

## DAFTAR PUSTAKA

- ASTM 1992. *ASTM Standards on Soil Stabilization with Admixture, American Society Testing and Materials, Second Edition.*
- Bowles, J. 1991. *Sifat-Sifat Fisis dan Geoteknis Tanah (Mekanika Tanah).* Jakarta. Edisi Kedua. Erlangga.
- Canonica, Lucio. 1991. *Memahami Mekanika Tanah,* Angkasa Bandung
- Das, Braja. M. 1995. *Mekanika Tanah (Prinsip-prinsip Rekayasa Geoteknik) Jilid I.* Jakarta: Erlangga
- Das, Braja. M. 1995. *Mekanika Tanah (Prinsip-prinsip Rekayasa Geoteknik) Jilid II.* Jakarta: Erlangga
- Dhani, N, Samang, L, Harianto, T dan Rachman, A . 2019. *Studi Eksperimental Nilai Cbr Tanah Lunak Stabilisasi Overboulder Asbuton.* Prosiding Seminar Nasional Teknik Sipil 2019 Fakultas Teknik Universitas Muhammadiyah Surakarta.
- Direktorat Jenderal Bina Marga. 2013. *Manual Desain Perkerasan Jalan Nomor 02/M/BM/2013.* Penerbit Bina Marga. Jakarta.
- Hardiyatmo, C.H. 2010. *Stabilisasi Tanah Untuk Perkerasan Jalan.* Gadjah Mada University Press, Yogyakarta.

Indiana Departement of Transportation (INDOT). 2002. Design Procedures for Soil Modification or Stabilisation, Materials and Test Devision Geotechnical Section, 120 South Shortridge Road Indianapolis, Indiana 46219

Ingles, O. G., & Metcalf, J. B. 1972. Soil Stabilization Principles and Practice. Sydney: Butterworths Sydney-Melbourne, Brisbane.

Makusa, G.P, 2012. Soil Stabilization Methods and Materials, Departement of Civil, Enviromental and Natural Resources Engineering, Lule å University of Technology, Sweden

Matasik, M.T. 2019 . Studi Cbr Tanah Laterit Stabilisasi Zeolit Aktivasi Waterglass. Departemen Teknik Sipil Fakultas Teknik Universitas Hasanuddin.

Sauri,S. 2015. Pengaruh Penambahan Abu Ampas Tebu dan Kapur pada Tanah Ekspansif di Bojonegoro terhadap nilai CBR, Swelling dan Durabilitas.Jurusan Teknik Sipil Fakultas Teknik Unversitas Brawijaya Jalan MT. Haryono 167, Malang 65145, Indonesia.

Setyowati, A. 2014. Daya Dukung Tanah Lempung Yang Distabilisasi Dengan Spent Catalyst Rcc 15 Dan Kapur . Program Studi Teknik Sipil, Universitas Islam 45 Bekasi.

Sulistiyowati, T. 2006. Pengaruh Stabilisasi Tanah Lempung Ekspansif Dengan Fly Ash Terhadap Nilai Daya Dukung Cbr. Jurusan Teknik Sipil Fakultas Teknik Universitas Mataram.

Susanto, Dedi. (2015). "Pengaruh Tanah Lempung Berplastisitas Tinggi dengan Bahan Additive Zeolit pada Uji CBR dan Uji Geser Langsung". *digilib.unila.ac.id/15706/3/COVER%20DALAM.pdf*.

## LAMPIRAN

<b>COMPACTION TEST RESULTS</b>											
PROJECT		: PENGARUH MATERIAL TAMBAH TERHADAP NILAI CBR									
LOCATION		: GOWA									
SAMPLE		: SOFT SOIL									
CLIENT		: -									
TESTING METHOD		: ASTM D 698/ D 1567					TESTED BY		: DANDI JUMADI		
LABORATORY		: HASANUDDIN UNIVERSITY					DATE		: AGUSTUS 2019		
Berat tanah	gram	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
Kadar air mula-mula	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Penambahan air	ml	400	500	600	700	800					
Kadar air akhir	%	16.00	20.00	24.00	28.00	32.00					
<b>Berat Isi Basah (Wet density)</b>											
No. Mould	-	1	2	3	4	5					
Berat Mould	gram	1943	1943	1943	1943	1943					
Berat tanah basah + Mould	gram	3502	3629	3745	3743	3721					
Berat tanah basah, $W_{wet}$	gram	1559	1686	1802	1800	1778					
Volume Mould	cm <sup>3</sup>	1004	1004	1004	1004	1004					
Berat Volume Basah	gr/cm <sup>3</sup>	1.5529	1.6794	1.7949	1.7929	1.7710					
<b>Kadar Air (Water Content)</b>											
No. Container	-	1A	1B	2A	2B	3A	3B	4A	4B	5A	5B
Berat tanah basah + Container	gram	30.04	21.4	32.51	32	39.77	44.4	26.65	32.66	34.15	29.05
Berat tanah kering + Container	gram	26.63	19.17	28.44	27.95	33.36	37.09	22.51	26.67	27.94	24.03
Berat air	gram	3.41	2.23	4.07	4.05	6.41	7.31	4.14	5.99	6.21	5.02
Berat container	gram	5.32	5.26	8.15	7.79	7.79	7.82	7.77	5.29	8.55	8.4
Berat tanah kering	gram	21.31	13.91	20.29	20.16	25.57	29.27	14.74	21.38	19.39	15.63
Kadar air	%	16.00	16.03	20.06	20.09	25.07	24.97	28.09	28.02	32.03	32.12
Kadar air rata-rata	%	16.02	20.07	25.02	28.05	32.07					
<b>Berat Isi Kering ( Dry Density)</b>											
Berat tanah basah, $W_{wet}$	gram	1559	1686	1802	1800	1778					
Kadar air rata-rata	%	16.02	20.07	25.02	28.05	32.07					
Berat kering $W_{dry} = \frac{W_{wet}}{1 + \left(\frac{W}{100}\right)}$	gram	1343.77	1404.13	1441.35	1405.68	1346.23					
Volume Mould	cm <sup>3</sup>	1003.94	1003.94	1003.94	1003.94	1003.94					
Berat isi kering $\gamma_{dry} = \frac{W_{dry}}{V_{mould}}$	kN/m <sup>3</sup>	1.34	1.40	1.44	1.40	1.34					
$gw = G_s / (1 + (w \cdot G_s))$	kN/m <sup>3</sup>	1.86	1.73	1.59	1.52	1.43					

COMPACTION TEST RESULTS											
PROJECT	: PENGARUH MATERIAL TAMBAH TERHADAP NILAI CBR										
LOCATION	: GOWA										
SAMPLE	: SOFT SOIL+15% OVERBOULDER ASBUTON+1% ZEOLITE										
CLIENT	: -										
TESTING METHOD	: ASTM D 698/ D 1567			TESTED BY	: DANDI JUMADI						
LABORATORY	: HASANUDDIN UNIVERSITY			DATE	: AGUSTUS 2019						
Berat tanah	gram	2500	2500	2500	2500	2500					
Kadar air mula-mula	%	0.00	0.00	0.00	0.00	0.00					
Penambahan air	ml	350	450	550	650	750					
Kadar air akhir	%	14.00	18.00	22.00	26.00	30.00					
<b>Berat Isi Basah (Wet density)</b>											
No. Mould	-	1	2	3	4	5					
Berat Mould	gram	1943	1943	1943	1943	1943					
Berat tanah basah + Mould	gram	3571	3665	3745	3789	3808					
Berat tanah basah, $W_{wet}$	gram	1628	1722	1802	1846	1865					
Volume Mould	cm <sup>3</sup>	1004	1004	1004	1004	1004					
Berat Volume Basah	gr/cm <sup>3</sup>	1.6216	1.7152	1.7949	1.8388	1.8577					
<b>Kadar Air (Water Content)</b>											
No. Container	-	1A	1B	2A	2B	3A	3B	4A	4B	5A	5B
Berat tanah basah + Container	gram	29.45	20.15	33.1	31.55	39.47	42.1	26.8	32.07	32.5	28.95
Berat tanah kering + Container	gram	26.45	18.35	28.44	28.8	33.35	36.38	22.9	26.5	27.1	24.09
Berat air	gram	3	1.8	4.66	2.75	6.12	5.72	3.9	5.57	5.4	4.86
Berat container	gram	5.32	5.26	8.15	7.79	7.79	7.82	7.77	5.29	8.55	8.4
Berat tanah kering	gram	21.13	13.09	20.29	21.01	25.56	28.56	15.13	21.21	18.55	15.69
Kadar air	%	14.20	13.75	22.97	13.09	23.94	20.03	25.78	26.26	29.11	30.98
Kadar air rata-rata	%	13.97		18.03		21.99		26.02		30.04	
<b>Berat Isi Kering ( Dry Density)</b>											
Berat tanah basah, $W_{wet}$	gram	1628	1722	1802	1846	1865					
Kadar air rata-rata	%	13.97	18.03	21.99	26.02	30.04					
Berat kering $W_{dry} = \frac{W_{wet}}{1 + \left(\frac{W}{100}\right)}$	gram	1428.39	1458.98	1477.22	1464.86	1434.14					
Volume Mould	cm <sup>3</sup>	1003.94	1003.94	1003.94	1003.94	1003.94					
Berat isi kering $\gamma_{dry} = \frac{W_{dry}}{V_{mould}}$	gr/cm <sup>3</sup>	1.42	1.45	1.47	1.46	1.43					
$g_w = G_s / (1 + (w \cdot G_s))$	gr/cm <sup>3</sup>	1.93	1.79	1.67	1.57	1.48					

## COMPACTION TEST RESULTS

PROJECT	: PENGARUH MATERIAL TAMBAH TERHADAP NILAI CBR				
LOCATION	: GOWA				
SAMPLE	: SOFT SOIL+15% OVERBOULDER ASBUTON+2% ZEOLITE				
CLIENT	: -				
TESTING METHOD	: ASTM D 698/ D 1567	TESTED BY	: DANDI JUMADI		
LABORATORY	: HASANUDDIN UNIVERSITY	DATE	: AGUSTUS 2019		

Berat tanah	gram	2500	2500	2500	2500	2500
Kadar air mula-mula	%	0.00	0.00	0.00	0.00	0.00
Penambahan air	ml	340	440	540	640	740
Kadar air akhir	%	13.60	17.60	21.60	25.60	29.60

### Berat Isi Basah (Wet density)

No. Mould	-	1	2	3	4	5
Berat Mould	gram	1943	1943	1943	1943	1943
Berat tanah basah + Mould	gram	3571	3675	3745	3789	3795
Berat tanah basah, $W_{wet}$	gram	1628	1732	1802	1846	1852
Volume Mould	cm <sup>3</sup>	1004	1004	1004	1004	1004
Berat Volume Basah	gr/cm <sup>3</sup>	1.6216	1.7252	1.7949	1.8388	1.8447

### Kadar Air (Water Content)

No. Container	-	1A	1B	2A	2B	3A	3B	4A	4B	5A	5B
Berat tanah basah + Container	gram	29.3	20.15	32	32.52	39.27	42.1	26.67	32.07	32.37	28.93
Berat tanah kering + Container	gram	26.45	18.35	28.44	28.8	33.35	36.38	22.9	26.5	27.1	24.09
Berat air	gram	2.85	1.8	3.56	3.72	5.92	5.72	3.77	5.57	5.27	4.84
Berat container	gram	5.32	5.26	8.15	7.79	7.79	7.82	7.77	5.29	8.55	8.4
Berat tanah kering	gram	21.13	13.09	20.29	21.01	25.56	28.56	15.13	21.21	18.55	15.69
Kadar air	%	13.49	13.75	17.55	17.71	23.16	20.03	24.92	26.26	28.41	30.85
Kadar air rata-rata	%	13.62		17.63		21.59		25.59		29.63	

