APPENDIX

INPUT DATA

FOR ESTIMATION OF THE PRODUCER'S SURPLUS BENEFIT

RV. :	RIAU	KAB. : BE	NGKALIS	SURVEY	YEAR: 198
Code	KECAMATAN	CULTIVATED	YIELD	FARMER'S POPULATION :	CIRCULATEI COMMODITY
No.	NAME	AREA : (PA)	RATE : (Y)	(AP)	(PG)
01	SIAK SEI. INDRAPURA	2,585	2.34	6,660	0
02	SEI. APIT	7.319	2.36	7,780	0
03	TEBING TINGGI	2,093	0.20	23,500	0
04	MERBAU	1,243.5	6.48	6,850	0
05	BENGKALIS	654	2.99	11,950	0
06	BUKIT BATU	3,629	2.69	10,900	0
07	MANDAU	1,378	1.84	1,378	0
08	TANAH PUTIH	2,105	1.92	6,950	0
09	KUBU	9,571	2.54	10,650	0
10	BANGKO	6,204.5	2.37	10,920	0
11	RUPAT	1,257	1.89	8,200	0
12	BUKIT KAPUR	1,186	2.48	4,350	0
13	DUMAI BARAT	1.046	2.37	2,700	0
14	DUMAI TIMUR	175.5	2.99	2,100	0
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	r1	r _{2.}	r3	r ₄	FARMER'S CONSUMPTION : (CD)	NON~AGRO REQUIRMENT : (NG)
ANNUAL % AVERAGE % GROWTH RATE	6.5	3.0	5.5	5.9		

	SEDAN	BUS	TRUCK	MOTOR	AVI	ERAGE	· · · · ·
RATE OF EACH VEHICLE TYPE %	2.70	0.48	2.87	93.95	1	EIGHT NAGE	0.9 Ton/Truck

Appendix A-2 Engineering Data

3-д-2

ROAD LINK DATA

PROVINCE :Riau

KABUPATEN: Bengkalis

LINK	BEGINNING POINT	END POINT	LENGTH	THROUGH TI NAME & LE		DEMADUC
NO.	(DESA NAME)	(DESA NAME)	(KM)	KEC. NAME	LENGTH (KM)	REMARKS
01	Bengkalis	Pambang	57	Bengkalis	57	1
02	Selat Panjang	Lalang	15	Tebing Ting- gi	15	4
03	Insit	Alahai	5	Tebing Ting- gi	5	11
04	Bantar	Tanjung Kedabu	30	Tebing Ting- gi	30	37
05	Pambang	Pematang Duku	20	Bengkalis	20	6
06	Bengkalis	Ketam Putih	30	Bengkalis	30	2
07	Sungai Pakning	Lubuk Muda	10	Bukit Batu	10	7
08	Simpang ber- kat	Siarang-arang	8	Tanah Putih	8	12
09	Teluk Belitung	Dedap	40	Merbau	40	5
10	Sei Apit	Mengkapan	21	Sungai Apit	21	28
11	Sei Apit	Tanjung Kuras	8	Sungai Apit	8	19
12	Sei Apit	Benuar	20	Sungai Apit	20	18
13	Bengkalis	Prapat Tunggal	18	Bengkalis	18	10
14	Teluk Merbau	Rantau Pan- jang Kanan	6	Kubu	6	20
15	Rantau Pan- jang kiri	Sei Pinang	4	Kubu	4	21
16	Rantau Panjang kiri	Teluk_ Nilap	4	Kubu	4	23
17	Teluk Nilap	Pinang Road	8.5	Kubu	8.5	22
18	Ujung Tanjung	Sedinginan	17	Tanah Putih	17	24
19	Bagan Siapi- api	Kampung Jawa	3	Bangko	3	25
20	Bagan Siapi-api	-Bagan Punak	4	Bangko	4	26
21	Siarang-arang	Pujud	. 15	Tanah Putih	15	16
22	Tanjung Palas	Pelintung	18	Dumai Timur	18	27
23	Dumai	Besilam	30	Bukit Kapur Dumai Barat	11 4	9
24	Bukit Timah	Bukit Kapur	6	Bkt. Kapur	6	17

Please note the priority No. in the Remarks of this list for each links No. according to the each Kabupaten's development plan.

ROAD LINK DATA

PROVINCE : Riau

KABUPATEN: Bengkalis

LINK	BEGINNING	END POINT	LENGTH	THROUGH T NAME & LE		DEMARKO
NO.	POINT (DESA NAME)	(DESA NAME)	(KM)	KEC. NAME	LENGTH (KM)	REMARKS
25	Bukit Kapur	Bagan Besar	5	Bukit Kapur	5	13
26	Batu Panjang	Pangkalan Buah	30	Rupat	30	30
27	Bagan Batu	Bagan Sinembah	18	Kubu	18	14
28	Baran Melintan	g Centaí	30	Merbau	22	
29	Bukit Kapur	Pelintung	22	Bukit Kapur	32	15
30	Kampung Jawa	Seneboi	32	Bangko Bukit Kapur	-29 3	3
31	Sokop	Tg. Samak	33	T. Tinggi	5	34
32	Teluk Belitung	Meranti Bunting	20	Merbau	20	29
33	Selat Baru	Pantai	5	Bengkalis	5	8
34	Tanjung Me- dang	Pangkalan Nyi- rih	15	Rupat	15	31
35	Pangkalan Nyirih	Titi Akar	15	Rupat	15	32
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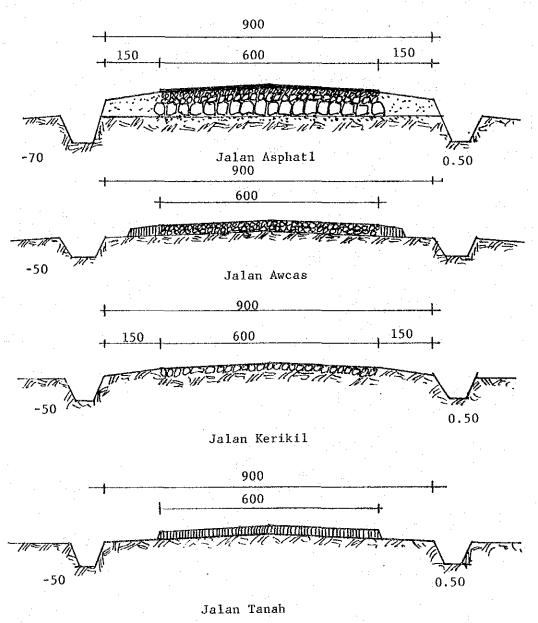
Please note the priority No. in the Remarks of this list for each links No. according to the each Kabupaten's development plan.

KABUPATEN: Bengkalis

What Kind of Design Criteria has being applied for the new road construction and the improvement for the Kabupaten Road ? Kriteria Perencanaan yang dipakai pada program penanganan jalan Kabupaten, baik untuk jalan lama maupun pembangunan baru.

Please draw the Typical Cross Section of the Kabupaten Road. Buat gambar dan penjelasan dari: Typical cross section yang dipakai pada program penanganan jalan selama ini (baik untuk jalan lama, maupun pembangunan baru)

TYPICAL CROSS SECTION.



3-a-5

KABUPATEN: Bengkalis

LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR INPROVED IN 1980/1981

_____Biaya konstruksi penanganan

jalan dan jembatan Kabupaten thn. 1980/1981

LINK NO .:	LOCATION From - To	Lebar per- kerasan(m)	Type perr kerasan	LENCTH Panjang	COSTS Harga	REMARKS Keterang
Nomor Ruas	(dari - ke)	Lebar Jembatan	Type 	(KM)	(Rp 10 ⁶)	an
3Ò	Bagan Siapi-api-Sina Boi	7m 5m	Earth Timber	5.121	90,160	
- 30	Bagan Siapi-api - Sina Boi	7m 5m	Earth Timber	9.879	84,850	
30	Bagan Siapi-api - Sina Boi	3m	Gravel Timber	2.500	8,209	
	Desa Rajajamu menuju proyek Bagan Siapi-api - Sina Boi					
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<u> </u>			1			

* PAVEMENT TYPE : Pls note the appropriate No. below.

1. : Asphalt surface / penetrasi macadam

- 2. : Asphalt seal / pelaburan aspal
- 3. : Gravel / kerikil
- 4. : Gravel /AWCAS / kerikil / japat

3-A-6

E-03-(1)

3 A.

KABUPATEN: Bengkalis

LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR INPROVED IN 1981/1982

Biaya konstruksi penanganan

jalan dan jembatan Kabupaten thn. 1981/1982

LINK NO .: Nomor Ruas	LOCATION From - To (dari - ke)	Lebar per- kerasan(m) Lebar Lembaran	Type per- kerasan Type Jembatan	LENGTH Panjang (KM)	COSTS Harga (Rp 10 ⁶)	REMARKS Keterang- an
29	Bukit Kapur - Pelintung (Dumai - Sei Pakning)	15 m 10 m	Earth		152,362	
30	Bagan Siapi-api - Sina Boi	9 m 6 m	Earth Timber	9.000	72,960	
30	Bagan Siapi-api - Sina Boi	9 m 6 m	Earth Timber	7.500	88,880	
30	Bagan Siapi-api - Sina Boi	3 m 4m	Gravel Timber	2.000	16,140	
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* PAVEMENT TYPE : Pls note the appropriate No. below.

1. : Asphalt surface / penetrasi macadam

2. : Asphalt seal / pelaburan aspal

3. : Gravel / kerikil

4. : Gravel /AWCAS / kerikil / japat

3-A-7

E-03-(2)

E-03-(3)

KABUPATEN:Bengkalis

LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR INPROVED IN 1982/1983

Biaya konstruksi penanganan

jalan dan jembatan Kabupaten thn. 1982/1983

LINK NO .: Nomor Ruas	LOCATION From - To (dari - ke)	Lebar per- kerasan(m) Lebar	Туре	LENGTH Panjang (KM)	COSTS Harga (Rp 10 ⁶)	REMARKS Keterang an
01	Bengkalis - Pambang	Jembatan 8 m 6 m	Lembatan Earth Timber		223,960	
01	Bengkalis - Pambang	8 m 6 m	Earth Timber	9.420	140,920	
01	Bengkalis - Pambang	8 m 6 m	Earth Timber	16.500	200,683	
29	Bukit Kapur - Pelintang	10 m	Timber	3.000	15,437	
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* PAVEMENT TYPE : Pls note the appropriate No. below.

1. : Asphalt surface / penetrasi macadam

2. : Asphalt seal / pelaburan aspal

3. : Gravel / kerikil

4. : Gravel /AWCAS / kerikil / japat

KABUPATEN: Bengkalis

LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR INPROVED IN 1983/1984

Biaya konstruksi penanganan

jalan dan jembatan Kabupaten thn. 1983/1984

LINK	LOCATION	Lebar per-	Type per-	LENGTH	COLUE	
NO		kerasan(m)		Panjang	COSTS Harga	REMARKS
Nomor		Lebar				Keterang,
Ruas	(dari - ke)	_lembatan	Type	(KM)	(Rp 10 ⁶)	an ·
01	Bengkalis - Pambang	8 m	<u>Iembatan</u> Earth	6.800	98,800	**************************************
	(Muntai - Banan)	6 m	Timber	and the second		
01	Bengkalis - Pambang	8 m	Earth	6.200	98,070	******
	(Banan - Pambang)	<u>6 m</u>	Timber			· · · · · ·
01	Bengkalis - Pambang	8 m	earth	2.500	36,718	······
	(Simpang Sukajadi-ArahKembu		Timber			
06	Bengkalis - Ketam Putih	8 m	Earth	4.650	90,904	
·	<u>(Sei Alam - Penampi)</u>	<u>6 m</u>	Timber		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
06	Bengkalis - Ketam Putih	8 m	Earth	7.850	94,809	
	(Penampi-Temeran-Penebal	<u>6 m</u>	Timber			
06	Bengkalis - Ketam Putih	8 m	Earth	4.750	78,020	
	(Penebal-Pematang Duku)	<u> </u>	Timber			
06	Bengkalis - Ketam Putih	<u>8 m</u>	Earth	3.750	69,710	
	(PematangDuku-Sliau)	<u>6 m</u>	Timber			
06	Bengkalis - Ketam Putih	<u>8 m</u>	Earth	2.700	63,892	
	Bengkalis - Ketam Putih (Sliau - Ketam Putih)	6 m -	Timber			
02	Selat Panjang - Lalang	7 m	Earth	6.000	82,907	•
	(Selat Panjang-Insit)	5 m	Timber			
02	Selat Panjang - Lalang	7 m	Earth	5.656	94,792	:
4	(Insit - Alai)	5 m	Timber			
•	•		· · · · · · · · · · · · · · · · · · ·			······································
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* PAVEMENT TYPE : Pls note the appropriate No. below.

