REPUBLIK INDONESIA
DEPARTEMEN PEKERJAAN UMUM
DIREKTORAT JENDERAL BINA MARGA

PDAAL 876

PROJECT CODE

LUWU ROAD BETTERMENT PROJECT
SOUTH SULAWESI

SUPERVISION MONTHLY REPORT

AUGUST 1982

P.T. INDAH KARYA
CONSULTING ENGINEERS

LOUIS BERGER INTERNATIONAL INC.
CONSULTING ENGINEERS

BEST AVAILABLE COPY

CONSTRUCTION SUPERVISORY SERVICES FOR LUWU ROAD BETTERMENT PROJECT
P.T. INDAH KARYA - LOUIS BERGER INT. INC.
PROJECT OFFICES - JLN. IMAM BONJOL 8 PALOPO, BONE BONE, WALENRANG, WOTU - SOUTH SULAWESI

September 13, 1982

Ir. Harry Pondaag
Project Manager
Bina Marga
Palopo.

SUBJECT: Monthly Report August 1982
Luwu Road Betterment Project.

Dear Mr. Pondaag,

Enclosed please find sixteen copies of our monthly report covering the above subject project for the month of August 1982.

Sincerely,

P.T. INDAH KARYA/LOUIS BERGER INT.INC.

James S. Myers
Engineer-in-Charge.

JSM:slk

c.c.: File (3)

Enclosures.

P.T. INDAH KARYA - Jln. Ir. H. Juanda 63 Tlp. 58611 - 58612 - Bandung.
LOUIS BERGER INT INC, - Jln. Kemang Raya 2 Tlp. 791715 - Jakarta
- 100 Halsted Street East Orange, New Jersey 07018 USA

2

COMPOSITE REPORT NO. 47

CONSTRUCTION SUPERVISION REPORT NO. 42

LUWU ROAD BETTERMENT PROJECT

SUBMITTED BY:

JAMES S. MYERS
ENGINEER-IN-CHARGE

AUGUST - 1982

(covering period 26.07.82 to 25.08.82)

PREPARED BY: P. T. INDAH KARYA - LOUIS BERGER INT. INC.

SECTION - I

SEGMENT I : MINNA - TARENGGE

SEGMENT II : TARENGGE - ANGKONA

SEGMENT III : ANGKONA - MALILI

CONTRACTOR : P.T. SEKAYU INTERNATIONAL
SEGMENT. 1 & 2

CONTRACTOR : P.T. BUMI KARSA
SEGMENT. 3

DIRECTORATE GENERAL OF HIGHWAYS

MINISTRY OF PUBLIC WORKS

REPUBLIC OF INDONESIA

MONTHLY PROGRESS REPORT NO. 47

FOR CONSTRUCTION OF

SECTION I

OF

LUWU ROAD BETTERMENT PROJECT

AUGUST - 1982

(covering period 26.07.82 to 25.08.82)

PREPARED BY: JAMES S. MYERS
RESIDENT ENGINEER

SUPERVISION:

Consultant:	P.T. INDAH KARYA/LOUIS BERGER INT. INC.
Contract Number:	13/CTR/LN/BM/1978
Mailing Address:	Jln. Ir. H. Juanda No. 63 Bandung, Indonesia

CONSTRUCTION:	SEGMENTS 1 & 2.	SEGMENT 3.
Contractor:	P.T. SEKAYU INTERNATIONAL	P.T. BUMI KARSA
Contract Number:	07/CTR/LN/BM/78	07/CTR/LN/BM/78
Mailing Address:	P.O. Box 2045 Jakarta, Indonesia	Jln.Cokroaminoto 27 Ujung Pandang, Indonesia.

INTRODUCTION

The Luwu Road Betterment Project lies within the South Sulawesi province, having been designed to facilitate all-weather access between the townships of Palopo, Masamba, Bone Bone, Tarengge and Malili.

The total 178 kilometers, consisting of two sections contiguous to one another, is within the overall plan emcompassed for the Luwu Transmigration Project which, in addition to the road improvements envisions the supply of electrical power, establishement of farms co-operatives and construction of irrigation schemes, all of which are intended to facilitate the transmigration and resettlement programs being undertaken by the Government of Indonesia.

Financing the project is being undertaken by the Government of Indonesia with assistance from the United States Government under USAID loan no. 497 - T - 038.

Section I of the project approximates 78 kilometers in length. Beginning at Minna, within the township of Bone Bone, it traverses through the town of Wotu and ends in the township of Malili.

Section II of this project commences in the town of Palopo, connects up with the town of Masamba and terminates at Minna.

Both sections are routed over existing alignments previously established by Dutch Colonialists many years ago and for the main part traverse rice paddies reclaimed from swamps and other low lying forested terrain.

The original design of the project was undertaken on behalf of the Direktorat Jenderal Bina Marga in 1974 by P.T. Indah Karya a local firm incorporated within Indonesia. Documentation was completed in 1976.

With the intent to further Indonesia Contractor capability, only local firms were invited to participate in the tenders. Bids were opened in October, 1977. P.T. Sekayu International were awarded the contract for Section I and P.T. Pembangunan Jaya won the contract for Section II.

In 1978, prior to the onset of construction activities, the services of Louis Berger International Inc. were obtained to assist P.T. Indah Karya with the project's supervision.

As well as being engaged in supervision, the joint Consultant team has been engaged in the detailed redesign of the whole project alignment and most of the originally documented bridges.

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1. ..... PROJECT DESCRIPTION

DATA

Road Length	78 km.
Foreign Aid Loan Agency:	USAID
DIP Number:	04.1.03.472350.21.05.19
Original Contract Amount:	Rp. 3,123,740,492
Revised Contract Estimate:	Rp. 3,355,363,751
Contract Invitation to Bid:	July 9, 1977
Contract Bid Opening:	October 4, 1977
Contract Signed:	May 24, 1978
Notice to Proceed:	June 12, 1978
Contract Accomplished To-Date: as per monthly Certificates (1)	74.4
Original Contract Time:	1,095 days
Original Contract Time Used Up To-Date:	1.529 days
Contract Extension Approved: (Addendum No. 5)	312 days
Revised Contract Time Used Up To-Date:	108.67 %

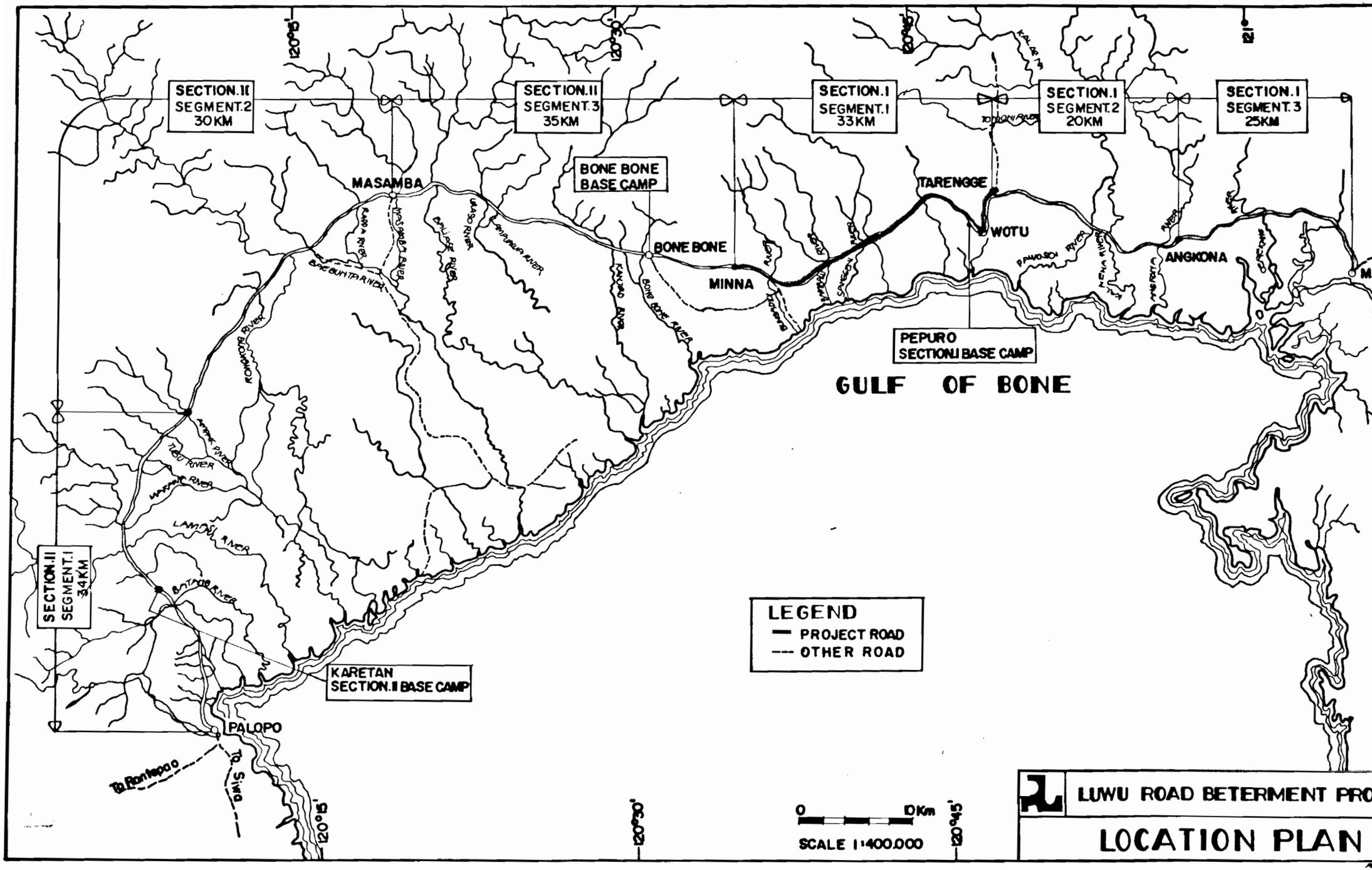
NOTE: (1) Percentage includes materials on site but not price escalation, etc., and is calculated on cumulative monetary value divided by the original contract amount.
Monthly certificates currently overestimate the quantity of subbase. Contract accomplished to-date based on value of work actually in place is 57.9 % of the revised estimate amount. Figures donot include bridge work by P.T. Hutama Karya.

The Contract encompasses Section I of the Luwu Betterment Project and thus forms part of the Luwu Transmigration Project in South Sulawesi. The roadworks under this Contract begin at Minna and proceed via Wotu to Malili, a distance of 78 km. Under Bina Marga's optimization plans put into effect on this project during early August 1980, the new road will have a 4.5 m. width wearing surface to Malili with the thickness of the asphalt concrete being reduced from 5 to 4 cm. overlying a 10 cm. crushed granular base which, in turn, is to be placed over a variable depth selected subbase.

The alignment follows an existing road through both rolling and flat/ swampy terrain. Although there are not large cuts involved, extensive filling is required to raise and widen the existing road bed.

Under an agreement made on 22 October 1981, responsibility for the construction of the 25 km. long Segment 3 has been handed over from P.T. Sekayu Int. to P.T. Bumi Karsa.

The construction of five steel truss bridges in Segments 2 & 3 has also been cut from Sekayu's contract and has now been formally awarded to P.T. Hutama Karya. Both new contractors have started work.


SECTION.II
SEGMENT.2
30KM
SECTION.II
SEGMENT.3
35KM
SECTION.I
SEGMENT.1
33KM
SECTION.I
SEGMENT.2
20KM
SECTION.I
SEGMENT.3
25KM
SECTION.II
SEGMENT.1
34KM
MASAMBA
BONE BONE
BASE CAMP
BONE BONE
MINNA
TARENGGE
WOTU
ANGKONA
PEPURO
SECTION.I BASE CAMP
KARETAN
SECTION.II BASE CAMP
PALOPO
GULF OF BONE
To Rantepao
To Siwa
LEGEND
PROJECT ROAD
OTHER ROAD
0
10Km
SCALE 1:400,000
LUWU ROAD BETERMENT PRO
LOCATION PLAN

3.A. ..... CONTRACTOR'S EQUIPMENT - P.T. SEKAYU INT.

TYPE OF EQUIPMENT	SIZE OR CAPACITY	MANUFACTURER & MODEL	AVERAGE NO. OF UNITS FOR PERIOD: REVISED SCHEDULE IN OPERATING CONDITION (1)	ACTUAL NUMBER ON SITE (2)	ACTUAL NUMBER IN OPERATING CONDITION (3)	CHANGE IN (3) FROM LAST PERIOD (4)	ACTUAL NUMBER OPERATING (5)
Bulldozer	155 HP	Komatsu D60E	-	3	-	-	-
Bulldozer	75 HP	Cat. D4E	-	1	-	-	-
Bulldozer	180 HP	Cat. D7F	-	2	-	-	-
Bulldozer	270 HP	Cat. D8H	-	1	0.5	-	-
SUB-TOTAL BULLDOZER			4	7	0.5	-	-
Wheel Loader	2.5 m^3	Fiat Allis	-	2	0.2	(-0.8)	0.1
Wheel Loader	1.2 m^3	Kobe LK 300	-	1	1	-	0.3
Wheel Loader	1.5 m^3	Fiat Allis 545	-	1	-	-	-
Wheel Loader	3.5 m^3	Cat. 966 C	-	3	0.8	-	0.2
Track Loader	1.8 m^3	Komatsu D 60 S	-	1	-	-	-
SUB-TOTAL LOADERS			5	8	2	(-0.8)	0.6
Motor Grader	125 HP	Fiat Allis	-	1	-	-	-
Motor Grader	180 HP	Cat. 12 E	-	1	-	-	-
Motor Grader	125 HP	Komatsu GD 37	-	2	0.2	(-0.8)	0.1
SUB-TOTAL MOTOR GRADERS			4	4	0.2	(-0.8)	0.1
Rollers:-							
Towed vib pad	5 T	Dynapac CF 47	-	1	1.0	-	-
SP vib flat	11 T	Ferguson 75 B	-	1	-	-	-
Pneumatic	8.5 T	Sakai TS 7409	-	1	1.0	-	-
SPvib pad ft	11 T	Dynapac 25 PB	-	1	-	-	-
Tree Wheel	10 T	Sakai 155 C	-	1	1.0	-	-
SP vib flat	9 T	Dynapac SA 25	-	1	1.0	-	0.2
Tandem	10-12 T	Sakai 155 C	-	1	1	-	-
Tandem	10-14 T	Ferguson	-	1	1	-	-
SUB-TOTAL ROLLERS			6	8	6	-	0.2
Dump truck	5 T	Hino KL 321	--	27	1	---	0.2
Dump truck	7 T	Mercedes	21	13	5	---	1
Dump truck	5 T	Izusu	2	10	4	(+1.0)	0.8
Dump truck	3 T	Izusu	16	18	4	(-2.0)	1
SUB-TOTAL DUMP TRUCKS			39	68	14	(-1.0)	3.0

TYPE OF EQUIPMENT	SIZE OR CAPACITY	MANUFACTURER & MODEL	AVERAGE NO. OF UNITS FOR PERIOD: REVISED SCHEDULE IN OPERATING CONDITION (1)	ACTUAL NUMBER ON SITE (2)	ACTUAL NUMBER IN OPERATING CONDITION (3)	CHANGE IN (3) FROM LAST PERIOD (4)	ACTUAL NUMBER OPERATING (5)
Flat bd truck	5-7 T	Various	1	4	1	-	-
Water tanker	5,000 L	Marcedes	3	3	1	(-1.0)	-
Lube truck	3 T	--	-	-	-	-	-
Fuel tanker	5,000 L	Mercedes	1	1	1	-	0.3
Pickup & jeep	--	Various	5	7	3.0	-	3
Crush jaw&rol	30 tph	Lippman & C100	-	-	-	-	-
Crus jaw only	30 tph	Lippman & C100	-	-	-	-	-
Distributor	3,800 L	Etnyre	1	1	1	-	-
Distributor	600 L	Tabaka	-	1	-	-	-
AMP	60 tph	Ermont 13	1	1	1	-	-
AC paver	--	Nigata	1	1	1	-	-
Crane	20 T	Little Giant	1	1	1	-	-
Pile driver	8 T	Kobe	-	-	-	-	-
Excavator	0.5 m^3	--	-	-	-	-	-
Tractor	77 HP	Ford	-	1	-	-	-
Conc, mixer	250 L	Various	3	5	2	-	-
Conc. mixer	600 L	Various	3	3	1	-	-
Concrete vib.	--	Mikasa	4	6	4	-	-
Hand stamper	3 HP	Various	5	4	-	-	-
Hand roller	2 T	Mikasa	2	2	2	-	0.4
Water pump	2"-4"	Various	6	10	5	-	-
Fuel pump	2"-4"	Various	3	1	1	-	-
Aircompressor	365 cfm	Worthington	1	2	1.0	-	-
Generating st	160 KVA	Caterpillar	1	1	1	-	-
Generating st	50 KVA	Bukh	1	1	1	-	-
Generating st	5-10 KVA	YabmarFarryman	5	8	6	-	-
Generating st	1 KVA	Kawasaki	1	1	1	-	-
Elec weld set	250-400A	Various	2	5	2	-	5
Oxy weld set	--	Various	2	1	1	-	1
Chainsaw	--	Various	2	3	1	-	-
Motorcycle	--	Various	5	3	2	-	-
Speedboat	120 HP	--	1	1	1	-	-
Steam cleaner	--	Clayton	1	1	1	-	-
Lethe machine			1	-	-	-	-
Prs drill mac			1	-	-	-	-
Radio unit			2	2	1	-	1
Photocopier			1	1	1.0	-	1.0
Mainten truck			1	-	-	-	-
Tire shop			1	1	1	-	1

3.8. ..... CONTRACTOR'S EQUIPMENT .T. BUMI KARSA

TYPE OF EQUIPMENT	SIZE CAPACITY OR	MANUFACTURER	AVERAGE FOR MONTH		
			NUMBER SCHEDULED IN OPERATING CONDITION	ACTUAL NUMBER ON SITE	ACTUAL NUMBER OPERATING
Bulldozer	D 7	Caterpillar	1	1	0.5
Bulldozer	D 6	"	1	1	0.5
Bulldoz.+Ripper	D 8	"	1	-	-
Wheel Loader	LK 300	Kobe	4	2	1.7
Grader	120 HP	Caterpillar	1	1	0.8
Grader	125 HP	Fiat Allis	1	1	0
Vib.Flat Roller	--	Bomag	2	1	0.7
3 Wheel Roller	--	"	1	-	-
Dump Trucks	7 T	Toyota	17	16	10
Excavator	0.45 M3	Niko	1	1	0
Crusher	40 Tph	--	1	1	-
Generator	150 KVA	--	1	0.5	0.5
Generator	5 KVA	Yanmar	2	2	2
Welding Set	250 A	Kubota	1	1	0.5
Water Pump	6 "	Kawamoto	2	2	0.5
Water Pump	3 "	Kawamoto	2	2	0.5
Concrete Mixer	250 L	Gloria	4	4	-
Conc. Vibrator	1¼ L	Mikasa	4	4	-
Stamper	--	Mikasa	2	2	0.5
Pick-Up/Jeep	--	Toyota	4	4	2.8
Motorcycle	100 CC	Yamaha	3	3	3

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4. ..... PERSONNEL [illegible] JECT.

4.1. ..... ENGINEER'S PERSONNEL FOR S[illegible]N I, SEGMENT 1 & 2

POSITION	NO. OF PERSO[illegible]	REMARKS
Resident Engineer	1	J.S. Myers (Expatriate)
Asst. R.E. Road	1	Rochadi Rahardjo
Asst. R.E. Sr & A.	1	Masyur Suryason
Site Inspector	2	
Asst. Q'ty Surveyor	1	
Asst. Adm. Officer	1	
Typist	1	
Lab. Technician	1	
Chainman	1	
Drivers	4	
Labourer	1	
T O T A L	15	

4.1.a. ..... ENGINEER'S PERSONNEL FOR SECTION I, SEGMENT 3

POSITION	NO. OF PERSONS		REMARKS
Resident Engineer	1		M.J. Nicholls (Expatriate)
Asst. Res. Eng'r	1		Maman Adriant
Site Inspector	2	(-1)	Including Yunior Inspector
Surveyor	1		
Draftsman	1		
Lab. Technician	2		Including Asst.Lab. Techn.
Clerk	1		
Chainman	1		
Driver	1		
Labourers	3		
T O T A L	14	(-1)	

4.1.b. ..... ENGINEER'S ADMINISTRATION CENTRAL TEAM AT BONE - BONE PROVIDING OVERALL SUPERVISION & SUPPORT FOR BOTH CONTRACTORS

POSITION	NO. OF PERSONS	REMARKS
Engineer-In-Charge	1	J.S. Myers (Expatriate)
Deputy Engineer-In-Charge	1	Haryanto Harin
Soils/Materials Engineer	1	Ernie Arevalo (Expatriate)
Bridge Engineer	-	
Asst. Bridge Engineer	-	
Quantity Surveyor	1	Handono
Administrator	1	Dimmer M.
Bridge Inspector	3	Humam A.L./Agus Hermadi Anwar Bachsam
Clerks & Typist	2	
Drivers	4	
Labourers	10	
T O T A L	24	

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4. ..... PERSONNEL ON PROJECT

4.2.A. ..... CONTRACTOR'S PERSONNEL (P.T. SEKAYU INT.)

POSITION	NUMBER OF PERSONS Per Revised Schedule	On-Site Average For Mo.		REMARKS (On-Site No.Change from last Month)
Managers & Superintendents				
Project Manager	1	1		Adolfo P. Lizaso
Deputy Project Manager	1	-	(-1)	Suntiono Wibowo
Road Superintendents	1	-		
Project Engineer (Supt.)	1	-	(-1)	
Bridge Superintendent	1	-		
Paving Superintendent	-	-		
Plant & Equip. Supt.	-	-		
Project Finance Supt.	1	1		
Project Admin. Supt.	1	1		
SUBTOTAL	7	3	(-2)	
Supervisors				
Road Supervisor	-	2		
Bridge Supervisor	-	1.5	(-0.50)	
Plant & Equip. Supervisor	--	-		
Materials Engineer	-	1		
Chief Surveyor	-	-		
Personnel Officer	-	1		
Accountant	-	-		
Warehouse Supervisor	-	1		
SUBTOTAL	11	6.50	(-0.50)	
Foreman & Asst. Foreman				
Bridge Foreman	-	2	(+0.50)	
Asst. Bridge Foreman	-	0.75	(-0.25)	
Road Foreman	-	-		
Asst. Road Foreman	-	2		
Surveyor	-	0.25	(-0.75)	
Asst. Surveyor	-	0.50	(-1.50)	
Quarry Foreman	-	-		
Foreman Driver	-	-	(-1)	
SUBTOTAL	20	5.50	(- 3.0)	

4. ..... PERSONNEL ON PROJECT

4.2.A. ..... CONTRACTOR'S PERSONNEL, Contd. (P.T. SEKAYU INT.)

POSITION	NUMBER OF PERSONS		REMARKS
	Per Revised Schedule	On-Site Average For Mo.	(On-Site No.Change from last Month)
Operators & Drivers			
Heavy Equip. Operator	24	13.75	(+3.25)
Driver	51	26.50	(-1.50)
SUBTOTAL	75	40.25	(+1.75)
Mechanics (Skilled)			
Class I Mechanic	--	4	--
Class II Mechanic	--	4	(-1. 0)
Electrical Mechanic	--	2	--
Welder - P&E Dept.	--	3	--
SUBTOTAL	25	13	(-1.0)
Lab., Techs., Instrument-Men, Draftsmen & Estimators			
Lab. Technician	--	4	--
Intrumentman	--	2	(-1. 0)
Draftsman/Estimator	--	1	(-1. 0)
SUBTOTAL	22	7	(-2)
Clerks			
Tool Keeper	--	1	
Time Keeper	--	1	
Clerk	--	12	(-5. 0)
Cheker	--	2	
SUBTOTAL	22	16	(-5. 0)
Security/Camp Maintenance	40	28	--
Guards & Attendants	12	4	(-4. 0)
SUBTOTAL	52	32	(-4. 0)

4. ..... PERSONNEL ON PROJECT

4.2.A. ..... CONTRACTOR'S PERSONNEL, Contd. (P.T. SEKAYU INT.)

POSITION	NUMBER OF PERSONS		REMARKS
	Per Revised Schedule	On-Site Average for Mo.	(On-Site No.Change from last Month).
Skilled Labour			
Bridge Dept.	--	5	(-2.50)
Road Dept.	--	5	(-1. 0)
P&E Dept. (Oilmen, Electn. & Cl. III Mech.)	--	8	(-1. 0)
Survey	--	3	(-1. 0)
SUBTOTAL	75	21	(-5.50)
Unskilled Labour			
Bridge Dept.	--	16.25	(-2.25)
Road Dept.	--	4.25	(-7.75)
Survey	--	5	--
SUBTOTAL	165	25.50	(-10,0)
TOTAL - ALL PERSONNEL	474	169.75	(-30.25)

4. ..... PERSONNEL ON PROJECT.

4.2.8. ..... CONTRACTOR'S PERSONNEL -- (P.T. BUMI KARSA).

POSITION	NUMBER OF PERSONS: PER - JUNE '82 SCHEDULE	NUMBER OF PERSONS: ACTUAL ON SITE (AVERAGE FOR PERIOD)	REMARKS (CHANGE FROM LAST MONTH)
MANAGERS & SUPERINTENDENTS:			
Project Manager	1	0.9	D. Ghosh (Expatriate)
Asst. Project Manager	1	1.0	Ir. Gantohe
Civil Works Superintendent	1	1.0	Irwan Sani
Mechanical "	1	0	
Gen. Affairs "	1	1.0	Andi Makaraeng
Finance "	1	1.0	Mansyur Nonci
Logistic "	1	1.0	M. Najib
SUB - TOTAL	7	5.9	(+0.7)
SUPERVISORS:			
Civil Works Supervisor	1	0	-
Chief Mecha. "	1	1	Yunus Bungin
Crusher Plat "	1	1	Abidin
Logistics "	1	1	Suleman Dewan
Prime "	0	0	-
AC Paving "	0	0	-
A M P "	1	0	-
SUB - TOTAL	5	3	(+0.9)
Foreman	14	3	-
Operator	17	11	-
Drivers	40	24	-
Skilled Mechanics	9	6	-
Laboratory Technicians	2	0	(-1)
Surveyors	2	2	-
Clerks	9	9	-
Guards	7	7	-
Camp Service	2	2	-
Skilled Labour	36	13	-
Unskilled Labours	139	31	-
SUB - TOTAL	277	108	(-1)
TOTAL ALL PERSONNEL	289	116.9	--

Worked full period - 2 shifts for hauling.-

5. . . . MONTHLY CERTIFICATE DETAILS : PERIOD . 26/07/'82 to 25/08/ 1982.