### Berat Isi Kering ( Dry Density)

Berat tanah basah, $W_{wet}$	gram	1628	1732	1802	1846	1852
Kadar air rata-rata	%	13.62	17.63	21.59	25.59	29.63
Berat kering $W_{dry} = \frac{W_{wet}}{1 + \left(\frac{W}{100}\right)}$	gram	1432.85	1472.47	1481.97	1469.87	1428.70
Volume Mould	cm <sup>3</sup>	1003.94	1003.94	1003.94	1003.94	1003.94
Berat isi kering $\gamma_{dry} = \frac{W_{dry}}{V_{mould}}$	gr/cm <sup>3</sup>	1.43	1.47	1.48	1.46	1.42
$g_w = G_s / (1 + (w \cdot G_s))$	gr/cm <sup>3</sup>	1.95	1.81	1.69	1.58	1.48

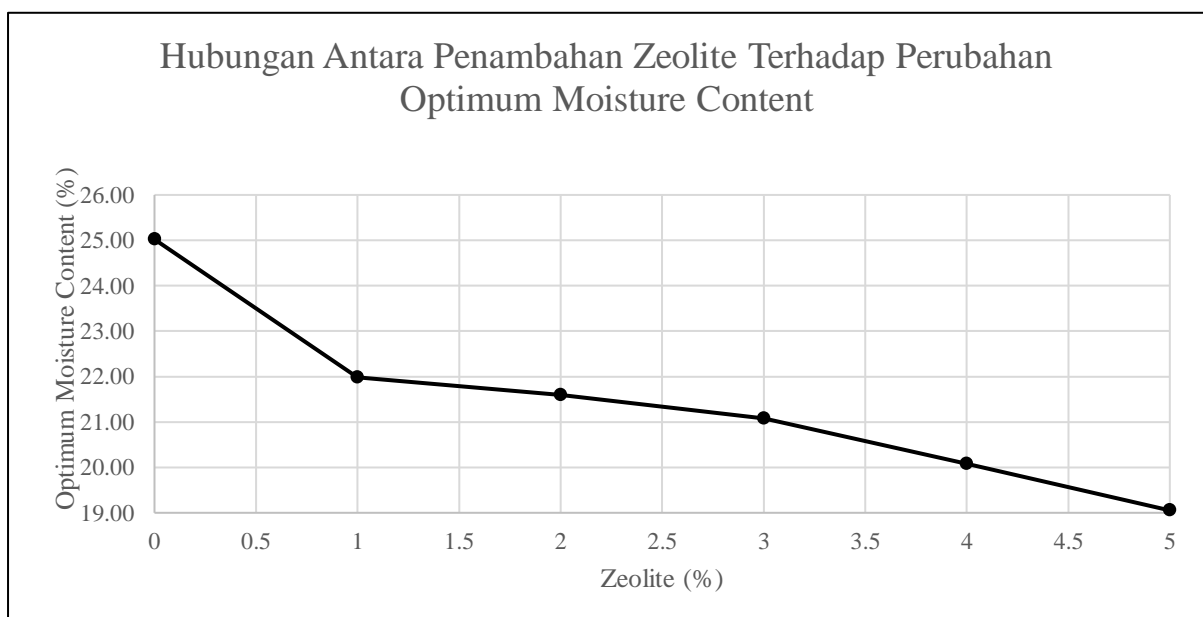
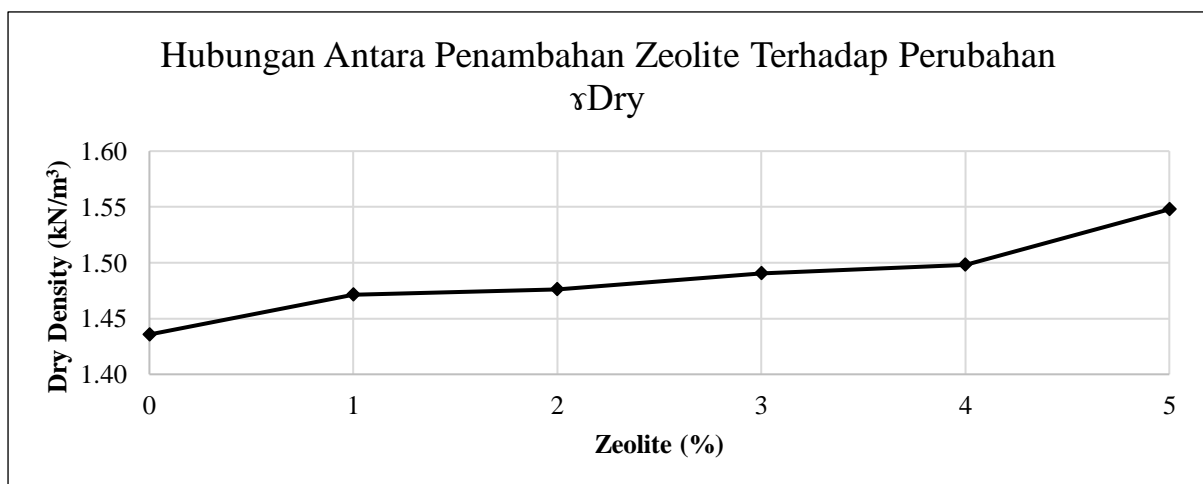
<b>COMPACTION TEST RESULTS</b>												
PROJECT	: PENGARUH MATERIAL TAMBAH TERHADAP NILAI CBR											
LOCATION	: GOWA											
SAMPLE	: SOFT SOIL+15% OVERBOULDER ASBUTON+3% ZEOLITE											
CLIENT	:-											
TESTING METHOD	: ASTM D 698/ D 1567					TESTED BY			: DANDI JUMADI			
LABORATORY	: HASANUDDIN UNIVERSITY					DATE			: AGUSTUS 2019			
Berat tanah	gram	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	
Kadar air mula-mula	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Penambahan air	ml	325	425	525	625	725	625	725	625	725	725	
Kadar air akhir	%	13.00	17.00	21.00	25.00	29.00	21.00	25.00	29.00	25.00	29.00	
<b>Berat Isi Basah (Wet density)</b>												
No. Mould	-	1	2	3	4	5						
Berat Mould	gram	1943	1943	1943	1943	1943						
Berat tanah basah + Mould	gram	3490	3641	3755	3720	3670						
Berat tanah basah, $W_{wet}$	gram	1547	1698	1812	1777	1727						
Volume Mould	cm <sup>3</sup>	1004	1004	1004	1004	1004						
Berat Volume Basah	gr/cm <sup>3</sup>	1.5409	1.6913	1.8049	1.7700	1.7202						
<b>Kadar Air (Water Content)</b>												
No. Container	-	1A	1B	2A	2B	3A	3B	4A	4B	5A	5B	
Berat tanah basah + Container	gram	41.12	34.12	41.23	43.21	44.357	28.51	49.28	47.22	44.99	41.85	
Berat tanah kering + Container	gram	37.47	31.23	36.39	38.02	37.48	25.54	42.9	40.98	39.74	35.55	
Berat air	gram	3.65	2.89	4.84	5.19	6.877	2.97	6.38	6.24	5.25	6.3	
Berat container	gram	9.81	8.81	7.81	7.6	9.44	8.7	14.59	14.57	14.66	15.07	
Berat tanah kering	gram	27.66	22.42	28.58	30.42	28.04	16.84	28.31	26.41	25.08	20.48	
Kadar air	%	13.20	12.89	16.93	17.06	24.53	17.64	22.54	23.63	20.93	30.76	
Kadar air rata-rata	%	13.04	17.00	21.08	23.08	25.85						
<b>Berat Isi Kering (Dry Density)</b>												
Berat tanah basah, $W_{wet}$	gram	1547	1698	1812	1777	1727						
Kadar air rata-rata	%	13.04	17.00	21.08	23.08	25.85						
Berat kering $W_{dry} = \frac{W_{wet}}{1 + \left(\frac{W}{100}\right)}$	gram	1368.50	1451.31	1496.52	1443.76	1372.30						
Volume Mould	cm <sup>3</sup>	1003.94	1003.94	1003.94	1003.94	1003.94						
Berat isi kering $\gamma_{dry} = \frac{W_{dry}}{V_{mould}}$	gr/cm <sup>3</sup>	1.36	1.45	1.49	1.44	1.37						
$g_w = G_s / (1 + (w \cdot G_s))$	gr/cm <sup>3</sup>	1.97	1.83	1.70	1.64	1.57						

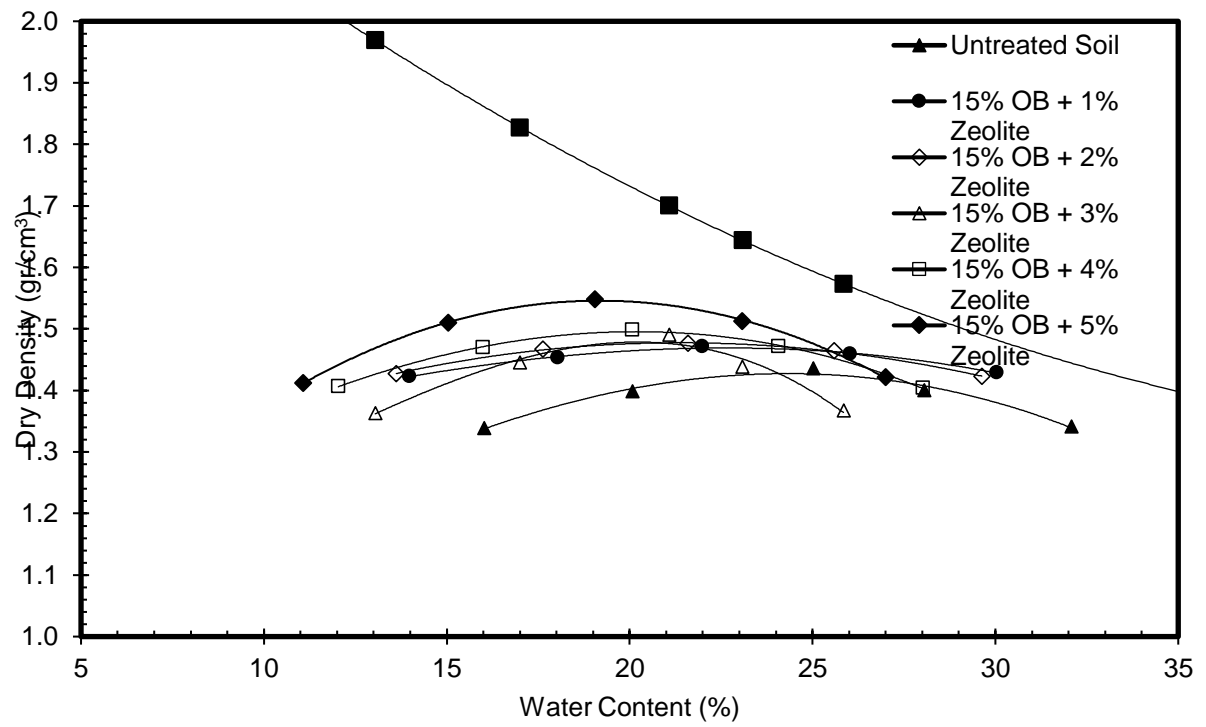
<b>COMPACTION TEST RESULTS</b>												
PROJECT	: PENGARUH MATERIAL TAMBAH TERHADAP NILAI CBR											
LOCATION	: GOWA											
SAMPLE	: SOFT SOIL+15% OVERBOULDER ASBUTON+4% ZEOLITE											
CLIENT	:-											
TESTING METHOD	: ASTM D 698/ D 1567					TESTED BY			: DANDI JUMADI			
LABORATORY	: HASANUDDIN UNIVERSITY					DATE			: AGUSTUS 2019			
Berat tanah	gram	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	
Kadar air mula-mula	%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Penambahan air	ml	300	400	500	600	700						
Kadar air akhir	%	12.00	16.00	20.00	24.00	28.00						
<b>Berat Isi Basah (Wet density)</b>												
No. Mould	-	1	2	3	4	5						
Berat Mould	gram	1943	1943	1943	1943	1943						
Berat tanah basah + Mould	gram	3525	3654	3749	3776	3747						
Berat tanah basah, $W_{wet}$	gram	1582	1711	1806	1833	1804						
Volume Mould	cm <sup>3</sup>	1004	1004	1004	1004	1004						
Berat Volume Basah	gr/cm <sup>3</sup>	1.5758	1.7043	1.7989	1.8258	1.7969						
<b>Kadar Air (Water Content)</b>												
No. Container	-	1A	1B	2A	2B	3A	3B	4A	4B	5A	5B	
Berat tanah basah + Container	gram	40.81	34.12	40.98	43.21	43.02	29.1	49.72	47.62	46.75	41.52	
Berat tanah kering + Container	gram	37.47	31.41	36.39	38.32	37.42	25.68	42.9	41.21	39.74	35.72	
Berat air	gram	3.34	2.71	4.59	4.89	5.6	3.42	6.82	6.41	7.01	5.8	
Berat container	gram	9.81	8.81	7.81	7.6	9.44	8.7	14.59	14.57	14.66	15.07	
Berat tanah kering	gram	27.66	22.6	28.58	30.72	27.98	16.98	28.31	26.64	25.08	20.65	
Kadar air	%	12.08	11.99	16.06	15.92	20.01	20.14	24.09	24.06	27.95	28.09	
Kadar air rata-rata	%	12.03	15.99	20.08	24.08	28.02						
<b>Berat Isi Kering ( Dry Density)</b>												
Berat tanah basah, $W_{wet}$	gram	1582	1711	1806	1833	1804						
Kadar air rata-rata	%	12.03	15.99	20.08	24.08	28.02						
Berat kering $W_{dry} = \frac{W_{wet}}{1 + \left(\frac{W}{100}\right)}$	gram	1412.08	1475.14	1504.02	1477.32	1409.17						
Volume Mould	cm <sup>3</sup>	1003.94	1003.94	1003.94	1003.94	1003.94						
Berat isi kering $\gamma_{dry} = \frac{W_{dry}}{V_{mould}}$	gr/cm <sup>3</sup>	1.41	1.47	1.50	1.47	1.40						
$g_w = G_s / (1 + (w \cdot G_s))$	gr/cm <sup>3</sup>	2.01	1.86	1.73	1.62	1.52						



