

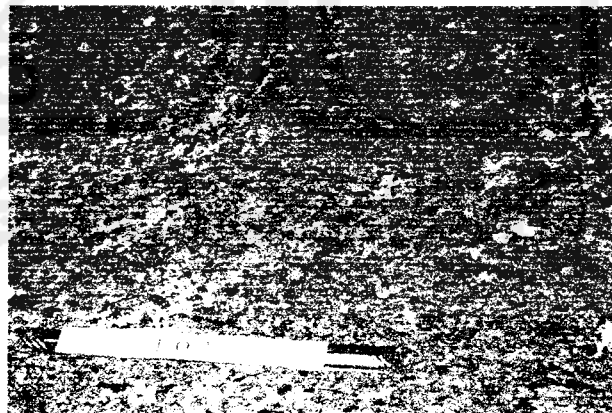
LAMPIRAN 1

DOKUMENTASI
KERUSAKAN JALAN ARTERI LINGKAR SELATAN

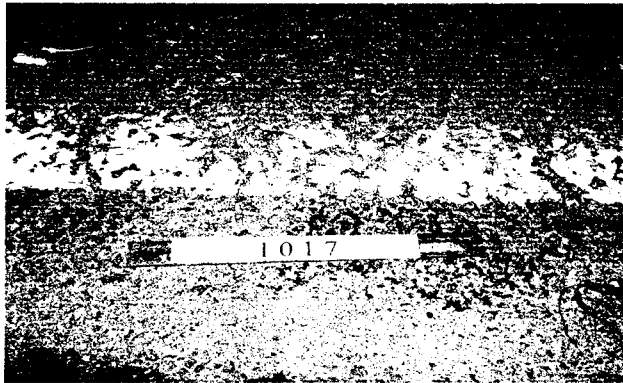
RUAS : 1017 (JANTI – WONOSASRI)



Sungkur (*shoving*)



Keriting (*corrugation*)



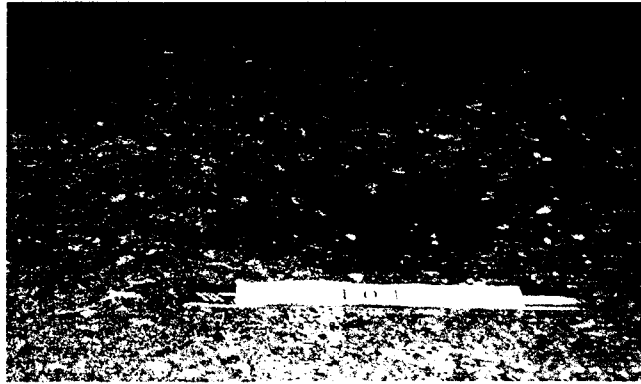
Retak pinggir (*edge break*)



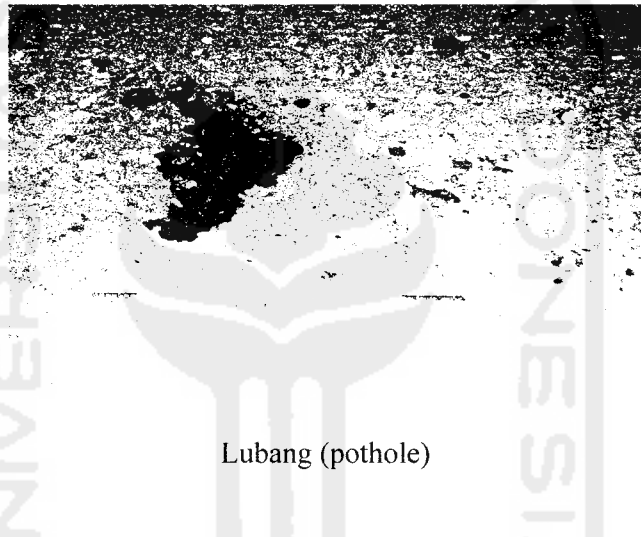
Retak halus (*block*)



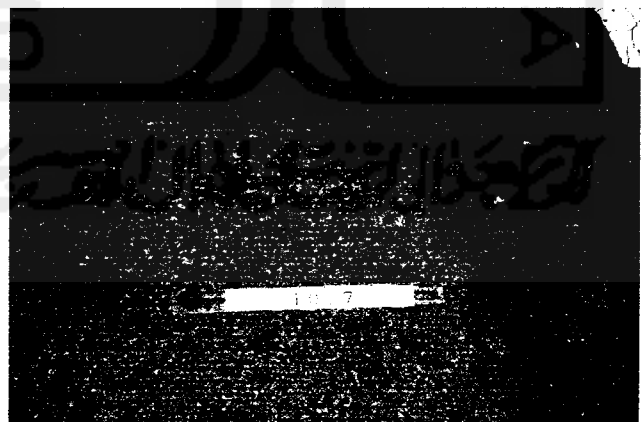
Retak kulit buaya (*crocodile*)



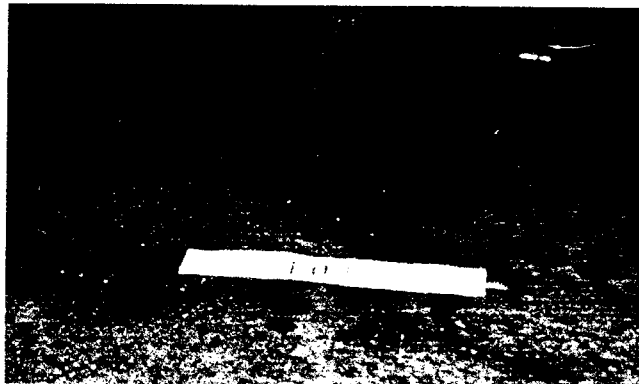
Lubang (*pothole*)



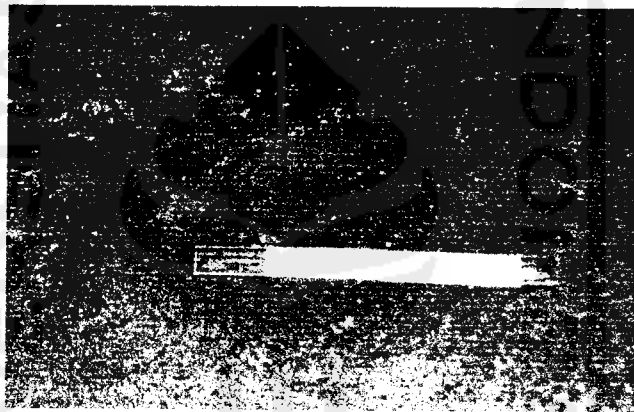
Lubang (*pothole*)



Licin (*flushing*)



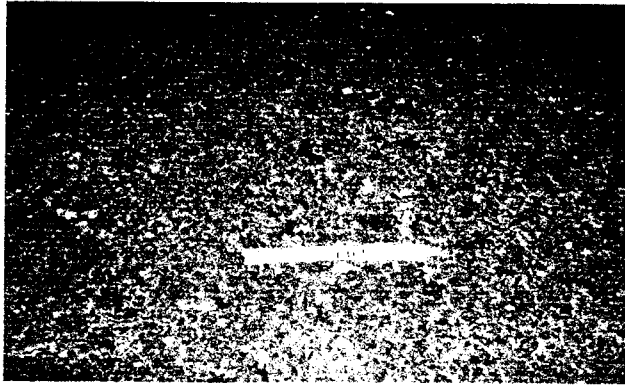
Kegemukan (bleeding)



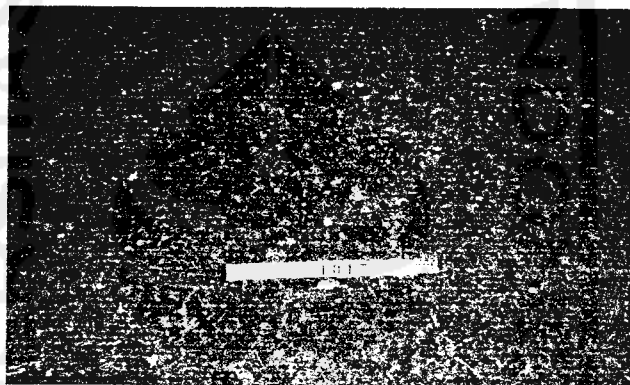
Kegemukan (*bleading*)