1. : Asphalt surface / penetrasi macadam

2. : Asphalt seal / pelaburan aspal

3. : Gravel / kerikil

4. : Gravel /AWCAS / kerikil / japat

3-A-9

E-03-(4)

E-03-(5)

KABUPATEN:Bengkalis

LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR INPROVED IN 1984/1985

Biaya konstruksi penanganan

jalan dan jembatan Kabupaten thn. 1984/1985

			and the second	مداور وجوا دون و در در در در در	Account of the Contemporation	
LINK	LOCATION	Lebar per- kerasan(m)	Type per- kerasan	LENGTH Panjang	COSTS Harga	REMARKS
Nomor Ruas	From - To (dari - ke)	Lebar	Туре	(KM)	(Rp 10 ⁶)	Keterang , an
01	Bengkalis - Pambang (Bamtamtu - Bantan Tua)	<u>lemhatan</u> 4 m	_Jembatan Grave1/Awcas	2.950	86,936	
01	Bengkalis - Pambang	4 m	Gravel/Awcas	3.050	78,377	
, , ,	(Bantan Tua - Pasirah)	5 m	Beton			
01	Bengkalis - Pambang (Pasikan - Selat Baru)	4 m	Gravel/Awcas	4.000	94,010	
23	Dumai - Basilam	10 m	Earth	3.650	71,215	
	(Bangsal Aceh-Lubuk Gaung)	<u>6 m</u> 10 m	<u>Timber</u> Earth			
23	Dumai Basilam	10 m	Bartn	3.750	55,913	· ·
- ⁻ -	(Lubuk Gaung-Lubuk Gaung)	6 m	Timber	19.750		
23	Dumai Basilam	10 m	Earth	2.600	63,863	
	(Lubuk Gaung - Lubuk Gaung		Timber			
09	Teluk Belitung - Dedap	6 m	Earth	5.100	69,163	
	(Kp Jawa-Bagan Melibur)	<u>4 m</u>	<u> </u>			
09	Teluk Belitung - Dedap (Bagan Melibur-Semelibur- Mengkirau)	<u>6 m</u>	Earth Timber	2.700	70,710	
	Mengkirau)	<u>4 m</u>	Earth			
09	Teluk Belitung - Dedap	6 m	Bartin	3.950	57,066	1
	(Mengkirau-Mengkopot)	4 m	Timber			
		7 m	Earth	5.800	73,315	· ·
02	Selat Panjang - Lalang (Selat Panjang - Insit)	5 m	Timber	1	1	1. A.
	Selat Panjang - Lalang	7 m	Earth	. 700	55,890	[
02	(Insit - Desa Tanjung)	5 m	Timber	3.700	55,090)
02	Selat Panjang - Lalang	7 m .	Earth	2.078	51,774	
02.	(Desa Tanjung-Berkung)	. 5 m	Timber	-2.070	51,774	
		·				
		· ·				
		<u></u>			-	

* PAVEMENT TYPE : Pls note the appropriate No. below.

1..: Asphalt surface / penetrasi macadam

2. : Asphalt seal / pelaburan aspal

3. : Gravel / kerikil

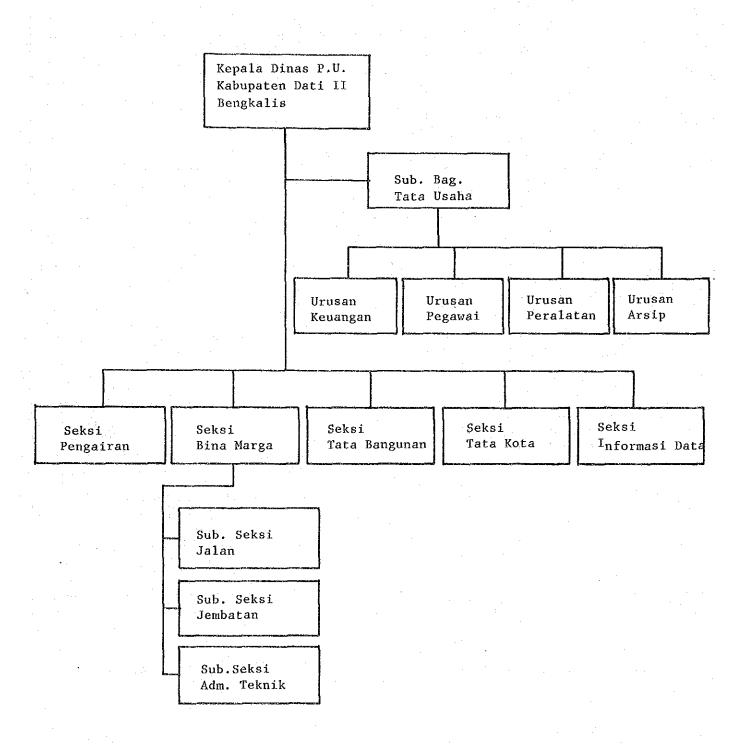
4. : Gravel /AWCAS / kerikil / japat

KABUPATEN: Bengkalis

EXISTING ORGANIZATION IN KABUPATEN

Structur Organisasi yang ada dari P.U Kabupaten

Please draw the Cart of the Existing Organization in the Kabupaten. Harap digambar bagan organisasi dari DPUK.



3-A-11

EXISTING STAFF RESOURCES OF BINA MARGA OF PU KABUPATEN

Tenaga Dinas PUK yang ada

PROPINSI: Riau KABUPATEN: Bengkalis

DESCRIPTION /Uraian	NUMBER / Jumlah	REMARKS Keterangan
CONTROLING STAFF Staff teknis.PUK	(20)	(5)
DPUK ENGINEED Sarjana Teknik	-	
ASSISTANT ENGINEER Sarjana Muda Teknik	6	
TECHNICIAN STAFF Staff Teknik (STM)	14	5
ADMINISTRATION Tenaga Administrasi	16	
SUPERVISOR Tenaga Pengawas	14	1
WORKING FORCE Tenaga Pelaksana Lapangan	(7)	<u>(6)</u>
OPERATORS Operators	7	6
DRIVERS Supir		
MECHANICS Mechanic		
TRADESMAN Tukang		
L A B O U R Buruh / Pekerja		
OTHERS Lain-lain		
TOTAL / JUMLAII	57	12

Çatatan ; Untuk kolom keterangan harap diisi berapa orang yang telah mendapat Training.

LOCATION AND AREA OF DPUK WORKSHOP

Lokasi Workshop DPUK

PROPINSI : Riau KABUPATEN: Bengkalis

LOCATION Lokasi	AREA (m2) Luas	NUMBER Jumlah	REMARKS Keterangan
Batu Kapur	3.000	1	

PROPINSI: Riau

KABUPATEN: Bengkalis

LAND ACQUISITION COST Daftar harga pembebasan tanah

DESCRIPTION Uraian	UNIT Satuan	RATE (RP) Harga	REMARKS Keterangan
CITY/kota	M2	1.400	
VILLAGE / desa	M2	800	, , , , , , , , , , , , , , , , , , ,
RICE FIELD/sawah	M2	700	n a fa de ser en la ser de la s
DRY FIELD/ladang	M2	600	
MIX CROPS/panen	M2	-	
FOREST/hutan	M2	100	
SWAMP / rawa	M2	100	
OTHERS / lain-lain	M2		

E-07

E-06

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KABUPATEN: Bengkalis

Classification of local contractors at Kabupaten level.

Klasifikasi kontraktor di Kabupaten

COMPANY NAME Nama Kontraktor	CLASS Kelas	CAPITAL Modal (Rp)	NUMBER OF EMPLOYEE Jumlah pegawai	REMARKS Keterangan
7	B2.	119,227,857		
17	Cl	69,810,647	-	
7	C2.	37,047,000		
35	C3	35,836,143		
		:		
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	-	: :		
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	·····			
			999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 199	

NOTE: DATI II

KABUPATEN: Bengkalis

LIST OF EXISTING EQUIPMENT OF LOCAL CONTRACTOR

Name of contractor

NAME OF EQUIPMENT	EXISTIN	IG CONI	DITION	/ Kondi	si Pera		REQUIRE - MENT / Ke-	
Jenis peralatan	TYPE/	P.Y	NUMBI	ER / Ju		REASON OF BAD CONDT	butuhan	
	Tipe		GOOD Baik	BAD Rusak	TOTAL Jumlah	TION/Seba Kerusakan	- haru -	
Bulldozer								
Motor Grader			1					
Tyre Roller								
Steel Whell Roller								
Vibration Roller		1979	1	-	1			
Wheel Loader	- 							
Front End Loader and Backhoe								
Mobile Crane						<u> </u>		
Concrete Mixer								
Stone Crusher								
Portable Compressor								
Hydraulic Excavator		1980	1	~	1			
Asphalt Paving Machine								
Asphalt Sprayer		<u> </u>		1				
Asphalt Mixing Machine								
Mobile Workshop	-				1.			
Mechanic Rammer								
Plate Tamper							· · · · · · · · · · · · · · · · · · ·	
Pile Driver								
Leg Drill		1						
Hand Hammer		1980	2	-	2		N	
Farm Tractor								
Dump Truck		1983	3	·	3			
Water Tank Truck	· · · · · · · · · · · · · · · · · · ·							
Fuel Tank Truck								
Pick Up								
Jeep							:	
Motorcycle		1984	.5	-	5			
Generator		1980	2	-	2			
Water Pump		1981	2		2.4			
Others								

3-A-15

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KABUPATEN: Bengkalis

LIST OF EXISTING EQUIPMENT OF P.U KABUPATEN

Name of contractor

NAME OF EQUIPMENT	EXISTI	NG CONI	DITION	Kondi	si Pera		REQUIRE - MENT / Ke-
Jenis peralatan	TYPE/	P.Y	NUMBI	ir / Ju	mlah	REASON OF BAD CONDT	butuhan
	Tipe	x	GOOD Baik	BAD Rusak	TOTAL Jumlah	FION/Sebal Kerusakan	baru
Bulldozer	· · · ·						
Motor Grader			;				
Tyre Roller							
Steel Whell Roller	-	1978	11	-	11	<u></u>	
Vibration Roller				•			
Wheel Loader							
Front End Loader and Backhoe							
Mobile Crane						<u> </u>	
Concrete Mixer							
Stone Crusher	•	1980	.1	-	1		
Portable Compressor		1					
Hydraulic Excavator							
Asphalt Paving Machine							
Asphalt Sprayer		1	1				
Asphalt Mixing Machine	and the second						
Mobile Workshop	•						
Mechanic Rammer							
Plate Tamper						<u> </u>	
Pile Driver						1	
Leg Drill				· · · · · · · · · · · · · · · · · · ·			
Hand Hammer		1978	2	-	2		\
Farm Tractor							
Dump Truck							
Water Tank Truck							
Fuel Tank Truck			·		:		
Pick Up							
Jeep		1					
Motorcycle		1982	4	-	4		
Generator	· · · · · · · · · · · · · · · · · · ·	1983	1	-	1		
Water Pump							
Others							
		1					

Appendix A-3

10 Km

FROV		15 1 ALL	LOD	-	IDPALING ALL YOS
LUUN	3	RIAU	KAĐ	2,	BENGKALIS

LINK NO : 7 (IIIC) LENGTH :

UPGRADE : 7.0m road bed, 4.0m road with surface Subbase Cource (Rp)

