

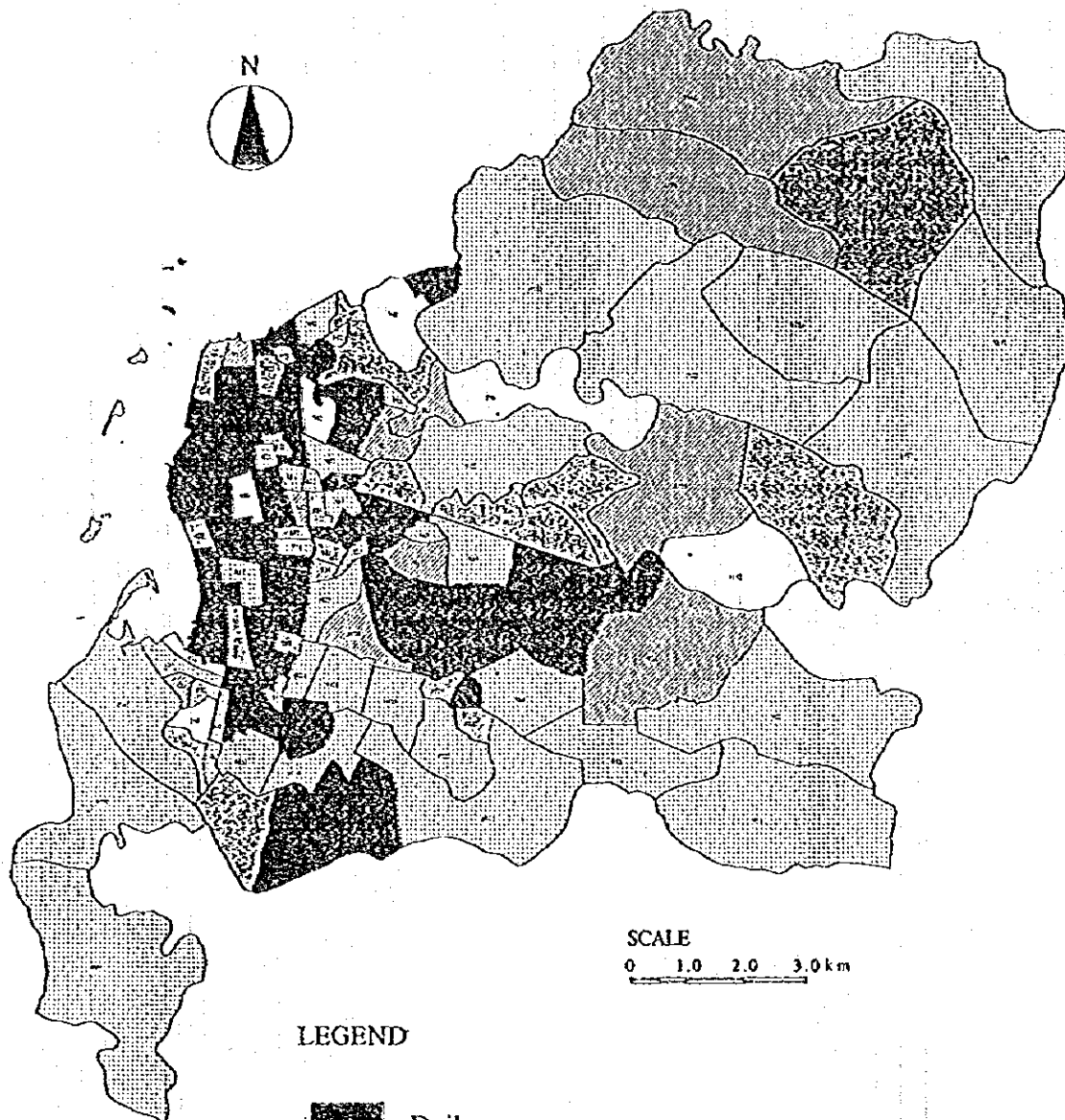
Table 6.12 Personnel Requirements by Branch Office and Sector