FOR MONITORING PURPOSES ONLY

SECTION. I : MINNA - MALILI

SEGMENTS. 1 & 2 : MINNA — ANGKONA : 53 KM : P.T. SEKAYU. INT : MC No. . .47. . .

SEGMENT. 3 : ANGKONA — MALILI : 25 KM : P.T. BUMI KARSA : MC No. . . .9. . .

		SEGMENTS 1 & 2 (P.T. SEKAYU)	SEGMENT. 3 P.T. BUMI KARSA (& P.T. SEKAYU. INT)	TOTAL FOR SECTION. I
REVISED CONTRACT ESTIMATE ➡		2,482,604,417	819,410,734	3,302,015,151
	WORK DESCRIPTION	AMOUNT PAID TO DATE		Rp.
1	GENERAL	372,789,834	70,489,923	443,279,757
2	DRAINAGE	41,365,421	2,556,200	43,921,621
3	EARTHWORKS, SUBGRADE & SUBBASE	837,324,010*	137,446,799*	974,770,809*
4	SHOULDERS & BASE	121,268,736	-0-	121,268,736
5	WEARING COURSE	353,278,305	-0-	353,278,305
6	STRUCTURES	179,094,623	-0-	179,094,623
7	MISCELLANEOUS	33,125,499	720,021	33,845,520
8	DAYWORKS & CONTINGENCIES	35,408,906	-0-	35,408,906
TOTAL SUM OF WORK COMPLETED TO DATE		1,973,655,334*	211,212,943*	2,184,868,277*
MATERIALS ON SITE		124,983,228	12,751,095	137,734,323
GROSS SUM OF MONTHLY CERTIFICATE		2,098,638,562*	223,964,038*	2,322,602,600*
DEDUCTIONS :				
1	Previous Monthly Payments	1,584,383,939	174,989,096*	1,759,373,035
2	10 % Retention	209,863,856	22,396,404*	232,260,260
3	Repayment of Advance	304,390,767	8,787,248*	313,178,015
TOTAL SUM OF DEDUCTIONS		2,098,638,562	206,172,746*	2,304,811,308
NET SUM OF MONTHLY CERTIFICATES		-0-	17,791,290	17,791,290
PERCENTAGE ACHIEVED * (Of revised contract estimate & excluding materials on site)	TO DATE :	79.5	25.8 ‡	66.2
	TO PREVIOUS MONTH :	79.4	23.5 ‡	65.6
	FOR THE PERIOD	0.1	2.3	0.6

* Includes overpayment of Subbase = Rp.243,537,796,-

‡ Allows for Rp 43,936,238 paid to P.T. Sekayu for work done in Seg. 3 before Oct. 81

CONTRACTORS ADVANCE: (Paid to P.T Sekayu.Int,only)		DATE	% CONTRACT	AMOU
Addendum	No. I	2"April 1979	15 %	Rp 468,461,0
Addendum	No. IV	31"March 1981	5 %	Rp 156,287,03
		TOTAL	20 %	Rp 62[illegible]

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LUWU ROAD BETTERMENT PROJECT — MONTHLY CERTIFICATE NO: 47

SECTION I MINNA - MALILI — 26th July 1982 to 25th August 1982

Pay Item No.	Item Description	Unit	CURRENT CONTRACT REVISED (MARCH 1981) Unit Price	Quantity	Amount Rupiah	THIS PERIOD Quantity	Amount Rupiah	TOTAL TO-DATE Quantity	Amount Rupiah	% Rev.
1.18	Maint. & Protection of Traffic	LS	--	--	106,369,744	--	--	--	79,054,770	74.3
1.19	Mobilization	LS	--	--	420,311,498	--	23,201	--	293,735,064	69.9
	SUBTOTAL "GENERAL"				526,681,242	--	23.201	--	372,789,834	70.8
2.04(3)a	Reinforced Conc. Pipe Ø 60 cm	M	11,631	642	7,467,102	--	--	642	7,467,102	
			22,300	54	1,204,300	--	--	24	535,200	95.7
2.04(3)b	Reinforced Conc. Pipe Ø 80 cm	M	21,806	245	5,342,470	--	--	245	5,342,470	
			34,820	397	13,823,540	--	--	402	13,997,640	100.8
2.04(3)c	Reinforced Conc. Pipe Ø 100 cm	M	37,392	202	7,553,184	--	--	202	7,553,184	
			47,225	127	5,997,575	--	--	137	6,469,825	103.0
2.04(3)d	Reinforced Conc. Pipe Ø 120 cm	M	--	--	--	--	--	--	---	--
	SUBTOTAL "DRAINAGE"				41,388,071	--	--	--	41,365,421	99.9
3.03(1)	C & G Rubber for.	M2	1.1x23*	26,675	674,878	--	--	26,675	613,525	100.0
3.03(2)	C & G Jungle Veg.	M2	1.1x33*	260,410	9,452,883	--	--	229,105	7,560,465	88.0
3.03(3)	C & G in Sparse Veg.	M2	27	356,178	9,616,806	--	--	356,178	9,616,806	
			35	384,197	13,446,895	--	--	360,468	12,616,380	96.8
	CARRIED FORWARD		--	--	33,191,462	--	--	--	30,407,176	--

* 10% increase due to quantity <80% of original (progress unit rate held at original rate pending completion.)

LUWU ROAD BETTERMENT PROJECT MONTHLY CERTIFICATE NO: 47

SECTION I MINNA-MALILI 26th July 1982 25th August 1982

Pay Item No.	Item Description	Unit	CURRENT CONTRACT REVISED (MARCH 1981)			THIS PERIOD		TOTAL TO-DATE		
			Unit Price	Quantity	Amount Rupiah	Quantity	Amount Rupiah	Quantity	Amount Rupiah	% Rev.
	BROUGHT FORWARD		--	--	33,191,462	--	---	--	30,407,176	--
3.04	Common Excavation	M3	361	112,200	40,504,200	--	---	90,886	32,809,846	81.0
3.05	Rock Excavation	M3	1.10x893*	800	785,840	--	---	--	--	--
3.06(1)	Str. Excavation up to 2 M	M3	1,192	4,342	5,175,664	--	---	4,342	5,175,664	--
			3,645	5,158	18,800,910	--	---	3,924	14,302,980	87.0
3.06(3)	Str. Excavation (additional over 2 M)	M3	1.10x527*	1,000	579,700	--	---	--	--	--
3.06(5)	Str. Excavation (add. Water Pres.)	M3	1,147	3,175	3,641,725	--	---	1,992	2,284,824	62.7
3.06(6)	Shoring & Cribbing	LS	--	--	24,896,406	--	---	--	24,829,122	91.0
3.08(1)	Embankment from Common or Borrow	M3	1,520	176,486	27,293,838	--	---	176,486	268,258,720	
			1,699	79,514	135,094,286	--	---	28,079	47,706,221	79.9
3.08(3)	Embankment from Str. Excavation	M3	--	--	--	--	---	--	--	--
3.08(5)	Comp. Foundation of Embankment	M3	38	18,455	701,290	--	---	18,455	701,290	
			56	280,345	15,699,320	--	---	262,530	14,701,680	94.0
3.08(6)	Embankment in Swamp from Borrow	M3	1.1x1342*	42,500	62,738,500	--	---	14,942	20,052,164	35.2
3.09(1)	Demolition Masonary or Concrete	M3	2,723	40	108,920	--	---	24	65,352	22.9
	CARRIED FORWARD		--	--	610,176,943	--	---	--	461,295,039	--

* 10% increase due to quantity <80% of original (progress unit rate at original rate pending completion.)

LUWU ROAD BETTERMENT PROJECT — MONTHLY CERTIFICATE NO: 47

SECTION I MINNA - MALILI — 26th July 1982 to 25th August 1982

Pay Item No.	Item Description	Unit	CURRENT CONTRACT REVISED (MARCH 1981) Unit Price	Quantity	Amount Rupiah	THIS PERIOD Quantity	Amount Rupiah	TOTAL TO-DATE Quantity	Amount Rupiah	% Rev.
	BROUGHT FORWARD		--	--	610,176,943	--	--	--	461,295,039	--
3.09(4)	Demolition of Wooden Bridges	M2	2,312	975	2,254,200	--	--	783	1,810,296	80.3
4.01	Subgrade Prep. in Earth Cut	M2	48	23,904	1,147,392	--	--	23,904	1,147,392	--
			87	17,296	1,504,752	--	--	5,009	435,783	70.2
6.01(3)	Subbase Course Class "C"	M3	--	--	--	--	--	102,796	372,635,500	185.2(1)
6.01(3)R	Subbase Course Class C-Revised	M3	3,181	55,500	176,545,500	--	--	(40,584)	(129,097,704)	73.1(2)
	SUBTOTAL "EARTHWORKS, SUBGRADE & SUBBASE"					--	--	--	837,324,010	105.5(1)
					794,026,219	--	--	--	(593,786,214)	74.8(2)
5.01	Shoulders	M3	--	--	--	--	--	--	---	--
5.01 R	Shoulders-Revised	M3	8,886	2,030	18,038,580	7	62,202	84	746,424	4.1
6.02(2)	Base Course Class "B"	M3	4,936	34,400	169,798,400	107	528,152	24,417	120,522,312	71.0
	SUBTOTAL "SHOULDERS&BASE"		--	--	187,836,980	--	590,354	--	121,268,736	64.6
7.01(1)	Prime Coat	M2	171	267,600	45,759,600	928	158,688	186,357	31,867,047	69.6
7.01(2)	7.01(1) Adjustment Add. or Subtract	M2	14	(-)535,200	(-) 7,492,800	(-)3,148	(-)44,072	(-)501,070	(-)7,014,980	93.6
7.03(1)	Asphaltic Concrete	MT	19,927	22,900	410,528,300	--	--	17,386	311,678,822	75.9
7.03(2)	7.03(1) Adjustment Add. or Subtract	MT	168	(+)114,500	(+)19,236,000	--	--	99,687	16,747,416	87.1
	CARRIED FORWARD				468,031,100	--	114,616	--	353,278,305	--

(1) As per monthly certificates but overpaid. (2) Actual progress.

LUWU ROAD BETTERMENT PROJECT — MONTHLY CERTIFICATE NO: 47

SECTION I MINNA - MALILI — 26th July 1982 to 25th August 1982

Pay Item No.	Item Description	Unit	CURRENT CONTRACT REVISED (MARCH 1981) Unit Price	Quantity	Amount Rupiah	THIS PERIOD Quantity	Amount Rupiah	TOTAL TO-DATE Quantity	Amount Rupiah	% Rev.
	BROUGHT FORWARD		--	--	468,031,100	--	114,616	--	353,278,305	--
7.04(a)	Pentn. Macadam	M2	--	--	--	--	--	--	--	--
7.04(d)	Asphalt Painting	M2	--	--	--	--	--	--	--	--
	SUBTOTAL "WEARING COURSE"				468,031,100	--	114,616	--	353,278,305	75.5
8.01(1)aa	Concrete Class A in Foundation	M3	38,840	37	1,437,080	--	--	37	1,437,080	}
			47,798	856	40,915,088	--	--	679	32,454,842	} 80.2
8.01(1)ab	Concrete Class A in Elevation	M3	63,552	1,247	79,249,344	--	--	879	55,862,208	70.5
8.01(1)b	Concrete Class AA	M3	83,719	251	21,013,469	--	--	--	--	--
8.01(3)a	Concrete Class B in Foundation	M3	1.10x34261*	100	3,768,710	--	--	56	1,918,616	56.0
8.01(5)a	Cyclopean Concrete in Foundation	M3	1.10x19700	54	1,170,180	--	--	2	39,400	3.7
8.01(6)a	Falsework 0-10 M	M2	--	--	--	--	--	--	--	--
8.01(6)b	Falsework 10-15 M	M2	--	--	--	--	--	--	--	--
8.01(6)c	Falsework 15-20 M	M2	--	--	--	--	--	--	--	--
8.01(6)e	Falsework 30-40 M	M2	--	--	--	--	--	--	--	--
8.02(2)	Treated Timber Piles - Furnished	M3	--	--	--	--	--	--	--	--
	CARRIED FORWARD				147,553,871	--	--	--	91,712,146	--

* 10% increase due to quantity <80% of original (progress unit rate held at original rate pending completion.)

L U W U R O A D B E T T E R M E N T P R O J E C T M O N T H L Y C E R T I F I C A T E N O: 47

S E C T I O N I M I N N A - M A L I L I 26th July 1982 to 25th August 1982

Pay Item No.	Item Description	Unit	CURRENT CONTRACT REVISED (MARCH 1981)			THIS PERIOD		TOTAL TO-DATE		
			Unit Price	Quantity	Amount Rupiah	Quantity	Amount Rupiah	Quantity	Amount Rupiah	% Rev.
	BROUGHT FORWARD		--	--	147,553,871	--	--	--	91,712,146	--
8.02(3)	Welded Splices for RC Piles	EA	73,593	100	7,359,300	--	--	98	7,212,114	98.0%
8.02(4)	Precast RC Piles - Furnished	M3	87,991	281	24,702,991	--	--	281	24,702,991	100.0
8.02(11)	Treated Timber Piles Driven	LM	--	--	--	--	--	--	--	--
8.02(13)	Precast RC Piles Driven	LM	7,356	2,300	16,918,800	--	--	1,285	9,452,460	55.9
8.03	Reinforcing Steel	Kg	229	308,200	70,577,800	--	--	186,778	42,772,162	60.6
8.03(1)	Pile Shoes	EA	29,750	110	3,272,500	--	--	109	3,242,750	99.1
8.03(5)	Pile Load Test	EA	2,567,000	3	7,701,000	--	--	--	--	--
8.04(1)	Struct. Steel Furnish & Earth	Kg	---	--	--	--	--	--	--	--
8.04(3)	Bearing Pads	EA	1.10x72721	108	8,639,255	--	--	--	--	--
8.05(2)	Treated Timber & Preservative	M3	--	--	--	--	--	--	--	--
	SUBTOTAL "STRUCTURES"				286,725,517	--	--	--	179,094,623	62.5
9.02	Stone Masonary	M3	21,439	345	7,396,455	--	--	365	7,825,235	105.8
9.02(a)	Plastering Stone Masonary	M2	4,152	400	1,660,800	--	--	440	1,826,880	110.0
9.02(b)	Bedding for RCBC Conc. In Foundation	M2	2,342	3,300	7,728,600	--	--	3,002	7,030,684	91.0
	CARRIED FORWARD		--	--	16,785,855	--	0	--	16,682,799	--

* 10% increase due to quantity <80% of original (progress unit rate held at original rate pending completion.)

LUWU ROAD BETTERMENT PROJECT — MONTHLY CERTIFICATE NO: 47

SECTION I MINNA - MALILI — 26th July 1982 to 25th August 1982

Pay Item No.	Item Description	Unit	CURRENT CONTRACT REVISED (MARCH 1981) Unit Price	Quantity	Amount Rupiah	THIS PERIOD Quantity	Amount Rupiah	TOTAL TO-DATE Quantity	Amount Rupiah	% Rev.
	BROUGHT FORWARD		--	--	16,785,855	--	0	--	16,682,799	--
9.04(1)	Grouted Rubble Paved Waterway	M2	13,465	3,300	44,434,500	45	605,925	1,220	16,427,300	37.0
9.09	Treated Wood Guard Rail	LM	--	--	--	--	--	--	--	--
9.11(1)	R.O.W. Monuments	EA	2,848	217	618,016	--	--	--	--	--
9.11(3)	Kilometer Posts	EA	9,792	54	528,768	--	--	--	--	--
9.11(4)	Hectometer Posts	EA	--	--	--	--	--	--	--	--
9.11(6)	Traffic Signs	EA	10,490	108	1,132,920	--	--	--	--	--
9.14	Bridge Joints	LM	39,697	70	2,778,790	--	--	--	--	--
9.17	Sodding	M2	1.10x280*	10,000	3,080,000	--	--	55	15,400	0.6
9.18(1)	Concrete Bridge Railing	LM	23,239	210	4,880,190	--	--	--	--	--
	SUBTOTAL "MISCELLANEOUS"		--	--	74,239,039	--	605,925	--	33,125,499	44.6
	Dayworks and Contingencies	LS	--	--	103,676,249	--	--	--	35,408,906	34.2
	TOTAL (excluding Materials on Site)		--	--	2,482,604,417	--	1,334,096	--	1,973,655,334	79.5(1)
						--	(1,334,096)	--	(1,730,117,538)	69.7(2)
	MATERIALS ON SITE (Refer Sheet 7 of 7)		--	--	--	--	481,096	--	124,983,228	--
	T O T A L		--	--	2,482,604,417	--	830,000	--	2,098,638,562	84.5(1)
						--	(853,000)	--	(1,855,100,766)	74.7(2)

SUBBASE OVERPAYMENT : 243,537,796,-

(1) As per monthly certificates but overpaid. (2) Actual progress.

* 10% increase due to quantity <80% of original (progress rate held at original rate pending completion.)

LUWU ROAD BETTERMENT PROJECT
SECTION I MINNA-MALILI

MONTHLY CERTIFICATE NO.: 47
26th July 1982 to 25th August 1982

Pay Item No.	Item Description	Unit	CURRENT CONTRACT REVISED Unit Price	THIS PERIOD Quantity	THIS PERIOD Amount	TOTAL TO-DATE Quantity	TOTAL TO-DATE Amount	% Rev.
	MATERIALS ON SITE							
6.02(2)	Base Course Class B	CuM	3,229.18	(-) 131.0	(-) 423,022.58	13,327	43,035,281.86	--
8.03	Reinforcing Steel	Kg	160.30	(-) 0.01	(-) 1.42	118,098.87	18,931,249.26	--
62	Cut-Back Asp.(MC70)	MT	95,200.00	(-) 0.61	(-) 58,072.00	26. 8	2,551,360.00	--
63	Asphalt Cement (85/100)	MT	121,856.00	(-) ---	---	390.95	47,639,603.20	--
64	Portland Cement	MT	42,840.00	---	---	0.00	0.00	--
79	Course Aggregate for Conc. Class A	CuM	3,229.18	---	---	904.00	2,919,178.72	--
82	Agg. for Wear. Course	CuM	2,430.46	---	---	4,076.00	9,906,554.96	--
	SUBTOTAL "MATERIALS ON SITE"		---	---	(-) 481,096.00	---	124,983,228.00	--

6.8. ..... ESTIMATES FOR SECT. I - SECT. 3 Sheet : 1 of 6

LUWU ROAD BETTERMENT PROJECT — MONTHLY CERTIFICATE NO.: 9

SECTION I MINNA-MALILI — 26th July 1982 to 25th August 1982

Pay Item No.	Item Description	Unit	CURRENT CONTRACT REVISED (MARCH 1981)			THIS PERIOD		TOTAL TO-DATE		
			Unit Price	Quantity	Amount Rupiah	Quantity	Amount Rupiah	Quantity	Amount Rupiah	% Rev.
1.18	Maint. & Protection of Traffic	LS	--	--	5,000,000	--	65,025	--	13,764,500	275.3
1.19	Mobilization	LS	--	--	100,600,000	--	471,461	--	56,725,425	56.4
	SUBTOTAL "GENERAL"		--	--	105,600,000	--	536,486	--	70,489,923	66,8
2.04(3)a	Reinforced Conc. Pipe Ø 60 cm	M	22,300	74	1,650,200	--	--	4	89,200	5.4
2.04(3)b	Reinforced Conc. Pipe Ø 80 cm	M	34,820	378	13,161,960	16	557,120	60	2,089,200	1.6
2.04(3)c	Reinforced Conc. Pipe Ø 100 cm	M	47,225	161	7,603,225	8	377,800	8	377,800	5.0
	SUBTOTAL "DRAINAGE"		--	--	22,415,385	--	934,920	--	2,556,200	11.4
3.03(2)	C & G Jungle Veg.	M2	1.1x33*	57,590	2,090,517	--	--	69,190	2,019,270	106.3
3.03(3)	C & G in spare veg.	M2	35	106,625	3,734,875	--	--	105,045	3,676,575	98.5
	CARRIED FORWARD		--	--	5,822,392	--	--	--	5,695,845	--

* 10% increase due to quantity <80% of original (progress unit rate held at original rate pending completion.)

(1) Include payment to P.T. Sekayu before October 1981.

LUWU ROAD BETTERMENT PROJECT MONTHLY CERTIFICATE NO.: 9

SECTION I MINNA-MALILI 26th July 1982 to 25th August 1982

Pay Item No.	Item Description	Unit	CURRENT CONTRACT REVISED (MARCH 1981)			THIS PERIOD		TOTAL TO-DATE		
			Unit Price	Quantity	Amount Rupiah	Quantity	Amount Amount	Quantity	Amount Amount	% Rev.
	BROUGHT FORWARD		--	--	5,822,392	--	--	--	5,695,845	--
3.04	Common Excavation	M3	361	27,300	9,855,300	3,237	1,168,557	16,638	6,006,318	60.9
3.05	Rock Excavation	M3	1.10x893*	1,200	1,178,760	--	--	--	--	--
3.06(1)	Str. Excavation up to 2 M	M3	3,645	2,500	9,112,500	27	98,415	69	251,505	2.8
3.06(5)	Str. Excavation (add. water pres.)	M3	1,147	1,325	1,519,775	32	36,704	65	74,555	4.9
3.06(6)	Shoring & Cribbing	LS	--	--	11,088,121	--	--	--	1,169,736	10.5
3.08(1)	Embankment from Common or Borrow	M3	1,520	5,782	8,788,640	--	--	5,782	8,788,640	100.0
			1,699	70,218	119,300,382	9,010	15,307,990	67,774	115,148,026	96.5(1)
3.08(5)	Comp. Foundation of Embankment	M3	56	50,500	2,828,000	--	--	5,263	294,728	10.4(1)
3.08(6)	Embankment in Swamp from Borrow	M3	1.1x1342*	19,500	28,785,900	--	--	13	17,446	0.1(1)
3.09(1)	Demolition Masonary or Concrete	M3	2,723	65	176,995	--	--	--	--	--
	CARRIED FORWARD		--	--	198,456,765	--	16,611,666	--	137,446,799	--

* 10% increase due to quantity < 80% of original (progress unit rate held at original rate pending completion.)

(1) Include payment to P.T. Sekayu before October 1981.

L U W U R O A D B E T T E R M E N T P R O J E C T — M O N T H L Y C E R T I F I C A T E N O.: 9

S E C T I O N I M I N N A - M A L I L I — 26th July 1982 to 25th August 1982

Pay Item No.	Item Description	Unit	CURRENT CONTRACT REVISED (MARCH 1981) Unit Price	Quantity	Amount Rupiah	THIS PERIOD Quantity	Amount Rupiah	TOTAL TO-DATE Quantity	Amount Rupiah	% Rev.
	BROUGHT FORWARD		--	--	198,456,765	--	16,611,666	--	137,446,799	--
3.09(4)	Demolition of Wooden Bridges	M2	2,312	625	1,445,000	--	--	--	--	--
4.01	Subgrade Prep. in Earth Cut	M2	87	28,200	2,453,400	--	--	--	--	--
6.01(3)R	Subbase Course Class C-Revised	M3	3,181	26,500	84,296,500	--	--	--	--	--
	SUBTOTAL "EARTH WORKS, SUBGRADE & SUBBASE"		--	--	286,651,665	--	16,611,666	--	137,446,799	47.9
6.01R	Shoulders - Revised	M3	8,886	970	8,619,420	--	--	--	--	--
6.02(2)	Base Course Class "B"	M3	4,936	16,600	81,937,600	--	--	--	--	--
	SUBTOTAL "SHOULDERS&BASE"		--	--	90,557,020	--	0	--	0	--
7.01(1)	Prime Coat	M2	171	126,400	21,614,400	--	--	--	--	--
7.01(2)	7.01(1) Adjustment Add or Subtract	M2	14	(-)252,800	(-)3,539,200	--	--	--	--	--
7.03(1)	Asphalt Concrete	MT	17,927	10,800	193,611,600	--	--	--	--	--
7.03(2)	7.03(1) Adjustment Add or Subtract	MT	168	(+) 54,000	(+)9,072,000	--	--	--	--	--
	CARRIED FORWARD		--	--	220,758,800	--	0	--	0	--

L U W U R O A D B E T T E R M E N T P R O J E C T — M O N T H L Y C E R T I F I C A T E N O.: 9

S E C T I O N I M I N N A - M A L I L I — 26th July 1982 to 25th August 1982

Pay Item No.	Item Description	Unit	CURRENT CONTRACT REVISED (MARCH 1981) Unit Price	Quantity	Amount Rupiah	THIS PERIOD Quantity	Amount Rupiah	TOTAL TO-DATE Quantity	Amount Rupiah	% Rev.
	BROUGHT FORWARD		--	--	220,758,800	--	--	--	--	--
	SUBTOTAL "WEARING COURSE"		--	--	220,758,800	--	--	--	--	--
8.01(1)aa	Concrete Class A in Foundation	M3	47,798	166	7,934,468	--	--	--	--	--
8.01(1)ab	Concrete Class A in Elevation	M3	63,552	321	20,400,192	--	--	--	--	--
8.03	Reinforcing Steel	Kg	229	49,800	11,404,200	--	--	--	--	--
	JRES"		--	--	39,738,860	--	--	--	--	--
9.02	Stone Masonary	M3	21,439	220	4,716,580	9	192,951	27	578,853	12.3
9.02(a)	Plastering Stone Masonary	M2	4,152	300	1,245,600	11	45,672	34	141,168	11.3
9.02(b)	Bedding for RCBC Conc. in Foundation	M2	2,342	700	1,639,580	--	--	--	--	--
	CARRIED FORWARD		--	--	7,601,580	--	238,623	--	720,021	--

* 10% increase due to quantity < 80% of original (progress unit rate held at original rate pending completion.)

