



PENUGASAN  
No : 07-09/PM/LM/IX/2003

Ketua Program Studi Teknik Sipil, Fakultas Teknik Sipil dan Perencanaan Institut Sains dan Teknologi Nasional Jakarta menugaskan kepada :

**Ir. Idrus, MSc**                      **Staff Jurusan Teknik Sipil**

Untuk melakukan pekerjaan Penyelidikan Tanah sebagai bentuk kegiatan  
**Pengabdian Pada Masyarakat pada :**

- Nama Pekerjaan        : Penyelidikan Tanah Uji CBR Skaron 2 Halim Perdana Kusuma
- Lokasi                    : Halim Perdana Kusuma
- Pemberi Tugas         : PT. Hutan AlamAndika Wijaya Sarana

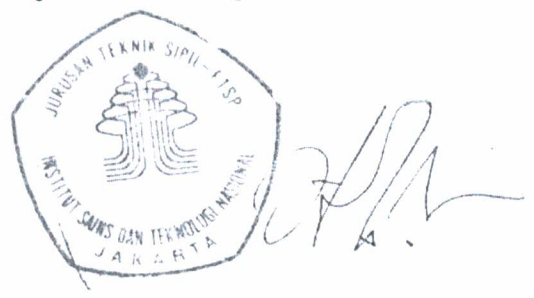
Dengan jadwal pelaksanaan pekerjaan selama 5 hari kerja ( 50 Jam), 2 hari di lapangan dan 3hari di Laboratorium

Kepada Ir. Idrus MSc diberikan kepercayaan penuh untuk melakukan pekerjaan Pengabdian Pada Masyarakat tersebut dan bertanggung jawab atas segala sesuatu mengenai pekerjaan tersebut

Kepada pelaksana tugas ini akan diberikan honorarium sesuai dengan ketentuan yang berlaku di Laboratorium Mekanika Tanah Institut Sains dan Teknologi Nasional.

Penugasan ini berlaku sejak dikeluarkan sampai dengan berakhirnya jangka waktu penyusunan Laporan Akhir (Final Report) diterima oleh pemberi kerja dengan baik.

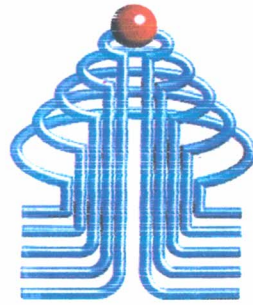
Jakarta, 07 September 2003  
Kapropdi Teknik Sipil



Ir. Harry Hartawan MT  
NIP : 01.83316

- Tembusan :
1. Dekan FTSP-ISTN ( sbg laporan )
  2. Ka. Lab. Mekanika Tanah ISTN
  3. Arsip

**LEMBAR PENGESAHAN  
PENGABDIAN PADA MASYARAKAT**



**ISTN**

**PENYELIDIKAN TANAH CBR SKADRON 2  
Lokasi : Halim Perdana Kusuma**

Oleh :  
Idrus Ir, M.Sc

Mengetahui :  
Ketua Jurusan Teknik Sipil



Ir. Harry Hartawan, M.T

**Program Studi Teknik Sipil  
Institut Sain dan Teknologi Nasional  
Jakarta 2003**

# ՀԱՅԱՍՏԱՆԻ ՀԱՆՐԱՊԵՏՈՒԹՅԱՆ ՎՃԱՐՈՒՄԻ ԱՐԴԱՐԱԴԱՆՈՒԹՅԱՆ ՆԱԽԱՐԱՐՈՒԹՅԱՆ ԿՈԴԵՔՍՏ



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ԿՈԴԵՔՍՏ

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ՆԱԽԱՐԱՐՈՒԹՅԱՆ ԿՈԴԵՔՍՏ

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ՆԱԽԱՐԱՐՈՒԹՅԱՆ ԿՈԴԵՔՍՏ

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ՆԱԽԱՐԱՐՈՒԹՅԱՆ ԿՈԴԵՔՍՏ

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ՆԱԽԱՐԱՐՈՒԹՅԱՆ ԿՈԴԵՔՍՏ

# FINAL REPORT

# SOIL INVESTIGATION

PROJECT :

CBR FIELD TEST

SKADRON 2 HALIM PERDANA KUSUMA

LOCATION : JAKARTA



**LABORATORIUM MEKANIKA TANAH**  
**INSTITUT SAINS DAN TEKNOLOGI NASIONAL**

KAMPUS ISTN BHUMI SRENGSENG INDAH JALAN MOCH KAHFI 2 JAGAKARSA -- JAKARTA 12640  
TELPON. 021 98189554 FAX. 021 78693379

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Jakarta 06 September 2003  
No: 06-09.1/FR/CBR/IX/03

Kepada Yth  
PT. Andika Wijaya Sarana  
Di Jakarta

Perihal : Laporan Uji CBR Lapangan di Skadron 2 Halim Perdana Kusuma  
Dengan hormat,

Sehubungan permohonan yang kami terima untuk melakukan pengujian CBR lapangan pada proyek : Skadron 2 Halim Perdana Kusuma, Jakarta ,maka kami Laboratorium Mekanika Tanah ISTN, akan melaporkan hasil pengujian yang telah kami lakukan sbb :

1. Uji CBR Lapangan kami lakukan pada 05 September 2003 sebanyak 10 (sepuluh) titik pengujian pada lapisan subgrade (tanah merah)
2. Hasil uji sbb :

No	CBR 0,1"	Jenis tanah	Keterangan
1	12.48	Tanah merah	
2	22.12	Tanah merah	
3	16.45	Tanah merah	
4	7.94	Tanah merah	
5	14.75	Tanah merah	
6	13.61	Tanah merah	
7	11.34	Tanah merah	
8	28.93	Tanah merah	
9	15.03	Tanah merah	
10	7.37	Tanah merah	

3. Hasil uji CBR lapangan untuk subgrade berkisar antara 7.37 s/d 28.93 %.

Hasil uji CBR lapangan terlampir.

Demikianlah laporan ini kami buat dengan sebenar benarnya.