					· · · ·		
ITEN			<<< UNIT	COST >>>	(((>>>>>>
	UNIT	QUANFITY	LOCAL	FOREIGN	LOCAL	FORELON	TOTAL
Site Clearance in Light Bush	#2	0.0	201	91	0	đ	
Subgrade Preparation	#2	70000.0	26	ii ii	1,820,000	770,000	2,590,00
Hormal Fill	#3	0.0	2,084	062	0	0	
Fill in Swawp	n3	1860.0	15,739	267	29,274,540	496,620	29,771,16
Normal Excavation to Spoil	#3	4120.0	1,214	522	5,001,680	2,150,640	7,152,32
Cenent Stabilizing	#3	6400.0	20,950	11,979	134,080,000	76,665,600	210,745,60
Cement Stabilizing	n3	0.0	20,950	11,979	0	0	
Shoulder	ตวี	30000.0	365	146	10,950,000	4,390,000	15,330,00
Asphalt Patching	#2	0.0	12,313	1,104	1011001000	1,0001006	101000100
Surface Dressing (Single)	· #2	0.0	1,734	640	0	0	
Surface Dressing (Double)	•2	0.0	2,428	1,004	0	0	
Earth Drain	. #£		1,147	119	Ö	ů.	
Earth Drain in Swamp (by machine)	. s 3	6000.0	. 1,497	473	8,982,000	2,939,000	11,820,00
Fipe Eulvert OBOcu		77.0	84,075	41,499	6,535,375	3,191,653	9,730,02
Hasonry Culvert (80x80ca)		010	150,350	-34,870	0,000,010	51111035	13120102
Retaining Wall and Wing Wall (Timber)			13,014	246	7,808,400	147,600	7,956,00
Retaining Wall and Wing Wall (Masonry)	#2 #3		111,234	10,370		298,656	3,502,19
Gabion Protection	•3		46,371	120	0,200,007	210,030	aloacti (
New Bridge (finber)	SET	1.0	101011	120	. 0	0	1
New Bridge (Concrete)	SET	1.0			v	0	· ·
new bitoge soonereter	561	1.0			· · · ·		
		÷.,	Sub fotal		207,655,534	90,941,769	278,597,30
Overhead 1 15%)					31,148,330	13,641,265	44,789,59
			IOTAL COST	1	230,803,864	104,593,034	343,386,89
			~~~~~~~~				
fanual routine satistenance of road	Ke	10.0	107,896	7,236	1,878,960	72,360	1,951,3
Routine maintenance of gravel road	Ka		1,259,334	42,615		426,150	13,017,4
warthe paintenance of Arates inpo	6.#		Sub Total		14,472,300	498,510	14,970,8
Naintenance of Timber Bridge (New)	s2	0.0	9,059	1,121		0	
Maintenance of Concrete Bridge (Hew)	n7		3,733	2,662		ċ	
Haintenance of limber Bridge (Exist)	-2		9,339	2,403		•	1,197,6
Naintenance of Concrete Bridge (Exist)	#2		5,556	2,375		0	•1••1•
	**		-1				
						-*************	
			Earthwork &	Pavepent	Unit Cost II	Ro/Kal :	34,338,6
			Tinber		1. The second	Ro/a2) :	
		÷	Concrete	•		Rp/#21 1	
			Survived	Value		(Rp) :	84,298,2
			20141450	Talue		inpr a	
			Naintenance		ut Bridge	(1) :	4,

PROV	:	RIAU KAB		: BENGKALIS			
LINK NO	1	9 (111)	3)	LENOTH :	40 Km		

UPGRADE : 6.0m road bed, 4.0m road with surface Subbase Cource (Rp)

							, dus
ITEN			TINU, >>>	cost >>>	(((	((C COST	>>>>>>
	UNIT	QUANTETÝ	LOCAL	FORELGN	LOCAL	FOREIGN	TOTA
				و ې دې د د د د د د د د د د د د د د د د د			******
ite Clearance in Light Bush	5 a2	30000.0	201	91	6,030,000	2,730,000	8,750,00
ubgrade Preparation	#2	240000.0	26	11	6,240,000	2,640,000	9,990,00
ormal Fill	n3	0.0	2,084	862	0	0	
ill in Swaap	#J	0.0	15,739	267	0	0	4, 1, 41
lormal Excavation to Spoil	#3	14494.0	1,214	522	17,595,716	7,555,868	25,161,58
ement Stabilizing	#3	25600.0	20,950	11,979	536,320,000	306,662,400	842,982,40
enent Stabilizing	<b>a</b> 3	0.0	20,950	11,979	0	0	1
houlder	<b>p</b> 2	80000.0	365	146	29,200,000	11,680,000	40,880,00
sphalt Patching	#2	0.0	12,313	1,104	0	0	
urface Dressing (Single)	a2	0.0	1,734	540	· 0	· · · · · · · · · · · · · · · · · · ·	. <u>1</u>
urface Dressing (Double)	92	0.0	2,428	1,004	0	· · · · · 0	
arth Brain	8	0.0	1,142	. 119	0	0	ang ang
arth Drain in Swagp (by machine)			1,497	473	. 0		. · · ·
ipe Culvert D80cm	8	66.0	B4,875	41,489	5,601,750	2,738,274	B,340,0
asonry Culvert (80x80cm)	5	0.0	150,350	34,870	0	0	:
etaining Wall and Wing Wall (Timber)	#2	3000.0	•	246	39,042,000	738,000	39,780,0
etaining Hall and Wing Hall (Hasonry)	#3	0.0	111,234	10,370	0	. 0	
abion Protection	æ3	0.0	46,371	120	0	. 0	
en Bridge (Timber)	SET	1.0			0	. 0	
ew Bridge (Concrete)	SET	1.0	· · · · · ·	**	0	0	
en bringe toonerezer	•=-					1997 - A.	
			Sub Total		640,029,466	334,754,542	974,784,01
verhead ( 15% )					96,004,419	50,213,181	146,217,6
· · · · · · · · · · · · · · · · · · ·			TOTAL COST		736,033,885	384,967,723	1.121.001.6
						• •	
anual routine maintenance of road	Ka	40.0	187,896	7 236	7,515,840	287,440	7,805,2
outine maintenance of gravel road	· Ka	40.0	1,259,334	42,615	50,373,360	1,704,600	
DETHE MATHICENSICE OF GLAVES FORD	, Va	70.0	Sub Total	111010	57,887,200	1,994,040	59,603,2
aintenance of Timber Bridge (New)	s2	0.0	9,059	1,121	0,,001,200	.,,0	,,-
aintenance of Concrete Bridge (New)	#2	0.0		2,662	0	. 0	
aintenance of Timber Bridge (Exist)	#2	240.0	9,339	2,403	2,241,360	576,720	2,919,0
aintenance of Concrete Bridge (Exist)	#2	0.0	5,556	2,375	212111000	0,01,120	*10.010
antenance of Goncieve Drauge (CASSC)			01000				
							·
			Earthwork &			Rp/Ka) :	28,025,0
			Tieber	Bridge U	nit Cost (f	Rp/#21 1	
· · · · ·			Concrete	Bridge U	nit Cost 🛛 (F	Rp/d21 ±	
			Survived	Value		tRp) :	337,192,9
	1.00		Maintenance			(%) :	5.
			Rex Bridge	Cost Rate		{XI 1	
							· · · · ·

#### PROV : RIAU KAB : BENGKALIS

## LINK ND : 10 (IIIB-1) LENGTH : 21 Km

UPGRADE : 7.0m road bed, 4.0m road with surface Dressing (1)

(Rp)

<b>ITEN</b> ALTER	UNIT	QUANTETY	UNIT LOCAL	COST >>: Foreign		(((( L ¹ .	COST Fore Lon	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
		*******						
Site Clearance in Light Bush	#Z	3000.0	201	91	603,00	0.	273,000	876,00
Subgrade Preparation	a2		26	11	· · · ·		540,000	5,180,00
Normal Fill	#3	0.0	2,084	862		0	. 0	
Fill in Swamp	<b>a</b> 3	0.0	15,739			0		·
Hormal Excavation to Spuil	- #3	10561.0	1,214	522		4 5.	512,842	18,333,89
Cement Stabilizing	#3	11340.0	20,950	11,979			841,860	373,414,86
Cement Stabilizing	<b>s</b> 3	5600.0	20,950	11,979			082,400	
Shoulder	#2		365	146	• •		198,000	32,193,00
Asphalt Patching	aZ		12,313	1,104			13,248	161,00
Surface Dressing (Single)	a?		1,731	640			760,000	199,416,00
Surface Dressing (Double)	n2		2,428	1,004	, .	0	0	
Earth Drain	1		1,142	119		Õ .	Ö	
Earth Drain in Swamp (by machine)	n3		•	473		с. С.	0	
Pipe Culvert D80cm	-v B	<u> </u>	84,875	41,409		0	829,760	2,527,28
Hasonry Eulvert (80x80cs)			150,350	34,870		Õ	. 0	jozr jeu
Retaining Wall and Wing Wall (Timber)	m2		13,014	246		•	738,000	39,780,00
Retaining Wall and Wing Wall (Masonry)	aJ		111,234	10,370			66,369	778,26
Gabion Protection	a3		46,371	120		0	0,000	110,10
New Bridge (Timber)	SET					У. А	v 0	
New Bridge (Concrete)	SET					v A	Ň	
wew pringe (concrete)	5E I	1.0				v	U.	
			Sub Total		582,207,20	7 274	855,498	857,062,70
Overhead ( 15% )				·	87,331,00	11 41,	228,324	128,559,40
			TOTAL COST	÷	669,538,20	19 316,	083,822	985,622,11
Hanual routine saintenance of road	Ks	21.0	197, 996	1,236	3,945,0	6	151,956	4,097,7
Routine maintenance of asphalt road	Ke						318,400	
voorne mathrenence of gybnair Logo	N.12	£1.0	Sub Total	1101100	29,803,1		470,356	
Wilstonsper of Tichor Deider (Dout	#2	0.0	500 30Car 9,059	1,121		0 -	0	octriala
faintenance of Tinber Bridge (New)	e2		-	2,662		Ň		
Maintenance of Concrete Bridge (New) Maintenance of Timber Bridge (Exist)	- ez n2		3,733 9,339	2,403		х О	- V	· · · ·
	nz #2		5,558	2,375		0	ň	•
Haintenance of Concrete Bridge (Exist)	s.						• •	
			Earthwork &	Pavesent	Unit Cost	(Rp/Ke)	;	46,934,3
			Timber		Unit Cost	(Rp/m2)	:	
			Concrete		Unit Cost	(Rp/a2)	;	1.1
			Survived	Value		(Rp)	:	298,270,8
			Naintenance		nut Bridge	(7)	1	3.
			New Bridge			(%)		
			ana vrioge	Syst more			•	

PROV

RIAU KAB : BENGKALIS

LINK NO :

:

12 (1118-2)

LENGTH : 20 Km

UPGRADE : 6.0m road bed, 4.0m road with surface Base Cource

(Rp)

I T E H	larr •						>>>>>> Total
	UNIT	QUANTITY	LOCAL	FOREIGN	LOEAL	FORELGN	1018
Site Clearance in Light Bush	●2	4000.0	201	91	804,000	364,000	1,168,00
Subgrade Preparation	=2 ≥2	96000.0	28	11	•	1,056,000	3,552,00
Normal Fill	a3 -		2,084	862		110001000	01001300
Fill in Swamp	±3	0.0	15,739	267		0	e entre entre a
Normal Excavation to Spoil	#3	8660.0	1,214	522		4,520,520	15,033,76
Cenent Stabilizing	""""""""""""""""""""""""""""""""""""""		20,950	11,979		115,717,140	
Cement Stabilizing	a3	4800.0	20,950	11,979			158,059,20
Ghoulder	#2	40000.0	365	146	14,600,000		20,440,00
Asphalt Patching	#2	0.0	12,313	1,104	11000,000	0	201110100
Surface Dressing (Single)	#2 #2	0.0	1,734	640	ů N	ò	-
Surface Dressing (Double)	<b>a</b> 2	0.0	2,428	1,004	ů N	0	
Earth Drain	#Z	0.0	2,120	117	, N	 Л	
				473	ν 	, , , , , , , , , , , , , , , , , , ,	
Earth Drain in Swamp (by machine)	#3	0.0	1,497 04 075	41,489	5,771,500	2,821,252	8,592,75
Pipe Culvert D80cm	· 6	68.0	84,975			2:021:202	01312113
lasonry Culvert (80x80cm)	₽ 	0.0	150,350	34,870	. 0		an taona Taona amin'ny faritr'o designa (m. 1970) Angla angla
Retaining Hall and Ning Wall (Timber)	<b>₽</b> 2	0.0	13,014	246		09 663	
(etaining Wall and Wing Wall (Masonry)	· #3	9.6	111,234	10,370	1,067,846	99,552	1,167,39
abion Protection	RJ ACT	0.0	46,371	120	· · · · ·	V O	- <u>-</u>
lex Bridge (Tinber)	SET	1.0			V	U A	1. State 1.
lew Bridge (Concrete)	SET	1.0			Ū		
			Sub Total		338,189,586	187,917,664	526,107,25
iverhead ( 15% )		·	· ·		50,728,437	28,187,649	78,916,0E
			TOTAL COST		388,918,023	216,105,313	605,023,33
······	V.		107 00/	3 17		(#1 770	1 003 14
anual routine maintenance of road	Ka	20.0	197,896	7,236		144,720	• •
loutine maintenance of gravel road	Ka	20.0	1,259,334	42,615			
e e a se			Sub Total	4 191	28,944,600	997,020	29,941,62
laintenance of Timber Bridge (New)	#Z	0.0	9,059	1,121	0	• 0	
aintenance of Concrete Bridge (New)	e2	0.0	3,733	2,662			1 642 01
laintenance of Timber Bridge (Exist)	a2	128.0	9,339		1,195,392		1,502,97
laintenance of Concrete Bridge (Exist)	¢2	0.0	5,556	2,375	V	0	
			Earthwork &	Pavegent (	Unit Cost (F	(p/Ka) i	30,251,16
						ip/a21 1	
						Rp/m2} 1	14 - A.
				Value V		(Rp) :	159,047,03
		•	Maintenance		at Bridge	(X) t	1011011101
			New Bridge		ar orruge	(1) 1	441
			new prinds	CODE HOLE		101 - 1	

PROV : RIAU KAB : BENGKALIS

LINK NO : 30 (IIIC) LENGTH : 32 Km

UPGRADE : 7.0m road bed, 4.0m road with surface Subbase Cource (Rp)

ITEN	INT	QUANTITY	<<< UNIT	COST >>> Foreign	<pre>\\ LOCAL</pre>	COST COST FOREIGN	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
· · · · · · · · · · · · · · · · · · ·	0011	UURIT [ ] ]		1 UNC 1011		1 000 1 00	10180
lite Clearance in Light Bush	. #2	0.0	201	91	. 0	· · · · 0	
Subgrade Preparation	<b>¤</b> 2	0.0	26	11	0	0	
lormal Fill	ø3	0.0	2,081	862	0		
ill in Swamp	<b>m</b> 3		15,739	267	0	0	
lormal Excavation to Spoil	#3	9000.0	1,214		9.712.000	4,176,000	13.889.00