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L U W U R O A D B E T T E R M E N T P R O J E C T M O N T H L Y C E R T I F I C A T E N O.: 9

S E C T I O N I M I N N A - M A L I L I 26th July 1982 to 25th August 1982

Pay Item No.	Item Description	Unit	CURRENT CONTRACT REVISED (MARCH 1981)			THIS PERIOD		TOTAL TO-DATE		
			Unit Price	Quantity	Amount Rupiah	Quantity	Amount Rupiah	Quantity	Amount Rupiah	% Rev.
	BROUGHT FORWARD		--	--	7,610,580	--	238,623	--	720,021	--
9.04(1)	Grouted Rubble Paved Waterway	M2	13,465	1,000	13,465,000	--	--	--	--	--
9.11(1)	R.O.W. Monuments	EA	2,848	101	287,648	--	--	--	--	--
9.11(3)	Kilometer Posts	EA	9,792	25	244,800	--	--	--	--	--
9.11(6)	Traffic Signs	EA	10,490	49	514,010	--	--	--	--	--
9.17	Sodding	M2	1.10x280*	5,000	1,540,000	--	--	--	--	--
	SUBTOTAL "MISCELLANEOUS"		--	--	23,653,038	--	238,623	--	720,021	3.0
	Dayworks and Contingenties	LS	--	--	30,035,966	--	--	--	--	--
	TOTAL (excluding materials on site)		--	--	819,410,734	--	18,321,695	--	211,212,943	25.8
	MATERIALS ON SITE (refer Sheet 6 of 6)		--	--	--	--	1,446,405	--	12,751,095	--
	T O T A L		--	--	819,410,734	--	19,768,100	--	223,964,038	--

* 10% increase due to quantity < 80% of original (progress rate held at original rate pending completion.)

L U W U R O A D B E T T E R M E N T P R O J E C T M O N T H L Y C E R T I F I C A T E N O.: 9

S E C T I O N I M I N N A - M A L I L I 26th July 1982 to 25th August 1982

Pay	Item Description	Unit	CURRENT CONTRACT REVISED	THIS PERIOD		TOTAL TO-DATE		
			Unit Price	Quantity	Amount	Quantity	Amount	% Rev.
	MATERIALS ON SITE							
6.02(2)	Base Course Class B	Cum	3,229.18	313	1,010,733.34	313	1,010,733.34	--
8.03	Reinforcing Steel	Kg	160.30	(+) 0.09	(+) 14.40	61,692.28	9,889,270.40	--
62	Cut-Back Asp. (MC 70)	MT	95,200.00	--	--	--	--	--
63	Asphalt Cement (85/100)	MT	121,856.00	--	--	--	--	--
64	Portland Cement	MT	42,840.00	(-) 4.68	(-) 200,491.20	28.36	1,214,942. 4	--
79	Course Aggregate for Conc. Class A	CuM	3,229.18	197	(-) 636,148.46	197	636,148.46	--
82	Agg. for Wear. Course	CuM	2,430.46	--	--	--	--	--
	SUBTOTAL "MATERIALS ON SITE"		---	--	1,446,405	--	12,751,095	--

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Contractor : P.T SEKAYU INTERNATIONAL
Palopo - Malili Road Betterment Project

CONTRACT PAY ITEM	DESCRIPTION	ORIGINAL COS AMOUNT
1.18 ; 1.19	GENERAL	150,840.154
2.04(3)	DRAINAGE	11,789,511
3.04 ; 3.05 ; 4.01 ; 6.01(3) 3.03(1,2,3) 3.06(3)(4)	EARTH WORK - DEMOLITION SUB GRADE & SUB BASE	936,799,565
5.01 ; 6.02(2)	SHOULDER & BASE COURSE	249,496,386
7.01 ; 7.03	WEARING COURSE	69,852,131
8.01 ; 8.02 8.03 ; 8.04	STRUCTURE	411,447,067
9.02 ; 9.11 ; 9.17	MISCELLANEOUS	292,685,454
ADDENDUM . 3	DAY WORK & CONTIGENCY	—
	TOTAL	2,112,916,269
	MATERIAL ON SITE	

NOTE :
ALL AMOUNT ARE NON EXCALATED
" ZERO PRICE " Rp
VOLUME IN OCT '77

AMOUNT REFLECTS PHYSICAL PROGRESS	MONTHLY PROG
	ACCUMULATED
	ACCUMULATED
AMOUNT REFLECTS CASH FLOW	MONTHLY INVO
	ACCUMULATED
	ACCUMULATED

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PROGRE
SECTIO

INAL COST ( )		ESTIMATE REVISED CONTRACT.		TO DATE [redacted]		Schadule Actual	
1 OUNT	% TOTAL Of „A"	AMOUNT	% TOTAL Of „B"	AMOUNT	% ITEM Of „B"		JAN
50,840,154	7.1	526,681,242	21.2	[redacted]		S	67
						A	67
1,789,511	0.6	41,388,071	1.7			S	99
						A	99
5,799,565	44.1	794,026,219	32.0			S	70
						A	70
,496.386	11.8	187,836,980	7.6			S	47
						A	47
,852,131	3.3	468,031,100	18.8			S	54
						A	54
.447,067	19.4	286,725,517	11.5			S	43
						A	43
685,454	13.7	74,239,039	3.0			S	40
						A	40
–	–	103,676,249	4.2			S	34
						A	34
16,269	100	2,482,604,417	100				
							40

PROGRESS AMOUNT	EXCLUDING MATERIAL ON SITE INCLUDING POST JAN 80 SUB BASE	Rp x 10^6	S A	85 85
TED PROGRESS	EXCLUDING MATERIAL ON SITE INCLUDING POST JAN 80 SUB BASE	Rp x 10^6	S A	1485 1485
TED PROGRESS	EXCLUDING MATERIAL ON SITE INCLUDING POST JAN'80 SUB BASE	% TOTAL.B"	S A	59.8 59.8
NVOICE AMOUNT	INCLUDING MATERIAL ON SITE EXCLUDING POST JAN 80 SUB BASE	Rp x 10^6	S A	69 69
TED INVOICE	INCLUDING MATERIAL ON SITE EXCLUDING POST JAN 80 SUB BASE	Rp x 10^6	S A	1874 1874
ED INVOICE	INCLUDING MATERIAL ON SITE EXCLUDING POST JAN 80 SUB BASE	% TOTAL.B"	S A	75.5 75.5

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RESS SCHEDULE.
TION.I SEGMENT.1,2

1982

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
67 2	68 1	69 3	70 5	[illegible]	[illegible]	[illegible]	78 9	81 2	83 5
67 2	68 1	69 3	69 [illegible]	70 3	70 7	70 8	[illegible]		
99 9	99 9	99 9	99 [illegible]	100 0	100 0	100 0	100 0		
99 9	99 9	99 9	99 [illegible]	99 9	99 9	99 9	[illegible]		
70 1	70 3	71 6	73 2	76 5	80 8	84 6	89 9	93 5	96 1
70 1	70 3	71 6	72 [illegible]	[illegible]	[illegible]	74 8	[illegible]		
47 4	51 0	54 7	58 7	61 5	65 1	69 7	73 8	81 7	87 8
47 4	51 0	54 7	58 9	61 5	[illegible]	64 2	[illegible]		
54 5	59 7	64 7	69 1	71 3	73 7	76 9	80 0	84 4	90 1
54 5	59 7	64 7	68 2	71 8	[illegible]	75 5	[illegible]		
43 2	44 5	48 5	53 7	62 [illegible]	73 3	83 7	90 5	94 9	98 1
43 2	44 5	48 5	52 6	54 [illegible]	60 7	62 5	[illegible]		
40 3	41 2	41 6	42 0	43 [illegible]	47 5	53 8	60 4	68 3	77 5
40 3	41 2	41 6	42 [illegible]	42 6	43 8	43 8	[illegible]		
34 2	34 2	34 [illegible]	34 5	35 6	37 2	39 2	41 6	44 4	49 [illegible]
34 2	34 2	34 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		

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AMOUNT (in million rupiah) AND PERCENTAGES
FOR PERIODE NUMBERS

40	41	42	43	44	45	46	47	48	49
85	46	54	63	68	102	104	105	97	93
85	46	54	48	35	47	13	[illegible]		
485	1531	1585	1648	1716	1818	1922	2027	2174	2217
485	1531	1585	1634	1668	1715	1729	[illegible]		
59.8	61.7	63.8	66.4	69.1	73.2	77.4	81.6	85.6	89.3
59.8	61.7	63.8	65.8	67.2	69.1	69.6	[illegible]		
69	123	23	49	49	66	85	68	69	67
69	123	23	24	20	31	13	[illegible]		
874	1997	2020	2069	2118	2184	2269	2337	2406	2473
874	1997	2020	2045	2064	2095	2098	[illegible]		
75.5	80.4	81.4	83.3	85.3	88.0	91.4	94.1	96.9	99.6
75.5	80.4	81.4	82.4	83.1	84.4	84.5	[illegible]		

7.A. PROGRESS SCHEDULE
SECTION. I - SEGMENT. 1&2
FOR PERIODE : [redacted]

			1983	PERCENTAGES completed of		REMARK.
OCT	NOV	DEC	JAN	Revised total	Original total	
83.5	86.5	90.0	96.0	100		
96.1	100.0			90		(1) Includes over payment of subbase.
87.8	92.4	100.0		80		(2) Includes actual estimate for subbase placed. These figures used for this schedule.
90.1	93.1	100.0		70		
98.1	99.3	100.0		60		
77.5	89.0	100.0		50		
49.3	62.4	75.0		40		
				30		
				20		
				10		
				0		

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49	50	51	52
93	95	92	32
217	2312	2404	2436
89.3	98.1	96.8	98.1
67	70	65	32
473	2543	2608	2640
99.6	102.4	105.1	106.3

SUBMITTED BY : DATE :

[signature] 11/4/82

PROJECTMANAGER P.T SEKAYU INT'L

APPROVED BY: DATE :

[signature] 4/4/82

RESIDENT ENGINEER P.T INDAH KARYA

ACCEPTED BY: DATE :

PROJECT MANAGER PPJL BINA MARGA.

35

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CONTRACTOR
P.T BUMI KARSA

CONTRACT PAY ITEM NO.	DESCRIPTION	ESTIMATED REVISED CONTRACT		TO
		AMOUNT A	%TOTAL OF A	
1.18 1.19	GENERAL	105,600,000	12,1	
2,04 (3)	DRAINAGE	22,415,385	2,57	
3.03, 3.04, 3.05, 4.01, 3.06, 3.08, 3.09, 6.01	EARTH WORK, DEMOLITION SUBGRADE & SUBBASE	340,000,265 (2)	38,95	
5.01, 6.02 (2)	SHOULDER & BASE COURSE	90, 557, 020	10.38	
7.01 , 7.03	WEARING COURSE	220,758,800	25,30	
8.01, 802, 8.03, 8.04	STRUCTURES	39,738,860	4,55	
9.04, 9.11, 9.17	MISCELLANEOUS	23,653,038	2,71	
ADENDUM 3	DAY WORK & CONTINGENCY	30.035,966	3,44	
	TOTAL	872,759,334	100	
	MATERIAL ON SITE			

ACCUMULATIVE	RATE	OF PROGRESS	S
ACCUMULATIVE	WORKS	ACCOMPLISHED	UI
DIFFERENCES			
ACCUMULATIVE	WORKS	ESTIMATED	
ACCUMULATIVE	WORKS	ACCOMPLISHED	AMOUNT
MATERIAL	ON SITE	AMOUNT	TO DATE

NOTE: 1. Above figures include Rp 43,936,238,- paid to P.T SEKAYU for earthworks in segment 3 before the October 81 handover to PT BUMI KARSA.

2. Above estimate has been increased by Rp53,348,600 to include an extra qua of 31 400 cu.m of embankment construction over and above original contra

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PROGRESS SCHEDULE

SECTION I SEGMENT 3

PALOPO - MALILI ROAD BETTERMENT PROJECT

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DATE AUG. 25-1982		S:schedule A:Actual	1981						
AMOUNT	%ITEM OF A		NOV.	DEC.	JAN.	FEB.	MAR.	APRIL	MA
70.489.925	66.8	S							
		A	0	8.4	20.1	20.[illegible]	24.7	27.0	32.3
2,556,200	1.4	S							
		A	0	0	0	0	0	0	4.1
137,446,799	[illegible]	S							
		A	12.9	12.9	16.3	17.5	20.1	23.4	26.[illegible]
[illegible]	[illegible]	S							
		A	0	0	0	0	0	0	0
[illegible]	[illegible]	S							
		A	0	0	0	0	0	0	0
[illegible]	[illegible]	S							
		A	0	0	0	0	0	0	0
720.021	[illegible]	S							
		A	0	0	0	0	0	0	1.1
[illegible]	[illegible]	S							
		A	0	0	0	0	0	0	0
211.152.076	4.2								
12.751.098									

SCHEDULE	%	S							
UP TO DATE	%	A	5.0	7.2	9.9	10.6	12.1	13.7	15.4
	%								
AMOUNT	$\times 10^6$ Rps	S							
UNT	$\times 10^6$ Rps	A	43.9	63.2	86.8	92.7	106.2	119.9	137.[illegible]
E $\times 10^6$ Rps	S / A		0	10.3	9.9	11.7	11.7	11.6	11.5

rks done -

quantity
ntract quantity

SUBMITTED BY:	DATE :	APPROV
D K Ghosh	3-7-82	
PROJECT MANAGER PT BUMI KARSA		RESIDE[illegible]

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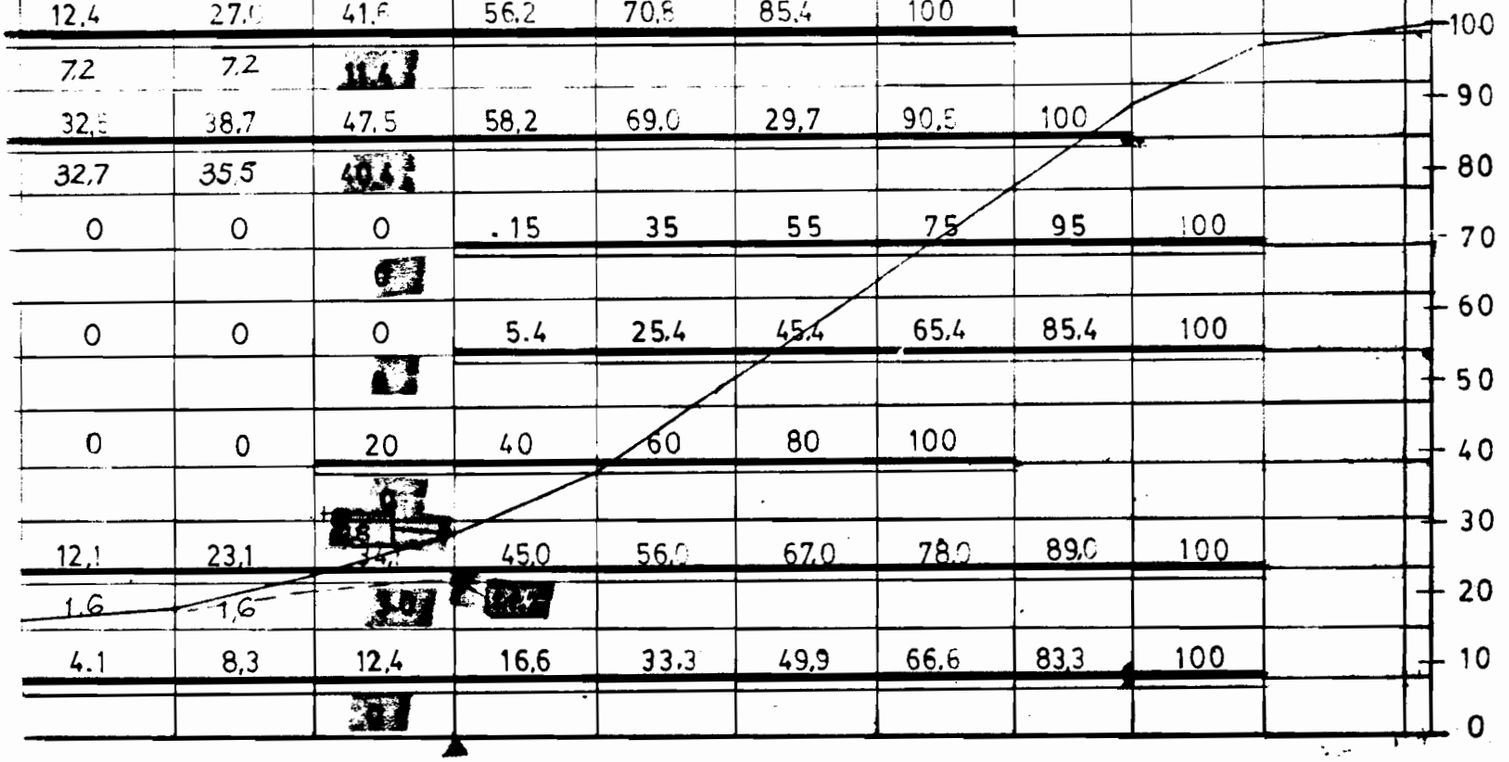
PERIOD: 26/7/1982 TO 25/8/1983

1982							1983		
JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH
33,8	49,6	49,7	49,9	50,3	50,7	51,0	51,1	75,1	100
33,5	66,2	66,8							
12,4	27,0	41,6	56,2	70,8	85,4	100			
7,2	7,2	11,4							
32,8	38,7	47,5	58,2	69,0	29,7	90,5	100		
32,7	35,5	40,8							
0	0	0	15	35	55	75	95	100	
		6,3							
0	0	0	5.4	25.4	45.4	65.4	85.4	100	
		2,1							
0	0	20	40	60	80	100			
		6,7							
12,1	23,1	34,1	45,0	56,0	67,0	78,0	89,0	100	
1,6	1,6	3,0	4,5						
4,1	8,3	12,4	16,6	33,3	49,9	66,6	83,3	100	
		1,1							



17,5	22,7	27,8	36,7	50,2	63,7	77,3	89,0	97,00	100,00
17,0	22,1	27,0							
→0,5	(-)0,6	0,8							
153,1	198,2	243,1	320,5	438,6	556,5	674,6	777,0	846,4	872,6
148,5	192,9	236,5							
11,4 11,4	15,5 39,3	41,1	110,2	94,5	78,9	46,4	17,7		

BY :	DATE :	ACCEPTED BY :	DATE :
	7/7/82		
GINER PT INDAH KARYA–LOUIS BERGER		PROJECT MANAGER P P J L BINA MARGA	

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8..... STATUS OF ADDENDA & CHANGE ORDERS

8.1..... ADDENDA

ADDENDUM NUMBER		DESCRIPTION	DATE	CONTRACT AMOUNT (Rp)			REMARKS
				Increase	Decrease	Comulative Total	
		ORIGINAL CONTRACT	24 May 1978	--	--	3,123,740,492	
1		Advance payment from 10% to 15%	2 Apr. 1979	--	--	3,123,740,492	
2		Intent to change wood Bridges to RC	2 Apr. 1979	--	--	3,123,740,492	This change now included under CO.Nos. 18,19,20 25,27,28,29 & 30.
3	(1)	Method of payment for mobilisation	Dec. 1979	--	--	3,123,740,492	
	(2)	Intent to provide expat. General Suptdt.& Mech.Supdt.	--"--	--	--	3,123,740,492	
	(3)	Allowance for dayworks	--"--	93,712,215	--	3,217,452,707	
	(4)	Allowance for camp facilities at Bone-Bone	--"--	40,000,000	--	3,257,452,707	
	(5)	Method of payment for escalation	--"--	--	--	3,257,452,707	
4		Advance payment from 15% to 20%	31 Mar. 1981	--	--	3,257,452,707	
5		312 days extension of time.(23 May'81 to 31 March 1982)	19 May 1981	--	--	3,257,452,707	
7		Allocation of remaining works in Segt.3 to P.T. Bumi Karsa	26 Oct. 1981	8,139,424	--	3,265,592,131	Increase due to adjustment of Maintenance and Mobilisation amounts only other amounts unchanged.

NOTE : ADD. No. 6 is Pending.

8. ..... STATUS OF ADDENDA & CHANGE ORDERS

8.1. ..... CHANGE ORDERS.

Change Order Number	PAY ITEMS INVOLVED		REASON FOR CHANGE	CHANGE IN CONTRACT AMOUNT Rp.		D A T E S O F	
	NUMBER	DESCRIPTION		INCREASE	DECREASE	Agreement by PT.SEKAYU INT.	Approval by BINA MARGA
1	9.11(4)	Hectometer Posts	Deletion	--	2,163,420	14-4-'80	Pending
2	6.01(3) 6.01(3) R	Subbase Class C Revised Class C Subbase	Deletion New Item	--	462,374,500	2-7-'80	"
3	1.18	Maintenance & Protec.of Traffic	Addition	92,430,000	--	7-9-'81	"
4	1.19	Mobilisation	Addition	309,711,818	--	"	"
5	2.04(3)a,b&c	RCP Ø 60, Ø 80 & Ø 100	Qty.120%	43,440,700	397,736	"	"
6	2.04(3) d	RCP Ø 120	Deletion	--	--	"	"
7	3.03(3)	C & G in Sparse vegitation	Qty.120%	17,178,700	--	"	"
8	3.06(1)	Structure excavation 2 m	Qty.120%	27,913,410	--	"	"
9	3.08(1)	Embankment common or borrow	Qty.120%	254,394,668	--	"	"
10	3.08(5)	Compactn. Embankment Foundation	Qty.120%	18,527,320	--	"	"
11	4.01	Subgrade prepn. in cut	Qty.120%	3,958,152	--	"	"
12	5.01	Shoulders	Deletion	--	137,081,850	"	"
13	5.01 R	Revised shoulders	New Item	26,658,000	--	"	"
14	7.01(1) 7.01(2)	Prime coat 1.0 kg/m2 Add or subbt. for variation	New Item	56,342,000	--	"	"
15	7.03(1) 7.03(2)	Asphaltic conct. 5% Asphalt Add or subbt. for variation	New Item	632,447,900	--	"	"
16	7.04(a)	Penetration Macadam	Deletion	--	5,082,850	"	"
17	7.04(d)	Asphalt Painting	Deletion	--	97,718,400	"	"
18	8.01(1) aa 8.01(1) ab 8.01(1) b	Conc. Cl. A in Foundation " Cl. A in Elevation " Cl. AA	Qty.120% New Item New Item	169,512,561	--	"	"

8. ..... STATUS OF ADDENDA & CHANGE ORDERS

8.2. ..... CHANGE ORDERS.

Change Order Number	PAY ITEMS INVOLVED NUMBER	DESCRIPTION	REASON FOR CHANGE	CHANGE IN CONTRACT AMOUNT Rp. INCREASE	DECREASE	DATES OF Agreement by PT.SEKAYU INT.	Approved by BINA MARGA
19	8.01(6) a 8.01(6) b 8.01(6) c 8.01(6) e	Falsework 5 - 10m span " 10 - 15m " " 15 - 20m " " 30 - 40m "	Deletion	--	41,794,620	7-9-'81	Pending
20	8.02(2) 8.02(11) 8.04(1) 8.05(2)	Timber piles, furnished Timber piles, driven Structural steel, Treated timber	Deletion	--	445,002,718	"	"
21	8.02(3)	Welded Splices - piles	New Item	7,359,300	--	"	"
22	8.03(1)	Pile shoes	New Item	3,272,500	--	"	"
23	8.03(5)	Pile load test	New Item	7,701,000	--	"	"
24	9.02(a)	Plastering stone Masonary	New Item	2,906,400	--	"	"
25	9.7	Bedding for Class A Concrete in Foundation	New Item	9,368,000	--	"	"
26	9.04(1)	Grouted Rubble Paved Waterway	New Item	57,899,500	--	"	"
27	9.09	Wood Guard Rail	Deletion	--	273,604,800	"	"
28	9.14	Bridge Joints	New Item	2,778,790	--	"	"
29	9.18(1)	Concrete Bridge Railing	New Item	2,880,190	--	"	"
30	3.06(6)	Shoring & Cribbing	Addition	6,823,459	--	"	"
		T O T A L S		1,755,504,368	1,465,220,894		
		NETT CHANGE (+) Rp.		290,283,474	(Increase)		

9. ..... SUMMARY OF CONTRACTOR'S CLAIMS (DAYWORKS & CONTINGENCIES)

SEKAYU JOB. NO.	DATE SUBMITTED	NATURE OF CLAIM	CONTRACTOR'S VALUE OF CLAIM	ENGINEER'S COMMENTS	PAYMENT DATE	PAYMENT AMOUNT
--	9.07.'79	Delay in provision of drawings	180,061,943	Contractor withdrew claim Apr.81		--
04	18.08.'79	Filling for Engineer's yard	1,216,900	Approved	2.07.80	842,587
05	10.08.'79	Drilling 6m. well Bone Bone	211,400	Approved	5.09.80	211,400
06	10.08.'79	Purchase 50 KVA Gen.Bone Bone	10,332,600	Approved	2.07.80	10,332,600
08	10.08.'79	Install 50 KVA Gen.Bone Bone	1,514,700	Approved	3.11.80	1,449,470.63
09	16.08.'79	Pressure tank and line Bone Bone	481,500	Approved	2.07.80	300,000
15	7.08.'79	Construct Kitchen Bone Bone	2,186,500	Approved	3.11.80	1,225,940.25
18	10.08.'79	Filling base camp Bone Bone	1,125,500	Approved	2.07.80	1,125,500
19	7.08.'79	Cooling tank 50-KVA Gen.	198,000	Approved	2.07.80	150,000
20	16.08.'79	Alterations Engineer's houses	1,903,600	Approved	5.09.80	1,858,000
22	4.01.'80	Install deep well Bone Bone	12,358,000	Quoted price Approved	2.07.80	8,750,000
23	26.08.'80	Reconstr.4pcs.60cm. pipe, Kalubu	60,000	Approved	5.09.80	60,000
25	10.08.'79	Transp. 2 ge.sets to Bone Bone	486,300	Approved	2.07.80	460,000
26	10.08.'79	Modify cooling tank Gen.Set.	242,500	Not to be paid (Contractor's responsibility)	--	--
31	18.08.'79	Appliances Engineer's houses	942,700	Approved	3.11.80	552,253
32	10.08.'79	Foundation for 130 KVA Gen.Bone2	893,200	Approved	2.07.80	690,500
54	15.10.'79	Plumbing Engineer's houses	132,135	Approved	2.07.80	132,135
55	4.01.'80	Install 130 KVA Ge. Bone Bone	2,299,110	Approved	3.11.80	500,000
61	24.11.'79	Appliances Engineer's houses	872,045	Approved	2.07.80	4,945
62	4.01.'80	Cooling tank 130 KVA generator	1,275,942	Approved	2.07.80	550,000
63	5.02.'80	Constr. SSB Antenna Palopo	364,785	Not to be paid (Contractor's responsibility)	--	--
		-Carry forward-	219,159,360			29,245,330.88

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9. ..... SUMMARY OF CONTRACTOR'S CLAIMS (DAYWORKS & CONTINGENCIES) Contd.

