



**REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL CIPTA KARYA
DIRECTORATE OF SANITARY ENGINEERING**

**CONTRACT FOR CONSULTANT SERVICES
FOR
SURAKARTA WATER SYSTEM
NO. 01/WS-S/I/AID/78
AID LOAN 487-U-044**

MONTHLY PROGRESS

**REPORT NO. 45
JUNE 1982**

**BURNS & McDONNELL ENGINEERING COMPANY
AND
TRANS-ASIA ENGINEERING ASSOCIATES, INC.
A JOINT VENTURE**

BURNS & McDONNELL Engineering Co.

Architect - Engineers **A JOINT VENTURE** Consultants - Planners

TRANS-ASIA Engineering Associates, Inc.

Please Reply to: Kotak Pos 105
Surakarta

132/BM/TAE/SKA/82
01 July 1982

Mr. Soesanto Mertoliningrat , Director
Directorate of Sanitary Engineering
Directorate General Cipta Karya
Jl. Pattimura No. 20
Kebayoran Baru
Jakarta Selatan

Subject : Contract for the Consultant Services for
Surakarta Water System No. 01/WS.S/I/AID/78
dated 28 October 1978 as Amended 24 May 1982.

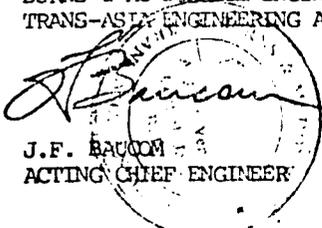
Dear Sir,

In accordance with Section 4.12 and Appendix I of the subject
Contract, we are pleased to submit fifteen copies of the Month-
ly Report No. 45 for the month of June 1982.

We trust that this report will meet with your approval.

Very truly yours,

BURNS & McDONNELL ENGINEERING CO.
TRANS-ASIA ENGINEERING ASSOC. INC.


J.F. BACON
ACTING CHIEF ENGINEER

cc : CJWSP	Semarang	(10 copies)
USAID	Jakarta	(5 copies)
BM/TAE	Jakarta	(2 copies)
Burns & Mc Donnell	Kansas City	(1 copy)
CJWSP I	Surakarta	(1 copy)
SWE	Surakarta	(1 copy)
Mayor of Surakarta	Surakarta	(1 copy)
File		

JFB/da

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SECTION I

G E N E R A L

I-A NARRATIVE SUMMARY

The Surakarta DPU has investigated two locations where public latrines, which were scheduled to be restored, are declared to be private property. A determination has been rendered that their claim is correct, and during the monthly progress meeting (see Appendix VIII) USAID agreed the contractors could perform a like value of work in the O & M machine shops building shelving, tables, etc. There appears to be yet another location which is questionable.

A final inspection was conducted on the second phase of the distribution main construction work. The first phase has been working off the punch list from his final inspection and the third has been actively installing piping in the remaining Kelurahan included in the twenty two designed.

Action continues in the paperwork required for obtaining the proforma letter of credit necessary for tax exemption and port clearance. It is believed the process will be completed by mid July. One shipment arrived at Semarang the first of the month with other shipments staggard at various positions from Indonesia to the United States.

The final inspection was completed on Phase II of the bath house/public latrine work (see Appendix IX). That contractor hopes to be ready for the Consultant's certification the first week in July. Phases I and III contractors continue with their work and expect to be able to hold final inspections in early July. Phase IV is progressing good.

The leak survey has reached the halfway point on the first time around (see Appendix IV) and there have been some seventeen hundred ninety discrepancies noted requiring a repair order to be written. The majority of the work orders deal with customer services, meters or both. The new service connections are being made by PDAM with excavation done by subcontractors. The installations now comply with the Consultant recommendations.

Several kilometers of new PVC pipe has been sent to PDAM by Cipta Karya to assist in the new service installation. There has been considerable tertiary mains installed in areas where PDAM has numerous applications for services.

Cipta Karya has issued a letter of award to P. T. Eslon Jaya for the additional PVC and Cast Iron pipe, valves and fittings which were requested to be added to their original order. The supplier has advised they could start deliver in mid July.

I-B PROBLEMS AND PROPOSED SOLUTIONS

The Phase III contractor has concentrated upon installation of pipe alone. He was issued a stop work order on additional new open trenching until he completes the many connections to the existing network and street crossings.

Late delivery of materials could additionally affect the Phase III work. The Project has been requested to give the contractor a proceed order with the installation of the \varnothing 400 mm pipeline in Kelurahan Sangkrah.

SECTION II
ADMINISTRATION

II-A SUBMISSIONS/ APPROVALS.

Consultant's Invoice No. 45 for May 1982 and Special Invoice No. 46 and No. 47 for Off-Shore Equipment Procurement U.S. Dollar reimbursable expenses were submitted to Cipta Karya on 01, 07 and 19 June 1982 respectively and were approved by Cipta Karya on 10 June for No. 45 and No. 46 and on 25 June 1982 for No. 47.

Consultant's English Invoice No. 30 for May 1982 submitted to Cipta Karya on 02 June 1982 and was approved on 29 June 1982.

II-B CONTRACT STATUS

Appendix I shows the continuation of Consultant's effort in man-months from the beginning of the Contract.

Appendix II shows the billing of approved expenditures to date.

II-C PERSONNEL

The Surakarta Office personnel in June 1982 were as follows :

E x p a t r i a t e s

- James F. Baucom, Acting Chief Engineer
arrived 26 September 1979

- Albert G. Ringler, O & M Specialist
arrived 09 May 1980

Indonesian Professional and Technical :

- Mohammad Khalil, Materials Coordinator
arrived 09 October 1978

- Mohamad Syarif Lambah, Construction Supervisor
arrived 01 May 1979

- Gatot Bramono, Inspector
arrived 19 November 1979

- Soewanto, Inspector
arrived 11 March 1980

- Abdul Rasyid, Inspector
arrived 11 June 1981

- Susena, Draftsman
arrived 20 October 1980

Administrative :

- Dradjat Atmardjo, Office Manager
arrived 02 October 1978

- Haryani Pudyastuti, Secretary
hired 17 November 1980

- Rubiyo, Clerk
hired 01 November 1978

- Pamudji Rahardjo, Driver
hired 02 October 1978

- Sutrisno, Driver
hired 02 April 1979

- Darmadi, Driver
hired 22 June 1982

- Tukino, Office Boy/Labor
hired 10 November 1980

SECTION III
ENGINEERING AND MANAGEMENT

III-A OFF-SHORE PURCHASED MATERIALS	US.\$ COMMITTED	% PAID (ASSUMED)	US. \$ BAL. DUE
III-A-1 Direct Cipta Karya Procurement Contract			
III-A-1-1 American Cast Iron Pipe Co. Ductile Iron Pipe & Fittings Contract certified complete 01/02/80	2,595,511.60	100	- 0 -
III-A-1-2 Colcorindo Raya Flow Metering Equipment Contract certified complete 07/04/80	3,462.00	100	- 0 -
III-A-1-3 Rohan Corporation Water Meters, Repairs Parts- Tools & Equipment. Contract certified complete 06/07/81	668,712.83	100	- 0 -
III-A-1-4 Clow Corporation Casting, Auto Air Vents & Valves. Contract certified complete 15/05/81	125,912.00	100	- 0 -
III-A-1-5 Ford Meter Box Company Brass Valves Parts & Acces- sories. Contract certified complete 12/02/81	390,775.15	100	- 0 -
Sub Total III-A-1 :	3,784,373.58	100	- 0 -

III-A-2 Special Equipment Procurement/Consultant Contract

III-A-2-1 Western International Leak Defectors & Pipe Locators Complete	2,496.14	100	- 0 -
III-A-2-2 Kennedy/McClane Distribution Network Valves Complete	58,546.40	100	- 0 -
III-A-2-3 Laboratory Equipment-Variou Sources - Complete	11,303.54	100	- 0 -
III-A-2-4 Publication & Reference Data Various Sources - Complete	1,465.85	100	- 0 -
III-A-2-5 Repair Parts For Clow Various Sources - Complete	228.51	100	- 0 -
III-A-2-6 O & M Facility Outfitting Various Sources - Partial	93,901.30	39.09	51,107.41
III-A-2-7 Well Water Pumping Equipment Various Sources	156,439.66	- 0 -	156,439.66
Sub Total III-A-2 :	314,381.40	33.98	207,547.07
Total US \$	4,098,754.98	94.936	207,547.07

III-B CONSTRUCTION SUPERVISION

A final inspection was made on Phase II Distribution Main construction (see appendix VII) during the month of June. The contractor has turned in as-built drawings and purchased materials as required by the Contract Documents. Upon correction of the discrepancies noted on the punch list, the work will be certified as complete.

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The Phase I contractor has almost completed all punch list items and should be ready for certification shortly. The Phase III contractor has completed work in Pucangsawit and nearly finished in Kelurahan Gajahan, Kebrabon and Jayengan. He has almost eight kilometers of pipe installed including a good portion of the requirement in Kelurahan Nusukan. There remains much testing and connection to the existing system yet to be done. In order to be assured the finishing work is done, the contractor was issued a stop work order on new open excavation until he has caught up with it.