<b>COMPACTION TEST RESULTS</b>												
PROJECT	: PENGARUH MATERIAL TAMBAH TERHADAP NILAI CBR											
LOCATION	: GOWA											
SAMPLE	: SOFT SOIL+15% OVERBOULDER ASBUTON+5% ZEOLITE											
CLIENT	:-											
TESTING METHOD	: ASTM D 698/ D 1567					TESTED BY			: DANDI JUMADI			
LABORATORY	: HASANUDDIN UNIVERSITY					DATE			: AGUSTUS 2019			
Berat tanah	gram	2500		2500		2500		2500		2500		
Kadar air mula-mula	%	0.00		0.00		0.00		0.00		0.00		
Penambahan air	ml	275		375		475		575		675		
Kadar air akhir	%	11.00		15.00		19.00		23.00		27.00		
<b>Berat Isi Basah (Wet density)</b>												
No. Mould	-	1		2		3		4		5		
Berat Mould	gram	1943		1943		1943		1943		1943		
Berat tanah basah + Mould	gram	3517		3687		3793		3812		3755		
Berat tanah basah, $W_{wet}$	gram	1574		1744		1850		1869		1812		
Volume Mould	cm <sup>3</sup>	1004		1004		1004		1004		1004		
Berat Volume Basah	gr/cm <sup>3</sup>	1.5678		1.7372		1.8427		1.8617		1.8049		
<b>Kadar Air (Water Content)</b>												
No. Container	-	1A	1B	2A	2B	3A	3B	4A	4B	5A	5B	
Berat tanah basah + Container	gram	40.51	34.12	40.67	43.21	42.76	29.1	49.43	47.62	46.53	41.52	
Berat tanah kering + Container	gram	37.47	31.58	36.39	38.54	37.42	25.84	42.9	41.42	39.74	35.91	
Berat air	gram	3.04	2.54	4.28	4.67	5.34	3.26	6.53	6.2	6.79	5.61	
Berat container	gram	9.81	8.81	7.81	7.6	9.44	8.7	14.59	14.57	14.66	15.07	
Berat tanah kering	gram	27.66	22.77	28.58	30.94	27.98	17.14	28.31	26.85	25.08	20.84	
Kadar air	%	10.99	11.16	14.98	15.09	19.09	19.02	23.07	23.09	27.07	26.92	
Kadar air rata-rata	%	11.07		15.03		19.05		23.08		27.00		
<b>Berat Isi Kering ( Dry Density)</b>												
Berat tanah basah, $W_{wet}$	gram	1574		1744		1850		1869		1812		
Kadar air rata-rata	%	11.07		15.03		19.05		23.08		27.00		
Berat kering $W_{dry} = \frac{W_{wet}}{1 + \left(\frac{W}{100}\right)}$	gram	1417.09		1516.07		1553.94		1518.54		1426.81		
Volume Mould	cm <sup>3</sup>	1003.94		1003.94		1003.94		1003.94		1003.94		
Berat isi kering $\gamma_{dry} = \frac{W_{dry}}{V_{mould}}$	gr/cm <sup>3</sup>	1.41		1.51		1.55		1.51		1.42		
$\gamma_w = G_s / (1 + (w \cdot G_s))$	gr/cm <sup>3</sup>	2.05		1.89		1.76		1.64		1.54		

Soil (%)	OB (%)	Zeolite (%)	$\gamma_{\text{Dry}}$ (kN/m <sup>3</sup> )	OMC (%)
100	0	0	1.44	25.02
84	15	1	1.47	21.99
83	15	2	1.48	21.59
82	15	3	1.49	21.08
81	15	4	1.50	20.08
80	15	5	1.55	19.05





CALIFORNIA BEARING RATIO TEST RESULT														
Project	: Pengaruh Material Tambah Terhadap Nilai CBR													
Location	: Gowa	Tested By	Dandi Jumadi											
Sample Number	: 15% OB+1%Z 0 Hari	Testing Method	: ASTM D 1883-07											
Weight of Mould	:	4164	gr											
Weight Of Wet Soil + Mould	:	9965	gr											
Weight Of Soil	:	5801	gr											
Mould Volume	:	3242	cm <sup>3</sup>											
Wet Density	:	1.79	gr/cm <sup>3</sup>											
Dry Density	:	1.47	gr/cm <sup>3</sup>											
<b>Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443</b>														
Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)											
0.00	0.00	0	0.00											
0.25	0.013	7	47.2101											
0.50	0.025	15	101.1645											
1.00	0.050	27	182.0961											
1.50	0.075	39	263.0277											
2.00	0.100	51	343.9593											
3.00	0.150	67	451.8681											
4.00	0.200	76	512.5668											
6.00	0.300	85	573.2655											
8.00	0.400	92	620.4756											
10.00	0.500	99	667.6857											
		<table border="1"> <thead> <tr> <th></th> <th>Load (lbs)</th> <th>CBR (%)</th> </tr> </thead> <tbody> <tr> <td>0.1</td> <td>343.959</td> <td>11.465</td> </tr> <tr> <td>0.2</td> <td>512.567</td> <td>11.390</td> </tr> <tr> <td>CBR</td> <td>11.47</td> <td>%</td> </tr> </tbody> </table>		Load (lbs)	CBR (%)	0.1	343.959	11.465	0.2	512.567	11.390	CBR	11.47	%
	Load (lbs)	CBR (%)												
0.1	343.959	11.465												
0.2	512.567	11.390												
CBR	11.47	%												

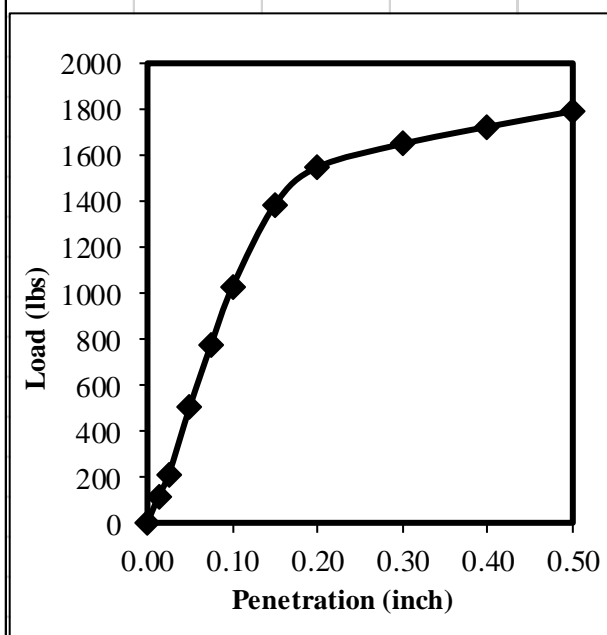
CALIFORNIA BEARING RATIO TEST RESULT				
Project	: Pengaruh Material Tambah Terhadap Nilai CBR			
Location	: Gowa	Tested By	Dandi Jumadi	
Sample Number	: 15% OB+1%Z 7 Hari	Testing Method	: ASTM D 1883-07	
Weight of Mould	:	4164	gr	
Weight Of Wet Soil + Mould	:	9803	gr	
Weight Of Soil	:	5639	gr	
Mould Volume	:	3242	cm <sup>3</sup>	
Wet Density	:	1.74	gr/cm <sup>3</sup>	
Dry Density	:	1.47	gr/cm <sup>3</sup>	
<b>Proving ring Calibration 50 KN cap, lbs/Dev= 6.7443</b>				
Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)	
0.00	0.00	0	0.00	
0.25	0.013	19	128.1417	
0.50	0.025	31	209.0733	
1.00	0.050	55	370.9365	
1.50	0.075	81	546.2883	
2.00	0.100	109	735.1287	
3.00	0.150	141	950.9463	
4.00	0.200	164	1106.0652	
6.00	0.300	178	1200.4854	
8.00	0.400	185	1247.6955	
10.00	0.500	192	1294.9056	
		Load (lbs)	CBR (%)	
		0.1	735.129	24.504
		0.2	1106.065	24.579
		CBR	24.58	%

### CALIFORNIA BEARING RATIO TEST RESULT

Project	: Pengaruh Material Tambah Terhadap Nilai CBR		
Location	: Gowa	Tested By	Dandi Jumadi
Sample Number	15% OB+1% Z 14 Hari	Testing Method	: ASTM D 1883-07
Weight of Mould	:	4164	gr
Weight Of Wet Soil + Mould	:	9656	gr
Weight Of Soil	:	5492	gr
Mould Volume	:	3242	cm <sup>3</sup>
Wet Density	:	1.69	gr/cm <sup>3</sup>
Dry Density	:	1.47	gr/cm <sup>3</sup>

#### Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443

Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)
0.00	0.00	0	0.00
0.25	0.013	17	114.6531
0.50	0.025	31	209.0733
1.00	0.050	75	505.8225
1.50	0.075	115	775.5945
2.00	0.100	152	1025.1336
3.00	0.150	205	1382.5815
4.00	0.200	229	1544.4447
6.00	0.300	244	1645.6092
8.00	0.400	255	1719.7965
10.00	0.500	265	1787.2395

