

1520 - 33824

4970249/53

PD-AAP-041



REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS
DIRECTORATE GENERAL OF HOUSING BUILDING
PLANNING AND URBAN DEVELOPMENT (CIPTA KARYA)

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT

MONTHLY REPORT 6

1 JUNE 1979 THROUGH 30 JUNE 1979

ENGINEERING SCIENCE INC
SINOTECH ENGINEERING CONSULTANTS INC
PADCO INC
P.T. DACREA

MEDAN URBAN DEVELOPMENT, HOUSING, WATER SUPPLY AND SANITATION PROJECT

Jln. Singamangaraja 1-3, P.O. Box 26, Phone 20716, Medan-Sumatra, Indonesia

Our ref: 79/1110/MUDS/202/5

Medan, 9 July 1979

DIRECTOR GENERAL CIPTA KARYA
Ministry of Public Works
Jalan Pattimura 20
Kebayoran Baru
Jakarta Selatan

SUBJECT: Monthly Progress Report 6,
1 June 1979 through 30 June 1979

REFERENCE : Contract dated 17 October 1978, between
Ministry of Public Works, Directorate
General of Housing Building Planning, and
Engineering Science, Inc.

Gentlemen:

In compliance with article 10.15 of our Agreement, Engineering Science, Inc., submits Monthly Progress Report 6 for the Calendar period 1 June 1979 through 30 June 1979.

SECTION I - PRIMARY ACTIVITY PROGRESS

The Consultants recommended project strategies for the urban planning, housing, water supply, and sanitation sectors were reviewed at a special Steering Committee meeting on 25 June in Medan. A list of the GOI, City, USAID, ADB and other officials attending that meeting is presented in Annex I. Subject to the comments received at that meeting, the Consultant is now proceeding with development of the engineering, financial, and organizational details associated with the long-term urban plan, housing programs, and water supply and sanitation Master Plans. Rough drafts of sections from the Interim Strategic Plan Report were distributed at the Steering Committee meeting. Formal, printed copies of the Strategic Plan Report will be available by about the third week of July.

Two hundred and fifty nine hectares were identified for the KIP. These sites were discussed with City and Cipta Karya officials and agreement was reached on the specific kampungs to be improved as part of this Project. A list of the kampungs to be included in the program and their locations are given in Annex II.

The Consultant has been directed to concentrate his housing site identification efforts to finding areas that could embody the cross-subsidy concept. It should be recognized that, due to the greater size and complexity of such sites, it will be very difficult to acquire a site early enough to enable detailed design to be carried out during the life of the present project.

Calculation of the detailed water demand projections have now been completed and analysis of the distribution network is underway. Tirtanadi is currently planning construction of a cross-town main from the Sunggai Plant to the east side, and special care is being taken to ensure that this facility is coordinated with the Master Plan for distribution system improvements.

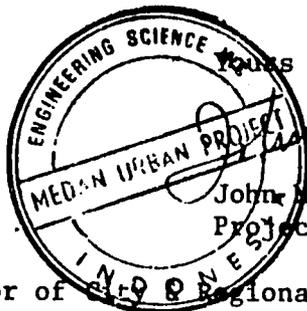
The status of project activities by work plan task as of the end of June is presented in Annex III, Activity Schedule.

SECTION II - PERFORMANCE

Annex IV presents the professional staffing schedule (solid lines) together with the actual schedule of on-site staff (dashed lines). Actual performances versus that scheduled for project month 6 is illustrated in the graph comprising Annex V, Item 1, cumulative input of professional personnel. This graph is based on the schedule shown in Annex IV. Item 2 of Annex V summarizes the planned, and actual man-months by personnel category and firm as of the end of the month. As indicated in this summary, the actual professional staffing level is 86 percent of the schedule level. Indonesian professional and non-professional levels were 83 and 79 percent of scheduled as of the end of the month. Annex V, Item 3, personnel movement, identifies personnel changes during project month 6, Item 4, Annex V, End-of-month strength, Medan office, indicates the number and type of staff assigned to the project at the end of the reporting period. Annex VI summarizes the status of project expenditures at the end of June.

SECTION III - PLANNED PROGRAMS AND ACTIVITIES

During the coming month (July) the Consultants major efforts will be directed towards: (1) finalization of the Interim Strategic Plan and Feasibility Report; and, (2) preparation of Technical Memorandum Reports on economic background, housing affordability, existing water, wastewater, drainage, and solid waste systems, alternative water supply sources, and water demand projections. Those project activities which will be pursued during the coming month are indicated in Annex III, Activity Schedule.



