)	-	47.83	56.06	54.20	58.74
	Degree of Saturation (Sr)	%	90.74	60.62	48.38	93.54
Gradation Analysis	Gravel	%	0.00	0.00	0.00	0.00
	Sand	%	83.36	86.63	46.12	46.44
	Silt + Clay	%	16.64	13.37	53.88	53.56
	Clay	%	1.35	2.92	17.06	22.05
Atterberg Limits	Liquid Limit (LL)	%	17.61	39.64	45.75	66.57
	Plastic Limit (PL)	%	0.00	31.72	12.33	33.62
	Plasticity Index (PI)	%	NP	7.91	33.42	32.95
	Shrinkage Limit (SL)	%	-	-	-	-
Konsolidasi Test	Compressibility Index (cc)	Cc	0.043	0.228	0.531	0.636
	Swelling Index (Cr)	Cr	0.031	0.007	0.029	0.066
	Preconsolidation pressure	kPa	220	200	180	280
	Overconsolidated ratio (OCR)	-	4.624	1.720	1.002	1.004

NO.	URAIAN PEMERIKSAAN	SATUAN	HASIL PEMERIKSAAN			
			BH 01 UDS 1	BH 01 UDS 2	BH 02 UDS 1	BH 02 UDS 2
I.	<b>INDEX PROPERTIES</b>					
1	Berat Volume Basah, $\gamma_b$	gr/cm <sup>3</sup>	1,15	1,11	1,01	0,92
2	Berat volume kering, $\gamma_d$	gr/cm <sup>3</sup>	1,10	0,95	0,92	0,83
3	Moisture Content, W	%	5,01	16,76	9,78	10,49
II.	<b>ENGINEERING PROPERTIES</b>					
	<b>TOTAL STRESS STRENGTH PARAMETER</b>					
1	Shear Strength, Cu	kg/cm <sup>2</sup>	0,090	0,133	0,236	0,275
2	Angle of Friction, $\phi_u$	°	15,90	16,81	15,22	14,48
	<b>EFFECTIVE STRESS STRENGTH PARAMETER</b>					
1	Shear Strength, C'	kg/cm <sup>2</sup>	0,133	0,175	0,272	0,312
2	Angle of Friction, $\phi'$	°	16,26	17,58	16,00	15,17