PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 55 (IIIA) LENGTH : 14 Km

UPGRADE : 7.5m road bed, 4.5m road with surface Dressing (2)

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Site Clearance in Light Bush	m2	0.0	172	91	0	0	0
Subgrade Preparation	m2	0.0	22	11	0	0	0
Normal Fill	m3	0.0	1,784	863	0	0	0
Fill in Swamp	m3	0.0	2,621	1,053	0	0	0
Normal Excavation to Spoil	m3	1960.0	1,044	523	2,046,240	1,025,080	3,071,320
Sub Base Course	m3	4557.0	3,357	1,348	15,297,849	6,142,836	21,440,685
Base Course	m3	5040.0	4,604	2,300	23,204,160	11,592,000	34,796,160
Shoulder	m2	42000.0	310	146	13,020,000	6,132,000	19,152,000
Asphalt Patching	m2	0.0	3,617	1,512	0	0	0
Surface Dressing (Single)	m2	0.0	587	766	0	0	0
Surface Dressing (Double)	m2	63000.0	737	1,207	46,431,000	76,041,000	122,472,000
Earth Drain	m	0.0	800	119	0	0	0
Earth Drain in Swamp (by machine)	m3	0.0	1,231	474	0	0	0
Pipe Culvert D80cm	m	0.0	44,289	50,140	0	0	0
Masonry Culvert (80x80cm)	m	0.0	66,426	40,282	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,566	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	50,559	11,682	0	0	0
Gabion Protection	m3	0.0	20,132	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		99,999,249	100,932,916	200,932,165
Overhead (15%)					14,999,887	15,139,937	30,139,824
			TOTAL COST		114,999,136	116,072,853	231,071,989
Manual routine maintenance of road	Km	14.0	127,720	7,248	1,788,080	101,472	1,889,552
Routine maintenance of asphalt road	Km	14.0	361,700	151,200	5,063,800	2,116,800	7,180,600
			Sub Total		6,851,880	2,218,272	9,070,152
Maintenance of Timber Bridge (New)	m2	0.0	7,234	1,009	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	7,746	2,347	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,491	2,443	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	16,505,142
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	25,851,588
Maintenance Rate without Bridge		(%)	:	3.93
New Bridge Cost Rate		(%)	:	

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 54 (TTTC) LENGTH : 5 Km

UPGRADE : 7.5m road bed, 3.5m road with surface Subbase Course

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Site Clearance in Light Bush	m2	0.0	172	91	0	0	0
Subgrade Preparation	m2	0.0	22	11	0	0	0
Normal Fill	m3	0.0	1,784	863	0	0	0
Fill in Swamp	m3	0.0	2,621	1,053	0	0	0
Normal Excavation to Spoil	m3	0.0	1,044	523	0	0	0
Sub Base Course	m3	402.5	3,357	1,348	1,351,192	542,570	1,893,762
Base Course	m3	1050.0	4,604	2,300	4,834,200	2,415,000	7,249,200
Shoulder	m2	20000.0	310	146	6,200,000	2,920,000	9,120,000
Asphalt Patching	m2	0.0	3,617	1,512	0	0	0
Surface Dressing (Single)	m2	0.0	587	766	0	0	0
Surface Dressing (Double)	m2	0.0	737	1,207	0	0	0
Earth Drain	m	0.0	800	119	0	0	0
Earth Drain in Swamp (by machine)	m3	0.0	1,231	474	0	0	0
Pipe Culvert D80cm	m	0.0	44,289	50,140	0	0	0
Masonry Culvert (80x80cm)	m	0.0	66,426	40,282	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,566	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	50,559	11,682	0	0	0
Gabion Protection	m3	0.0	20,132	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		12,385,392	5,877,570	18,262,962
Overhead (15%)					1,857,809	881,635	2,739,443
			TOTAL COST		14,243,200	6,759,205	21,002,405
Manual routine maintenance of road	Km	5.0	127,720	7,248	638,600	36,240	674,840
Routine maintenance of gravel road	Km	5.0	200,130	88,092	1,000,650	440,460	1,441,110
			Sub Total		1,639,250	476,700	2,115,950
Maintenance of Timber Bridge (New)	m2	0.0	7,234	1,009	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	7,746	2,347	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,491	2,443	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	4,200,481
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	757,504
Maintenance Rate without Bridge		(%)	:	10.07
New Bridge Cost Rate		(%)	:	

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 52 (IIIB-2) LENGTH : 8 Km

UPGRADE : 6.0m road bed, 3.5m road with surface Base Cource

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Site Clearance in Light Bush	m2	0.0	172	91	0	0	0
Subgrade Preparation	m2	0.0	22	11	0	0	0
Normal Fill	m3	0.0	1,784	863	0	0	0
Fill in Swamp	m3	0.0	2,621	1,053	0	0	0
Normal Excavation to Spoil	m3	0.0	1,044	523	0	0	0
Sub Base Course	m3	1195.3	3,357	1,348	4,012,622	1,611,264	5,623,886
Base Course	m3	1680.0	4,604	2,300	7,734,720	3,864,000	11,598,720
Shoulder	m2	20000.0	310	146	6,200,000	2,920,000	9,120,000
Asphalt Patching	m2	0.0	3,617	1,512	0	0	0
Surface Dressing (Single)	m2	0.0	587	766	0	0	0
Surface Dressing (Double)	m2	0.0	737	1,207	0	0	0
Earth Drain	m	0.0	800	119	0	0	0
Earth Drain in Swamp (by machine)	m3	0.0	1,231	474	0	0	0
Pipe Culvert D80cm	m	0.0	44,289	50,140	0	0	0
Masonry Culvert (80x80cm)	m	0.0	66,426	40,282	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,566	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	50,559	11,682	0	0	0
Gabion Protection	m3	0.0	20,132	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		17,947,342	8,395,264	26,342,606
Overhead (15%)					2,692,101	1,259,289	3,951,390
			TOTAL COST		20,639,443	9,654,553	30,293,996
Manual routine maintenance of road	Km	8.0	127,720	7,248	1,021,760	57,984	1,079,744
Routine maintenance of gravel road	Km	8.0	200,130	88,092	1,601,040	704,736	2,305,776
			Sub Total		2,622,800	762,720	3,385,520
Maintenance of Timber Bridge (New)	m2	0.0	7,234	1,009	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	7,746	2,347	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,491	2,443	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	3,786,750
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	2,811,943
Maintenance Rate without Bridge		(%)	:	11.18
New Bridge Cost Rate		(%)	:	

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 51 (LLLA) LENGTH : 10 Km

UPGRADE : 6.5m road bed, 4.5m road with surface Dressing (2)

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Site Clearance in Light Bush	m2	0.0	172	91	0	0	0
Subgrade Preparation	m2	0.0	22	11	0	0	0
Normal Fill	m3	0.0	1,784	863	0	0	0
Fill in Swamp	m3	0.0	2,621	1,053	0	0	0
Normal Excavation to Spoil	m3	1400.0	1,044	523	1,461,600	732,200	2,193,800
Sub Base Course	m3	2892.8	3,357	1,348	9,711,129	3,899,494	13,610,623
Base Course	m3	3600.0	4,604	2,300	16,574,400	8,280,000	24,854,400
Shoulder	m2	20000.0	310	146	6,200,000	2,920,000	9,120,000
Asphalt Patching	m2	0.0	3,617	1,512	0	0	0
Surface Dressing (Single)	m2	0.0	587	766	0	0	0
Surface Dressing (Double)	m2	45000.0	737	1,207	33,165,000	54,315,000	87,480,000
Earth Drain	m	0.0	800	119	0	0	0
Earth Drain in Swamp (by machine)	m3	0.0	1,231	474	0	0	0
Pipe Culvert D80cm	m	0.0	44,289	50,140	0	0	0
Masonry Culvert (80x80cm)	m	0.0	66,426	40,282	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,566	746	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	50,559	11,682	0	0	0
Gabion Protection	m3	0.0	20,132	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	4,710,061	503,803	5,213,864
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		71,822,190	70,650,497	142,472,687
Overhead (15%)					10,773,328	10,597,574	21,370,902
			TOTAL COST		82,595,518	81,248,071	163,843,589
Manual routine maintenance of road	Km	10.0	127,720	7,248	1,277,200	72,480	1,349,680
Routine maintenance of asphalt road	Km	10.0	361,700	151,200	3,617,000	1,512,000	5,129,000
			Sub Total		4,894,200	1,584,480	6,478,680
Maintenance of Timber Bridge (New)	m2	40.0	7,234	1,009	289,360	40,360	329,720
Maintenance of Concrete Bridge (New)	m2	0.0	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	24.0	7,746	2,347	185,904	56,328	242,232
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,491	2,443	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	15,784,765
Timber Bridge	Unit Cost	(Rp/m2)	:	149,899
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	17,102,098
Maintenance Rate without Bridge		(%)	:	4.10
New Bridge Cost Rate		(%)	:	3.66

