



YAYASAN PERGURUAN "CIKINI"
**INSTITUT
SAINS DAN TEKNOLOGI
NASIONAL**

**FAKULTAS TEKNIK SIPIL
DAN PERENCANAAN
JURUSAN TEKNIK SIPIL**

PENUGASAN

No : 25-07/PM/LM/VII/2000

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 CBR lapangan Jl. Denpasar Utara Tembus Jalan
 Setiabudi.
Lokasi : Jakarta Selatan
Pemberi Tugas : PT.Jhon dan RO

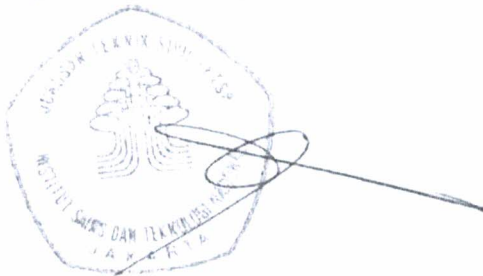
Dengan jadwal pelaksanaan pekerjaan selama 5 hari kerja (40 Jam), 1 hari di lapangan dan 4 hari di Laboratorium

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, 25 Juli 2000
Kaprodi Teknik Sipil

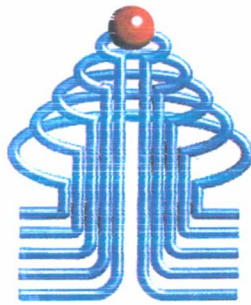


Ir. Wawan Kuswaya MT
NIP : 01.86765

Tembusan :

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

LEMBAR PENGESAHAN PENGABDIAN PADA MASYARAKAT

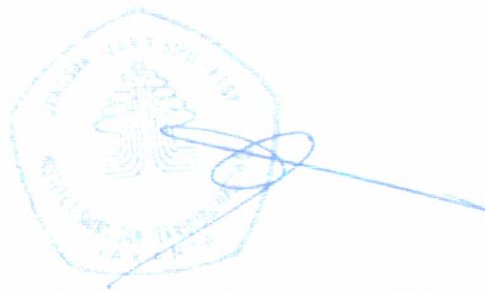


ISTN

PENYELIDIKAN TANAH CBR LAPANGAN
Lokasi : Jl. Denpasar Utara Tembus Jl. Setiabudi, Jakarta

Oleh :
Idrus Ir, M.Sc

Mengetahui :
Ketua Jurusan Teknik Sipil



Ir. Wawan Kuswaya, M.T

Program Studi Teknik Sipil
Institut Sain dan Teknologi Nasional
Jakarta 2000

FINAL REPORT

SOIL INVESTIGATION

PROJECT :

CBR FIELD TEST

PENINGKATAN JALAN DENPASAR UTARA

TEMBUS SETIABUDI UTARA

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 78893379



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

KAMPUS ISTN BHUMI SRENGJENG INDAH JALAN MOCH KAHLI 2 JAGAKARSA -- JAKARTA 12640
TELEPON 021 98189554 FAX 021 78893379

Jakarta 30 Juli 2000
No: 30-1/FR/CBR/VII/00

Kepada Yth
PT. JHON DAN RO
di
JAKARTA

Perihal : Laporan Uji CBR Lapangan di Jl. Denpasar Utara tembus Setiabudi Utara

Dengan hormat,

Sehubungan permohonan yang kami terima untuk melakukan pengujian CBR lapangan pada proyek : Jalan Denpasar Utara tembus Setiabudi Utara ,maka kami Laboratorium Mekanika Tanah ISTN, akan melaporkan hasil pengujian yang telah kami lakukan sbb :

1. Uji CBR Lapangan kami lakukan pada 27 Juli 2000 sebanyak 10 (sepuluh) titik pengujian pada lapisan basecourse (macamam).

2. Hasil uji sbb :

No	CBR 0,1"	Jenis tanah	Keterangan
1	20,57	macadam	bad
2	31,64	macadam	bad
3	31,64	macadam	bad
4	55,37	macadam	good
5	105,9	macadam	Very good
6	12,66	macadam	bad
7	17,40	macadam	bad
8	20,57	macadam	bad
9	37,97	macadam	bad
10	75,93	macadam	good

3. Hasil uji CBR lapangan untuk bascourse berkisar antara 12,66 % s/d 105,9 %.

Hasil uji CBR lapangan terlampir.

Demikianlah laporan ini kami buat dengan sebenar benarnya.