With the completion of the final inspection on Phase II of the bath house/public latrine work, Progress on the overall BH/PL is now 82.5%. He is working off the punch list items rapidly and will be ready for certification very soon. The Phase I, III and IV contractors are proceeding. Provided the water services are completed, the older Contracts will be ready for final inspection early July. Phase IV plans to have a fifth of his ready for final inspection by mid July. All contractors say they have had trouble getting payment, but it is believed the administrative problems have been overcome so that should no longer be a restriction to progress. Latrines in Sangkrah, Punggawan and Sriwedari are being contested for various reasons and DPU has said two are known now to be private property and as such the work should not be done on them. They are to decide on the others in the near future.

III-C GROUNDWATER EXPLORATION AND WELL DEVELOPMENT PROGRAM

Completed.

III-D MANAGEMENT ASSISTANCE PROGRAM

Completed.

III-E O & M TRAINING AND ASSISTANCE PROGRAM

The activity increased during the month of June within the survey area by PDAM making repairs. A total of 285 repair orders were generated by the leak survey team during June. Of those, 90% proved to be either customer service lines and/or water meters. The Consultant has attempted to get the PDAM water meter readers to report all such items as they see them which will speed up the survey.

The old well near Pasar Gety has been located. One of the pipelines from it has been disconnected and PDAM is to write the proper authorities to obtain permission to excavate in that very busy intersection to locate and disconnect any other lines found, which may be the cause of the large loss of water in that area.

There remains some five truck loads of parts to be relocated from the proposed O&M Shops to PDAM. Two of the public latrine contractors have found that part of their work cannot be done due to the claims that the property is privately owned. AID has agreed the contractors may provide work on the O&M Shops in lieu of the latrine(s) in question. The shipment of pavement breakers and pumps from the Wacker Corporation arrived at the Port of Semarang on 01 June 1982. Until the paperwork has been completed, the shipment will not be released.

Due to widening of the street for a slow vehicle lane, the Surakarta Water Enterprise has been given money to relocate the south wall of the pipe gallery at Jebres one or two meters northward.

III-F METER REPAIR TRAINING PROGRAM

Completed.

III-G NEW WATER DISTRIBUTION NETWORK DESIGN

Completed.

III-H CONFERENCES

08 June 1982: Coordination meeting with Phase IV Public Latrine and Phase III Distribution Main Contractors. A few of the locations require the Project to take the people for education on the merits of septic tanks. They have expressed their displeasure in having them built. The Consultant decision has been the septic tanks must be built as a component part of the restoration work. Other items, like eliminating certain privacy doors, etc. would be up to the Kampung Chief and a letter from him to that effect would suffice. The contractor reports work in process on thirty of the units.

The piping contractor advised he would start work at Jagalan/Pungcasawit and another crew at Gajahan. When the first crew is done at Pungcasawit, they are to move to Keprabon whereas the second will go to Jayengan. After the work is done in Keprabon, those men will start in Nusukan.

15 June 1982: Coordination meeting on Phase IV PL and Phase III distribution mains. Contractor was advised to pipe straight through to tee when he is short a valve. The valve can be cut in later. He was also instructed to dispose of his excess material from excavation at the site of bath house 3-5.

The Public Latrine contractor reports one of his latrine sites is private property. He is advised to request a letter from the Kelurahan Office to that effect and we will get DPU to give us an an-

swer as soon as possible.

22 June 1982: Monthly Progress Meeting in Surakarta (see Appendix X).

29 June 1982: Coordination meeting with BH/PL contractors and Phase III distribution main contractor. The \emptyset 75mm PVC pipe is getting low and appears there will not be enough to finish. The contractor was advised some may be obtained from another source or the pipe size increased to \emptyset 100mm. He was advised if he completed road repairs and got rid of excess excavated materials in Fungcasawit, we could hold a final inspection. He was also requested to supply as-built drawings.

The Phase I contractor advised one of his latrines in Sriwedari is in the expansion area of the stadium. He was advised to complete work and have a final inspection as quickly as possible so the latrine may be turned over to the City. What they do with it after that, we have no control over.

Phase II contractor reports he should be completed with all punch list items next week. Phase III was not represented.

Phase IV requests PDAM to set water meters at eight locations, then he will be ready for a final inspection there.

III-J ACTIVITIES PLANNED FOR NEXT MONTH

Continue with final inspections on the work as it becomes ready. Continue with ongoing construction and survey activities and start O&M Shop modifications. Expedite release of shipments from customs.

Burns & McDonnell
Engineers - Architects - Consultants
KANSAS CITY, MISSOURI

Client CIPTA KARYA
Project No. 78-977-2-003 Date 3 / 0 / 82 Made By JFB

OFF-SHORE PROCUREMENT: O & M TOOLS AND Checked By _____

WEEK	EQUIP. & WATER WELL PUMPING EQUIPMENT				WATER WELL PUMPING EQUIPMENT				
	MacLane PO-2115	Wacker PO-2118	Rohan PO-2119	G. Schmidt PO-2229	Western In. PO-2296	Curmins TRW PO-2442	Pleu. CL2 Inc. PO-2443	MacLane PO-2444	PO-2445
03 APR.		S 2/4 A			Received				
10 APR.				Received					
17 APR.									
24 APR.		534 lbs 242.7 kg							
01 MAY									
08 MAY									
15 MAY		13/5 P							
22 MAY									
29 MAY	S 25/5 A								
05 JUN.		P 1/6 A						S 8/6 A	
12 JUN.	3,780 lbs 1,718.2 kg							100 lbs 45.5 kg	
19 JUN.			S 15/6 A						4,000 lbs 1,818.2 kg
26 JUN.	25/6 P					S 24/6 A			S 22/6 A
03 JUL.								12/7 P	
10 JUL.									
17 JUL.							S 20/7		
24 JUL.						10,000 lbs 4,545.5 kg			
31 JUL.									29/7 P
07 AUG.									
14 AUG.				25/7 P					
21 AUG.									
28 AUG.									
04 SEP.									
11 SEP.									
13 SEP.									
25 SEP.									
..... TERMINAL DATE OF CONSULTANT CONTRACT 30 SEP. 1982									
02 OCT.									
09 OCT.									
16 OCT.									
23 OCT.									
30 OCT.									
06 NOV.									
13 NOV.									
20 NOV.									
27 NOV.									

16

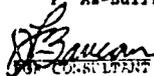
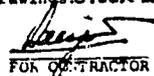
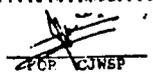
NOTE: S = SHIPPED PLANNED; P = PORT ARRIVAL PLANNED; A = ACTUAL