Yours truly,

John A. McGill
Project Representative

C.C.: Ir. Ruslan Diwiryo, Director of Regional Planning
Ir. Susanto Mertodiningrat, Director of Sanitary Engineering
Ir. Sunaryo, Head Sub-Directorate Town Planning
Ir. K. Pohan, Project Manager, MUDS
AID - Jakarta, Attn. P. Thorn, Project Officer
ES - Arcadia
SINOTECH - Taipei
DACREA - Jakarta

LIST OF PERSONS ATTENDING 26 JUNESTEERING COMMITTEE MEETING

<u>Name</u>	<u>Department</u>
M. Saleh Arifin	Mayor of Medan
Ruslan Diwiryo	TKTD PU, Cipta Karya, Jakarta
Chua Peng Chye	A.D.B., Manila
Robert E. Davis	U.S.A.I.D., Jakarta
Eddie S. Kristiawan	U.S.A.I.D./DTE, Jakarta
Siswara W.	TKTD PU, Cipta Karya, Jakarta
Ismeth S. Abid	TKTD PU, Jakarta
Harid Sabran	Staff Akhli Menteri PU, Jakarta
Suwarno Prawir sumantri	Directorate of Housing, Cipta Karya, Jakarta
Noer Saijidi	Directorate of Housing, Cipta Karya, Jakarta
S. P. Kuntjoro Jakti	Directorate General of Irrigation PU, Jakarta
S. Hadibroto	Chief of Bappeda, Medan
M. Joesoef BAF	Construction Dept, Medan
Abraar	Bappeda Tk.II, Medan
P. Sinuraya	Planning Unit Tk.I, North Sumatra
Fachry MD	Urban Development Dept. Tk.II, Medan
Muljono	Subag T. P.
C. a. m. Bahar	TKTD North Sumatra
M. Ketaren	Cipta Karya, North Sumatra
Yahya Harahap	Dinas PN Tk.II, Medan
Darwin Nst	Dinas Kebersihan, Medan
Susetyo	Proyek Air Bersih, Medan
Kumala Siregar	FAM Tirtanadi, Medan
B. F. Silalahi	Bupati Simalungun
Iden Purba	Staff Bupati Simalungun
M. Sinaga	Staff Bupati Simalungun
Ismail A. Gani	Staff Wako Kadya Tg. Balai
Bahmid Muhamad	Bupati Asahan
H. Sudjono	Chief of Public Works Tk.II, Asahan
W. Lumbanbatu	Bappeda Tk.II, Asahan
K. Pohan	Project Manager, MUDS
John M. McGill	Project Representative, MUDS
C. Y. Huang	Deputy Project Representative, MUDS
Larry McGill	MUDS
Lee Baker	MUDS
Tom Williams	MUDS
A. Van Huyck	MUDS

SELECTION OF KAMPUNGS TO BE IMPROVED

Kampung	Population 1979	Residential Area (ha)	Residential Density (persons/ha)	Major Physical Problems
1. Tegal Sari	15,500	59.1	260	Streets, Water, Sanitation
Tegal Sari	20,600	31.8	650	Solid Waste
Tegal Sari	4,900	24.1	200	
2. Sei Kera Hilir	14,000	40.2	350	Water, Sani- tation
Sei Kera Hulu	6,400	22.5	280	Solid Waste
3. Sidorame Barat	9,900	35.7	280	Water, Street, Flooding
Sidorame Timur	5,900	28.1	210	
4. Aur	9,900	7.7	470	Water, Streets, Sanitation
Hamdan	5,900	9.9	470	
T o t a l	95,500	259.1	330	

5

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT

ACTIVITY SCHEDULE

TASKS		1979												1980	
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
II. RECONNAISSANCE/WORK PROGRAM															
Establish Contract with Agencies.	1	=====													
Collect/Review Existing Data.	2	=====	=====												
Review National, Provincial and Local Objectives.	3	=====	=====	=====	=====										
Conduct Field Visits.	4	=====	=====	=====											
Prepare Work Program.	5	=====	=====												
Inception Report.	6		=====	=====											
III. HOUSING DEVELOPMENT PROJECT KAMPUNG IMPROVEMENT (KIP)															
Analysis of Low Income Kampung.	7				=====	=====									
Appraise Low Cost Housing Activities.	8					=====	.....							
Examine Building Materials and Construction.	9					=====	.....							
Identify Target Groups and Existing Housing Condition.	10					=====	=====								
Assemble Current Cost Data.	11					=====	.....							
Field Survey and Reconnaissance.	12						=====								
Analyze Demographic Characteristics.	13					=====									
Prepare Guiding Principles and Policies.	14							=====							
Selection of Kampung to be Improved.	15							=====							

Schedule Activity Period through 31 July 1979

Legend

- ===== Scheduled Task Activity
- ===== Estimated Activity to 30 June 1979
- Activity for July 1979