Cement Stabilizing	83	3246.0	20,950	11,979	68,003,700		105,887,53
Cement Stabilizing	<b>m</b> 3	1	20,950	11,979	160,895,000		
ihoulder	e2	96000.0	365	146	35,040,000		49,056,00
isphalt Patching	m2	0.0	12,313	1,104	00,000,000		
Surface Dressing (Single)	-2	0.0		640	Ő	-	
Surface Dressing (Double)	#2	0.0	2,120	1,004	ň	Î Î	· · · · · ·
arth Drain	HC B	0.0	1,142	119		i 0.	
arth Drain in Swamp (by machine)	. n3	0.0	1,497	473	v م	. <u>.</u>	
ripe Culvert DBOce	P.J B	0.0	84,875	41,489		ν 	
(asonry Culvert (80x80cm)	и В	0.0	150,350	34,870	. ·		•
Retaining Wall and Wing Wall (Timber)	. #2		13,014	246			
Retaining Walt and Wing Wall (Masonry)	. яс я3			10,370			
action Protection			111,234	•	(		
	6J		46,371	120			
lew Bridge (Timber)	SET		*-		0		
len Bridge (Concrete)	SET	1.0				, v	
			Sub Total		273,651,700	149,074,554	422,726,25
verhead { 15% }					41,047,755	22,361,103	63,408,93
·			TOTAL COST		314,699,455	171,435,737	486,135,1
anual routine maintenance of road	Ka	32.0	187,896	1,236	6,012,672	231,552	6,244,2
loutine maintenance of gravel road	Ka	32.0	1,259,334	42,615	40,298,68	1,363,680	41,662,30
			Sub Total	·	46,311,360	1,595,232	47,905,5
aintenance of Timber Bridge (New)	#2	0.0	9,059	1,121	(	)	
aintenance of Concrete Bridge (Hew)	\$2	0.0	3,733	2,662		) ŠQ	
aintenance of Timber Bridge (Exist)	R2	1570.0	9,339	2,403	14,662,230	3,772,710	18,434,9
aintenance of Concrete Bridge (Exist)	#2	0.0	5,556	2,375	(	) 0	
	در جو ڪي سڌ پن در در در س	********					
			Castle	Davank 4	Hall Cr-L	IDe (Val	15 104 3
			Earthwork &			(Rp/Ks) :	15,191,7
and the second						(Rp/a2) :	
				-	Unit Cost	(Rp/m2) :	48 755 4
			Sur vi ved	Value		(Rp) :	42,755,0
			Maintenance		ut Bridge	(%)	9.
			New Bridge	Enst Rate		(%) :	

FROV :

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RIAU

11 (1118-1)

KAB : BENGKALIS

LINK NO

UPGRADE : 7.0m road bed, 4.0m road with surface Dressing (1)

LENGTH : 8 Km

(Rp)

17EN E	UNIT	QUANTITY	((( UN) Local	I COST >>> Foreign	()) Local	((( COST Foreign	>>>>>> total
###===================================				************			*******
Site Clearance in Light Bush	.2	0.0	201	91	0	0	
Subgrade Preparation	#2	56000.0	26	11	1,456,000	616,000	2,072,00
Norwal Fill	e3	0.0	2,084	862	0	. 0	
Fill in Swamp	<b>N</b> 3	0.0	15,739	267		0	in inga ing
Normal Excavation to Spuil	• 3	2304.0	1 211	522	2,797,056	1,202,688	3,999,74
Cenent Stabilizing	n3	4480.0	20,950	11,979	93,856,000		
Cement Stabilizing	. <b>E</b> 3	2240.0	20,950	11,979	46,928,000		
Shoulder	<b>B</b> 2	24000.0	365	146	8,760,000	3,504,000	
Asphalt Patching	#2	0.0	12,313	1,104	0	0	
Surface Dressing (Single)	•2	32000.0	1,734	640	55,488,000	20,480,000	75,968.00
Surface Dressing (Double)	#2	0.0	2,428	1,004	0	0	
Earth Drain		0.0	1,142	119	0	0	
Earth Drain in Swamp (by machine)	n3	0.0	1 497	473	0		
Fipe Culvert DBOrm		4.0	84,975	41,489	339,500	165,956	505,4
Nasonry Culvert (80x80cm)		0.0	150,350	34,870	0	0	
Retaining Wall and Wing Wall (Timber)	ø2	0.0	13,014	246	. 0	. 0	
Retaining Wall and Wing Wall (Masonry)	. 43	0.0	111,231	10,370	-	0	
Gabion Protection	a3	0.0	46,371	120		0	
New Bridge (Tinber)	SET	1.0			10,014,816	780.392	10,795,20
New Bridge (Concrete)	SET	1.0			1010111010	1001012	Tell tale
nen bridge (concrece)		4 I V			v		
			Sub Total		219, 839, 372	107,247,916	326,007,20
Overhead (15%)					32,945,905	16,087,187	49,033,0
			TOTAL COST		252.585,277	123,335,103	375,920,3
:				•	• • •		
						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Manual routine maintenance of road	Ka	0.0	187,896	7,236	1,503,168	57,899	1,561,0
Routine maintenance of asphalt road	Ka	8.0		110,400	9,850,400	883,200	10,733,6
			Sub Total		11,353,568	941,088	12,294,6
Maintenance of Timber Bridge (New)	#2	49.0	9,057	1,121	434,832	53,808	488,6
Maintenance of Concrete Bridge (New)	e2	0.0	3,733	2,652	0		
Haintenance of Timber Bridge (Exist)	∎2		9,339	2,403	0		÷ .
Haintenance of Concrete Bridge (Exist)	<b>e</b> 2			2,375	0	, e	۰.
				****			
	•		· - 11 · · ·	0		- (# - )	10 17A -
				Pavement Ur		Rp/Ka) :	45,438,2
			Timber		· · · · ·	ip/#21 1	258,6
	•		Concrete			Rp/#2) :	
			Survived	Value		(Rp) r	118,017,5
			Naintenance New Bridge	Rate without	t Bridge	(X) 1 (X) 5	3.
			· · · · · · · · · · · · · · · · · · ·			(2) :	3,

FROV

KAB I DENOKALIB

LINK NO .

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RIAU

17

(IIIC)

LENETH 1 3 Km

UPGRADE : 4.0m road bed, 4.0m road with surface Subbase Cource (Bp)

	UNIT	QUAILTY	((( UNII Local	COSI >>> FOREIGN	LUCAL		>>>>>> foint
Sile Clearance in Light Bush	<b>■</b> 2	0.0	201	91	0	0	. 0
Subgrade Preparation	42	18000.0	26	. 11	468,000	198,000	666,000
Roraal F111	•3	0.0	2,081	662			0
FILL In Swamp	a3	0.0	15,739	767	. 0	0	
Normal Excavation to Spoll	*3	1111.0	1,214	511	1,388,816	597,168	1,785,98
Ceneul Stabilizing	Ea.	1920.0	20,950	11,979	40,224,000	22,999,680	63,273,68
Cenent Stabilizing	8J	0.0	20,950		0	. 0	
Shoulder	#2	6000.0	365	146	2,190,000	876,000	3,069,00
Asphalt Patching	#2	0.0	12,313	1,101	0	0	. (
Surface Dressing (Single)	22	0.0	1,734	640	Û	0	. 1
Surface Dressing (Double)	n2	0.0	2,428	1,001	0	0	
Earth Drain	1	0.0	1,112	119	0	. 0	
Earth Drain in Swamp (by machine)	. 63	.0.0	1,497	423	0	. <b>Q</b> .	
Pipe Culvert DBOca	· 1	0.0	84,875	11,199	Q	0	1.1
Hasonry Culvert (80x80ca)	- <b>I</b>		50,350	34,870	0	0	
Retaining Wall and Wing Wall (IIImber)	#2		13,014	246	9,109,800	172,200	9,282,00
Retaining Wall and Ming Wall (Masonry)	43	0.0	111,234	10,370	0		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 19
Sablon Protection	a]	0.0	46,311	120	g	. 0	
Hen Bridge Illaber)	SEI	-	••		0	. 0	1 - A
Hem Bridge (Concrete)	SET	1.0			0	. 0	
		· .	Sub Total		53,380,616	21,843,018	70,223,60
Overhead ( 151 )				•	Ð,007,092	3,726,457	11,733,5
		· ·	IDIAL COST		61,387,709	28,559,505	87,957,21
Hanual routine maintenance of road	K.		197,896	7,235	563,699	21,708	505,3
Routing maintenance of gravel road	Ka	1,0		42,615	3,778,002		
	_		Sub folzi		4,341,690	149,553	4,491,2
Haintenance of Timber Bridge (New)	•2			1,121	. 0	0	1
Haintenance of Concrete Bridge (Hew)	#2			2,552	U 101 101	0 DAL DE1	6 100
Haintenance of Yimber Bridge (Exist)	#2		· · · ·	2,403	784,476	201 852	986,3
Naintenance of Concrete Oridge (Exist)	12	0.0	5,556	2,375	, v	9 	
			**********		• • • • • • • • • • • • • • • • • • •		
and the second second second	1.1		Earthwork V			Rp/Kal +	29,985,2
			llaber	Bridge i		Ap/o2) i	
		•	Concrete	4	Unit Cast	Rp/=21 ±	
			Survived	Value		(Rp) i	25,289
			Haintenance		ut Bridge	(X) I	. 4.
			Hen Ørldge	tost fiale		(1) 1	

## Appendix A-4

## CONSTRUCTION AND MAINTENANCE QUANTITIES FOR ALL PROPOSED ROAD LINKS (CONSTRUCTION)

PROV	2	RIAU	 KAB	2	BENGKAL15
	-				and and strated at 1994 at 1994

		-					
ITEN	UNIT	( 1988 )	( 1989 )	( 1990 )	( 1991 )	( 1992 )	< TOTAL >
dittorat		•	•				
QUIPHENT :		11 C		$(1,1) \in \mathbb{R}^{n}$			1994 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -
Bulldazer	hr	350.1	756.7	878.4	1033.5	1129.5	4148.2
Bulldozer/Ripper	hr	216.0	557.0	691.6	653.7	708.9	2029.2
Swamp Bulldozer	br.	0.0	0.0	31.0	31.0	0.0	62.0
Notor Brader	hr	724.8	1622.1	1962.3	2109.9	2274.2	8692.1
Road Stabilizer	hr	350.1	756.7	878.4	1033.5	1129.5	4148,2
Hand-quide Vib. Roller	. hr	104.8	145.9	168.1	193.1	169.4	780.3
Tire Roller	hr	210.0	489.9	266.6	0.0	0.0	966.5
Vibratory Roller (D&T)	hr '	674.8	1476.3	1774.7	1999.7	2138.2	
Hydraulic Excavator; Wheel	hr	0.0	0.0	225.0	225.0	0.0	
Wheel Loader		741.1	1674.1	2009.2	2203.9	2403.1	9051.4
Hater Tank Truck	hr hr	570.1	1208.6	1404.4	1703.0	1838.2	6724.3
Dump Truck	n hr	3829.5	8865.2	10986.5	11497.0	12129.5	47307.7
Flat Bed Truck with Crane	nr hr	151.3	204.8	138.8	227.6	225.8	940.3
Flat Bed Truck	hr	779.6	1729.1	158.0	1587.3	1717.5	7501.5
Concrete Nixer	hr	2.1	5.0	15.8	28.4	15.4	66.7
Hater Pump	ur hr	1.7	4.1	12.9	24.5	14.5	57.7
Concrete Vibrator	ur lır	1.0	2.4	7.2	16.9	12.6	40.1
Asphalt Sprayer	hr	210.0	487.9	266.6	0.0	0.0	966.5
uspilare spilarei		210.0	1.101	200.0	0.0	•••	10010
BOUR :		· · · 1	r				1
Handur	san day	478.0	943.6	963.6	1069.1	1092.6	4565.9
Skilled Labourer	sen day	1439.4	2022.5	1049.8	1295.6	1523.6	7330.7
Carpenter	man day	727.5	955.3	468.2	687.4	822.3	3660.7
Hason	Ran day	1.9	. 4.4	14.4	19.2	4.8	44.7
Labourer	nan day	3017.B	6311.1	6949.1	7206.7		30643.6
Driver	#an day	942.2	2111.9	2428.1	2491.9	2642.6	10616.7
Operator	dan day		1324.4	1620.1	1654.7	1711.4	6888.0
	wan way			tuevet	100111		000014
TERIAL :							:
				1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 - 1949 -		:	e de la composición d
Bitunen	1	43054.8	100461.2	54666.6	0,0	0.0	198182.6
Asphalt Oil	1	8610.0	20090.0	10933.3	0.0	0.0	39633.3
Kerosene	- 1 i i i	10290.5	24011.1	13066.6	0.0	0.0	47368.2
Sand	<b>£</b> 3	7142.6	15464.2	18890.8	21815.4	22730.3	86043.3
Cement	bag	13494.5	29173.1	33930.3	40044.1	43671.5	160313.5
River Stone	<b>#</b> 3	1.9	4.4	14.4	19.2	4.8	44.7
Steel Houlds	set	6.0	14.0	42.5	98.9	73.6	235.0
lieber		101.8	133.6	48.9	95.4	114.5	494.2
Paint	. 1	0.0	0.0	220.0	0.0	0.0	220.0
Reinforcing Steel	kg	191.4	446.6	1355.7	3154.9	2347.8	7496.4
Tying Wire	kg	1.7	4.0	12.3	28.6	21.3	67.9
BaseCourse Naterial	m3	0.5	1.2	0.0	0.0	0.0	1.7
Crushed Stone	. <b>6</b> 3	421.7	984,1	545.4	28.2	21.0	2000.4
		*****	12111	0.001		6110	*****1

# CONSTRUCTION AND MAINTENANCE QUANTITIES FOR ALL PROPOSED ROAD LINKS (MAINTENANCE)

PROV RIAU BENGKAL IS 2 KAB .

Builidazer         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0	TTEN	UNIT	< 1980 >	< 1989 >	( 1990 )	< 1991 >	< 1992 >	< TOTAL >
Builidazer         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0				(m me me ne pe se W 44 74 74 76 16				• • • • • • • • • • • • • • • • • • •
Buildozer/Ripper         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	EQUIPMENT :					н. Н	· ·	· ·
Swamp Builducer         hr         0.0         0.0         0.0         0.0         0.0         0.0           Mod Stabilizer         hr         498.2         1004.0         1114.0         0         0.0         0.0           Mad Stabilizer         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0           Mad Stabilizer         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	Bulldozer	hr	0.0	0,0	0.0	0.0	0.0	0.0
Hotor Brader         hr         498.2         1004.0         1004.0         1116.0         1145.0         4767.2           Raad Stabilizer         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	Bulldazer/Ripper	hr	0.0	0.0	0.0	0.0	0.0	0.0