APPENDIX VII
 BUREAU OF MUNICIPAL ENGINEERING CO.
 TRANS - ADA ENGINEERING ASSOCIATES, INC.
 1001 B. VENTURA

FINAL INSPECTION - PUNCH LIST

PHASE: II CONTRACTOR: P.T. CINDI LESANA DATE: 16-18 JUNE 1982
DISTRIBUTION MAINS 1981 / 1982

1. KELURAHAN SEMANGGI - SHEETS 6 & 7
 - A. Stream Crossing Beam (Shop Dwg. II-1) *OK*
 - F. Fire Hydrant #12, #13 & #14 *REWELD SAFETY CHAIN IN #13 #14 (3) TURN 1/2 IN AT MOSS NORTH STREAM UP*
 - C. Valves & Valve Boxes *NEED V.B. #12 #13 #14*
 - D. Street Repair & Cleanup *SEE OTHER 13.A*
 - E. As-Built Drawings *OTHER CORRECT. PLAN DET. TO PNC BETW. #12 #13 #14*
2. KELURAHAN DANUKUSUMAN - SHEETS 8, 9, 10, 11, 12 & 13
 - A. Stream Crossing Beam (Shop Dwg. II-2, 3 & 4) *COMPLETE AND MARK #29 #30*
 - B. Fire Hydrant #16 (1) *REWELD SAFETY CHAIN*
 - C. Valves & Valve Boxes *NEED V.B. #16 #17 #18 #19 #20 #21 #22 #23 #24 #25 #26 #27 #28*
 - D. Street Repair & Cleanup *SEE OTHER 13.A*
 - E. As-Built Drawings *OTHER CORRECT. PLAN DET. TO PNC BETW. #16 #17 #18 #19 #20 #21 #22 #23 #24 #25 #26 #27 #28*
3. KELURAHAN SERENGAN - SHEETS 14, 15, 16, 17, 18 & 19
 - A. Stream Crossing Beam (Shop Dwg. II-7, 10, 12, 13, 14 & 15) *PAINT UNDERGROUND SECTION BETWEEN #10 #11 UNDER HAULT*
 - B. Drainage Span (Shop Dwg. II-8 & 11) *NEED PAINT AT #27*
 - C. Fire Hydrant #19 (1) *NEED V.B.*
 - D. Valves & Valve Boxes *NEED V.B. #19 #20 #21 #22 #23 #24 #25 #26 #27 #28 #29 #30 #31 #32 #33 #34 #35 #36 #37 #38 #39 #40 #41 #42 #43 #44 #45 #46 #47 #48 #49 #50 #51 #52 #53 #54 #55 #56 #57 #58 #59 #60 #61 #62 #63 #64 #65 #66 #67 #68 #69 #70 #71 #72 #73 #74 #75 #76 #77 #78 #79 #80 #81 #82 #83 #84 #85 #86 #87 #88 #89 #90 #91 #92 #93 #94 #95 #96 #97 #98 #99 #100*
 - E. Street Repair & Cleanup *SEE OTHER 13.A*
 - F. As-Built Drawings *ADD. FH-19 CORRECT PLAN #19 #20 #21 #22 #23 #24 #25 #26 #27 #28 #29 #30 #31 #32 #33 #34 #35 #36 #37 #38 #39 #40 #41 #42 #43 #44 #45 #46 #47 #48 #49 #50 #51 #52 #53 #54 #55 #56 #57 #58 #59 #60 #61 #62 #63 #64 #65 #66 #67 #68 #69 #70 #71 #72 #73 #74 #75 #76 #77 #78 #79 #80 #81 #82 #83 #84 #85 #86 #87 #88 #89 #90 #91 #92 #93 #94 #95 #96 #97 #98 #99 #100*
4. KELURAHAN TIKES - SHEETS 20, 21, 22, 23, 24 & 25
 - A. Stream Crossing Beam (Shop Dwg. II-18) *OK*
 - B. Drainage Span (Shop Dwg. II-19) *OK*
 - C. Fire Hydrant #20 (1) *NEED V.B. HYDRANT IS TOO LOW*
 - D. Valves & Valve Boxes *NEED V.B. #20 #21 #22 #23 #24 #25 #26 #27 #28 #29 #30 #31 #32 #33 #34 #35 #36 #37 #38 #39 #40 #41 #42 #43 #44 #45 #46 #47 #48 #49 #50 #51 #52 #53 #54 #55 #56 #57 #58 #59 #60 #61 #62 #63 #64 #65 #66 #67 #68 #69 #70 #71 #72 #73 #74 #75 #76 #77 #78 #79 #80 #81 #82 #83 #84 #85 #86 #87 #88 #89 #90 #91 #92 #93 #94 #95 #96 #97 #98 #99 #100*
 - E. Street Repair & Cleanup *SEE OTHER 13.A*
 - F. As-Built Drawings *ADD. FH-20 TO PLAN #20 #21 #22 #23 #24 #25 #26 #27 #28 #29 #30 #31 #32 #33 #34 #35 #36 #37 #38 #39 #40 #41 #42 #43 #44 #45 #46 #47 #48 #49 #50 #51 #52 #53 #54 #55 #56 #57 #58 #59 #60 #61 #62 #63 #64 #65 #66 #67 #68 #69 #70 #71 #72 #73 #74 #75 #76 #77 #78 #79 #80 #81 #82 #83 #84 #85 #86 #87 #88 #89 #90 #91 #92 #93 #94 #95 #96 #97 #98 #99 #100*
5. KELURAHAN PANULARAN - SHEETS 26, 27, 28, 29 & 30
 - A. Stream Crossing Beam (Shop Dwg. II-16) *OK*
 - B. Drainage Span (Shop Dwg. II-17) *OK*
 - C. Fire Hydrant #1 (1) *REWELD SAFETY CHAIN*
 - D. Valves & Valve Boxes *NEED V.B. #1 #2 #3 #4 #5 #6 #7 #8 #9 #10 #11 #12 #13 #14 #15 #16 #17 #18 #19 #20 #21 #22 #23 #24 #25 #26 #27 #28 #29 #30 #31 #32 #33 #34 #35 #36 #37 #38 #39 #40 #41 #42 #43 #44 #45 #46 #47 #48 #49 #50 #51 #52 #53 #54 #55 #56 #57 #58 #59 #60 #61 #62 #63 #64 #65 #66 #67 #68 #69 #70 #71 #72 #73 #74 #75 #76 #77 #78 #79 #80 #81 #82 #83 #84 #85 #86 #87 #88 #89 #90 #91 #92 #93 #94 #95 #96 #97 #98 #99 #100*
 - E. Street Repair & Cleanup *SEE OTHER 13.A*
 - F. As-Built Drawings *OTHER CORRECT. PLAN DET. TO PNC BETW. #1 #2 #3 #4 #5 #6 #7 #8 #9 #10 #11 #12 #13 #14 #15 #16 #17 #18 #19 #20 #21 #22 #23 #24 #25 #26 #27 #28 #29 #30 #31 #32 #33 #34 #35 #36 #37 #38 #39 #40 #41 #42 #43 #44 #45 #46 #47 #48 #49 #50 #51 #52 #53 #54 #55 #56 #57 #58 #59 #60 #61 #62 #63 #64 #65 #66 #67 #68 #69 #70 #71 #72 #73 #74 #75 #76 #77 #78 #79 #80 #81 #82 #83 #84 #85 #86 #87 #88 #89 #90 #91 #92 #93 #94 #95 #96 #97 #98 #99 #100*


P.T. CINDI LESANA FOR CONTRACTOR
 P.T. CINDI LESANA FOR CONTRACTOR
 P.T. CINDI LESANA FOR CONTRACTOR
 P.T. CINDI LESANA FOR CONTRACTOR

18 JUN 1982

DISTRIBUTION MAINS 1981 / 1982
FINAL INSPECTION - PUNCH LIST

PHASE: II CONTRACTOR : P.T. CANDI LAKEBA DATE : 16-18 JUNE 82

- 6. JALAN PURWOPEJO - SHEET 31 & JALAN GONDANG - SHEET 32
 - A. Railroad Crossing *NEED LETTER IF APPROVAL FROM RAILROAD ENTERPRISE*
 - B. Fire Hydrant # 15 (1) *NEED VB... SEE OTHER 13A*
 - C. Valves & Valve Boxes *NEED ① ②*
 - D. Street Repair & Cleanup *SEE OTHER 13A*
 - L. As-Built Drawings *ADD. F.H. #16*
- 7. JALAN GILINGAN - SHEET 32
 - A. Railroad Crossing *NEED LETTER IF APPROVAL FROM RAILROAD ENTERPRISE*
 - D. Valves & Valve Boxes *NEED ① ②*
 - C. Street Repair & Cleanup *SEE OTHER 13A*
 - D. As-Built Drawings *OK*
- 8. JALAN GAJAHMADA/BALAPAN - ADDENDUM DRAWING SHEET ADD. I-1
 - A. Stream Crossing Beam (Shop Dwg. II-5) *OK*
 - B. Valves & Valve Boxes *NEED NUT ① ②*
 - C. Street Repair & Cleanup *SEE OTHER 13A*
 - D. As-Built Drawings *NEED*
- 9. JALAN PASAR LEGI - ADDENDUM DRAWING SHEET ADD. I-2
 - A. Stream Crossing Beam (Shop Dwg. II-6) *OK*
 - B. Valves & Valve Boxes *ALL EXISTING*
 - C. Street Repair & Cleanup *SEE OTHER 13A*
 - D. As-Built Drawings *NEED*
- 10. JALAN LOGI WETAN - ADDENDUM DRAWING SHEET ADD. I-4
 - A. Stream Crossing Span *OK*
 - B. Valves & Valve Boxes *ALL EXISTING*
 - C. Street Repair & Cleanup *SEE OTHER 13A*
 - D. As-Built Drawings *NEED*
- 11. MISCELLANEOUS FIRE HYDRANTS - SHEET 33
 - A. Fire Hydrant # 16, #22 & #25 (3) *NEED SAFETY CHAIN ① SEE OTHER 13B*
 - B. Valves & Valve Boxes *NEED ① ② ③ EXCH. VALVE & F.H. #6*
 - C. Street Repair & Cleanup *SEE OTHER 13A*
 - D. As-Built Drawings *NEED ① ② ③*
- 12. CHANGE ORDERS
 - A. ADDENDUM DRAWING ADD. I-3 Deleted
 - B. Jalan Tipes II *NOT READY FOR FINAL INSPECTION*
 - i. Fire Hydrant #17
 - ii. Valves & Valve Boxes
 - iii. Street Repair & Cleanup
 - iv. As-Built Drawings *NEED TO ADD TP. TIPES*
 - C. Supply C.I. Gate Valves & Fittings *SUPPLY 2" DR. NUTS...*

13. OTHER
 A. PROVIDE LETTER FROM DPU ACCEPTING STREET REPAIR.
 B. APPROVAL OF FIRE HYDRANTS SUBJECT TO FIRE DEPARTMENT APPROVAL.