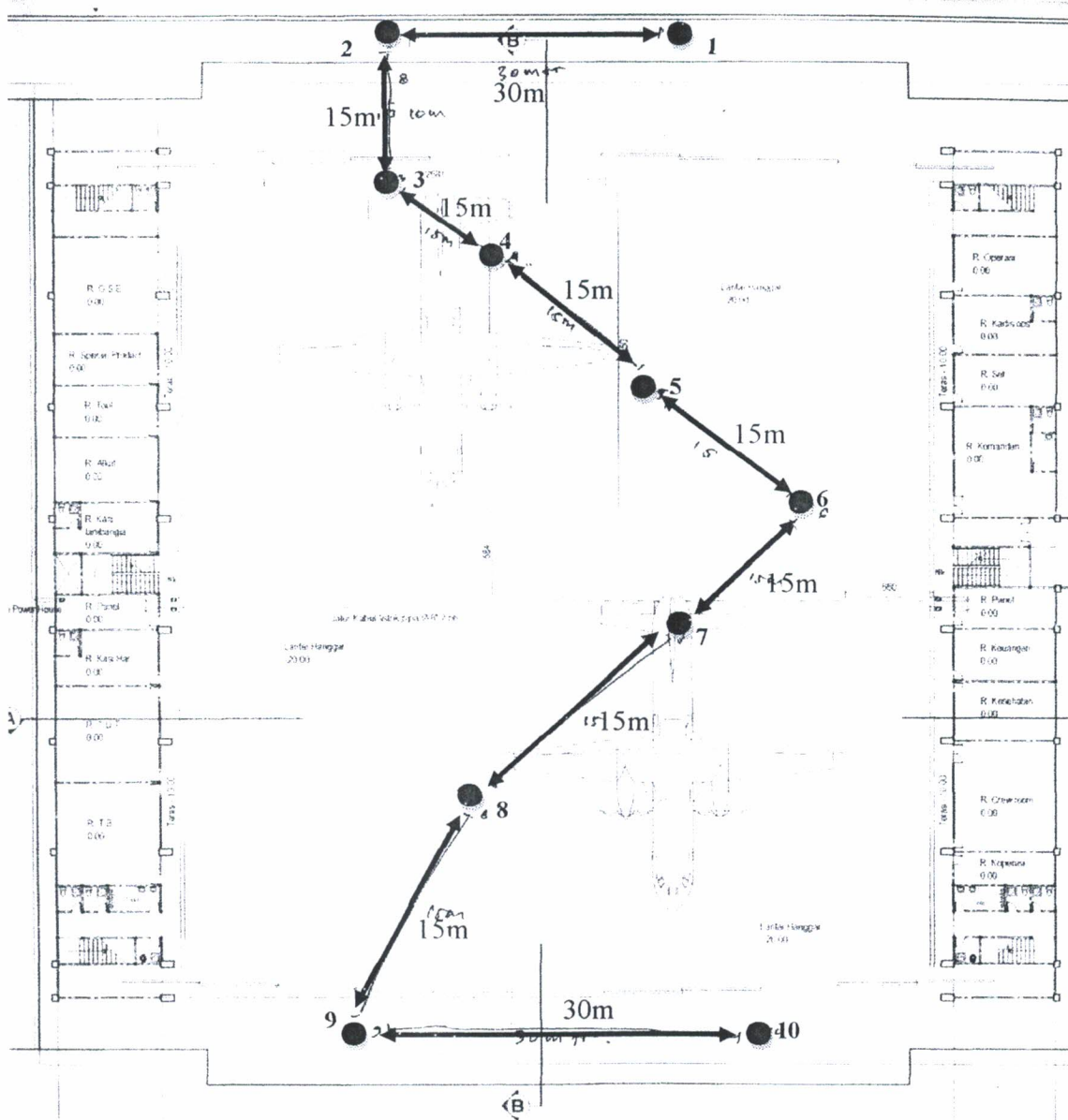
Hormat kami,  
*ISTN Soil Mechanics Laboratory*



**Idrus Muhammad Ir. M.Sc**

REG LPJK : 1.2.500.2.31.09.03.000007

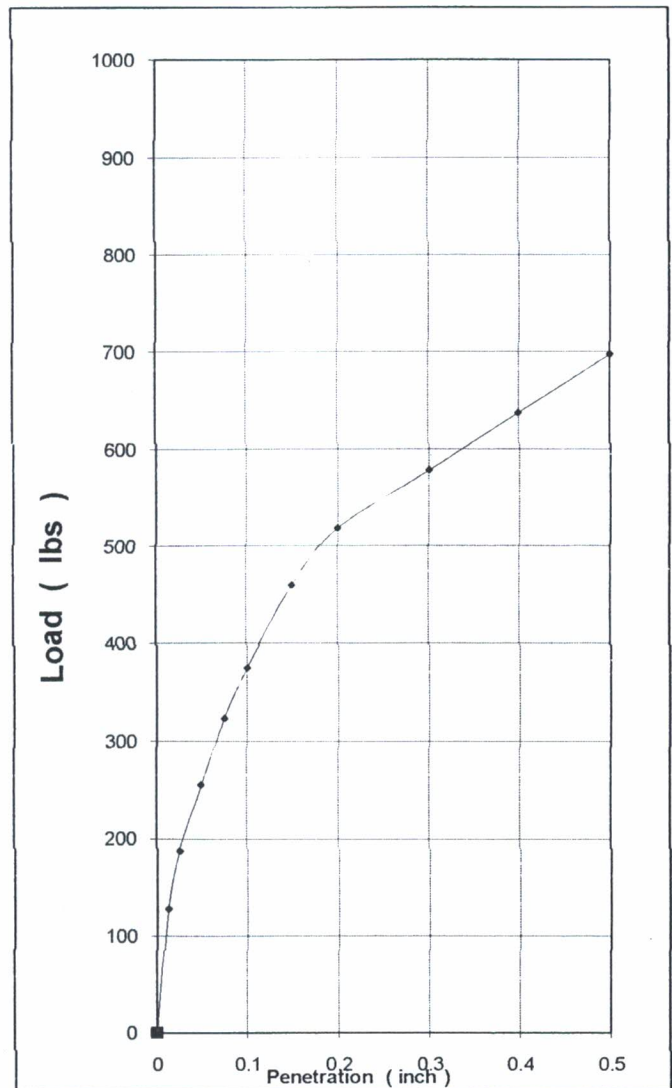
**LAY-OUT TITIK CBR**  
**SITE : SKADRON 2 HALIM PERDANA KUSUMA**  
**JAKARTA**



# CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	SKADRON 2 HALIM PERDANA KUSUMA		
LOCATION	Jakarta		
Location of Tested	No : 1	Date of Test	September 05, 2003
Soil Description	<i>tanah merah (subgrade)</i>	Tested By	Budi
Coordinate of Tested	N : ..... E : .....	Calibration ( lbs/div )	8.5082
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov.Ring	Load(lbs)
0.00	0	0	3.0	0
0.25	0.0125	31.75	15.0	127.62
0.50	0.025	63.5	22.0	187.18
1.00	0.05	127	30.0	255.25
1.50	0.075	190.5	38.0	323.31
2.00	0.1	254	44.0	374.36
3.00	0.15	381	54.0	459.44
4.00	0.2	508	61.0	519.00
5.00	0.3	762	68.0	578.56
8.00	0.4	1016	75.0	638.12
10.00	0.5	1270	82.0	697.67



### Field Water Content ( % )

	Unit
Weight of Container	gram
Weight of Soil & Container	gram
Weight of Soil & Container	gram
Field Water Content	%