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT

ACTIVITY SCHEDULE

TASKS		1979												1980		
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	
KIP Strategy.	16							—	.....						
Prepare Standards for KIP Project.	17							—	.....						
Finalize Selected KIP Plan and Program.	18								—	.....					
Preliminary Engineering Report.	19									—						
Draft Final Feasibility Report.	20										—					
Final Feasibility Report.	21															—
III. PUBLIC ACTION FRAMEWORK																
Identify Present and Proposed Public Projects.	22		—	—	—	—	—	—								
Assemble Data on Existing Taxation and Revenue Sources.	23			—	—	—	—	—	.....						
Assemble Information on Legal and Administrative Constraints.	24				—	—	—	—	—	.....					
Assess Public Action Capabilities.	25				—	—	—	—	—	.....					
Identify Public Action Capabilities.	26							—	.....	—					
Determine Financial Benefits.	27									—	.....				
Recommend Measures for Increasing Municipal Revenue.	28										—					
Recommend Legislation and Administration - KIP	29										—					
Develop Organization for Project Management.	30										—					
Estimate Investments Needed for Housing.	31											—				

Legend

Schedule Activity Period through 31 July 1979

-  Scheduled Task Activity
 Estimated Activity to 30 June 1979
 Activity for July 1979

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT

ACTIVITY SCHEDULE

TASKS		1979												1980	
TITLE	NUMBER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
Recommend Planning Measures and Controls	32										—				
IV. LONG TERM URBAN DEVELOPMENT PLAN															
Collect and Analyze Available Data.	33	—	—	—	—										
Evaluate National, Provincial and Local Demographic and Economic Data.	34			—	—										
Examine Existing Conditions and Trends.	35		—	—	—	—	—								
Examine Population, Migration, Economy, Employment and Income.	36			—	—	—	—								
Review Medan Master Plan.	37			—	—	—	—								
Identify Development Issues and Constraints.	38			—	—	—	—								
Prepare Alternative Growth Strategies.	39				—	—	—	—	—	—	—				
Prepare Population Projections.	40				—	—	—	—	—	—	—				
Interim Strategy Plan and Feasibility Report.	41					—	—	—	—	—	—				
Prepare Guidelines.	42						—	—	—	—	—				
Prepare Long Term Growth Strategy.	43							—	—	—	—				
Identify Long Term Needs.	44								—	—	—				
Long Term Development Plan Draft Final Report.	45									—	—				
Long Term Development Plan Final Report.	46										—	—	—		

Legend

Schedule Activity Period through 31 July 1979

- Scheduled Task Activity
- ▬ Estimated Activity to 30 June 1979
- Activity for July 1979

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT

ACTIVITY SCHEDULE

TASKS		1979												1980	
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
TITLE	NUMBER														
V. HOUSING DEVELOPMENT PROJECT SITES AND SERVICES CORE HOUSING (SSCH) AND LOW COST HOUSING (LCH)															
Site Selection Criteria for SSCH/LCH Projects.	47			—————											
Site Selection.	48					.....								
Identify Target Groups.	49								—						
Prepare Objectives.	50								—						
Estimate Standards and Costs.	51								—						
Survey of Selected Site.	52							.....						
Finalize Design Criteria, Costs and Standards.	53									—					
Examine Alternative SSCH/LCH Concepts.	54								—						
Prepare Social and Economic Components.	55									—					
Prepare Financial, Administration, and Legal Aspects.	56										—				
Preliminary SSCH and LCH Design Report.	57											—			
Prepare Draft Final Feasibility Report.	58												—		
SSCH and LCH Detailed Design Report.	59													—	
Final Feasibility Report.	60														—

Legend

- Scheduled Task Activity
 — Estimated Activity to 30 June 1979
 Activity for July 1979

Schedule Activity Period through 31 July 1979

10

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT

ACTIVITY SCHEDULE

TASKS		1979												1980	
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
TITLE	NUMBER														
WATER SUPPLY	101-1107														
General Tasks															
Summarize Population, Land Use, and Economy	1101														
Assess Development Resources and Scarcity	1102														
Assess Environmental Effects	1103														
Review Public Health Conditions	1104														
Review Water Quality	1105														
Summarize Climate and Hydrology	1106														
Summarize Soils, Topography and Geology	1107														
Inventory and Plan Formulation															
Estimate Water Supply Sources	101-105														
Summarize Water Use and Demand	106-110														
Inventory Existing Facilities and Operations	111-112														

Schedule Activity Period through 31 July 1979

Legend

 Scheduled Task Activity
 Estimated Activity to 30 June 1979
 Activity for July 1979