SEKAYU JOB. NO.	DATE	NATURE OF CLAIM	CONTRACTOR'S VALUE OF CLAIM	ENGINEER'S COMMENTS	PAYMENT DATE		PAYMENT AMOUNT
		BROUGHT FORWARD	219,159,360	BROUGHT FORWARD			29,245,330.88
64	5.02.'80	Constr. SSB Antenna U.Pandang	352,992	Not to be paid (Contractor's responsibility)	--		--
66	5.02.'80	Modify cooling tank 130 KVA Gen.	160,600	Not to be paid (Included under Job. No. 62)	--		--
70 & 75	4.04.'80	Appliances, Engineer's office and house	3,040,000	Approved	2.07.'80		2,588,040
73	24.01.'80	Steam exc., Lagaego	718,600	Paid, Pay Item 3.04 MC20	--		--
77	13.02.'80	Riprap for culverts, Segt. 1	62,200	Approved	2.07.'80		62,200
78	24.06.'80	Servant's quarters for M.E.	300,000	Approved	2.07.'80		300,000
79	27.02.'80	Maintenance Lemo Road	934,800	Paid, Pay Item 3.08(6)MC21	--		--
1	29.07.'80	Ext.Elec. facilities of Engr.	1,866,376	Approved	3.11.'80		1,596,715
2	16.09.'80	Cross ditch re-installation	968,485	Approved	8.10.'80		968,485
3	10.10.'80	Cross ditch re-installation	123,070	Approved	3.11.'80		123,070
8	25.10.'80	Rental of Bone2 Lab. (Client's claim)	--	Deducted in MC25	25.10.'80	(-)	1,152,736.67
85	25.03.'81	Constr. SSB Antenna Pepuro	351,834.72	Approved	--		351,834.72
86	13.05.'81	Road Maintenance Sect.II,Segt.3	342,214	Approved	25.05.'81		342,214
87	5.08.'81	Install Sanyo Pump, Bone2 Base Camp	35,978.07	Not to be paid (Contractor's responsibility)	--		--
88	5.08.'81	Road Maintenance Sect.II,Segt.3	368,150	Approved	5.08.'81		368,150
89	22.09.'81	Maintenance of E.I.C. house	83,373	Approved	2.10.'81		83,373
90	22.09.'81	Extra haul for 1.0m RCP.	70,230	Approved	2.10.'81		70,230
91.	5.12.'81	Extra Furniture for R.E.'s office	462,000	Approved	5.12.'81		462,000
			229,400,263				35,408,906

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A. GENERAL DATA

Estimated progress on work in place (WIP) for Section I up to the end of this period is summarized below:-

	Segt. 1 & 2 P.T. SEKAYU	Segt.3 BUMI KARSA	5 Truss Bridges HUTAMA KARYA	Total all CONTRACTS
% Progress this month (1)	0.1	2.6	33	3.8
% Progress to date (1)	69.4	20.6	100	60.8
Months to complete at current rate	306	31	0	--

Note (1) Percentages are based on the revised estimate rupiah amounts for WIP; they exclude estimates and payments for Maintenance & Protection of Traffic, Mobilization and Materials on Site.

Rainfall recorded at Pepuro this period was 272 mm which is 51% higher than the average for August in this region.

B. SPECIFIC COMMENTS

P.T. Sekayu International

A small amount of money was made available to the contractor during the early part of the month to allow partial resumption of work. However within a week they were again forced to terminate all activities.

The monies promised by their main office did not arrive on the 10th of the month nor on the 20th hence at the end of the month P.T. Sekayu asked Bina Marga to take over the remaining partion of the contract. No estimate appears this month since a final one is under preparation denoting final monies owed if any to this contractor.

It should be noted that beautful construction weather amounting to close to 2 months has been allowed to pass by without any activity occuring in the swamp areas.

At this stage it is doubtfull if P.T. Jaya the contractor who assume the remainder of the contract will be able to complete embankment operations in the areas.

No work on the 3 bridges in this section's Segment 1 which had been given to P.T. Jaya on the 5th of June has as yet commenced nor has the pile driving rig's engine been replaced to allow finishing of piling for the Lepa Lepa bridge.

Minor work elements achieved up to the 16th of the month are as follows:-

--Base course constructed between Stas. 7+775 and 7+950
--Priming undertaken between Sta. 7+750 and 7+945
--Shoulder construction was undertaken between Stas. 27+975 and 29+175 L. & R. sides.

PROGRESS ON WORKS

Period: 26/07/1982---25/08/1982, P.T. Sekayu Int.

1.	Earthworks	:	--
2.	Subbase	:	--
3.	Base Course	:	107 Cu.M.
4.	Shoulder	:	7 Cu.M.
5.	Prime Coat	:	--
6.	A. C.	:	--
7.	R.C.B.C.	:	45 (G.R.P.W.)
8.	R.C.P.	:	--
9.	Pile Driven	:	--

Limit Station for Each Work Item, P.T. Sekayu Int.

Asphalt	:	--
Prime Coat	:	7+750 - 7+945
Subbase	:	--
Base	:	7+775 - 9+950
Shoulder	:	27+975 -29+175 (LT & RT)

45

P.T. Bumi Karsa failed to mobilise any additional equipment or manpower this period which will mean that they almost certainly will not meet their scheduled completion date of 1st March 1983.

The period was mainly dry with only 120 mm of rain being recorded at malili, however due to lack of resources the contractor is unable to capitalise good weather conditions.

Work Items credited for payment this period were:-

--24 Lin.M. of R.C.P. installed
--3,237 Cu.M. of common excavation
--27 Cu.M. of structure excavation
--9,010 Cu.M. of embankment from borrow
--9.0 Cu.M. of stone masonary
Materials on site credited included 313 Cu.M. of class B crushed base course and 197 Cu.M. of concrete aggregates.

The crusher commenced production on the 19th August, more that one month later than scheduled. Furthermore, daily production is only about 40 Cu.M. Whereas the schedule requires 200 Cu.M. per day. Modification of the crusher feed been will be required to obtain the required production rate.

The most serious shortfalls in the contractor's mobilisation and work performance are as follows:-

1. Mobilisation of one extra Dozer and Loader now 1½ months behind schedule has meant that the Malaulu hill quarry has not been developed and 20,000 Cu.M. of common excavation not performed.
2. Mobilisation of 2 extra Rollers now 1½ months behind schedule has meant compaction of embankment and subgrades in cut cannot keep pace with material placement and is thus restricting progress on embankment.
3. Mobilisation of AMP to site is now 2 months behind schedule. This will mean that the planned start up date for AC will be at least mid November rather than mid September as scheduled.
4. RCP installation is being done by one gang only, whereas 6 gangs were scheduled to commence on 1st July. Similiarly, RC8C construction was scheduled to commence on 1st August with 6 gangs but todate Bumi Karsa have not even organised sub-contracts, let alone started work.

Bumi Karsa now say they will mobilise a grader, an excavator, a loader and a vibrating roller from Kendari and Ujung Pandang by the end of September and will also try to rent 10 items of heavy equipment this month from the remnants of the P.T. Sekayu fleet at Wotu. If this equipment is mobilised in September and the work force on RCP and RCBC construction is also brought to scheduled strengths, Bumi Karsa could possibly complete Segment 3 in April 1983.

P. T. Hutama Karya

All work with the exception of minor punch list items and final clean up was completed this month.

11.....SUMMARY OF STATUS OF BRIDGE CONSTRUCTION.

No	Name & Location of Bridge		Length (m)x (Width)	Type	Estimated Cost (Rp x 10^6)	Date Work Began	ESTIMATED % COMPLETED/SCHEDULED								REMARKS
							Foundation		Sub Structr.		Super Structr.		Overall Complete		
							A	S	A	S	A	S	A	S	
1	Lepa-Lepa	Seg I Sta 10 + 025	24.0 (6)	2 Span RC Super.S. RC Sub-S. & piles	78.1 (3)	June 1981	72	100	-	100	-	100	27	100	Refer Note 1
2	Waemate	Seg I Sta 12 + 915	34.0 (6)	3 Span RC Super.S. RC Sub-S. & piles	96.7 (3)	April 1981	90	100	-	100	-	100	30	100	"
3	Towau	Seg I Sta 22 + 500	24.0 (6)	2 Span RC Super.S. RC Sub-S. & piles	85.0 (3)	March 1981	93	100	-	100	-	100	38	100	"
4	Pawosoi	Seg 2 Sta 10 + 575	30.5 (3.75)	1 Span Bailey truss on RC Abuts	68.5 (4)	Dec. 1981	100	100	100	100	100	100	100	100	Refer Note 2
5	Kalaena	Seg 2 Sta 12 + 272	54.9 (3.75)	2 Span Bailey truss RC Sub-S & piles	136.1 (4)	Oct. 1981	100	100	100	100	100	100	100	100	"
6	Angkona	Seg 2 Sta 19 + 275	73.2 (3.75)	3 Span truss on existing RC piers & new RC Abuts & piles	97.0 (4)	Jan. 1982	100	100	100	100	100	100	100	100	"
7	Cirekang	Seg 3 Sta 9 + 950	54.9 (3.75)	2 Span truss on existing pier & new RC Abuts & piles	102.2 (4)	Feb. 1982	100	100	100	100	100	100	100	100	"
8	U s u	Seg 3	30.5 (3.75)	1 Span truss on RC Abuts & piles	80.2 (4)	Not Started	100	100	100	100	100	100	100	100	"

Notes : 1. P.T. Sekayu Progress on foundation is for pre-casting piles only. Pile rig & hammer not yet mobilised.

2. Construction of these structures has been deleted from P.T. Sekayu contract and have been awarded to P.T. Hutama Karya

3. Prices include escalation and overheads.

4. Estimates based on contract let to P.T. Hutama Karya 5 Nov. '81 and include mobilisation costs but exclude supply & delivery costs Bailey truss component.

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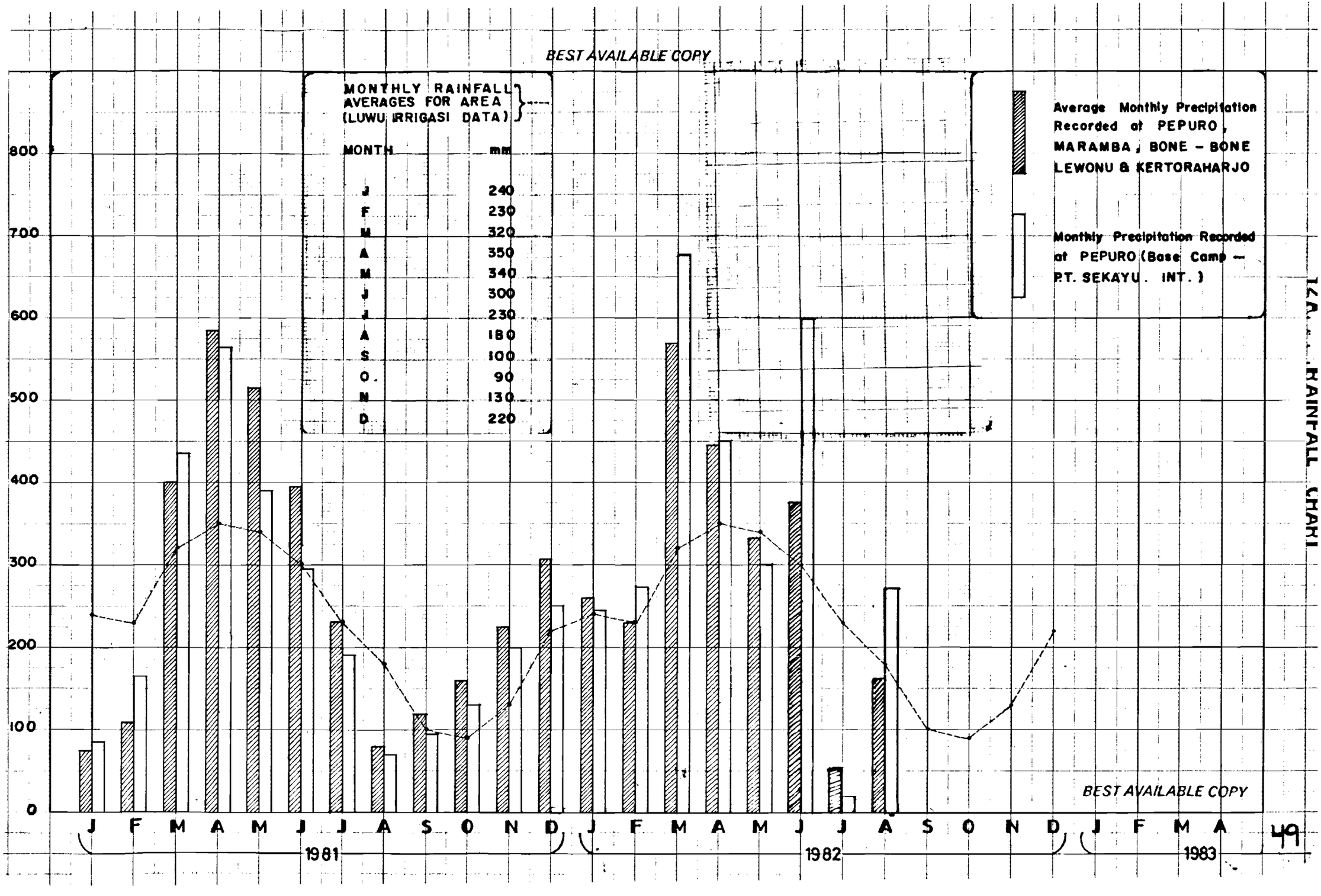

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12.8. ..... RAINFALL DATA - SEGMENT 3.

1. Rainfall recorded at Department of Aqriculture office, Malili for month of AUGUST 1982 :-

Date	mm
01	5
02	--
03	11
04	1
05	12
06	--
07	--
08	3
09	--
10	1
11	18
12	-
13	53
14	--
15	--
16	--
17	--
18	6
19	--
20	1
21	--
22	--
23	2
24	--
25	--
26	1
27	7
28	--
29	--
30	--
31	--
TOTAL	120 mm.

2. Monthly rainfall data :-

M O N T H :-		Oct '81	Nov '81	Dec '81	Jan '82	Feb '82	Mar '82	Apr '82	May '82	Jun '82	Jul '82	Aug '82	Sep '82	Oct '82	Nov '82	Dec '82
Recorded at Malili	No.of rainy days.(greater than 5 mm)	7	16	16	23	19	22	16	14	8	0	7				
	Rainfall(mm)	158	149	195	516	434	438	424	315	207	8	120				
Mean Monthly Rainfall (mm)(Luwu Irrigation Proj. data for Malili)		120	200	230	260	270	340	350	310	220	180	150	110	120	200	230

13. ..... CONSTRUCTION PROJECT IMPUT DATA SHEET

All costs expressed in million of rupiah.

1. Project ID _____ 2. Project Code _____ 3. Date August 31, 1982
4. Reporting Unit Luwu Road Betterment Project 5. Contractors P.T. Sekayu Int.+ Bumi Karsa + Hutama Karya
6. Construction Contract No. 07/CTR/LN/BM/1978 7. Consultant P.T. Indah Karya / Louis Berger International Inc.
8. Project Limits, From M i n n a 9. Project Limits, To: M a l i l i
10. Length 78 km 11. Invite Bids 09 July 1977 12. Open Bids 04 October 1977
13. Award 24 May 1978 14. Notice to Proceed 12 June 1978 15. Begin Contract Time 23 June 1978
16. Original Contract Time 1,095 days 17. Original Completion Date 22 June 1981
18. Approved Time Extensions 312 days 19. Revised Completion Date 31 March 1982
20. Days Elapsed 1,529 21. Estimated Completion Date 31 June 1982 22. Actual Completion Date _____
23. Original Contract Amount 3,123.7 24. Approved Change Orders 0
25. Certified Price Escalation 1,637.5 (up to 25/08/1982) 26. Anticipated Price Escalation 783.1
27. Materials On Site 137.7 (exclude P.T. Hutama Karya) 28. Anticipated Change Orders + 290.3
29. Value of Certified Work 2,184.8 30. Value of Scheduled Work 2,580.1
31. Advances Paid _____ 32. Advances Refunded 313.2
33. Approved Claims 0 34. Certified Interest _____
35. Net Retention Money _____ 36. Certified Currency Adjustments 0
37. Other Approved Adjustments 0 38. Other Anticipated Adjustments + 500.0 for 5 Bridges in Segt. 2 & 3 by P.T. Hutama Karya

Note: Items 39 through 44 will be calculated by the computer from the other data on this sheet.

39. Revised Contract Amount _____ 40. Probable Final Cost _____
41. Actual Percent Complete _____ 42. Schedule Percent Complete _____
43. Revised Contract Time _____ 44. Percent Time Elapsed _____
45. Lender's Share _____ %

* Include 243.5 overpayment of Subbase; net actual value of work = 1941.3 .-

SECTION - II

SEGMENT I : PALOPO - SALUAMPAK

SEGMENT II : SALUAMPAK - MASAMBA

SEGMENT III : MASAMBA - MINNA

PREPARED BY : ALFRED L. FOUST
RESIDENT ENGINEER

CONTRACTOR : P.T. PEMBANGUNAN JAYA

DIRECTORATE GENERAL OF HIGHWAYS

MINISTRY OF PUBLIC WORKS

REPUBLIC OF INDONESIA

COMPOSITE REPORT NO.48

MONTHLY PROGRESS REPORT NO.42

SECTION II

C O N S T R U C T I O N

O F

LUWU ROAD & BRIDGES BETTERMENT PROJECT

AUG. 1982

SUPERVISION:

CONSULTANT : P.T. INDAH KARYA-LOUIS BERGER INT.,INC.

CONTRACT : 13/CTR/LN/BM/79

MAILING ADDRESS: MR. JAMES S. MYERS, E.I.C
LOUIS BERGER INT,INC.
JALAN IMAM BONJOL NO. 8
PALOPO, SOUTH SULAWESI

CONSTRUCTION :

CONTRACTOR : P.T. PEMBANGUNAN JAYA

CONTRACT NO.:13/CTR/LN/BM/1978

MAILING ADDRESS: JL. M.H. THAMRIN -12Th FLOOR
JAKARTA

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JULY 1982

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PROJECT DESCRIPTION

SECTION II

The project initial point is in the vicinity of Palopo, at kilometre 390 from Ujung Pandang, and proceeds via Masamba and Bone Bone to the terminus at Minna, thereby making connection with Section I. The overall length of Section II is 98.5 kilometres. The three segments of the project are unequal in lengths.

The project is being constructed having a 4.5 metres asphalt concrete paving and 0.75 centimetres shoulders.

The road generally adhered to an existing alignment. This was necessitated to meet the horizontal and vertical control points of existing structures to be saved. The original road generally traversed flat terrain with adjacent rice paddies and swampy areas contributing to peremnial inundations of the roadway. The roadway was elevated and the geometry approved to accomodate a minimal 60 KMP design criterion.

Drainage structures destined for new construction comprised: 8 Reinforced Concrete Bridges; 53 Reinforced Concrete Box Culverts; 142 Lines of Reinforce Concrete Culvert Pipes; 10 Lines of CMPs. 5 Bridges are to be rehabilitated and several bridges to be re-decked.

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PROJECT DATA
AUGUST 1982.
CONTRACT & OTHER DETAILS

Project Length — 98.5 +/- Kilometres

Section II

Foreign Aid Loan : U.S. Agency for International Development

U.S.A.I.D. Project No. : 0244

U.S.A.I.D. Loan No. : 497-T-038; 23 Oct 75

Contract No. : 08/CTR/LN/BM/78

DIP No. : 04.1.03.472350.21.05.19/1980-1981

Original Contract Amount	: Rps 2,148,337,015	
Revised Contracted Amount (Estimated)	: Rps 4,475,388,583	
Bid Invitation Date	: 09 Jul 1977	
Bid Opening Date	: 04 Oct 1977	
Contract Execution Date	: 24 May 1978	
Initial Notice to Proceed	: 12 Jun 1978	
Original Contract Time	: 1,096 Calendar Days	
Contract Time Expended	: 1,523 Calendar Days	
Percentage of Time Expended	: 138.00 %	
Contracted Work Accomplished	: 151.00 %	
Revised Redesign Work Accomplished	: 72.57 %	
Time Extension (1559) 97.00 % Expended	: 30 Sep 1982	Memo of Under.No.2 183 days = 12.27 %
Consulting Eng'rs Supervision Contract	: 18 Nov 1978	
Effective Date Consulting Eng'rs Contr.	: 15 Aug 1978	

Due to Redesign (Contractor's)

Mobilization Effective Date	: 02 Nov 1978
Effective Date Work Commenced	: 02 May 1979

TERMINAL DATE

Original Contract (Contractor)	: 24 Jun 1981
Consultants Contract (Addenda under review)	: 14 Aug 1981
Addendum No. 3 Terminal Date	: 31 Mar 1982 (App'd 10 Mar 82)

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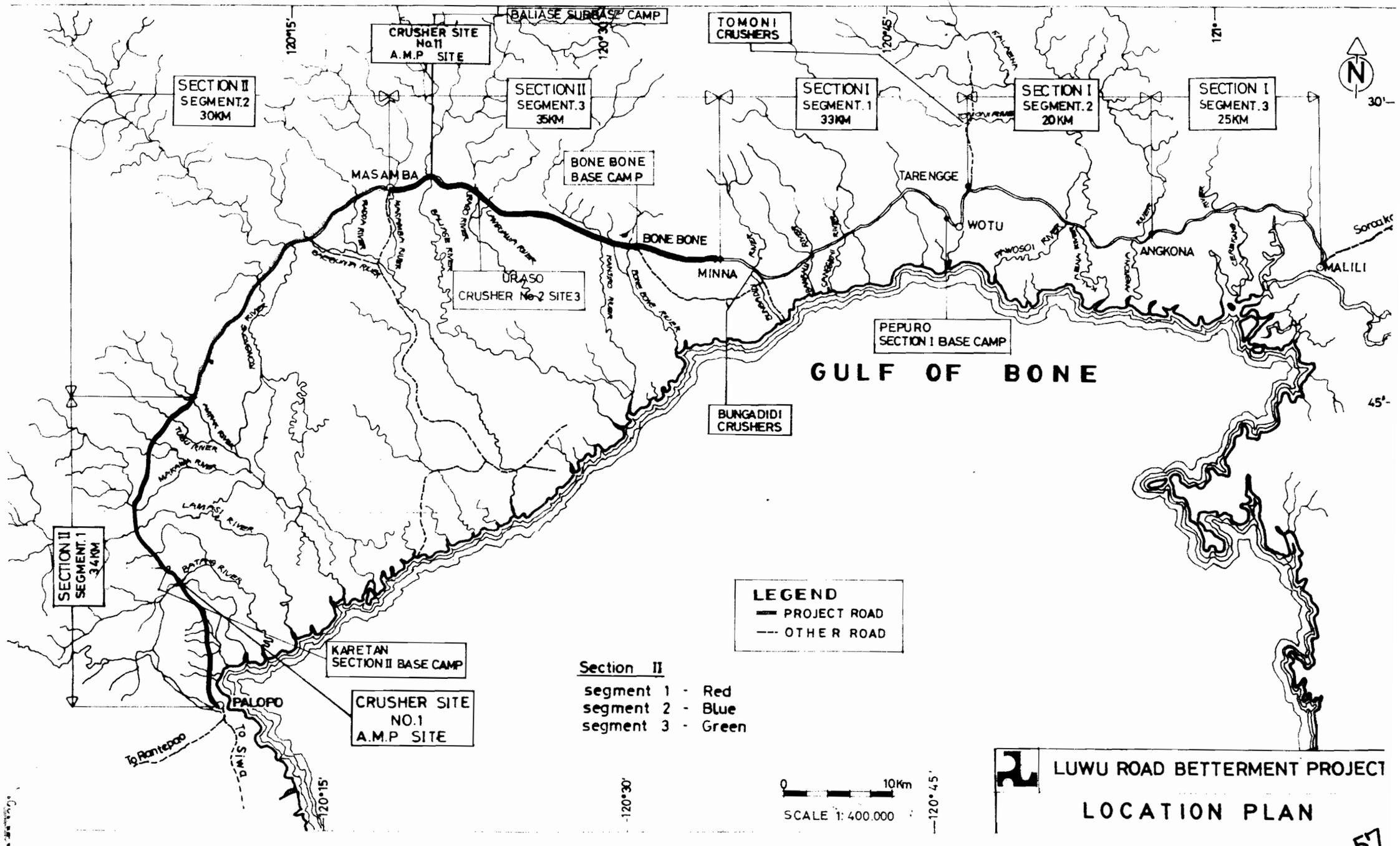

LUWU ROAD BETTERMENT PROJECT

LOCATION PLAN

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MOBILIZATION

The prime generator at Bone Bone requires a complete overhaul. This plant has been under constant maintenance the past several weeks. At the present time there is no standby generator as it has been inoperable for many months. Since the water pump is a three-phase design it is imperative that the generator also be compatible. Many single-phase generators are readily available but cannot be used at Bone Bone. This systems fault was pointed out by the Consultant at the onset of the project. It was also recommended that an expenditure of Rp 1,000,000 be made for an automatic load balancer -this was not purchased. Subsequently and consequently several expensive appliances and airconditioners have been damaged.

The contractor responsible for the operation and maintenance of the generator has had problems in retaining a responsible person to oversee that diesel fuel (solar) is always on hand. Several occasions the generator went down for lack of fuel and consultant personnel made local purchases to keep the plant operable.

The former residence of the Consultants' Resident Engineer at Karetan will be turned over to the Bina Marga in September. This house has been occupied by the team on the feasibility study and by the Chief-Inspector-in charge of the "as built" surveys. This house will become redundant for the Construction Supervision team about 01 September 1982. Possibly the client will use it to house the O & M expert scheduled for arrival latter this year.

The field office at Karetan is now redundant and an order has been issued to repair and paint this structure prior to the hand over to the client.

This maintenance, as well as repairs and repainting of the housing, where local staff were quartered, is the responsibility of P.T. Pembangunan Jaya.

Only three consultant personnel will be working out of the Palopo area:

Ir. Hariyanto Harin	- DEIC
Mr. Yan Sofyan S.	- Fiscal Clerk
Mr. Atai Hangat	- Mail Clerk/Printer

Mr. Syamsuddin will work out of the Bina Marga office and Ir. Hariyanto will work out of his home and liaison with Bina Marga on a daily basis. Mr. Atai will check the Post Office and Cable Office daily and perform printing either at the contractors office (blue prints) or do report printing (xeroxing) at commercial places in Palopo.