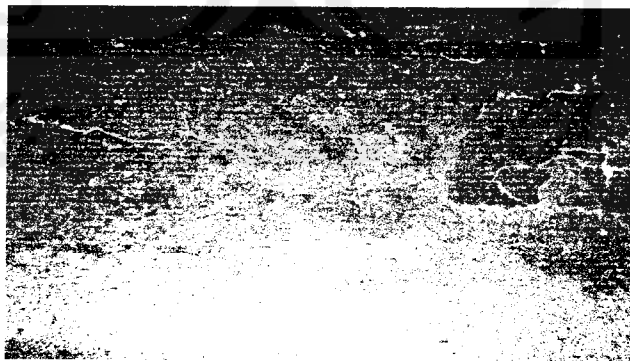
Amblas (*depression*)



Retak halus (*block*)

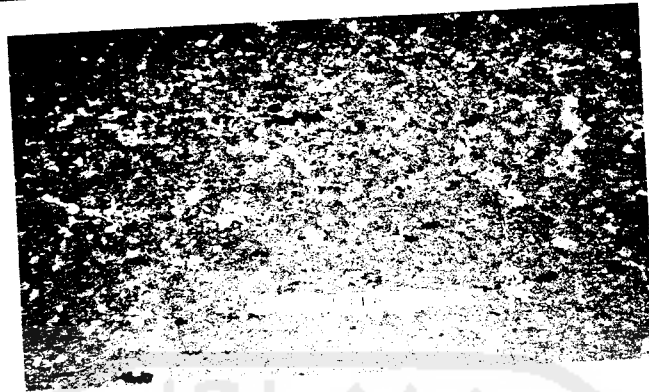


Keriting (corrugation)

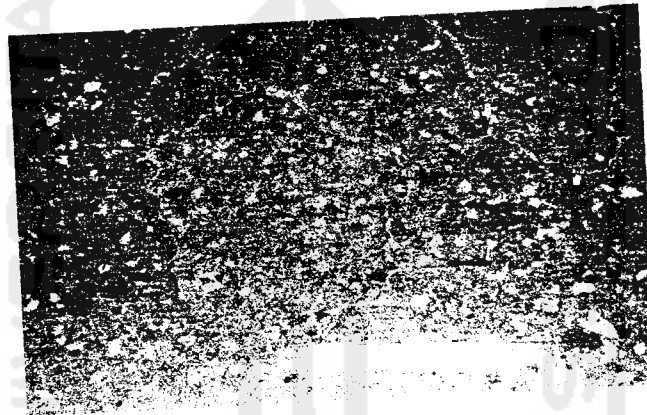


Meandering

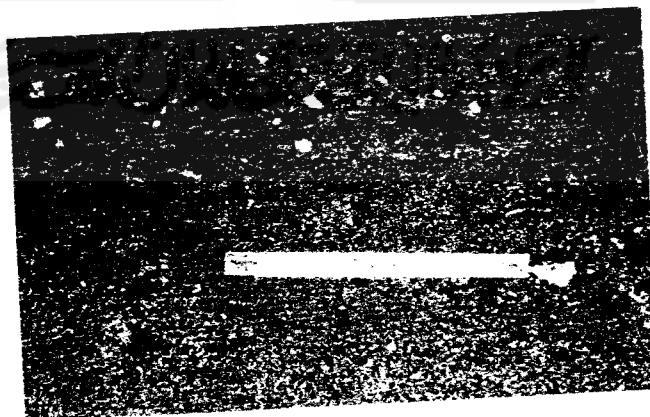
RUAS : 1016 (WONOSARI – BRIMOB)



Retak kulit buaya (*crocodile*)



Retak halus (*hair cracks*)



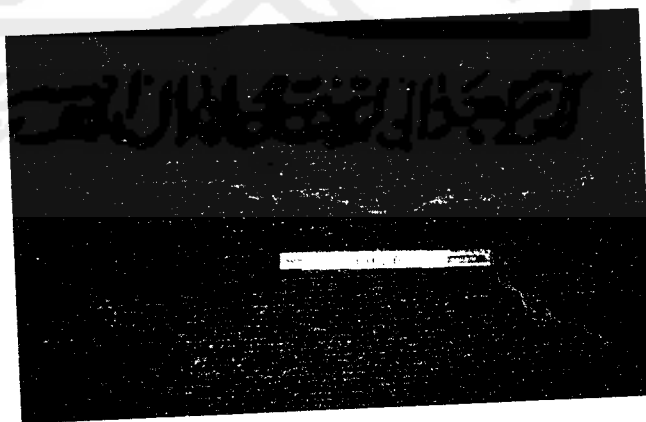
Kegemukan (*bleading*)



Retak halus (*block*)



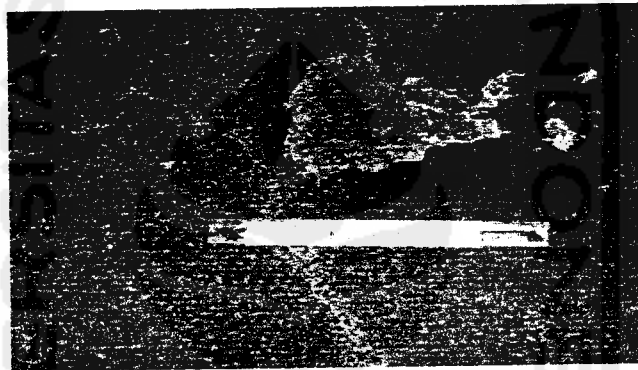
Kegemukan



Diagonal



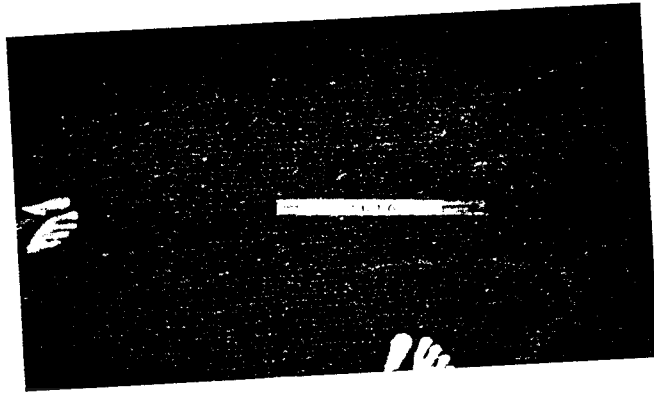
Stripping



Lubang (pothole)



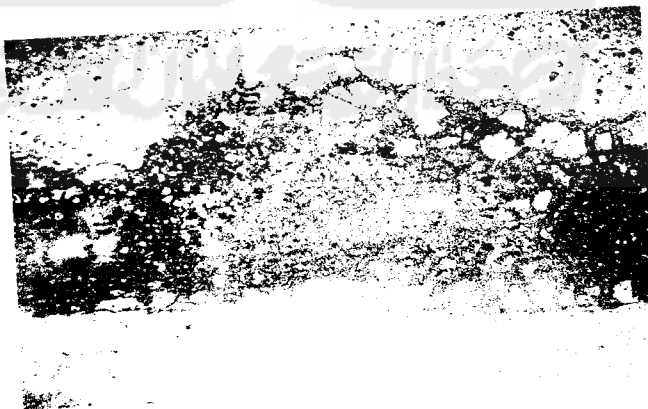
Kegemukan (*bleeding*)