[Signature] FOR CONSULTANT
[Signature] FOR CONTRACTOR
[Signature] FOR CONST
[Signature] FOR S.V.I

18 JUN 1982

MINUTES OF COORDINATION
MEETING WITH CONSTRUCTION CONTRACTOR
AND MONTHLY PROGRESS OF THE PROJECT

DATE : 22 June 1982
 HOURS : 10:00 - 12:45
 PLACE : PAB-I Office Surakarta
 PARTICIPANTS :

1.	Ir. Hari Wahyuadi	PAB
2.	Widodo	PAB
3.	Budiyono	PAB
4.	Abimanyu	KIP/DFU
5.	Ngadin	DFU (Fire Dept.)
6.	David Warner, P.E.	USAID
7.	Clare Copleman, P.E.	BM/TAE
8.	J. F. Baucom	BM/TAE
9.	A. G. Ringler	BM/TAE
10.	Syarif Lembah	BM/TAE
11.	Ir. Djaelani Saberani	PDAM
12.	Suranto	PDAM
13.	Mulyono	CV Sederhana (Ph.I BH/PL)
14.	Sri Handoyo	PT Kedungrejo Abadi (Ph.II)
15.	Trinul	PT Sukha Magga (Ph.III)
16.	G. Sehiyarso	CV Sumber Makmur (Ph.IV)
17.	Tukimin	CV Sumber Makmur "
18.	Teguh S.	PT Teknik Umum (Ph.III Pipe)
19.	S. Indramanto	PT Teknik Umum "

Ir. Hari Wahyuadi opened the meeting by stating topics would take into consideration those present so that the contractors would be first for discussion then would be excused from the meeting so the other topics not pertaining to them could be discussed by the remaining participants.

Phase I Bath House/Public Latrine Contractor was requested to try for a final inspection as soon as possible by completing the water lines to the respective units. It was stated there had been no field activities due to a lack of funds. Present progress would

allow the contractor to bill 6% as his progress is now 84.498%. An invoice is to be prepared to provide the funds for the work to proceed. The representative from DPU indicated a joint inspection of the contractor's work be made to determine where his efforts could be concentrated. The same contractor is building a school for DPU and is behind schedule on it also.

Phase II Bath House/Public Latrine Contractor was advised the water main would be completed to bath house 3-5 during the next week and he should proceed to make his service line connection. The Contractor was also advised to concentrate on completion of all punch list items found during the final inspection. DPU stated the Project should write a letter to the Mayor regarding the Bath Houses ready to be turned over individually and Public Latrines in a block per Phase. Upon completion of the punch list items the Consultant will certify the Contractor being 100%.

Phase III Bath House/Public Latrine Contractor was requested to try for a final inspection as soon as possible by completing the water lines to the respective units. This Contractor was also running low on funds whereas he has completed 12% more of his work since he last invoiced as his present progress is 72.934%. It was recommended that he invoice for the funds immediately. Regarding the latrine found to be private property (V-Ee-4) DPU stated another site will be investigated. If none is found, AID approved the use of the funds for the same contractor to build shelves or other construction within the O & M Shops as required.

Phase IV Public Latrine Contractor advised some twenty eight (28) units were essentially complete and a final inspection could be held on eight next week provided PDAM made the taps to the existing distribution mains for the service lines now installed. The present progress is 43%. Regarding the unit (III-Cc-2) in Kel. Sangkrah, DPU advised an alternate could be provided in Kestalan.

Phase III Distribution Main Contractor advised he was being held up because there were not enough of the various fittings and ac-

21

-3-

cessories he needs. The Consultant mentioned that in a telephone conversation with Cipta Karya Logistics this morning, the Materials Coordinator had been told by Mr. Anyur, Mr. Sorta's assistant, that they could write a letter to Eslon Jaya to proceed. The Consultant also advised the Contractor should complete his connections to the existing system piping and test the work in Kelurahan Jayengan, Keprabon and Gajahan before moving to other areas. If need be, water for the test could be acquired by tapping the old mains where tie-in is to be made if there is a shortage of fittings. Completion status of the \varnothing 100 and larger piping is 11.33%, \varnothing 75 is 23.40% and overall it is 13.42%. The Contractor was cautioned not to close any valves without first obtaining permission from PDAM.

At this point in the meeting, the contractors were excused and they all left the premise. Regarding coordination between DPU, PDAM, PAB and the Consultant, it was mentioned that management of the bath houses and public latrines is to be handled by LKMD, the security people at the Kampung level under the DPU of the City via the Kecamatan and Kelurahan. It was again mentioned that formal delivery of the bath houses and latrines is to be made by the Project to the Mayor. After that time, they will proceed to have the electrical power connected to the bath houses. Regarding the fire hydrants, there was mention of the lack of some valve boxes which prevented the Fire Department from testing all locations. The Department representative also asked for location maps of each intalled hydrant and after seeing the Phase I Contract Drawings, agreed they would suffice as location maps to the provided to the Fire Department. Regarding the proposed location for the mental health hospital at Kentengan, DPU is to advise the precise location with a formal letter of request from the Mayor to the Project for water supply. Upon receipt of such a request, the Project will determine what can be done. PDAM mentioned the need for not using domestic water for watering City green areas through the fire hydrants. Upon completion of this discussion, the representatives of DPU departed.

22

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As of the first of June, there have been 1,505 work orders generated by the leak survey team. Of those, it was estimated approximately 30% had been acted upon by PDAM repair crews. The O & M Specialist said the last few weeks had had more of a concentration of repair activity in the survey area. There is still approximately five truck loads of parts to be moved from the O & M Facility to PDAM before work can be started to modify the facilities. The old well has been located at Pasar Getty.

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23

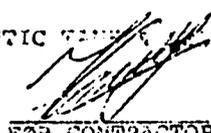
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STANDARD BATH FLOOR (100 sq. ft. typical for all Bath Houses)

NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
1.	5 #4 REINFORCING BARS				
A.	6" C. WALL	27	LN	OK	
B.	4" C. WALL	46	LN	OK	
2.	BRICK CONCRETE COLUMNS	14	EA	OK	
3.	BRICK EXTERIOR WALL				
A.	11" C. THICK	103	SM	OK	
B.	6" C. THICK	16	SM	OK	
4.	CEILING				
A.	20' X 12' PLASTER	11	SM	OK	
B.	100' X 12' PLASTER	75	SM	KN#1 LEAK REPAIR	
5.	INTERIOR WALL FINISH	146	SM	OK	
6.	ROOF FLASHING & ROOFING	1	LOT	OK	
7.	WATER STORAGE RESERVOIR	1	EA	NEED DRAIN PLUGS NEED SPARE PARTS.	
8.	WOODEN METAL DOORS & FRAMES	8	EA		
9.	PLUMBING				
A.	WATER TAPING FROM WATER	1	LOT	REPLACE FAUCETS LEAK AT BUILDING WALL	
B.	DRAIN TAPING TO SEPTIC TANK	1	LOT	OK	
C.	FLOOR DRAINS & WATER CLOSET	1	LOT	OK	
10.	CONCRETE FLOOR & SAND BED	23	SM	OK	
11.	ELECTRICAL	1	LOT	OK	
12.	PAINTING - METAL WORK ONLY	35	SM	OK	
13.	WALLS FOR CARETAKER POOM	1	LOT	OK	
14.	RAIN GUTTER & DOWNSPOUTS	1	LOT	OK	
15.	REMOVAL OF EXISTING STRUCTURES & SITE PREPARATION	1	LOT	OK	
16.	OUTSIDE UTILITIES				
A.	2" & 1" WATER SERVICE INCL. TIE-IN TO EXISTING MAIN	120	SM	OK	
B.	SEPTIC TANK & SOAK FIELD	1	EA	OK	

07 JUN 1982

 BOB CONSULTANT


 BOB CONTRACTOR


 BOB CWSP

NOT PRESENT
 FOR DEPT FOR 24

STANDARD BATH HOUSE SPECIFICATIONS (Typical for all Bath Houses)

ITEM NO.	DESCRIPTION	QTY	UNIT	STATUS
1.	ROOF VENTILATION SYSTEM			
A.	6" CF TRUSS	27	LN	OK
B.	4" CF TRUSS	40	LN	OK
2.	BEAM, CONCRETE COLUMNS	14	EA	OK
3.	RYNOR FLOOR WORK			
A.	11 G. TRUSS	103	SM	OK
B.	9" G. TRUSS	16	SM	OK
4.	FLOOR WORK			
A.	24 X 24 IN FLOOR TILE	11	SM	OK
B.	12 X 12 IN CERAMIC TILE	75	SM	OK
5.	PLASTER WALL FINISH	146	SM	OK
6.	ROOF BRACES & ROOFING COMPLETE WITH WOOD FLASHING	1	LOT	COAT TOP OF TRUSSES
7.	WATER STORAGE RESERVOIR			SECURE NUTS
8.	HOLLOW METAL DOORS & FRAMES	3	EA	KM #4 CANNOT LOCK
9.	PAINTING			
A.	WATER PIPING FROM METER	1	LOT	NEED SPARE PARTS
B.	DRAIN PIPING TO SEPTIC TANK	1	LOT	NEED PLUGS AT DRAINS
C.	FLOOR DRAINS & WATER CLOSET			FLOOR TO SLUPE TO DRAINS
10.	CONCRETE FLOOR & SAND BED	23	SM	OK
11.	ELECTRICAL	1	LOT	OK
12.	PAINTING - METAL WORK ONLY	35	SM	OK
13.	WALLS FOR CARETAKER ROOM	1	LOT	OK
14.	RAIN GUTTER & DOWNSPOUTS	1	LOT	OK
15.	REMOVAL OF EXISTING WALL & SITE PREPARATION	1	LOT	OK
16.	OUTSIDE UTILITIES			
A.	1" WATER SERVICE INCLUDING TIE-IN TO # 100 PVC	17	LN	OK
B.	SEPTIC TANK & LEACH FIELD	1	EA	OK