REPORT NO. 48 . PERIOD : August 1982

P.T. PEMBANGUNAN JAYA CONTRACT NO.13/CTR/LN/BM/1979

SECTION II -REVISED EACH PERIOD- Sheet 1 of 6

PROJECT VEHICLES & EQUIPMENT

Item No.	Type of Equipment	Size or Capacity	Make	Serial No.	Cond.	Remarks
01	Dump Truck	6 T	Isuzu TXD40	DA 120-848667	F	001
02	Dump Truck	6 T	" "	DA 120-848666	F	002
03	Dump Truck	6 T	" "	DA 120-848612	F	003
04	Dump Truck	6 T	" "	DA 120-848746	F	004
05	Dump Truck	6 T	" "	DA 120-848700	F	005
06	Dump Truck	6 T	" "	DA 120-848665	F	006
07	Dump Truck	6 T	" "	DA 120-848620	F	007
08	Dump Truck	6 T	" "	DA 120-848658	F	008
09	Dump Truck	6 T	" "	DA 120-848697	F	009
10	Dump Truck	6 T	" "	DA 120-825645	F	010
11	Dump Truck	6 T	" "	DA 120-848743	F	011
12	Dump Truck	6 T	" "	DA 120-848611	F	012
13	Dump Truck	6 T	" "	DA 120-848701	F	012A
14	Dump Truck	6 T	" "	DA 120-848618	F	014
15	Dump Truck	6 T	" "	DA 120-848509	F	015
16	Dump Truck	6 T	" "	DA 120-848513	P	016
17	Dump Truck	6 T	" "	DA 120-848670	F	017
18	Dump Truck	6 T	" "	DA 120-848740	F	018
19	Dump Truck	6 T	" "	DA 120-848606	F	019
20	Water Tank T.	6 T	" "	DA 120-848739	F	020
21	Dump Truck	6 T	" "	DA 120-848668	F	021
22	Dump Truck	6 T	" "	DA 120-848512	F	022
23	Dump Truck	6 T	" "	DA 120-848617	F	023
24	Dump Truck	6 T	" "	DA 120-848613	F	024
25	Dump Truck	6 T	" "	DA 120-848738	F	025
26	Dump Truck	6 T	" "	DA 120-854421	NG	026
27	Dump Truck	6 T	" "	DA 120-854419	F	027
28	Dump Truck	6 T	" "	DA 120-853956	F	028
29	Flat Bed	6 T	" "	DA 120-767505	F	029
30	Water Tank T.	5 T	" "	2D - 140833	F	030
31	Light Truck	2½T	Isuzu TLD53	C 2D- 172500	F	031
32	Dump Truck	6 T	Toyota DA110	2D - 202823	F	032
33	Dump Truck	6 T	" "	2D - 204091	F	033
34	Dump Truck	6 T	" "	2D - 204100	F	034
35	Dump Truck	6 T	" "	2D - 204087	F	035

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SECTION II

Item No.	Type of Equipment	Size or Capacity	Make	Serial No.	Cond.	Remarks
36	Dump Truck	6 T	Toyota DA11C	2D - 204136	F	036
37	Dump Truck	6 T	" "	2D - 204064	F	037
38	Dump Truck	6 T	" "	2D - 204281	F	038
39	Dump Truck	6 T	" "	2D - 204259	F	039
40	Dump Truck	6 T	" "	2D - 202112	F	040
41	Dump Truck	6 T	" "	2D - 200315	F	041
42	Dump Truck	6 T	" "	2D - 204106	F	042
43	Dump Truck	6 T	" "	2D - 204126	F	043
44	Light Truck	2½T	Daihatsu	130525	F	044
45	Dump Truck	3 T	Isuzu TLD54	40A1-544623	G	U.M.045
46	Dump Truck	3 T	" "	40A1-544701	N/G	U.M.046
47	Dump Truck	3 T	" "	40A1-544647	G	U.M.047
48	Dump Truck	3 T	" "	40A1-544705	G	U.M.048
49	Dump Truck	3 T	" "	40A1-544748	G	U.M.049
50	Dump Truck	3 T	" "	40A1-550385	G	U.M.050
51	Dump Truck	3 T	" "	40A1-544698	G	U.M.051
52	Dump Truck	3 T	" "	40A1-550394	N/G	U.M.052
53	Dump Truck	3 T	" "	40A1-544704	G	U.M.053
54	Dump Truck	3 T	" "	40A1-544692	G	U.M.054
55	Dump Truck	3 T	" "	40A1-544739	G	U.M.055
56	Dump Truck	3 T	" "	40A1-544687	N/G	U.M.056
57	Dump Truck	3 T	" "	40A1-544690	G	U.M.057
58	Dump Truck	3 T	" "	40A1-544647	G	U.M.058
59	Dump Truck	3 T	" "	40A1-544779	G	U.M.059
60	Dump Truck	3 T	" "	40A1-550374	G	U.M.060
61	Dump Truck	3 T	" "	40A1-544755	G	U.M.061
62	Pick Up	½ T	Datsun	J15-019764	F	6534 -1
63	Pick Up	2 T	Toyota Hiace	12R-1487559	F	8398 -2
64	Pick Up	½ T	Datsun	J15-190723	F	9766 -3
65	Pick Up	½ T	Chev Luv		F	5764J-4
66	Pick Up				NOS	5270 -5
67	Land Cruiser	4230 cc	Toyota 2F		F	61704 -1
68	Land Cruiser		" "		F	6535 -2
69	Land Cruiser		" "		F	7476 -3
70	Land Cruiser		" "		F	7817 -4
71	Land Cruiser		" "		N/G	7857 -5
72	Land Cruiser		" "		F	1086 -6
73	Land Cruiser		" "		G	7509 -7
74	Land Rover		Rover		F	0-122

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Item No.	Type of Equipment	Size or Capacity	Make	Serial No.	Cond.	Remarks
75	Motor Cycle	CB 100	Honda CB 100		F	3758 -01
76	Motor Cycle	100 CC	Honda CB 100		F	84379 -02
77	Motor Cycle	100 CC	Honda Benly	S110E-1033105	F	4538 -03
78	Motor Cycle	100 CC	Honda Benly		F	4876 -04
79	Motor Cycle	100 CC	Honda Benly		F	4878 -05
80	Motor Cycle	100 CC	Honda Benly		F	4879 -06
81	Motor Cycle	100 CC	Honda Benly		F	4880 -07
82	Motor Cycle	100 CC	Honda Benly	S110E-1041192	F	4901 -08
83	Motor Cycle	100 CC	Yemaha Trail	1291360	F	5114 -09
84	Motor Cycle	CB 100	Honda CB100		F	6121 -10
85	Motor Cycle	CB 100	Honda	(Not on road)	L	7016 -11
86	Motor Cycle	CB 100	Honda		F	9895 -12
87	Motor Grader	125 HP	Cat 120 G	87 V 4049	F	101
88	Motor Grader	125 HP	Cat 120 G	87 V 4048	F	102
89	Motor Grader	150 HP	Cat 120 G		F	110
90	Motor Grader	150 HP	Cat 14 E	(Not on Site)	G	
91	Wheel Loader	1.53 M3	Cat 930	41 K 8122	F	103
92	Wheel Loader	1.53 M3	Cat 930	41 K 8124	F	104
93	Wheel Loader	1.53 M3	Cat 930		G	
94	Track Loader	1.53 M3	Cat 955	13 X 1058	F	105
95	Track Loader	1.53 M3	Cat 955	13 X 1059	F	106
96	Bulldozer	140 HP	Cat D60	4 X 3278	F	107
97	Bulldozer	140 HP	Cat D60	4 X 3279	F	108
98	Bulldozer+Winch	140 HP	Cat D60	4 X 3340	F	109
99	Jaw Crusher	30 T	Jaquea	(Not on Site)	F	201
100	Giratory Crush	30 T	Jaquea		F	202
101	Vibr.Screen	30 T	Hargill		F	203
102	Conveyor			(Not on Site)	F	204
103	Conveyor			(Not on Site	F	205
104	Conveyor		E.Yanmar		F	206
105	Conveyor		E.Yanmar		F	207
106	Conveyor			(Not on Site)	G	208
107	Conveyor			(Not on Site)	G	209
108	Crusher	20-30 TPH	Russian		F	S/C

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SECTION II

Item No.	Type of Equipment	Size or Capacity	M a k e	Serial No.	Cond.	Remarks
109	Tire Roller	8.5-20 T	Sakai	932457	F	301
110	Tire Roller	8.5-20 T	Sakai	32683	F	302
111	Three W.Roller	8 - 10 T	Sakai	30043	F	303
112	Three W.Roller	8 - 10 T	Sakai	30133	F	304
113	Vib.Compactor	9.6-22 T	I.R. SP 54	5125424	F	305
114	Double Vib.Rol.	1 - 4 T	Wacker	W - 75	F	306
115	Asphalt Sprayer	600 Lt	E.Yanmar		F	307
116	Tire Roller	8.5-20 T	Sakai		F	308
117	Three W.Roller	12-14 T	Sakai		F	309
118	Three W.Roller	10-12 T	Zattle M		P	310
119	Three W.Roller	8-10 T	Sakai		F	311
120	Asp.Distributor	5000 Lt	Isuzu-Hanta		P	313
121	Tandem Roller		Sakai	SP 1028	F	316
122	Tire Roller		Sakai	AG/084/004	F	B.M.
123	Asp.Mix.Plant	30 - 40TPH	Nikko		F	
124	Asp. Paver		Nikko		F	
125	Asp. Paver		Nigata		E	
126	Asp. Kettle				F	320
127	Asp.Mix.Plant	30 -40 TPH	Tanaka		E	322
128	Vib.Roller	1 -17 T	Sakai	SV -90	F	323
129	Vib.Compactor				G	
130	Generating Set	30 KVA	Denyo	FB-30 LF	F	401
131	Generating Set	175 KVA	Cummins	SD-53207	F	402
132	Generating Set	135 KVA	Cat D333	S/N-6608736	F	403
133	Generating Set	10 KVA	ALG	SJRK 30/10	F	404
134	Air Compressor	125 CFM	Broom wade	S/N-P201/025	F	405
135	Generating Set	5 KVA	Denyo	A - 5W	F	406
136	Generating Set	5 KVA	Denyo	A - 5W	F	407
137	Generating Set	3 KVA	Denyo	A - 3W	NG	408
138	Generating Set	3 KVA	Denyo	A - 3W	NG	409
139	Air Compressor	3 PK	Fu Sheng	FA80-9023873	F	410
140	Generating Set				NG	411
141	Generating Set	5 KVA			F	412
142	Generating Set	37.5 KVA	Deutz		G	B.M
143	Generating Set	175 KVA	Denyo		G	
144	Generating Set	188 KVA	Cat		G	
145	Air Compressor		Hokuetsu		F	413
146	Air Compressor	125 CFM	Atlas C.		F	414
147	Air Compressor	5 PK	Fu Sheng	FA-100	F	415

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SECTION II

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Item No.	Type of Equipment	Size or Capacity	M a k e	Serial No.	Cond	Remarks
148	Concrete Mixer	600 Lt	Nikko		F	501
149	Concrete Mixer	600 Lt	Nikko	3192	F	502
150	Concrete Mixer	600 Lt	Nikko	3088	F	503
151	Concrete Mixer	275 Lt	Lister		NG	504
152	Concrete Mixer	250 Lt	Goliath		P	505
153	Concrete Mixer	250 Lt	Golden S		NG	506
154	Concrete Mixer	250 Lt	Hercules	KND 50/K100164	F	507
155	Concrete Mixer	250 Lt	Hercules	KND 50/K100169	F	508
156	Concrete Mixer	250 Lt	Hercules	KND 50/K100187	F	509
157	Concrete Mixer	250 Lt	Gloria	TS 50/10506	F	510
158	Concrete Mixer	250 Lt	Gloria	TS 50/10723	G	511
159	Water Pump	4"Ø TS-80	Kawamoto	Yanmar Engine	G	601
160	Water Pump	4"Ø TS-80	Kawamoto	" "	P	602
161	Water Pump	3"Ø TS-60	Kawamoto	" "	P	603
162	Water Pump	3 Inch	Kawamoto	" "	P	604
163	Water Pump	3 Inch	Kawamoto	" "	F	605
164	Water Pump	3 Inch	Kawamoto	" "	P	606
165	Water Pump	3 Inch	Kawamoto	" "	P	607
166	Water Pump	3 Inch	Honda		P	608
167	Water Pump	2 Inch	Robin		F	609
168	Elect.Fuel P		Tockheim		G	610
169	Elect.water P	1 Inch	Hinz		G	611
170	Fuel Pump	2 Inch	Robin		G	612
171	Water Pump	4 Inch	Kawamoto	Yanmar Engine	F	614
172	Water Pump	2 Inch	Kawamoto	" "	F	620
173	Water Pump	4 Inch	Kawamoto	" "	F	623
174	Water Pump	3 Inch	Kawamoto	" "	F	626
175	Water Pump	4 Inch	Kawamoto	" "	F	627
176	Water Pump	3 Inch	Kawamoto	" "	F	628
177	Water Pump	3 Inch	Kawamoto	" "	F	631
178	Water Pump	4 Inch	Kawamoto	" "	P	632
179	Water Pump	4 Inch	Kawamoto	" "	F	633
180	Water Pump	4 Inch	Kawamoto	" "	F	634
181	Water Pump	3 Inch	Kawamoto	" "	F	635
182	Water Pump	4 Inch	Kawamoto	" "	F	636
183	Water Pump	4 Inch	Kawamoto	" "	F	637
184	Water Pump	3 Inch	Kawamoto	" "	F	638
185	Water Pump	3 Inch	Kawamoto	" "	NG	639
186	Water Pump	3 Inch	Kawamoto	" "	NG	640

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CONTRACTOR'S EQUIPMENT

(CONTINUATION LIST)

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SECTION II

Item No.	Type of Equipment	Size or Capacity	M a k e	Serial No.	Cond.	Remarks
187	Water Pump	3 Inch	Kawamoto	Yanmar Engine	L	641
188	Water Pump	4 Inch	Kawamoto	" "	F	642
189	Welder Machine	150 AMP	Nippon S	EDW 270 Y	F	701
190	Elec.Welder/Tr	250 AMP	National		F	702
191	Elec.Welder/Tr	250 AMP	National		F	703
192	Elec.welder/Tr	250 AMP	National		G	704
193	Elec.Welder/Tr	250 AMP	Ohatsu		G	
194	Welder Machine	150 AMP			F	705
195	Stamper	170 M2/H	Wacker	349995615	NG	801
196	Stamper	170 M2/H	Wacker	349995594	NG	802
197	Stamper	170 M2/H	Wacker	349995556	P	803
198	Stamper	170 M2/H	Wacker	349995558	P	804
199	Stamper	170 M2/H	Wacker	349995612	G	805
200	Stamper	170 M2/H	Wacker	349995220	P	806
201	Stamper	170 M2/H	Wacker	349993382	NG	807
202	Stamper	170 M2/H	Wacker	349992520	F	808
203	Plate Stamper		Wacker	355353793	NG	809
204	Plate Stamper		Wacker	355350508	F	810
205	Internal Vib.	5.24 CBM/H	Wacker	271218059	F	811
206	Internal Vib.	5.24 CBM/H	Wacker	271216265	F	812
207	Internal Vib.	5.24 CBM/H	Wacker	271216253	F	813
208	Internal Vib.	5.24 CBM/H	Wacker	271216264	F	814
209	Internal Vib.	5.24 CBM/H	Wacker	271216275	F	815
210	Internal Vib.	5.24 CBM/H	Wacker	348721849	F	816
211	External Vib.		Wacker		NG	817
212	External Vib.		Wacker		NG	818
213	Chain Saw		MC Culloch		F	901
214	Chain Saw		MC Culloch		L	902
215	Chain Saw		MC Culloch		P	903
216	Chain Saw		MC Culloch		NG	904
217	Chain Saw		MC Culloch		L	910
218	Chain Saw		MC Culloch		P	911
219	Crane	15 T	Clark	AQ/062/002	F	
220	Lathe				E	
221	Drill,Elect.	$\frac{1}{2}$ Drill			E	
222	Grinder	$\frac{1}{4}$ HP			E	
223	Torch,Acetylene		Harris	Model No.43-2	G	
224	Grinder,Hand D.		Ryobi	" G.1810	G	

E : Excellent
G : Good
F : Fair

P : Poor
NG : No Good
L : Lost/Stolen
SC : Sub-Contractor

B.M. : Bina Marga
P.W. : Public Work
Ir. : Irigasi
N.O.S: Not on Site

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CONTRACTOR PERSONNEL

REPORT NO. 48
Sheet 1 of 2

Period : August 1982

Position	Local / Foreign	No.	E.O.D Date	Departure Date	Remarks
PROFESSIONAL/ MANAGEMENT					
Project Manager	Indonesian	1	20-11-81		Erwin, S
Asst. Project Manager	"	1	20-11-81		Sucipto, M
Project Engineer	"	1	28-11-79		Alim, H.S
Materials Eng'r	"	1	01-04-81		Alok, A.
General Superintendent	"	1	27-01-81		Naibaho, L.
Structural Superindendent	"	1	26-01-81		Taman
Field Superintendent(Road)	"	1	01-05-79		Hadi, S.
Chief-of-Surveys	"	1	23-09-78		Marcius
Quantity Engineer	"	1			Ismail
Logistic Specialist	"	1	01-11-78		Suntiono
Finance & Administration	"	1	20-09-78		Purwanto
Equip. Administration Off.	"	1	14-04-79		Zainuddin
Chief-of-Security	"	1	27-06-81		Mandey
External Security Chief	"	1	01-01-81		Patadungan
Warehouse Chief	"	1	17-01-76		Liliek
Heavy Equipment Chief	"	1	15-11-78		Nukidi
					16 (4.06 %)
TECHNICAL					
Laboratory Chief	Indonesian	1	10-08-78		Machmud
Laboratory Technicians	"	2			
Laboratory Aides	"	10			
Surveymen	"	8			
Draftsmen	"	3			
Warehousemen	"	6			
Equip. Administration	"	2			
Dep. Equip. Chief	"	1			
Foremen (Road & Drainage)	"	17			
H.E. Logistics	"	2			
Operators	"	29			

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CONTRACTOR PERSONNEL (continued)

Sheet 2 of 2

Position	Local / Foreign	No.	E.O.D Date	Departure Date	Remarks
TECHNICAL (cont'd)					
Crushing Plant Crew (s)	Indonesian	11			
Workshop Mechanics	"	46			
Clerks	"	7			
					145 (36.80%)
LABORERS					
Labor Group Leaders	Indonesian	8			Sub-Contract
Installers	"	3			
Drivers	"	66			
Security Guards	"	31			
Laborers	"	125			Sub-Contract
					233 (59.14%)

Total Staff : 394

KEY PERSONNEL

Ir. Erwin S.	Indonesian	Project Manager
Ir. M. Soetjipto	Indonesian	Dep. Project Manager
Ir. H.S. Alim	Indonesian	Project Engineer
Ir. Alok Adiranto	Indonesian	Materials Eng'r
Ir.Lauren Naibaho	Indonesian	General Superintendant

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PROJECT PERSONNEL

CONSULTANT'S TABLE OF ORGANIZATION

Sheet 1 of 2

Name	Administrative Title	Functional Position	Manmonths Approved	Manmonths Expended
Alfred L. Foust	Res. Engineer	Res.Engineer	36	42
(Vacant)	Chief Insp.	Chief Insp.II	12	12
Hariyanto H.	Deputy E.I.C	Deputy E.I.C	35	43
Surya Wijaya	Ass.Res. Eng.	Ass. Res. Eng.	32	39
Zahlan K	Ass. Q'ty S.	Ass. Q'ty S.	32	43
Aep Syaefudin	Inspector	Inspector	31	39
J. Ngatemin	Inspector	Inspector	31	38
Sutrisno	Inspector	Inspector	34	44
Marani M	Inspector	Inspector	34	7
A. Sukarno	Surveyor	Surveyor	34	38
Suleman	Surveyor	Surveyor	34	45
M. Saleh B	Sr.Lab.Tech.	Sr.Lab.Tech	32	43
(Vacant)	Driver	Radio Operator	16	17
Chairul K	Draftsman	Draftsman	36	27
Junus L.R	Ass.Adm.Of	Ass.Adm.Of.	36	44
Ahmad Jusa	Clerk	Chief Clerk	34	39
Paulus R	Typist	Clerk/Typist	36	44
Nurhayati	Clerk-Typist	Clerk/Typist	35	12
(Vacant)	Driver	Driver	36	38
M. Ramly	Driver	Driver	36	28
(Vacant)	Driver	Driver	36	3
Abd.Hafid	Driver	Jr.Lab.Tech.	36	28
Juanda	Driver	Driver	36	23
Syacrul B	Driver	Driver	36	13
Ramlan	Driver	Driver	36	10
Swen	Driver	Driver	36	1

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(Vacant)	Laborer	Day Watchman	36	6
Justinus R	Laborer	Night Watch.	36	11
Biri'	Laborer	Office Boy	36	10
Atai Hangat	Laborer	Printer	33	39
Vacant	Laborer	-	33	None
Vacant	Laborer	-	33	None
Vacant	Laborer	-	33	None
Y.S. Syamsuddin	Chainman	Fiscal Clerk	None	27
Agus Sobari	Inspector	Inspector	None	15
Agus Hermadi	Inspector	Inspector	None	15
Humam A.L	Inspector	Inspector	None	8
Rachman	Overhead	Levelman		2
Karmawan	Draftsman	Draftsman		8
Joseph Maguire	Chief Insp.I	Chief-of-Surv.	6	9

HEADQUARTERS PERSONNEL
BONE BONE BASE CAMP

Mr. Ernesto L. Arevalo, P.E., Soils & Materials Engineer, devotes 80 % of his time to Section II.

Mr. Joseph Maguire the Chief Inspector who was supervising Section II "as built" surveys will complete his tour of duty at the end of August. Mr. Maguire devoted 100 % of his time, either in the field or office, to these activities.

Ir. Handono, Project Quantity Surveyor, was involved in Section II activities 75 % of his time.

ENGINEER'S STAFF NATIONALITIES
SECTION II & BONE BONE H.Q. SUPPORT

The P.T. Indah Karya personnel are staffed by Indonesian and the Section II Louis Berger International, Inc. expatriates are all Americans excepting Mr. Joseph Maguire, an Australian National.

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Section II

LUWU ROAD & BRIDGES BETTERMENT PROJECT ESTIMATE NO. 40
SECTION II - PALOPO - MINNA. August 1982

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN. QUANTITY	THIS ESTIMATE		TOTAL ESTIMATE TO DATE		ORIG.	REV.
						QUANTITY	AMOUNT RUPIAHS	QUANTITY	TOTAL AMOUNT RUPIAHS	CONTR. Q'TY(%	CONTR Q'TY(
	GENERAL										
1.18	Maintenance	LS	37,515,000	37,515,000	None	-	-	66.25	24,859,187.50	66.25	NA
1.18	Maintenance	LS	74,732,930	None	74,732, 930	-	-	90.25	67.446,469.32	N/A	90.25
1.19	Mobilization	LS	197,722,500	197,722,500	None	-	-	80	158,178,000.00	80	N/A
1.19	Mobilization	LS	331,530,000	None	331,530,000	0.71	2,353,863.00	55.78	184,927,434.00	N/A	55.78
	DRAINAGE										
2.04(3)a	R.C.C.P 60 Cm	LM	21,427	146	175	-	-	176	3,771,152.00	120	100
2.04(3)a	R.C.C.P 60 Cm	LM	23,755	None	155	-	-	99	2,351,745.00	N/A	63.87
2.04(3)b	R.C.C.P 80 Cm	LM	34,639	130	156	-	-	156	5,403,684.00	120	100
2.04(3)b	R.C.C.P 80 Cm	LM	36,025	None	194	-	-	176	6,340,400.00	N/A	90.72

CONTRACTORS MONTHLY PAY ESTIMATE

LUWU ROAD & BRIDGES BETTERMENT PROJECT — ESTIMATE NO. 40

SECTION II PALOPO - MINNA — August 1982.

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN QUANTITY	THIS ESTIMATE		TOTAL ESTIMATE TO DATE		ORIG. CONTR. Q'TY(%	REV. CONTR. Q'TY(%
						QUANTITY	AMOUNT RUPIAHS	QUANTITY	TOTAL AMOUNT RUPIAHS		
2.04(3)c	R.C.C.P. 100 Cm	LM	47,401	38	46	-	-	46	2,180,446.00	120	100
2.04(3)c	R.C.C.P. 100 Cm	LM	51,511	None	604	-	-	541	27,867,451.00	N/A	89.57
2.06(2)	P.C.C.P 60 Cm	LM	17,772	None	140	-	-	203	3,607,716.00	N/A	145
2.06(4)	P.C.C.P 80 Cm	LM	26,264	None	200	-	-	289	7,590,296.00	N/A	144.5
2.06(6)	P.C.C.P 100 Cm	LM	32,303	None	150	-	-	258	8,334,174.00	N/A	172
	EARTHWORK AND DEMOLITION										
3.03(1)	C & G. Rubber F.	M2	194	208,150	4,500	-	-	4500	873,000.00	2.16	100
3.03(2)	C & G. Jungle V.	M2	144	489,210	250,000	-	-	344,502	49,608,288.00	70.42	137.80
3.03(3)	C & G. Sparse V.	M2	71	442,175	530,000	-	-	530,610	37,673,310.00	120	100
3.03(3)	C & G. Sparse V.	M2	72.50	None	469,190	-	-	365,088	26,468,880.00	N/A	77.81

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LUWU ROAD & BRIDGES BETTERMENT PROJECT

SECTION II PALOPO - MINNA

ESTIMATE NO. 40

August 1982.

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN QUANTITY	THIS ESTIMATE		TOTAL ESTIMATE TO DATE		ORIG. CONTR. Q'TY(%	REV. CONTR Q'TY(
						QUANTITY	AMOUNT RUPIAHS	QUANTITY	TOTAL AMOUNT RUPIAHS		
3.04	Common Excavat.	M3	[illegible]3	88,528	106,234	-	-	106.234	67,246,122.00	120	100
3.04	Common Excavat.	M3	[illegible]7	None	43,766	6,200	5,189,400.00	68,689	57,492,693.00	N/A	156.9
3.04(a)	Irrigation Ditch	M3	1,187	None	50,000	-	-	43,146	51,214,302.00	N/A	86.2
3.04(b)	B e r m	LM	118	None	10,000	-	-	9,301	1,097,578.00	N/A	93.0
3.05	Rock Excavation	M3	3,280	7,644	750	-	-	720	2,361,600.00	N/A	96
3.06(1)	Str.Exc.to 2 Mtrs	M3	1,108	1,795	2,154	-	-	2,154	2,386,632.00	120	100
3.06(1)	Str.Exc.to 2 Mtrs	M3	3,589	None	4,846	788	2,828,132.00	7,203	25,851,567.00	N/A	148.6
3.06(3)	Str.Exc.over 2 M	M3	421	670	500	-	-	230	96,830.00	34.33	46.00
3.06(5)	Str,Exc.water pre.	M3	2,145	670	804	-	-	804	1,724,580.00	120	100
3.06(5)	Str.Exc.Water pre.	M3	2,145	None	2,196	821	1,761,045.00	4,504	9,661,080.00	N/A	209.9
3.06(6)	Shoring & Cribb.	LS	18,081,000	LS	LS	-	-	92.4 %	16,706,844.00	92.4	N/A
3.06(6)	Shoring & Cribb.	LS	24,415,000	LS	LS	-	-	98.6 %	24,073,683.00	N/A	98.6

Section II

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LUWU ROAD & BRIDGES BETTERMENT PROJECT ESTIMATE NO. 40
SECTION II PALOPO - MINNA August 1982.