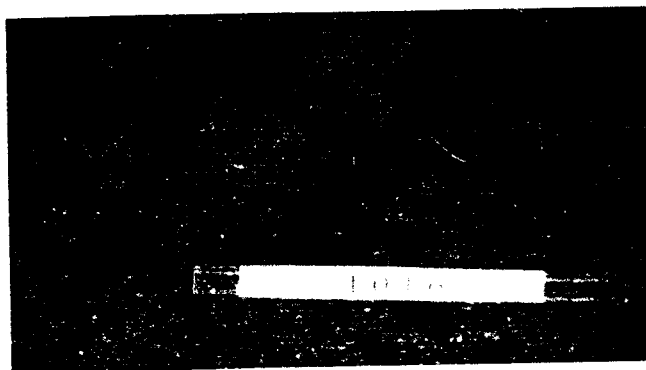
Longitudinal



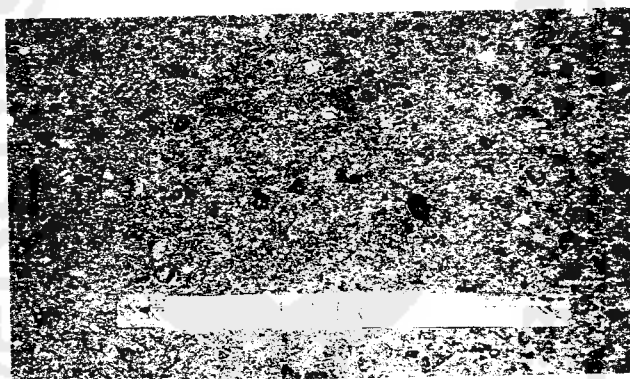
Retak halus (*block*)



Amblas (depression)



Retak kulit buaya (*crocodile*)



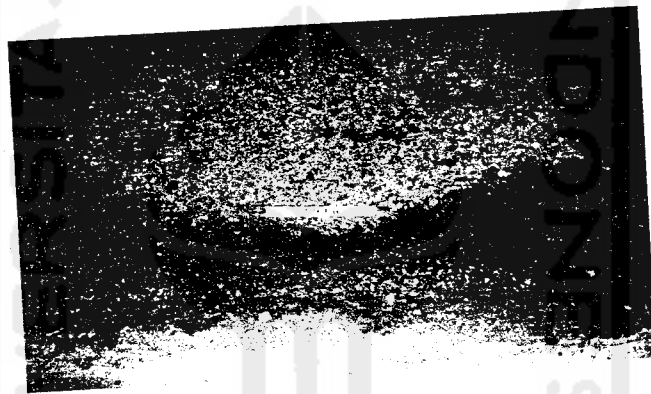
Stripping



Shoving



Corrugation

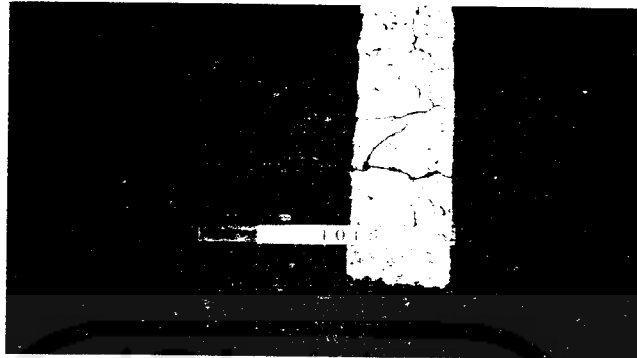


Kegemukan (*flushing*)

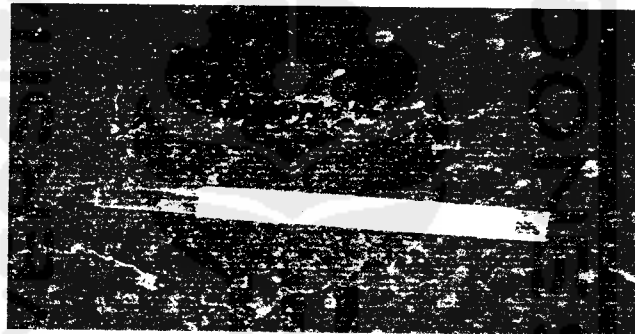


Delamination

RUAS : 1015 (WONOSARI – BRIMOB)



Retak halus (*block*)



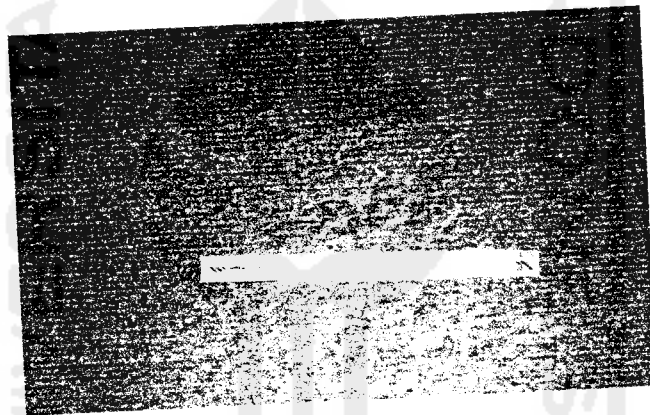
Retak kulit buaya (*crocodile*)



Keriting (*corrugation*)



Retak halus (*hair cracks*)

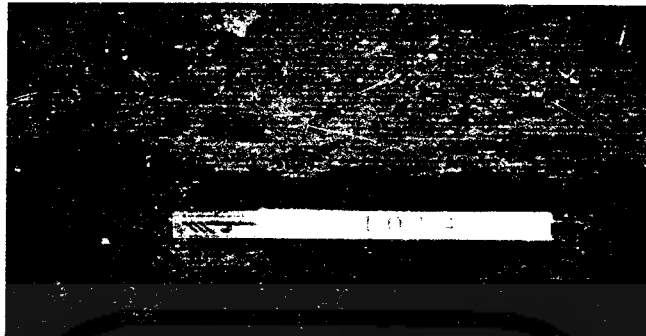


Stripping

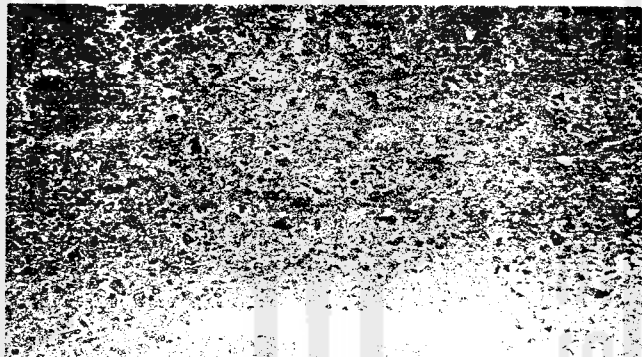


Retak kulit buaya (*crocodile*)

RUAS : 1014 (BRIMOB – KARANGKAJEN)



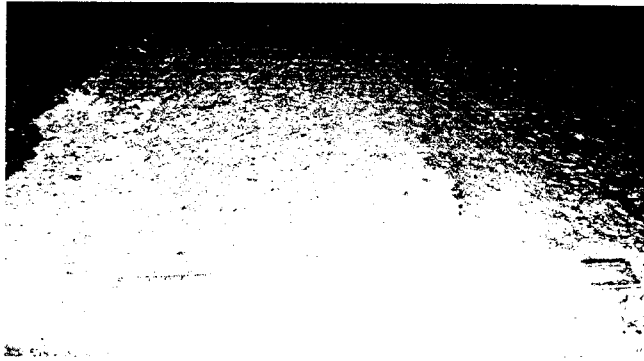
Kegemukan (*flushing*)



Stripping



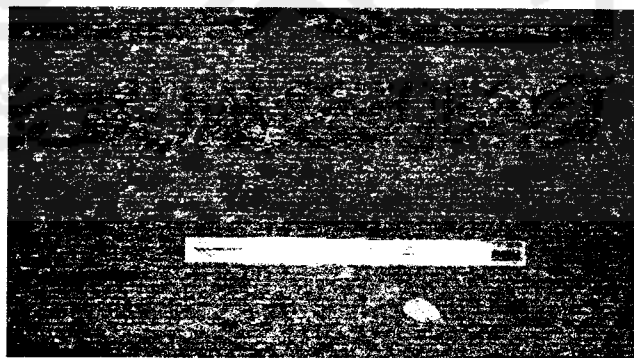
Keriting



Shoving

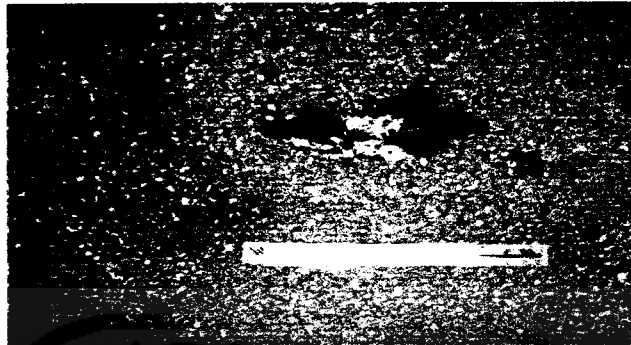


Keriting (*corrugation*)