| OFFICE                          | Function                                      | 1995  |        |                    | 2005  |        |                    | 2015  |        |                    |       |
|---------------------------------|---|-------|--------|--------------------|-------|--------|--------------------|-------|--------|--------------------|-------|
|                                 |   | Admin | Driver | Worker Super Total | Admin | Driver | Worker Super Total | Admin | Driver | Worker Super Total |       |
| 1. Branch 1 (Bontolua)          | a) SWM Headquarter                            | 4     | 0      | 390                | 47    | 431    | 0                  | 0     | 0      | 0                  | 0     |
|                                 | b) Collection/Ditch Cleaning                  | 2     | 0      | 195                | 10    | 205    | 1                  | 0     | 43     | 2                  | 45    |
|                                 | c) Street Sweeping                            | 6     | 0      | 575                | 57    | 632    | 3                  | 0     | 161    | 10                 | 171   |
|                                 | Sub-Total                                     | 12    | 0      | 1160               | 114   | 1274   | 4                  | 0     | 204    | 12                 | 216   |
| 2. Branch 2 (Tanjung)           | a) Workshop                                   | 1     | 0      | 10                 | 5     | 15     | 1                  | 0     | 12     | 5                  | 17    |
|                                 | b) Depot #1                                   | 2     | 114    | 0                  | 0     | 116    | 2                  | 61    | 0      | 0                  | 63    |
|                                 | c) TPA (up to 2005)                           | 0     | 4      | 4                  | 1     | 9      | 3                  | 12    | 10     | 2                  | 27    |
|                                 | Sub-Total                                     | 3     | 118    | 14                 | 6     | 141    | 6                  | 73    | 22     | 7                  | 106   |
| 3. Branch 3 (Parakkung)         | a) Depot #2                                   | 6     | 86     | 0                  | 0     | 92     | 6                  | 86    | 0      | 0                  | 113   |
|                                 | b) Collection/Ditch Cleaning                  | 0     | 0      | 201                | 24    | 225    | 0                  | 0     | 307    | 0                  | 307   |
|                                 | c) Street Sweeping                            | 1     | 4      | 84                 | 4     | 92     | 1                  | 5     | 92     | 4                  | 102   |
|                                 | d) Future SWM Treatment Facility (after 2015) | 0     | 0      | 0                  | 0     | 0      | 0                  | 0     | 0      | 0                  | 0     |
|                                 | Sub-Total                                     | 7     | 90     | 285                | 28    | 409    | 7                  | 112   | 309    | 30                 | 548   |
| 4. Branch 4 (Bringkanaya)       | a) Collection/Ditch Cleaning                  | 6     | 0      | 99                 | 12    | 117    | 6                  | 0     | 188    | 17                 | 219   |
|                                 | b) Street Sweeping                            | 1     | 0      | 37                 | 2     | 39     | 1                  | 0     | 45     | 2                  | 47    |
|                                 | Sub-Total                                     | 7     | 0      | 136                | 14    | 155    | 7                  | 0     | 241    | 19                 | 266   |
| 5. Branch 5 (Gawal)             | a) TPA (after 2005)                           | 3     | 17     | 10                 | 2     | 32     | 3                  | 17    | 10     | 2                  | 32    |
|                                 | Sub-Total                                     | 3     | 17     | 10                 | 2     | 32     | 3                  | 17    | 10     | 2                  | 32    |
|                                 | TOTAL (Secondary Collection, Ditch, Sweeping) | 9     | 118    | 589                | 63    | 776    | 23                 | 163   | 603    | 65                 | 851   |
| TOTAL (with Primary Collection) | 0   | 0     | 429    | 0                  | 429   | 0      | 0                  | 429   | 0      | 429                |       |
| Kelurahan                       | Primary Collection                            | 0     | 0      | 429                | 0     | 429    | 0                  | 0     | 429    | 0                  | 429   |
|                                 | TOTAL (with Primary Collection)               | 9     | 118    | 1,018              | 63    | 1,207  | 23                 | 163   | 1,032  | 65                 | 1,283 |