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN. QUANTITY	THIS ESTIMATE		TOTAL ESTIMATE TO DATE		ORIG. CONTR. Q'TY(%	REV. CONTR. Q'TY(%
						QUANTITY	AMOUNT RUPIAHS	QUANTITY	TOTAL AMOUNT RUPIAHS		
3.08(1)	Embank.from Borr.	M3	1,235	88,920	118,734	-	-	138,704	171,299,440.00	140.22	116.65
3.08(1)	Embank.from Borr.	M3	1,699	None	371,296	7.667	13,026,233.00	360,471	612,440,229.00	N/A	97.08
3.08(3)	Embank.from Str.	M3	2,063	5,644	750	295	608,585.00	1,111	2,291,993.00	19.68	148.13
3.08(5)	Embank.Fnd.Comp.	M2	57	27,375	32,850	-	-	32.850	1,872,450.00	120	100
3.08(5)	Embank.Fnd.Comp.	M2	58	None	107,150	-	-	143.572	8,327,176.00	N/A	133.99
3.08(6)	Embank.in Swamps	M3	1,903	6,350	7,620	-	-	7.620	14,500,860.00	120	100
3.08(6)	Embank.in Swamps	M3	2,367	None	7,300	-	-	10,663	25,239,321.00	N/A	146.07
3.09(1)	Concr.Demolition	M3	3,527	58	70	-	-	70	246,890.00	120	100
3.09(1)	Concr.Demolition	M3	4,164	None	430	72	299,808.00	390	1,623,910.00	N/A	90.70
3.09(4)	Timber Brid.Dem.	M2	2,454	1,781	2,137	259	635,586.00	1.893	4,645,422.00	106.29	88.58
3.09(4)	Timber Brid.Dem.	M2	2,736	None	563	-	-	-	-	-	-
3.09(5)	Rsp. Conc.Pav.Dem	M2	334	None	27,500	-	-	27.500	9,185,000.00	N/A	100

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LUWU ROAD & BRIDGES BETTERMENT PROJECT ESTIMATE NO. 40
SECTION II PALOPO - MINNA August 1982.

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN QUANTITY	THIS ESTIMATE		TOTAL ESTIMATE TO DATE		ORIG. CONTR. Q'TY(%)	REV. CONT Q'TY(
						QUANTITY	AMOUNT RUPIAHS	QUANTITY	TOTAL AMOUNT RUPIAHS		
	SUBGRADE										
4.01	Subgrade Prep.	M2	58	6,900	8,280	-	-	8,280	480,240.00	120	100
4.01	Subgrade Prep.	M2	78	None	39,720	-	-	81,487	6,355,986.00	N/A	205.15
	SHOULDERS										
5.01	Shoulders	M3	7,080	43,412	3,000	-	-	-	-	-	-
	SUB-BASE/BASE										
6.01(3)	Base Course Class "C".	M3	1,591	248,853	None	-	-	-	-	-	-
6.02(2)	Base Course Class "B"	M3	2,913	73,292	64,500	4,404	12,828,852.00	54,860	159,807,180.00	74.85	85.05

LUWU ROAD & BRIDGES BETTERMENT PROJECT ESTIMATE NO. 40
SECTION II PALOPO - MINNA August 1982

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN QUANTITY	THIS ESTIMATE		TOTAL ESTIMATE TO DATE		ORIG. CONTR. Q'TY(%	REV. CONTR Q'TY(
						QUANTITY	AMOUNT RUPIAHS	QUANTITY	TOTAL AMOUNT RUPIAHS		
	SURF. & PAVEMENT										
7.01(1)	Prime C.1.0 Kg/M2	M2	242	None	490,000	24,440	5,914,480.00	393.377	95,197,234.00	N/A	80.28
7.01(2)	Add./Substraction	M2	10	-	-	-	-	-50,808.3	-508,583.00	N/A	N/A
7.03(1)	Asphalt C. 5 %	T	17,367	None	42,400	2,301	40,007,487.00	36,611	636,555,457.00	N/A	86.35
7.03(2)	Add. /Substractur	T	135	-	-	9,578	1,293,030.00	161,308	21,776,580.00	N/A	N/A
7.04(a)	Penetration Macad.	M2	1,208	2,087	None	-	-	-	-	-	-
7.04(a)	Asphalt Painting	M2	745	297,270	None	-	-	-	-	-	-
	STRUCTURE										
8.01(1)a	Class "A" P.C.C. Fnd.	M3	29,050	57.98	None	-	-	-	-	-	-
8.01(3)a	Class "B" P.C.C. Fnd.	M3	26,754	1,005.81	None	-	-	-	-	-	-
8.01(5)a	Cyclopean Concr.	M3	12,777	274.69	None	-	-	-	-	-	-

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LUWU ROAD & BRIDGES BETTERMENT PROJECT
SECTION II PALOPO - MINNA

ESTIMATE NO. 40
August 1982.

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN. QUANTITY	THIS ESTIMATE		TOTAL ESTIMATE TO DATE		ORIG. CONTR. QITY(%)	REV. CONTR. Q'TY(%
						QUANTITY	AMOUNT RUPIAHS	QUANTITY	TOTAL AMOUNT RUPIAHS .		
8.01(1)aa	Class "AA" PCC	M3	60,355	-	530	-	-	531,50	32,078,682.50	N/A	90.08
8.01(1)ab	Class "AB" PCC	M3	59,450	-	610	10	594,500.00	692	41,139,400.00	N/A	113.44
8.01(3)aa	Class "A" PCC R.C.B.C.	M3	54,093	-	2,600	-	-	2058	111,323,394.00	N/A	79.15
8.01(3)ab	Class "B" PCC R.C.B.C	M3	52,961	-	630	81	4,289,841.00	611	32,359,171.00	N/A	96.98
8.01(3)ac	Lean Concrete	M3	25,767	-	218	-	-	369	9,508,023.00	N/A	169.27
8.01(6)a	Scaff. 0M - 10M	M2	7,389	1,110	700	-	-	570	4,211,730.00	-	-
8.01(6)b	Scaff.10M - 15M	M2	8,600	520	588	-	-	768	6,604,800.00	147.69	130.61
8.01(6)c	Scaff.15M - 20M	M2	20,670	600	-	-	-	-	-	-	-
8.02(2)	Timber Piles	M2	110,155	202	-	-	-	-	-	-	-
8.02(4)	Precast Conc.P.	M3	93,742	82.21	98.65	-	-	98.652	9,247,835.78	120	100
8.02(4)	Precast Conc.P.	M3	163,000	-	301.35	-	-	298,738	48,694,294.00	N/A	99.13
8.02(11)	Timber Pile Driv.	M3	5,896	2,678	-	-	-	-	-	-	-

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LUWU ROAD & BRIDGES BETTERMENT PROJECT ESTIMATE NO. 40
SECTION II PALOPO - MINNA August 1982

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN QUANTITY	THIS ESTIMATE		TOTAL ESTIMATE TO DATE		ORIG. CONTR. Q'TY(%	REV. CONTR. Q'TY(%
						QUANTITY	AMOUNT RUPIAHS	QUANTITY	TOTAL AMOUNT RUPIAHS		
8.02(13)	Concr.Pile Driver	LM	8,069	676	811	-	-	811.2	6,545,572.80	120	100
8.02(13)	Concr.Pile Driver	LM	14,186	-	2,439	-	-	1876.800	26,908,004.80	N/A	77.77
8.02(16)	Splices	EA	81,000	-	126	-	-	64	5,184,000.00	N/A	50.79
8.02( )	Conc.pile built up					-	-	-	-	-	-
8.02(27)	Load Test	EA	-	-	7	-	-	-	-	-	-
8.03	Reinforcing Steel	Kg	277	196,755	236,106	-	-	236,106	65,401,362.00	120	100
8.03	Reinforcing Steel	Kg	285	-	256,894	6,522	1,858,770.00	214,205	61,048,425.00	N/A	83.38
8.03	Driving Shoe	EA	30,285	-	26	-	-	26	787,410.00	N/A	100
8.04(1)	Structural Steel	KG	508	356,307	-	-	-	-	-	-	-
8.04(3)	Bearing Pad	EA	17,547	252	302	-	-	24	421,128.00	9.52	7.95
8.04(3)	Bearing Pad	EA	30,251	-	138	-	-	-	-	-	-
8.04(6)	Bridge Railing	LM	46,002	-	476	63.6	2,925,727.20	499.60	22,982,599.20	N/A	104.96

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LUWU ROAD & BRIDGES BETTERMENT PROJECT
SECTION II PALOPO - MINNA

ESTIMATE NO. 40
August 1982

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN. QUANTITY	THIS ESTIMATE		TOTAL ESTIMATE TO DATE		ORIG. CONTR. Q'TY(%)	REV. CONTR Q'TY
						QUANTITY	AMOUNT RUPIAHS	QUANTITY	TOTAL AMOUNT RUPIAHS		
8.05(2)	Treated Timber	M3	98,736	759	-	-	-	-	-	-	-
	MISCELLANEOUS										
9.02	Stone Masonry	M3	16,326	4,518	1,200	107	1,746,882.00	956	15,607,656.00	21.16	79.67
9.02(a)	Plastering	M3	3,359	-	1,100	491,1694	1,649,838.00	1,537	5,162,783.00	N/A	139.73
9.03(2)	Grouted Rip-Rap	M3	40,942	-	1,800	14	573,188.00	233	9,539,486.00	N/A	12.94
9.04(1)	Grouted Rubble Pav.waterway	M3	40,942	-	2,000	-	-	424	17,359,408.00	N/A	21.20
9.06(1)	Hand Laid R.Emb.	M3	6,968	-	500	-	-	209	1,456,312.00	N/A	41.80
9.07(1)	Wire Mesh Gabion	M3	16,279	-	600	-	-	156	2,539,524.00	N/A	26
9.09	Wood Guard Rail	LM	8,275	4,400	-	-	-	-	-	-	-
9.11(1)	R.O.W.Monument	EA	6,056	400	400	-	-	-	-	-	-
9.11(3)	Kilometre Post	EA	13,932	101	101	-	-	-	-	-	-

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CONTRACTORS MONTHLY PAY ESTIMATE

LUWU ROAD & BRIDGES BETTERMENT PROJECT

SECTION II PALOPO - MINNA

ESTIMATE NO. 40

August 1982

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN. QUANTITY	THIS ESTIMATE		TOTAL ESTIMATE TO DATE		ORIG. CONTR. Q'TY(%	REV. CONTR Q'TY(%
						QUANTITY	AMOUNT RUPIAHS	QUANTITY	TOTAL AMOUNT RUPIAHS		
9.11(4)	Hectometre Post	EA	5,493	282	279	-	-	-	-	-	-
9.11(6)	Traffic Signs	EA	19,254	184	184	-	-	-	-	-	-
9.14(1)	Expansion Joint	LM	40,544		175	63	2,554,272	140	5,676,160.00	N/A	80
9.17	S o d d i n g	M2	272	119,459	10,000	-	-	-	-	-	-

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LUWU ROAD & BRIDGES BETTERMENT PROJECT
SECTION II PALOPO - MINNA

ESTIMATE NO. 40
August 1982.

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN. QUANTITY	THIS ESTIMATE		TOTAL ESTIMATE TO DATE		ORIG. CONTR. Q'TY(%	REV. CONTR. Q'TY(%
						QUANTITY	AMOUNT RUPIAHS	QUANTITY	TOTAL AMOUNT RUPIAHS		
	PAYMENT MATERIALS ON HAND		(70 %)								
2.04(3)a	R.C.C.P. 60 Cm Ø	LM	14,998.90	146		-6	-89.993.40	-	-		
2.04(3)b	R.C.C.P. 80 Cm Ø	LM	24,247.30	130		-	-	-	-		
2.04(3)c	R.C.C.P. 100 Cm Ø	LM	33,180.70	38		-	-	-	-		
2.06(2)	P.C.C.P 60 Cm Ø	LM	12,440.40	None		-7	-87,082.80	-	-		
2.06(4)	P.C.C.P 80 Cm Ø	LM	18,384.80	None		-6	-110,308.80	-	-		
2.06(6)	P.C.C.P 100 Cm Ø	LM	22,612.10	None		-3	- 67,836.30	-	-		
6.01(3)	Subbase Course Class "C"	M3	1,113.70	248,853		-	-	-	-		
6.02(2)	Base C. Class"B"	M3	2,039.10	73,292		-3,417	-6,967,604.7	5.824	11,875,718.40		
8.03	Reinforcing Steel	Kg	193.90	196,755		-4,572	- 886,510.80	-	-		
9.11(1)	R.O.W.Monuments	EA	4,329.20	400		-	-	291	1,233,607.20		
9.11(3)	Kilometre Posts	EA	9,752.40	101		-	-	101	984,992.40		

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LUWU ROAD & BRIDGES BETTERMENT PROJECT ESTIMATE NO. 40
SECTION II PALOPO - MINNA August 1982.

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE (70 %)	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN. QUANTITY	THIS ESTIMATE		TOTAL ESTIMATE TO DATE		ORIG. CONTR. Q'TY(%)	REV. CONTR Q'TY%
						QUANTITY	AMOUNT RUPIAHS	QUANTITY	TOTAL AMOUNT RUPIAHS		
9.11(4)	Hectometre Posts	EA	3,845.10	902	370	-	-	369	1,418,841.90		
62	Cut back Asphalt	MT	103,600.00			-	-	-	-		
63	Asphalt Cement	MT	77,000.00			- 140	-10,780,000.0	466	35,882,000.0		
64	Portland Cement	MT	35,000.00			-	-	-	-		
68	Timber Plank	M3	42,000.00			-	-	-	-		
77	Class "B" & "C" PCC / CA	M3	2,800.00			-	-	-	-		
78	PCC / FA	M3	2,450.00			-	-	-	-		
79	Class "A" PCC/CA	M3	3,150.00			-	-	-	-		
81	Base C.Aggregate	M3	4,200.00			-	-	-	-		
82	Wearing C.Agg.	M3	7,000.00			-1,214	-8,498,000.0	2,611	18,277,000.00		
84	Stones(Hand Laid)	M3	3,500.00			-	-	-	-		

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LOCAL ROAD & BRIDGES BETTERMENT PROJECT ESTIM-TE NO 40
SECTION II P-LOPO - MI'NA August 1982

PAY ITEM NO	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGIN-L TENDER QU-NTITY	REDESIGN PRELIMIN QU-NTIY	THIS ESTIM-TE		TOT-L ESTIM-TE TO DATE		ORIG. CONTR. Q'TY(%	REV. CONTR. Q'TY(%
						QU-NTITY	AMOUNT RUPI-HS	QU-NTITY	TOT-L AMOUNT RUPI-HS		
	D-Y WORKS										
	PERSONNEL										
1	Site Surveyor	HR	400			None	-	38	15,200	-	
2	Foremen	HR	400			None	-	369	147,600	-	
3	Operator	HR	400			None	-	None	-	-	
4	Driver	HR	400			None	-	None	-	-	
5	Mechanic	HR	400			None	-	None	-	-	
6	Carpenter	HR	300			None	-	14	4,200	-	
7	Re-bar Worker	HR	300			None	-	None	-	-	
8	Welder	HR	300			None	-	None	-	-	
9	Skilled Labour	HR	300			None	-	3,387	1,016,100	-	
10	Unskilled Lab.	HR	200			None	-	515	103,000		

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LUMU ROAD & BRIDGES BETTERMENT PROJECT
SECTION II PALOPO - MINA

ESTIMATE NO. 40
August 1982

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN QUANTITY	THIS ESTIMATE QUANTITY	THIS ESTIMATE AMOUNT RUPIAHS	TOTAL ESTIMATE TO DATE QUANTITY	TOTAL ESTIMATE TO DATE TOTAL AMOUNT RUPIAHS	ORIG. CONTR. QUANTITY	REV. QUANTITY
	EQUIPMENT										
11	Bulldozer with Ripper 100-200HP	HR	17,000			None	-	None	-	-	
14	Motor Grader to 100 HP	HR	12,000			None	-	None	-	-	
15	Motor Grader to 100 - 150 HP	HR	15,000			None	-	None	-	-	
16	Loader to 100 HP	HR	9,000			None	-	None	-	-	
17	Loader 100 - 150 HP	HR	13,350			None	-	None	-	-	
18	Dragline,1 M3/1.5	HR	15,000			None	-	None	-	-	
20	Hyd.Excavat.0.5	HR	14,000			None	-	None	-	-	
21	Hyd.Exc. 0.5/M3	HR	15,000			None	-	None	-	-	
22	8 T Tandem S.R.	HR	6,000			None	-	59.5	357,000.00	-	
23	8 - 12 T Tandem	HR	7,500			None	-	None	-	-	
25	Triaxle Steel Roller 10-20 T	HR	12,000			None	-	None	-	-	

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LUWU ROAD & BRIDGES BETTERMENT PROJECT ESTIMATE NO. 40

SECTION II PALOPO - MINNA August 1982

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN QUANTITY	THIS ESTIMATE QUANTITY	THIS ESTIMATE AMOUNT RUPIAHS	TOTAL ESTIMATE TO DATE QUANTITY	TOTAL ESTIMATE TO DATE TOTAL AMOUNT RUPIAHS	ORIG. CONTR. Q'TY(%	REV. CONTR. Q'TY(%
26	Vib. Tandem SR. to 5 T	HR	5,000			None	-	None	-	-	
27	Vib.Tandem 5-10T	HR	7,500			None	-	None	-	-	
29	Vib.Roller 5-10T	HR	9,000			None	-	None	-	-	
31	Sheeps Foot Roller to 5 T	HR	5,000			None	-	None	-	-	
34	Pneumatic Roller 10 - 15 T	HR	10,000			None	-	None	-	-	
38	Dump Truck, 5 T	HR	5,500			None	-	5	27,500.00	-	
39	Dump Truck,5-10T	HR	6,500			None	-	None	351,000.00	-	
40	Water Tanker 6M3	HR	6,500			None	-	None	-	-	
41	Conc.Mix.0.25M3	HR	1,500			None	-	None	-	-	
42	Concrete Mixer 0.25 - 0.50 M3	HR	3,000			None	-	None	-	-	
43	Rock Drill 20 Kg	HR	1,500			None	-	None	-	-	
45	Compressor 5000Lt/Min.	HR	3,000			None	-	None	-	-	

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LUWU ROAD & BRIDGES BETTERMENT PROJECT ESTIMATE NO. 40
SECTION II PALOPO - MINNA August 1982

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN QUANTITY	TOTAL ESTIMATE		TOTAL ESTIMATE TO DATE		ORIG. CONTR. Q'TY(%	REV. CONTR. Q'TY(%
						QUANTITY	AMOUNT RUPIAHS	QUANTITY	TOTAL AMOUNT RUPIAHS		
46	Compressor 5000-12000 L/M	HR	4,000			None	-	None	-		
48	Bending Machine 10 HP	HR	1,500			None	-	None	-		
49	water Pump 1500 Ltrs/Min	HR	2,000			None	-	14	28,000.00		
51	Screening Plant 80/100 TPH	HR	10,000			None	-	None	-		
52	Crushing Plant 40/60 TPH	HR	30,000			None	-	None	-		
53	A.M.P 50/80 TPH	HR	22,500			None	-	None	-		
54	Power Broom w/81	HR	2,000			None	-	None	-		
55	Mechanical Broom Tractor 50 HP	HR	8,000			None	-	None	-		
56	Asphalt Sprayer 6 M3	HR	3,000			None	-	117	351,000.00		
57	Asphalt Finisher 80 - 100 TPH	HR	25,000			None	-	None	-		
58	Chip Spreader to 100 HP	HR	2,500			None	-	None	-		
59	Generator to 50	HR	4,000			None	-	None	-		

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LOCAL ROAD & BRIDGES BETTERMENT PROJECT ESTIMATE NO. 40

SECTION II PALOPO - MINNA August 1982

PAY ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	ORIGINAL TENDER QUANTITY	REDESIGN PRELIMIN QUANTITY	TOTAL ESTIMATE		TOTAL ESTIMATE TO DATE		ORIG. CONTR. Q'TY (%)	REV. CONTR. Q'TY (%
						QUANTITY	AMOUNT RUPIAHS	QUANTITY	TOTAL AMOUNT RUPIAHS		
60	Generator 50 - 100 KVH	HR	5,000			None	-	None	-		
61	Hand Guided Stripper	HR	2,000			None	-	None	-		
62	Cut Back Asphalt	MT	148,000			None	-	None	-		
63	Asphalt Cement	MT	110,000			None	-	6.94	763,400.00		
64	Portland Cement	MT	50,000			None	-	3.01	150,500.00		
68	Timber Plank	M3	60,000			None	-	0.64	38,760.00		
77	Class "B" & "C" PCC / C.A	M3	4,000			None	-	51	204,000.00		
78	PCC / F.A	M3	3,500			None	-	47.36	165,760.00		
79	Class "A" PCC/C.A	M3	4,500			None	-	None	-		
81	Base C. Aggr.	M3	6,000			None	-	None	-		
82	Wearing C.Agg.	M3	10,000			None	-	None	-		
84	Stones(Hand Laid)	M3	5,000			None	-	9.71	48,575.00		

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LUWU ROAD & BRIDGES BETTERMENT PROJECT
SECTION II PALOPO - MINNA

ESTIMATE NO. 40
August 1982

Extra Work Orders Bridge Repairs	Work Performed (Rupiahs)	DAY WORKS Total Estimate to Date (Rupiahs)
Salu Lino		
Materials	1,173,589.50	
Labor	566,000.00	
O/H (5 %)	88,075.48	
Profit (2.5 %)	46,239.62	
Total	1,895,824.60	1,895,824.60
Salu Ampak I		
Materials	2,649,771.00	
Labor	1,499,400.00	
O/H (5 %)	207,458.55	
Profit (2.5 %)	108,915.74	
Total	4,465,545.29	4,465,545.29
Salu Ampak II		
Materials	326,843,00	
Labor	205,000.00	
O/H (5 %)	26,632.15	
Profit (2.5 %)	13,901.87	
Total	573,257.02	573,257.02
Engineer Facilities	14,590,000.00	14,590,000.00
Bone Bone Camp Facilities	20,000,000.00	20,000,000.00

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Temporary Bridge

S. Kanjiro (Including O.H. Profit)

Labour	:	255,900.00
Equipment	:	366,000.00
Material	:	336,580.20
		958,280.20

S. Battang

Labour	:	2,179,900.00
Equipment	:	3,125,500.00
Material	:	6,076,479.84
		11,381,879.84

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ESTIMATE NO. 40 — Sheet 20 of 20

August 1982

Calendar Days for Completion	=	1096
Calendar Days Elapsed	=	1523
Percent of Time Elapsed	=	138.96 %
Original Contracted Sum	=	Rp 2,148,337,016
Sum Expended to Date	=	Rp 3,317,658,757.75
Percent of Money Expended	=	154.43 %
Percent of Expended Time Elapsed	=	97.69 %
Revised Estimate (March 1981)	=	Rp 4,475,388,583
Percent of Rev. Fiscal Est.	=	74.13 %

Total Forward :

Total Amount of Work Compl'd	= Rp	3,317,658,757.75
Total Amount Prev.Credited (-)	= Rp	3,242,206,575.35
Total Amount This Invoiced	= Rp	75,452,182.40
Less 10 % Retention	= Rp	7,545,218.24
Less 20 % Advance Payment	= Rp	-
Total Amt. To Be Deducted	= Rp	7,545,218.24
Total Amt. Payable This Month	= Rp	67,906,964.16
60 % Rupiah Component	= Rp	40,744,178.50
40 % Dollar in Rupiah	= Rp	27,162,785.66

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MONTHLY CERTIFICATE DETAILS
FOR MONITORING PURPOSES ONLY

SECTION II : PALOPO - MINNA
CONTRACTOR : P.T.PEMBANGUNAN JAYA
ENGINEERS : P.T.INDAH KARYA
LOUIS BERGER INT,INC.

ESTIMATE NO. 40
PERIOD : August 1982

April 1982 Revised Schedule

	SUMMARY	Rp 4,475,388,583		RUPIAH
NO.	DESCRIPTION	ITEMS	PERCENT	AMOUNT TO DATE
1	GENERAL	1.18 - 1.19	9.73	435,405,591
2	DRAINAGE	2.04 - 2.06	1.51	67,447,064
3	EARTHWORKS	3.03(1)- 3.09(5)	27.40	1,226,209,670
4	PAVEMENT	4.01 - 6.02(2)	3.72	166,643,406
5	WEARING SURFACE	7.01 - 7.04	16.83	753,020,688
6	STRUCTURES	8.01(1)- 8.05(2)	10.82	484,445,832
7	MISCELLANEOUS	9.0	1.28	57,341,329
8	DAY WORKS		1.28	57,473,018
	TOTAL SUM OF WORK COMPLETED TO DATE		72.57	3,247,986,598
9	MATERIALS ON SITE		1.56	69,672,160
	GROSS SUM OF MONTHLY CERTIFICATE		74.13	3,317,658,758

DEDUCTIONS : PREVIOUS CERTIFICATE	2,488,318,514	
10 % ACCORDING TO CONTRACT	331,765,880	
20 % PAYMENT OF ADVANCE	429,667,400	
O T H E R S	-	
TOTAL SUM OF DEDUCTIONS RUPIAHS	3,249,751,794	3,249,751,794
NET SUM OF MONTHLY CERTIFICATES	RUPIAHS	67,906,964

(IN WORDS) : Sixty Seven Million Nine Hundred and Six Thousand Nine Hundred and Sixty Four.