Road Stabilizer         hr         0.0         0.0         0.0         0.0         0.0         0.0           Nand-guide Vib. Roller         hr         75.0         150.0         465.0         505.0         585.0         1880.0           Tire Roller         hr         478.2         1004.0         1004.0         1160.0         1145.0         4767.2           Vibratory Roller (D&1)         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	Swamp Bulldozer	hr	0.0	0.0	0.0	0.0	0.0	0.0
Road Stabilizer         hr         0.0         0.0         0.0         0.0         0.0         0.0           Hand-guide Vib. Roller         hr         75.0         150.0         465.0         305.0         585.0         1880.0           Iire Roller         hr         478.2         1004.0         1004.0         1116.0         1145.0         4767.2           Vibratory Roller (DbT)         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	Notor Grader	hr	498.2	1004.0	1004.0	1116.0	1145.0	4767.2
Hand-guide Vib. Roller         hr         75.0         150.0         465.0         585.0         585.0         1860.0           Tire Roller         hr         478.2         1004.0         1004.0         1114.0         1145.0         4767.2           Vibratory Roller         (Bk1)         hr         0.0         0.0         0.0         0.0         0.0         0.0           Hydraulic Excavator;         Hweel         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	Road Stabilizer				0.0			0.0
Tire Roller       hr       478.2       1004.0       1004.0       1116.0       1145.0       4767.2         Vibratory Roller (DkT)       hr       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Hydraulit Excavator; Wheel       hr       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Water Tank Truck       hr       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0	Nand-quide Vib. Roller	հ <b>r</b>						
Vibratory Roller (D&T)         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0		hr						
Hydraulic Excavator; Wheel         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
Wheel Loader         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>								
Water Tank Truck         hr         0.0         0.0         0.0         0.0         0.0         0.0           Duap Truck         hr         150.0         300.0         930.0         1170.0         1170.0         3720.0           Flat Bed Truck         hr         1103.5         2255.5         2255.5         4010.5         4115.2         13740.2           Flat Bed Truck         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0<								
Dusp Truck         hr         150.0         300.0         930.0         1170.0         1170.0         3720.0           Flat Bed Truck         hr         1103.5         2255.5         2255.5         4010.5         4115.2         13740.2           Flat Bed Truck         hr         2031.2         4068.0         4340.0         4836.0         4937.0         20232.2           Concrete Hixer         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0								
Flat Bed Truck with Crane       hr       1103.5       2255.5       2255.5       4010.5       4115.2       13740.2         Flat Bed Truck       hr       2031.2       4068.0       4340.0       4835.0       4937.0       20232.2         Concrete Hixer       hr       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Nater Pusp       hr       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Asphalt Sprayer       hr       0.0       0.0       0.0       0.0       0.0       0.0         LABUUR       #andur       #an day       660.7       1330.8       1519.8       1773.1       1809.5       7093.9         Skilled Labourer       #an day       355.3       726.1       736.1       1503.3       1557.0       5080.8         Carpenter       nan day       164.4       336.1       336.1       597.7       627.6       2061.9         Mason       aan day       7641.9       15376.9       17686.9       20151.0       20521.8       81378.5         Driver       man day       166.0       334.6       334.6       372.0       381.6       1588.8         KATERIAL :								
Flat Bed Truck       hr       2031.2       4088.0       4340.0       4836.0       4937.0       20232.2         Concrete Hixer       hr       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Mater Pusp       hr       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Concrete Yibrator       hr       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Asphalt Sprayer       hr       0.0       0.0       0.0       0.0       0.0       0.0       0.0         LABUUR :								
Concrete Hixer         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         <								
Nater Pusp         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0								
Concrete Vibrator         hr         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0								
Asphalt Sprayer         hr         0.0         0.0         0.0         0.0         0.0         0.0           LABDUR :           Mandur         man day         660.7         1330.8         1519.8         1773.1         1809.5         7093.9           Skilled Labourer         man day         356.3         726.1         936.1         1503.3         1559.0         5080.8           Carpenter         nan day         164.4         336.1         336.1         597.7         627.6         2061.9           Hason         man day         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0								
LABDUR : Mandur san day 660.7 1330.8 1519.8 1773.1 1809.5 7093.9 Skilled Labourer san day 356.3 726.1 936.1 1503.3 1559.0 5080.8 Carpenter nan day 164.4 336.1 336.1 597.7 627.6 2061.9 Mason san day 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Labourer san day 7641.9 15376.9 17686.9 20151.0 20521.8 81378.5 Driver san day 599.6 1214.1 1361.1 1859.6 1900.1 6934.5 Operator san day 166.0 334.6 334.6 372.0 381.6 1588.9 MATERIAL : Bitumen 1 675.0 1350.0 4185.0 5265.0 5265.0 16740.0 Asphalt 0i1 1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Karosene 1 75.0 1350.0 445.0 585.0 585.0 1880.0 Sand s3 12.5 25.0 77.5 97.5 97.5 310.0 Cesent bag 0.0 0.0 0.0 0.0 0.0 0.0 River Stone s3 14.9 30.5 30.5 54.3 57.0 187.2 Paint 1 106.5 217.7 217.7 387.1 406.4 1335.4 Reinforcing Steel kg 0.0 0.0 0.0 0.0 0.0 0.0 BaseCourse Material s3 401.2 870.0 1185.0 2025.0 2250.0 2250.0 671.2		•						
Mandur       man day       660.7       1330.8       1519.8       1773.1       1809.5       7093.9         Skilled Labourer       man day       356.3       726.1       936.1       1503.3       1559.0       5080.8         Carpenter       man day       164.4       336.1       336.1       597.7       627.6       2061.9         Mason       man day       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0	inspirate op. sjar	•••	••••		,			
Skilled Labourer       man day       356.3       726.1       936.1       1503.3       1559.0       5080.9         Carpenter       man day       164.4       336.1       336.1       597.7       627.6       2061.9         Mason       man day       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Labourer       man day       7641.9       15376.9       17686.7       20151.0       20521.8       81378.5         Driver       man day       599.6       1214.1       1361.1       1659.6       1900.1       6934.5         Operator       man day       166.0       334.6       334.6       372.0       381.6       1588.9         MATERIAL       :                Bitumen       1       675.0       1350.0       4185.0       5265.0       5265.0       16740.0         Asphalt Oil       1       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Sand       1       75.0       1350.0       4185.0       585.0       585.0       1880.0         Sand       3.0       0.0	LABOUR :							
Skilled Labourer       man day       355.3       726.1       936.1       1503.3       1559.0       5080.9         Carpenter       man day       164.4       336.1       336.1       597.7       627.6       2061.9         Mason       man day       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Labourer       man day       7641.9       15376.9       17686.9       20151.0       20521.8       81378.5         Driver       man day       7640.0       334.6       334.6       372.0       381.6       1588.9         MAIERIAL       :       Bitumen       1       675.0       1350.0       4185.0       5265.0       5265.0       16740.0         Asphalt Oil       1       0.0       0.0       0.0       0.0       0.0       0.0         Sand       man day       166.0       334.6       334.5       5265.0       16740.0         Masen       1       0.75.0       1350.0       4185.0       5265.0       16740.0         Asphalt Oil       1       0.0       0.0       0.0       0.0       0.0       0.0         Sand       3       1.0.0       0.0       0.0 <td>Handur</td> <td>gan day</td> <td>660.7</td> <td>1330.8</td> <td>1519.8</td> <td>1773.1</td> <td>1807.5</td> <td>7093.9</td>	Handur	gan day	660.7	1330.8	1519.8	1773.1	1807.5	7093.9
Carpenter         nam day         164.4         336.1         336.1         597.7         627.6         2061.9           Hason         man day         0.0         0.0         0.0         0.0         0.0         0.0           Labourer         man day         7641.7         15376.9         17686.7         20151.0         20521.8         81378.5           Driver         man day         599.6         1214.1         1361.1         1859.6         1900.1         6934.5           Operator         man day         166.0         334.6         334.6         372.0         381.6         1588.8           MATERIAL :           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	and the second							
Hason         man day         0.0         0.0         0.0         0.0         0.0         0.0           Labourer         man day         7641.7         15376.9         17686.7         20151.0         20521.8         81378.5           Driver         man day         599.6         1214.1         1361.1         1859.6         1900.1         6934.5           Operator         man day         166.0         334.6         334.6         372.0         381.6         1588.9           MATERIAL         :            0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0								