Stripping

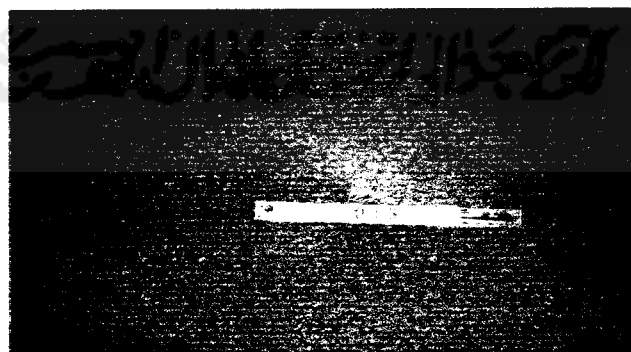
RUAS : 1013 (SEWON – DONGKELAN)



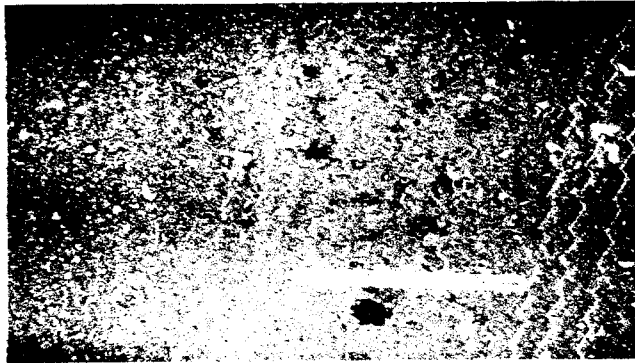
Lubang (*pothole*)



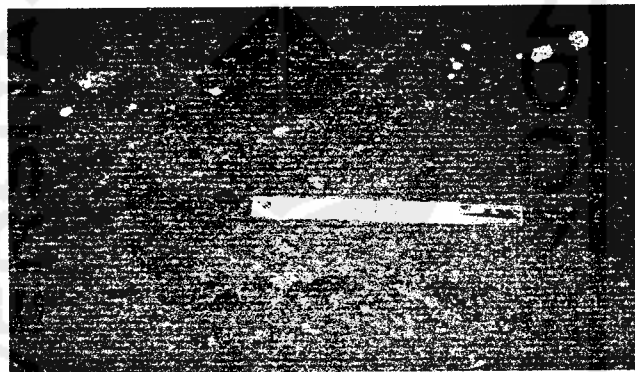
Alur (*rutting*)



Licin (*Polishing*)



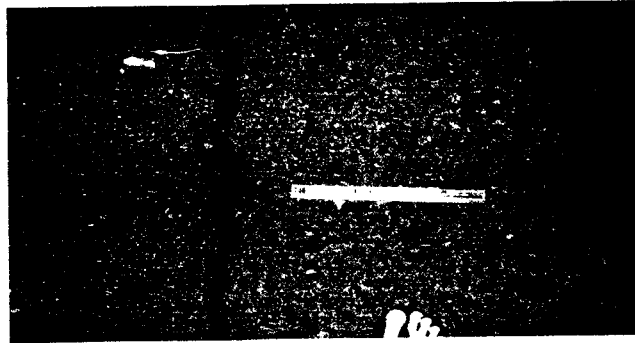
Alur (*rutting*)



Keriting (*corrugation*)



Transvere

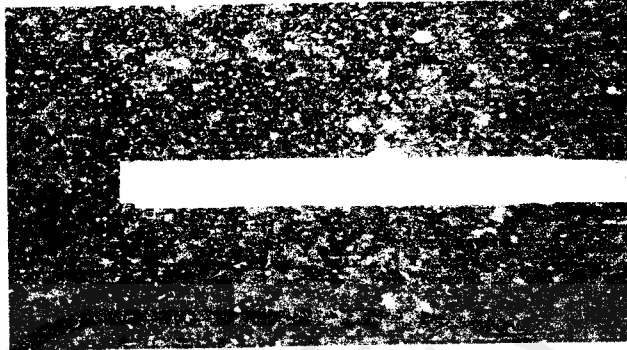


Alur (*rutting*)

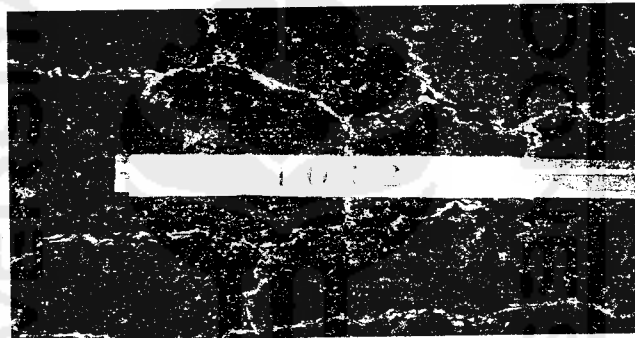


Longitudinal

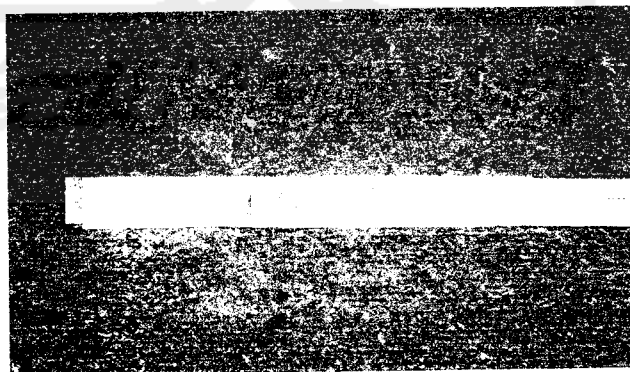
RUAS : 1012 (DONGKELAN – MEDIKUSMO)



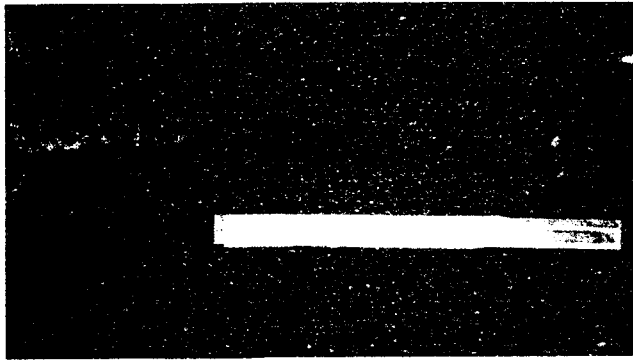
Retak halus (*block*)



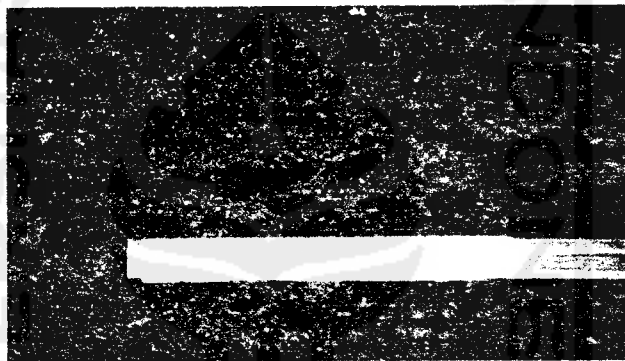
Retak kulit buaya (*Crocodile*)



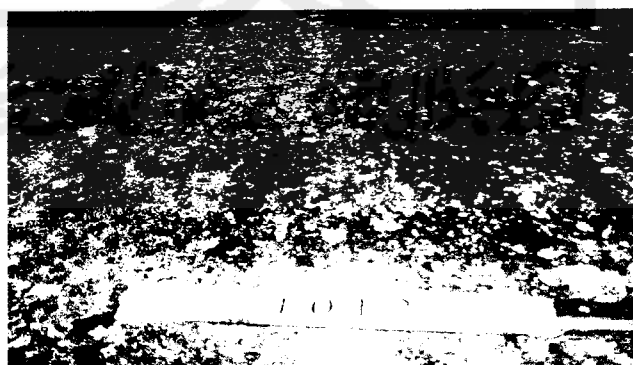
Keriting (*corrugation*)