PERCENTAGE ACHIEVED : (WORK)
TO DATE : 72.57
PREVIOUS MONTH : 70.27
THIS PERIOD : 2.30

(CONTRACTORS ADVANCES)
10 % 214,833,702
(60 %)128,980,221 27 OCT. '78
(40 %) 85,933,481 20 JAN. '89

ADDENDUM + 5 % 107,416,851 4 AUG 79
(ORIG.CONTRACT) + 5 % 107,416,851 5 JUN 81

TOTAL : 20% -RP 429,667,403.20

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BAR GRAPH PROGRESS CHART

SECTION II

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Rp 2.148.337.016

	CATEGORY (SECTION)	ORIGINAL		F
		CONTRACT-AMOUNT Rp	WEIGHT %	AMOUNT Rp
1	GENERAL	235.237.500	10.94	641.500.430
2	DRAINAGE	9.432.650	0.44	66.191.712
3	EARTHWORK AND DEMOLITION	397.150.726	18.49	1.289.690.719
4	SUBGRADE	400.200	0.02	8.241.240
5	SHOULDERS	94.464.512	4.40	23.718.000
6	SUBBASE AND BASE	609.424.712	28.37	187.888.500
7	SURFACING AND PAVEMENT	223.987.264	10.43	855.788.800
8	STRUCTURES	423.248.793	19.70	538.597.843
9	MISCELLANEOUS	154.990.670	7.12	213.771.339
10	CONTINGENCIES			650.000.000
	TOTAL	**2.148.337.016**	**100.00**	**4.475.388.583**

* CONTINGENCIES IS SUBJECT TO FUTHER NEGOTIATIONS AND CONSISTING OF :

- DAY WORKS
- BASE CAMP FASILITIES
- ADDITIONAL BRIDGES
- EXTRA WORK ORDERS

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REVISED		PROGRESS TO DATE		1979							
ESTIMATE-WEIGHT %	WEIGHT TO ORIGINAL %	AMOUNT	WEIGHT TO REVISED	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV
14.334	29.8603	435.405.591	9.73								
1.479	3.0811	67.447.064	1.51								
28.8174	60.0320	1.226.209.670	27.40								
0.1841	0.3836	6.836.226	0,15								
0.530	1.104	—	—								
4.1983	8.7458	159.807.180	85.05								
19.1221	39.8349	753.020.688	16.83								
12.0346	25.0704	484.445.832	10.82								
4.7766	9.9506	57.341.329	1.28								
14.5239	30.2560	57.473.018	1.28								
100.000	**208.3187**	2.023.003.137	154.05								

MONTHLY CERTIFICATE NUMBER		**1**	**2**	**3**	**4**	**5**	**6**	**7**
MONTHLY PHYSICAL PROGRESS SCHEDULE (%)								
ACTUAL MONTHLY PROGRESS (%)		2.67	4.46	5.19	6.17	7.28	8.13	9.17
BALANCE (%)								
MONTHLY CERTIFICATE PAYMENT (Rp)		119.588.000	199.780.943	232.357.100	276 286.346	325.990.483	363.899.764	410 286 704

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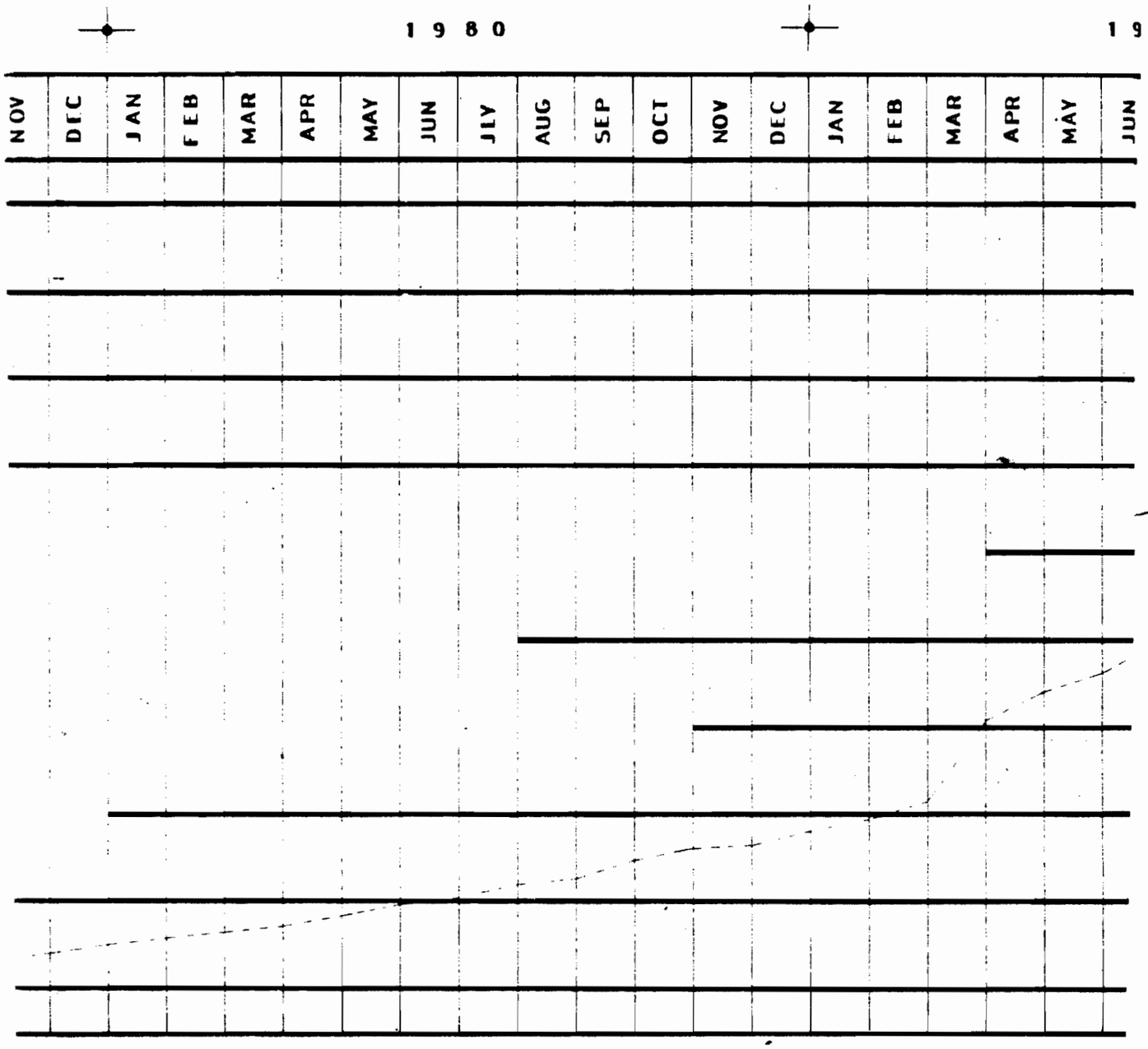
SCHEDULE REVISED
APRIL 1982

TARGET DATE 30 SEPTEMBER 1982
PURSUANT LETTER OF UNDERSTANDING NO 2



7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	2
17	9.32	10.83	11.89	12.69	13.42	14.57	15.26	16.73	17.68	19.56	20.82	21.32	22.69	24.43	26.20	36.21	39.42	41.98	4
410 280 704	444 130 170	486 702 800	531 979 [illegible]3	567 846 990	600 703 490	652 303 674	683 845 593	748 923 665	791 280 709	875 559 779	931 741 560	954 246 330	1.015 246 010	1 093 243 397	1.172 402 271	1.620 316 159	1.764 246 431	1.878 707 211	

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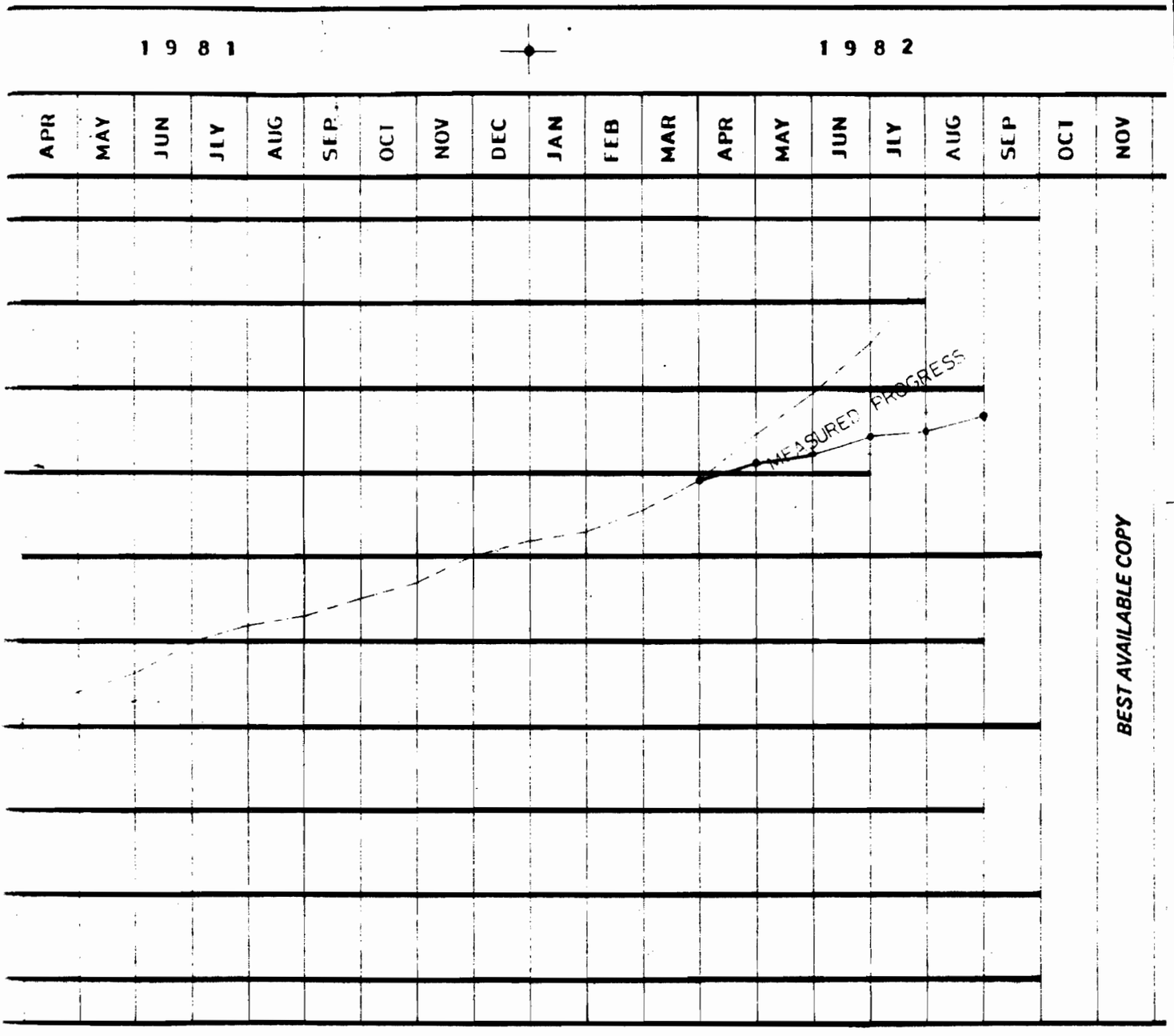

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24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
												69.55	74.38	80.20	88.13	95.32	100.00		
39.42	41.98	44.64	47.41	48.49	50.36	52.58	55.23	57.06	58.35	60.50	64.12	66.40	67.44	[illegible]	[illegible]	72.57			
												3,15	6.94	10.80	[illegible]				
1.764.245.431	1.878.707.211	1.997.756.505	2.121.700.279	2.170.097.793	2.253.804.819	2.353.202.771	2.471.930.576	2.553.615.853	2.611.157.922	2.707.272.557	2.869.373.502	2972.253.502	[illegible]	[illegible]	[illegible]	3.4[illegible]986.598			

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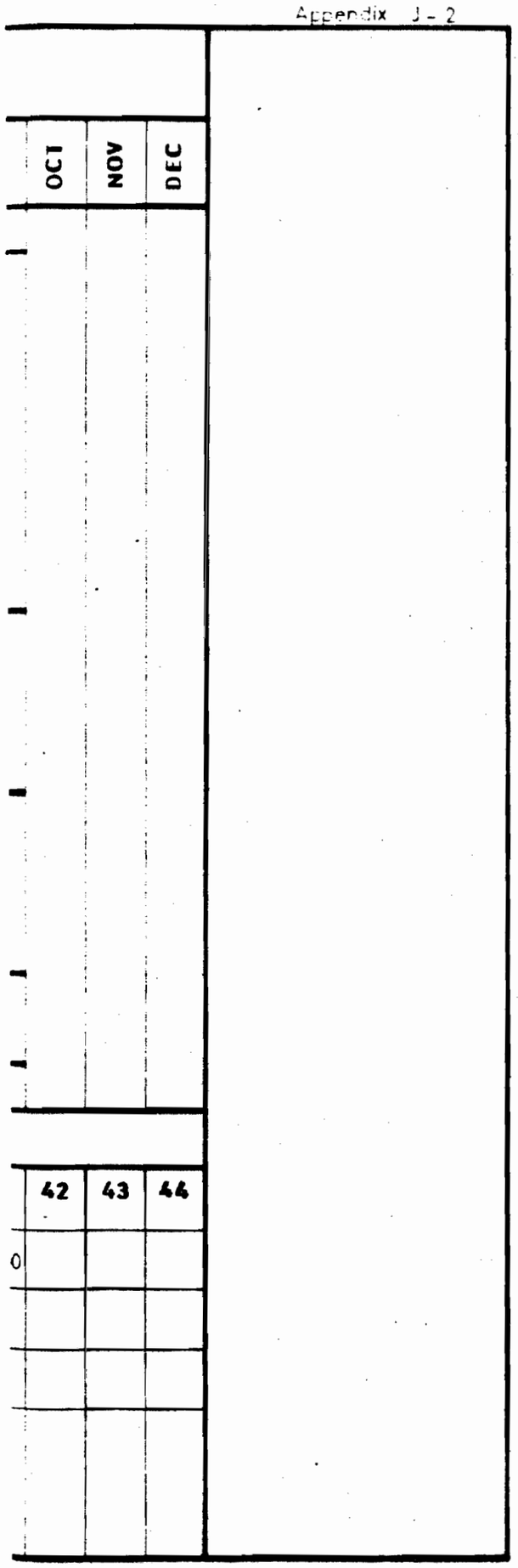
Appendix J - 2



SCHEDULED RECEIVED REVIEWED
20 APRIL 1982

P.T. NJAH KARYA - LOUIS BERGER INT. INC.

ALFRED L. FOUST

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CHANGE ORDER STATUS

APPENDIX K-2

Date : August 1982

Change Order No.	Description	Date		Funds (equiv. rupiah)			Remarks
		Submitted	Approved	Increase	Decrease	Cum. Total	
-	Original Contract	-	-	-	-	2,148,337,016	08/CTR/LN/BM/78
01	Class "C" Subbase Deletion				395,925,123	1,752,411,893	
02	Excessive Quantities For Embank. From Borrow Exc.			630,831,904		2,383,243,797	Excess = 120% x Original Bid Est.
03	Additional Mobilization Requirements			331,530,000		2,714,773,797	
04	Additional Maintenance Requirements			74,732,930		2,789,506,727	
05	Unrein.Conc. Culvert Pipe			12,586,330		2,802,093,057	
06	Excess Sparse Clearing &Gr			34,030,775		2,836,123,832	
07	Excess Common Excavation			36,632,142		2,872,755,974	
08	Irrigation Ditching			59,350,000		2,932,105,974	
09	Berm Construction			1,180,000		2,933,285,974	
10	Prime Coat Application			118,580,000		3,051,865,974	
11	Asphalt Concrete Paving			737,208,800		3,789,074,774	
12	Original Shoulder Deletion				94,464,512	3,694,610,262	
13	Revised Shoulder Design			21,240,000		3,715,850,262	

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CHANGE ORDER STATUS

APPENDIX K-2

Date : August 1982

Change Order No.	Description	Date		Funds (equiv. rupiah)			Remarks
		Submitted	Approved	Increase	Decrease	Cum. Total	
14	Excess Conc.Struct.Demolit.			1,790,520		3,717,640,782	
15	Excess Timber Bridge Demol.			1,551,628		3,719,192,410	
16	Reshaping Exist.Asphalt Pav.			9,185,000		3,728,377,410	
17	Excess Quantities R.C.C.P			41,783,519		3,770,160,929	
18	Excess Str.Exv.up to 2 Mtrs			17,392,294		3,787,553,223	
19	Excess Str.Exc.(water Pres.			4,710,420		3,792,263,643	
20	Excess Shoring & Cribbing			24,415,000		3,816,678,643	
21	Excess Compact.Embank.Foun.			6,214,700		3,822,893,343	
22	Excess Swamp Area Embank.			17,468,460		3,840,361,803	
23	Excess Earthcut Subg.Prep.			3,098,160		3,843,459,963	
24	Excess Reinforcing Steel			73,214,790		3,916,674,753	
25	Excess Bearing Pads			4,174,638		3,920,849,391	
26	Bridge Expansion Joints			7,095,200		3,927,944,591	
27	Pile Driving Shoes			787,410		3,928,732,001	

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CHANGE ORDER STATUS

APPENDIX K-2

Date : August 1982

Change Order No.	Description	Date		Funds (equiv. rupiah)			Remarks
		Submitted	Approved	Increase	Decrease	Cum. Total	
28	Pile Splices			10,206,000		3,938,938.001	
29	Deletion- Timber Piles				38,040,798	3,900,897.203	
30	Class "AA" P.C.C.			31,986,150		3,932,883.353	
31	Excess Concr.Piling Suppl.			49,120,050		3,982,003.403	
32	Excess Driving Conc.Piles			34,599,654		4,016,603.057	
33	Deletion-Penetration Macad.				2,521,096	4,014,081.961	
34	Deletion-Asphalt Painting				221,466,150	3,792,615.811	
35	Deletion Str.Cyclop.Concr.				3,509,714	3,789,106.097	
36	Hand Laid Rock Embankment			3,484,000		3,792,590.097	
37	Grouted Rubble Paved Waterw			81,884,000		3,874,474.097	
38	Grouted Rip-Rap			73,695,600		3,948,169.697	
39	Treated Wood Guard Rail.Del				36,410,000	3,911,759.697	
40	Deletion of Hectometre Pst.				4,954,686	3,906,805.011	
41	Wire Mesh Gabions			9,767,400		3,916,572.411	

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CHANGE ORDER STATUS

APPENDIX K-2

Date : August 1982

Change Order No.	Description	Date		Funds (equiv. rupiah)			Remarks
		Submitted	Approved	Increase	Decrease	Cum. Total	
42	Class "AB" P.C.C.			36,264,500		3,952,836,911	
43	Plastering			3,694,900		3,956,531,811	
44	Class "A" PCC RCBC			140,641,800		4,097,173,611	
45	Class "B" PCC RCBC			33,365,430		4,130,539,041	
46	Lean Concrete(Blinding)			5,617,206		4,136,156,247	
47	Bridge Railing			21,896,952		4,158,053,199	
48	Deletion Class "A" PCC				1,684,319	4,156,368,880	
49	Deletion Class "B" PCC				26,909,440	4,129,459,440	
50	Deletion Scaffolding 15-20				12,402,000	4,117,057,440	
51	Deletion Structural Steel				181,003,956	3,936,053,484	
52	Deletion Treated Timber				74,940,624	3,861,112,860	
53	Concrete Built Up/Piles (5 M3)			1,243,155		3,862,356,015	New Item Under Negotiations
54	Sand Blotter (100,000 M2)			3,500,000		3,865,856,015	New Item Under Negotiations
55	Traffic Sign Deletions(184)				3,542,736	3,862,313,279	(Original Contract)

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CHANGE ORDER STATUS

APPENDIX K-2

Date : August 1982

Change Order No.	Description	Date		Funds (equiv. rupiah)			Remarks
		Submitted	Approved	Increase	Decrease	Cum. Total	
56	International Traffic Signs (191)			15,618,070		3,877,931,349	New Item Under Negotiations
57	Corrugated Metal Pipe Installation Costs (215)			2,168,060		3,880,099,409	New Item Under Negotiations
58	Guide Markers (369)			2,026,917		3,882,126,326	New Item
59	Pile Load Tests, Each			16,435,161		3,898,561,487	E.W.O. No. 01
60	Abutment Repair Sta 6+371 -Seg. 1	Oct 79		298,545.0		3,898,860.032	E.W.O. No. 02
61	Poilitical Demarcation Marker -Seg.1	Nov 79		253,350.0		3,901,393,382	E.W.O. No. 03
62	Asphalt Patching -Seg.1	Jan 80		3,501,200.0		3,904,694,582	E.W.O. No. 04
63	Concrete Chipping Station 2 + 799 - Seg.1	Feb 80		13,500.0		3,904,708,082	E.W.O. No. 05
64	Salu Lino Repairs	Jly 80		1,895,824.6		3,906,603,906.6	E.W.O. No. 06
65	Salu Ampak I Repairs Sta -Seg.2	Jly 80		4,465,545.2		3,911,069,451.8	E.W.O. No. 07
66	Salu Ampak II Repairs Sta -Seg.2	Jly 80		573,257.0		3,911,642,708.8	E.W.O. No. 08
67	Engineering Facilities	Jly 80		14,590,000.0		3,926,232,708.8	E.W.O. No. 09
68	Bone Bone Facilities	Sep 80		20,000,000.0		3,946,232,708.8	E.W.O. No. 10
69	Kanjiro Bridge Repair	Jly 81		1,210,280.2		3,947,442,989.-	E.W.O. No. 11

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CHANGE ORDER STATUS

APPENDIX K-2

Date : August 1982

Change Order No.	Description	Date		Funds (equiv. rupiah)			Remarks
		Submitted	Approved	Increase	Decrease	Cum. Total	
70	Battang Temporary Bridge	Jly 81		11,381,879.84		3,958,824,868.84	E.W.O. No. 12
71	Sekayu Roadway Maintenance -Seg. 3	Jly 81		-	710,364.00	3,958,114,484.84	E.W.O. No. 13
72	Baliase Repair Work						E.W.O. No. 14
73	Palopo No.1 Reconstruction	22 Apr 82		53,264,271			E.W.O. No. 15
74	Palopo No.2 Reconstruction	22 Apr 82		35,973,999			E.W.O. No. 16
75	Battang Reconstruction						E.W.O. No. 17
76	Sabbang Rehabilitation	23 Feb 82		14,421,264.00			E.W.O. No. 18
77	Kanjiro Rehabilitation						E.W.O. No. 19
78	Lamasi Timber-Redecking	03 Apr 82		30,422,134.60			E.W.O. No. 20
79	Makawa-Timber Redecking	03 Apr 82		40,593,321.60			E.W.O. No. 21
80	Masamba -Timber Redecking	03 Apr 82		35,930,575.20			E.W.O. No. 22
81	Baliase -Timber Redecking	03 Apr 82		37,599,107.00			E.W.O. No. 23
82	Bone Bone -Timber Redeck.	03 Apr 82		30,924,979.80			E.W.O. No. 24
83	Radda - Metal Decking	24 Feb 82		10,603,309.20			E.W.O. No. 25

75 Design Not Resolved
76 Maybe deleted from Project

72 No Costs Submitted to Client
73 Costs Submitted to Client
74 Costs Submitted to Client

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CHANGE ORDER STATUS

APPENDIX K-2

Date : August 1982

Change Order No.	Description	Date		Funds (equiv. rupiah)			Remarks
		Submitted	Approved	Increase	Decrease	Cum. Total (Rp)	
84	Urasso -Metal Decking	24 Feb 82		6,292,445.68	-		E.W.O. No. 26
85	Lampuawa -Metal Decking	24 Feb 82		9,436,002.24			E.W.O. No. 27
86	Sidomukti Underdrains						E.W.O. No. 28
	Total to Date of Known & Pending* Costs :					4,263,575,894.16	

Items 76 & 78 thru 85 - Subject to final negotiations and policy decisions.

Item 86 ≠ L.S. Price Requested 20 Mar 82.

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Claims submitted to the client have been adjudicated. The Contractor has not proposed any claims recently. It is the Consultants understanding that claims are being formulated for submission which involves delays due to lack of diesel fuel. The contractor has stated orally he was preparing claims for delays for performing additional work due to emergency conditions which has affected his scheduling.

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GENERAL COMMENTS

NARRATIVE

Mr. Joseph Maguire will depart from the project site at the end of August as his contract will be completed. Mr. Maguire has been in charge of the "As Built" surveys, which is proceeding at a very slow rate due to many field errors monitored by Mr. Maguire. The measured progress to date, for Segment 1 is about 40 % or equated to Section II, it equals to about 13 %. The responsibilities for ascertaining the "as built" information now lies wholly with P.T. Indah Karya personnel. The joint surveys between the Contractor and the P.T. Indah Karya group shall continue after Mr. Maguire departure.

One of the prime difficulties in ascertaining true progress is the lack of input for the pricing of many items. These outstanding items have been pending resolution for over a year. Change Orders 71 through 86 have not been adjudicated to date. Approximately Rp 300 millions or 7 % of the revised contracted amount may yet be due to the contractor. It is recommended that the client and contractor negotiates these outstanding items so the official change orders can be drafted.

The Contractor expedited progress this period. The achieved physical progress is reflected on the bar schedule found in Appendix J. The accrued percentage now stands at 72.57 %. This period an incremental increase of 2.3 percent was made.

The Contractor finally received their outstanding shipment of asphalt cement from Singapore. However, the drums borrowed from their sister contractor in Section I was instrumentally responsible for the asphalt concrete progress achieved in Section II.

The weather was ideal for executing construction. Stream levels were generally low. Less than 60 milimetres of rainfall this report period over the project area.

Bridge rehabilitation and other bridge works continues and progress was noted. Reference is made to the bridge report. (Appendix N-1).

Overall progress this period is satisfactory and shows intensification on part of the contractor management team.

The underdrain constructed in Segment 3 in the vicinity of Bone Bone at survey station 27+802 was completed during the latter part of this report period. This drain was provided at the request of "Irigasi" to preclude contamination and the adding of unmeasured water to the canal from the roadway runoff. (Nanakan Siphon).

The Lamasi box culvert constructed by the Irigasi contractor, P.T. Bumi Karsa has failed the density tests for backfilling. The client, Irigasi, P.T. Pembangunan Jaya, and P.T. Bumi Karsa have been apprised of this violation of the contract specifications. The consultant was not privileged to the design details or construction methodology to be employed for the installation of this masonry box culvert.

BRIDGE REPORT STATUS

SECTION II

25 AUGUST 1982.

The status of the Bridge Construction at the end of this report period is as follows:

PALOPO I — Kilometre 0 + 000 Palopo - Makale Road
This structure is 100 % completed and is open to traffic.

PALOPO II — 0 - 168 Palopo Town, (Palopo-Malili Road)
This structure is 100 % completed and is open to traffic.

BATTANG — Station 13 + 000, Segment 1,
100 % of Abutment 8 placed. Gabions scour protection started.

LAMASI — Station 19 + 613, Segment 1
No effort made to initiate redecking of this structure. Some maintenance work performed.