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT

ACTIVITY SCHEDULE

TASKS		1979												1980	
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
Review and Evaluate Planned															
Facilities and Operations	113		█	█	█										
Review Management, Policies,															
and Regulations	114-118		█	█	█	█									
Summarize Revenue and Finance	119-121		█	█	█	█	█	█	█	█	█	█	█	█	█
Recommend Improvements	122-124			█	█	█	█	█	█	█	█	█	█	█	█
Estimate Potential Basin Yield	130-131			█	█	█	█	█	█	█	█	█	█	█	█
Additional Hydrological Studies	200			█	█	█	█	█	█	█	█	█	█	█	█
Project Future Water Demand	132-134			█	█	█	█	█	█	█	█	█	█	█	█
Establish Evaluation Criteria and System	135-136			█	█	█	█	█	█	█	█	█	█	█	█
Formulate Alternative Schemes	137-138			█	█	█	█	█	█	█	█	█	█	█	█
Estimate Water Source Variations	152					█	█	█	█	█	█	█	█	█	█
Establish New Service Areas and															
Local Water Demands	151,154					█	█	█	█	█	█	█	█	█	█
Formulate Alternative Local Systems	153							█	█	█	█	█	█	█	█
Prepare Preliminary and															
Interim Reports	143							█	█	█	█	█	█	█	█

Schedule Activity Period

through 31 July 1979

Legend

— Scheduled Task Activity

█ Estimated Activity to 30 June 1979

..... Activity for July 1979

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT

ACTIVITY SCHEDULE

TASKS		1979												1980	
TITLE	NUMBER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
Governmental Review	1201-02						=====	.....						
Master Plan	161-170														
Define Major Facilities	161							.....	=====					
Establish Transmission Routes	162							.....	=====					
Establish Operations/Maintenance Requirements	163								=====						
Establish Management System	164								=====						
Schedule Facilities and Operations	165								=====						
Establish Costs, Rates, and Finance	166-167								=====						
Develop Review for Master Plan	168								=====						
Produce Master Plan	169									=====					
Produce Final Master Plan	170										=====				
First Stage Feasibility Report	181-1100														
Develop Objectives and Criteria	181-182								=====						
Develop Designs, Locations, Land, Costs and Design Criteria	183,188 191,194-95									=====					
Analyse Distribution System and Design	184;189									=====					

Legend

- ===== Scheduled Task Activity.
 ===== Estimated Activity to 30 June 1979
 Activity for July 1979

Schedule Activity Period through 31 July 1979

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT

ACTIVITY SCHEDULE

TASKS		1979												1980		
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	
TITLE	NUMBER															
WASTEWATER	200-2100															
Population, Land Use, and Economy	1101			—	—	—	—	—								
Public Health	1104		—	—	—	—										
Water Quality	1105		—	—	—	—										
INVENTORY AND PLAN	201-253															
Estimate Wastewater Generation	201-202			—	—	—	—	—	—	—	—	—	—	—	—	—
Inventory Facilities, Operations, and Management	203-204			—	—	—	—	—								
Review Collector Interconnections	205			—	—	—	—	—								
Formulate Evaluation System	231-232				—	—	—	—	—	—	—	—	—	—	—	—
Project Wastewater Generation	233-234				—	—	—	—	—	—	—	—	—	—	—	—
Formulate Alternative Strategies	235				—	—	—	—	—	—	—	—	—	—	—	—
Select Recommended Plan	236-239						—	—	—	—	—	—	—	—	—	—
Establish Localized Generation	251						—	—	—	—	—	—	—	—	—	—
Formulate Alternative Schemes	252							—	—	—	—	—	—	—	—	—
Prepare Preliminary and Interim Plans	253							—	—	—	—	—	—	—	—	—

Legend

Schedule Activity Period through 31 July 1979

 Scheduled Task Activity
 Estimated Activity to 30 June 1979
 Activity for July 1979

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT

ACTIVITY SCHEDULE

TASKS		1979											1980					
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB			
TITLE	NUMBER																	
GOVERNMENTAL REVIEW	2201-2202						=====											
Master Plan	261-271																	
Define Major Facilities	261						.....										
Establish Collector Sewers	262-263						=====											
Develop Operations/Maintenance	264																	
Establish Management System	265																	
Schedule Facilities and Operations	266																	
Estimate Costs, Revenue, and Finance	267																	
Develop Plan Review Methods	268																	
Produce Draft Master Plan	269																	
Produce Final Master Plan	271																	
First Stage Feasibility Report	281-2100																	
Form Objectives and Criteria	281-282																	
Develop Designs, Lands, Schedule, Costs	283,288																	
and Design Criteria	291,94,95																	
Define and Analyse Routes	284,289																	
Review Land and Site Features	285,287																	

Legend

- Scheduled Task Activity
 ===== Estimated Activity to 30 June 1979
 Activity for July 1979

Schedule Activity Period through 31 July 1979

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT

ACTIVITY SCHEDULE

TASKS		1979												1980			
		TITLE	NUMBER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
DRAINAGE																	
General Tasks																	
Climate and Hydrology		1106		—	—	—	—	—									
Soils, Topography, and Geology		1107		—	—	—	—										
Inventory and Plan																	
Estimate Existing Runoff		301-302			—	—	—	—	—	—	—	—	—	—	—	—	—
Inventory Facilities, Operations and Maintenance		303-307			—	—	—	—									
Review Management		308-311			—	—	—	—									
Review Finance		311			—	—	—	—	—	—	—	—	—	—	—	—	—
Review Future Plans		312			—	—	—	—									
Recommend Improvements		313-314			—	—	—	—	—	—	—	—	—	—	—	—	—
Formulate Evaluation System		331-333			—	—	—	—	—	—	—	—	—	—	—	—	—
Project Future Runoff		334			—	—	—	—	—	—	—	—	—	—	—	—	—
Develop Alternative Schemes		335			—	—	—	—	—	—	—	—	—	—	—	—	—
Select Recommended Plan		336-339			—	—	—	—	—	—	—	—	—	—	—	—	—