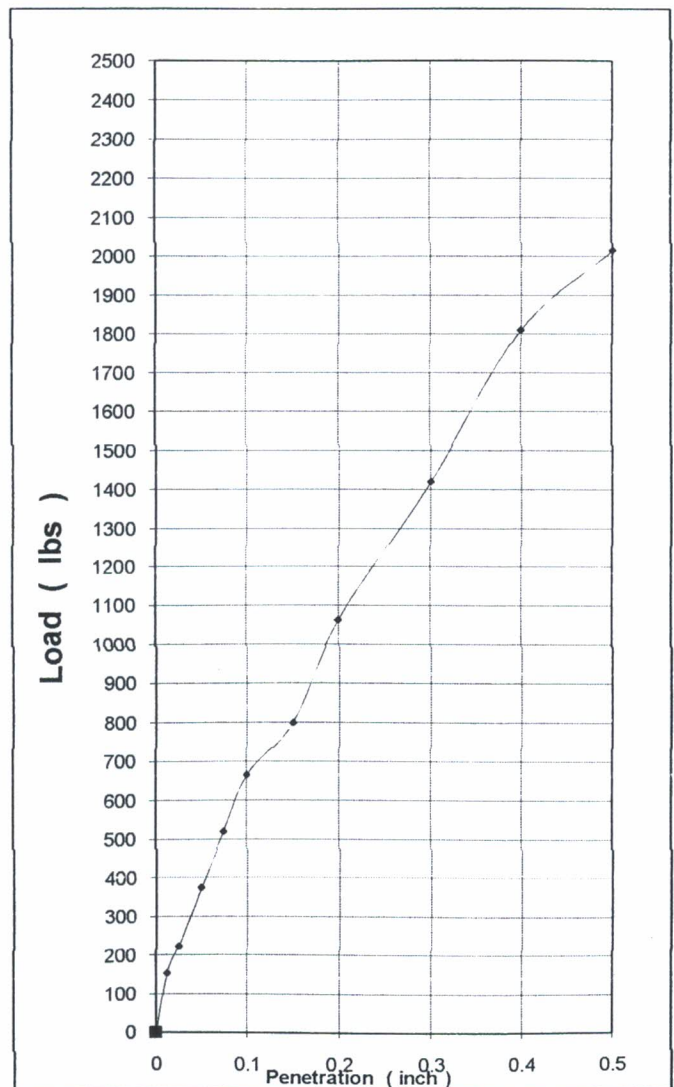
### C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
C.B.R VALUE	12.48	11.53

# CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	SKADRON 2 HALIM PERDANA KUSUMA 0		
LOCATION	Jakarta		
Location of Tested	No : 2	Date of Test	September 05, 2003
Soil Description	<i>tanah merah (subgrade)</i>	Tested By	Budi
Coordinate of Tested	N : ..... E : .....	Calibration ( lbs/div )	8.5082
Elevation		Standard of Test	ASTM

Time /minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov. Ring	Load( lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	18.0	153.15
0.50	0.025	63.5	26.0	221.21
1.00	0.05	127	44.0	374.36
1.50	0.075	190.5	61.0	519.00
2.00	0.1	254	78.0	663.64
3.00	0.15	381	94.0	799.77
4.00	0.2	508	125.0	1063.53
6.00	0.3	762	167.0	1420.87
8.00	0.4	1016	213.0	1812.25
10.00	0.5	1270	237.0	2016.44



### Field Water Content ( % )

	Unit
Weight of Container	gm
Weight of Soil & Container	gm
Weight of Soil & Container	gm
Field Water Content	%

### C.B.R VALUE

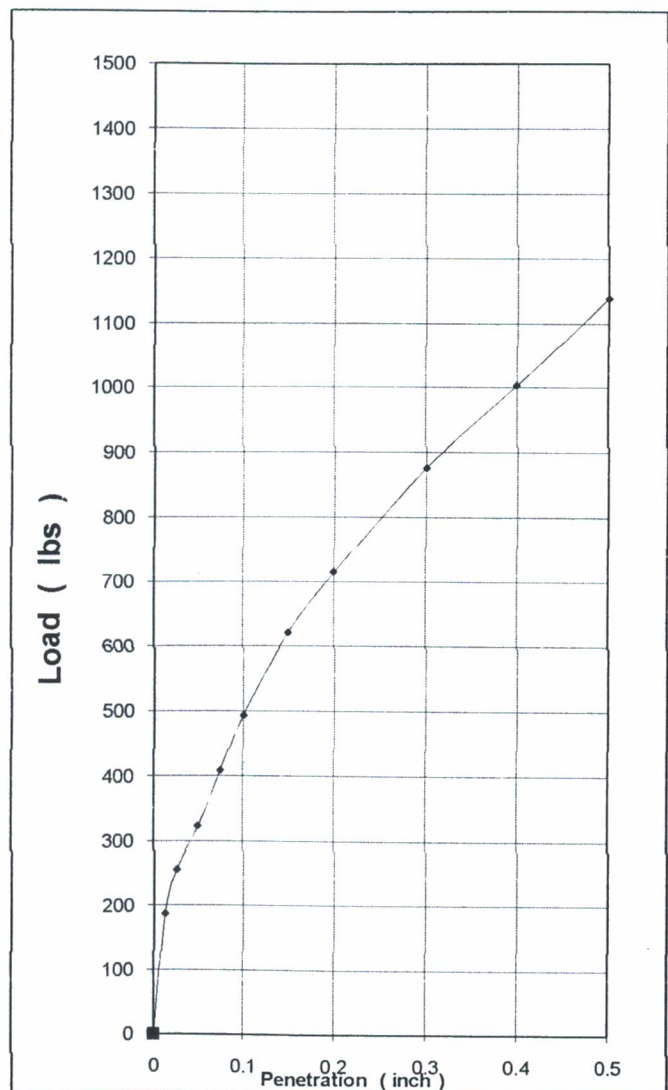
	Penetration	
	0.1 inch	0.2 inch
C.B.R VALUE	22.12	23.63



# CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	SKADRON 2 HALIM PERDANA KUSUMA 0		
LOCATION	Jakarta		
Location of Tested	No : 3 <i>tanah merah (subgrade)</i> N : ..... E : .....	Date of Test	September 05, 2003
Soil Description		Tested By	Budi
Coordinate of Tested		Calibration ( lbs/div )	8.50820
Penetration		Standard of Test	ASTM

Time minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov. Ring	Load( lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	22.0	187.18
0.50	0.025	63.5	30.0	255.25
1.00	0.05	127	38.0	323.31
1.50	0.075	190.5	48.0	408.39
2.00	0.1	254	58.0	493.48
3.00	0.15	381	73.0	621.10
4.00	0.2	508	84.0	714.69
6.00	0.3	762	103.0	876.34
8.00	0.4	1016	118.0	1003.97
0.00	0.5	1270	134.0	1140.10