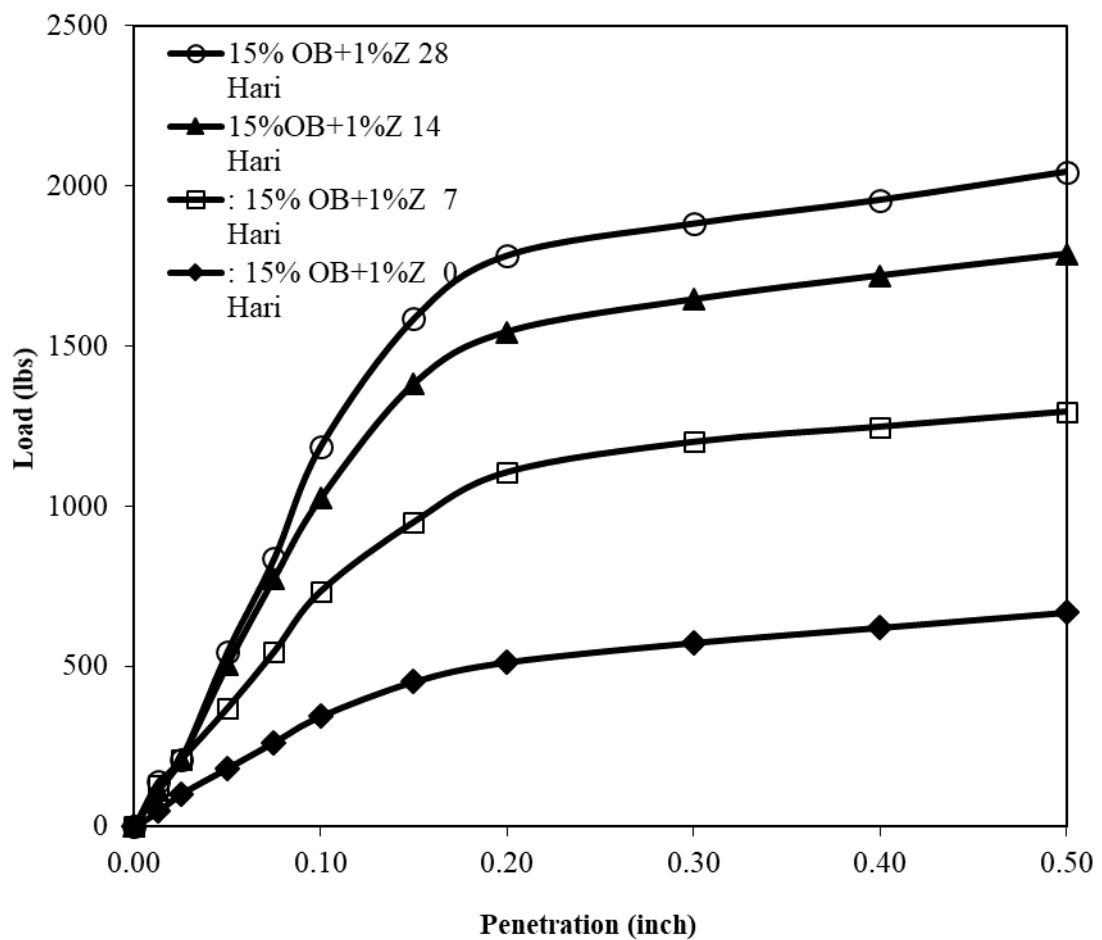


	Load (lbs)	CBR (%)
0.1	1025.134	34.171
0.2	1544.445	34.321

CBR      34.32    %

CALIFORNIA BEARING RATIO TEST RESULT					
Project	: Pengaruh Material Tambah Terhadap Nilai CBR				
Location	: Gowa	Tested By	Dandi Jumadi		
Sample Number	15% OB+1% Z 28 Hari	Testing Method	: ASTM D 1883-07		
Weight of Mould	:	4164	gr		
Weight Of Wet Soil + Mould	:	9492	gr		
Weight Of Soil	:	5328	gr		
Mould Volume	:	3242	cm <sup>3</sup>		
Wet Density	:	1.64	gr/cm <sup>3</sup>		
Dry Density	:	1.47	gr/cm <sup>3</sup>		
<b>Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443</b>					
Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)		
0.00	0.00	0	0.00		
0.25	0.013	21	141.6303		
0.50	0.025	31	209.0733		
1.00	0.050	81	546.2883		
1.50	0.075	124	836.2932		
2.00	0.100	176	1186.9968		
3.00	0.150	235	1584.9105		
4.00	0.200	264.2	1781.8441		
6.00	0.300	279	1881.6597		
8.00	0.400	290	1955.847		
10.00	0.500	303	2043.5229		
			Load (lbs)	CBR (%)	
			0.1	1186.997	39.567
			0.2	1781.844	39.597
		CBR	39.60	%	

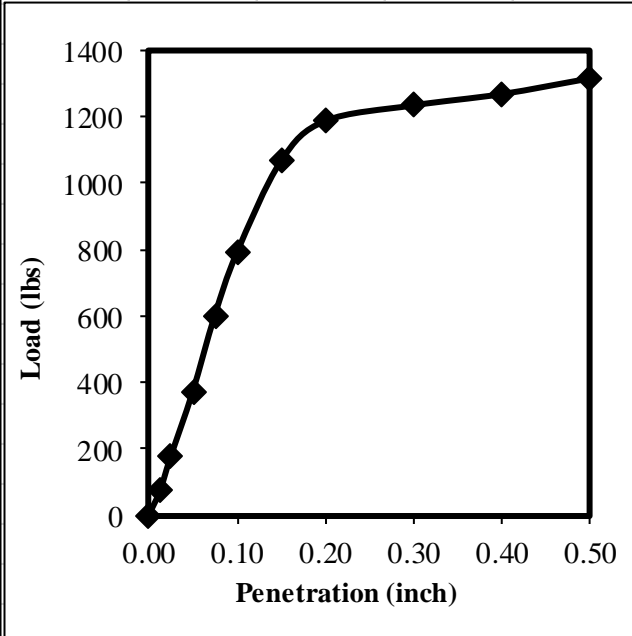
Sample	CBR (%)
: 15% OB+1%Z 0 Hari	11.47
: 15% OB+1%Z 7 Hari	24.58
15% OB+1%Z 14 Hari	34.32
15% OB+1%Z 28 Hari	39.60





## 15% OB+2%Z

CALIFORNIA BEARING RATIO TEST RESULT				
Project	: Pengaruh Material Tambah Terhadap Nilai CBR			
Location	: Gowa	Tested By	Dandi Jumadi	
Sample Number	: 15% OB+2%Z 0 Hari	Testing Method	: ASTM D 1883-07	
Weight of Mould	:	4164	gr	
Weight Of Wet Soil + Mould	:	9982	gr	
Weight Of Soil	:	5818	gr	
Mould Volume	:	3242	cm <sup>3</sup>	
Wet Density	:	1.79	gr/cm <sup>3</sup>	
Dry Density	:	1.48	gr/cm <sup>3</sup>	
<b>Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443</b>				
Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)	
0.00	0.00	0	0.00	
0.25	0.013	9	60.6987	
0.50	0.025	15	101.1645	
1.00	0.050	26	175.3518	
1.50	0.075	38	256.2834	
2.00	0.100	51.2	345.30816	
3.00	0.150	67	451.8681	
4.00	0.200	77.2	520.65996	
6.00	0.300	83	559.7769	
8.00	0.400	87	586.7541	
10.00	0.500	91	613.7313	
		Load (lbs)	CBR (%)	
		0.1	345.308	11.510
		0.2	520.660	11.570
	CBR		11.57	%

CALIFORNIA BEARING RATIO TEST RESULT														
Project	: Pengaruh Material Tambah Terhadap Nilai CBR													
Location	: Gowa	Tested By	Dandi Jumadi											
Sample Number	: 15% OB+2%Z 7 Hari	Testing Method	: ASTM D 1883-07											
Weight of Mould	:	4164	gr											
Weight Of Wet Soil + Mould	:	9813	gr											
Weight Of Soil	:	5649	gr											
Mould Volume	:	3242	cm <sup>3</sup>											
Wet Density	:	1.74	gr/cm <sup>3</sup>											
Dry Density	:	1.48	gr/cm <sup>3</sup>											
<b>Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443</b>														
Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)											
0.00	0.00	0	0.00											
0.25	0.013	11	74.1873											
0.50	0.025	26	175.3518											
1.00	0.050	55	370.9365											
1.50	0.075	89	600.2427											
2.00	0.100	117	789.0831											
3.00	0.150	158	1065.5994											
4.00	0.200	176	1186.9968											
6.00	0.300	183	1234.2069											
8.00	0.400	188	1267.9284											
10.00	0.500	195	1315.1385											
		<table border="1"> <thead> <tr> <th></th> <th>Load (lbs)</th> <th>CBR (%)</th> </tr> </thead> <tbody> <tr> <td>0.1</td> <td>789.083</td> <td>26.303</td> </tr> <tr> <td>0.2</td> <td>1186.997</td> <td>26.378</td> </tr> <tr> <td>CBR</td> <td>26.38</td> <td>%</td> </tr> </tbody> </table>		Load (lbs)	CBR (%)	0.1	789.083	26.303	0.2	1186.997	26.378	CBR	26.38	%
	Load (lbs)	CBR (%)												
0.1	789.083	26.303												
0.2	1186.997	26.378												
CBR	26.38	%												

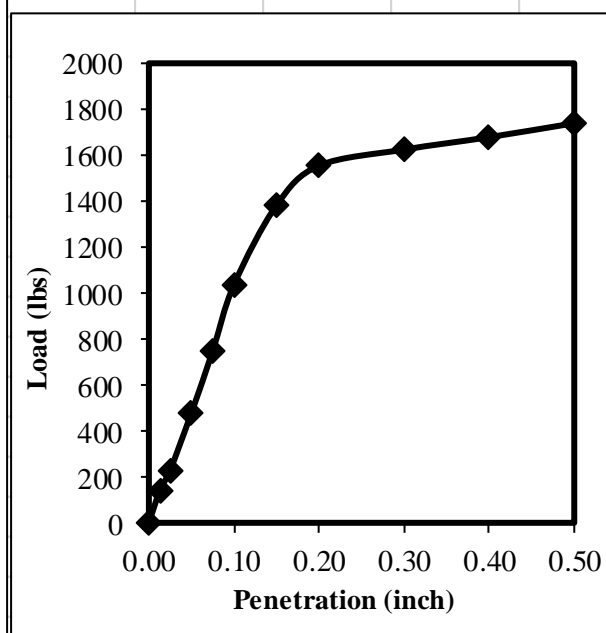
### CALIFORNIA BEARING RATIO TEST RESULT

Project	: Pengaruh Material Tambah Terhadap Nilai CBR		
Location	: Gowa	Tested By	Dandi Jumadi
Sample Number	: 15% OB+2% Z 14 Hari	Testing Method	: ASTM D 1883-07

Weight of Mould	:	4164	gr
Weight Of Wet Soil + Mould	:	9646	gr
Weight Of Soil	:	5482	gr
Mould Volume	:	3242	cm <sup>3</sup>
Wet Density	:	1.69	gr/cm <sup>3</sup>
Dry Density	:	1.48	gr/cm <sup>3</sup>

#### Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443

Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)
0.00	0.00	0	0.00
0.25	0.013	21	141.6303
0.50	0.025	34	229.3062
1.00	0.050	71	478.8453
1.50	0.075	111	748.6173
2.00	0.100	153.7	1036.59891
3.00	0.150	205	1382.5815
4.00	0.200	230.6	1555.23558
6.00	0.300	241	1625.3763
8.00	0.400	249	1679.3307
10.00	0.500	258	1740.0294



	Load (lbs)	CBR (%)
0.1	1036.599	34.553
0.2	1555.236	34.561

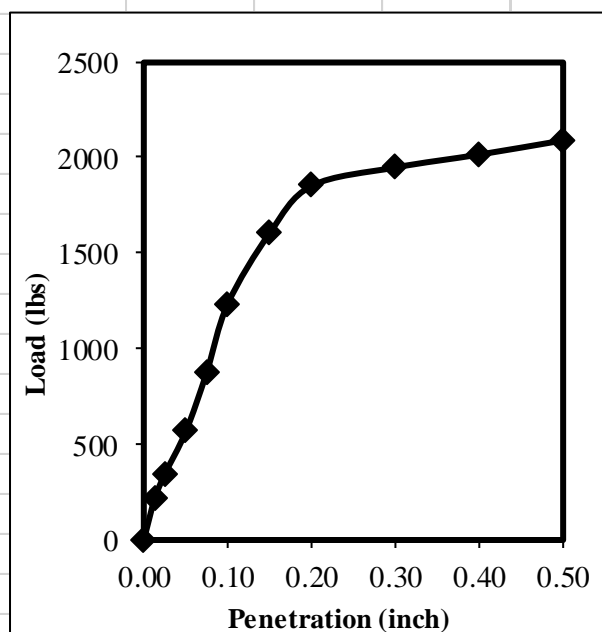
CBR      34.56    %

### CALIFORNIA BEARING RATIO TEST RESULT

Project	: Pengaruh Material Tambah Terhadap Nilai CBR		
Location	: Gowa	Tested By	Dandi Jumadi
Sample Number	15% OB+2%Z 28 Hari	Testing Method	: ASTM D 1883-07
Weight of Mould	:	4164	gr
Weight Of Wet Soil + Mould	:	9468	gr
Weight Of Soil	:	5304	gr
Mould Volume	:	3242	cm <sup>3</sup>
Wet Density	:	1.64	gr/cm <sup>3</sup>
Dry Density	:	1.48	gr/cm <sup>3</sup>

Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443

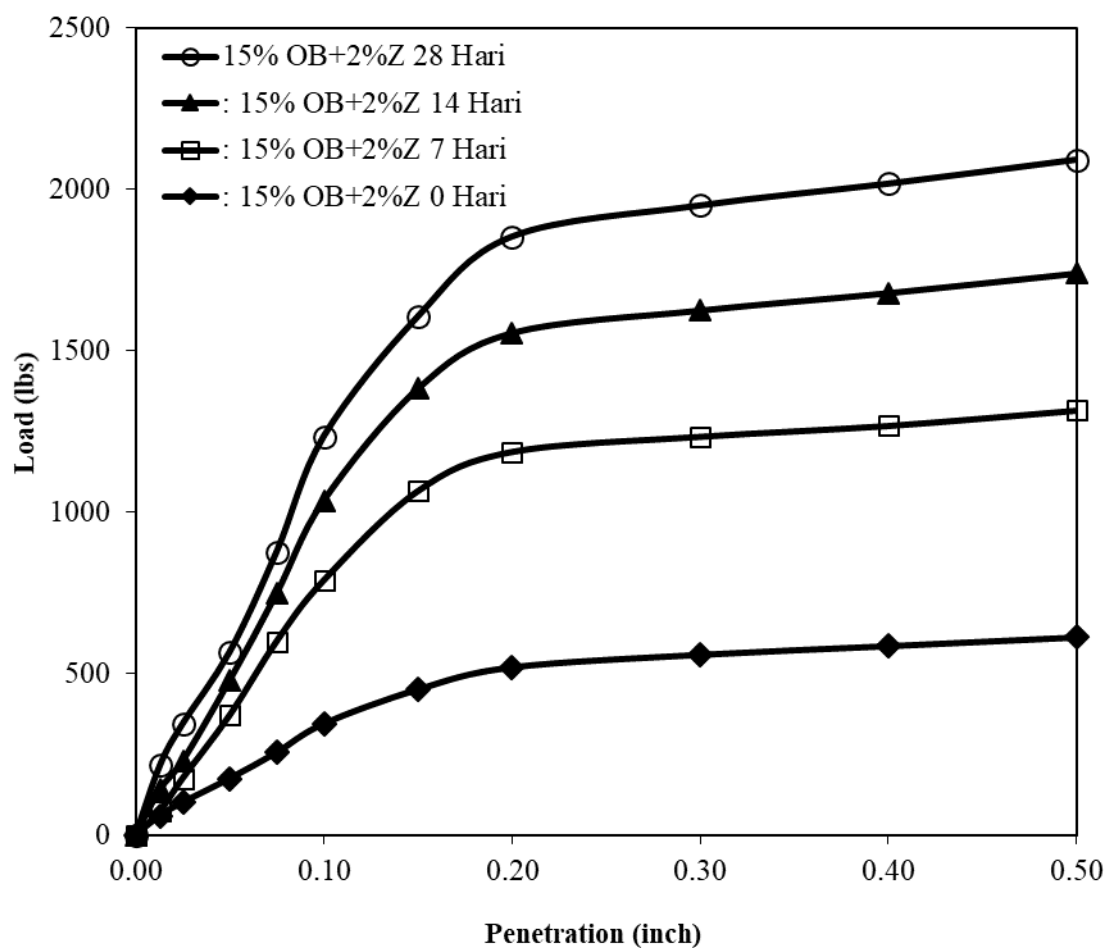
Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)
0.00	0.00	0	0.00
0.25	0.013	32	215.8176
0.50	0.025	51	343.9593
1.00	0.050	84	566.5212
1.50	0.075	130	876.759
2.00	0.100	183	1234.2069
3.00	0.150	238	1605.1434
4.00	0.200	274.7	1852.6592
6.00	0.300	289	1949.1027
8.00	0.400	299	2016.5457
10.00	0.500	310	2090.733



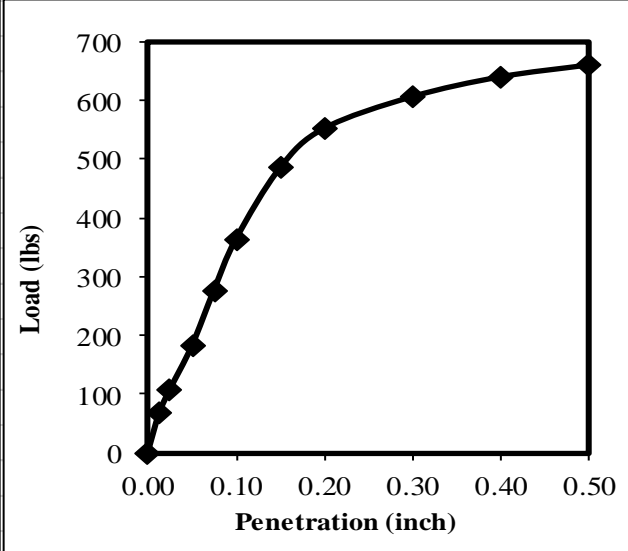
	Load (lbs)	CBR (%)
0.1	1234.207	41.140
0.2	1852.659	41.170

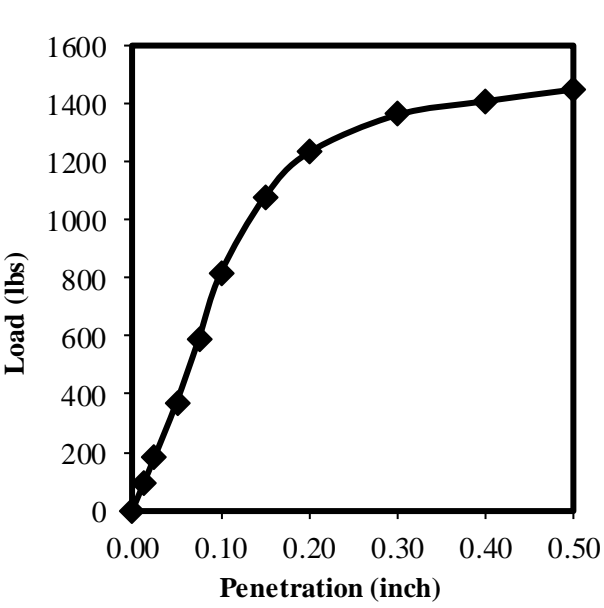
CBR            41.17    %

Sample	CBR (%)
: 15% OB+2%Z 0 Hari	11.57
: 15% OB+2%Z 7 Hari	26.38
: 15% OB+2%Z 14 Hari	34.56
15% OB+2%Z 28 Hari	41.17



## 15% OB+3%Z

<b>CALIFORNIA BEARING RATIO TEST RESULT</b>					
Project	: Pengaruh Material Tambah Terhadap Nilai CBR				
Location	: Gowa	Tested By	Dandi Jumadi		
Sample Number	: 15% OB+3%Z 0 Hari	Testing Method	: ASTM D 1883-07		
Weight of Mould	:	4164	gr		
Weight Of Wet Soil + Mould	:	9994	gr		
Weight Of Soil	:	5830	gr		
Mould Volume	:	3242	cm <sup>3</sup>		
Wet Density	:	1.80	gr/cm <sup>3</sup>		
Dry Density	:	1.49	gr/cm <sup>3</sup>		
<b>Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443</b>					
Time (Min)	Penetration (inch)		Dial Reading	Load (lbs)	
0.00	0.00		0	0.00	
0.25	0.013		10	67.443	
0.50	0.025		16	107.9088	
1.00	0.050		27	182.0961	
1.50	0.075		41	276.5163	
2.00	0.100		54	364.1922	
3.00	0.150		72	485.5896	
4.00	0.200		82	553.0326	
6.00	0.300		90	606.987	
8.00	0.400		95	640.7085	
10.00	0.500		98	660.9414	
					
			Load (lbs)	CBR (%)	
			0.1	364.192	12.140
			0.2	553.033	12.290
			CBR	12.29	%

CALIFORNIA BEARING RATIO TEST RESULT														
Project	: Pengaruh Material Tambah Terhadap Nilai CBR													
Location	: Gowa	Tested By	Dandi Jumadi											
Sample Number	: 15% OB+3% Z 7 Hari	Testing Method	: ASTM D 1883-07											
Weight of Mould	:	4164	gr											
Weight Of Wet Soil + Mould	:	9848	gr											
Weight Of Soil	:	5684	gr											
Mould Volume	:	3242	cm <sup>3</sup>											
Wet Density	:	1.75	gr/cm <sup>3</sup>											
Dry Density	:	1.49	gr/cm <sup>3</sup>											
<b>Proving ring Calibration 50 KN cap, lbs/Dev= 6.7443</b>														
Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)											
0.00	0.00	0	0.00											
0.25	0.013	14	94.4202											
0.50	0.025	27	182.0961											
1.00	0.050	55	370.9365											
1.50	0.075	87	586.7541											
2.00	0.100	121	816.0603											
3.00	0.150	160	1079.088											
4.00	0.200	182.8	1232.858											
6.00	0.300	202	1362.3486											
8.00	0.400	209	1409.5587											
10.00	0.500	215	1450.0245											
		<table border="1"> <thead> <tr> <th></th> <th>Load (lbs)</th> <th>CBR (%)</th> </tr> </thead> <tbody> <tr> <td>0.1</td> <td>816.060</td> <td>27.202</td> </tr> <tr> <td>0.2</td> <td>1232.858</td> <td>27.397</td> </tr> <tr> <td>CBR</td> <td>27.40</td> <td>%</td> </tr> </tbody> </table>		Load (lbs)	CBR (%)	0.1	816.060	27.202	0.2	1232.858	27.397	CBR	27.40	%
	Load (lbs)	CBR (%)												
0.1	816.060	27.202												
0.2	1232.858	27.397												
CBR	27.40	%												

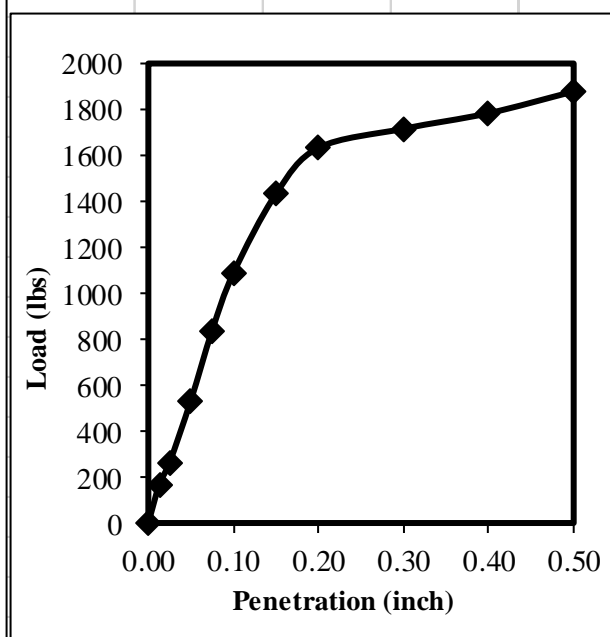
### CALIFORNIA BEARING RATIO TEST RESULT

Project	: Pengaruh Material Tambah Terhadap Nilai CBR		
Location	: Gowa	Tested By	Dandi Jumadi
Sample Number	: 15% OB+3% Z 14 Hari	Testing Method	: ASTM D 1883-07

Weight of Mould	:	4164	gr
Weight Of Wet Soil + Mould	:	9680	gr
Weight Of Soil	:	5516	gr
Mould Volume	:	3242	cm <sup>3</sup>
Wet Density	:	1.70	gr/cm <sup>3</sup>
Dry Density	:	1.49	gr/cm <sup>3</sup>

#### Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443

Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)
0.00	0.00	0	0.00
0.25	0.013	25	168.6075
0.50	0.025	39	263.0277
1.00	0.050	79	532.7997
1.50	0.075	124	836.2932
2.00	0.100	161	1085.8323
3.00	0.150	212	1429.7916
4.00	0.200	241.7	1630.0973
6.00	0.300	254	1713.0522
8.00	0.400	264	1780.4952
10.00	0.500	278	1874.9154