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 42 (IIIB-2) LENGTH : 3 Km

UPGRADE : 5.5m road bed, 3.5m road with surface Base Cource

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Site Clearance in Light Bush	m2	0.0	172	91	0	0	0
Subgrade Preparation	m2	3240.0	22	11	71,280	35,640	106,920
Normal Fill	m3	0.0	1,784	863	0	0	0
Fill in Swamp	m3	744.0	2,621	1,053	1,950,024	783,432	2,733,456
Normal Excavation to Spoil	m3	0.0	1,044	523	0	0	0
Sub Base Course	m3	648.5	3,357	1,348	2,150,158	863,394	3,013,552
Base Course	m3	630.0	4,604	2,300	2,900,520	1,449,000	4,349,520
Shoulder	m2	6000.0	310	146	1,860,000	876,000	2,736,000
Asphalt Patching	m2	0.0	3,617	1,512	0	0	0
Surface Dressing (Single)	m2	0.0	587	766	0	0	0
Surface Dressing (Double)	m2	0.0	737	1,207	0	0	0
Earth Drain	m	0.0	800	119	0	0	0
Earth Drain in Swamp (by machine)	m3	2400.0	1,231	474	2,954,400	1,137,600	4,092,000
Pipe Culvert D80cm	m	0.0	44,289	50,140	0	0	0
Masonry Culvert (80x80cm)	m	0.0	66,426	40,282	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,566	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	50,559	11,682	0	0	0
Gabion Protection	m3	0.0	20,132	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		11,886,382	5,145,066	17,031,448
Overhead (15%)					1,782,957	771,759	2,554,716
			TOTAL COST		13,669,339	5,916,825	19,586,164
Manual routine maintenance of road	Km	3.0	127,720	7,248	383,160	21,744	404,904
Routine maintenance of gravel road	Km	3.0	200,130	88,092	600,390	264,276	864,666
			Sub Total		983,550	286,020	1,269,570
Maintenance of Timber Bridge (New)	m2	0.0	7,234	1,009	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	67.5	7,746	2,347	522,855	158,422	681,277
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,491	2,443	0	0	0

Earthwork & Pavement Unit Cost	(Rp/Km)	:	6,528,722
Timber Bridge Unit Cost	(Rp/m2)	:	
Concrete Bridge Unit Cost	(Rp/m2)	:	
Survived Value	(Rp)	:	1,506,776
Maintenance Rate without Bridge	(%)	:	6.48
New Bridge Cost Rate	(%)	:	

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 49 (IIIB-2) LENGTH : 8 Km

UPGRADE : 5.5m road bed, 3.5m road with surface Base Cource

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Site Clearance in Light Bush	m2	0.0	172	91	0	0	0
Subgrade Preparation	m2	0.0	22	11	0	0	0
Normal Fill	m3	0.0	1,784	863	0	0	0
Fill in Swamp	m3	0.0	2,621	1,053	0	0	0
Normal Excavation to Spoil	m3	0.0	1,044	523	0	0	0
Sub Base Course	m3	1223.3	3,357	1,348	4,106,618	1,649,008	5,755,626
Base Course	m3	1680.0	4,604	2,300	7,734,720	3,864,000	11,598,720
Shoulder	m2	16000.0	310	146	4,960,000	2,336,000	7,296,000
Asphalt Patching	m2	0.0	3,617	1,512	0	0	0
Surface Dressing (Single)	m2	0.0	587	766	0	0	0
Surface Dressing (Double)	m2	0.0	737	1,207	0	0	0
Earth Drain	m	0.0	800	119	0	0	0
Earth Drain in Swamp (by machine)	m3	0.0	1,231	474	0	0	0
Pipe Culvert D80cm	m	0.0	44,289	50,140	0	0	0
Masonry Culvert (80x80cm)	m	0.0	66,426	40,282	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,566	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	50,559	11,682	0	0	0
Gabion Protection	m3	0.0	20,132	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	2,487,268	323,858	2,811,126
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		19,288,606	8,172,866	27,461,472
Overhead (15%)					2,893,290	1,225,929	4,119,219
			TOTAL COST		22,181,896	9,398,795	31,580,691
Manual routine maintenance of road	Km	8.0	127,720	7,248	1,021,760	57,984	1,079,744
Routine maintenance of gravel road	Km	8.0	200,130	88,092	1,601,040	704,736	2,305,776
			Sub Total		2,622,800	762,720	3,385,520
Maintenance of Timber Bridge (New)	m2	12.0	7,234	1,009	86,808	12,108	98,916
Maintenance of Concrete Bridge (New)	m2	0.0	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	42.0	7,746	2,347	325,332	98,574	423,906
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,491	2,443	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	3,543,487
Timber Bridge	Unit Cost	(Rp/m2)	:	269,400
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	2,877,813
Maintenance Rate without Bridge		(%)	:	11.94
New Bridge Cost Rate		(%)	:	10.24

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 39 (IIIA) LENGTH : 6 Km

UPGRADE : 6.0m road bed, 4.0m road with surface Dressing (2)

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Site Clearance in Light Bush	m2	0.0	172	91	0	0	0
Subgrade Preparation	m2	36000.0	22	11	792,000	396,000	1,188,000
Normal Fill	m3	0.0	1,784	863	0	0	0
Fill in Swamp	m3	3847.5	2,621	1,053	10,084,297	4,051,417	14,135,714
Normal Excavation to Spoil	m3	576.0	1,044	523	601,344	301,248	902,592
Sub Base Course	m3	3360.0	3,357	1,348	11,279,520	4,529,280	15,808,800
Base Course	m3	1920.0	4,604	2,300	8,839,680	4,416,000	13,255,680
Shoulder	m2	12000.0	310	146	3,720,000	1,752,000	5,472,000
Asphalt Patching	m2	0.0	3,617	1,512	0	0	0
Surface Dressing (Single)	m2	0.0	581	766	0	0	0
Surface Dressing (Double)	m2	24000.0	737	1,207	17,688,000	28,968,000	46,656,000
Earth Drain	m	8320.0	800	119	6,656,000	990,080	7,646,080
Earth Drain in Swamp (by machine)	m3	36000.0	1,231	474	44,316,000	17,064,000	61,380,000
Pipe Culvert D80cm	m	56.0	44,289	50,140	2,480,184	2,807,840	5,288,024
Masonry Culvert (80x80cm)	m	12.0	66,426	40,282	797,112	483,384	1,280,496
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,566	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	20.7	50,559	11,682	1,046,571	241,817	1,288,388
Gabion Protection	m3	0.0	20,132	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		108,300,708	66,001,066	174,301,774
Overhead (15%)					16,245,106	9,900,159	26,145,265
			TOTAL COST		124,545,814	75,901,225	200,447,039
Manual routine maintenance of road	Km	6.0	127,720	7,248	766,320	43,488	809,808
Routine maintenance of asphalt road	Km	6.0	361,700	151,200	2,170,200	907,200	3,077,400
			Sub Total		2,936,520	950,688	3,887,208
Maintenance of Timber Bridge (New)	m2	0.0	7,234	1,009	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	101.6	7,746	2,347	786,993	238,455	1,025,448
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,491	2,443	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	33,407,840
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	15,960,960
Maintenance Rate without Bridge		(%)	:	1.94
New Bridge Cost Rate		(%)	:	

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 332 (IIIA) LENGTH : 8 Km

UPGRADE : 8.0m road bed, 4.5m road with surface Dressing (2)