Labourer         man day         7641.7         15376.9         17686.7         20151.0         20521.8         01378.5           Driver         man day         599.6         1214.1         1361.1         10859.6         1900.1         6934.5           Operator         man day         166.0         334.6         334.6         372.0         381.6         1588.9           MATERIAL         :								
Driver Operator         man day         599.6 166.0         1214.1 334.6         1361.1 1859.6         1809.1 1900.1 381.6         6934.5 1588.8           MATERIAL :         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *         *								
Operator         man day         166.0         334.6         334.6         372.0         381.6         1588.9           MATERIAL :		•						
MATERIAL       :         Bitumen       1       675.0       1350.0       4185.0       5265.0       5265.0       16740.0         Asphalt Dil       1       0.0       0.0       0.0       0.0       0.0       0.0         Kerosene       1       75.0       150.0       465.0       585.0       585.0       1860.0         Sand       #3       12.5       25.0       77.5       97.5       310.0         Cement       bag       0.0       0.0       0.0       0.0       0.0       0.0         River Stone       #3       0.0       0.0       0.0       0.0       0.0       0.0         Steel Houlds       set       0.0       0.0       0.0       0.0       0.0       0.0         I inber       #3       14.9       30.5       30.5       54.3       57.0       187.2         Paint       1       106.5       217.7       217.7       387.1       406.4       1335.4         Reinforcing Steel       kg       0.0       0.0       0.0       0.0       0.0       0.0         Timber       kg       0.0       0.0       0.0       0.0       0.0       0.0       0.0		•						
Bitumen1675.01350.04185.05265.05265.016740.0Asphalt Oil10.00.00.00.00.00.00.0Kerosene175.0150.0465.0585.0585.01860.0Sandm312.525.077.597.597.5310.0Cementbag0.00.00.00.00.00.0River Stones30.00.00.00.00.00.0Steel Houldsset0.00.00.00.00.00.0Steel Houldsset0.00.00.00.00.00.0I aberm314.930.530.554.357.0187.2Paint1106.5217.7217.7387.1406.41335.4Reinforcing Steelkg0.00.00.00.00.00.0Jying Hirekg0.00.00.00.00.00.0BaseCourse Haterialm3401.2870.01185.02025.02250.06731.2	uper a cor	Ball naš	100.0	331.0	334.0	572.0	30110	1000.0
Asphalt Oil       1       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Kerosene       1       75.0       150.0       465.0       585.0       585.0       1860.0         Sand       #3       12.5       25.0       77.5       97.5       97.5       310.0         Cement       bag       0.0       0.0       0.0       0.0       0.0       0.0         River Stone       #3       0.0       0.0       0.0       0.0       0.0       0.0         Steel Houlds       set       0.0       0.0       0.0       0.0       0.0       0.0         I inber       #3       14.9       30.5       30.5       54.3       57.0       187.2         Paint       1       106.5       217.7       217.7       387.1       406.4       1335.4         Reinforcing Steel       kg       0.0       0.0       0.0       0.0       0.0         Jying Wire       kg       0.0       0.0       0.0       0.0       0.0       0.0         BaseCourse Haterial       #3       401.2       870.0       1185.0       2025.0       2250.0       6731.2	NATERIAL :							
Asphalt Oil10.00.00.00.00.00.0Kerosene175.0150.0465.0585.0585.01860.0Sandm312.525.077.597.597.5310.0Cementbag0.00.00.00.00.00.0River Stonem30.00.00.00.00.00.0Steel Houldsset0.00.00.00.00.0Steel Houldsset0.00.00.00.00.0I aberm314.930.530.554.357.0Paint1106.5217.7217.7387.1406.41335.4Reinforcing Steelkg0.00.00.00.00.0Tying Hirekg0.00.00.00.00.0BaseCourse Haterialm3401.2870.01185.02025.02250.06731.2	Bituaen	i	675.0	1350.0	4185.0	5265.0	5265.0	16740.0
Kerosene175.0150.0465.0585.0585.01860.0Sandm312.525.077.597.597.5310.0Cementbag0.00.00.00.00.00.0River Stonem30.00.00.00.00.00.0Steel Houldsset0.00.00.00.00.00.0I aberm314.930.530.554.357.0187.2Paint1106.5217.7217.7387.1406.41335.4Reinforcing Steelkg0.00.00.00.00.0Tying Hirekg0.00.00.00.00.0BaseCourse Haterialm3401.2870.01185.02025.02250.06731.2		1					0.0	0.0
Sand       m3       12.5       25.0       77.5       97.5       97.5       310.0         Cement       bag       0.0       0.0       0.0       0.0       0.0       0.0       0.0         River Stone       m3       0.0       0.0       0.0       0.0       0.0       0.0       0.0         River Stone       m3       0.0       0.0       0.0       0.0       0.0       0.0       0.0         Steel Houlds       5et       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0         I aber       m3       14.9       30.5       30.5       54.3       57.0       187.2         Paint       1       106.5       217.7       217.7       387.1       406.4       1335.4         Reinforcing Steel       kg       0.0       0.0       0.0       0.0       0.0       0.0         Jying Wire       kg       0.0       0.0       0.0       0.0       0.0       0.0       0.0         BaseCourse Haterial       m3       401.2       870.0       1185.0       2025.0       2250.0       6731.2		1						1860.0
Cement         bag         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0<		#3				97.5		
River Stone         a3         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0						0.0		0.0
Steel Houlds         set         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0 <t< td=""><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td>0.0</td></t<>		-						0.0
Timber#314.930.530.554.357.0187.2Paint1106.5217.7217.7387.1406.41335.4Reinforcing Steelkg0.00.00.00.00.0Tying Wirekg0.00.00.00.00.0BaseCourse Haterial#3401.2870.01185.02025.02250.06731.2								0.0
Paint         1         106.5         217.7         217.7         387.1         406.4         1335.4           Reinforcing Steel         kg         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0<	1							187.2
Reinforcing Steelkg0.00.00.00.00.0Tying Hirekg0.00.00.00.00.00.0BaseCourse HaterialB3401.2870.01185.02025.02250.06731.2	Datak							1335.4
Tying Hire kg 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.								0.0
BaseCourse Haterial B3 401.2 870.0 1185.0 2025.0 2250.0 6731.2								0.0
		•						6731.2
	Crushed Stone	#3	7.5	15.0	46.5	58.5	58.5	186.0

#### CONSTRUCTION AND MAINTENANCE QUANTITIES FOR ALL PROPOSED ROAD LINKS (TOTAL)

#### PROV : RIAU KAB : BENGKALIS

I T E N	UNIT		( 1989 )			< 1992 >	( TOTAL )
QUIPHENT :		· · ·	. · ·	· · · · ·		· · ·	
autrichts t			· · · ·	· ·			
Bulldozer	hr	350.1	756.7	878.4	1033.5	1127.5	4148.2
Bulldozer/Ripper	hr	216.0		691.6	653.7	708.9	2829.2
Swamp Bulldozer	hr	0.0	0.0	31.0	31.0	0.0	62.0
Nator Grader	hr	1222.8	2626.1	2966.3	3224.9	3419.2	13459.3
Road Stabilizer	hr	350.1	756.7	078.4	1033.5		4148.2
Hand-guide Vib. Roller		179.8	295.9	633.1	778.1	753.4	2640.3
Tire Roller	hr	708.2	1493.9	1270.6	1116.0	1145.0	5733.7
Vibratory Roller (D&T)	hr	674.8	1476.3	1774.7	1999.7	2138.2	8063.7
Hydraulic Excavator; Whe		0.0	0.0	225.0	225.0	0.0	450.0
Wheel Loader	hr	741.1	1694.1		2203.9	2403.1	
Water Tank Truck	hr		1208.6	1404.4	1703.0	1838.2	6724.3
Duep Truck	hr	3979.5	9165.2	11916.5	12667.0	13299.5	51027.7
Flat Bed Truck with Cran		1254.8		2394.3	4239.1	4341.0	14688.5
Flat Bed Truck	hr is	2810.8		6029.0	6423.3	6654.5	
Concrete Nixer	hr	2.1	5.0	15.8	28.4	15.4	
Water Pump	hr	1.7	4.1	12.9			
Concrete Vibrator	hr	1.0	2.4	7.7	16.9	12.6	40.1
Asphait Sprayer	hr		487.9	266.6	0.0	0.0	
	•••			RUDID			
ABOUR :						· · ·	
· · · · ·			: :				
Handur	∉an day	1158.7	2274.4		2841.2	2902.1	
Skilled Labourer	man day	1795.7	2748.6	1985.7	2798.9	3082.6	12411.5
Carpenter	man day	891.9	1291.4	B04.3	and the second	1449.9	5722.6
Hason	man day	1.9	4.4	14.4	19.2	4.8	44.7
Labourer	man day		21688.0		27357.7	27680.7	112022.1
Driver	ean day	1541.8				1542.7	17551.2
Operator	man day	743.4	1659.0	1954.7	2026.7	2093.0	8476.8
ATERIAL :		· .			· · · .		
Bitumen	1	43729.8	101811.2	58851.6	5265.0	5265.0	214922.6
the second se	]	8610.0	20090.0	10933.3	3283.V 0.0	5265.0 0.0	39633.3
Asphalt Oil Kerosene			1			585.0	
Sand	1 A3	10365.5 7155.1	24161.1 15489.2	13531.4 18969.3	585.0 21912.9	22827.8	49228.2 86353.3
Cenent	bag	13494.5	29173.1	33930.3	40044.1	43671.5	160313.5
River Stone	uay NG	13414.3	4.4	14.4	19.2	4.8	44.7
Steel Houlds	set	6.0	14.0	42.5	98.9	73.6	235.0
Tisber	set #3	116.7	14.0	79.4	149.7	171.5	481.4
Paint	#3 	106.5	217.7	437.7	387.1	406.4	1555.4
Reinforcing Steel	i kg	191.4	446.6	1355.7	3154.9	2347.8	7496.4
Tying Kire		171.4	4.0	12.3	28.6	2347.0	67.9
BaseCourse Haterial	kg n 3			1185.0	2025.0		
Crushed Stone	- B2 B2	401.7 429.2	871.2 999.1	591.9	2025.0	2250.0 79.5	6732.9 2186.4
A DECIPAL ELECTRONIC	8.3	9/4./	TYY. I	. 341.4	48.7	/7.3	Z116.9

#### Appendix A-5

#### CONSTRUCTION AND MAINTENANCE COSTS FOR ALL PROPOSED ROAD LINKS (CONSTRUCTION)

PROV : RIAU	KAĐ	: BENG	<al19< th=""><th></th><th></th><th></th><th>( 1000 Rp )</th></al19<>				( 1000 Rp )
ITEN			< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
OUIPMENT :		78,566	177,668	211,169	223,423	235,779	926,604
Bulldozer	16723	5,854	12,654	14,689 12,475 407	17,283	18,880	69,368
Bulldozer/Ripper	18039	3,896	10,083	12,475	11,792	12,787	51,033
Swamp Bulldozer	13159	0	.0	407	407	0	814
Notor Grader	15207	11.018	24,667	29,840	32,070	34,583	132,178
Road Stabilizer	12596	4,409	9,531	11,064	13,017	14,227	52,248
	1657	173	241	278	319	279	1,290
Tire Roller	13104	2,751	6,419	3,493	· · 0	• • • • • •	12,663
Vibratory Roller (D&T)	7520	5.074	11.101	13.345	15,037	16,079	60.636
Hydraulic Excavator; Wheel	14743	0	0	3,317 36,782	3,317	0	6,634
Wheel Loader	18307	13,567	31,013	36,782	40,346	43,993	165,701
Water Tank Truck	4854	2.767	5,866	6,816	8,266	8,922	32,637
Dump Truck	6366	24,378	56,435	69,940	73.189	77,216	301,158
Flat Bed Truck with Crane			1,219	826	1.354	1,344	5.643
Flat Bed Truck		3,321	7.367	7,192	6.763	7.318	31.961
Concrete Nixer	8618	18	43	136	248	132	573
Water Pump	549	0	2	7	13		29
Concrete Vibrator	307		0	2	6		29 12
Asphalt Sprayer	2097		1,027	559			
ABOUR :		21,803	41,382	40,886	43,745	45,588	193,404
Kandur	3000	1,494	2.830	2,890	3.204	3.277	13,695
Skilled Labourer	3000		6.067	3.148	3.885		
Carpenter	3500	2.546	3.343	3,148 1,638	2,405	2,878	
Nason	3500	6	15	50	67	16	154
Labourer	2500	7,544	15 777			17,997	
Driver	3500	רדטון למל ד	7 701	8,498	8 721	9.749	37,156