Branch Office responsible for Collection and Transport by Kecamatan  
 Branch Office <1> Makassar, U. Pandang, Wiyo, Bontolua, U. Tanah  
 Branch Office <2> N.Tamalele, C.Tamalele, S.Tamalele, W.Parakukung, E.Parakukung, Mariso, Mamajang  
 Branch Office <3> Talo, N.Bringkanaya, S.Bringkanaya

Depot vehicle parking by Kecamatan  
 Depot #1 E.Parakukung, N.Tamalele, C.Tamalele, S.Tamalele, N.Bringkanaya, S.Bringkanaya  
 Depot #2 Mariso, Mamajang, Makassar, U.Pandang, Wiyo, Bontolua, Talo, U.Tanah, W.Parakukung

| Staffing by SWM Activity   | 1995  |        |                    | 2005  |        |                    | 2015  |        |                    |       |
|----------------------------|-------|--------|--------------------|-------|--------|--------------------|-------|--------|--------------------|-------|
|                            | Admin | Driver | Worker Super Total | Admin | Driver | Worker Super Total | Admin | Driver | Worker Super Total |       |
| 1) Primary Collection      | 0     | 0      | 429                | 0     | 0      | 429                | 0     | 0      | 429                |       |
| 2) Secondary Collection    | 3     | 111    | 250                | 37    | 400    | 7                  | 144   | 288    | 40                 | 479   |
| 3) Ditch Cleansing         | 1     | 3      | 130                | 10    | 144    | 1                  | 3     | 130    | 10                 | 144   |
| 4) Sanitary Landfill       | 0     | 4      | 4                  | 1     | 9      | 3                  | 12    | 10     | 2                  | 27    |
| 5) Street Sweeping         | 2     | 0      | 195                | 10    | 207    | 3                  | 4     | 163    | 8                  | 178   |
| 6) Branch (Depot/Workshop) | 3     | 0      | 10                 | 5     | 18     | 9                  | 9     | 12     | 5                  | 26    |
| TOTAL                      | 9     | 118    | 1,018              | 63    | 1,207  | 23                 | 163   | 1,032  | 65                 | 1,283 |