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Site Clearance in Light Bush	m2	0.0	172	91	0	0	0
Subgrade Preparation	m2	9215.0	22	11	202,730	101,365	304,095
Normal Fill	m3	0.0	1,784	863	0	0	0
Fill in Swamp	m3	445.5	2,621	1,053	1,167,655	469,111	1,636,766
Normal Excavation to Spoil	m3	1737.0	1,044	523	1,813,428	908,451	2,721,879
Sub Base Course	m3	3132.0	3,357	1,348	10,514,124	4,221,936	14,736,060
Base Course	m3	2880.0	4,604	2,300	13,259,520	6,624,000	19,883,520
Shoulder	m2	28000.0	310	146	8,680,000	4,088,000	12,768,000
Asphalt Patching	m2	0.0	3,617	1,512	0	0	0
Surface Dressing (Single)	m2	0.0	587	766	0	0	0
Surface Dressing (Double)	m2	36000.0	737	1,207	26,532,000	43,452,000	69,984,000
Earth Drain	m	0.0	800	119	0	0	0
Earth Drain in Swamp (by machine)	m3	900.0	1,231	474	1,107,900	426,600	1,534,500
Pipe Culvert D80cm	m	0.0	44,289	50,140	0	0	0
Masonry Culvert (80x80cm)	m	0.0	66,426	40,282	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,566	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	50,559	11,682	0	0	0
Gabion Protection	m3	0.0	20,132	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		63,277,357	60,291,463	123,568,820
Overhead (15%)					9,491,603	9,043,719	18,535,322
			TOTAL COST		72,768,960	69,335,182	142,104,142
Manual routine maintenance of road	Km	8.0	127,720	7,248	1,021,760	57,984	1,079,744
Routine maintenance of asphalt road	Km	8.0	361,700	151,200	2,893,600	1,209,600	4,103,200
			Sub Total		3,915,360	1,267,584	5,182,944
Maintenance of Timber Bridge (New)	m2	0.0	7,234	1,009	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	7,746	2,367	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,491	2,443	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	17,763,018
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	16,759,728
Maintenance Rate without Bridge		(%)	:	3.65
New Bridge Cost Rate		(%)	:	

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 40 (IIIA) LENGTH : 6 Km

UPGRADE : 6.0m road bed, 4.0m road with surface Dressing (2)

(Rp)

ITEM	UNIT	QUANTITY	UNIT COST LOCAL	UNIT COST FOREIGN	COST LOCAL	COST FOREIGN	COST TOTAL
Site Clearance in Light Bush	m2	0.0	172	91	0	0	0
Subgrade Preparation	m2	36000.0	22	11	792,000	396,000	1,188,000
Normal Fill	m3	0.0	1,784	863	0	0	0
Fill in Swamp	m3	3847.5	2,621	1,053	10,084,297	4,051,417	14,135,714
Normal Excavation to Spoil	m3	536.0	1,044	523	559,584	280,328	839,912
Sub Base Course	m3	3360.0	3,357	1,348	11,279,520	4,529,280	15,808,800
Base Course	m3	1920.0	4,604	2,300	8,839,680	4,416,000	13,255,680
Shoulder	m2	12000.0	310	146	3,720,000	1,752,000	5,472,000
Asphalt Patching	m2	0.0	3,617	1,512	0	0	0
Surface Dressing (Single)	m2	0.0	587	766	0	0	0
Surface Dressing (Double)	m2	24000.0	737	1,207	17,688,000	28,968,000	46,656,000
Earth Drain	m	11880.0	800	119	9,504,000	1,413,720	10,917,720
Earth Drain in Swamp (by machine)	m3	36000.0	1,231	474	44,316,000	17,064,000	61,380,000
Pipe Culvert D80cm	m	96.0	44,289	50,140	4,251,744	4,813,440	9,065,184
Masonry Culvert (80x80cm)	m	0.0	66,426	40,282	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,566	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	38.4	50,559	11,682	1,941,465	448,589	2,390,053
Gabion Protection	m3	0.0	20,132	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		112,976,290	68,132,773	181,109,063
Overhead (15%)					16,946,443	10,219,915	27,166,358
			TOTAL COST		129,922,733	78,352,688	208,275,421
Manual routine maintenance of road	Km	6.0	127,720	7,248	766,320	43,488	809,808
Routine maintenance of asphalt road	Km	6.0	361,700	151,200	2,170,200	907,200	3,077,400
			Sub Total		2,936,520	950,688	3,887,208
Maintenance of Timber Bridge (New)	m2	0.0	7,234	1,009	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	7,746	2,347	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,491	2,443	0	0	0

Earthwork & Pavement Unit Cost		(Rp/Km)	:	34,712,570
Timber Bridge Unit Cost		(Rp/m2)	:	
Concrete Bridge Unit Cost		(Rp/m2)	:	
Survived Value		(Rp)	:	15,960,960
Maintenance Rate without Bridge		(%)	:	1.87
New Bridge Cost Rate		(%)	:	

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 5 (IIID-1) LENGTH : 5 Km

UPGRADE : 6.5m road bed, 3.5m road with surface Dressing (1)

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Site Clearance in Light Bush	m2	0.0	172	91	0	0	0
Subgrade Preparation	m2	32500.0	22	11	715,000	357,500	1,072,500
Normal Fill	m3	0.0	1,784	863	0	0	0
Fill in Swamp	m3	3861.0	2,621	1,053	10,119,681	4,065,633	14,185,314
Normal Excavation to Spoil	m3	700.0	1,044	523	730,800	366,100	1,096,900
Sub Base Course	m3	2450.0	3,357	1,348	8,224,650	3,302,600	11,527,250
Base Course	m3	1225.0	4,604	2,300	5,639,900	2,817,500	8,457,400
Shoulder	m2	15000.0	310	146	4,650,000	2,190,000	6,840,000
Asphalt Patching	m2	0.0	3,617	1,512	0	0	0
Surface Dressing (Single)	m2	17500.0	587	766	10,272,500	13,405,000	23,677,500
Surface Dressing (Double)	m2	0.0	737	1,207	0	0	0
Earth Drain	m	0.0	800	119	0	0	0
Earth Drain in Swamp (by machine)	m3	7800.0	1,231	474	9,601,800	3,697,200	13,299,000
Pipe Culvert D80cm	m	0.0	44,289	50,140	0	0	0
Masonry Culvert (80x80cm)	m	0.0	66,426	40,282	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,566	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	50,559	11,682	0	0	0
Gabion Protection	m3	0.0	20,132	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		49,954,331	30,201,533	80,155,864
Overhead (15%)					7,493,149	4,530,229	12,023,378
			TOTAL COST		57,447,480	34,731,762	92,179,242
Manual routine maintenance of road	Km	5.0	127,720	7,248	638,600	36,240	674,840
Routine maintenance of asphalt road	Km	5.0	361,700	151,200	1,808,500	756,000	2,564,500
			Sub Total		2,447,100	792,240	3,239,340
Maintenance of Timber Bridge (New)	m2	0.0	7,234	1,009	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	7,746	2,347	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,491	2,443	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	18,435,849
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	9,760,555
Maintenance Rate without Bridge		(%)	:	3.51
New Bridge Cost Rate		(%)	:	

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 3 (IIIA) LENGTH : 10 Km

UPGRADE : 7.5m road bed, 4.5m road with surface Dressing (2)

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Site Clearance in Light Bush	m2	6000.0	172	91	1,032,000	546,000	1,578,000
Subgrade Preparation	m2	38100.0	22	11	838,200	419,100	1,257,300
Normal Fill	m3	0.0	1,784	863	0	0	0
Fill in Swamp	m3	2400.0	2,621	1,053	6,290,400	2,527,200	8,817,600
Normal Excavation to Spoil	m3	761.0	1,044	523	1,003,284	502,603	1,505,887
Sub Base Course	m3	4307.1	3,357	1,348	14,458,934	5,805,970	20,264,904
Base Course	m3	2520.0	4,604	2,300	11,602,080	5,796,000	17,398,080
Shoulder	m2	30000.0	310	146	9,300,000	4,380,000	13,680,000
Asphalt Patching	m2	1491.0	3,617	1,512	5,392,947	2,254,392	7,647,339
Surface Dressing (Single)	m2	13500.0	587	766	7,924,500	10,341,000	18,265,500
Surface Dressing (Double)	m2	31500.0	737	1,207	23,215,500	38,020,500	61,236,000
Earth Drain	m	0.0	800	119	0	0	0
Earth Drain in Swamp (by machine)	m3	6000.0	1,231	474	7,386,000	2,844,000	10,230,000
Pipe Culvert D80cm	m	0.0	44,209	50,140	0	0	0
Masonry Culvert (80x80cm)	m	0.0	86,426	40,282	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,566	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	50,559	11,682	0	0	0
Gabion Protection	m3	0.0	20,132	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		88,443,845	73,436,765	161,880,610
Overhead (15%)					13,266,576	11,015,514	24,282,090
			TOTAL COST		101,710,421	84,452,279	186,162,700
Manual routine maintenance of road	Km	10.0	127,720	7,248	1,277,200	72,480	1,349,680
Routine maintenance of asphalt road	Km	10.0	361,700	151,200	3,617,000	1,512,000	5,129,000
			Sub Total		4,894,200	1,584,480	6,478,680
Maintenance of Timber Bridge (New)	m2	0.0	7,234	1,009	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	332.0	7,746	2,347	2,571,672	779,204	3,350,876
Maintenance of Concrete Bridge (Exist)	m2	64.0	4,491	2,443	287,424	156,352	443,776

Earthwork & Pavement	Unit Cost	(Rp/Km) :	18,616,270
Timber Bridge	Unit Cost	(Rp/m2) :	
Concrete Bridge	Unit Cost	(Rp/m2) :	
Survived Value		(Rp) :	20,561,443
Maintenance Rate without Bridge		(%) :	3.48
New Bridge Cost Rate		(%) :	