### Field Water Content ( % )

	Unit
Weight of Container	gm
Weight of Soil & Container	gm
Weight of Soil & Container	gm
Field Water Content	%

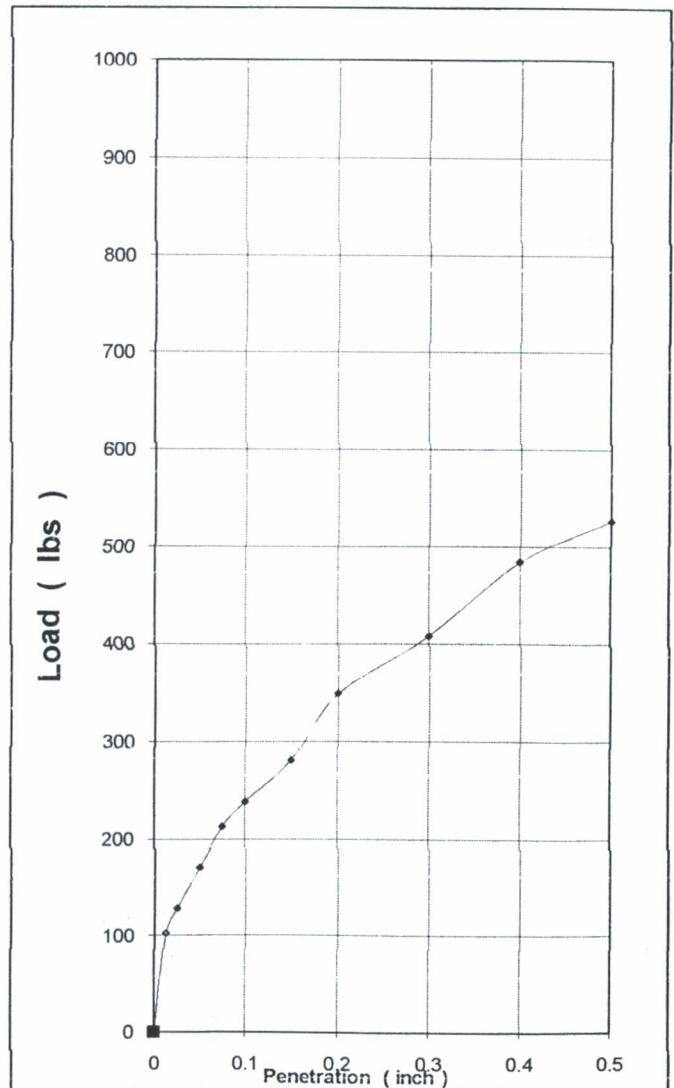
### C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
C.B.R VALUE	16.45	15.88

# CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	SKADRON 2 HALIM PERDANA KUSUMA		
	0		
LOCATION	Jakarta		
Location of Tested	No : 4	Date of Test	September 05, 2003
Soil Description	<i>tanah merah (subgrade)</i>	Tested By	Budi
Coordinate of Tested	N : ..... E : .....	Calibration ( lbs/div )	8.50820
Elevation		Standard of Test	ASTM

Time /minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov. Ring	Load( lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	12.0	102.10
0.50	0.025	63.5	15.0	127.62
1.00	0.05	127	20.0	170.16
1.50	0.075	190.5	25.0	212.71
2.00	0.1	254	28.0	238.23
3.00	0.15	381	33.0	280.77
4.00	0.2	508	41.0	348.84
6.00	0.3	762	48.0	408.39
8.00	0.4	1016	57.0	484.97
10.00	0.5	1270	62.0	527.51



### Field Water Content ( % )

	Unit
Weight of Container	gram
Weight of Soil & Container	gram
Weight of Soil & Container	gram
Field Water Content	%

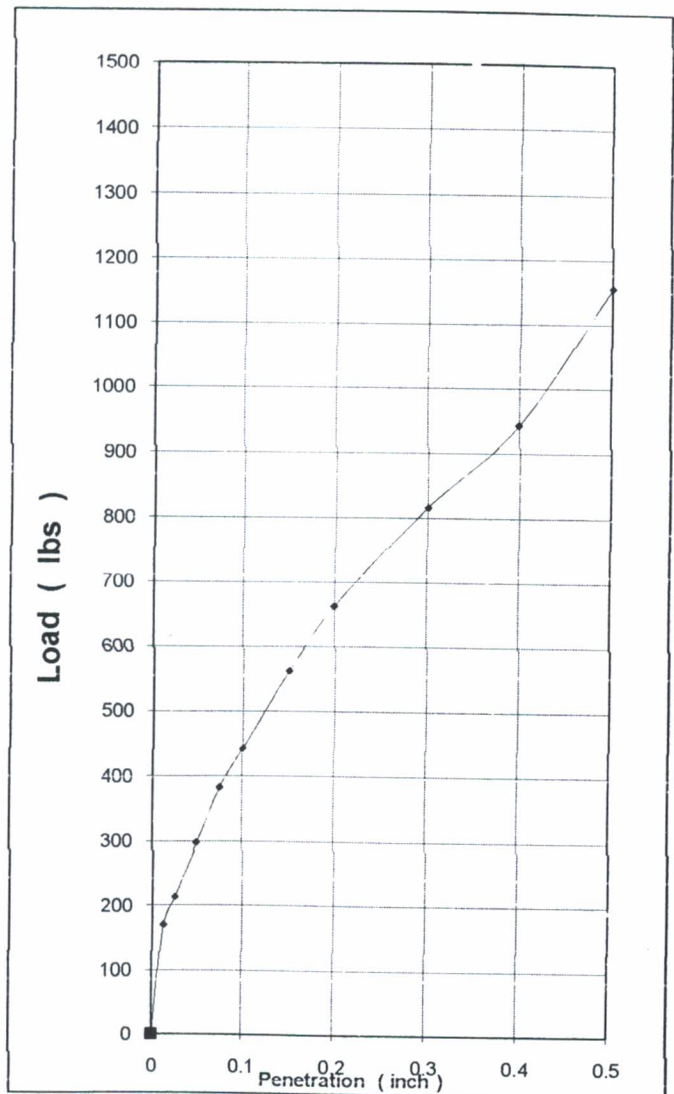
### .B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
BR VALUE	7.94	7.75

# CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	SKADRON 2 HALIM PERDANA KUSUMA		
	0		
LOCATION	Jakarta		
Location of Tested	No : 5	Date of Test	September 05, 2003
Soil Description	<i>tanah merah (subgrade)</i>	Tested By	Budi
Coordinate of Tested	N : ..... E : .....	Calibration ( lbs/div )	8.50620
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov.Ring	Load( lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	20.0	170.16
0.50	0.025	63.5	25.0	212.71
1.00	0.05	127	35.0	297.79
1.50	0.075	190.5	45.0	382.87
2.00	0.1	254	52.0	442.43
3.00	0.15	381	66.0	561.54
4.00	0.2	508	78.0	663.64
6.00	0.3	762	96.0	816.79
8.00	0.4	1016	111.0	944.41
10.00	0.5	1270	138.0	1157.12