Legend

- Scheduled Task Activity
 Estimated Activity to ³⁰ June 1979
 Activity for July 1979

Schedule Activity Period through ³¹ July 1979

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT

ACTIVITY SCHEDULE

TASKS		1979												1980	
TITLE	NUMBER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
Establish Local Basins and Runoff	351				—	—	—								
Formulate Alternative Local Systems	352					—	—								
Prepare Preliminary and Interim Report	353					—	—	.....						
Master Plan	361-371														
Define Major Facilities	361							.....	—					
Establish Collector Drains	362-363							.....	—					
Develop Operations/Maintenance	364								—	—					
Establish Management System	365								—	—					
Schedule Facilities and Operations	366								—	—					
Estimate Cost, Revenue, and Finance	367								—	—					
Develop Plan Revision Methods	368								—	—					
Produce Draft Master Plan	369									—					
Produce Final Master Plan	371											—			

Legend

Schedule Activity Period through 31 July 1979

— Scheduled Task Activity

▬ Estimated Activity to 30 June 1979

..... Activity for July 1979

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT

ACTIVITY SCHEDULE

TASKS		1979												1980	
TITLE	NUMBER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
SOLID WASTES	400-4100														
Summarize population, Land Use, and Economy	1101														
Assess Effects															
Summarize Public Health	1104														
Summarize Water Quality	1105														
INVENTORY AND PLAN FORMULATION	401-455														
Review Solid Waste Generation	401-403														
Inventory Facilities and Equipment	404														
Summarize collection and Disposal	405-406														
Summarize Management and Regulations	407-408														
Review Revenue, Costs, and Finance	409-411														
Review Plans	412														
Formulate Improvements of Facilities	413-414														
Project Future Solid Waste Generation	431-434														
Formulate Evaluation System	435-436														
Formulate Alternative Strategies	437-438														

Schedule Activity Period through 31 July 1979

Legend

- Scheduled Task Activity
- ▬ Estimated Activity to 30 June 1979
- Activity for July 1979

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT

ACTIVITY SCHEDULE

TASKS		1979												1980		
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	
TITLE	NUMBER															
Select Recommended Plan	439-444					■	■	.....							
Project Local Solid Wastes	451-452					■	■	.....							
Form Alternative Local Schemes	453-454					■	■									
PREPARE PRELIMINARY AND INTERIM REPORTS	455					■	■	.....							
GOVERNMENTAL REVIEW	4201-02					■	■	.....			■		■		
MASTER PLAN	460-470															
Define Major Facilities and Sites	461							.....	■	■					
Locate Transfers and Haul Rates	462									■	■					
Develop Operations Requirements	463										■	■				
Establish Management System	464										■	■				
Schedule Facilities and Operations	465										■	■				
Estimate Plan Costs, Rates and Finance	466-467										■	■				
Develop Revision System	468											■	■			
Prepare Master Plan	469												■	■		
Prepare Final Master Plan	470														■	■

Schedule Activity Period through 31 July 1979

Legend

- Scheduled Task Activity
- Estimated Activity to 30 June 1979
- Activity for July 1979

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT PROFESSIONAL STAFF SCHEDULING CHART (ES/SINOTECH/PADCO)