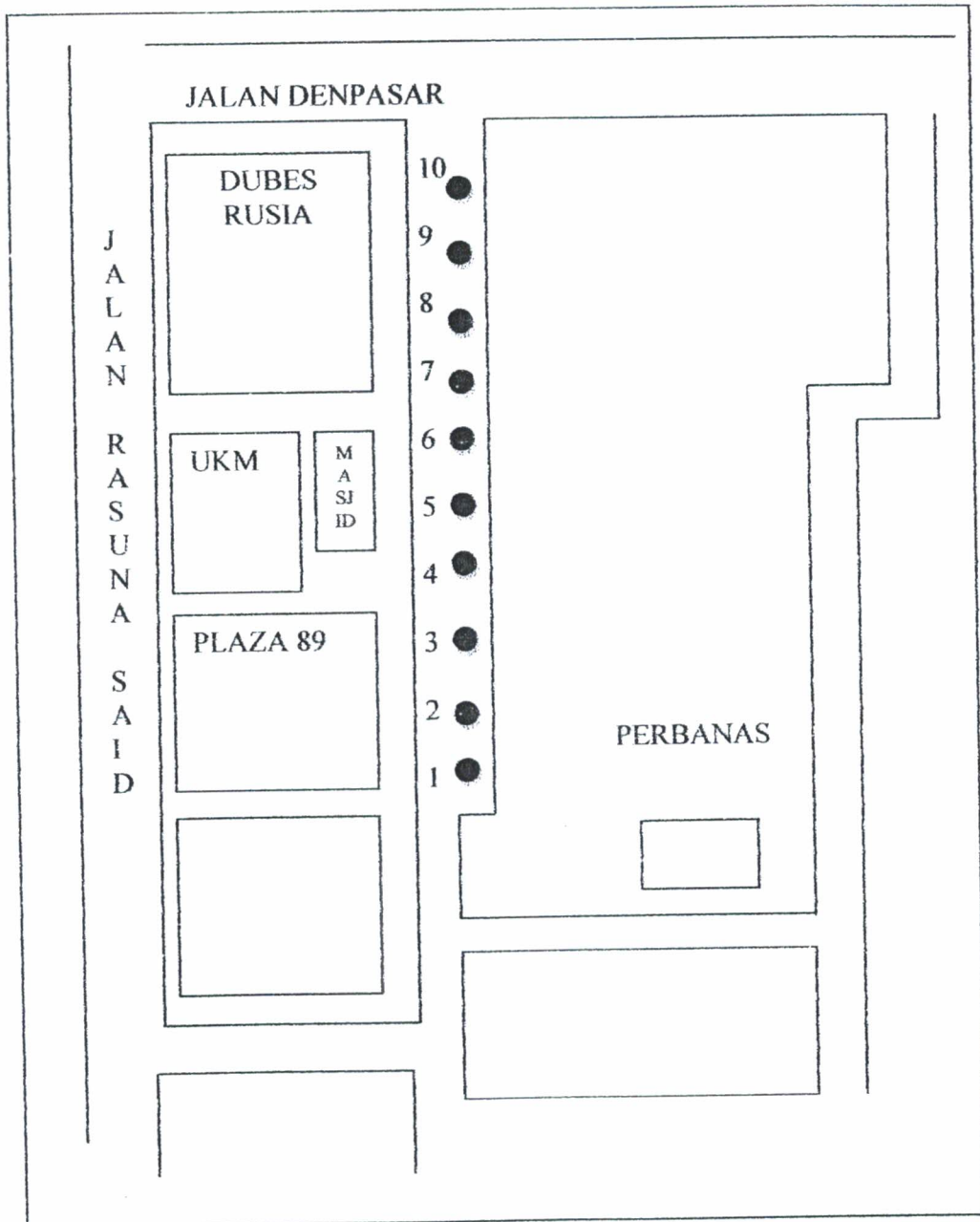
Hormat kami,
ISTN Soil Mechanics Laboratory



Idrus Muhammad Ir. M.Sc

REG LPJK : 1.2.500.2.31.09.03.000007

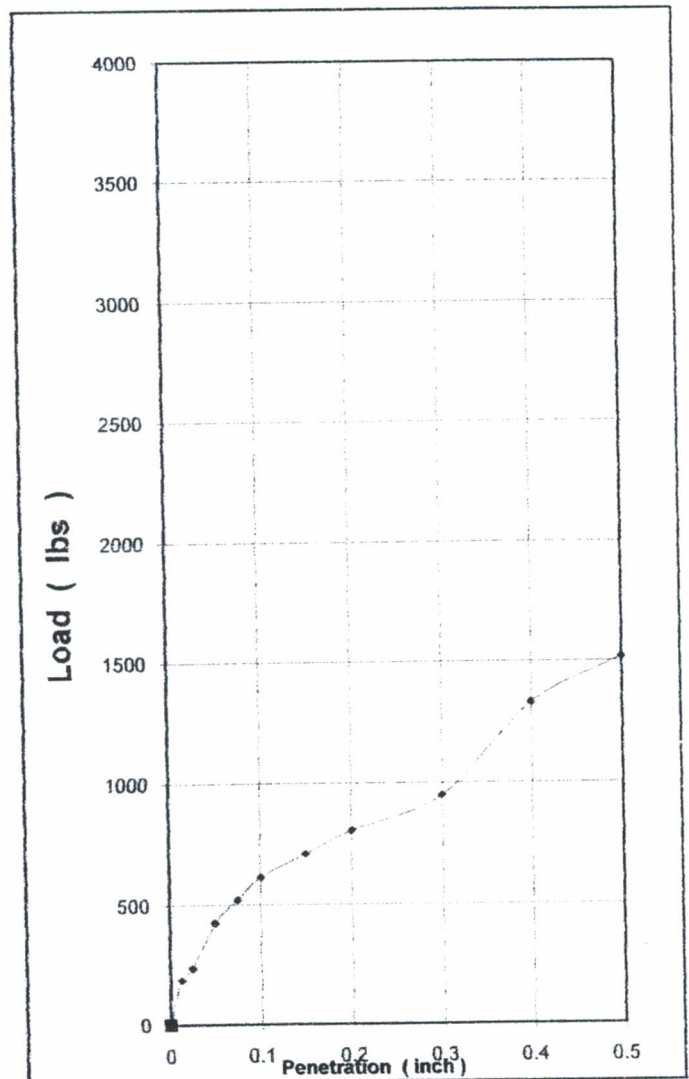
LAY-OUT TITIK CBR
SITE : DENPASAR UTARA
JAKARTA SELATAN



CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	PEMBANGUNAN JALAN DENPASAR UTARA TEMBUS SETIABUDI UTARA		
LOCATION	Jl. Denpasar Utara , Jakarta		
Location of Tested	No : 1	Date of Test	July 27 , 2000
Soil Description	Macadam (Baselayer)	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	47.45784
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	4.0	189.83
0.50	0.025	63.5	5.0	237.29
1.00	0.05	127	9.0	427.12
1.50	0.075	190.5	11.0	522.04
2.00	0.1	254	13.0	616.95
3.00	0.15	381	15.0	711.87
4.00	0.2	508	17.0	806.78
6.00	0.3	762	20.0	949.16
8.00	0.4	1016	28.0	1328.82
10.00	0.5	1270	32.0	1518.65



Field Water Content (%)