Operator	4500					7,701	
IATERIAL :		235,045	507,878	520,170	535,305	566,787	2,365,185
Bitunen	350	15,069	35,161	19,133	0	0	69,363
Asphalt Oil	1500	12,915	30,135	16,399	0	0	59 449
Kerosene	250	2,572	6,002	3,266	0	0	11,840
Sand	15000	107,139	231,963	283,362	327,231	340,954	1,290,649
Cement	4800	64,773	140,030	162,865	192,211	209,623	769,502
River Stone	40000	76	176	576	769	192	1,798
Steel Houlds	8000	48	112	340	791	588	1,979
Tinper	110000	11,198	14,696	5,379	10,494	12,595	54,362
Paint	2500	0	0	550	0	0	550
Reinforcing Steel	750	143	33Å	1,016	2,366	1,760	5,619
Tying Hire	1200	2	4	14	34	25	79
BaseCourse Naterial	50000	25	60	0 .	0		85
Adjernni je ilgrej 141	50000	21,005	49,205	27,270	1,410	1,050	100,020

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## CONSTRUCTION AND MAINTENANCE COSTS FOR ALL PROPOSED ROAD LINKS (MAINTENANCE)

PROV : RIAU	КАВ	: BENG	KAL19	• •			1 1000 Rp )
ITEN	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
WIFNENT :	· .	30,405	61,424	67,031	84,492	86,366	329,718
Bulldozer	16723	0.	0	Ó	0	0	. 0
Bulldozer/Ripper	18037	0	Q	0	0	. 0	0
Swamp Bulldozer	13159	-	0	. 0	· : 0	0	0
• .	15207		15.267	15,267	16.971	17,412	72,493
Road Stabilizer	12596			0	0	0	0
Hand-guide Vib. Roller	1657	124	248	770			
Tire Roller	13104	121	17 152	13,156	11 151	15 004	42 449
					0	30,001 Û	011100
Vibratory Roller (D&T)	7520	0	0	-	0	V	· · · ·
Hydraulic Excavator; Wheel			0	0	V	V	Ŷ
Wheel Loader	18307		: O ·	-	0	Ų	0
Nater Tank Truck	4854	0		0	0		0
Duep Truck	6366	954	1,909	5,920	7,448	7,448	23,679
Flat Bed Truck with Crane	5953	6,569	13,426	13,426 18,492	23,874	24,497	01,792
Flat Bed Truck	4261	8,654	17,418	18,492	20,606	21,036	86,206
Cancrete Mixer	8618	Q			0	. 0	0
Water Puep	548	0	0	0	· • 0	0	0
Concrete Vibrator	387	0	0	0	0	0,1	0
Asphalt Sprayer	2097	0	0	0	0	0	0
BOUR :		25,574	51,542	59,028	70,478	71,972	278,594
Kandur	3000	1,982	3,992	4,559	5,319	5,428	21,280
Skilled Labourer	3000	1,068	2,179	2,808	4.509	4.377	15,240
Carpenter	3500	575	1.176	1,176	2.091	2,196	7.214
Hason	3500	0	0	.,	0	0	0
Labourer	2500			44,217			203,444
Driver	3500			4,763			
Operator	4500	747.		1,505		1,717	
obei aroi.	4300	191	L PAPA	1,000	1,0/1	34131	
TERIAL :	·	22,781	49,033	69,216	114,565	126,161	380,756
Bitumen	350	236	472	1,464	1,842	1,842	5,856
Asphalt Oil	1500	0	. 0.	. 0.	· 0	0	0
Kerosene	250	18	37	115	146	146	463
Sand	15000	187	375	1,162	1,462	1,462	4,648
Cesent	4800	. 0	. 0	0	0	0	0
River Stone	40000	0	0	.0.1	0	Ç.	
Steel Noulds	8000	· . 0	0	0	0	0	6 ° 0
Tinber	110000	1,639	3,355	3,355	5,973	5,270	20,592
Paint	2500	266	544	544	967	1,016	3,337
Reinforcing Steel	750	0	0	0	0	0	0
Tying Wire	1200	0	Ő	· · · · 0 .	Ŏ	0	0
BaseCourse Material	50000	20,060	43,500	59,250	101,250	112,500	336,560
				<b>MI 1 1 1 1 1</b> 1 1			

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#### CONSTRUCTION AND MAINTENANCE COSTS FOR ALL PROPOSED ROAD LINKS (TOTAL)

#### PROV : RIAL KAB : BENGKALIS

1 1000 Rp }

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ITEN	UNIT	( 1988 )	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
QUIPHENT :		108,971	239,092	278,199	307,915	322,145	1,256,322
Bulldozer	16723	5,854	12,854	14,689	17,203	18,888	69,368
Bulldozer/Ripper	18039	3,896	10,083	12,475	11,792	12,787	51,033
Swamp Bulldozer	13159	0	101003	407	407	12,101	31 ₁ 033 814
Notor Grader	15207	18,594	39,934	45,107	49,041	51,995	204,671
Road Stabilizer	12596	4,409	9,531	11,064	13,017	14,227	52,248
Hand-quide Vib. Roller	1657		489	1,048	1,288	1,249	
Tire Roller	13104	9,279	(c) 2 (A)	16,649	14,624		
Vibratory Roller (D&T)	7520		11,101	13,345	15,037		60,636
Hydraulic Excavator; Wheel	14743	0	11,105	3,317	3,317	10,077	
Wheel Loader	18307	13,567		36,782			6,634
Hater Tank Truck	4854	2,767	31,013	6,816	40,346	43,993	
Buep Truck	6366		5,866 58 344		8,266		
Flat Bed Truck with Crane	5953	25,332	58,344	75,960	80,637	84,664	
Flat Bed Truck	4261	7,469	14,645		25,228		
Concrete Nixer	9201 8618	11,975		25,604	27,369		
Water Pusp	548	18	43	136	244	132	573
Concrete Vibrator	387	0.	2 0	7	13	7	29
Asphalt Sprayer	2097	440	-	559	0	4	12
ushugir shi aici	2017	440	1,027	337	. V	v	2,026
ABOUR :		47,377	92,924	99,914	114,223	117,560	471,998
Mandur	3000	3,476	6,822	7,449	8,523	8,705	34,975
Skilled Labourer	3000	5,386		5,956	8,395	9,247	37,229
Carpenter	3500	3,121	4,519	2,814	4,496	5,074	20,024
Mason	3500	6	15	50	67	. 16	154
Labourer	2500	28,848	54,219	61,589	68,393	69,201	
Driver	3500	5,395		13,261	15,229	15,899	•
Operator	4500	3,345	7,464	8,795	9,120	9,418	38,142
IATERIAL :		257,826	556,911	588,386	649,870	692,948	2,745,941
Bitumen	350	15,305	35,633	20,597	1,842	1,842	75,219
Asphalt Oil	1500	12,915	30,135	16,399	0	• 0	59,449
Kerosene	250	2,590	6,039	3,382	146	146	12,303
Sand	15000	107,328	232,338	284,524	328,693	342,416	1,295,297
Cement	4800	64,773	140,030	162,865	192,211	209,623	
River Stone	40000	76	176		768	192	1,798
Steel Houlds	B000	48	112	340	791	588	1,879
Tieber	110000	12,837	18,051	8,734	16,467	18,865	74,954
Paint	2500	266	544	1,094	967	1,016	3,887
Reinforcing Steel	750	143	334	1,016	2,366	1,760	5,619
Tying Hire	1200	2	· 4	- 14	34	25	79
BaseCourse Naterial	50000	20,085	43,560	59,250	101,250	112,500	336,645
Crushed Stone	50000	21,460	49,955	29,595	4,335	3,975	109,320

#### PROV : RIAU KAB : BENGKALIS

NO No	BRIDGE NAN		Ka	Fron	<< TY (EXIST)				LENGTH (a)	ND	SPAN LENGTH (n)		AREA (EXIST) (#2)	AREA (HEN) (#2)		(no)	ROAD Class
7		<b></b>	2	SIPA	KK				4,00		4.00	3.00	12.00		0	2	3111
•	N. I			SIPA	KK				4.00	1	4.00	5.00	20.00		. 0	2	· · ·
	N. 1			SIPA	KK				4.00	i	4.00	5.00	20.00		0	2	
				SIPA	KK			1. N.	2.50	1	2.50	4.00	10.00		. 0	2	. :
	N.I	÷		SIPA	KK				2.50	1	2.50	4.00	10.00		0	2	
	N. I			SIPA	KK				6.00	1	5.00	5.00	30.00		0	2	2
9	N. I		4	TLBG	KK		<b></b>		10.00	3	3.33	4.00	40.00		2	2	1110
	N. I			TLBG	KK				5.00	2	2.50	4.00	20.00		1	2	
	N. 1			TLBG	KK				10.00	- 3	3 33	4.00	40.00		2	2	
					XK				15.00	4	3,75	4.00	60.00		3	2	
	N. 1			7L86	· KK				20.00	5	4.00	4.00	80,00		· 4	2	
11	N.1			SEAP	KK	TH	101	(C)	6.00	i	6.00	4.00	6.00	24.00			1118-1
	N. I		2	SEAP	KK	XT 	10T	(C)	8.00	ا 	6.00	4.00	6.00	24.00	0		
12	N. I		9	SEAP	· KK				15.00	2	7,50	4.00	60.00		1	2	- 1110-2
	N. I			SEAP	KK				12.00	2	6.00	4.00	48.00		1	2	
	N. I			SEAP	KK				5.00	1	5.00	4.00	20.00	÷	0	2	
19	N. (		1	BAGN	KK				7.00	2	3.50	4.00	28.00		1	2	ню
	N.I		2	BAGN	KK				7.00	2	3.50	4.00	28.00		- 1	- 2	
	N. I		3	BAGN	ĸĸ				7.00	2	3,50	4.00	28.00			2	
30	N. I		l	86SA	KK				10.00	2		5.00			•		1110
. •	N. 1			Besa	XK				15.00		7.50	5.00	· · ·		1	2	
	N, I		3	BESA	KK .				8.00	2		5.00	40.00		1	2	
	N. J		4	BGSA	¥K.				10.00	2	5.00	5.00	50.00		1	2	
	N. I		5	96SA	KK				10.00	2	5.00	5.00	50.00		1	2	
	N. I		6	Resa	¥.K				15.00	2	7.50	5.00	75.00		1	2	
	H. L		7	BGSA	KK -				8.00	2	4.00	5.00	40.00		[	2	
	N.1		7	BGSA	ĸĸ				15.00	2	7.50	5.00	75.00		• 1	2	
	N. I		8	86SA	KK				10.00	2	5.00	5.00	50.00		1	2	
	N. I		8	BESA	KK				15.00	2		5.00	75.00		ļ	· 2	
	N. I		9	BGSA	, KK				15.00	2	7.50	5.00	75.00			2	.*
	N. I		10	BGSA	KK				10.00	2	5.00	5.00	50.00		1	2	
	N. L		11	BGSA	KK				15.00	2		5.00	75.00		1	2	
	N. 1			86SA	КK				8.00	Z		5,00	40.00		ļ	2	
	N. I			BGSA	KK				10.00	2		5,00			1	2	
	N, I			BGSA	KK.				15.00		7.50	5.00	75.00		1	2	
	N. 1		15	BGSA	XX.				15.00	3	5.00	5.00	75.00		2	2	
	N. I		16	BGSA	KK	·			8.00	2	4.00	5,00			1	2	
	N.1		17	BGSA	XK				8.00	2	4.00	5.00	40.00		1	2	
	N.I		18	BGSA	KK		• •		8.00	. 2	4,00	5.00			1	2	
	N. I		18	BGSA	KK KK				10.00	2	5,00	5,00	50.00		1	2	
	8.1		17	BGSA	KK.				15.00	- 3	5.00	5.00			2	2	
	N. I		20	96SA	KK				10.00	2	5.00	5.00	50.00	1 ¹	ļ	. 2	
	.N. 1		21	RESA	· KK				8.00	.2	4.00	5.00	40.00		1	2	- <b>-</b>
	N. I			8GSA	£K.				10.00	. 2	5.00	5.00	50.00		l	2	
	H.1		23	BESA	KK.				8.00	2	1.00	5.00	1	· .	Į.	2	
	Ň. I		26	BGSA	ĸĸ				15.00	3	5.00	5.00			2	2	
	N, 1		28	BGSA	I.K				10.00	2	5,00	5.00	50.00		t	. 2	

#### CONSTRUCTION AND MAINTENANCE COST OF BRIDGES ON PROPOSED ROAD LINKS

PROV : RIAU KAB : BENGKALIS

LINK NO : 7 (IIIC)

Appendix A-7

LENGTH : 10 Km

	• •						( Rp )
ITEH	INT	QUANTITY	<<< UNIT LOCAL	COST >>> FOREIGN	\\\\\\ Local	COST Foreign	>>>>>> TOTAL
·							
Superstructure (limber;Span 3m;[0])		0.00	48,736	3,540	0	. A	0
Superstructure (Timber;Span Sa;10T)	e2	0.00	53,982	3,909	. 0	0	ν 
Superstructure (Timber;Span Bm;101)	a2	0.00	71,500	5,136	0	٥ ٥	0
Superstructure (Timber:Span 3m;BHSO)	¥2	0.00	60,430	4,371	Å.	0	. 0
Superstructure (Timber;Span 5m;BHSO)	=2	0.00	65,971	4,744	0	. 0	. 0
Superstructure (Timber;Span Ba;BMSO)			83,669	6,005	Ô		0
Superstructure (Concrete:Span 3#;BN50)	=2 =2		81,050	85,319	Ŏ	0	0
Superstructure (Concrete;Span Sn;BNSO)	. <b>9</b> 2		85,741	75,239	0	Ő	Q
Superstructure (Concrete;Span 8#;8//50)	#2	0.00	89,607	103,675	0	0	0
Superstructure (Concrete;Span10s;BH50)			90,629	117,650	Ó	Ň	ů.
Superstructure (Concrete; Span15n; BN50)	s2		108,916	138,457	Û	ň	0
Substructure (Pier;for Timber;101)	ŇO		424,610	32 854	Ô.	ň	. Õ
Substructure (Abut;for Timber;101)	NO	0.00	1,578,028	129,749	0	0	Ő
Substructure (Pier;for Timber;8850)	NO	0.00	624,407	48,620	ů	. 0	0
Substructure (Abut;for Timber;BH50)	NO	0.00	1,749,005	146,917	ů.	. 0	0
Substructure (Pier;for Concrete;BN50)	NO		3,828,518	472,735	0	0	Ň
Substructure (Abut; for Concrete; BH50)	NO	1	8,566,434	912,790	ŏ	. 0	ů O
Demolition of Bridge (Timber-)Timber)	#2	0.00	15,892	1,239	· 0	· •	v 0
Demolition of Bridge (finber-)Concrete)	#2		15,892	1,239	ů.	. 0	۰: v
Demolition of Bridge (Concrete)	#2 #2		177,135	66,347	0.	. 0	. 0
centrition of circye (contreter	91	0.00	1171100	001017	V	v	· · ·
Naintenance of Timber Bridge (New)	62	0.00	9,059	1,121	Q	. 0	0
Haintenance of Concrete Bridge (New)	#2	0.00	3,733	2,662	0	0	. 0
Maintenance of Timber Bridge (Exist)	a2	102.00	9,339	2,403	952,578	245,106	1,197,684
Haintenance of Concrete Bridge (Exist)	a2	0.00	51556	2,375	0	Ð	0
( Without Overhead )		IOTAL COST	(Timber Brid		0	0	0
			(Concrete Br		0	0	0
	1	IDTAL COST	(without Hai		0	0	0
( Overhead : 15% )		IDTAL COST	(Timber Brid	ge)	0	0	 0
			(Concrete Br		0	0	(
			(without Mai		0	0	0

PROV : RIAU	KAI	B :	BENBKAL	15	·		-
1.1NK NO : 30 (11	(10)		LENGTH	: 32	Кm		· .
				·	·		( Rp )
1168	UNIT	QUANTITY	<<< UNIT LOCAL	COST >>> Foreign	\\\\\ LÓCAL	COST Fore Ign	>>>>>> Total
				: .			:
uperstructure (limber;Span 3m;101)	92	0.00	48,736	3,540	÷ 0,	• 0	· · · (
uperstructure (linber;Span 5#;101)	#2	0.00	53,982	3,909	0	0	· ·
uperstructure (Timber;Span 8m;10T)	a2	0.00	71,500	5,136	• 0.1	. 0	