ANNEX IV
SHEET 1
PROJECT MONTH 6
CALENDER Mo:TC 30 JUN 79

NAME AND TITLE	ASSIGNMENT/WORK AREA LEGEND Scheduled : _____ Actual : ***** Intermittant: - - - - -	MONTHS 29 Dec 1978														MAN MONTHS	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	ACTUAL (END OF MO)	Schedu led
1 J.M.MC GILL, Project Representative	Resident Project Representative														5	14	
2 C.Y.HUANG, Deputy Project Representative	Sanitary Engineering														5	14	
3 E.T.AMES, Chief Planner	Land Use Planning Physical Zonal Forecasts														5.8	12	
4 L.H.MC GILL, Chief Engineer	Water Supply Sanitary Engineering														5.25	12	
5 D.STOUT/ M.GREESMAN/ HEDFIELD Economist/ Financial Analyst	Metro & Hsing Econ, Mun Finance, Emplm, Indust														2	12	
6 L.BAKER, Housing Planner	Residential Planning Housing SSCH/LCH/KIP														5.87	12	
7 M.JAN AMES, Urban Planner	Planning Training, Small Scale Ind Non Profit Hsi														5.0	5	
8 C.T.WHITE, Chief Designer	Technical Work Production															9	
9 C.H.WANG, Urban Planner	Physical Planning														5	10	
10 J.D.E.PERERA, Sanitary Engineer	Solid Waste, Sanitary Engineering														2.57	8	
11 Y.T HSUEH, Sanitary Engineer	Drainage and Sewerage														3.87	9	
12 C.F.WU, Civil Sanitary Engineer	Urban Development Collect & Dist System														2.97	10	
13 T.G.ARULAMBALAM, System Sanitary Engr.	System Engineering Computer Modeling Water Supply														5.48	9	
14 R.POTER, Financial Analyst	Economics Financial Analysis Tariffs															6	
15 J.G.DANIEL, Special Consultant	Drainage															1	
16 H.FENNERTY, Project Director	Project Direction														1.26	2	
17 P.N.STORRS, ES Senior Vice President	Technical Review															7	
18 G.L.SENNY, Public Health Specialist	Public Health														2.0	2	
19 R.FOX, Hydrogeologist	Hydrogeology														1.0	0.5	
20 C.T.WILLIAM, Environmental Analyst	Environmental Aspects														5.9	6	
21 J.E.ARRINGTON, Senior Planner	Planning Project Planning Direction														2.55	3	
22 A.P.VAN HUYCK, PADCO President	Housing Finance for SSCH/KIP														0.38	1	
23 H.S.SHYU, Transportation Engineer	Transportation Engineering															4	
HOME OFFICE SUPPORT	AS REQUIRED														5.5	9.5	
TOTAL TIME														71.9	173.0		

MEDAN URBAN DEVELOPMENT HOUSING WATER SUPPLY AND SANITATION PROJECT PROFESSIONAL STAFF SCHEDULING CHART (DACREA)

ANNEX IV
SHEET 2
PROJECT MONTH 5
CALENDER Mo: TO30 JUN. 79

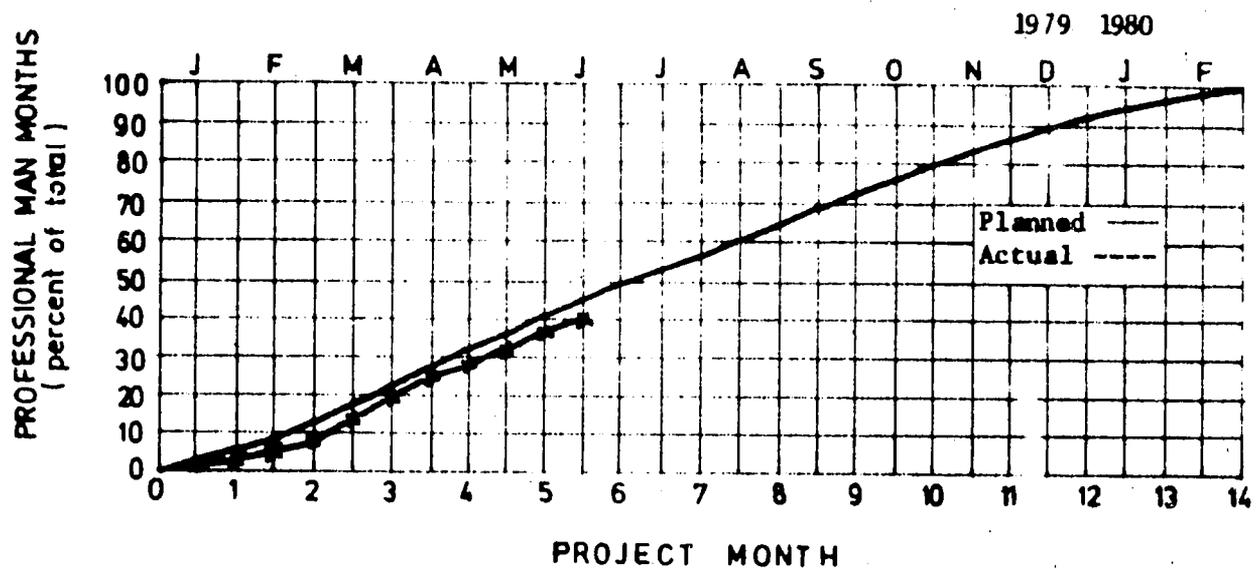
NAME AND TITLE	ASSIGNMENT/WORK AREA LEGEND Scheduled : _____ Actual : ***** Intermittant: - - - - -	MONTHS														MAN MONTHS		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	ACTUAL (END OF MO)	Schedu led	
1 HENDRATA/NIZAR, Principal & Coordinator	Coordination and Direction	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1.2	4
2 MARIAM DARUS, Legal Specialist	Legal Specialist			-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2.2	3
3 ISMAIL R.YUSUF, Economist	Economics, Financial Analysis, Industrial			-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2.7	5
4 ABRAAR, Socio Economist	Socio Economics, Demography Finances Employment			-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2.4	5
5 VICTOR THE, Economist	Economics, Financial Analysis, Industrial	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1.0	1
6 M. JUWONO, Socio Economist	Socio Economics, Demography Finances Employment	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1.0	1
7 WIDJONO, Urban Planner	Land Use Planning, Forecasts Housing Planning	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	3.5	11
8 BAMBANG SUDARPO Urban Planner / Trans Planner	Land Use Planning, Forecasts Housing Planning	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	4.5	5
9 SURACHMAN Transportation / ARGADINATA Highway Engineer	Transportation Planning and Economics	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1.0	6
10 ARIYANI HARTONO, Cost Engineer	Cost Estimating Construction Material	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	4	5
11 P.WIDIYANTO, Senior Civil Engineer	SSCH/LCH/KIP Engineering, Civil	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	4	11
12 PRAWOTO/LILY.T, Sr Sanitary Engineer	SSCH/LCH/KIP Engineering Sanitary Engineering			x	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.24	5
13 PRAYITNO/FACHMI.R, Hydrogeologist	Hydrogeologist			-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	3	3
14 DJAYADI.P, Sanitary Engineer	Water Supply, Sewerage, Solid Waste	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	4	11
15 UNKNOWN	Utility Management, Traffic and Finances	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		6
16 DJOKO SOEJATMIKO Hydraulic / Materials Engineer	Drainage System, Hydraulics	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	3	9
17 M. DISHMAR, Architect / Site Planner	Housing, Architecture SSCH/LCH/KIP Site Planning	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	5	12
18 SAHUSILAWANE, Electrical Engineer	Electrical Engineering	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1.1	3
19 GARDJITO, Architect	Housing, SSCH/LCH/KIP	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.6	7
20 SOEDARSONO	Graphics Coordinator	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2.75	3
		TOTAL TIME														47.39	116	