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 1 (IIIA) LENGTH : 2 Km

UPGRADE : 8.5m road bed, 4.5m road with surface Dressing (2)

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Site Clearance in Light Bush	m2	0.0	172	91	0	0	0
Subgrade Preparation	m2	17000.0	22	11	374,000	187,000	561,000
Normal Fill	m3	0.0	1,784	863	0	0	0
Fill in Swamp	m3	0.0	2,621	1,053	0	0	0
Normal Excavation to Spoil	m3	0.0	1,044	523	0	0	0
Sub Base Course	m3	1260.0	3,357	1,348	4,229,820	1,698,480	5,928,300
Base Course	m3	720.0	4,604	2,300	3,314,880	1,656,000	4,970,880
Shoulder	m2	8000.0	310	146	2,480,000	1,168,000	3,648,000
Asphalt Patching	m2	0.0	3,617	1,512	0	0	0
Surface Dressing (Single)	m2	0.0	587	766	0	0	0
Surface Dressing (Double)	m2	9000.0	737	1,207	6,633,000	10,863,000	17,496,000
Earth Drain	m	0.0	800	119	0	0	0
Earth Drain in Swamp (by machine)	m3	0.0	1,231	474	0	0	0
Pipe Culvert D80cm	m	0.0	44,289	50,140	0	0	0
Masonry Culvert (80x80cm)	m	0.0	66,426	40,282	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,566	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	50,559	11,682	0	0	0
Gabion Protection	m3	0.0	20,132	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	9,158,056	1,001,458	10,159,514
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		26,187,756	16,573,938	42,763,694
Overhead (15%)					3,928,463	2,486,090	6,414,553
			TOTAL COST		30,118,219	19,060,028	49,178,247
Manual routine maintenance of road	Km	2.0	127,720	7,248	255,440	14,496	269,936
Routine maintenance of asphalt road	Km	2.0	361,700	151,200	723,400	302,400	1,025,800
			Sub Total		978,840	316,896	1,295,736
Maintenance of Timber Bridge (New)	m2	66.8	7,234	1,009	483,231	67,401	550,632
Maintenance of Concrete Bridge (New)	m2	0.0	1,817	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	14.8	7,746	2,347	114,640	34,735	149,375
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,491	2,443	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	18,747,404
Timber	Bridge	Unit Cost	(Rp/m2)	:	174,902
Concrete	Bridge	Unit Cost	(Rp/m2)	:	
Survived	Value		(Rp)	:	5,985,360
Maintenance Rate without Bridge			(%)	:	3.46
New Bridge Cost Rate			(%)	:	23.76

Appendix A-4

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

PROV : KALIMANTAN TIMUR KAB : KUTAI

I T E M	UNIT	(1988)	(1989)	(1990)	(1991)	(1992)	(TOTAL)
EQUIPMENT :							
Bulldozer/Ripper	hr	267.9	861.5	929.6	1314.7	1704.6	5078.3
Swamp Bulldozer	hr	128.7	80.0	499.7	695.1	878.2	2281.7
Motor Grader	hr	857.2	2248.4	1581.6	1916.5	1922.0	8525.7
Hand-guide Vib. Roller	hr	433.4	597.4	1677.2	1947.0	3151.7	7806.7
Tire Roller	hr	845.8	2129.0	1588.8	1645.6	965.4	7174.6
Vibratory Roller (D&I)	hr	749.5	1696.1	1603.8	2057.1	2290.9	8397.4
Hydraulic Excavator; Wheel	hr	585.0	450.0	3750.0	4255.5	2358.8	11399.3
Wheel Loader	hr	1363.6	3298.4	3424.6	4077.3	4429.1	16613.0
Water Tank Truck	hr	515.2	1083.0	1142.1	1384.6	1510.8	5635.7
Dump Truck	hr	11011.5	24995.4	28490.8	32233.6	31553.6	128284.9
Flat Bed Truck with Crane	hr	349.3	212.9	1127.8	1169.4	1865.2	4724.6
Flat Bed Truck	hr	1160.2	2655.3	2467.4	2598.2	2158.3	11039.4
Portable Crusher/Screening	hr	336.1	868.4	687.3	643.6	443.9	2979.3
Concrete Mixer	hr	98.7	74.0	204.0	138.9	195.8	711.4
Water Pump	hr	79.5	59.6	164.3	110.7	156.1	570.2
Concrete Vibrator	hr	41.1	30.8	85.0	54.3	76.6	287.8
Asphalt Sprayer	hr	845.8	2129.0	1588.8	1645.6	965.4	7174.6
LABOUR :							
Mandor	man day	1195.8	2036.9	3784.6	4132.7	4745.7	15895.7
Skilled Labourer	man day	1547.0	1822.7	6743.5	8751.8	13479.4	32344.4
Carpenter	man day	482.5	128.3	2939.0	4023.0	6699.3	14272.1
Mason	man day	96.0	72.0	198.4	140.9	198.7	706.0
Labourer	man day	10277.4	19178.6	30909.8	30326.9	30318.9	121011.6
Driver	man day	2360.3	5276.7	6062.7	6843.3	6799.4	27342.4
Operator	man day	1316.1	2815.0	3434.2	3909.9	3851.9	15327.1
MATERIAL :							
Bitumen	l	200520.7	505683.6	387291.6	371864.6	199252.3	1670612.8
Asphalt Oil	l	29079.1	73562.5	52433.3	59251.1	39582.0	253908.0
Kerosene	l	40745.7	102910.5	76266.6	79685.7	47454.5	347063.0
Sand	m3	634.4	1243.6	1194.3	1141.0	1023.3	5236.6
Cement	bag	636.4	477.3	1315.3	846.4	1194.4	4469.8
River Stone	m3	96.0	72.0	198.4	140.9	198.7	706.0
Steel Moulds	set	240.0	180.0	496.0	294.6	419.4	1630.0
Timber	m3	42.5	10.7	264.5	364.0	606.6	1288.3
Paint	l	305.1	87.5	2040.3	2827.8	4713.1	9973.8
Reinforcing Steel	kg	7656.0	5742.0	15822.4	9776.2	13851.2	52847.8
Tying Wire	kg	69.6	52.2	143.8	88.8	125.8	480.2
Equivalent Royalty	m3	22575.5	48062.7	52942.9	62050.5	65083.8	250715.4

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

PROV : KALIMANTAN TIMUR KAB : KUTAI

ITEM	UNIT	(1988)	(1989)	(1990)	(1991)	(1992)	(TOTAL)
EQUIPMENT :							
Bulldozer/Ripper	hr	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
Motor Grader	hr	489.1	891.8	865.3	744.1	645.3	3635.6
Hand-guide Vib. Roller	hr	75.0	397.5	885.0	1537.5	1995.0	4890.0
Tire Roller	hr	489.1	891.8	865.3	744.1	645.3	3635.6
Vibratory Roller (O&T)	hr	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Excavator; Wheel	hr	0.0	0.0	0.0	0.0	0.0	0.0
Wheel Loader	hr	104.6	208.3	244.6	276.8	294.7	1129.0
Water Tank Truck	hr	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	hr	778.0	2044.7	3236.8	4733.7	5755.7	16548.9
Flat Bed Truck with Crane	hr	426.7	808.2	1255.3	1246.5	1334.2	5070.9
Flat Bed Truck	hr	1923.1	3717.8	4003.3	4057.9	4045.5	17747.6
Portable Crusher/Screening	hr	52.4	104.8	123.9	141.2	151.0	573.3
Concrete Mixer	hr	0.0	0.0	0.2	0.2	0.2	0.6
Water Pump	hr	0.0	0.0	0.2	0.2	0.2	0.6
Concrete Vibrator	hr	0.0	0.0	0.2	0.2	0.2	0.6
Asphalt Sprayer	hr	0.0	0.0	0.0	0.0	0.0	0.0
LABOUR :							
Mandur	man day	617.9	1288.4	1576.4	1833.4	2011.9	7328.0
Skilled Labourer	man day	168.4	489.3	958.7	1369.8	1742.8	4720.0
Carpenter	man day	63.6	120.4	197.8	180.2	221.5	783.5
Mason	man day	0.0	0.0	0.0	0.0	0.0	0.0
Labourer	man day	7277.6	15220.3	18534.3	21705.0	23785.9	86523.1
Driver	man day	541.3	1132.8	1475.3	1729.8	1919.0	6798.2
Operator	man day	197.9	366.9	370.7	341.6	315.1	1592.2
MATERIAL :							
Bituaen	l	675.0	3577.5	7965.0	13837.5	17955.0	44010.0
Asphalt Oil	l	0.0	0.0	0.0	0.0	0.0	0.0
Kerosene	l	75.0	397.5	885.0	1537.5	1995.0	4890.0
Sand	m3	12.5	66.2	147.7	256.4	332.7	815.5
Cement	bag	0.0	0.0	3.4	3.4	3.4	10.2
River Stone	m3	0.0	0.0	0.0	0.0	0.0	0.0
Steel Moulds	set	0.0	0.0	0.0	0.0	0.0	0.0
Timber	m3	5.7	10.9	17.8	16.2	20.0	70.6
Paint	l	41.1	78.0	127.7	116.2	143.0	506.0
Reinforcing Steel	kg	0.0	0.0	17.6	17.6	17.6	52.8
Tying Wire	kg	0.0	0.0	0.1	0.1	0.1	0.3
Equivalent Royalty	m3	1483.1	2951.5	3465.6	3920.1	4173.6	15993.9