### Field Water Content ( % )

			Unit
Weight of Container			gm
Weight of Soil & Container			gm
Weight of Soil & Container			gm
Field Water Content			%

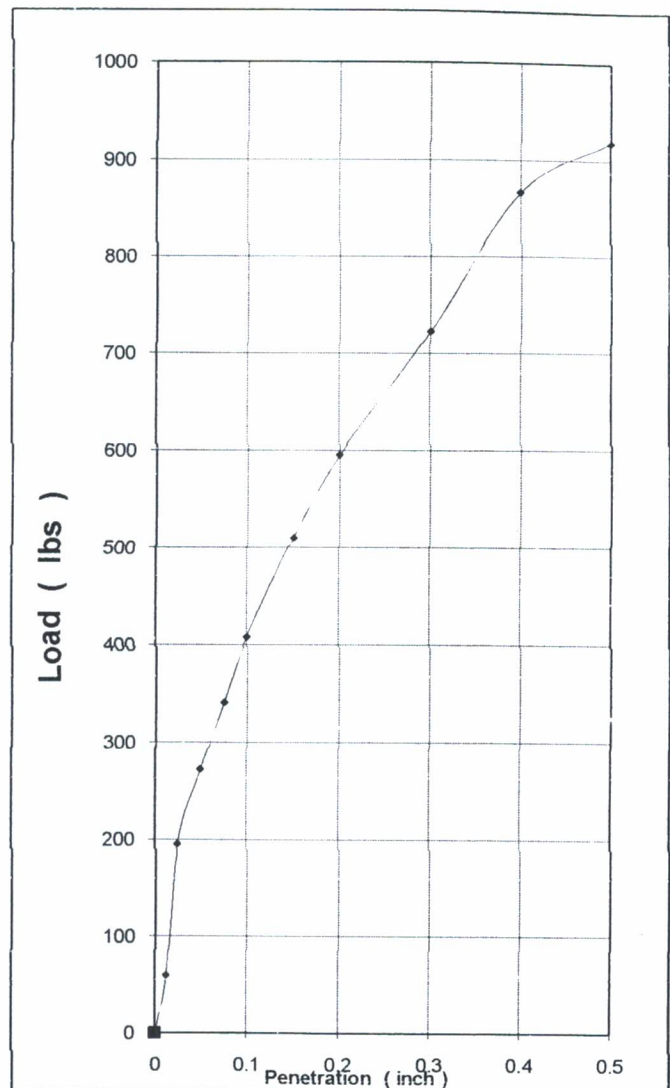
### C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
C.B.R VALUE	14.75	14.75

## CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	SKADRON 2 HALIM PERDANA KUSUMA 0		
LOCATION	Jakarta		
Location of Tested	No : 6	Date of Test	September 05, 2003
Soil Description	<i>tanah merah (subgrade)</i>	Tested By	Budi
Coordinate of Tested	N : ..... E : .....	Calibration ( lbs/div )	8.5082
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov.Ring	Load( lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	7.0	59.56
0.50	0.025	63.5	23.0	195.69
1.00	0.05	127	32.0	272.26
1.50	0.075	190.5	40.0	340.33
2.00	0.1	254	48.0	408.39
3.00	0.15	381	60.0	510.49
4.00	0.2	508	70.0	595.57
6.00	0.3	762	85.0	723.20
8.00	0.4	1016	102.0	867.84
10.00	0.5	1270	108.0	918.89



### Field Water Content ( % )

	Unit
Weight of Container	gm
Wet Soil & Container	gm
Dry Soil & Container	gm
Field Water Content	%

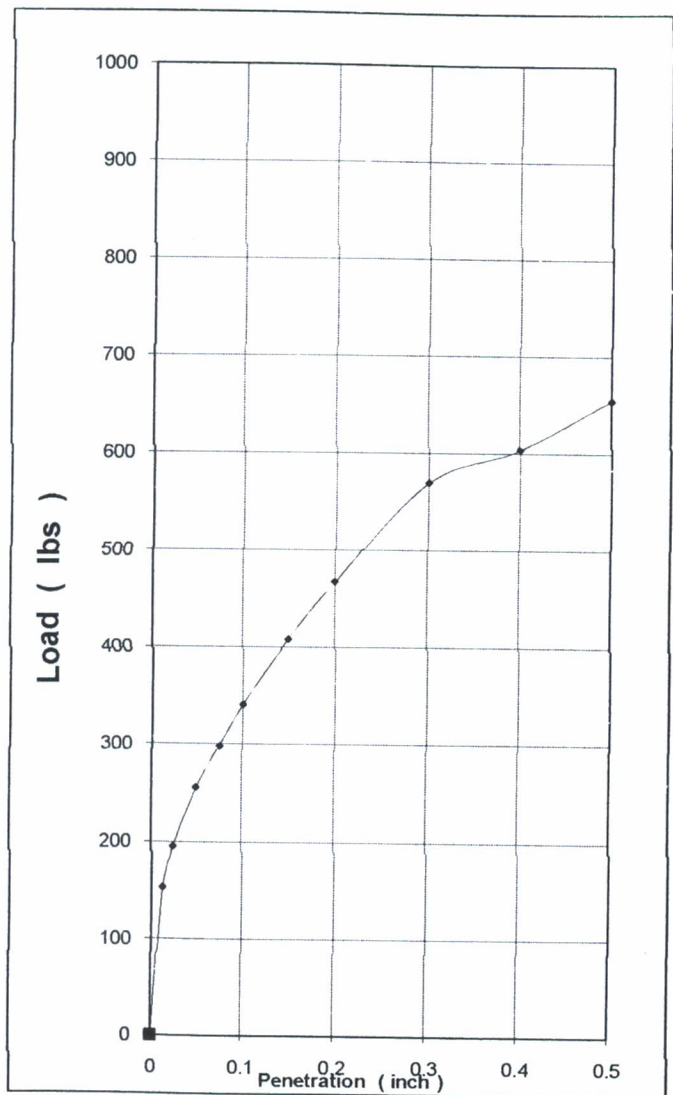
### C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
C.B.R VALUE	13.61	13.23

## CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	SKADRON 2 HALIM PERDANA KUSUMA		
LOCATION	Jakarta		
Location of Tested	No : 7	Date of Test	September 05, 2003
Soil Description	<i>tanah merah (subgrade)</i>	Tested By	Budi
Coordinate of Tested	N : ..... E : .....	Calibration ( lbs/div )	8.5082
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov. Ring	Load ( lbs )
0.00	0	0	0.0	0
0.25	0.0125	31.75	18.0	153.15
0.50	0.025	63.5	23.0	195.69
1.00	0.05	127	30.0	255.25
1.50	0.075	190.5	35.0	297.79
2.00	0.1	254	40.0	340.33
3.00	0.15	381	48.0	408.39
4.00	0.2	508	55.0	467.95
6.00	0.3	762	67.0	570.05
8.00	0.4	1016	71.0	604.08
10.00	0.5	1270	77.0	655.13



### Field Water Content ( % )

	Unit
Weight of Container	gm
Wet Soil & Container	gm
Dry Soil & Container	gm
Field Water Content	%

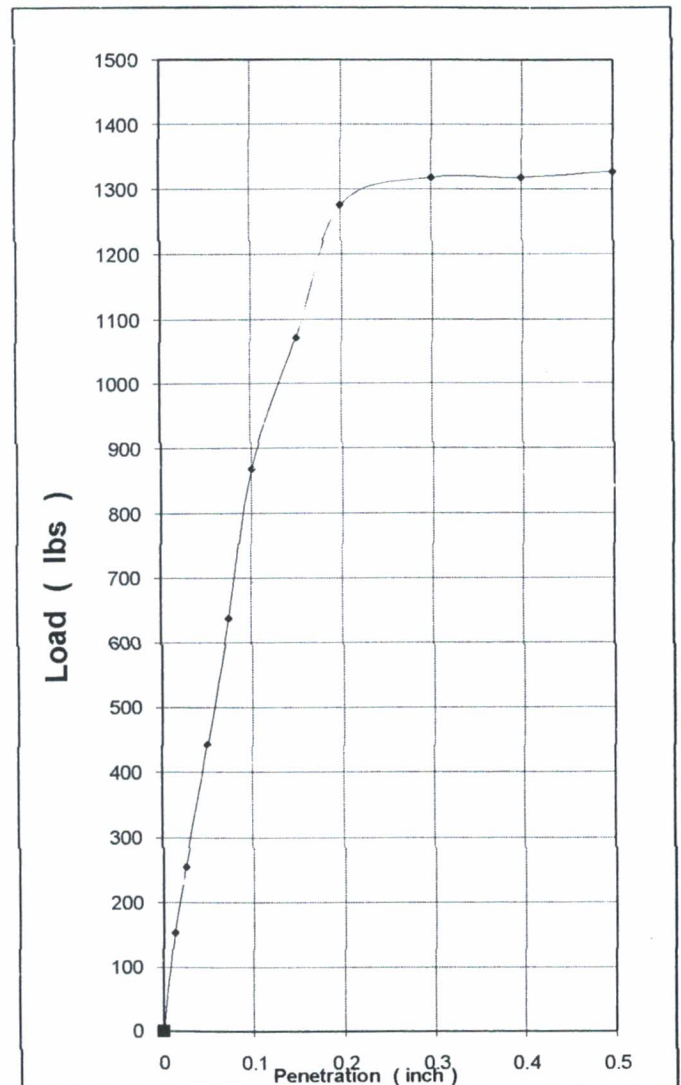
### C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
C.B.R VALUE	11.34	10.40

# CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	SKADRON 2 HALIM PERDANA KUSUMA 0		
LOCATION	Jakarta		
Location of Tested Soil Description	No : 8 <i>tanah merah (subgrade)</i>	Date of Test	September 05, 2003
Coordinate of Tested Location	N : ..... E : .....	Tested By	Budi
		Calibration ( lbs/div )	8.5082
		Standard of Test	ASTM

Time /minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov. Ring	Load ( lbs )
0.00	0	0	0.0	0
0.25	0.0125	31.75	18.0	153.15
0.50	0.025	63.5	30.0	255.25
1.00	0.05	127	52.0	442.43
1.50	0.075	190.5	75.0	638.12
2.00	0.1	254	102.0	867.84
3.00	0.15	381	126.0	1072.03
4.00	0.2	508	150.0	1276.23
6.00	0.3	762	155.0	1318.77
8.00	0.4	1016	155.0	1318.77
10.00	0.5	1270	156.0	1327.28



### Field Water Content ( % )

	Unit
Weight of Container	gm
Weight Soil & Container	gm
Dry Soil & Container	gm
Field Water Content	%

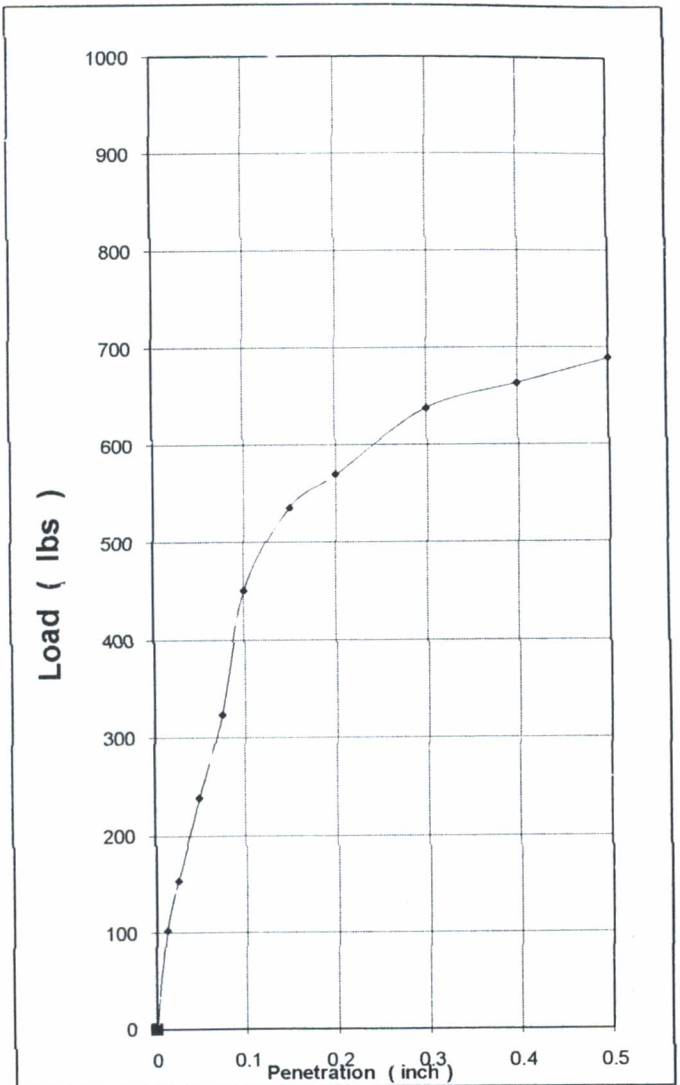
### California B.R. VALUE

	Penetration	
	0.1 inch	0.2 inch
California B.R. VALUE	28.93	28.36

# CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	SKADRON 2 HALIM PERDANA KUSUMA 0		
LOCATION	Jakarta		
Location of Tested	No : 9	Date of Test	September 05, 2003
Soil Description	<i>tanah merah (subgrade)</i>	Tested By	Budi
Coordinate of Tested	N : ..... E : .....	Calibration ( lbs/div )	8.5082
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov.Ring	Load( lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	12.0	102.10
0.50	0.025	63.5	18.0	153.15
1.00	0.05	127	28.0	238.23
1.50	0.075	190.5	38.0	323.31
2.00	0.1	254	53.0	450.93
3.00	0.15	381	63.0	536.02
4.00	0.2	508	67.0	570.05
6.00	0.3	762	75.0	638.12
8.00	0.4	1016	78.0	663.64
10.00	0.5	1270	81.0	689.16