Best Available Document

07 JUN 1982
Rancon

NOT PRESENT
 FOR PDAM
 25

Burns & McDonnell
 Engineers - Architects - Consultants
 KANSAS CITY, MISSOURI

Client: CIPTA KARYA

Page 1 Of 1

Project No. 78-977-2-003

Date 3/9/82

Made By JFB

OFF-SHORE PROCUREMENT: O & M TOOLS AND

Checked By _____

WEEK	EQUIP. & WATER WELL PUMPING EQUIPMENT					Preliminary		Final	
	Maclane PO-2115	Wacker PO-2118	Rohan PO-2119	G. Schmidt PO-2229	Western In. PO-2296	Curmins TRW PO-2442	Pleu. CI2 Inc. PO-2443	Maclane PO-2444	Maclane PO-2445
03 APR.		S 2/4 A			Received				
10 APR.				Received					
17 APR.									
24 APR.									
01 MAY		534 lbs 242.7 kg							
08 MAY									
15 MAY		13/5 P							
22 MAY									
29 MAY	S 25/5 A	P 1/6 A							
05 JUN.								S 8/6 A	
13 JUN.								100 lbs 45.5 kg	4,000 lbs 1,818.2 kg
19 JUN.			S 15/6 A						
26 JUN.	25/6 P					S 21/6 A			
03 JUL.									S 22/6 A
10 JUL.								12/7 P	
17 JUL.							S 20/7		
24 JUL.						10,000 lbs 4,545.5 kg			29/7 P
31 JUL.									
07 AUG.									
14 AUG.				25/7 P					
21 AUG.						25/8 P			
28 AUG.							18,000 lbs 8,181.8 kg		
04 SEP.								1/9 P	
11 SEP.									
18 SEP.									
25 SEP. TERMINAL DATE OF CONSULTANT CONTRACT 30 SEP. 1982								
02 OCT.									
09 OCT.									
16 OCT.									
23 OCT.									
30 OCT.									
06 NOV.									
13 NOV.									
20 NOV.									
27 NOV.									

NOTE: S = SHIPPED PLANNED; P = PORT ARRIVAL PLANNED; A = ACTUAL

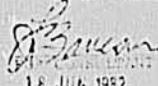
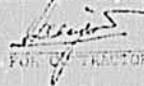
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APPENDIX VII
 BUREAU OF MUNICIPAL ENGINEERING CO.
 TRANS - ALIA LABORATORY ASSOCIATES, INC.
 10001 VENTURE

FINAL INSPECTION - PUNCH LIST

PROJECT: 11 CONTRACTOR: J. D. CONNOR & SONS DATE: 16-18 JUNE 1952
 (REVISIONS DURING 1951 / 1952)

1. KEMBARAN SENGANGI - SHEETS 6, 7
 - A. Stream Crossing Beam (Shop Dwg. 11-1) *OK*
 - B. Fire Hydrant #20 (1) *REMOVED SAFETY CHAIN. TESTED TURN WATER ON. (3) TURN TO 1/2 IN. AT NO. 2 & INSTEAD STRAIGHT UP*
 - C. Valves & Valve Boxes *SEE OTHER 13A*
 - D. Street Repair & Cleanup *SEE OTHER 13A*
 - E. As-Built Drawings *OTHER CORRECT DRAWING TO INC. BETWEEN 13A & 13B*
2. KEMBARAN DANU MUSEMAN - SHEETS 8, 9, 10, 11, 12 & 13
 - A. Stream Crossing Beam (Shop Dwg. 11-2, 3 & 4) *COMPLETE AS-BUILT DRAWING (24) (20)*
 - B. Fire Hydrant #18 (1) *REMOVED SAFETY CHAIN*
 - C. Valves & Valve Boxes *SEE OTHER 13A*
 - D. Street Repair & Cleanup *SEE OTHER 13A*
 - E. As-Built Drawings *OTHER CORRECT DRAWING TO INC. BETWEEN 13A & 13B*
3. KEMBARAN SENGANGI - SHEETS 14, 15, 16, 17, 18 & 19
 - A. Stream Crossing Beam (Shop Dwg. 11-7, 10, 12, 13, 14 & 15) *CONT. UNDERGROUND SECTION WITH NEW PIPE DOWNSIDE MULT.*
 - B. Drainage Span (Shop Dwg. 11-8 & 11) *NEED PAINT AT (25)*
 - C. Fire Hydrant #19 (1) *NEED V.B.*
 - D. Valves & Valve Boxes *SEE OTHER 13A*
 - E. Street Repair & Cleanup *SEE OTHER 13A*
 - F. As-Built Drawings *ADD. F.H. IN CORRECT DRAWING TO INC. BETWEEN 13A & 13B*
4. KEMBARAN TIPIS - SHEETS 20, 21, 22, 23, 24 & 25
 - A. Stream Crossing Beam (Shop Dwg. 11-18) *OK*
 - B. Drainage Span (Shop Dwg. 11-19) *OK*
 - C. Fire Hydrant #20 (1) *NEED V.B. HYDRANT IS TOO LOW*
 - D. Valves & Valve Boxes *SEE OTHER 13A*
 - E. Street Repair & Cleanup *SEE OTHER 13A*
 - F. As-Built Drawings *OTHER CORRECT DRAWING TO INC. BETWEEN 13A & 13B*
5. KEMBARAN DAN LAHAN - SHEETS 26, 27, 28, 29 & 30
 - A. Stream Crossing Beam (Shop Dwg. 11-16) *OK*
 - B. Drainage Span (Shop Dwg. 11-17) *OK*
 - C. Fire Hydrant #17 (1) *REMOVED SAFETY CHAIN*
 - D. Valves & Valve Boxes *SEE OTHER 13A*
 - E. Street Repair & Cleanup *SEE OTHER 13A*
 - F. As-Built Drawings *OTHER CORRECT DRAWING TO INC. BETWEEN 13A & 13B*



18 JUN 1952 FOR CONTRACTOR FOR OWNER

DISTRIBUTION MAINS 1981/1982
FINAL INSPECTION - PUNCH LIST

PHASE: II CONTRACTOR: P.T. CANDILAKSANA DATE: 16-18 JUNE 82

13. OTHER (CONTINUED)

C. NEED VALVE BOX:

1. PANULARAN - (29) (28) (19) (21)

D. SHOP DRAWING (CONTINUED)

1. SERENGAN (CONTINUED)

(a) CHANGE PLAN TO AGREE W/DET. (14)

(b) CHANGE PIPE SIZE FROM $\phi 75$ TO $\phi 100$ PLAN AND DETAIL (13)

2. PANULARAN

(a) REMOVE GATE VALVE FROM PLAN & DETAILS (24) (33) (34)

3. TILIS

(a) ADD $\phi 100$ PVE FROM (16) WEST TO FH-17

E. PROVIDE PROJECT PHOTOGRAPHS

F. PROVIDE CORRECTED AS-BUILT DRAWINGS.

[Signature]

FOR CONSULTANT
1 JUN 1982

[Signature]

FOR CONTRACTOR

[Signature]

FOR CJWSP

[Signature]

FOR PDAM

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FINAL INSPECTION - PUNCH LIST: BATH HOUSE #3-1 PHASE II Pg. 1 of 5

STANDARD BATH HOUSE (Typical for all Bath Houses)

NO.	DESCRIPTION	QTY	UNIT	STATUS
1.	...			
A.	...	27	EA	OK
B.	...	40	EA	OK
2.	...	11	EA	OK
3.	...			
A.	...	103	SM	OK
B.	...	16	SM	OK
4.	...			
A.	...	11	SM	OK
B.	...	75	SM	KM#1 LEAK REPAIR
5.	...	116	SM	OK
6.	...	1	LOT	OK
7.	...	1	EA	NEED DRAIN PLUGS NEED SPARE PARTS.
8.	...	8	EA	
9.	...			
A.	...	1	LOT	REPLACE FAUCETS LEAK AT BUILDING WALL
B.	...	1	LOT	OK
C.	...	1	LOT	OK
10.	CONCRETE FLOOR & SAND BED	23	SM	OK
11.	METALWORK	1	LOT	OK
12.	PAINTING - METAL WORK ONLY	35	SM	OK
13.	WALLS FOR CHANGEROOM	1	LOT	OK
14.	RAIN GUTTER & DOWN SPENTS	1	LOT	OK
15.	REMOVAL OF EXISTING STRUCTURES & SITE PREPARATION	1	LOT	OK
16.	OUTSIDE UTILITIES			
A.	2" & 1" WASTE SERVICE INCL. TIE-IN TO EXISTING MAIN	120	LN	OK
B.	SEPTIC TANK & FIELD	1	EA	OK