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

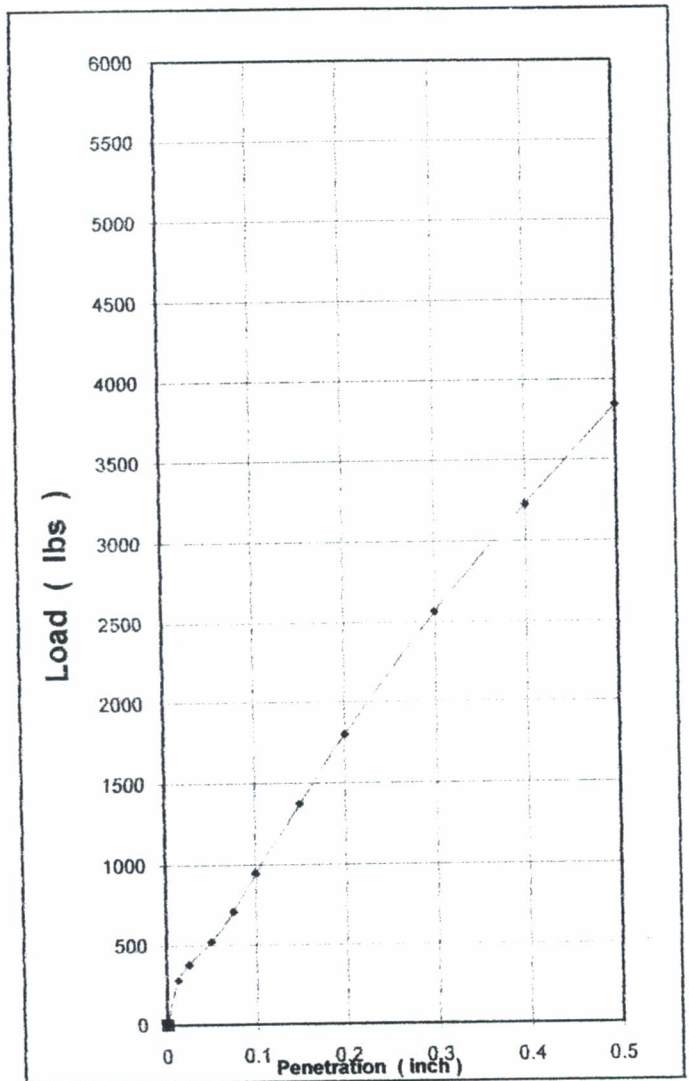
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	20.57	17.93

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	PEMBANGUNAN JALAN DENPASAR UTARA TEMBUS SETIABUDI UTARA		
LOCATION	Jl. Denpasar Utara , Jakarta		
Location of Tested	No : 2	Date of Test	July 27 , 2000
Soil Description	Macadam (Baselayer)	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	47.45784
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	6.0	284.75
0.50	0.025	63.5	8.0	379.66
1.00	0.05	127	11.0	522.04
1.50	0.075	190.5	15.0	711.87
2.00	0.1	254	20.0	949.16
3.00	0.15	381	29.0	1376.28
4.00	0.2	508	38.0	1803.40
6.00	0.3	762	54.0	2562.72
8.00	0.4	1016	68.0	3227.13
10.00	0.5	1270	81.0	3844.09



Field Water Content (%)

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

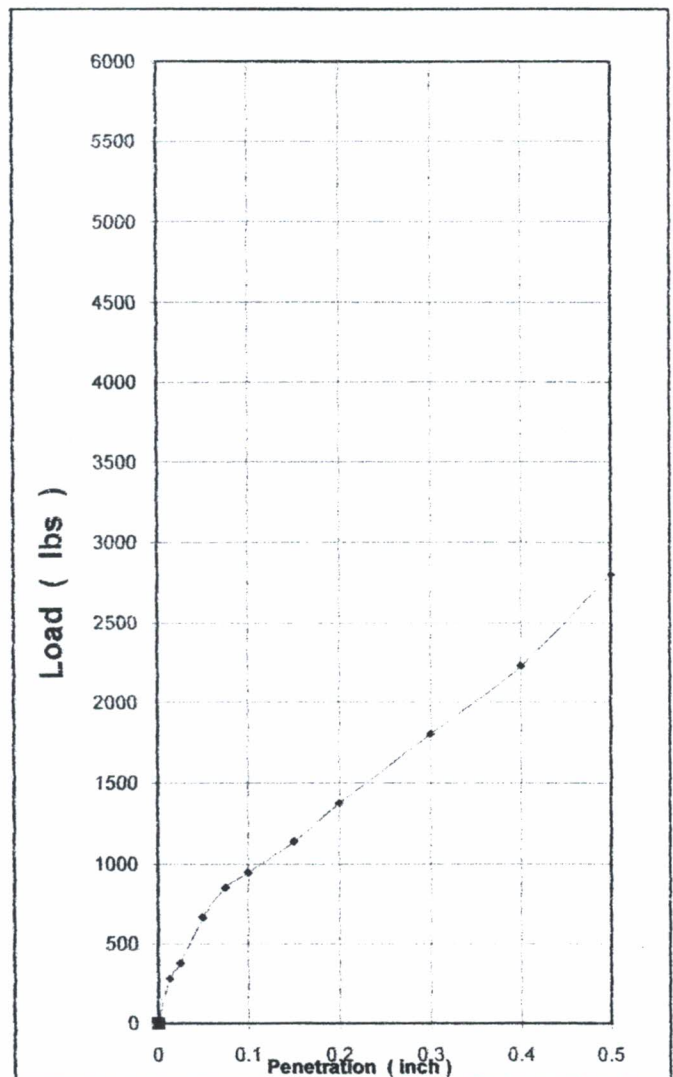
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	31.64	40.08

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	PEMBANGUNAN JALAN DENPASAR UTARA		
	TEMBUS SETIABUDI UTARA		
LOCATION	Jl. Denpasar Utara , Jakarta		
Location of Tested	No : 3	Date of Test	July 27 , 2000
Soil Description	Macadam (<i>Baselayer</i>)	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	47.45784
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	6.0	284.75
0.50	0.025	63.5	8.0	379.66
1.00	0.05	127	14.0	664.41
1.50	0.075	190.5	18.0	854.24
2.00	0.1	254	20.0	949.16
3.00	0.15	381	24.0	1138.99
4.00	0.2	508	29.0	1376.28
6.00	0.3	762	38.0	1803.40
8.00	0.4	1016	47.0	2230.52
10.00	0.5	1270	59.0	2800.01



Field Water Content (%)