MAKAWA — Station 21 + 692, Segment 1
No work initiated this period. This structure requires timber redecking.

SAPAAN — Station 26 + 720, Segment 1
Additional slope protection at the wing wall and Gabion scour protection at the river's meander has been done.

L I N O — Curbs & Railing was finished this period. 15 % rip-rap and cut off walls remaining. Gabions are needed for bank protection as the river meanders.

AMPAK Station 0 + 044, Segment 2

The work remain is finishing of curbs & railing.

This bridge is approximately 100 % completed.

BABESU Station 1 + 120, Segment 2

Out-standing work at this structure substanially completed. Stripping of forms required. Rip-rap 100 % finished in this period.

SABBANG Station 18 + 100, Segment 2

The Consultant has not been apprised as to what decision the government has reached as regards rehabilitation of this very poor and critical structure.

BAEBUNTA Station 19 + 935, Segment 2

No works remains in this period.

RADDA Station 26 + 388, Segment 2

No work remain in this period.

KAPUNA Station 28 + 330, Segment 2

All of the works almost finished. This structure is substanially completed.

MASAMBA Station 29 + 930, Segment 2

No work carried out this period towards redecking this structure with metal for asphalt concrete paving.

BALIASE There are needed Gabion scour protection at the up stream of Maili side.

BALIASE Station 4 + 002, Segment 3

This structure is slated to be redecked with timber.

No activity this period.

URASO Station 9 + 495, Segment 3

Construction not started yet, excepted the mobilization of manpower and equipment.

LAMPUAWA — The construction started, while the preparation already done.

KANJIRO — Station 24 + 009, Segment 3
Almost 100 % works completed, except the finishing should be done.

BONE BONE — Station 26 + 971, Segment 3
No work this period towards redecking with timber. Some maintenance work carried out by directive of the Engineer.

PATILA — Station 31 + 119, Segment 3
Curbs & Railing was completed. No work, except clean-up, remaining. This structure is now open to traffic.

MINNA II — Station 33 + 750, Segment 3
100 % completed, now this Bridge open to traffic.

GENERAL — Still no report from Bina Marga or Contractor for the Materials Engineer's records regarding the acceptance of Consultant does not believe these devices conform to the ASTM standards which are required by the contracted specifications. The contractor are using these devices at his own risk. These elastomeric bearing pads which are manufactured in Indonesia have not been officially approved by the Engineer.
Bridge Sites, in general, require extensive clean-up and removal of old bridges, channel changes, and slope protection works. Many bridge approaches remain to be paved. Many bridges are abused due to overloading even thoguh the critical structures are posted with load limits. The Contractor, public, and other contractors violate the load limits. The one by one (satu per satu) notices are not heeded.

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The Contractor and Consultant vehicles are the worst offenders. There are no police enforcement of posting. The older structures will collapse as did the Battang River Bridge unless corrective measures are carried out.

Due to the failure of the Irigasi Contractor (P.T. Bumi Karsa) to affect repairs on the Lamasi Bridge in Segment 1, Section II, an excessively loaded truck of asphalt cement fell through the north or Bone Bone end of the deck. This caused great inconveniences to the motoring public.

Contributing factors : Unsafe deck

Overloaded vehicle.

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SUMMARY

BRIDGE CONSTRUCTION

APPENDIX N-2

LUWU ROAD & BRIDGES BETTERMENT PROJECT

MONTH: Aug. 82

M.C.NO. 40

No.	Bina Marga Code No.	N a m e	Station	Length Metres	Actual Construction Costs	Date Work Began	Estimated % Completed/Scheduled								Remarks
							Foundation		Sub-Structure		Super Structure		Overall Completed		
							S	A	S	A	S	A	S	A	
															Segment 1
1	54.003.021	Sapaan	26 + 720	10	11.890.857	03 Jun 80	100	100	100	100	100	100	100	100	Spread Footing
2	54.003.024	L i n o	28 + 590	24	26.465.602	13 Apr 81	100	100	100	100	100	100	100	99	Pile Fondation
															Segment 2
1	54.003.028	Ampak	0 + 044	48	61.035.250	06 May 81	100	100	100	100	100	100	100	99	Piling Fondat.
2	54.003.029	Babesu	1 + 120	20	29.238.808	27 Jun 81	100	100	100	100	100	100	100	99	Piling Fondat.
3	54.003.041	Baebunta	19 + 935	30	33.338.741	01 Jly 81	100	100	100	100	100	100	100	99	Abuts Piling Only
4	54.003.046	Kapuna	28 + 330	20	42.788.058	08 Jly 81	100	100	100	100	100	100	100	99	Piling Fondat.
															Segment 3
1	54.002.012	Patila	31 + 119	12	18.463.163	03 Sep 81	100	100	100	100	100	100	100	100	Spread Footing
2	54.002.016	Minna II	33 + 750	24	37.666.185	19 Oct 81	100	100	100		100	100	100	99	Piling Fondat.
8			Totals	188	260.642.804 (Total) Contr'd Cost		Revised Schedule:- 31 March 1982 Target Date. Note: Fondations Includes Piling and Footings-Structural Excavation-Blinding								ALL BRIDGES A = Actual 99.00 % S = Schedule 100.00%

Note: All structures in contract are substanially completed - Lacking only clean-up - channelizations - & protection works.

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PILE DRIVING STATUS

ORIGINAL DESIGN

25 J u l y 1982

APPENDIX N - 3

Bridge Name	Seg.	Station	Lengths			No. Driven			Costs	
			Design	As Built	Savings %	Design	To Date	%	Estimated	Real
L i n o	1	28 + 590	236	209.8	11.10	26	26	100	1,904,284.00	1,692,876.20
Ampek	2	0 + 044	1044	1003.9	3.84	58	58	100	11,291,685.60	10,562,561.60
Bebesu	2	1 + 120	442	441.3	1.60	34	34	100	6,270,212.00	6,260,281.80
Beebunta	2	19 + 935	264	250.4	5.15	22	22	100	3,745,104.00	3,552,174.40
Kapuna	2	28 + 330	680	425.2	37.47	34	34	100	9,646,480.00	6,031,887.20
Minna II	3	33 + 750	578	416.7	27.91	34	34	100	8,199,508.00	5,911,306.20
			3,244	2,747.3	15.31	208	208	100	41,057,273.60	34,011,087.40
				(-) 39.0					Deducted (-)	553,254.00
				2,708.3	16.51				Paid M.C. :	33,457,833.40

Note: The Contractor drove no p i l i n g this period: The Resident Engineer condemned approximately 39 linear metres since no pile driving inspector was on duty or requested for Sunday work. The initial 811.2 linear metres of piling (676 x 1.20 %) are driven at the unit price of Rp 8069/L.M., the remaining lengths are paid at rate of Rp 14,186/L.M. Reference is made to the Bid Schedule Sheet, found on Page 25 of this report.
One hundred percent of the piling have been driven. Monetary Savings effected due to difference between the design estimated costs and the "as built" costs are 18.51% or 535.7 LM at Rp 14,186 per metre (Rp 7,599,440.20)

*Special Piling Requirements - Bridge Rehabilitation
(Sina Marga Design) Unexecuted Change Order C.O.No.77 (E.W.O. No.19)

Kanjiro	3	24 + 009	68	64.9	4.56 %	4	1	25	(Costs subject to Negotiations)

Pile Driving Completed in February 1982. Pile Driving Rig removed to Section I, along with Pile Driving Inspector.

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Appendix N - 4

R.C.B.C. L I S T

SEGMENT 3

LUWU ROAD & BRIDGES BETTERMENT PROJECT

SECTION II

RCBC NO.	PROJECT NO.	STATION	N A M E	CELLS	H	W	L	TYPE SIDE WALLS H	TYPE SIDE WALLS E	INVERT ELEVATION INLET	INVERT ELEVATION OUTLET	DATE ACCEPTED	REMARKS
01	34	1 + 199	Kuru Kuri	4	1.5	1.0	7.4	A	A	36.0	35.95	17 Sep 81	
02	35	2 + 073	Patinik	4	1.5	1.0	7.4	A	A	38.0	37.95	03 Sep 81	
03	36	2 +947.9	Baliase II	4	1.5	1.0	7.4	A	A	39.3	39.25	23 Sep 81	
04	37	4 +440.1	S.Bulawan	2	1.5	1.4	7.4	A	A	43.0	42.90	16 Oct 81	
05	38	6 +233.6	Salu Bulo	5	1.5	1.0	7.4	A	A	40.80	40.75	22 Oct 81	
06	39	6 +918.7	S.Nasiang I	2	1.5	1.2	7.4	A	A	39.60	39.55	21 Nov 81	
07	40	6 +944	S.Nasiang II	2	1.5	1.2	7.4	A	A	39.60	39.55	03 Nov 81	
08	41	7+285.65	S.Tatedongi I	2	2.4	1.6	7.4	A	A	39.15	39.10	20 Oct 81	
09	42	7 + 379	S.Tatedongi II	1	1.0	0.5	7.4	*	*	42.25	42.15	07 Nov 81	
10	43	9 + 773	Masapi	4	2.4	1.6	7.4	A	A	30.05	30.00	09 Oct 81	54.002.005
11	44	12 +127.10	S.Tienpik	5	1.5	1.0	7.4	A	A	25.20	25.15	24 Nov 81	
12	45	12 + 650	S.Balambangi	5	3.0	2.0	7.4	A	A	22.65	22.60	18 Mar 82	54.002.007
13	46	16+419.6	Kaluku II	3	1.5	1.25	12.2	A	A	67.90	67.90	30 Mar 82	54.002.008
14	47	19 + 656	Salulemo I	2	3.0	2.0	9.0	A	A	33.82	33.80	23 Dec 81	
15	48	26+106.3	Lamoa	4	3.0	3.0	7.4	A	A	14.00	14.00	29 Mar 82	54.002.010
16	49	26+746.25	Pambasihan	2	2.4	2.0	7.4	A	A	12.40	12.30	30 Dec 82	
17	50	30 + 200	Nakowong	4	3.0	3.0	7.4	A	A	8.08	8.05	15 May 82	
18	51	31 + 556	Bangke	2	1.5	1.5	9.0	A	A	17.54	17.50	12 Jan 82	54.002.013
19	52	32+157.5	Salu Mate	2	3.0	2.5	7.4	A	A	13.35	13.25	25 Oct 81	54.002.014
20	53	32+825	Salu Baletc	3	1.5	1.25	7.4	A	A	10.50	10.50	12 Mar 82	

* Special Type

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BY ELA DATE

CHKD. BY [illegible] DATE

SUBJECT

LOUIS BERGER & ASSOCIATES INC.

SHEET NO. 1 OF 1

PROJECT Y-299 (LHWM)

LABORATORY TEST CONTROL RECORD

FOR MONTH OF August 1982

SECTION II PALOPO-MINNA	EMBANKMENT		SUB-GRADE		SELEC'D EMBANKT OR S.B.		BASE COURSE		ASPHALT CONCR.		P.C.C	
TYPES OF TESTS	NUMBER OF TEST											
	This Month	To Date	This Month	To Date	This Month	To Date	This Month	To Date	This Month	To Date	This Month	To Date
1. LIQUID LIMIT												
2. PLASTIC LIMIT												
3. MOISTURE CONTENT												
4. PARTICLE SIZE ANALYSIS					11		15					
5. LAB. DENSITY (T-99)					-		-					
6. LAB. DENSITY (T-180)					3		5					
7. IN-PLACE DENSITY					25		59					
8. CBR VALUE (T-185)												
9. FINENESS MODULUS (AGG.)											6	
10. ORGANIC (AGG.)												
11. SOUNDNESS (AGG.)												
12. L.A. ABRASSION (AGG.)												
13. THICKNESS & ELONG. (AGG.)							15					
14. FRACTURED FACE (AGG.)							15					
15. SPECIFIC GRAVITY (AGG.)												
16. LOOSE UNIT WEIGHT (AGG.)												
17. A.C. MARSHALL TEST									84			
18. A.C. EXTRACTION TEST									21			
19. A.C. CORING (PAVET.THIC.)									57			
20. P.C.C. TRIAL MIX												
21. P.C.C. COMPRESSIVE STRG.											192	
22. P.C.C. SLUMP TEST											61	
23. ASPHALT (AASHTO)												
24. PORTLAND CEMENT (AASHTO)												
25. RE-BARS (AASHTO)												
26. OTHER TESTS												
27. OTHER TESTS												
28. OTHER TESTS												
TOTAL NUMBER					39		109		162		259	

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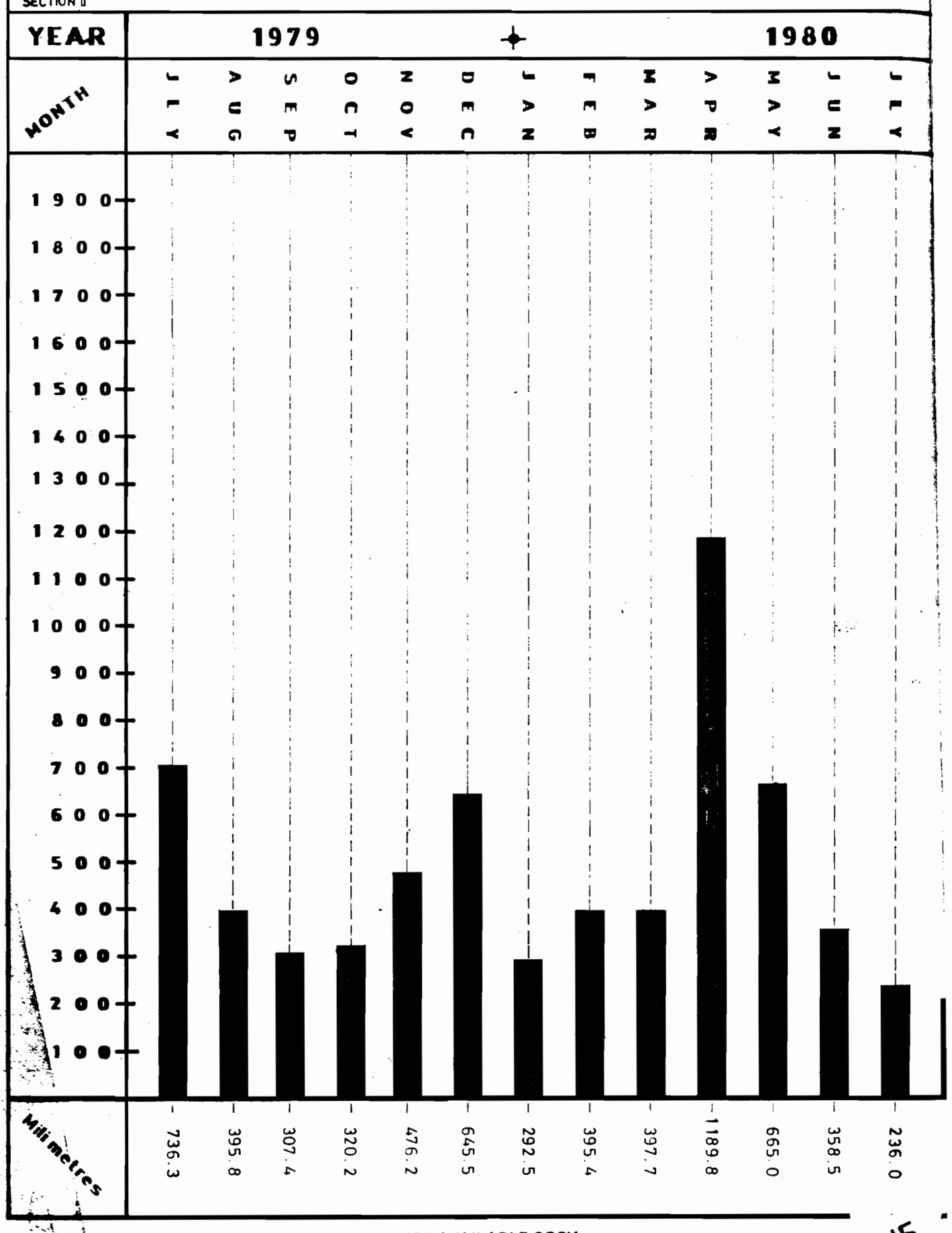
SECTION II



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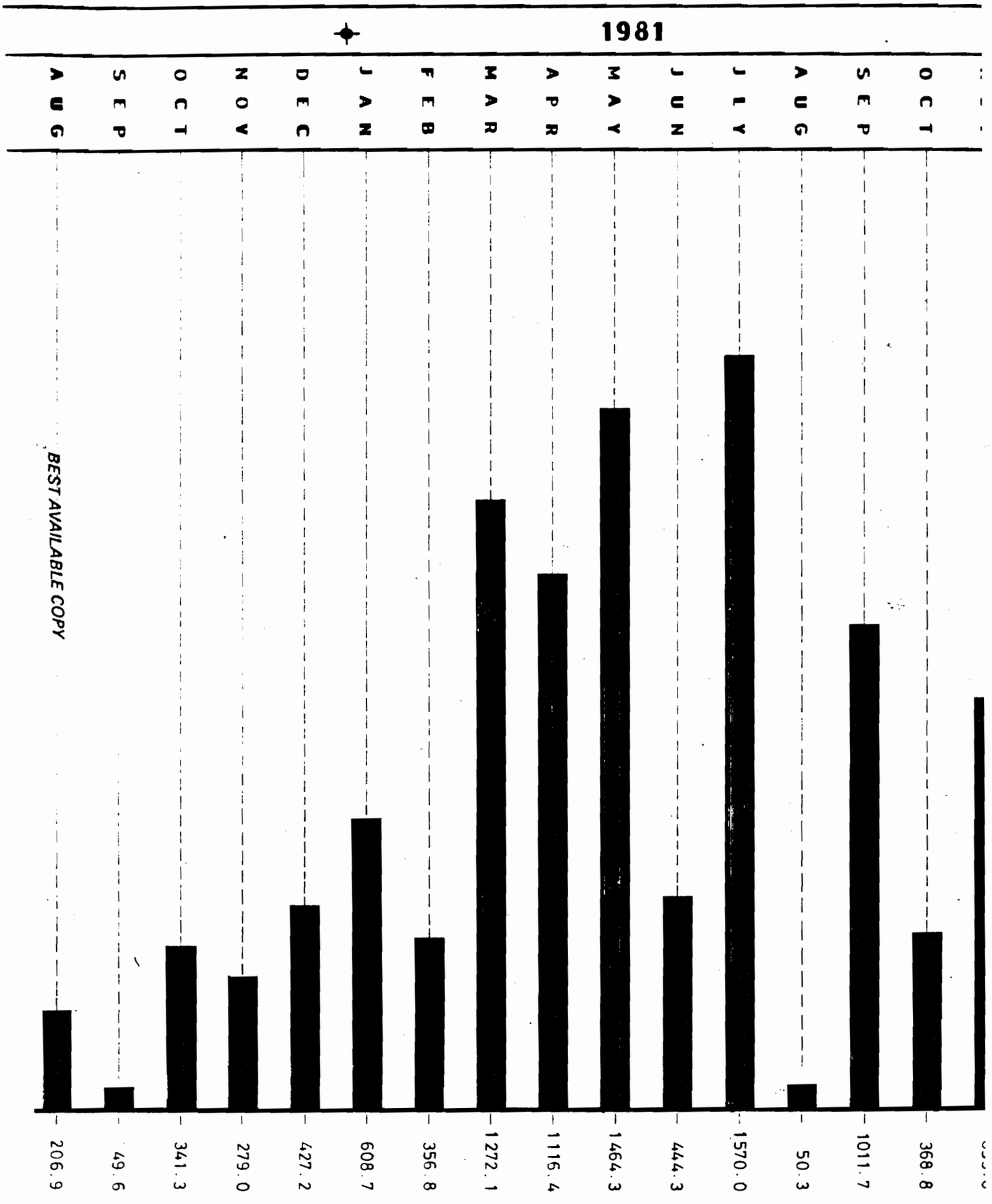
LUWU ROAD & BRIDGES BETTERMENT PROJECT

MONTHLY RAINFALL CHART

KARETAN LABORATORY METEOROLOGICAL STATION



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APPENDIX O - 2

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CONSTRUCTION PROJECT INPUT DATA SHEET

All Costs expressed in millions of rupiah

1. Project ID		2. Project Code		3. Date	
4. Reporting Unit		5. Contractor	P.T.Pembangunan Jaya		
6. Construction Contract No.	08/CTR/LN/BM/78	7. Consultant	P.T.Indah Karya/Louis Berger Int,Inc.		
8. Project Limits, From	Palopo	9. Project Limits, To :	Minna		
10. Length	99.3 Km	11. Invite Bids	09 July 1977	12. Open Bids	04 October 1977
13. Award	24 May 1978	14. Notice to Proceed	12 June 1978	15. Begin Contract Time	24 June 1978
16. Original Contract Time	1096 days	17. Original Completion Date			24 June 1981
18. Approved Time Extensions	1376 days	19. Revised Completion Date			30 Sept. 1982
20. Days Elapsed		21. Estimated Completion Date	31 Dec.82	22. Actual Completion Date	-
23. Original Contract Amount	Rp 2,148 X 10^6	24. Approved Change Orders	Rp 1,311 X 10^6		
25. Certified Price Escalation	Rp 2,380 X 10^6	26. Anticipated Price Escalation	Rp 2,867 X 10^6		
27. Materials-on-Site	Rp 69 X 10^6	28. Anticipated Change Orders	Rp 1,675 X 10^6		
29. Value of Certified Work	Rp 3,317 X 10^6	30. Value of Scheduled Work	Rp 4,475 X 10^6		
31. Advances Paid	Rp 429 X 10^6	32. Advances Refunded	Rp 429 X 10^6		
33. Approved Claims	None	34. Certified Interest	Rp 5.8 X 10^6		
35. Net Retention Money	Rp 331 X 10^6	36. Certified Currency Adjustments	None		
37. Other Approved Adjustments	None	38. Other Anticipated Adjustments	None		

Note : Items 39 through 44 will be calculated by the computer from the other data on this sheet.

39. Revised Contract Amount		40. Probable Final Cost	
41. Actual Percent Complete		42. Schedule Percent Complete	
43. Revised Contract Time		44. Percent Time Elapsed	

45. Lender's Share _____ %

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SUMMARY

PERIODIC PROGRESS

M.C. No.	Month	Monetary Earnings (Productivity)	Original: 2,148,337,016		Revised: 3,823,327,666		Projected: 4,475,388,583	
			Monthly Progress	Accumulative Prog.	Monthly Pr.	Acc.Progress	Monthly Prog.	Acc.Progress
01	May 79	119,588,000.00	5.57	5.57	3.13	3.13	2.67	2.67
02	Jun 79	80,192,943.00	3.73	9.30	2.10	5.23	1.79	4.46
03	Jly 79	32,576,157.00	1.52	10.82	0.85	6.08	0.73	5.19
04	Aug 79	43,929,246.00	2.04	12.86	1.15	7.23	0.98	6.17
05	Sep 79	49,704,137.40	2.31	15.17	1.30	8.53	1.11	7.28
06	Oct 79	37,909,280.50	1.77	16.94	0.99	9.52	0.85	8.13
07	Nov 79	46,386,939.60	2.16	19.10	1.21	10.73	1.04	9.17
08	Dec 79	33,843,466.00	1.57	20.67	0.89	11.62	0.75	9.92
09	Jan 80	40,572,630.54	1.89	22.56	1.06	12.68	0.91	10.83
10	Feb 80	47,276,802.58	2.20	24.76	1.24	13.92	1.06	11.89
11	Mar 80	35,867,387.60	1.67	26.43	0.94	14.86	0.80	12.69
12	Apr 80	32,856,500.13	1.53	27.96	0.86	15.72	0.73	13.42
13	May 80	51,600,183.21	2.40	30.36	1.35	17.07	1.15	14.57
14	Jun 80	31,541,919.31	1.47	31.83	0.82	17.89	0.71	15.28
15	Jly 80	65,078,072.22	3.03	34.86	1.70	19.59	1.45	16.73
16	Aug 80	42,357,044.00	1.97	36.83	1.11	20.70	0.95	17.68
17	Sep 80	84,279,069.67	3.92	40.75	2.20	22.90	1.88	19.56
18	Oct 80	56,181,780.74	2.62	43.37	1.47	24.37	1.26	20.82
19	Nov 80	22,504,770.54	1.05	44.42	0.59	24.96	0.50	21.32
20	Dec 80	60,999,679.96	2.84	47.26	1.60	26.56	1.37	22.69

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M.C. No.	Month	Monetary Earnings (Productivity)	Original : 2,148,337,016		Revised: 3,823,327,666		Projected: 4,475,388,583	
			Monthly Progress	Accumulative Prog.	Monthly Pr.	Acc.Progress	Monthly Prog.	Acc.Progress
21	Jan 81	77,997,386.84	3.63	50.89	2.04	30.67	1.74	24.43
22	Feb 81	79,158,874.16	3.68	54.57	2.07	30.67	1.77	26.20
23	Mar 81	447,913,888.44	20.85	75.42	11.72	42.39	10.01	36.21
24	Apr 81	143,930,271.15	6.70	82.12	3.76	46.15	3.21	39.42
25	May 81	114,460,780.80	5.33	87.45	2.99	49.14	2.56	41.98
26	Jun 81	119,049,293.38	5.54	92.99	3.11	52.25	2.66	44.64
27	Jly 81	123,943,773.79	5.77	98.76	3.24	55.49	2.77	47.41
28	Aug 81	48,397,514.17	2.25	101.01	1.27	56.76	1.08	48.49
29	Sep 81	83,707,026.50	3.90	104.91	2.19	58.95	1.87	50.36
30	Oct 81	99,397,951.52	4.63	109.54	2.60	61.55	2.22	52.58
31	Nov 81	118,727,805.36	5.52	115.06	3.10	64.65	2.65	55.23
32	Dec 81	81,685,277.28	3.80	118.86	2.14	66.79	1.83	57.06
33	Jan 82	57,542,069.00	2.68	121.54	1.51	68.30	1.29	58.35
34	Feb 82	96,114,635.00	4.47	126.01	2.51	70.81	2.15	60.50
35	Mar 82	162,100,944.16	7.55	133.56	4.24	75.05	3.62	64.12
36	Apr 82	106,090,545.50	4.94	138.50	2.77	77.82	2.38	66.40
37	May 82	46,065,480.00	2.14	140.64	1.20	79.02	1.04	67.44
38	Jun 82	87,719,806.40	4.08	144.58	2.29	81.24	1.96	69.40
39	Jul 82	39,006,290.50	1.82	146.40	1.02	82.26	0.87	70.27
40	Aug 82	67,906,964.16	4.79	151.19	2.69	84.96	2.30	72.57

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