	Load (lbs)	CBR (%)
0.1	1085.832	36.194
0.2	1630.097	36.224

CBR      36.22    %



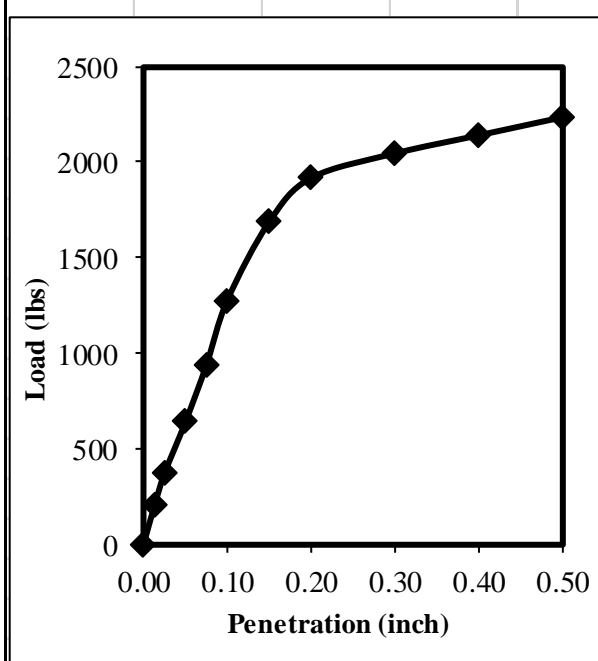
### CALIFORNIA BEARING RATIO TEST RESULT

Project	: Pengaruh Material Tambah Terhadap Nilai CBR		
Location	: Gowa	Tested By	Dandi Jumadi
Sample Number	: 15% OB+3% Z 28 Hari	Testing Method	: ASTM D 1883-07

Weight of Mould	:	4164	gr
Weight Of Wet Soil + Mould	:	9503	gr
Weight Of Soil	:	5339	gr
Mould Volume	:	3242	cm <sup>3</sup>
Wet Density	:	1.65	gr/cm <sup>3</sup>
Dry Density	:	1.49	gr/cm <sup>3</sup>

#### Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443

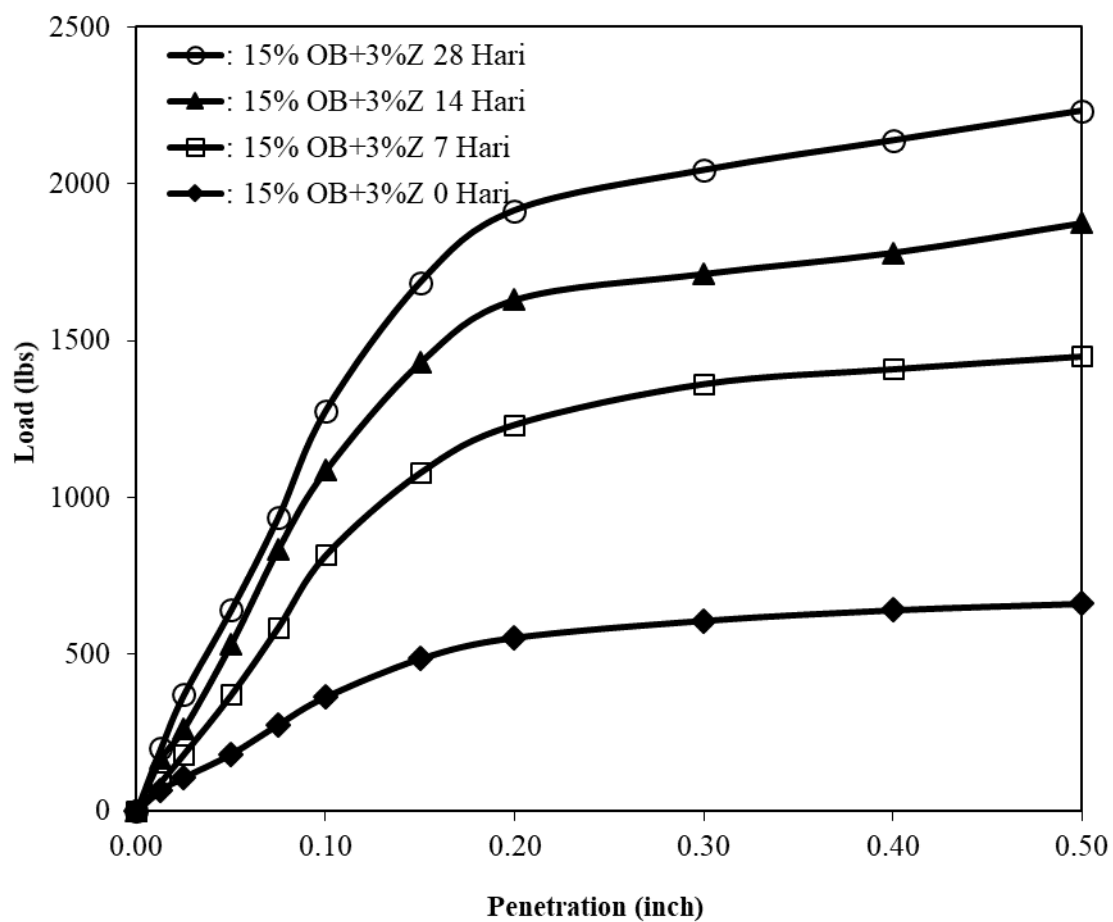
Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)
0.00	0.00	0	0.00
0.25	0.013	30	202.329
0.50	0.025	55	370.9365
1.00	0.050	95	640.7085
1.50	0.075	139	937.4577
2.00	0.100	189.3	1276.696
3.00	0.150	250	1686.075
4.00	0.200	284	1915.3812
6.00	0.300	303	2043.5229
8.00	0.400	317	2137.9431
10.00	0.500	331	2232.3633



	Load (lbs)	CBR (%)
0.1	1276.696	42.557
0.2	1915.381	42.564

CBR      42.56    %

Sample	CBR (%)
: 15% OB+3%Z 0 Hari	12.29
: 15% OB+3%Z 7 Hari	27.40
: 15% OB+3%Z 14 Hari	36.22
: 15% OB+3%Z 28 Hari	42.56



## 15% OB+4%Z

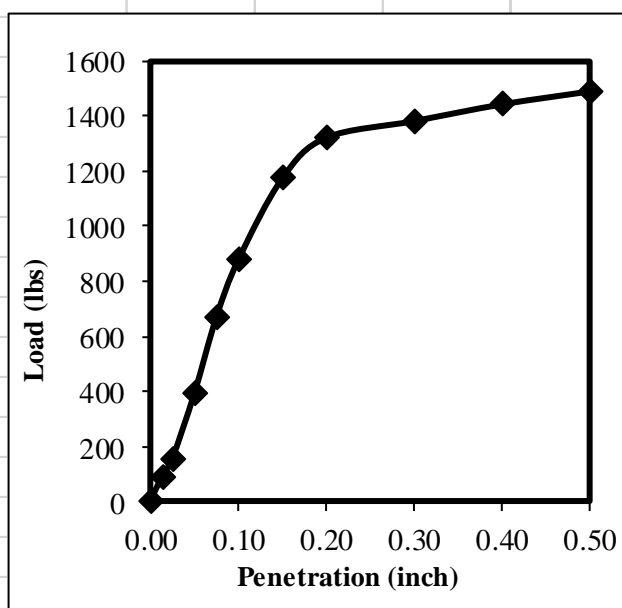
CALIFORNIA BEARING RATIO TEST RESULT														
Project	: Pengaruh Material Tambah Terhadap Nilai CBR													
Location	: Gowa	Tested By	Dandi Jumadi											
Sample Number	: 15% OB+4%Z 0 Hari	Testing Method	: ASTM D 1883-07											
Weight of Mould	:	4164	gr											
Weight Of Wet Soil + Mould	:	9985	gr											
Weight Of Soil	:	5821	gr											
Mould Volume	:	3242	cm <sup>3</sup>											
Wet Density	:	1.80	gr/cm <sup>3</sup>											
Dry Density	:	1.50	gr/cm <sup>3</sup>											
<b>Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443</b>														
Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)											
0.00	0.00	0	0.00											
0.25	0.013	10	67.443											
0.50	0.025	16	107.9088											
1.00	0.050	29	195.5847											
1.50	0.075	45	303.4935											
2.00	0.100	58	391.1694											
3.00	0.150	78	526.0554											
4.00	0.200	88	593.4984											
6.00	0.300	93	627.2199											
8.00	0.400	98	660.9414											
10.00	0.500	103	694.6629											
		<table border="1"> <thead> <tr> <th></th> <th>Load (lbs)</th> <th>CBR (%)</th> </tr> </thead> <tbody> <tr> <td>0.1</td> <td>391.169</td> <td>13.039</td> </tr> <tr> <td>0.2</td> <td>593.498</td> <td>13.189</td> </tr> <tr> <td>CBR</td> <td>13.19</td> <td>%</td> </tr> </tbody> </table>		Load (lbs)	CBR (%)	0.1	391.169	13.039	0.2	593.498	13.189	CBR	13.19	%
	Load (lbs)	CBR (%)												
0.1	391.169	13.039												
0.2	593.498	13.189												
CBR	13.19	%												

### CALIFORNIA BEARING RATIO TEST RESULT

Project	: Pengaruh Material Tambah Terhadap Nilai CBR		
Location	: Gowa	Tested By	Dandi Jumadi
Sample Number	: 15% OB+4%Z 7 Hari	Testing Method	: ASTM D 1883-07
Weight of Mould	:	4164	gr
Weight Of Wet Soil + Mould	:	9853	gr
Weight Of Soil	:	5689	gr
Mould Volume	:	3242	cm <sup>3</sup>
Wet Density	:	1.75	gr/cm <sup>3</sup>
Dry Density	:	1.50	gr/cm <sup>3</sup>

Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443

Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)
0.00	0.00	0	0.00
0.25	0.013	13	87.6759
0.50	0.025	23	155.1189
1.00	0.050	58	391.1694
1.50	0.075	99	667.6857
2.00	0.100	130	876.759
3.00	0.150	174	1173.5082
4.00	0.200	196	1321.8828
6.00	0.300	205	1382.5815
8.00	0.400	214	1443.2802
10.00	0.500	221	1490.4903



	Load (lbs)	CBR (%)
0.1	876.759	29.225
0.2	1321.883	29.375

CBR      29.38    %

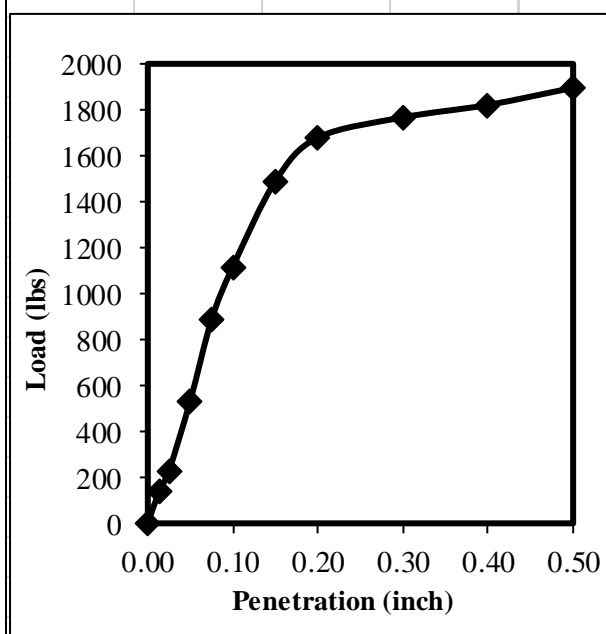
### CALIFORNIA BEARING RATIO TEST RESULT

Project	: Pengaruh Material Tambah Terhadap Nilai CBR		
Location	: Gowa	Tested By	Dandi Jumadi
Sample Number	: 15% OB+4%Z 14 Hari	Testing Method	: ASTM D 1883-07

Weight of Mould	:	4164	gr
Weight Of Wet Soil + Mould	:	9655	gr
Weight Of Soil	:	5491	gr
Mould Volume	:	3242	cm <sup>3</sup>
Wet Density	:	1.69	gr/cm <sup>3</sup>
Dry Density	:	1.50	gr/cm <sup>3</sup>

#### Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443

Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)
0.00	0.00	0	0.00
0.25	0.013	20	134.886
0.50	0.025	34	229.3062
1.00	0.050	79	532.7997
1.50	0.075	131	883.5033
2.00	0.100	165	1112.8095
3.00	0.150	220	1483.746
4.00	0.200	248	1672.5864
6.00	0.300	261	1760.2623
8.00	0.400	269	1814.2167
10.00	0.500	280	1888.404



	Load (lbs)	CBR (%)
0.1	1112.810	37.094
0.2	1672.586	37.169

CBR      37.17    %

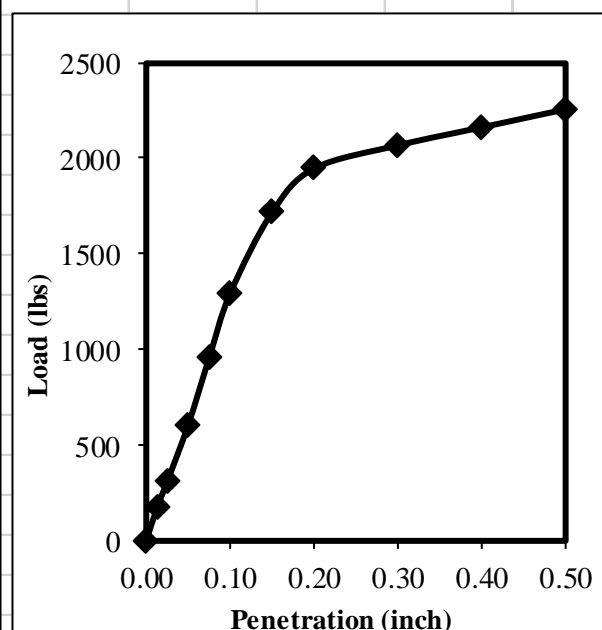
### CALIFORNIA BEARING RATIO TEST RESULT

Project	: Pengaruh Material Tambah Terhadap Nilai CBR		
Location	: Gowa	Tested By	Dandi Jumadi
Sample Number	: 15% OB+4%Z 28 Hari	Testing Method	: ASTM D 1883-07

Weight of Mould	:	4164	gr
Weight Of Wet Soil + Mould	:	9488	gr
Weight Of Soil	:	5324	gr
Mould Volume	:	3242	cm <sup>3</sup>
Wet Density	:	1.64	gr/cm <sup>3</sup>
Dry Density	:	1.50	gr/cm <sup>3</sup>

#### Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443

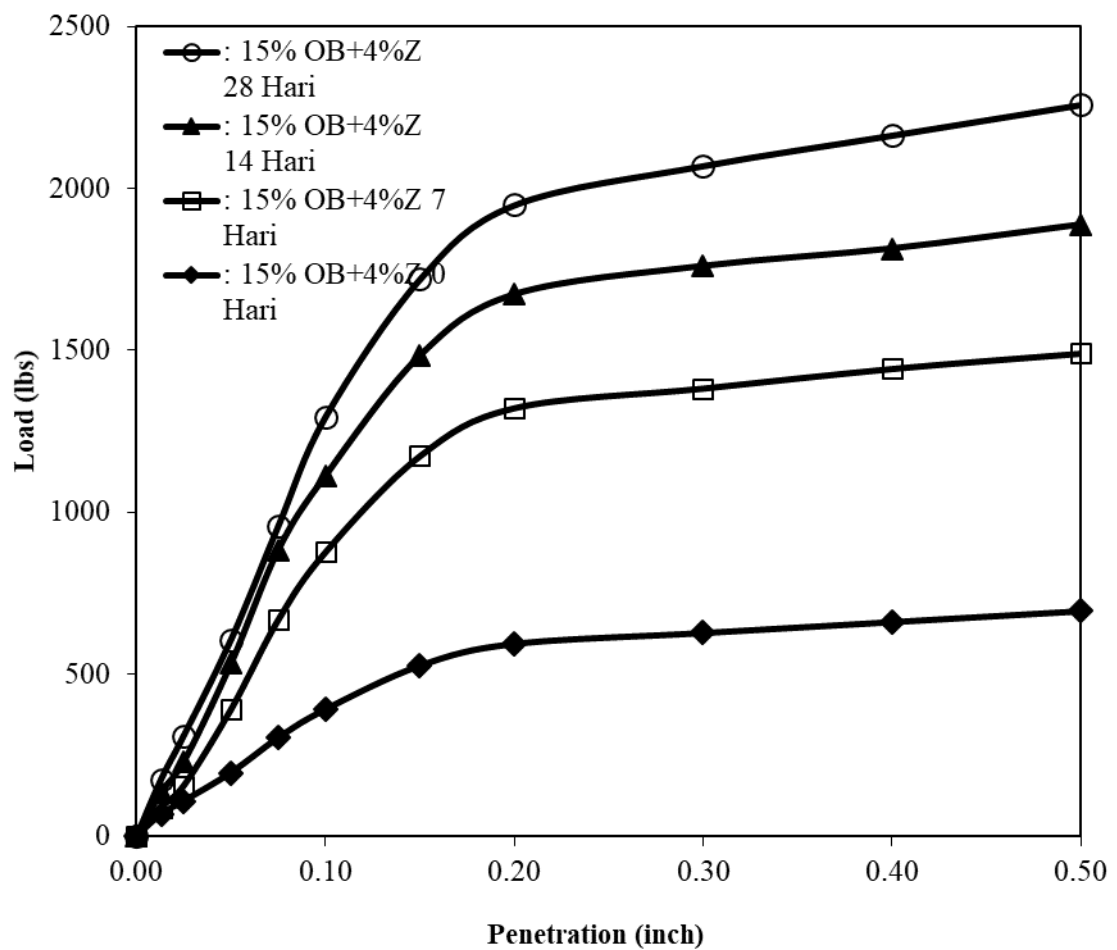
Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)
0.00	0.00	0	0.00
0.25	0.013	26	175.3518
0.50	0.025	46	310.2378
1.00	0.050	90	606.987
1.50	0.075	142	957.6906
2.00	0.100	192	1294.9056
3.00	0.150	255	1719.7965
4.00	0.200	289	1949.1027
6.00	0.300	307	2070.5001
8.00	0.400	321	2164.9203
10.00	0.500	335	2259.3405



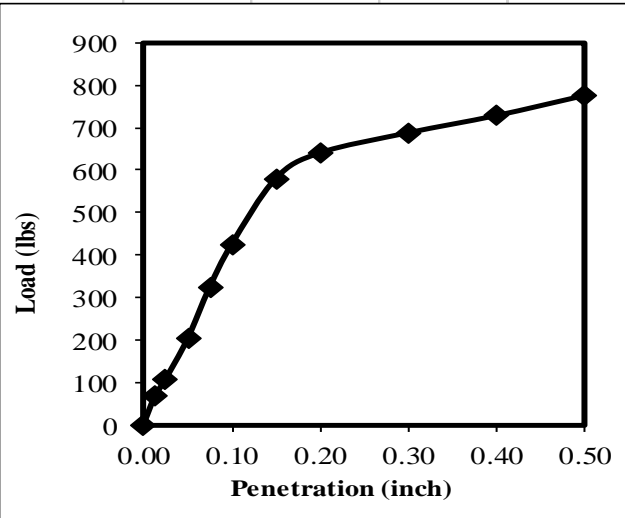
	Load (lbs)	CBR (%)
0.1	1294.906	43.164
0.2	1949.103	43.313

CBR      43.31    %

Sample	CBR (%)
: 15% OB+4%Z 0 Hari	13.19
: 15% OB+4%Z 7 Hari	29.38
: 15% OB+4%Z 14 Hari	37.17
: 15% OB+4%Z 28 Hari	43.31



## 15% OB+5%Z

CALIFORNIA BEARING RATIO TEST RESULT																
Project	: Pengaruh Material Tambah Terhadap Nilai CBR															
Location	: Gowa	Tested By	Dandi Jumadi													
Sample Number	: 15% OB+5%Z 0 Hari	Testing Method	: ASTM D 1883-07													
Weight of Mould	:	4164	gr													
Weight Of Wet Soil + Mould	:	10162	gr													
Weight Of Soil	:	5998	gr													
Mould Volume	:	3242	cm <sup>3</sup>													
Wet Density	:	1.85	gr/cm <sup>3</sup>													
Dry Density	:	1.55	gr/cm <sup>3</sup>													
<b>Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443</b>																
Time (Min)	Penetration (inch)		Dial Reading	Load (lbs)												
0.00	0.00		0	0.00												
0.25	0.013		10	67.443												
0.50	0.025		16	107.9088												
1.00	0.050		30	202.329												
1.50	0.075		48	323.7264												
2.00	0.100		63	424.8909												
3.00	0.150		86	580.0098												
4.00	0.200		95	640.7085												
6.00	0.300		102	687.9186												
8.00	0.400		108	728.3844												
10.00	0.500		115	775.5945												
 <table border="1" data-bbox="917 1294 1300 1429"> <thead> <tr> <th></th> <th>Load (lbs)</th> <th>CBR (%)</th> </tr> </thead> <tbody> <tr> <td>0.1</td> <td>424.891</td> <td>14.163</td> </tr> <tr> <td>0.2</td> <td>640.709</td> <td>14.238</td> </tr> </tbody> </table> <table border="1" data-bbox="917 1444 1300 1496"> <tbody> <tr> <td>CBR</td> <td>14.24</td> <td>%</td> </tr> </tbody> </table>						Load (lbs)	CBR (%)	0.1	424.891	14.163	0.2	640.709	14.238	CBR	14.24	%
	Load (lbs)	CBR (%)														
0.1	424.891	14.163														
0.2	640.709	14.238														
CBR	14.24	%														



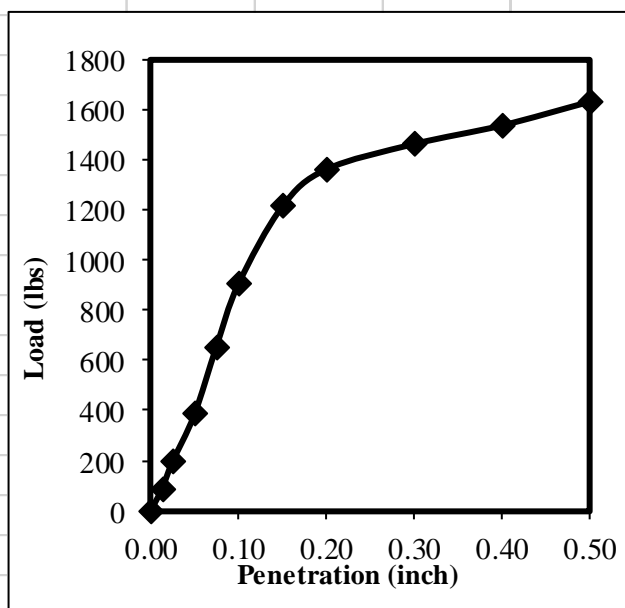
### CALIFORNIA BEARING RATIO TEST RESULT

Project	: Pengaruh Material Tambah Terhadap Nilai CBR		
Location	: Gowa	Tested By	Dandi Jumadi
Sample Number	: 15% OB+5%Z 7 Hari	Testing Method	: ASTM D 1883-07

Weight of Mould	:	4164	gr
Weight Of Wet Soil + Mould	:	9975	gr
Weight Of Soil	:	5811	gr
Mould Volume	:	3242	cm <sup>3</sup>
Wet Density	:	1.79	gr/cm <sup>3</sup>
Dry Density	:	1.55	gr/cm <sup>3</sup>

#### Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443

Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)
0.00	0.00	0	0.00
0.25	0.013	13	87.6759
0.50	0.025	29	195.5847
1.00	0.050	57	384.4251
1.50	0.075	97	654.1971
2.00	0.100	134	903.7362
3.00	0.150	180	1213.974
4.00	0.200	202	1362.3486
6.00	0.300	217	1463.5131
8.00	0.400	228	1537.7004
10.00	0.500	242	1632.1206