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

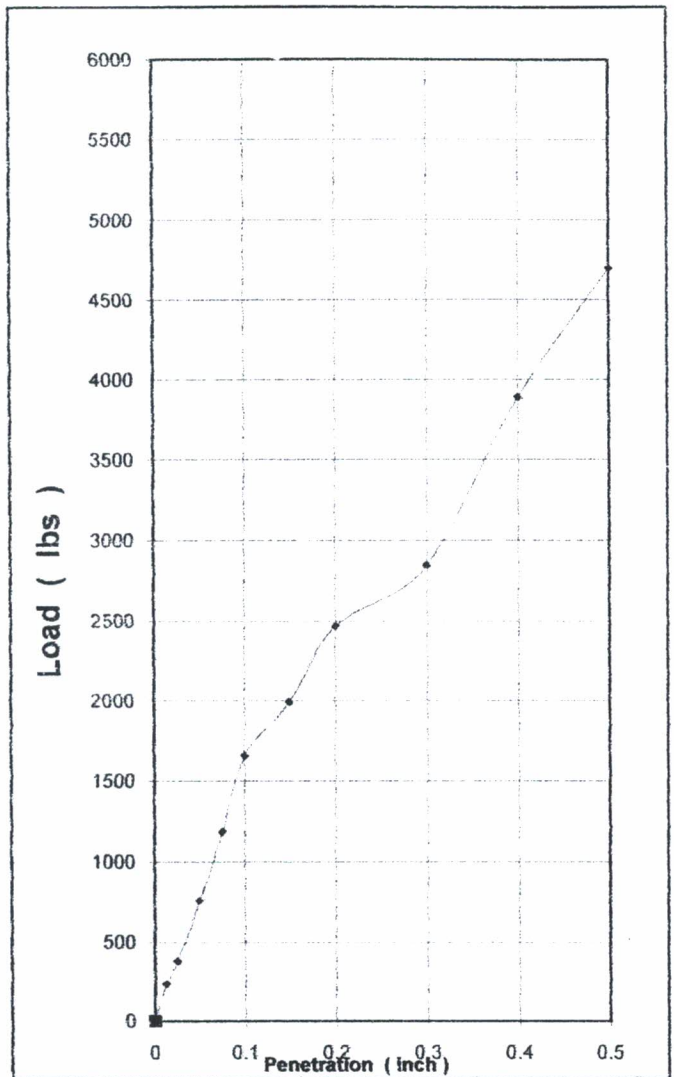
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
C.B.R VALUE	31.64	30.58

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	PEMBANGUNAN JALAN DENPASAR UTARA TEMBUS SETIABUDI UTARA		
LOCATION	Jl. Denpasar Utara , Jakarta		
Location of Tested	No : 4	Date of Test	July 27 , 2000
Soil Description	Macadam (Baselayer)	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	47.45784
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	5.0	237.29
0.50	0.025	63.5	8.0	379.66
1.00	0.05	127	16.0	759.33
1.50	0.075	190.5	25.0	1186.45
2.00	0.1	254	35.0	1661.02
3.00	0.15	381	42.0	1993.23
4.00	0.2	508	52.0	2467.81
6.00	0.3	762	60.0	2847.47
8.00	0.4	1016	82.0	3891.54
10.00	0.5	1270	99.0	4698.33



Field Water Content (%)

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

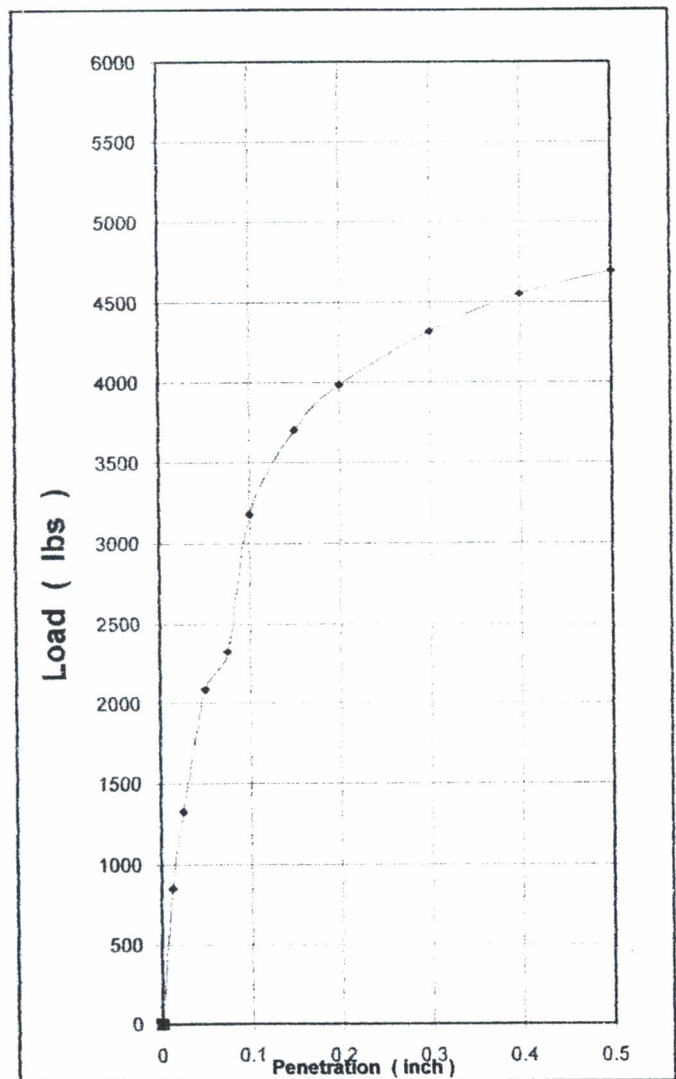
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	55.37	54.84

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	PEMBANGUNAN JALAN DENPASAR UTARA TEMBUS SETIABUDI UTARA		
LOCATION	Jl. Denpasar Utara , Jakarta		
Location of Tested	No :5	Date of Test	July 27 , 2000
Soil Description	Macadam (Baselayer)	Tested By	Budi
Coordinate of Tested	N :..... E :	Calibration (lbs/div)	47.45784
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	854.24
0.50	0.025	63.5	28.0	1328.82
1.00	0.05	127	44.0	2088.14
1.50	0.075	190.5	59.0	2325.43
2.00	0.1	254	67.0	3179.68
3.00	0.15	381	78.0	3701.71
4.00	0.2	508	84.0	3986.46
6.00	0.3	762	91.0	4318.66
8.00	0.4	1016	96.0	4555.95
10.00	0.5	1270	99.0	4698.33