**LEGEND**

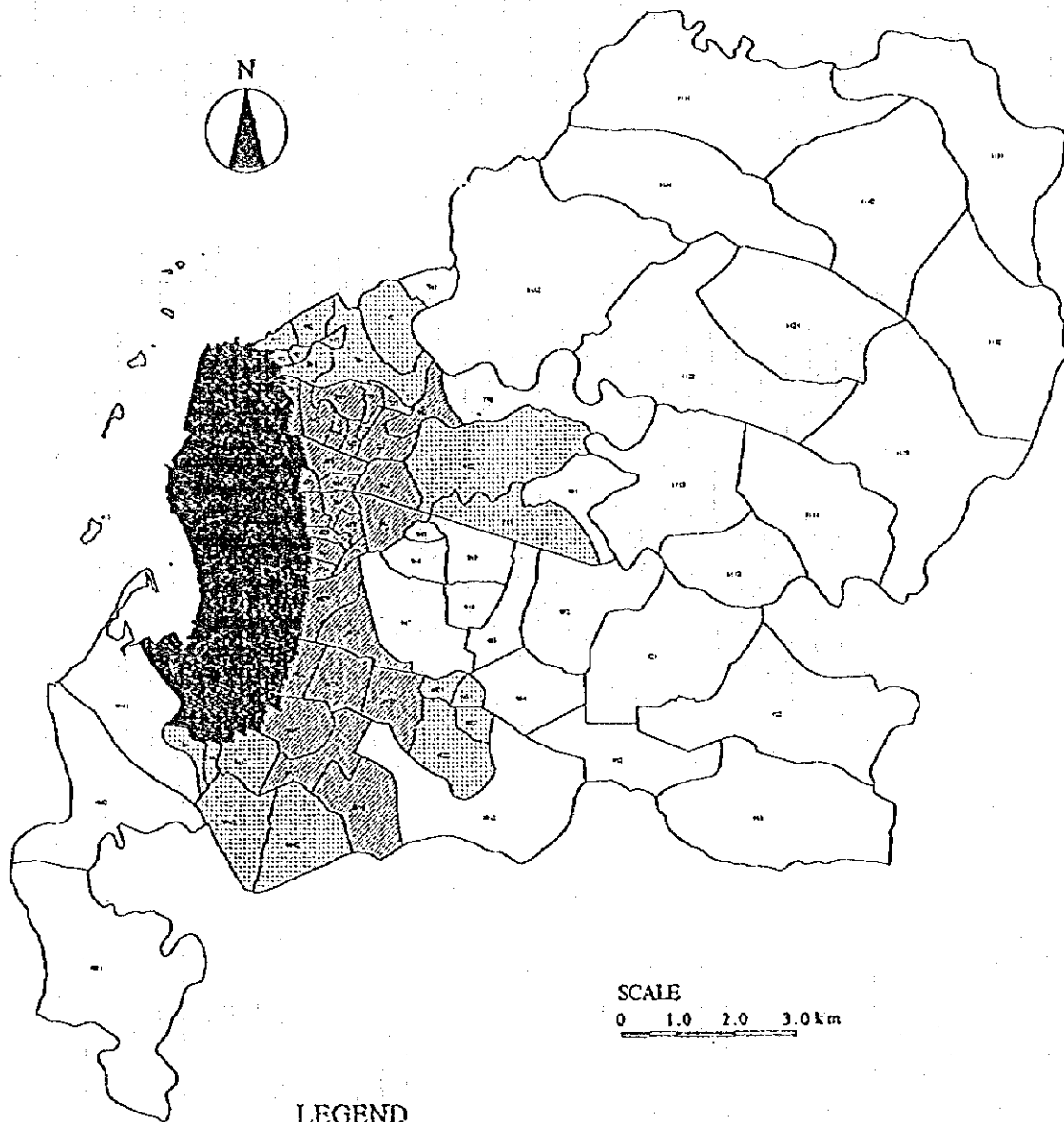
-  Daily
-  3days/week
-  1~2days/week
-  Irregular/None
-  No data

(Source : Kelurahan Questionnaire Survey)