MEDAN URBAN DEVELOPMENT, HOUSING, WATER SUPPLY AND SANITATION PROJECT

Project Month : 6

Calendar Month : 1 June 1979 - 30 June 1979

1. CUMULATIVE INPUT OF PROFESSIONAL PERSONNEL



2. SUMMARY TABLE

	<u>MAN - MONTH</u>			
	This Month <u>Planned</u>	Actual	Cumulative <u>Planned</u>	Actual
Professional - Medan				
ES	7.0	6.0	32.0	27.4
Sinotech	4.0	4.0	19.0	17.0
Padco	3.2	2.2	25.2	20.9
Dacrea	16.0	16.0	58.1	48.0
T o t a l	30.2	28.2	34.3	113.3
Professional - Home Office				
ES - Arcadia	0	0	2.0	2.0
Sinotech - Taiwan	0.5	0.5	3.5	3.5
Padco - Washington	-	-	-	-
Dacrea - Jakarta	-	-	-	-
T o t a l	0.5	0.5	5.5	5.5
Non-Professional - Medan (Dacrea)	26.0	26.0	146	114.7

MEDAN URBAN DEVELOPMENT, HOUSING,
WATER SUPPLY AND SANITATION PROJECT

Project Month : 6

Calendar Month: 1 June 1979 - 30 June 1979

3. Personnel Movement

Expatriate Staff

<u>Ref.</u> <u>Annex II</u>	<u>Name</u>	<u>Arrival</u>	<u>Departure</u>
1	J.M. McGill	February 2	
2	C.Y. Huang	February 2	
3	E.T. Ames	December 31	June 20
4	L.H. McGill	January 10 April 11	March 22
5	D. Stout	March 29	May 23
6	M. Grossman	June 27	
7	Hadfield		
8	L. Baker	January 6	
9	M.J. Ames	December 31	June --
10	C.T. White		
11	C.H. Wang	February 2	
12	J.D.E. Perera	April 16	
13	Y.T. Hsueh	March 6	
14	C.F. Wu	April 3	
15	T.G. Arulambalam	January 18	June 30
16	C. Adelman		
17	J.G. Daniel		
18	H. Fennerty	February 14 April 3 June 1	February 24 April 11 June 11
19	P.N. Storrs		
20	C.L. Senn	April 11	June 6
21	R. Fox	June 19	June 30
22	C.T. Williams	January 5	
23	J.E. Arington	February 24 May 23	March 30 June 10
24	A.P. Van Huyck	February 10 March 21 April 9	February 16 March 23 April 10