Field Water Content (%)

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

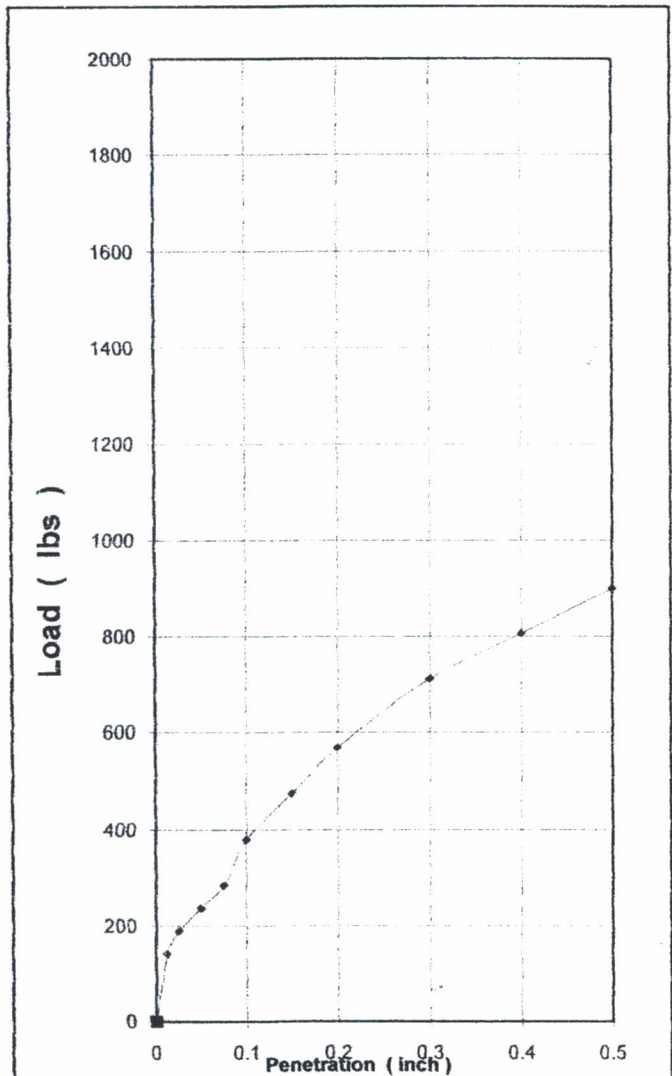
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
C.B.R VALUE	105.99	88.59

CALIFORNIA BEARING RATIO FIELD TEST

OBJECT	PEMBANGUNAN JALAN DENPASAR UTARA TEMBUS SETIABUDI UTARA		
CATION	Jl. Denpasar Utara , Jakarta		
Location of Tested	No : 6	Date of Test	July 27 , 2000
Soil Description	Macadam (Baselayer)	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	47.45784
Location		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	3.0	142.37
0.50	0.025	63.5	4.0	189.83
1.00	0.05	127	5.0	237.29
1.50	0.075	190.5	6.0	284.75
2.00	0.1	254	8.0	379.66
3.00	0.15	381	10.0	474.58
4.00	0.2	508	12.0	569.49
5.00	0.3	762	15.0	711.87
6.00	0.4	1016	17.0	806.78
7.00	0.5	1270	19.0	901.70



Field Water Content (%)

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

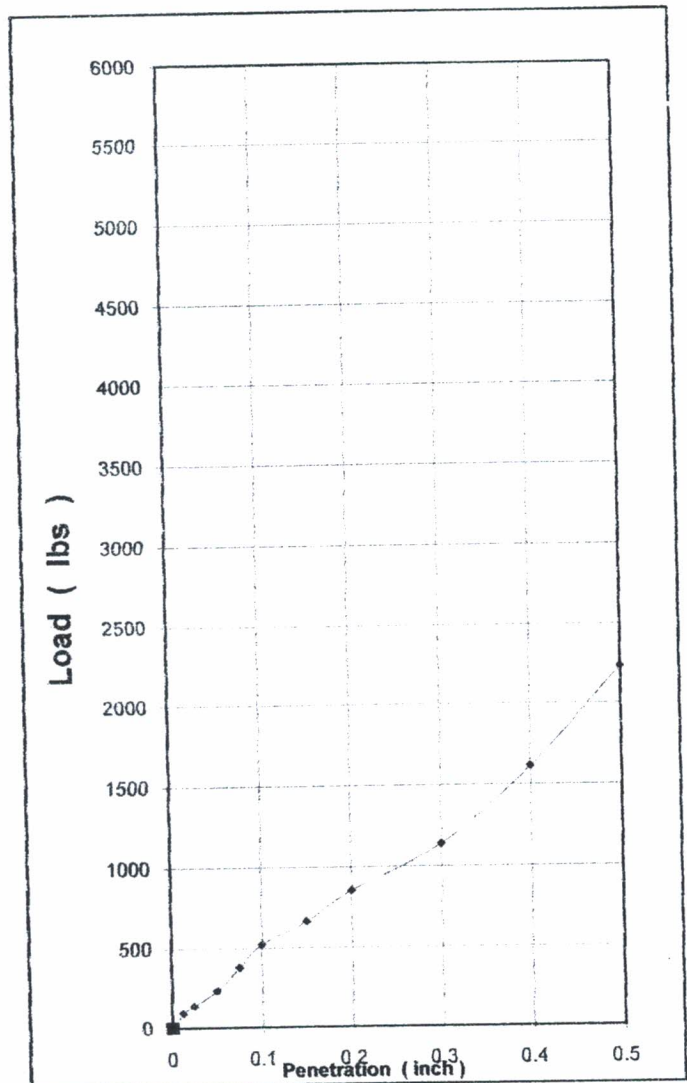
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
C.B.R VALUE	12.66	12.66