**FIG. 6.1**

**LKMD Collection Service Frequency**

**MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA**



LEGEND

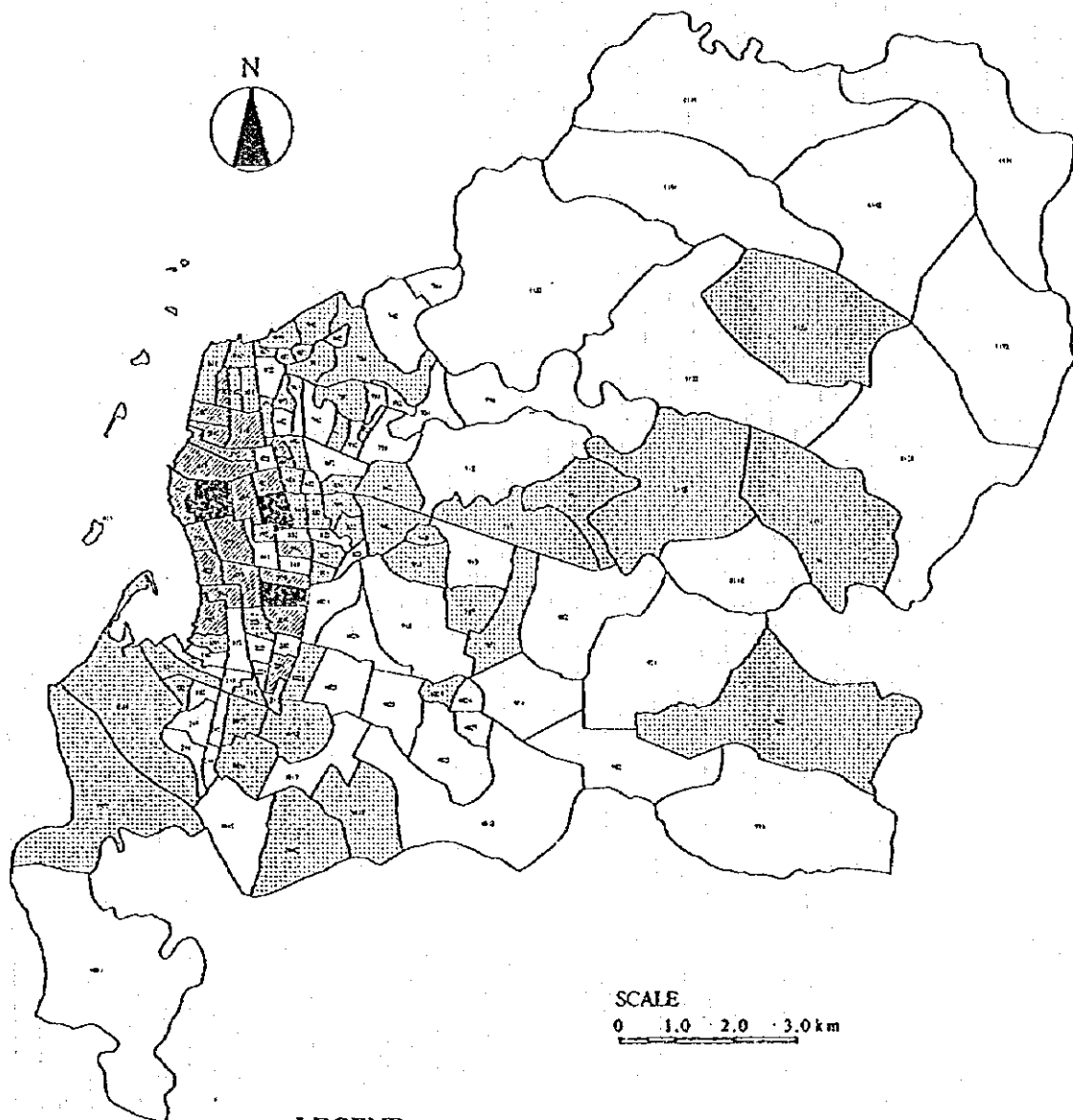
-  Daily Evening
-  Daily Daytime
-  2 days/week
-  Irregular / or No Service

(Source : Counterpart Team)

FIG. 6.2




Dinas Kebersihan Solid Waste Collection and Transport Operation System

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



**LEGEND**

Collection Frequency > 3 days/week

-  Day Shift
-  Night Shift
-  Both Shifts

(Source : JICA Study Survey)