Local Professional Staff

<u>Ref.</u> <u>Annex II</u>	<u>Name</u>	<u>Arrival</u>	<u>Departure</u>
1	Hendrata/Nazar	May 27	May 30
2	Mariam Darus	March 15	
3	Ismail R. Yusuf	March 5	
4	Abraar	March 5	
5	Victor The		
6	M. Juwono		
7	Widjono	March 12	March 16
8	Bambang Sudarpo	February 13	
9	Handoyo		
10	Ariyani Hartono	March 1	
11	Widiyanto	March 1	
12	Prawoto/Lily T.	March 20	March 24
13	Prayitno/Fachmi Rasjid	March 23	
14	Djajadi	March 5	
15	Unknown		
16	Djoko Soejatmiko	April 2	
17	M. Dishmar	January 22	
18	Sahusilawane	May 15	May 29
19	Gardjito	June 12	
20	Sudarsono	March 12	May 31

4. End-of-month Strength, Medan Office

Professional

ES	6
Sinotech	4
Padco	4
Dacrea	16

Non Professional

(Dacrea)	26
----------	----

A. SUMMARY OF US DOLLAR EXPENDITURE

For Period: December 1978 through 30 June 1979

DOLLAR INVOICE 5

<u>Cost Category</u>	<u>Contract Amount</u>	<u>Expenditure for June</u>	<u>Amount Accumulated</u>	<u>% of Budget Estimate</u>
1. <u>SALARIES AND RELATED COSTS</u>				
(1) ES Personnel (I)				
Base Salaries	178,233	15,101.15	73,268.2	41.1
Overhead	224,639	19,531.47	95,273.22	42.4
Overseas Differen- tial	6,892	529	2,708.5	39.3
Sub-total	409,764	35,161.62	171,249.92	41.8
(2) Sinotech Total Billing (III)	211,733	18,576	84,827.4	40.1
(3) PADCO Personnel (II)				
Base Salaries	121,731	5,305.7	53,877.15	44.3
Overhead	101,245	5,200.4	43,183.24	42.7
Overseas Differen- tial	22,632	342.15	7,355.40	32.5
Sub-total	245,608	10,848.25	104,415.79	42.5
2. <u>ES / PADCO FEE</u>	74,991	0	32,139	42.9
3. <u>INTERNATIONAL TRAVEL & ALLOWANCE (IV)</u>	77,735	3,645.79	39,003.59	50.2
4. <u>INTERNATIONAL AIR FREIGHT (V)</u>	8,880	60	1,770	19.9
5. <u>SPECIAL OFFICE EQUIPMENT (VI)</u>	7,200		702	9.7
6. <u>OTHER COST (VII)</u>	116,042	600	20,600	17.8
TOTAL	<u>1,151,953</u>	<u>68,891.66</u>	<u>454,707.7</u>	<u>39.5</u>
Less 10% retention for ES/PADCO fee		0	3,213.9	

25

B. SUMMARY OF RUPIAH EXPENDITURE

For Period: 31 December 1978 through 31 May 1979

<u>Cost Category</u>	<u>Contract Amount</u>	<u>Amount Thru. This Period</u>	<u>% of Budget Estimate</u>
1. <u>INDONESIAN PERSONNEL (VIII)</u>			
P. T. DACREA	111,975,000	20,188,000	18.0
2. <u>ALLOWANCE FOR PROJECT PERSONNEL (IX)</u>			
(1) Per Diem Allowance	11,454,000	8,300,000	72.5
(2) Housing Allowance for Expatriate (more than 6 months)			
(a) Furnishing 5 Cipta Karya Houses	5,000,000	5,000,000	100
(b) Utilities and Maintenance	3,200,000	1,250,000	39.0
(c) Rental of Houses Running Cost	18,675,000 3,000,000	18,675,000 1,250,000	100 41.7
(d) Outfitting Rented Houses	2,000,000	2,000,000	100
(3) Per Diem P. T. DACREA	3,450,000	1,712,500	49.6
(4) Housing Allowance DACREA	10,350,000	1,324,500	12.8
3. <u>PROJECT VEHICLES (X)</u>			
(1) Government	17,366,000	17,260,000	99.4
(2) Consultant Depreciation Charge	7,744,800	3,663,750	47.3
(3) O & M	5,840,000	1,880,000	32.2
4. <u>OTHER COSTS (XI)</u>			
(1) Office space	NO COST	NIL	NIL
(2) Office maintenance	2,100,000	750,000	35.7
(3) Office furniture Consultant	4,000,000	4,000,000	100
(4) Office furniture Cipta Karya	NO COST	NIL	NIL
(5) Office equipment Consultant	2,500,000	4,029,022	161.2
(6) Office equipment Cipta Karya	NO COST	NIL	NIL
(7) Local communications	2,100,000	750,000	35.7
(8) Off duty station support	2,270,375	712,675	31.4
(9) Local air travel	9,100,000	2,965,600	32.6
(10) Office consumable supplies	1,400,000	500,000	35.7
(11) Report printing	4,500,000	2,500,000	55.6
5. <u>SUB-CONTRACTS (XII)</u>	131,600,000	NIL	NIL
T O T A L	359,625,175 =====	98,711,047 =====	27.4 =====

26