Best Available Document

07 JUN 1982

FOR CONSULTANT

FOR CONTRACTOR

FOR CMSP

NOT PRESENT FOR DBU FOR B

34

DATE: 01.01.04

STANDARD BATH HOUSE SCHEDULE (TYPICAL FOR ALL BATH HOUSES)

ITEM NO.	DESCRIPTION	QTY	UNIT	STATUS
1.	CONCRETE FLOOR			
A.	1" CONC	27	EA	OK
B.	4" CONC	46	EA	OK
2.	REBAR, CONCRETE COLUMNS	14	EA	OK
3.	REBAR FLOOR W/OUT			
A.	11" CONC	103	SM	OK
B.	4" CONC	16	SM	OK
4.	ROOFING			
A.	2" X 4" JOIST	11	SM	OK
B.	1" X 4" JOIST	75	SM	OK
5.	ROOF FLASHING	146	SM	OK
6.	ROOF TRUSSES - BRACING	1	LOT	COAT TOP OF TRUSSES
7.	ROOF TRUSSES - BRACING			SECURE NUTS
8.	ROOF TRUSSES - BRACING	6	EA	KM#4 CANNOT LOCK
9.	PLUMBING			
A.	WATER SERVICE FROM P.U.A.	1	LOT	NEED SPARE PARTS
B.	DRAIN PIPING TO SEPTIC TANK	1	LOT	NEED PLUGS AT DRAINS
C.	1" DRAINS & UNDER CLOSET			FLOOR TO SLOPE TO DRAINS
10.	CONCRETE FLOOR & SAND BED	23	SM	OK
11.	ROOFING	1	LOT	OK
12.	PAINTING - METAL WORK ONLY	35	SM	OK
13.	WHEELS FOR CARTWHEEL ROOM	1	LOT	OK
14.	RAIN GUTTER & DOWNSPOUTS	1	LOT	OK
15.	REMOVAL OF EXISTING WALL & SITE PREPARATION	1	LOT	OK
16.	OUTSIDE UTILITIES			
A.	1" WATER SERVICE INCLUDING TIE-IN TO 100 PSC	17	EA	OK
B.	SEPTIC TANK & FIELD	1	EA	OK

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07 JUN 1982

CONTRACTOR

FOR CHECK

NOT PRESENT

FOR PDM

35

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SURAKAPTA WATER PROJECT

REPORT OF MAN-MONTHS EXPANDED BY CONSULTANT

BURNS & MCDONNELL / TRANS-ASIA ENGINEERING ASSOCIATES

PD 1111 41

CONTRACT NUMBER GAMS-S/MD/75 AID LOAN 497-U-044	MAN - MONTHS				BALANCE
	FOR JUNE 1982	CUMULATIVE THROUGH JUNE 1982	TOTAL IN CONTRACT SCHEDULE	% OF TOTAL USED PER SCHEDULE	
	EXPATRIATES				
PROCUREMENT ENG	0.3	11.27	14.5	77.7	3.23
CHIEF ENGINEER	0	26.2	30	87.3	3.8
CONSTRUCTION SPECIALIST		33.1	36	91.9	2.9
LOCAL OFFICER	0.16	5.63	7.5	75.0	

APPENDIX - II

PRINCIPAL	0	1.17	2	75.0	2.03
HYDROGEOLOGIST	0	8.1	12	67.5	3.9
DRILLING SPECIALIST	0	10.5	12	87.5	1.5
GEOL. SPECIALIST	1	40.4	41.5	97.3	1.1
METAL. SPECIALIST	0	8	8	100	0
MANAGEMENT SPECIALIST	0	10.2	21	96.1	0.8
SPECIALIST	0	0	0	0	0
ENGINEER SPECIALIST	0	12	12	100	0
EXP. PROF. B. TECH.	2.4	75.57	195.5	88.0	23.93

INDONESIAN PROFESSIONAL & TECHNICAL

CONSTRUCTION CHIEF ENG.	0	28.6	33	86	4.4
CONSTRUCTION SUPERVISOR	1	23.5	36	65.2	12.5
HYDROGEOLOGIST	0	20.7	26	79.6	5.3
MATERIALS COORDINATOR	1	45	48	93.7	3
INSPECTOR	3	134	146	91.7	12
DRAFTSMAN	1	56	66	84.8	10
ACCOUNTANT	0	34	32	106.2	(2)
TECHNICAL TRANSLATOR	0	17.8	18	98.8	0.2
DESIGN ENGINEER	0	6	8	75	2
SPEC. / COST ESTIMATOR	0	4.6	3	153.3	(1.6)
SR. SURVEYOR / PLOTTER	0	5.4	5	108	(0.4)
TECHNICAL	0	5	5	100	0
LABORER	0	0.3	5	126	(1.3)
INDONES. PROF. B. TECH.	6.0	386.9	631	89.7	44.1

INDONESIAN ADMINISTRATIVE

DEPT. MANAGER	0	45	48	93.7	3
MANAGER	0	30.6	36	80.7	10.4
SR. SUPERVISOR	2	27.2	31	53.3	23.8
SUPERVISOR	1	108.6	98	121.1	(18.6)
CLERK	2.6	173.6	273	77.8	49.4
LABORER	1	172.2	258	66.7	85.8
ROOM / GENERAL MEN	0	13.3	10	138.0	(3.8)
ADMINISTRATIVE TOTAL	6.6	581.7	732	79.4	150.3

APPENDIX I

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SURAKARTA WATER PROJECT
REPORT OF ENGINEERING COSTS
BURNS & McDONNELL/TRANS-ASIA ENGINEERING ASSOC.

CONTRACT NO 01/WS-S/AID/78 SIGNED 26 OCT. 1978 START 1 JAN. 1978 END 30 SEP. 1982 REIMBURSABLE EXPENDITURES	COSTS FOR	CUMULATIVE COSTS THROUGH		CUMULATIVE PAYMENTS THROUGH			TOTAL BUDGET ESTIMATE FOR CONTRACT
	JUNE 1982	AMOUNT	% OF TOTAL BUDGET ESTIMATE	AMOUNT RECEIVED IN JUNE 1982	TOTAL AMOUNT RECEIVED THROUGH JUNE 1982	% OF TOTAL BUDGET ESTIMATE	
US DOLLARS							
Salaries and Related Costs	15,613.78	1,075,616.68	95.0	13,966.90	1,060,002.90	93.6	1,132,179
Transportation	—	73,631.72	88.3	—	73,631.72	88.3	83,343
Equipment	32,586.61	45,041.77	17.5	—	12,455.16	77.8	256,133.78
Miscellaneous	—	63,563.48	109.4	—	63,563.48	109.4	58,003
Contingencies	—	58,865.85	93.0	—	58,865.85	93.0	63,271
TOTAL DOLLARS	48,200.39	1,268,519.11	79.6	13,966.90	1,268,519.11	92.7	1,592,989.78
INDONESIAN RUPIAH							
Salaries	7,523,450	194,857,834	87.0	3,461,000	187,334,384	83.7	223,759,250
Transportation	1,755,800	77,340,923	92.1	1,436,000	75,585,123	90.0	83,952,600
Housing	—	64,000,000	101.6	—	64,000,000	101.6	62,975,000
Vehicle Costs	1,195,000	53,516,472	99.7	597,500	52,321,472	97.4	53,675,000
Equipment Costs	—	24,610,860	101.4	—	24,610,860	101.4	24,253,000
Miscellaneous	831,030	86,347,305	94.0	154,235	85,516,275	93.1	91,810,000
Contingencies	—	33,144,580	99.7	—	33,144,580	99.7	33,236,460
TOTAL RUPIAH	11,305,200 *	533,817,974	93.0	5,648,735	542,132,694 **	91.0	573,661,310