inperstructure (Timber;Span Jm;BH50)	e2 ·	0.00	60,430	4 377	0	0	$(1,1,1,1,\dots,1)$
uperstructure (Timber;Span 5m;BH50)	: a2	0.00	65,971	4,744	0	. 0	I
uperstructure (limber;Span Bø;BH50)	#2	0.00	83,669	6,005	0	0	
uperstructure (Concrete;Span 3m;DH50)	#2 ·	0.00	81,850	85,319	0	0	•
uperstructure (Concrete;Span 5m;BMSO)	#Z	0.00	85,741	95,239	0	. 0	
uperstructure (Concrete;Span B#18850)	#2	0.00	89,607	103,675	0	0	
operstructure (Concrete;Span10#;8850)	#2	0.00	98,629	117,650	0		
uperstructure (Concrete;Span150;BNSO)	a2	0,00	108,916	138,457	ů ·	Ő	· · · ·
ubstructure (Pier;for limber;101)					۰ ۵	. 0	
	NO	0.00	424,610	32,954	U A		
ubstructure (Abut; for Timber; 101)	NO	0.00	1,598,028	127,749		•	
ubstructure (Pier;for Timber;RH50)	KO	0.00	624,487	48,620	U	0	
ubstructure (Abut;for Timber;8H5O)	NO	0.00	1,749,005	146,917	0	0	
ubstructure (Pier;for Concrete;8850)	NO	0.00	3,828,510	472,735	0	0	
ubstructure (Abut;for Concrete;8H50)	NO	0.00	8,566,434	912,770	0	0.	
emolition of Bridge (Timber-)Timber)	s2	0.00	15,892	1,239	0	0	
emolition of Bridge (Timber-)Concrete)	#2	0.00	15,892	1,237	0	0	
eaolition of Bridge (Concrete)	•2	0.00	177,135	66,347	0	0	
aintenance of Timber Bridge (New)	a2	0.00	9,059	1,121	0		
aintenance of Concrete Bridge (New)	a2	0.00	3,733	2,662	0	· 0	÷
aintenance of Timber Bridge (Exist)		1570.00	9,339	2,403	14,662,230	3,772,710	18,434,9
aintenance of Concrete Bridge (Exist)	a2	0.00	5,556	2,375	0	0	
( Without Overhead )	T	ITAL COST	(Timber Bridg (Concrete Bri		0	0	
٩	Ī	DTAL COST	(without Main		Õ	0	
						#	
( Overhead : 152 )	T	ITAL COST	(Timber Bridg		0	0	
and the second		1. A. A.	(Concrete Bri	oge)	· · · · · · · · · · · · · · · · · · ·	- 0	

PROV

t RIAU

KAB : BENGKALIS

LINK ND : 19 (IIIC)

LENGTH : 3 Km

( Rp )

							ц кр ) 
ITEN	INCT	QUANTETY	LOCAL	COST >>> Foreign	<<<<< LOCAL	COST FORE LGN	>>>>> Total
		aunnisiii		1 UNL LON			101KL
Superstructure (limber;Span 3m;101)	#2	0.00	48,736	3,540	0	0	
Superstructure (limber;Span Sm;101)	-2	0.00	53,982	3,909	0	0	
Superstructure (Timber;Span 8m;101)	a2	0.00	71,500	5,136	0	0	· ·
Superstructure (limber;Span 3m;BH50)	-2	0.00	60,430	4,377	0	0	
Superstructure (limber;Span Sm;BNSO)	#2	0.00	65,971	4,744	0	0	
Superstructure (limber;Span 8m;BH50)	•2	0.00	83,669	6,005	. 0 .	0	4
Superstructure (Concrete;Span 3m;BN50)	n2	0.00	81,850	85,319	0	0	
Superstructure (Concrete;Span So;PHSO)	n2	0.00	85,741	95,239	0	0	
Superstructure (Concrete;Span 8m;BN50)	#2	0.00	89,607	103,675	0	0	
Superstructure (Concrete;Span10a;BN50)	•2	0.00	98,629	117,650	0	. 0	
Superstructure (Concrete;Span15s;BHSO)	a2	0.00	108,916	138,457	0	0	
Substructure (Pier;for Timber;101)	NÐ	0.00	424,610	32,854	0	Q	
Substructure (Abut;for Timber;101)	NO	0.00	1,578,028	129,749	. 0 .	0	
Substructure (Pier;for Timber;BH50)	ND	0.00	624,487	48,620	0	0	
Substructure (Abut;for Timber;8K50)	NO	0.00	1,749,005	146,917	0	. 0	
Substructure (Pier;for Concrete;BX50)	HO	0.00	3,928,518	472,735	0	. 0	
Substructure (Abut;for Concrete;8850)	NO	0.00	8,566,434	912,790	0	0	
Demolition of Bridge (Timber-)Timber)	a2		15,892	1,239	0	0	
Demolition of Bridge (Timber->Concrete)	a2		15,892	1,239	. 0	. 0	
Demolition of Bridge (Concrete)	#2			66,347	0	0	
Maintenance of Timber Bridge (New)	s2	0.00	9,059	1,121	. 0	0	
Maintenance of Concrete Bridge (New)	×2	0.00	3,733	2,652	0	0	
Maintenance of Timber Bridge (Exist)	#2		9,339	2,403	784,476	201,852	986,32
Maintenance of Concrete Bridge (Exist)	n2		5,556	2,375	0	0	•
( Without Overhead )		10101 CUCL	(Tinber Brid)			. 0	
A RECOUL OVELLESU /		wine wat	(Concrete Br		V .	. v	
		101A1 COCT	(without Kai		0	v O	
					v	Ų	•••••••••••
( Overhead : 15% )		IOTAL COST	(Timber Brid)	ge)	0	0	
			(Concrete Br	idge)	Q .	0	
		IOTAL COST	(without Nair	ntenancel	· 0	0	

RIAU KAB I

BENGKAL 15

LINK NO : 12 (IIIB-2)

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PROV

LENGTH : 20 Km

	******				*****			(Rp.
ITEH		UNIT	QUANTITY	<<< UNIT Local	COST >>> Foreign	<<<<< Local	COST FOREIGN	>>>>> Tota
		********	*****			, # * * * * * * * * * * * * * * * * * *		
	(limber;Span 30;101)	#2	0.00	48,735	3,540	0	0	j. j
Superstructure	(limber;Span 5m;10f)	#2		53,982	3,909	0	0	
	(Timber;Span 8#;10T)	a2	0.00	71,500	5,136	0	0	
	(limber;Span 3m;BH50)	62	0.00	60,430	4,377	0	0	1997 - 1997 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -
	(Tiober;Span 5#;BH50)	∎2	0.00	65,971	4,744	0	0	
	(Timber;Span 8m;BH50)	ə2	0,00	B3,669	6,005	0	0	
super structure	(Concrete;Span 3#;BH50)	\$2	0.00	81,850	85,319	0	0	
	(Concrete;Span Sa;BH50)	R2	0.00	85,741	95,239	0	0	· · · ·
	(Concrete;Span 8s;BN50)	<b>\$</b> 2	0.00	89,607	103,675	0	Û	
	(Concrete; Span10#; BM50)	<b>m</b> 2	0.00	98,629	117,650	0	0	
	(Concrete; Span15a; BH501	#2	0.00	108,916	138,457	0	0	
	ier;for Timber;101)	NO	0.00	424,610	32,854	0	0	· · ·
	but;for Timber;1011	NO	0.00	1,598,028	129,749	0	0	
	ier;for limber;BH50}	NO	0.00	624,487	48,620	0	0	
	but;for Timber;8H50)	NO	0.00	1,749,005	146,917	0	0	
	ier;for Concrete;BH50)	NO	0.00	3,828,518	472,735	0	. 0	
	but;for Concrete;BN50)	NO	0.00	8,566,434	912,790	0	0	
	ridge (linber-)linber)	s2	0.00	15,892	1,239	0	0	· · ·
	ridge (limber-)Concrete)	. #2	0.00	15,092	1,239	0	0	
Demolition of E	ridge (Concrete)	a2	0.00	177,135	66,347	0	0	
laintenance of	Timber Bridge (New)	#2	0.00	8,059	1,121	0	0	
	Concrete Bridge (New)	p2	0.00	3,733	2,667	0	0	· · ·
	linber Bridge (Exist)	a2	128.00	9 339	2,403	1,195,392	307,594	1,502,97
	Concrete Bridge (Exist)	¢2	0.00	5,556	2,375	0	. 0	• • •
(	Without Overhead 1	1	IOTAL COST	(ligber Brid	· .	Q	0	
		· ·		(Concrete Br		0	0	
		-	FOTAL COST	(without Main	itenance)	0	0	
*******					<i>-</i>			
t	Overhead : 152 )	•	IOTAL COST	(linder Brid		0	. 0	
				(Concrete Br Inithout Main		0	• • • •	
							0	

#### RIAU KAB : BENGKALIS

(1(18-1)

LINK NO :

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11

PROV

LENGTH : 8 Km

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					·•.			(Rp)
	(	UNIT	QUANTITY	((( UNIT Local	COS1 >>> FOREIGN	<<<<< LQCAL	COST Foreign	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
						******************		
Superstructure (Timber;Span 3#101)	11	#2	0.00	48,736	3,540	· 0	0	(
Superstructure (Timber;Span 5m;101)	et e e	n2	0.00	53,982	3,909	· E O	0	i
Superstructure (Timber:Span Bm:10T)		a2	48.00	71,500	5,136	3,432,000	246,528	3,678,52
Superstructure (lisber;Span 3#;BH50)	11	a2	0.00	60,430	4,377	0	0	
Superstructure (Timber;Span Sm;BN50)		#2	0.00	65,971	4,744	0	0	
Superstructure (Timber;Span Bø;RH50)	· .	· #2	0.00	83,669	6,005	0	0	
Superstructure (Concrete;Span 3#;8050)	:	a2	0.00	81,850	85,319	0	0	4
Superstructure (Concrete;Span Sa;BH50)		æ2	0.00	85 741	95,239	0	0	
Superstructure (Concrete;Span 8m;BH50)		m2	0.00	89,607	103,675	0	0	
Superstructure (Concrete;Span10a;BH50)	19.1	<b>\$</b> 2	0.00	98,629	117,650	0	• • • •	
Superstructure (Concrete;Span15m;BHSO)		`n2	0.00	108,916	138,457	0	0	
Substructure (Pier;for Timber;101)		NØ	0.00	424,610	32,854	0 -	.0	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -
Substructure (Abul;for Timber;101)		NO	4.00	1,598,028	129,749	6,392,112	518,996	6,911,10
Substructure (Pier;for Timber;BNSO)		- NO	0.00	624,487	48,620	0	0	
Substructure (Abut;for Timber;8850)		NO	0.00	1,749,005	146,917	<u>.</u>	Q	
Substructure (Pier;for Concrete;BH50)		NO	0.00	3,828,518	472,735	0	- 0	
Substructure (Abut;for Concrete;BHSO)		NO	0.00	8,566,434	912,790	0	0	
Demolition of Bridge (Timber-)Timber)		•2	12.00	15,992	1,239	190,704	14,868	205,57
Demolition of Bridge (limber-)Concrete)		<b>n</b> 2	0.00	15,992	1,239	. 0	0	•
Demolition of Bridge (Concrete)		. <b>n</b> 2	0.00	177,135	66,347	. 0	0	5
laintenance of Timber Bridge (New)		<b>e</b> 2	48.00	9,059	1,121	434,832	53,808	498,64
Maintenance of Concrete Bridge (New)		n2	0.00	3,733	2,662	0	0	
Maintenance of Timber Bridge (Exist)		- e2	0.00	9,339	2,403	0	. 0	1. Sec. 1. Sec
Haintenance of Concrete Bridge (Exist)		<b>¤</b> 2	0.00	5,556	2,375	0	0	
/ U: (h) 0							аль 700	
( Without Overhead )			SUTRE LUST	(Timber Brid		10,014,816	780,392	10,795,20
				(Concrete Br		0	0	10 305 0
			IUTAL EUST	(without Mai)	ncenance)	10,014,816	780,392	10,795,20

( Overhead : 15% ) TOTAL COST (Timber Bridge) 11,517,038 897,451 12,414,489 (Concrete Bridge) 0 0 0 TOTAL COST (Without Kaintenance) 11,517,038 897,451 12,414,489

PROV : RIAU KAB : BENGKALIS

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LINK NO :

(IIIC) LENGTH : 40 Km

				*******					( Rp )
ETER.			UNTT	QUANTITY	KKK UNIT Local	COST >>> FOREIGN	((((() Local	COSI Foreign	>>>>>> Total
							**************		
	(Timber:Span 3n;101)		#2	0.00	48,736	3,540	0	0	· · · · (
	(Timber;Span 5m;101)		•2	0.00	53,982	3,909	0	0	1 . C
	(Timber;Span 8m;101)		e2	0.00	71,500	5,136	, <b>0</b> · · · .	0	. C
	(limber;Span 3m;BH50)	. (†	#Z	0.00	60,430	4,377	0	0	
	(Timber;Span 5m;BH50)		a2,	0,00	65,971	4,744	; <b>0</b> .	0	. i (
iperstructure	(Timber;Span Bm;BM50)		e2	0.00	83,669	6,005	. 0	. 0	· · · · · (
uperstructure	(Concrete;Span 3m;BH50)	· · ·	#2	0.00	81,850	85,319	· · · · · ·	0	
	(Concrete;Span 5m;8H50)		e2	0.00	85,741	95,239	0	0	- L
	(Concrete; Span 8a; 8H50)		`n2	0.00	89,607	103,675	0	0	· · · (
uperstructure	(Concrete; Span10a; BH50)	÷ .		0.00	98,629	117,650	e e e <b>o</b> ()	0	<b>(</b>
uperstructure	(Concrete; Span154; BH50)		· #2	0.00	108,916	138,457	0	• 0	
	Pier;for Timber;101)		NO	0.00	424.610	32,854	0	0	с
ubstructure (	Abut; for Timber; 101)		NO	0.00	1,598.028	129,749	. 0	0	
ubstructure (	Pier;for Timber;BN50)		NO	0.00	624,487	48,520	0	0	
	Abut; for Timber; BMSO)		NO	0.00	1,749,005	146,917	0	Ó	
	Pier;for Concrete;BHS0)		. NO	0.00	3,828,518	472,735	0	0	
	Abut; for Concrete; BM50)		NØ	0.00	8,566,434	912,790	0	0	
	Bridge (Timber->Timber)		e2	0.00	15,892	1,239	. 0	. 0	· · · · · · · · · · · · · · · · · · ·
	Bridge (Timber-)Concrete)		a2	0.00	15,892	1,239	0	0	
	Bridge (Concrete)		e2		177,135	66,347	0	0	a go is d
aintenance of	Timber Bridge (New)		. #2	0.00	9,059	1,121	0	0	. (
	Concrete Bridge (New)		#2		3 733	2,662	0	0	
	Timber Bridge (Exist)		82		9,339	2,403	2,241,360	576,720	2,818,000
	Concrete Bridge (Exist)		a7		5,556	2,375	0	0	-,,,
	Hithout Overhead )	(1 <b></b>			{Timber Brid		<u>ـــــ</u>		
•					{Concrete Br		Ō		
	· .		1	TALL COST	(without Main		0	. ` N	
							· · ·		
. (	Overhead : 15% )		ļ	IOTAL COST	(limber Brid	ge)	0	. 0	
				. 1. <u>1</u>	(Concrete Br		0	0	
			1	OTAL COST	(without Main		. 0	0	