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

PROV : KALIMANTAN TIMUR KAB : KUTAI

I T E M	UNIT	(1988)	(1989)	(1990)	(1991)	(1992)	(TOTAL)
EQUIPMENT :							
Bulldozer/Ripper	hr	267.9	861.5	929.6	1314.7	1704.6	5078.3
Swamp Bulldozer	hr	128.7	80.0	499.7	695.1	878.2	2281.7
Motor Grader	hr	1346.3	3140.2	2446.9	2660.6	2567.3	12161.3
Hand-guide Vib. Roller	hr	508.4	994.9	2562.2	3484.5	5146.7	12696.7
Tire Roller	hr	1334.9	3020.8	2454.1	2389.7	1610.7	10810.2
Vibratory Roller (O&T)	hr	749.5	1696.1	1603.8	2057.1	2290.9	8397.4
Hydraulic Excavator; Wheel	hr	585.0	450.0	3750.0	4255.5	2358.8	11399.3
Wheel Loader	hr	1468.2	3506.7	3669.2	4374.1	4723.8	17742.0
Water Tank Truck	hr	515.2	1083.0	1142.1	1384.6	1510.8	5635.7
Dump Truck	hr	11789.5	27040.1	31727.6	36967.3	37309.3	144833.8
Flat Bed Truck with Crane	hr	776.0	1021.1	2383.1	2415.9	3199.4	9795.5
Flat Bed Truck	hr	3083.3	6373.1	6470.7	6656.1	6203.8	28787.0
Portable Crusher/Screening	hr	388.5	973.2	811.2	784.8	594.9	3552.6
Concrete Mixer	hr	98.7	74.0	204.2	139.1	196.0	712.0
Water Pump	hr	79.5	59.6	164.5	110.9	156.3	570.8
Concrete Vibrator	hr	41.1	30.8	85.2	54.5	76.8	288.4
Asphalt Sprayer	hr	845.8	2129.0	1588.8	1645.6	965.4	7174.6
LABOUR :							
Mandur	man day	1813.7	3325.3	5361.0	5966.1	6757.6	23223.7
Skilled Labourer	man day	1715.4	2312.0	7702.2	10112.6	15222.2	37064.4
Carpenter	man day	546.1	248.7	3136.8	4203.2	6920.8	15055.6
Mason	man day	96.0	72.0	198.4	140.9	198.7	706.0
Labourer	man day	17555.0	34398.9	49444.1	52031.9	54104.8	207534.7
Driver	man day	2901.6	6409.5	7538.0	8573.1	8718.4	34140.6
Operator	man day	1514.0	3181.9	3804.9	4251.5	4167.0	16919.3
MATERIAL :							
Bitumen	l	201195.7	509261.1	395256.6	391702.1	217207.3	1714622.8
Asphalt Oil	l	29079.1	73562.5	52433.3	59251.1	39582.0	253908.0
Kerosene	l	40820.7	103308.0	77151.6	81223.2	49449.5	351953.0
Sand	m3	646.9	1309.8	1342.0	1397.4	1356.0	6052.1
Cement	bag	636.4	477.3	1318.7	849.8	1197.8	4480.0
River Stone	m3	96.0	72.0	198.4	140.9	198.7	706.0
Steel Moulds	set	240.0	180.0	496.0	294.6	419.4	1630.0
Timber	m3	48.2	21.6	282.3	380.2	626.6	1358.9
Paint	l	346.2	165.5	2168.0	2944.0	4056.1	10479.8
Reinforcing Steel	kg	7656.0	5742.0	15840.0	9793.8	13868.8	52900.6
Tying Wire	kg	69.6	52.2	143.9	88.9	125.9	480.5
Equivalent Royalty	m3	24058.6	51014.2	56408.5	65970.6	69257.4	266709.3

Appendix A-5

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

PROV : KALIMANTAN TIMUR KAB : KUTAI

(1000 Rp)

I T E M	UNIT	(1988)	(1989)	(1990)	(1991)	(1992)	(TOTAL)
EQUIPMENT :		155,534	352,910	407,629	464,820	438,242	1,819,135
Bulldozer/Ripper	16676	4,467	14,366	15,502	21,923	28,425	84,683
Swamp Bulldozer	12241	1,575	979	6,116	8,508	10,750	27,928
Motor Grader	14168	12,144	31,855	22,408	27,152	27,230	120,789
Hand-guide Vib. Roller	1608	696	960	2,696	3,130	5,067	12,549
Tire Roller	11649	9,852	24,800	18,507	19,169	11,245	83,573
Vibratory Roller (D&T)	7045	5,280	11,949	11,298	14,492	16,139	59,158
Hydraulic Excavator; Wheel	13462	7,875	6,057	50,482	57,287	31,754	153,455
Wheel Loader	17329	23,629	57,157	59,344	71,002	76,751	287,883
Water Tank Truck	4288	2,209	4,643	4,897	5,937	6,478	24,164
Dump Truck	5779	63,635	144,448	164,648	186,277	182,348	741,356
Flat Bed Truck with Crane	5372	1,876	1,143	6,058	6,282	10,019	25,378
Flat Bed Truck	3664	4,250	9,729	9,040	9,519	7,908	40,446
Portable Crusher/Screening	45755	15,378	39,733	31,447	29,447	20,310	136,315
Concrete Mixer	8773	865	649	1,789	1,218	1,717	6,238
Water Pump	508	40	30	83	56	79	288
Concrete Vibrator	342	14	10	29	18	26	97
Asphalt Sprayer	2068	1,749	4,402	3,285	3,403	1,996	14,835
LABOUR :		34,631	63,686	107,362	117,946	135,423	459,048
Mandur	2500	2,989	5,092	9,461	10,331	11,864	39,737
Skilled Labourer	2000	3,094	3,645	13,487	17,503	26,958	64,687
Carpenter	2500	1,206	320	7,347	10,057	16,748	35,678
Mason	2500	240	180	496	352	496	1,764
Labourer	1500	15,416	28,767	46,364	45,490	45,478	181,515
Driver	3000	7,080	15,830	18,188	20,529	20,398	82,025
Operator	3500	4,606	9,852	12,019	13,684	13,481	53,642
MATERIAL :		137,381	305,816	287,616	291,470	235,564	1,257,847
Bitumen	400	80,208	202,273	154,916	151,145	79,700	668,242
Asphalt Oil	600	17,447	44,137	31,459	35,550	23,749	152,342
Kerosene	250	10,186	25,727	19,066	19,921	11,863	86,763
Sand	8000	5,075	9,948	9,554	9,120	8,186	41,891
Cement	4500	2,863	2,147	5,918	3,808	5,374	20,110
River Stone	15000	1,440	1,080	2,976	2,113	2,980	10,589
Steel Moulds	8000	1,920	1,440	3,968	2,356	3,355	13,039
Timber	100000	4,250	1,070	26,450	36,400	60,660	128,830
Paint	2000	610	175	4,080	5,655	9,426	19,946
Reinforcing Steel	1000	7,656	5,742	15,822	9,776	13,851	52,847
Tying Wire	1200	83	62	172	106	150	573
Equivalent Royalty	250	5,643	12,015	13,235	15,512	16,270	62,675

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

PROV : KALIMANTAN TIMUR KAB : KUTAI

(1000 Rp)