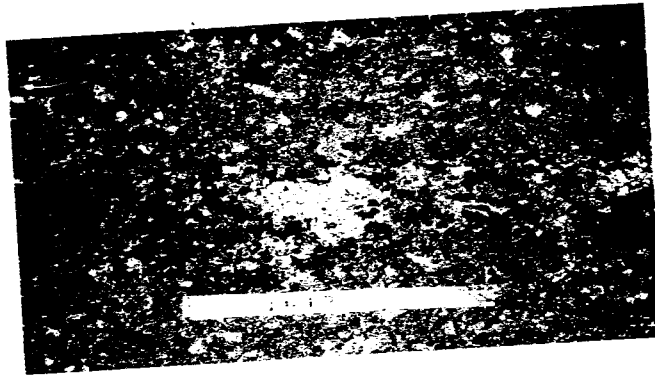
Longitudinal



Stippling

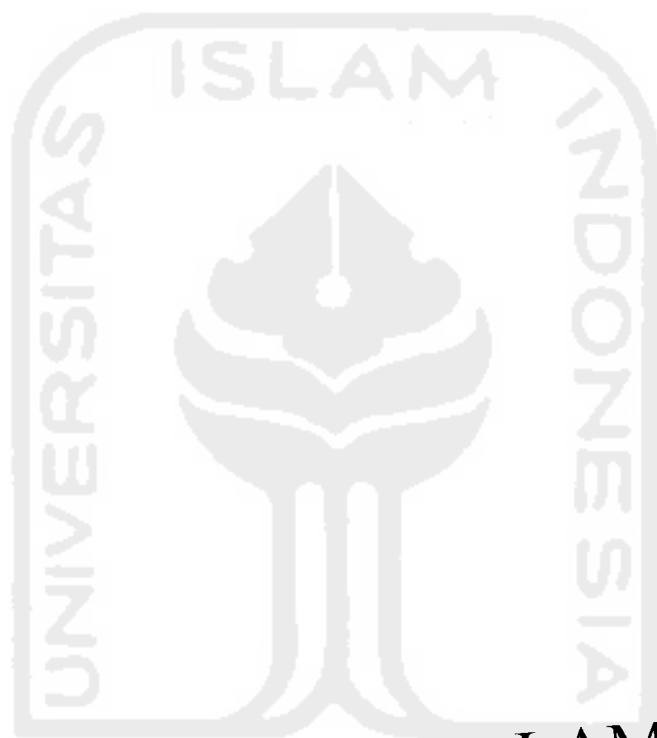


Keriting (*corrugation*)



Ravelling





LAMPIRAN 2

Lembar Data Survei

Kondisi Kerusakan Jalan Ring Road Selatan Yogyakarta

Jalan : Ring Road Selatan Yogyakarta		Tanggal : 18 April 2005								
Fasilitas : Badan Jalan		Ruas : 1012								
Di survey oleh : Hendra I, Gunadi K		Luas area : 14 m x 1000 m								
Tipe Kerusakan :		11. Edge break								
1. Corrugation		12. Edge drop off								
2. Depression		13. Delamination								
3. Rutting		14. Flushing								
4. Shoving		15. Polishing								
5. Block		16. Ravelling								
6. Crescent shaped		17. Stripping								
7. Crocodile		18. Pothole								
8. Diagonal		19. Patch								
9. Longitudinal		20. Transvere								
10. Meandering										
Luas Kerusakan Jalan (m ²)										
	1	5	7	9	16	17				
	3	914,5	32,75	4,25	5	6				
Total	965,5									
Kondisi	% Kerusakan		$\%Kerusakan = \frac{Total\ Kerusakan}{Total\ Jalan} \times 100\%$							
Sedang	6,90%		$= \frac{965,5}{14000} \times 100\%$ $= 6,90\%$							

Lembar Data Survei

Kondisi Kerusakan Jalan Ring Road Selatan Yogyakarta

Jalan : Ring Road Selatan Yogyakarta		Tanggal : 18 April 2005							
Fasilitas : Badan Jalan		Ruas : 1013							
Di survey oleh : Hendra I, Gunadi K		Luas area : 14 m x 1800 m							
Tipe Kerusakan :		11. Edge break							
1. Corrugation		12. Edge drop off							
2. Depresion		13. Delamination							
3. Rutting		14. Flushing							
4. Shoving		15. Polishing							
5. Block		16. Ravelling							
6. Crescent shoped		17. Stripping							
7. Crocodile		18. Pothole							
8. Diagonal		19. Patch							
9. Longitudinal		20. Transvere							
10. Meandering									
Luas Kerusakan Jalan (m ²)									
	1	3	9	15	20				
	4,75	55	11	12	3,5				
Total	86,25								
Kondisi		% Kerusakan		$\%Kerusakan = \frac{\text{Total Kerusakan}}{\text{Total Jalan}} \times 100\%$					
Baik		0,35%		$= \frac{86,25}{25200} \times 100\%$ $= 0,35\%$					

Lembar Data Survei

Kondisi Kerusakan Jalan Ring Road Selatan Yogyakarta

Jalan : Ring Road Selatan Yogyakarta		Tanggal : 19 April 2005								
Fasilitas : Badan Jalan		Ruas : 1014								
Di survey oleh : Hendra I, Gunadi K		Luas area : 14 m x 1500 m								
Tipe Kerusakan :		11. Edge break								
1. Corrugation		12. Edge drop off								
2. Depression		13. Delamination								
3. Rutting		14. Flushing								
4. Shoving		15. Polishing								
5. Block		16. Ravelling								
6. Crescent shaped		17. Stripping								
7. Crocodile		18. Pothole								
8. Diagonal		19. Patch								
9. Longitudinal		20. Transvere								
10. Meandering										
Luas Kerusakan Jalan (m ²)										
	1	4	5	14	17					
	6,75	8	1084	20,5	15					
Total	1134,25									
Kondisi		% Kerusakan		$\%Kerusakan = \frac{\text{Total Kerusakan}}{\text{Total Jalan}} \times 100\%$						
Sedang		5,4%		$= \frac{1134,25}{21000} \times 100\%$ $= 5,4\%$						

Lembar Data Survei

Kondisi Kerusakan Jalan Ring Road Selatan Yogyakarta

Jalan : Ring Road Selatan Yogyakarta		Tanggal : 19 April 2005							
Fasilitas : Badan Jalan		Ruas : 1015							
Di survey oleh : Hendra I, Gunadi		Luas area : 14 m x 2000 m							
Tipe Kerusakan :		11. Edge break							
1. Corrugation		12. Edge drop off							
2. Depression		13. Delamination							
3. Rutting		14. Flushing							
4. Shoving		15. Polishing							
5. Block		16. Ravelling							
6. Crescent shopped		17. Stripping							
7. Crocodile		18. Pothole							
8. Diagonal		19. Patch							
9. Longitudinal		20. Transvere							
10. Meandering									
Luas Kerusakan Jalan (m ²)									
	1	5	7	17					
	6	55,75	50	12					
Total	123,75								
Kondisi	% Kerusakan		$\%Kerusakan = \frac{Total\ Kerusakan}{Total\ Jalan} \times 100\%$						
Baik	0,45%		$= \frac{123,75}{28000} \times 100\%$ $= 0,45\%$						