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	PEMBANGUNAN JALAN DENPASAR UTARA TEMBUS SETIABUDI UTARA		
LOCATION	Jl. Denpasar Utara , Jakarta		
Date of Tested	No : 7	Date of Test	July 27 , 2000
Material Description	Macadam (Base layer)	Tested By	Budi
Coordinate of Tested location	N : E :	Calibration (lbs/div)	47.45784
		Standard of Test	ASTM

Time (minute)	Penetration		Load	
	(inch)	(Dial mm/100)	Prev. Ring	Load (lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	2.0	94.92
0.50	0.025	63.5	3.0	142.37
1.00	0.05	127	5.0	237.29
1.50	0.075	190.5	8.0	379.66
2.00	0.1	254	11.0	522.04
3.00	0.15	381	14.0	664.41
4.00	0.2	508	18.0	854.24
5.00	0.3	762	24.0	1138.99
6.00	0.4	1016	34.0	1613.57
7.00	0.5	1270	47.0	2230.52



Field Water Content (%)

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

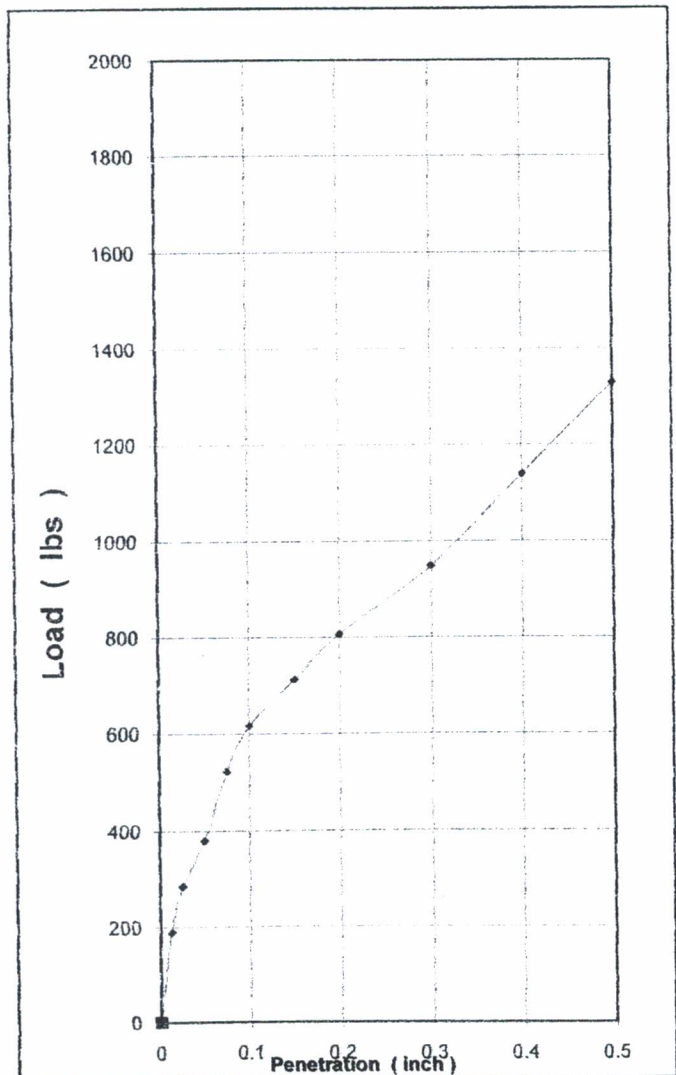
B.R VALUE

B.R VALUE	Penetration	
	0.1 inch	0.2 inch
	17.40	18.98

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	PEMBANGUNAN JALAN DENPASAR UTARA		
	TEMBUS SETIABUDI UTARA		
LOCATION	Jl. Denpasar Utara , Jakarta		
Date of Tested	No : 8	Date of Test	July 27 , 2000
Description	Macadam (Baselayer)	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	47.45784
Station		Standard of Test	ASTM

Time (Minute)	Penetration		Load	
	(inch)	(Dial mm/100)	Prov Ring	Load (lbs)
00	0	0	0.0	0
25	0.0125	31.75	4.0	189.83
50	0.025	63.5	6.0	284.75
00	0.05	127	8.0	379.66
50	0.075	190.5	11.0	522.04
00	0.1	254	13.0	616.95
00	0.15	381	15.0	711.87
00	0.2	508	17.0	806.78
00	0.3	762	20.0	949.16
00	0.4	1016	24.0	1138.99
00	0.5	1270	28.0	1328.82



Moisture Content (%)

	Unit
Weight of Container	gm
Soil & Container	gm
Soil & Container	gm
Moisture Content	%

CBR VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	20.57	17.93

CALIFORNIA BEARING RATIO FIELD TEST

OBJECT	PEMBANGUNAN JALAN DENPASAR UTARA		
	TEMBUS SETIABUDI UTARA		
LOCATION	Jl. Denpasar Utara , Jakarta		
Location of Tested	No : 9	Date of Test	July 27 , 2000
Soil Description	Macadam (Baselayer)	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	47.45784
Penetration		Standard of Test	ASTM