ITEM	UNIT	(1988)	(1989)	(1990)	(1991)	(1992)	(TOTAL)
EQUIPMENT :		30,789	61,845	73,785	81,859	87,133	335,411
Bulldozer/Ripper	16676	0	0	0	0	0	0
Swamp Bulldozer	12241	0	0	0	0	0	0
Motor Grader	14168	6,929	12,635	12,259	10,542	9,142	51,507
Hand-guide Vib. Roller	1608	120	639	1,423	2,472	3,207	7,861
Tire Roller	11649	5,697	10,388	10,079	8,668	7,517	42,349
Vibratory Roller (D&T)	7045	0	0	0	0	0	0
Hydraulic Excavator; Wheel	13462	0	0	0	0	0	0
Wheel Loader	17329	1,812	3,609	4,238	4,796	5,106	19,561
Water Tank Truck	4288	0	0	0	0	0	0
Dump Truck	5779	4,496	11,816	18,705	27,356	33,262	95,635
Flat Bed Truck with Crane	5372	2,292	4,341	6,743	6,696	7,167	27,239
Flat Bed Truck	3664	7,046	13,622	14,668	14,868	14,822	65,026
Portable Crusher/Screening	45755	2,397	4,795	5,669	6,460	6,909	26,230
Concrete Mixer	8773	0	0	1	1	1	3
Water Pump	508	0	0	0	0	0	0
Concrete Vibrator	342	0	0	0	0	0	0
Asphalt Sprayer	2068	0	0	0	0	0	0
LABOUR :		15,270	32,012	39,875	46,695	51,604	185,456
Mandur	2500	1,544	3,221	3,941	4,583	5,029	18,318
Skilled Labourer	2000	336	978	1,917	2,721	3,485	9,437
Carpenter	2500	159	301	494	450	553	1,957
Mason	2500	0	0	0	0	0	0
Labourer	1500	10,916	22,830	27,801	32,557	35,678	129,782
Driver	3000	1,623	3,398	4,425	5,189	5,757	20,392
Operator	3500	692	1,284	1,297	1,195	1,102	5,570
MATERIAL :		1,410	4,042	7,521	10,834	13,702	37,509
Bitumen	400	270	1,431	3,186	5,535	7,182	17,604
Asphalt Oil	600	0	0	0	0	0	0
Kerosene	250	18	99	221	384	498	1,220
Sand	8000	100	529	1,181	2,051	2,661	6,522
Cement	4500	0	0	15	15	15	45
River Stone	15000	0	0	0	0	0	0
Steel Moulds	8000	0	0	0	0	0	0
Timber	100000	570	1,090	1,780	1,620	2,000	7,060
Paint	2000	82	156	255	232	286	1,011
Reinforcing Steel	1000	0	0	17	17	17	51
Tying Wire	1200	0	0	0	0	0	0
Equivalent Royalty	250	370	737	866	980	1,043	3,996

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

PROV : KALIMANTAN TIMUR KAB : KUTAI

(1000 Rp)

I T E M	UNIT	(1988)	(1989)	(1990)	(1991)	(1992)	(TOTAL)
EQUIPMENT :		186,323	414,755	481,414	546,679	525,375	2,154,546
Bulldozer/Ripper	16676	4,467	14,366	15,502	21,923	28,425	84,683
Swamp Bulldozer	12241	1,575	979	6,116	8,508	10,750	27,928
Motor Grader	14168	19,073	44,490	34,667	37,694	36,372	172,296
Hand-guide Vib. Roller	1608	816	1,599	4,119	5,602	8,274	20,410
Tire Roller	11649	15,549	35,188	28,586	27,837	18,762	125,922
Vibratory Roller (D&T)	7045	5,280	11,949	11,298	14,492	16,139	59,158
Hydraulic Excavator; Wheel	13462	7,875	6,057	50,482	57,287	31,754	153,455
Wheel Loader	17329	25,441	60,766	63,582	75,790	81,857	307,444
Water Tank Truck	4288	2,209	4,643	4,897	5,937	6,478	24,164
Dump Truck	5779	68,131	156,264	183,353	213,633	215,610	836,991
Flat Bed Truck with Crane	5372	4,168	5,484	12,801	12,978	17,186	52,617
Flat Bed Truck	3664	11,296	23,351	23,709	24,387	22,730	105,472
Portable Crusher/Screening	45755	17,775	44,528	37,116	35,907	27,219	162,545
Concrete Mixer	8773	865	649	1,790	1,219	1,718	6,241
Water Pump	508	40	30	83	56	79	288
Concrete Vibrator	342	14	10	29	18	26	97
Asphalt Sprayer	2068	1,749	4,402	3,285	3,403	1,996	14,835
LABOUR :		49,901	95,698	147,237	164,641	187,027	644,504
Mandor	2500	4,533	8,313	13,402	14,914	16,893	58,055
Skilled Labourer	2000	3,430	4,623	15,404	20,224	30,443	74,124
Carpenter	2500	1,365	621	7,841	10,507	17,301	37,635
Mason	2500	240	180	496	352	496	1,764
Labourer	1500	26,332	51,597	74,165	78,047	81,156	311,297
Driver	3000	8,703	19,228	22,613	25,718	26,155	102,417
Operator	3500	5,298	11,136	13,316	14,879	14,583	59,212
MATERIAL :		138,791	309,858	295,137	302,304	249,266	1,295,356
Bitumen	400	80,478	203,704	158,102	156,680	86,882	685,846
Asphalt Oil	600	17,447	44,137	31,459	35,550	23,749	152,342
Kerosene	250	10,204	25,826	19,287	20,305	12,361	87,983
Sand	8000	5,175	10,477	10,735	11,179	10,847	48,413
Cement	4500	2,863	2,147	5,933	3,823	5,389	20,155
River Stone	15000	1,440	1,080	2,976	2,113	2,980	10,589
Steel Moulds	8000	1,920	1,440	3,968	2,356	3,355	13,039
Timber	100000	4,820	2,160	28,230	38,020	62,660	135,890
Paint	2000	692	331	4,335	5,887	9,712	20,957
Reinforcing Steel	1900	7,656	5,742	15,839	9,793	13,868	52,898
Tying Wire	1200	83	62	172	106	150	573
Equivalent Royalty	250	6,013	12,752	14,101	16,492	17,313	66,671

Appendix A-6 QUANTITIES OF BRIDGE ON PROPOSED ROAD LINKS

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO	BRIDGE NAME	Km	From	<< TYPE >> (EXIST)	(NEW)	DESIGN LOAD	SPAN CLASS	LENGTH (m)	SPAN NO (no)	SPAN LENGTH (m)	WIDTH (m)	AREA (EXIST) (m2)	AREA (NEW) (m2)	PIER (no)	ABUT (no)	ROAD CLASS
1	KERAH	1	LAJN	LL				4.00	2	2.00	3.70	14.80		1	2	IIIA
	MITAH	3	LAJN	KK	TM	BM50	(B)	12.50	3	4.17	4.00	28.75	50.00	2	2	
	N.I	3	LAJN	KK	TM	BM50	(B)	4.20	1	4.20	4.00	10.50	16.80	0	2	
3	N.I	0	**	LL				7.00	1	7.00	6.00	42.00		0	2	IIIA
	N.I	2	TGRG	KK				3.00	3	1.00	5.00	15.00		2	2	
	N.I	2	TGRG	KB				3.00	3	1.00	5.00	15.00		2	2	
	N.I	2	TGRG	KB				4.00	3	1.33	5.00	20.00		2	2	
	N.I	2	TGRG	KB				3.00	3	1.00	3.00	9.00		2	2	
	N.I	2	TGRG	KK				3.00	3	1.00	5.00	15.00		2	2	
	MANGKURAWANG	3	TGRG	KK				30.00	7	4.29	4.50	135.00		6	2	
	N.I	4	TGRG	KK				4.00	2	2.00	5.00	20.00		1	2	
	N.I	8	TGRG	KK				2.00	2	1.00	5.00	10.00		1	2	
	N.I	8	TGRG	KK				5.00	2	2.50	5.00	25.00		1	2	
	N.I	9	TGRG	KB				5.00	2	2.50	4.00	20.00		1	2	
	N.I	9	TGRG	KK				2.00	2	1.00	5.00	10.00		1	2	
	N.I	9	TGRG	KK				10.00	4	2.50	4.00	40.00		3	2	
	N.I	10	TGRG	KK				5.00	4	1.25	4.00	20.00		3	2	
39	RADEN BARON	2	**	KK				25.40	2	12.70	4.00	101.60		1	2	IIIA
42	BEKOTOK	3	**	KK				3.00	1	3.00	4.00	12.00		0	2	IIIB-2
	LEMAS	3	BKTK	KK				3.00	1	3.00	4.00	12.00		0	2	
	BEKOTOK	2	BKTK	KK				5.50	3	1.83	5.00	27.50		2	2	
	BEKOTOK	1	BKTK	KK				4.00	3	1.33	4.00	16.00		2	2	
49	N.I	4	**	KK	TM	10T	(A)	3.00	1	3.00	4.00	12.00	12.00	0	2	IIIB-2
	N.I	4	GGNK	KK				3.50	1	3.50	4.00	14.00		0	2	
	N.I	5	GGNK	KK				5.00	1	5.00	4.00	20.00		0	2	
	N.I	5	GGNK	KK				2.00	1	2.00	4.00	8.00		0	2	
51	LOA GELAN	53	**	KK				6.00	3	2.00	4.00	24.00		2	2	IIIA
	LAA GELAP	54	LARY	--	TM	BM50	(B)	10.00	2	5.00	4.00	0.00	40.00	1	2	