**FIG. 6.3**

**Survey on Dinas Kebersihan Operation System**

**MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA**

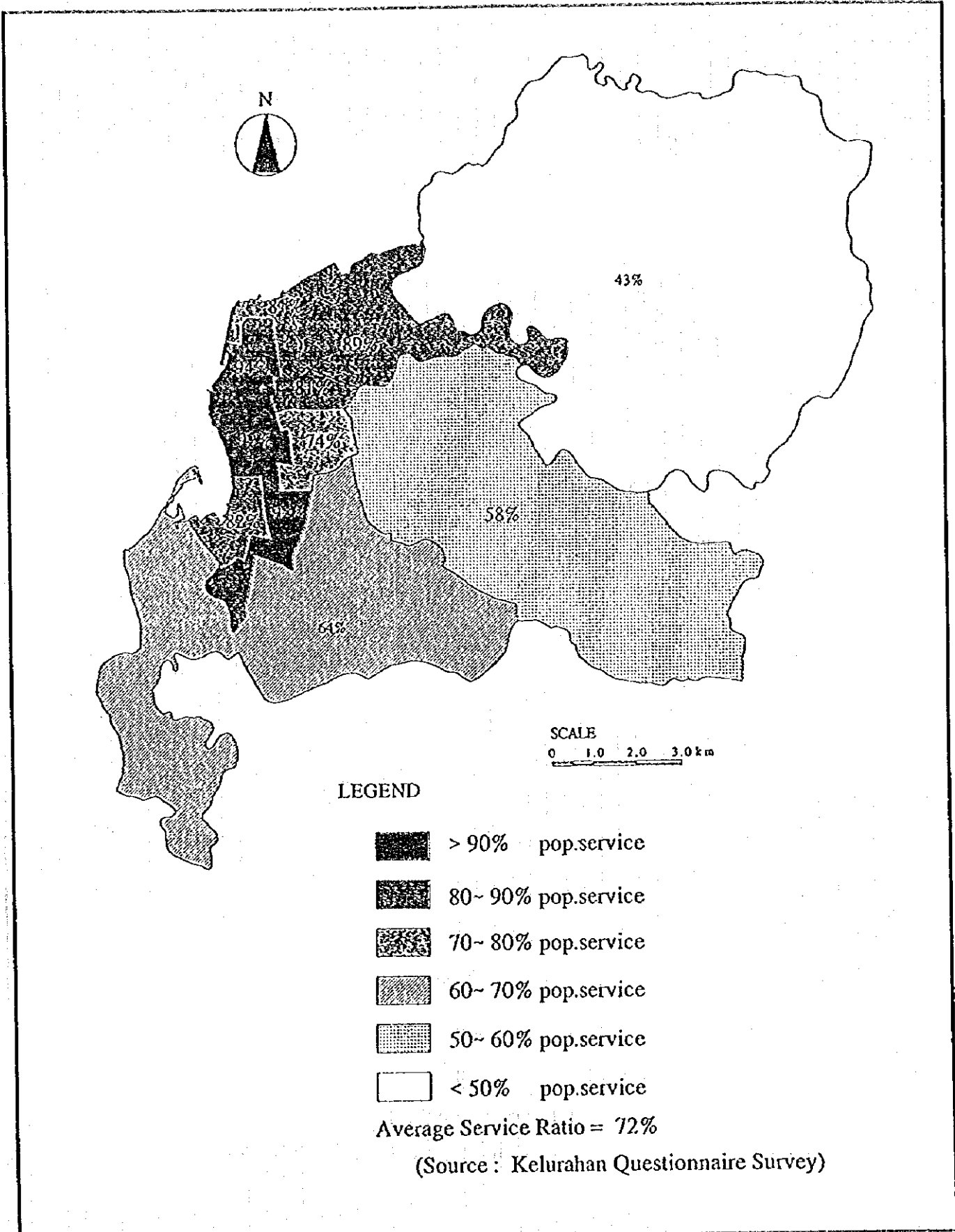


FIG. 6.4

**Extent of Dinas Kebersihan Waste Collection Service**