	Load (lbs)	CBR (%)
0.1	903.736	30.125
0.2	1362.349	30.274

CBR      30.27    %

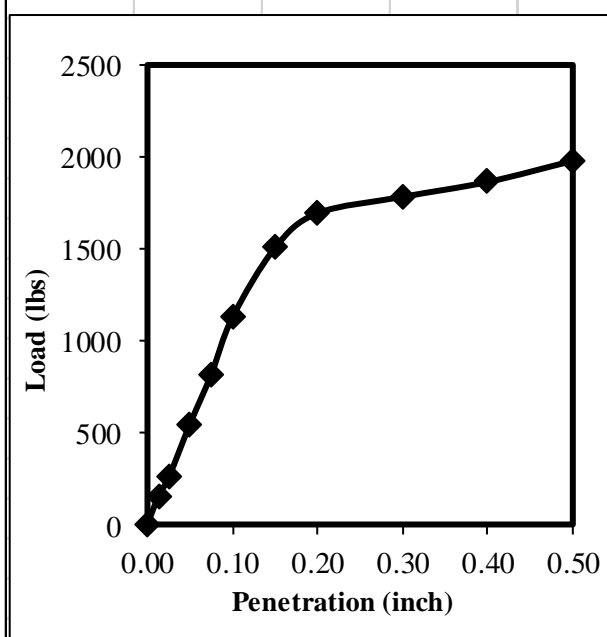
### CALIFORNIA BEARING RATIO TEST RESULT

Project	: Pengaruh Material Tambah Terhadap Nilai CBR		
Location	: Gowa	Tested By	Dandi Jumadi
Sample Number	: 15% OB+5%Z 14 Hari	Testing Method	: ASTM D 1883-07

Weight of Mould	:	4164	gr
Weight Of Wet Soil + Mould	:	9810	gr
Weight Of Soil	:	5646	gr
Mould Volume	:	3242	cm <sup>3</sup>
Wet Density	:	1.74	gr/cm <sup>3</sup>
Dry Density	:	1.55	gr/cm <sup>3</sup>

#### Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443

Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)
0.00	0.00	0	0.00
0.25	0.013	23	155.1189
0.50	0.025	38	256.2834
1.00	0.050	81	546.2883
1.50	0.075	121	816.0603
2.00	0.100	167	1126.2981
3.00	0.150	223	1503.9789
4.00	0.200	250.8	1691.4704
6.00	0.300	264	1780.4952
8.00	0.400	276	1861.4268
10.00	0.500	293	1976.0799



	Load (lbs)	CBR (%)
0.1	1126.298	37.543
0.2	1691.470	37.588

CBR      37.59    %

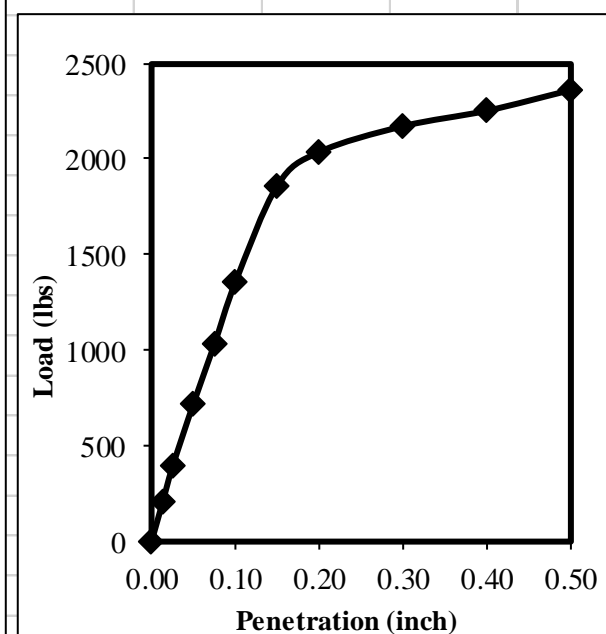
### CALIFORNIA BEARING RATIO TEST RESULT

Project	: Pengaruh Material Tambah Terhadap Nilai CBR		
Location	: Gowa	Tested By	Dandi Jumadi
Sample Number	: 15% OB+5%Z 28 Hari	Testing Method	: ASTM D 1883-07

Weight of Mould	:	4164	gr
Weight Of Wet Soil + Mould	:	9631	gr
Weight Of Soil	:	5467	gr
Mould Volume	:	3242	cm <sup>3</sup>
Wet Density	:	1.69	gr/cm <sup>3</sup>
Dry Density	:	1.55	gr/cm <sup>3</sup>

#### Proving ring Calibration 50 KN cap, lbs/Dev = 6.7443

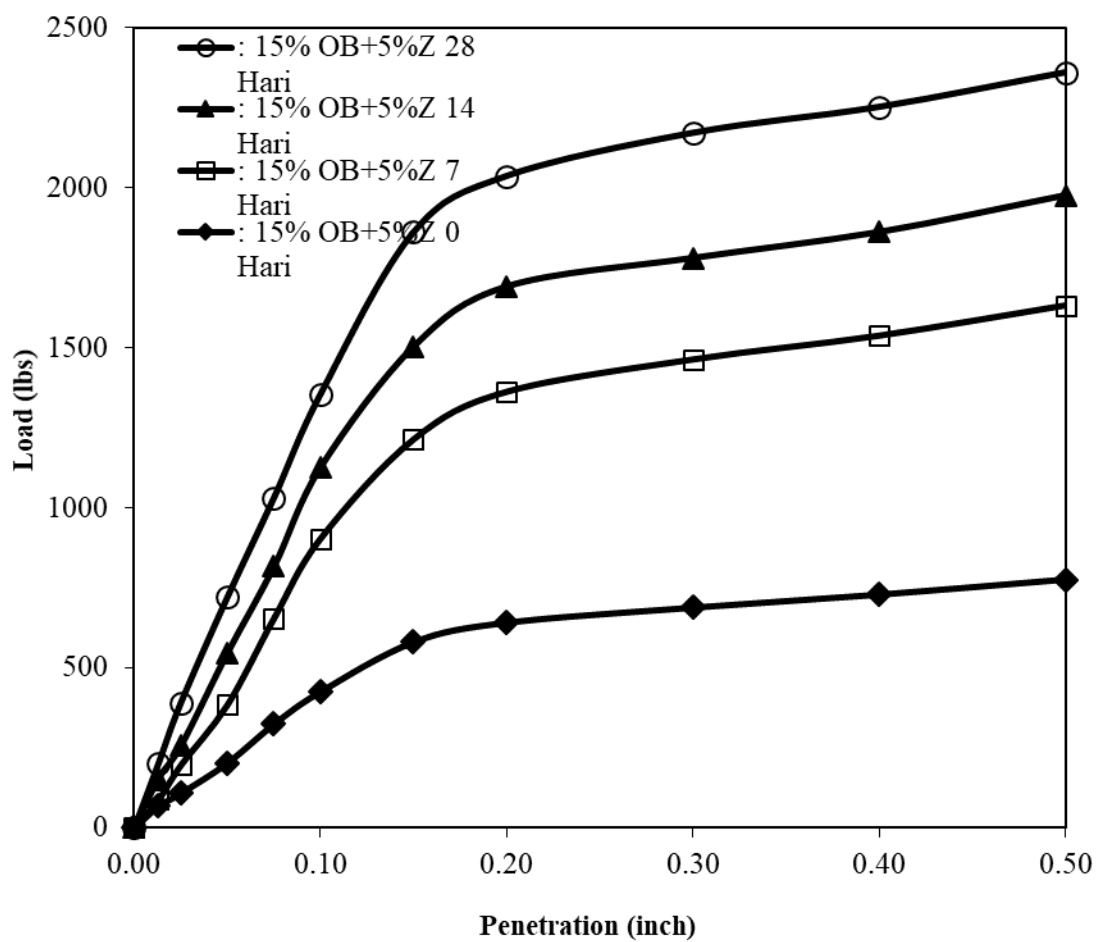
Time (Min)	Penetration (inch)	Dial Reading	Load (lbs)
0.00	0.00	0	0.00
0.25	0.013	30	202.329
0.50	0.025	58	391.1694
1.00	0.050	107	721.6401
1.50	0.075	153	1031.8779
2.00	0.100	201	1355.6043
3.00	0.150	276	1861.4268
4.00	0.200	302	2036.7786
6.00	0.300	322	2171.6646
8.00	0.400	334	2252.5962
10.00	0.500	350	2360.505



	Load (lbs)	CBR (%)
0.1	1355.604	45.187
0.2	2036.779	45.262

CBR      45.26    %

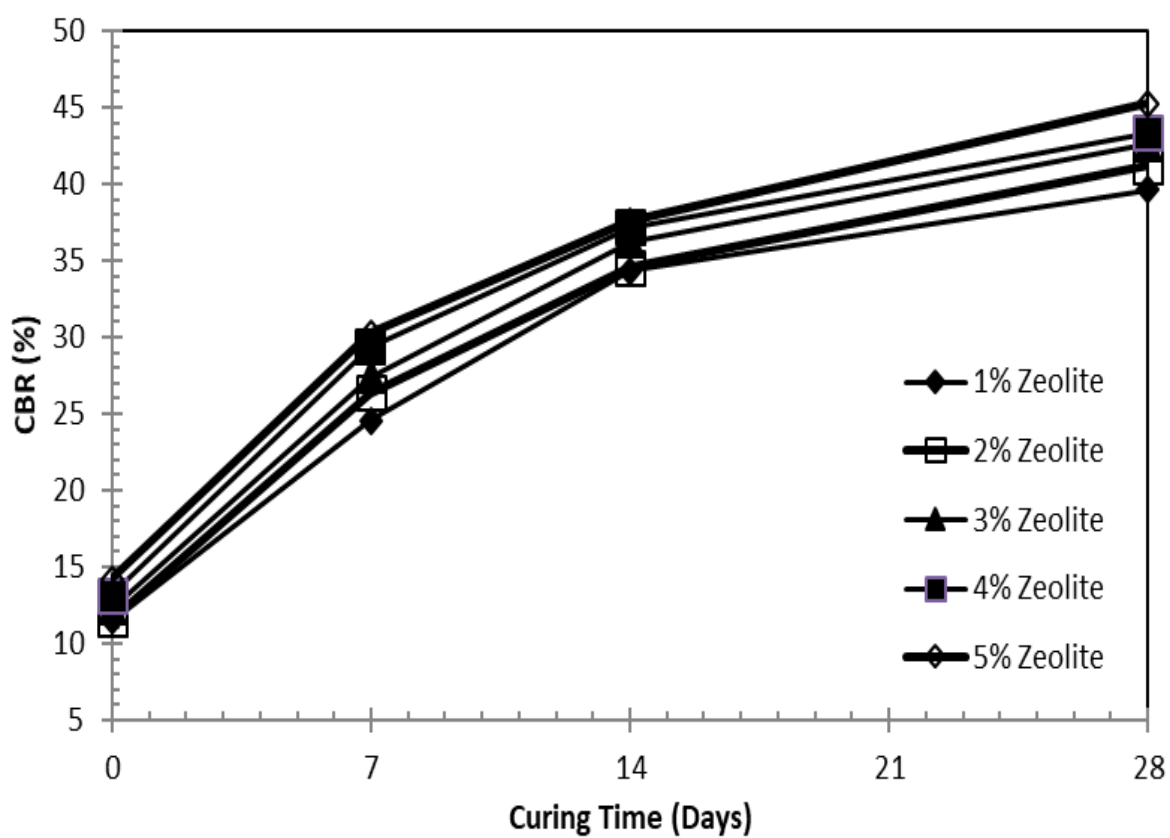
Sample	CBR (%)
: 15% OB+5%Z 0 Hari	14.24
: 15% OB+5%Z 7 Hari	30.27
: 15% OB+5%Z 14 Hari	37.59
: 15% OB+5%Z 28 Hari	45.26



## REKAP

CBR	Curing Time	Zeolite				
		1%	2%	3%	4%	5%
	0 Day	11.47	11.57	12.29	13.19	14.24
	7 Days	24.58	26.38	27.40	29.38	30.27
	14 Days	34.32	34.56	36.22	37.17	37.59
	28 Days	39.60	41.17	42.56	43.31	45.26

\*Overboulder Asbuton Konstan 15%



### DOKUMENTASI