Appendix A-7 CONSTRUCTION AND MAINTENANCE COST OF BRIDGES ON PROPOSED ROAD LINKS

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINE NO : 1 (LIA) LENGTH : 2 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Superstructure (Timber;Span 3m;10T)	m2	0.00	38,480	2,998	0	0	0
Superstructure (Timber;Span 5m;10T)	m2	0.00	42,622	3,311	0	0	0
Superstructure (Timber;Span 8m;10T)	m2	0.00	56,454	4,351	0	0	0
Superstructure (Timber;Span 3m;BM50)	m2	0.00	47,713	3,707	0	0	0
Superstructure (Timber;Span 5m;BM50)	m2	66.80	52,089	4,019	3,479,545	268,469	3,748,014
Superstructure (Timber;Span 8m;BM50)	m2	0.00	66,063	5,088	0	0	0
Superstructure (Concrete;Span 3m;BM50)	m2	0.00	44,804	105,767	0	0	0
Superstructure (Concrete;Span 5m;BM50)	m2	0.00	46,108	118,299	0	0	0
Superstructure (Concrete;Span 8m;BM50)	m2	0.00	47,568	128,919	0	0	0
Superstructure (Concrete;Span10m;BM50)	m2	0.00	52,059	146,517	0	0	0
Superstructure (Concrete;Span15m;BM50)	m2	0.00	56,260	172,712	0	0	0
Substructure (Pier;for Timber;10T)	NO	0.00	335,202	27,724	0	0	0
Substructure (Abut;for Timber;10T)	NO	0.00	947,708	136,771	0	0	0
Substructure (Pier;for Timber;BM50)	NO	2.00	492,985	41,015	985,970	82,030	1,068,000
Substructure (Abut;for Timber;BM50)	NO	4.00	1,066,758	151,014	4,267,032	604,056	4,871,088
Substructure (Pier;for Concrete;BM50)	NO	0.00	2,060,372	467,275	0	0	0
Substructure (Abut;for Concrete;BM50)	NO	0.00	4,152,360	982,926	0	0	0
Desolition of Bridge (Timber->Timber)	m2	39.25	10,841	1,195	425,509	46,903	472,412
Desolition of Bridge (Timber->Concrete)	m2	0.00	10,841	1,195	0	0	0
Desolition of Bridge (Concrete)	m2	0.00	89,220	79,820	0	0	0
Maintenance of Timber Bridge (New)	m2	66.80	7,234	1,009	483,231	67,401	550,632
Maintenance of Concrete Bridge (New)	m2	0.00	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	14.80	7,746	2,347	114,640	34,735	149,375
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,491	2,443	0	0	0
(Without Overhead)	TOTAL COST (Timber Bridge)				9,158,056	1,001,458	10,159,514
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				9,158,056	1,001,458	10,159,514
(Overhead : 15%)	TOTAL COST (Timber Bridge)				10,531,764	1,151,677	11,683,441
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				10,531,764	1,151,677	11,683,441

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 3 (IIIA) LENGTH : 10 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Superstructure (Timber;Span 3m;10T)	m2	0.00	38,480	2,998	0	0	0
Superstructure (Timber;Span 5m;10T)	m2	0.00	42,622	3,311	0	0	0
Superstructure (Timber;Span 8m;10T)	m2	0.00	56,454	4,351	0	0	0
Superstructure (Timber;Span 3m;BM50)	m2	0.00	47,713	3,707	0	0	0
Superstructure (Timber;Span 5m;BM50)	m2	0.00	52,089	4,019	0	0	0
Superstructure (Timber;Span 8m;BM50)	m2	0.00	66,063	5,088	0	0	0
Superstructure (Concrete;Span 3m;BM50)	m2	0.00	44,804	105,767	0	0	0
Superstructure (Concrete;Span 5m;BM50)	m2	0.00	46,108	118,299	0	0	0
Superstructure (Concrete;Span 8m;BM50)	m2	0.00	47,568	128,919	0	0	0
Superstructure (Concrete;Span10m;BM50)	m2	0.00	52,059	146,517	0	0	0
Superstructure (Concrete;Span15m;BM50)	m2	0.00	56,260	172,712	0	0	0
Substructure (Pier;for Timber;10T)	NO	0.00	335,202	27,724	0	0	0
Substructure (Abut;for Timber;10T)	NO	0.00	947,708	136,771	0	0	0
Substructure (Pier;for Timber;BM50)	NO	0.00	492,985	41,015	0	0	0
Substructure (Abut;for Timber;BM50)	NO	0.00	1,066,758	151,014	0	0	0
Substructure (Pier;for Concrete;BM50)	NO	0.00	2,060,372	467,275	0	0	0
Substructure (Abut;for Concrete;BM50)	NO	0.00	4,152,360	982,926	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,841	1,195	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,841	1,195	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	89,220	79,820	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	7,234	1,009	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	332.00	7,746	2,347	2,571,672	779,204	3,350,876
Maintenance of Concrete Bridge (Exist)	m2	64.00	4,491	2,443	287,424	156,352	443,776
(Without Overhead)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0
(Overhead : 15%)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINE NO : 39 (IIIA) LENGTH : 6 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Superstructure (Timber;Span 3m;10T)	m2	0.00	38,480	2,998	0	0	0
Superstructure (Timber;Span 5m;10T)	m2	0.00	42,622	3,311	0	0	0
Superstructure (Timber;Span 8m;10T)	m2	0.00	56,454	4,351	0	0	0
Superstructure (Timber;Span 3m;BM50)	m2	0.00	47,713	3,707	0	0	0
Superstructure (Timber;Span 5m;BM50)	m2	0.00	52,089	4,019	0	0	0
Superstructure (Timber;Span 8m;BM50)	m2	0.00	66,063	5,088	0	0	0
Superstructure (Concrete;Span 3m;BM50)	m2	0.00	44,804	105,767	0	0	0
Superstructure (Concrete;Span 5m;BM50)	m2	0.00	46,108	118,299	0	0	0
Superstructure (Concrete;Span 8m;BM50)	m2	0.00	47,568	128,919	0	0	0
Superstructure (Concrete;Span10m;BM50)	m2	0.00	52,059	146,517	0	0	0
Superstructure (Concrete;Span15m;BM50)	m2	0.00	56,260	172,712	0	0	0
Substructure (Pier;for Timber;10T)	NO	0.00	335,202	27,724	0	0	0
Substructure (Abut;for Timber;10T)	NO	0.00	947,708	136,771	0	0	0
Substructure (Pier;for Timber;BM50)	NO	0.00	492,985	41,015	0	0	0
Substructure (Abut;for Timber;BM50)	NO	0.00	1,066,758	151,014	0	0	0
Substructure (Pier;for Concrete;BM50)	NO	0.00	2,060,372	467,275	0	0	0
Substructure (Abut;for Concrete;BM50)	NO	0.00	4,152,360	982,926	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,841	1,195	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,841	1,195	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	89,220	79,820	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	7,234	1,009	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	101.60	7,746	2,347	786,993	238,455	1,025,448
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,491	2,443	0	0	0
(Without Overhead)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0
(Overhead : 15%)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 42 (IIIB-2) LENGTH : 3 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	TOTAL >>>>>>
Superstructure (Timber;Span 3m;10T)	m2	0.00	38,480	2,998	0	0	0
Superstructure (Timber;Span 5m;10T)	m2	0.00	42,672	3,311	0	0	0
Superstructure (Timber;Span 8m;10T)	m2	0.00	56,454	4,351	0	0	0
Superstructure (Timber;Span 3m;BM50)	m2	0.00	47,713	3,707	0	0	0
Superstructure (Timber;Span 5m;BM50)	m2	0.00	52,089	4,019	0	0	0
Superstructure (Timber;Span 8m;BM50)	m2	0.00	66,063	5,080	0	0	0
Superstructure (Concrete;Span 3m;BM50)	m2	0.00	44,804	105,767	0	0	0
Superstructure (Concrete;Span 5m;BM50)	m2	0.00	46,108	118,299	0	0	0
Superstructure (Concrete;Span 8m;BM50)	m2	0.00	47,568	128,919	0	0	0
Superstructure (Concrete;Span10m;BM50)	m2	0.00	52,059	146,517	0	0	0
Superstructure (Concrete;Span15m;BM50)	m2	0.00	56,260	172,712	0	0	0
Substructure (Pier;for Timber;10T)	NO	0.00	335,202	27,724	0	0	0
Substructure (Abut;for Timber;10T)	NO	0.00	947,708	136,771	0	0	0
Substructure (Pier;for Timber;BM50)	NO	0.00	492,985	41,015	0	0	0
Substructure (Abut;for Timber;BM50)	NO	0.00	1,066,758	151,014	0	0	0
Substructure (Pier;for Concrete;BM50)	NO	0.00	2,060,372	467,275	0	0	0
Substructure (Abut;for Concrete;BM50)	NO	0.00	4,152,360	982,926	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,841	1,195	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,841	1,195	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	89,220	79,820	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	7,234	1,009	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	67.50	7,746	2,347	522,855	158,422	681,277
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,491	2,443	0	0	0
(Without Overhead)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0
(Overhead : 15%)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 49 (IIIB-2) LENGTH : 0 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Superstructure (Timber;Span 3m;10T)	m2	12.00	38,480	2,998	461,760	35,976	497,736
Superstructure (Timber;Span 5m;10T)	m2	0.00	42,622	3,311	0	0	0
Superstructure (Timber;Span 8m;10T)	m2	0.00	56,454	4,351	0	0	0
Superstructure (Timber;Span 3m;BM50)	m2	0.00	47,713	3,707	0	0	0
Superstructure (Timber;Span 5m;BM50)	m2	0.00	52,089	4,019	0	0	0
Superstructure (Timber;Span 8m;BM50)	m2	0.00	66,063	5,088	0	0	0
Superstructure (Concrete;Span 3m;BM50)	m2	0.00	44,804	105,767	0	0	0
Superstructure (Concrete;Span 5m;BM50)	m2	0.00	46,108	118,299	0	0	0
Superstructure (Concrete;Span 8m;BM50)	m2	0.00	47,568	128,919	0	0	0
Superstructure (Concrete;Span10m;BM50)	m2	0.00	52,059	146,517	0	0	0
Superstructure (Concrete;Span15m;BM50)	m2	0.00	56,260	172,712	0	0	0
Substructure (Pier;for Timber;10T)	NO	0.00	335,202	27,724	0	0	0
Substructure (Abut;for Timber;10T)	NO	2.00	947,708	136,771	1,895,416	273,542	2,168,958
Substructure (Pier;for Timber;BM50)	NO	0.00	492,985	41,015	0	0	0
Substructure (Abut;for Timber;BM50)	NO	0.00	1,066,758	151,014	0	0	0
Substructure (Pier;for Concrete;BM50)	NO	0.00	2,060,372	467,275	0	0	0
Substructure (Abut;for Concrete;BM50)	NO	0.00	4,152,360	982,926	0	0	0
Demolition of Bridge (Timber->Timber)	m2	12.00	10,841	1,195	130,092	14,340	144,432
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,841	1,195	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	89,220	79,820	0	0	0
Maintenance of Timber Bridge (New)	m2	12.00	7,234	1,009	86,808	12,108	98,916
Maintenance of Concrete Bridge (New)	m2	0.00	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	42.00	7,746	2,347	325,332	98,574	423,906
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,491	2,443	0	0	0
(Without Overhead)	TOTAL COST (Timber Bridge)				2,487,268	323,858	2,811,126
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				2,487,268	323,858	2,811,126
(Overhead : 15%)	TOTAL COST (Timber Bridge)				2,860,358	372,437	3,232,795
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				2,860,358	372,437	3,232,795