Lembar Data Survei

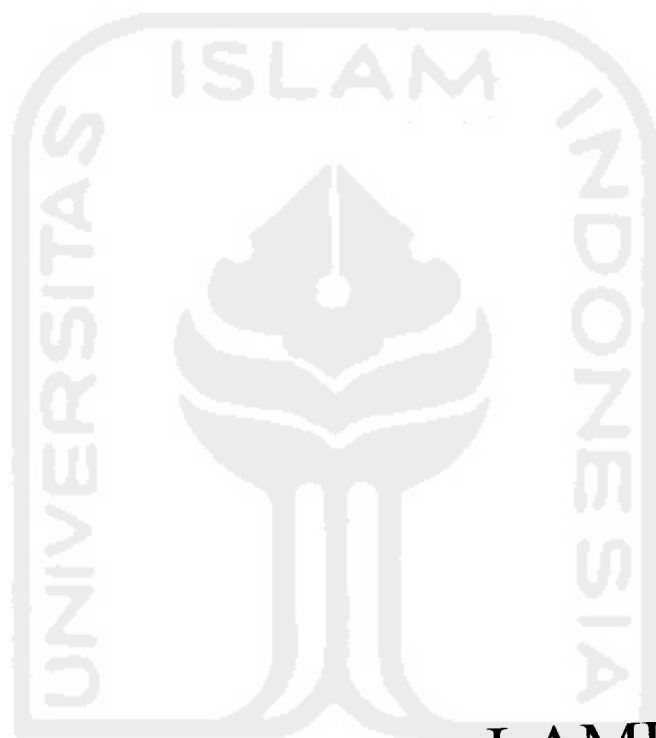
Kondisi Kerusakan Jalan Ring Road Selatan Yogyakarta

Jalan : Ring Road Selatan Yogyakarta		Tanggal : 20 April 2005								
Fasilitas : Badan Jalan		Ruas : 1016								
Di survey oleh : Hendra I, Gunadi K		Luas area : 14 m x 4400 m								
Tipe Kerusakan :		11. Edge break								
1. Corrugation		12. Edge drop off								
2. Depression		13. Delamination								
3. Rutting		14. Flushing								
4. Shoving		15. Polishing								
5. Block		16. Ravelling								
6. Crescent shoped		17. Stripping								
7. Crocodile		18. Pothole								
8. Diagonal		19. Patch								
9. Longitudinal		20. Transvere								
10. Meandering										
Luas Kerusakan Jalan (m ²)										
	1	2	4	5	7	8	9	13		
	10,5	0,95	20	50	20	2	1,85	14		
Total	119,3									
Kondisi		% Kerusakan		$\%Kerusakan = \frac{Total\ Kerusakan}{Total\ Jalan} \times 100\%$ $= \frac{119,3}{61600} \times 100\%$ $= 0,20\%$						
Baik		0,20%								

Lembar Data Survei

Kondisi Kerusakan Jalan Ring Road Selatan Yogyakarta

Jalan : Ring Road Selatan Yogyakarta		Tanggal : 21 April 2005								
Fasilitas : Badan Jalan		Ruas : 1017								
Di survey oleh : Hendra I, Gunadi K		Luas area : 14 m x 1500 m								
Tipe Kerusakan :		11. Edge break								
1. Corrugation		12. Edge drop off								
2. Depression		13. Delamination								
3. Rutting		14. Flushing								
4. Shoving		15. Polishing								
5. Block		16. Ravelling								
6. Crescent shopped		17. Stripping								
7. Crocodile		18. Pothole								
8. Diagonal		19. Patch								
9. Longitudinal		20. Transvere								
10. Meandering										
Luas Kerusakan Jalan (m ²)										
	1	2	4	5	7	10	11	14	15	18
	8	0,45	11,5	177	85	117	64	20	16	0,75
Total	499,7									
Kondisi		% Kerusakan		%Kerusakan = $\frac{\text{Total Kerusakan}}{\text{Total Jalan}} \times 100\%$						
Baik		2,38%		$= \frac{499,5}{21000} \times 100\%$ $= 2,38\%$						



LAMPIRAN 3



Disiram aspal dg. canting



Pengisian material



Material diratakan



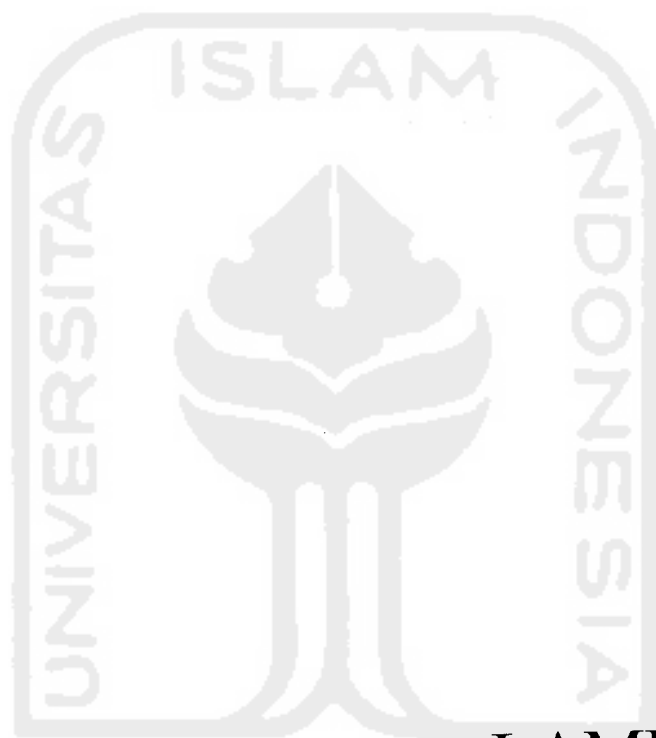
Kerusakan retak buaya yg. Akan di **Buras**



Disiram aspal dg. **Asphalt Sprayer**



Ditabur material



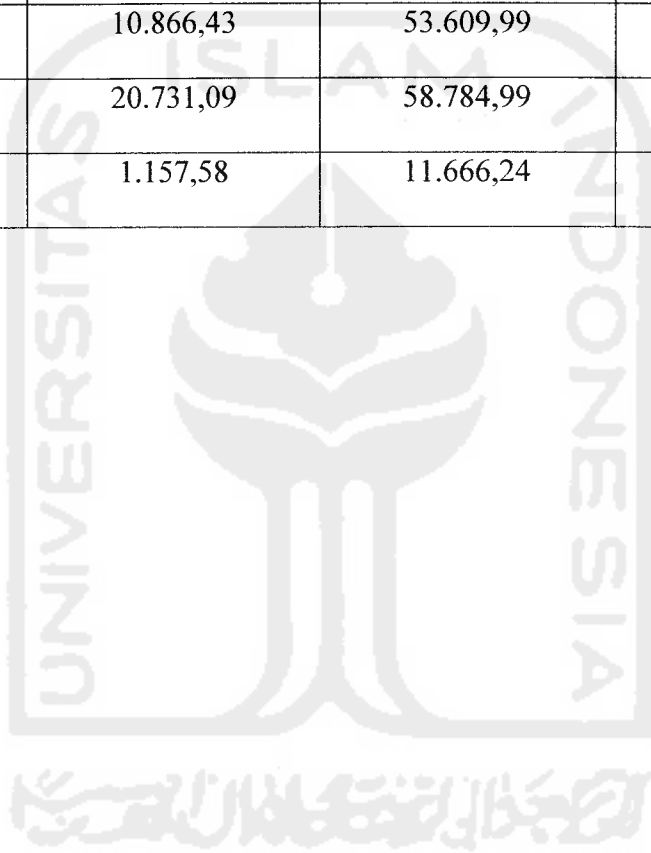
LAMPIRAN 4

DAFTAR HARGA DASAR SATUAN BAHAN

NO	URAIAN	SATUAN	HARGA SATUAN (Rp)
1	Aspal Emulsi	Kg	3.500
2	Aspal Panas	Kg	3.400
3	Chips	M ³	80.000
4	Batu Pecah 1/2	M ³	120.000
5	Batu Pecah 3/5	M ³	65.000
6	Pasir	M ³	50.000
7	Kayu Bakar	M ³	45.000
8	Bensin	Liter	2.400
9	Solar	Liter	2.100
10	Minyak Pelumas/Olie	Liter	15.000