* Costs of May and June 1982

** Including Mobilization of 19,620,000

205

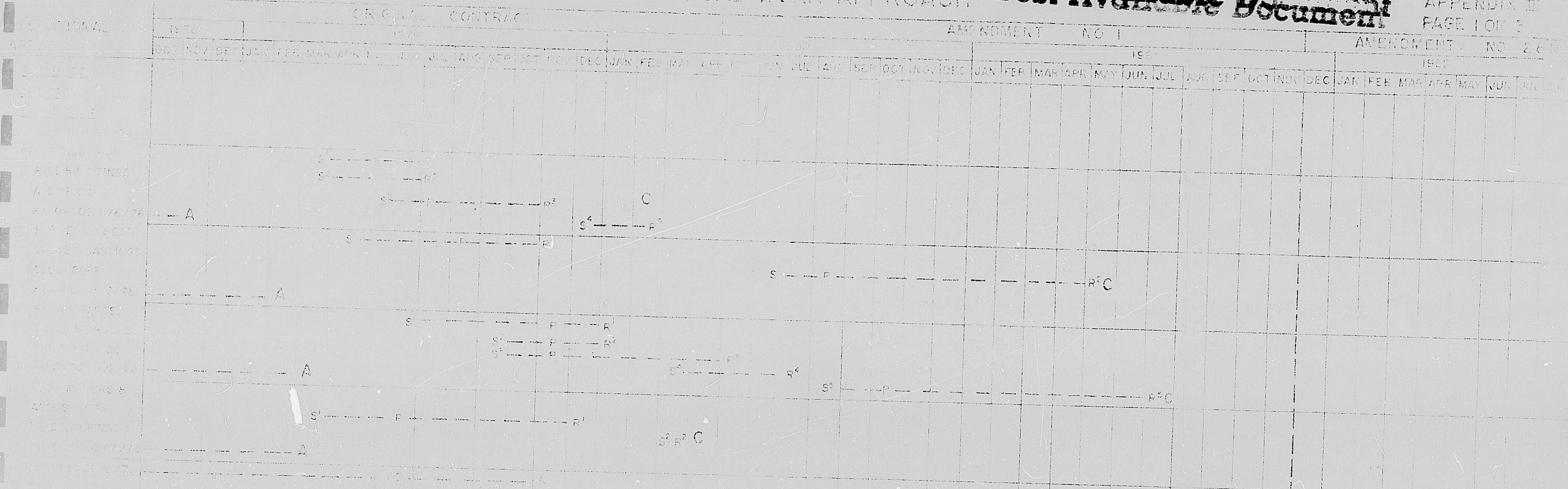
PD AAC 511

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SURAKARTA WATER PROJECT TECHNICAL WORK APPROACH

Best Available Document

APPENDIX III
PAGE 1 OF 3



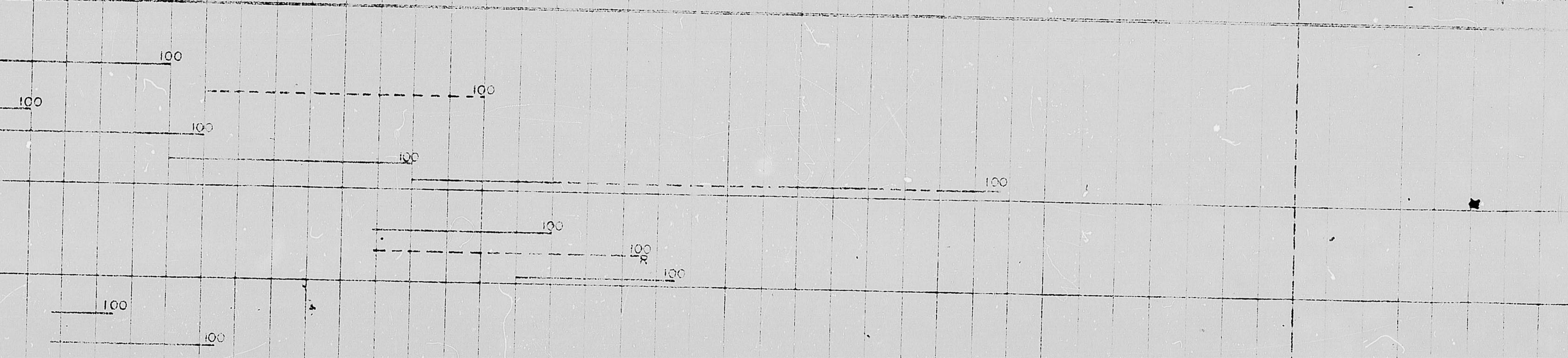
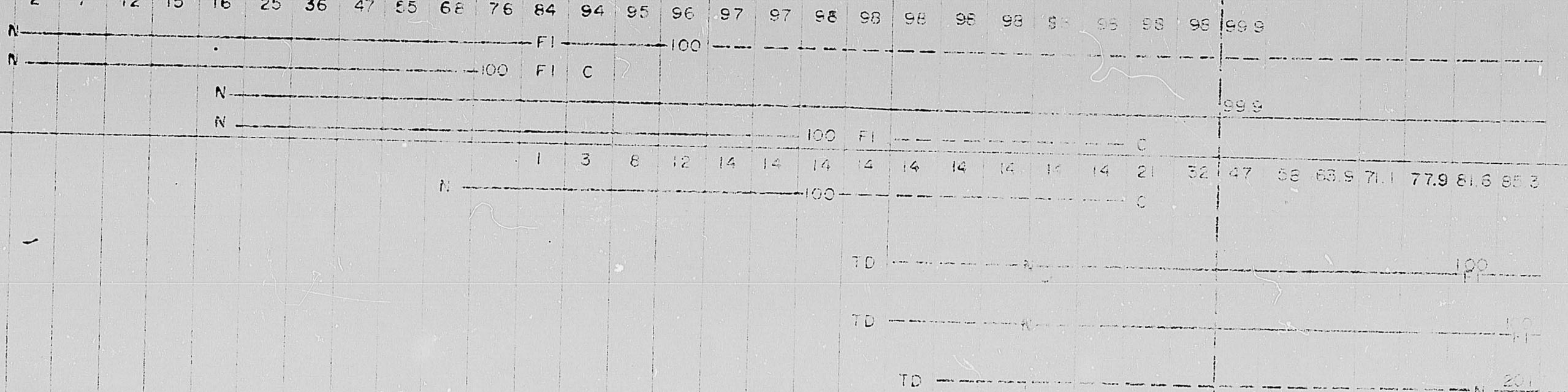
- 1. SECTION A
- 1. SECTION B
- 1. SECTION C
- 1. SECTION D

- 2. DISTRIBUTION SYSTEM
 - (a) KELURAHAN 1-8 (10.5 KM)
 - (b) KELURAHAN 9-12 B (10-21) (23.7 KM) I
 - (c) KELURAHAN 13 & 15 -17 (23.6 KM) II
 - (d) KELURAHAN 14, 18 & 22 (24.5 KM) III

- 3. M&O TECH. ASSISTANCE
 - (a) MANAGEMENT SPECIALIST
 - (i) POLICY & PROCEDURES
 - (ii) Operations Manual
 - (b) ORGANIZATION
 - (c) M&O ACCTG. SYST.
 - (d) TRAINING
 - (e) EVALUATION

- 4. METER REPAIR SPLST.
 - (a) Set up New Meter Shop
 - (b) Set Meter Equip.
 - (c) TRAINING
- 5. O&M SPECIALIST
 - (a) Review SWI data & Filing
 - (b) Produce O&M Training Manual

TOTAL CONSTRUCTION CONTRACT COMPLETION %



PDAH 511 4 of 5

SURABAYA WATER PROJECT
 TECHNICAL WORK APPROACH

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APPENDIX B
 PAGE 3 OF 3

ORIGINAL CONTRACT

AMENDMENT NO. 1

AMENDMENT NO. 2 & NO. 3

1979												1980												1981												1982											
OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

100

100

EQUIP. PROCUREMENT R O.J.T.

H₂O AVAIL.

START O.J.T. SURVEY & REPAIR

50

BLDG. CONST.

TD

100

N

BLDG. CONST.

TD

100

N

BLDG. CONST.

100

R

BLDG. CONST. 100

BLDG. CONST.