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINE NO : 51 (LUTA) LENGTH : 10 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Superstructure (Timber;Span 3m;10T)	m2	0.00	38,480	2,998	0	0	0
Superstructure (Timber;Span 5m;10T)	m2	0.00	42,622	3,311	0	0	0
Superstructure (Timber;Span 8m;10T)	m2	0.00	56,454	4,351	0	0	0
Superstructure (Timber;Span 3m;BM50)	m2	0.00	47,713	3,707	0	0	0
Superstructure (Timber;Span 5m;BM50)	m2	40.00	52,089	4,019	2,083,560	160,760	2,244,320
Superstructure (Timber;Span 8m;BM50)	m2	0.00	66,063	5,088	0	0	0
Superstructure (Concrete;Span 3m;BM50)	m2	0.00	44,804	105,767	0	0	0
Superstructure (Concrete;Span 5m;BM50)	m2	0.00	46,108	110,299	0	0	0
Superstructure (Concrete;Span 8m;BM50)	m2	0.00	47,568	120,919	0	0	0
Superstructure (Concrete;Span10m;BM50)	m2	0.00	52,059	146,517	0	0	0
Superstructure (Concrete;Span15m;BM50)	m2	0.00	56,260	172,712	0	0	0
Substructure (Pier;for Timber;10T)	NO	0.00	335,202	27,724	0	0	0
Substructure (Abut;for Timber;10T)	NO	0.00	947,708	136,771	0	0	0
Substructure (Pier;for Timber;BM50)	NO	1.00	492,985	41,015	492,985	41,015	534,000
Substructure (Abut;for Timber;BM50)	NO	2.00	1,066,758	151,014	2,133,516	302,028	2,435,544
Substructure (Pier;for Concrete;BM50)	NO	0.00	2,060,372	467,275	0	0	0
Substructure (Abut;for Concrete;BM50)	NO	0.00	4,152,360	982,926	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,841	1,195	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,841	1,195	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	89,220	79,820	0	0	0
Maintenance of Timber Bridge (New)	m2	40.00	7,234	1,009	289,360	40,360	329,720
Maintenance of Concrete Bridge (New)	m2	0.00	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	24.00	7,746	2,347	185,904	56,328	242,232
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,491	2,443	0	0	0
(Without Overhead)	TOTAL COST (Timber Bridge)				4,710,061	503,803	5,213,864
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				4,710,061	503,803	5,213,864
(Overhead : 15%)	TOTAL COST (Timber Bridge)				5,416,570	579,373	5,995,944
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				5,416,570	579,373	5,995,944

PROV : KALIMANTAN TIMUR KAB : KUTAI

LINK NO : 74 (111C) LENGTH : 23 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>> LOCAL	FOREIGN	<<<<<< COST LOCAL	FOREIGN	>>>>>> TOTAL
Superstructure (Timber;Span 3m;10T)	m2	0.00	38,480	2,998	0	0	0
Superstructure (Timber;Span 5m;10T)	m2	2000.00	42,622	3,311	85,244,000	6,622,000	91,866,000
Superstructure (Timber;Span 8m;10T)	m2	0.00	56,454	4,351	0	0	0
Superstructure (Timber;Span 3m;BM50)	m2	0.00	47,713	3,707	0	0	0
Superstructure (Timber;Span 5m;BM50)	m2	0.00	52,089	4,019	0	0	0
Superstructure (Timber;Span 8m;BM50)	m2	0.00	66,063	5,088	0	0	0
Superstructure (Concrete;Span 3m;BM50)	m2	0.00	44,804	105,767	0	0	0
Superstructure (Concrete;Span 5m;BM50)	m2	0.00	46,108	118,299	0	0	0
Superstructure (Concrete;Span 8m;BM50)	m2	0.00	47,568	128,919	0	0	0
Superstructure (Concrete;Span10m;BM50)	m2	0.00	52,059	146,517	0	0	0
Superstructure (Concrete;Span15m;BM50)	m2	0.00	56,260	172,712	0	0	0
Substructure (Pier;for Timber;10T)	NO	0.00	335,202	27,724	0	0	0
Substructure (Abut;for Timber;10T)	NO	200.00	947,708	136,771	189,541,600	27,354,200	216,895,800
Substructure (Pier;for Timber;BM50)	NO	0.00	492,985	41,015	0	0	0
Substructure (Abut;for Timber;BM50)	NO	0.00	1,066,758	151,014	0	0	0
Substructure (Pier;for Concrete;BM50)	NO	0.00	2,060,372	467,275	0	0	0
Substructure (Abut;for Concrete;BM50)	NO	0.00	4,152,360	982,926	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,841	1,195	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,841	1,195	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	89,220	79,820	0	0	0
Maintenance of Timber Bridge (New)	m2	2000.00	7,234	1,009	14,468,000	2,018,000	16,486,000
Maintenance of Concrete Bridge (New)	m2	0.00	1,812	3,001	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	7,746	2,347	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,491	2,443	0	0	0
(Without Overhead)	TOTAL COST (Timber Bridge)				274,785,600	33,976,200	308,761,800
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				274,785,600	33,976,200	308,761,800
(Overhead : 15%)	TOTAL COST (Timber Bridge)				316,003,440	39,072,630	355,076,070
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				316,003,440	39,072,630	355,076,070