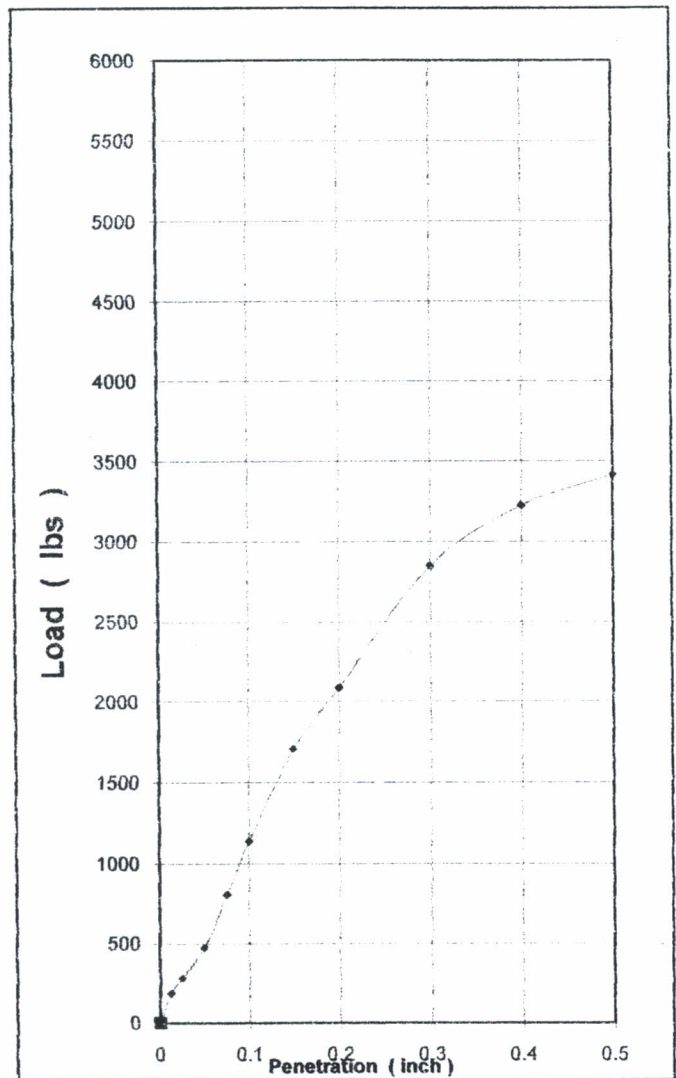
Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov. Ring	Load(lbs)
00	0	0	0.0	0
25	0.0125	31.75	4.0	189.83
50	0.025	63.5	6.0	284.75
00	0.05	127	10.0	474.58
50	0.075	190.5	17.0	806.78
00	0.1	254	24.0	1138.99
00	0.15	381	36.0	1708.48
00	0.2	508	44.0	2088.14
00	0.3	762	60.0	2847.47
00	0.4	1016	68.0	3227.13
00	0.5	1270	72.0	3416.96

Soil Water Content (%)

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

MR VALUE

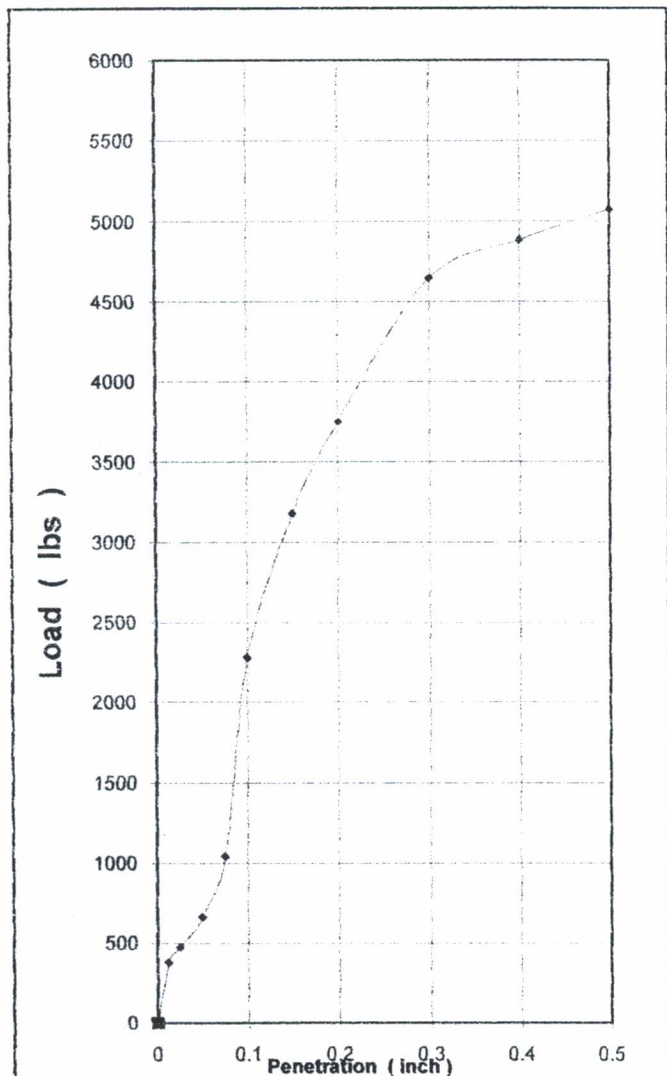
	Penetration	
	0.1 inch	0.2 inch
MR VALUE	37.97	46.40



CALIFORNIA BEARING RATIO FIELD TEST

OBJECT	PEMBANGUNAN JALAN DENPASAR UTARA		
	TEMBUS SETIABUDI UTARA		
LOCATION	Jl. Denpasar Utara , Jakarta		
Location of Tested	No : 10	Date of Test	July 27 , 2000
Material Description	Macadam (Baselayer)	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	47.45784
Location		Standard of Test	ASTM

Time (min)	Penetration		Load	
	(inch)	(Dial mm/100)	Prov Ring	Load (lbs)
00	0	0	0.0	0
25	0.0125	31.75	8.0	379.66
50	0.025	63.5	10.0	474.58
00	0.05	127	14.0	664.41
50	0.075	190.5	22.0	1044.07
00	0.1	254	48.0	2277.98
00	0.15	381	67.0	3179.68
00	0.2	508	79.0	3749.17
00	0.3	762	98.0	4650.87
00	0.4	1016	103.0	4888.16
100	0.5	1270	107.0	5077.99



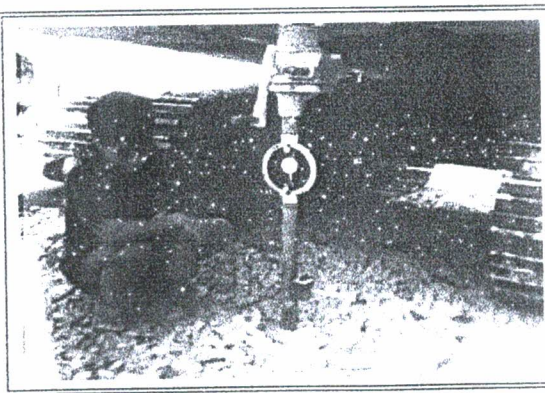
Soil Water Content (%)