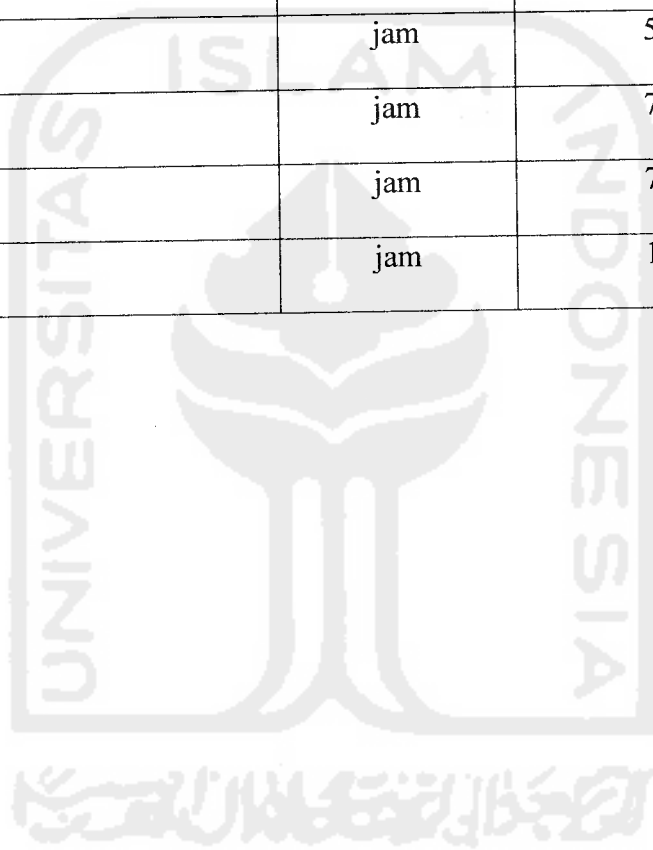
HARGA SEWA PERALATAN PER JAM

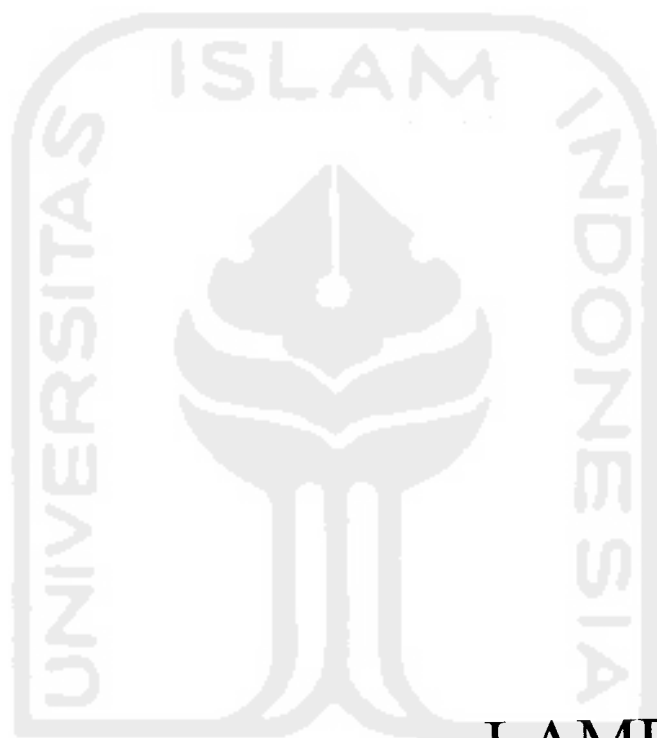
Nama Alat	Biaya Pasti Per Jam (Rp)	Biaya Operasional Per Jam (Rp)	Biaya Sewa Per Jam (Rp)
1. Asphalt Sprayer	13.583,03	22.203,74	35.786,77
2. Kompresor	11.438,34	46.184,99	57.623,33
3. Jack Hammer	1.350,51	10.968,74	12.319,25
4. Wals	28.595,85	45.528,74	74.124,59
5. Asphalt Cutter	10.866,43	53.609,99	64.476,42
6. Dump Truk	20.731,09	58.784,99	79.516,98
5. Stemper	1.157,58	11.666,24	12.823,82



DAFTAR HARGA DASAR SATUAN SEWA ALAT DAN UPAH PEKRJA

NO	URAIAN	SATUAN	HARGA SATUAN (Rp)
1	Pekerja	jam	2.857
2	Tukang	jam	3.571
3	Asphalt Spayer	jam	35.786,77
4	Jack Hammer	Jam	12.319,25
5	Asphalt Cutter	jam	64.476,42
6	Kompresor	jam	57.623,33
7	Dump Truk	jam	79.516,98
8	Wals	jam	74.124,59
9	Stemper	jam	12.823,82





LAMPIRAN 5

LAMPIRAN A : ASET-ASET FISIK

1. JUMLAH DAN NILAI

1.1. LAPIS PERKERASAN JALAN (KEWENANGAN PROPINSI DIY)

No. Ruas	Nama Jalan	Lebar Damrija (m)	Lebar Jalan (m)	Panjang Jalan (m)	Jenis Perkerasan	Nilai Aktual Aset			Biaya Penggantian (Juta Rp.)
						Tanah (Juta Rp.)	Perkerasan (Juta Rp.)	Total (Juta Rp.)	
1	Jl. Kyai Mojo	13,46	12,94	1.062	Aspal	27.895	509	28.393	275
2	Jl. Magelang	19,97	15,53	1.362	Aspal	53.029	783	53.812	423
3	Jl. Diponegoro	21,80	15,60	607	Aspal	25.791	350	26.141	189
4	Jl. C. Simanjuntak	14,56	9,41	916	Aspal	26.002	319	26.321	172
5	Jl. Jend. Sudirman	26,06	16,46	1.330	Aspal	67.607	1.073	68.680	438
6	Jl. Urip Sumcharjo	21,50	16,10	901	Aspal	37.797	537	38.324	290
7	Jl. Laksda Adisucipto	20,70	16,20	430	Aspal	17.357	258	17.615	139
8	Nandan - Lojajar	14,60	10,50	3.725	Aspal	79.532	1.447	80.979	782
9	Jl. HOS Cokroaminoto	19,53	16,65	1.764	Aspal	50.399	1.087	51.486	587
10	Jl. Gedung Kuning	16,63	14,07	1.958	Aspal	47.631	1.019	48.650	551
11	Jl. Ngeksigondo	19,43	13,67	692	Aspal	19.653	350	20.003	189
12	Jl. Perintis Kemerdekaan	16,50	13,60	1.098	Aspal	26.255	548	26.802	296
13	Jl. Jelas Kolyocya - Pulowati - Rogoyudan - Blunyo	18,80	3,70	833	Aspal	22.892	176	23.068	62
14	Jl. Menteri Suceno	16,60	12,18	882	Aspal	21.410	397	21.807	215
15	Jl. Kol. Sugiyono	23,00	15,20	818	Aspal	27.512	460	27.972	249
16	Jl. Mayor Jencral Suloyo	17,33	13,70	662	Aspal	16.782	336	17.117	181
17	Jl. MT. Harjono	17,97	12,27	720	Aspal	18.819	327	19.146	177
18	Jl. Kapten Piere Tendean	16,35	13,15	621	Aspal	19.622	399	20.021	216
19	Jl. Bugisan	16,20	13,10	456	Aspal	18.606	221	11.027	116
20	Jl. Sugeng Jarsni	16,76	12,68	673	Aspal	18.466	316	16.802	171
21	Jl. Bantui	17,02	10,20	1.592	Aspal	26.418	601	27.016	242
22	Jl. Parangtritis	13,10	9,12	1.500	Aspal	19.166	506	19.666	274
23	Jl. Pramuka	9,50	7,00	740	Aspal	6.852	192	7.044	164
24	Jl. Inogiri	12,90	6,50	1.517	Aspal	19.080	365	19.445	197
25	Jl. Lingkar (Vasoncatul - Janti)	30,00	25,00	1.500	Aspal	43.878	1.388	45.263	756
26	Jl. Lingkar (Janti - Maguwo)	30,00	25,00	2.100	Aspal	61.421	1.913	63.368	1.051
27	Jl. Lingkar (Maguwo - Condongcatul)	30,00	25,00	5.900	Aspal	172.575	5.458	178.033	2.956
28	Jl. Lingkar (Condongcatul - CemaraTujuh)	30,00	25,00	1.500	Aspal	43.875	1.388	45.263	756