### Field Water Content ( % )

	Unit
Weight of Container	gm
Wet Soil & Container	gm
Dry Soil & Container	gm
Field Water Content	%

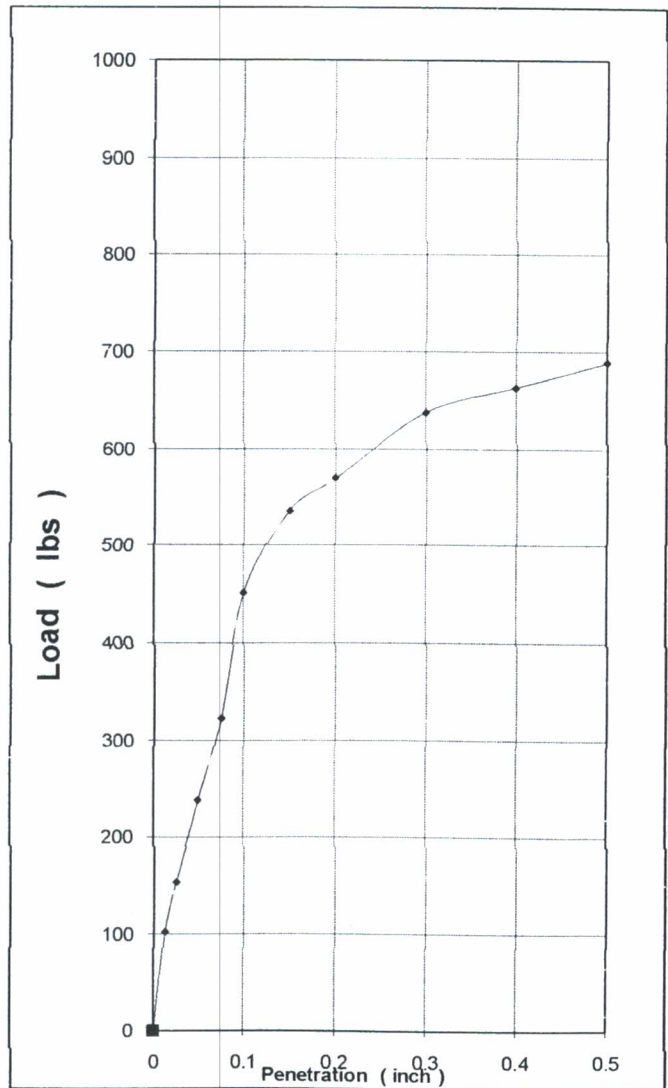
### C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	15.03	12.67

## CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	SKADRON 2 HALIM PERDANA KUSUMA		
	0		
LOCATION	Jakarta		
Location of Tested	No : 9	Date of Test	September 05, 2003
Soil Description	<i>tanah merah (subgrade)</i>	Tested By	Budi
Coordinate of Tested	N : ..... E : .....	Calibration ( lbs/div )	8.5082
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov Ring	Load (lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	12.0	102.10
0.50	0.025	63.5	18.0	153.15
1.00	0.05	127	28.0	238.23
1.50	0.075	190.5	38.0	323.31
2.00	0.1	254	53.0	450.93
3.00	0.15	381	63.0	536.02
4.00	0.2	508	67.0	570.05
6.00	0.3	762	75.0	638.12
8.00	0.4	1016	78.0	663.64
10.00	0.5	1270	81.0	689.16



### Field Water Content ( % )

	Unit
Weight of Container	gm
Wet Soil & Container	gm
Dry Soil & Container	gm
Field Water Content	%

### C.B.R VALUE

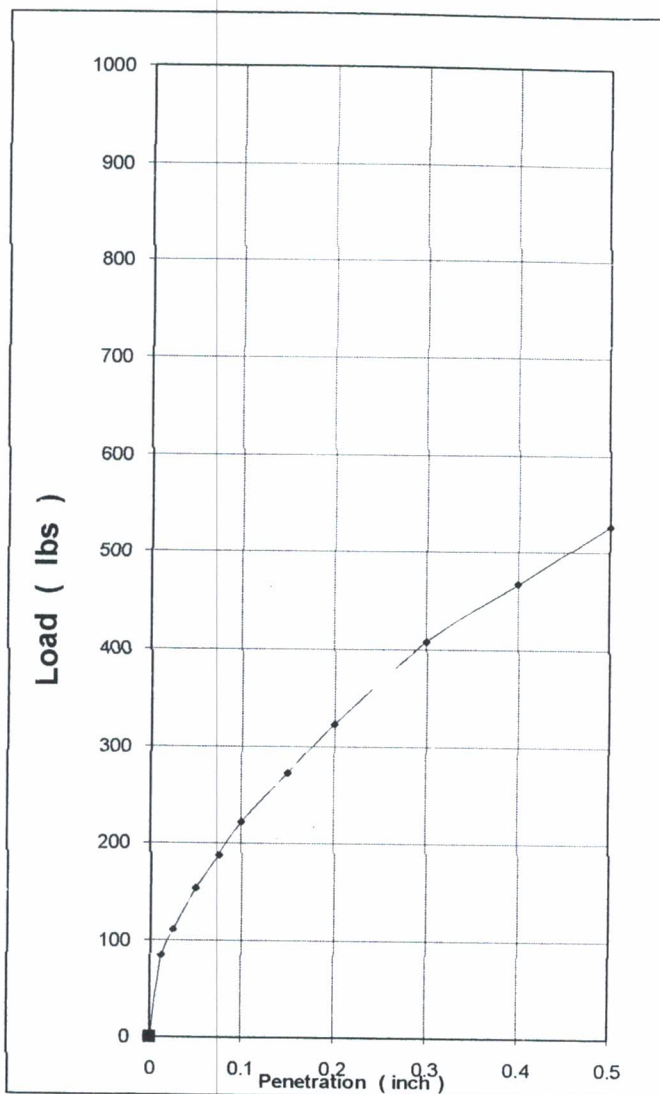
	Penetration	
	0.1 inch	0.2 inch
C.B.R VALUE	15.03	12.67



## CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	SKADRON 2 HALIM PERDANA KUSUMA 0		
LOCATION	Jakarta		
Location of Tested	No : 10	Date of Test	September 05, 2003
Soil Description	<i>tanah merah (subgrade)</i>	Tested By	Budi
Coordinate of Tested	N : ..... E : .....	Calibration ( lbs/div )	8.5082
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov. Ring	Load( lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	10.0	85.08
0.50	0.025	63.5	13.0	110.61
1.00	0.05	127	18.0	153.15
1.50	0.075	190.5	22.0	187.18
2.00	0.1	254	26.0	221.21
3.00	0.15	381	32.0	272.26
4.00	0.2	508	38.0	323.31
6.00	0.3	762	48.0	408.39
8.00	0.4	1016	55.0	467.95
10.00	0.5	1270	62.0	527.51



### Field Water Content ( % )

	Unit
Weight of Container	gm
Wet Soil & Container	gm
Dry Soil & Container	gm
Field Water Content	%

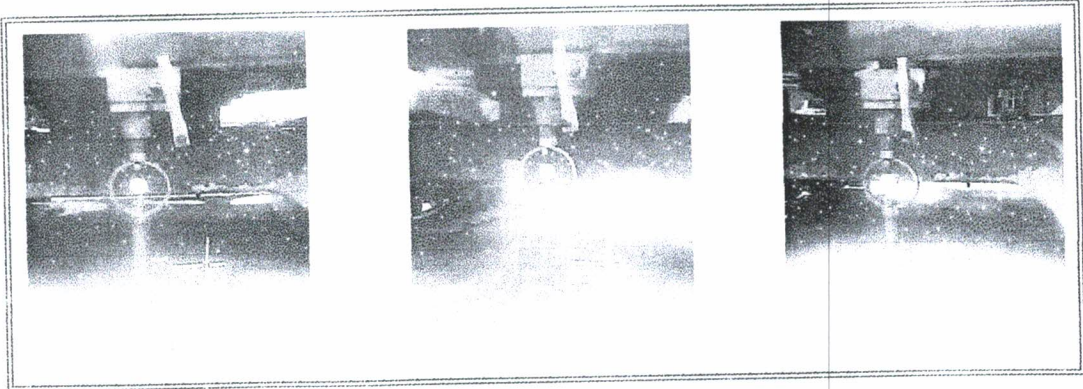
### C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
C.B.R VALUE	7.37	7.18

**STN**

Soil Mechanics Laboratory

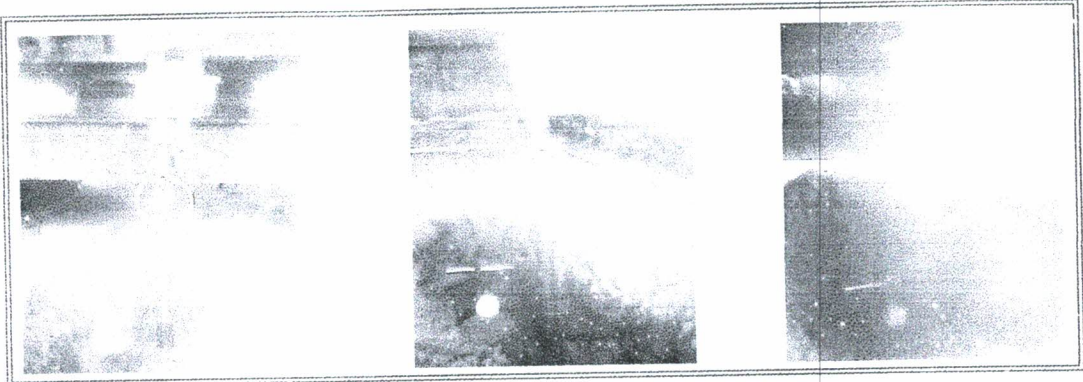
DOKUMENTASI CBR : SKADRON 2 HALIM PERDANA KUSUMA  
JAKARTA



Titik 1

Titik 2

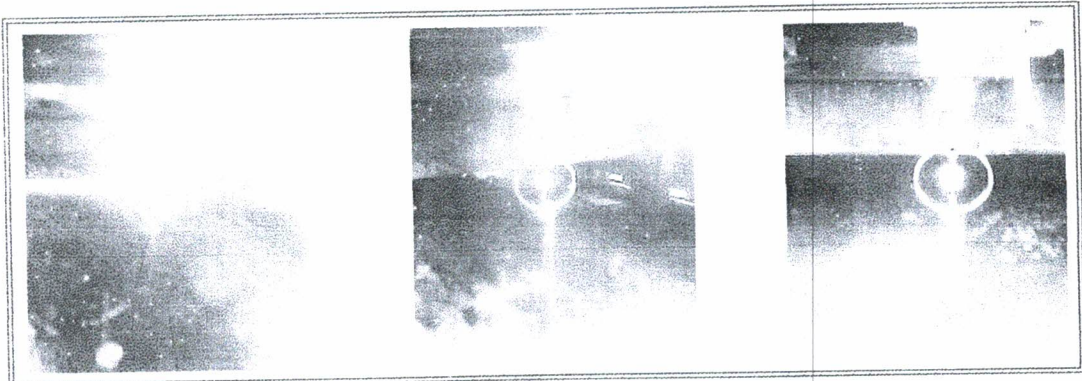
Titik 3



Titik 4

Titik 5

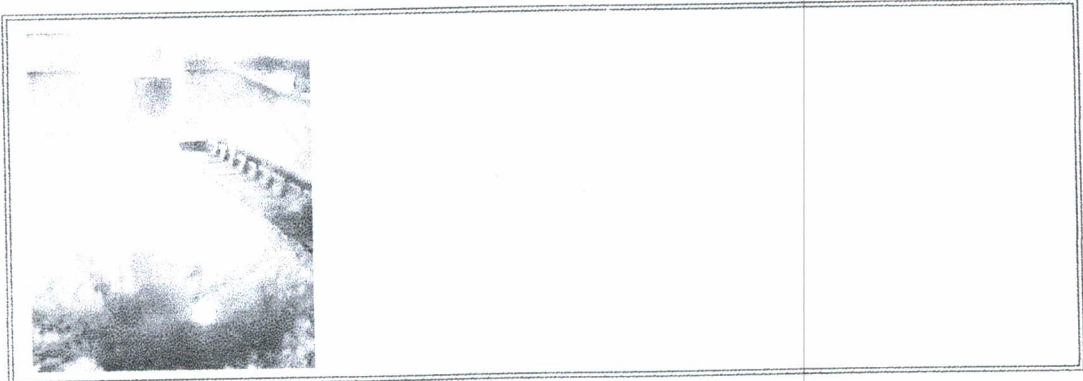
Titik 6



Titik 7

Titik 8

Titik 9



Titik 10