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

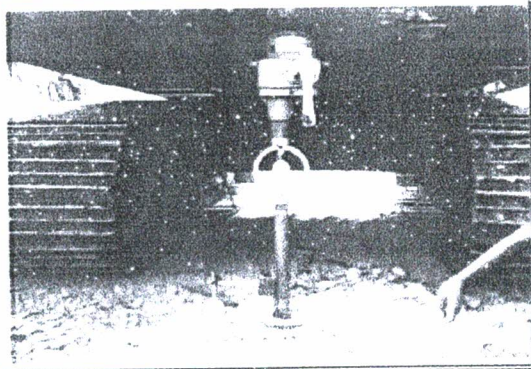
CBR VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	75.93	83.31

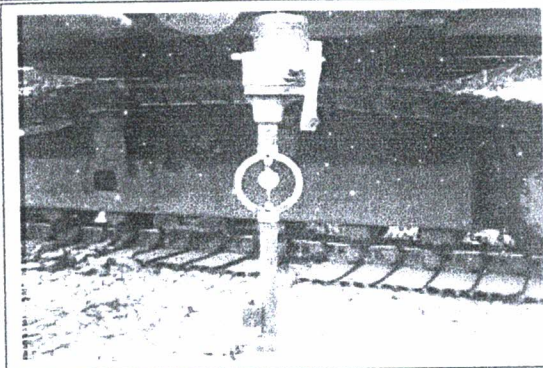
DOKUMENTASI CBR : DENPASAR UTARA
JAKARTA SELATAN



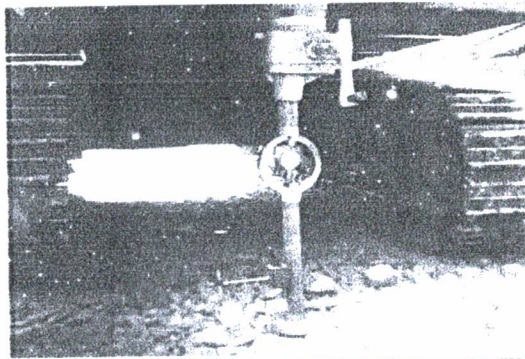
Titik-1



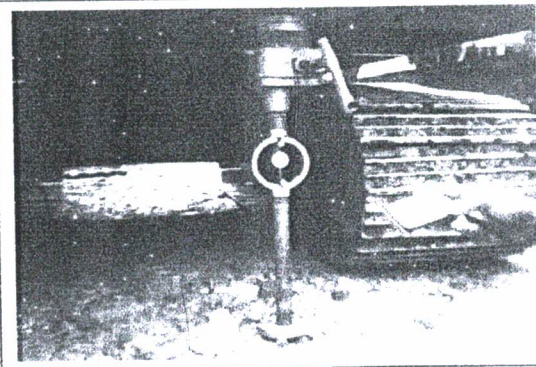
Titik-2



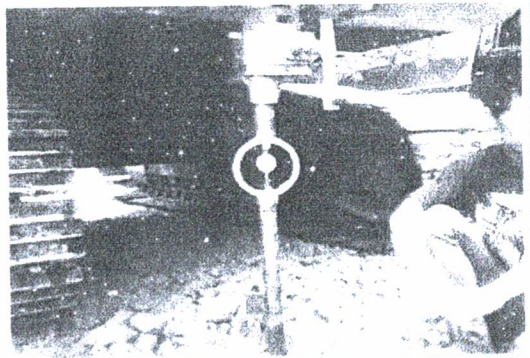
Titik-3



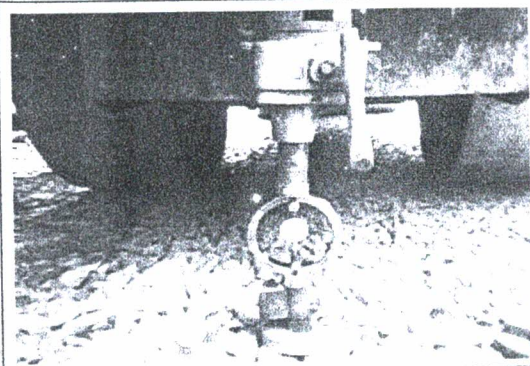
Titik-4



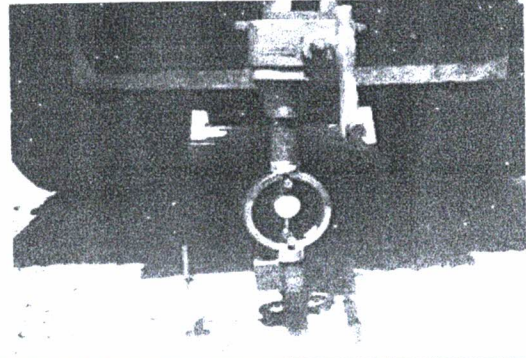
Titik-5



Titik-6

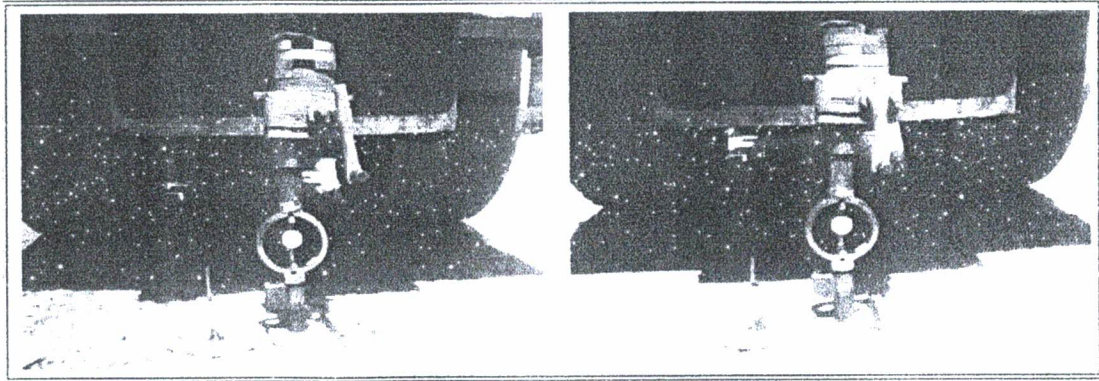


Titik-7



Titik-8

DOKUMENTASI CBR : DENPASAR UTARA
JAKARTA SELATAN



Titik-9

Titik-10