No. RUMAH	Nama Jalan	Lebar Damia (m)	Lebar Jalan (m)	Panjang Jalan (m)	Jenis Perkerasan	Nilai Aktual Aset			Biaya Penggantian (Juta Rp.)
						Tanah (Juta Rp.)	Perkerasan (Juta Rp.)	Total (Juta Rp.)	
305	Jl. Lingkar (Cemara Tujuh - Monjali)	30,00	25,00	1.400	Aspal	40.950	1.295	42.245	7
306	Jl. Lingkar (Monjali - Jompor)	30,00	25,00	1.000	Aspal	29.250	925	30.175	5
307	Jl. Lingkar (Jomber - Kronggahan)	30,00	25,00	1.500	Aspal	39.488	1.388	40.875	7
308	Jl. Lingkar (Kronggahan - Demakijo)	30,00	25,00	4.400	Aspal	115.830	4.070	119.900	2.2
309	Jl. Lingkar (Demakijo - Samping)	30,00	25,00	3.100	Aspal	81.608	2.868	84.475	1.5
310	Jl. Lingkar (Gamping - Tamanitro)	30,00	25,00	2.900	Aspal	76.343	2.683	79.025	1.4
311	Jl. Lingkar (Tamanitro - Madukismo)	30,00	25,00	1.000	Aspal	26.325	925	27.250	5
312	Jl. Lingkar (Madukismo - Dongkelan)	30,00	25,00	1.000	Aspal	26.325	925	27.250	5
313	Jl. Lingkar (Dongkelan - Sewon)	30,00	25,00	1.800	Aspal	17.385	1.665	49.050	9
314	Jl. Lingkar (Sewon - Karangkajen)	30,00	25,00	1.500	Aspal	39.488	1.388	40.875	7
315	Jl. Lingkar (Karangkajen - Brimob)	30,00	25,00	2.000	Aspal	52.650	1.850	54.500	1.0
316	Jl. Lingkar (Bimob - Jl. Wonosari)	30,00	25,00	4.400	Aspal	115.830	4.070	119.900	2.2
317	Jl. Lingkar (Jl. Wonosari - Wunocalur)	30,00	25,00	1.500	Aspal	39.488	1.388	40.875	7
SUB TOTAL				65.548		1.757.472	48.186	1.805.658	25.8



UNTUK DOSEN

KARTU PRESENSI KONSULTASI
TUGAS AKHIR MAHASISWA

PERIODE KE : II (Des 04 - Mei 05)
Berlaku mulai Tgl : 9-Dec-04 – 9 Juni 05

NO	N A M A	NO.MHS.	BID.STUDI
1.	Gunadi K	95 310 019	Teknik Sipil
2.	Hendra Iriawan	95 310 303	Teknik Sipil

JUDUL TUGAS AKHIR

Kerusakan Struktur Jalan Sepanjang Jl.Arteri Lingkar Selatan Jogjakarta

Dosen Pembimbing I : Bachnas,Ir,H,MSc

Dosen Pembimbing II : Subarkah,Ir,MT



Jogjakarta , 9-Dec-04
an. Dekan



Ir.H.Munadhir, MS

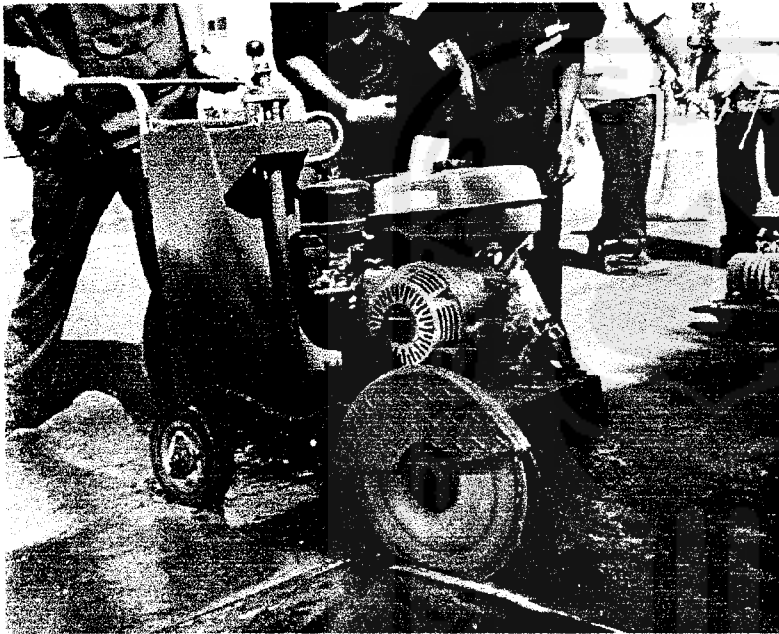
Catatan :
Seminar : _____
Sidang : _____
Pendadaran : _____

Diperpanjang 8/5 September 2005

Handwritten signature and date



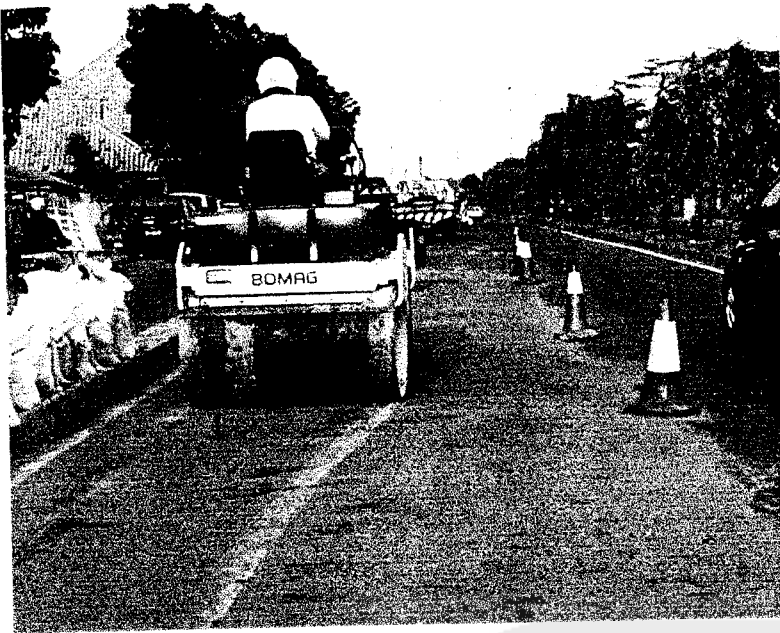
Lahan yang akan di patching



Dibuat tepi lubang persegi dg Asphalt Cutter



Bagian tengah dibongkar dg Jack Hammer / Jack vibrator



Dipadatkan dg alat pemadat **Walls**



CATATAN KONSULTASI TUGAS AKHIR

NO	TANGGAL	KONSULTASI KE :	TANDA TANGAN
	17/Jan-05	- perbaikan dan lengkapnya yg di beri tanda.	
	7/02-05	Perbaikan pd Pemb II.	
	23/02-05	<ul style="list-style-type: none"> Perbaikan tata tulis Penelitian di lokasi ini sudah pernah ada, coba pd lapisan - adakah perbedaannya? Pempejal kerusakan harus melihat lapis dan lapis s/d susunan menyempit Tajam laboratorium test penyusutan tidak diperbaiki Metodologi, didetailkan lagi cara menganalisis parameter & yg Kapan pustaka frase minimal - perlu ditamb. 	
		Uch. P. Afari & Rani Sitogunung Rumbod Kelate - 2007	
	23/05	Orkaph - Uchi Semasob	
	19/05	<p>Perbaikan metodologi: diperjelas, ada hubungan antara parameter dan hasil yg kredibilitas.</p> <p>Kejelasan di rujukan/referensi: Standar, Manual, SKI, Spcl. dll.</p> <p>Kesimpulan menunjukkan ds homolog uant</p> <p>Teori mendukung pelaksanaan ds menjelaskan metode</p> <p>Pustaka mendukung konsep metodologi,</p>	
	26/05	Perlu ditelusuri sumber analisis <u>NPV</u> secara metodologis	

Uchi ke pustaka ukuran keluarga s/d 06/05

09/06 Perbaikan: tata tulis - lihat kel. yg dan yg sejenismya
 Analisis diperbaiki (under perbaikan.)

14/07 Tambahan ke kesimpulan (sama & tujuan): penyusutan
 kerusakan

18/07-05. lanjutkan ke...
 lanjutkan ke...
 19/05 Perbaikan sdh di
 koreksi.