TD

N

R

1ST PHASE

2ND PHASE

3RD PHASE

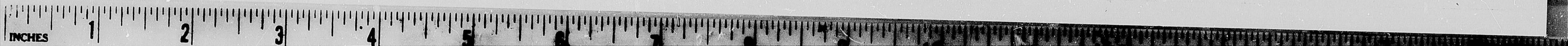
100
TD 4TH PHASE

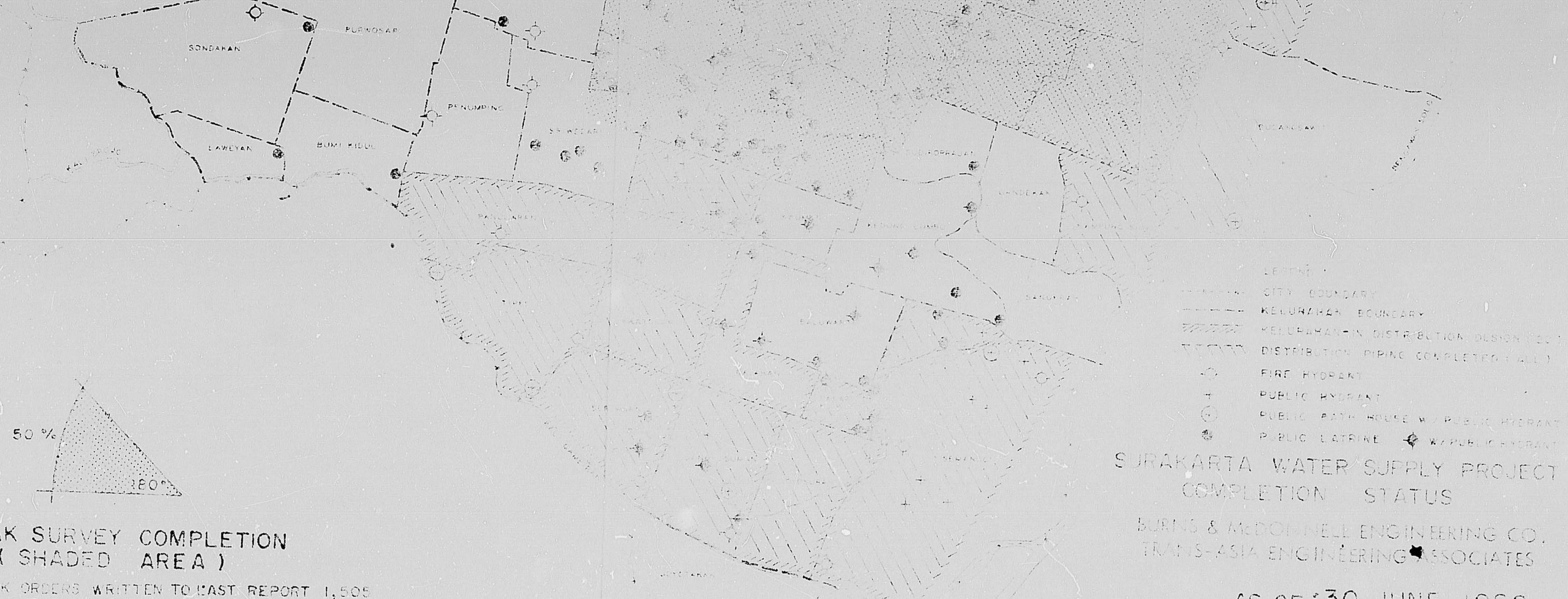
57.6

END OF CONTRACT

LEGEND

- A = SUBMITTAL DATA APPROVAL
- C = COMPLETE / CERTIFIED
- N = NOTICE TO PROCEED
- F = PORT ARRIVAL
- Q = QUOTATION REVISED
- R = RECEIVED AT JOBSITE
- S = SHIPPED (S NO SHIPMENT SAME SOURCE)
- FI = FINAL INSPECTION
- TD = TENDER DOCUMENTS
- O-100% = 100% PERCENTAGE CONSIDERED COMPLETE
- (EST.) = ESTIMATED
- T = TERMINATED
- Co = CHANGE ORDER





LEAK SURVEY COMPLETION (SHADED AREA)

WORK ORDERS WRITTEN TO LAST REPORT	1,505
WORK ORDERS WRITTEN IN JUNE	286 1,791

PD AALS 11
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PDAP 511 5 of 5

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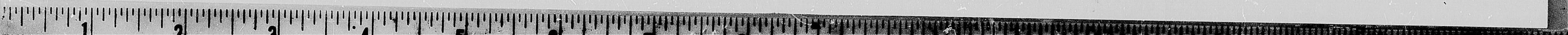
APPENDIX V

#	PH	LOC	SIZE	LENGTH	DATE
1	II	JL. BEDOKSARI	0 30 (OLD 50)	575 LM	7/80
2	II	JL. BAWEAN (KARIMUNJAWA)	2 30 (OLD 80)	166 LM	8/80
3	II	JL. ENGGANO	3 30 (OLD 60)	140 LM	8/80
4	II	JL. TUALHARJO	1 30 (OLD 60) - NOT CONN.	250 LM	8/80
5	I	JL. CINCORJO RT III (A)	0 30 (OLD 40)	300 LM	8/80
6	II	JL. MUSKAY	1 30 (OLD 120)	160 LM	9/80
7	II	KP. GILINJAN	2 30 (PEPL. HOUSE SERV.)	150 LM	9/80
8	II	JL. BATURONO	0 30 (OLD 100)	250 LM	8/80
9	I	JL. ANWAR	0 30 (PEPL. HOUSE SERV.)	785 LM	10/80
10	II	JL. KENCUR	0 30 (PEPL. HOUSE SERV.)	600 LM	10/80
11	I	JL. PENUDA RELATAN	2 00 (OLD 30 + LINE K)	300 LM	3/80
12	II	JL. KEPINCI	0 30 (OLD 30)	600 LM	8/80
13	II	SOLD - YOGYA HIGHWAY	0 50 (OLD 400)	400 LM	3/81
14	II	JL. NGEMPLAK BRIDGE	0 50 (OLD 150)	70 LM	7/81
15	IV	JL. CINCORJO RT. I	0 30 (OLD 30)	243 LM	1/82
16	IV	JL. MUSKAY (COMPLETION)	0 50 (OLD 120)	679 LM	3/82
17	IV	JL. KOL. PARTO	0 30 (OLD 150)	320 LM	2/82
18	IV	JL. LEMBOYAN	1 30 (OLD 130)	57 LM	5/82
19	IV	JL. PASIR	1 30 (OLD 130)	61 LM	4/82
20	IV	JL. PASIR (KORAN MADA)	1 30 (OLD 130)	127 LM	4/82
21	IV	JL. PASIR	1 30 (OLD 130)	240 LM	
22	IV	JL. BONGKALING ROAD	1 30 (OLD 130)	2,069 LM	
23	IV	JL. PASIR	1 30 (OLD 130)	252 LM	5/82
24	IV	JL. CINCORJO RT III (B)	0 30 (OLD 30)	550 LM	3/82
25	IV	PARAS BENTENG	0 30 (OLD 30 + BLOW OFF)	110 LM	3/82
26	IV	JL. KOL. PARTO	0 30 (OLD 150)	170 LM	3/82
27	IV	JL. NGEMPLAK	0 30 (OLD 30)	225 LM	3/82
28	IV	SOLD - YOGYA HIGHWAY	0 40 (OLD 400 ORAIN)	350 LM	



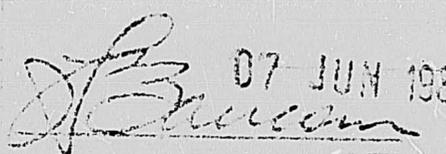
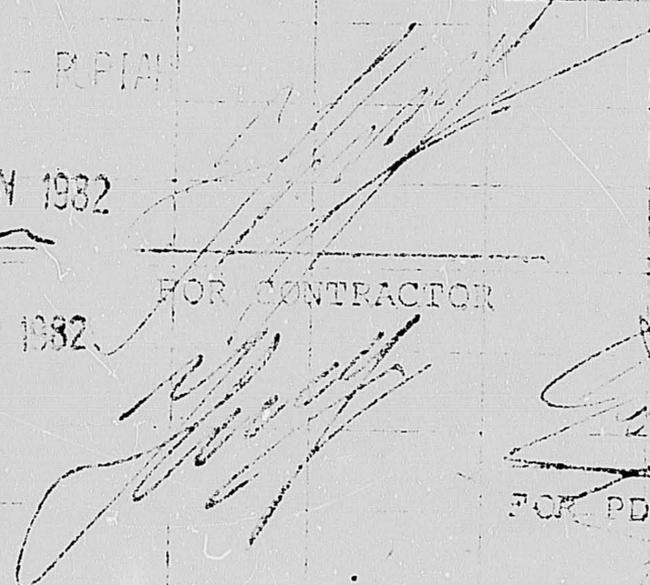
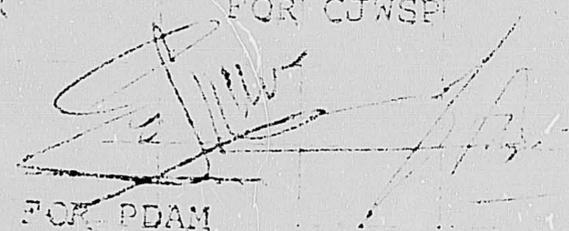
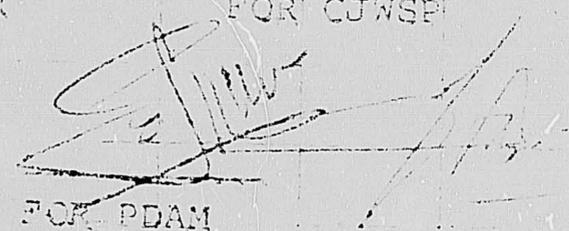
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NO. 99
NO. 100

1975 DISTRIBUTION SYSTEM
LANS & McDONNELL ENGINEERING CO.
TRAI-ASIA ENGINEERING ASSOCIATES



14/06/82

13/11	0	OK	OK	METAL	OK	OK	OK	OK	OK	NEED	NEED	OK	OK	UPDR	OK
27/11	-	OK	OK	OR	OK	OK	OK	OK	OK	LETTER	LETTER	OK	OK	OK	I.D. OK
1/12	0	NEED	OK	NEED	OK	INITIAL	OK	OK	OK	OK	OK	OK	OK	TUGHA	I.D. OK
1/12	-	OK	-	OK	OK	HOLLS	OK	REMOVE	OK	CORRECT	OK	OK	OK	UP	I.D. OK
1/12	-	-	-	-	-	NEED	OK	DISCONNECT	OK	FLOAT	OK	OK	OK	TUGHA	I.D. OK
1/12	-	-	-	-	-	(1)	-	ABANDON	-	OK	OK	OK	OK	UPDR	OK

TOTAL UNITS	15	9	13	24	24	24	24	24	24	24	24	24	24	24	24
UNIT PRICE - RUPIAH															
EXTENDED PRICE - RUPIAH															
FOR CONSULTANT	 07 JUN 1982		 FOR CONTRACTOR		 FOR CJWSP		NOT PRESENT								
FOR PDAM															

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PDAM 511