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

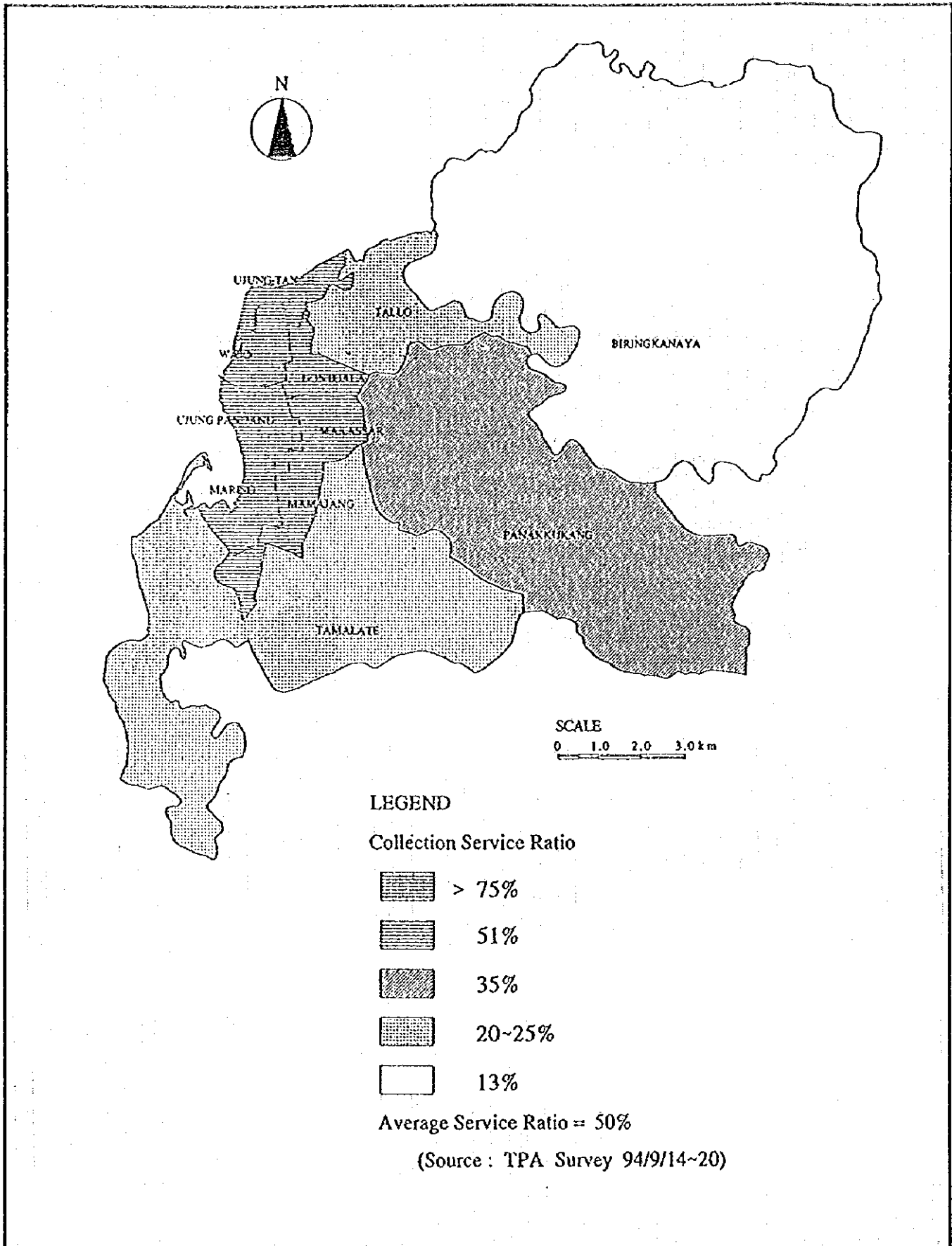


FIG. 6.5 Waste Collection Service Ratio

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

Service Area by Kecamatan

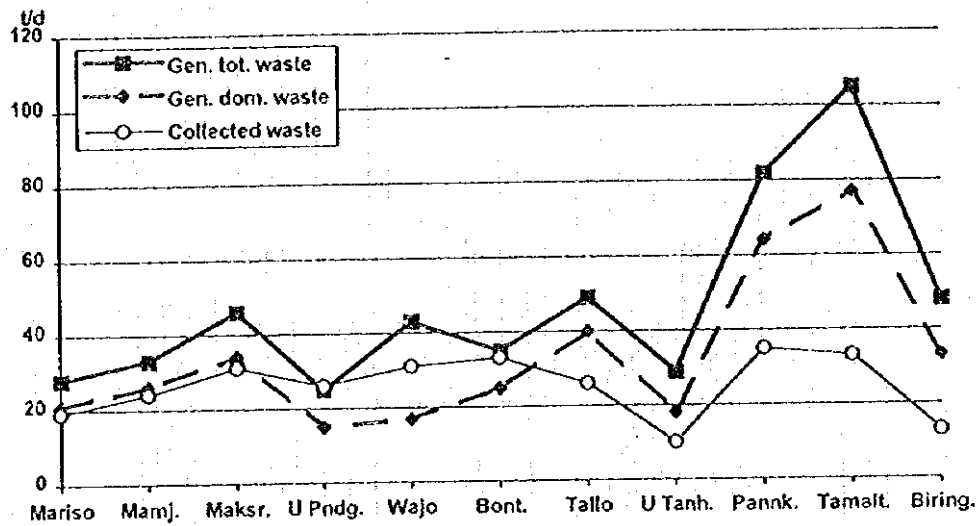
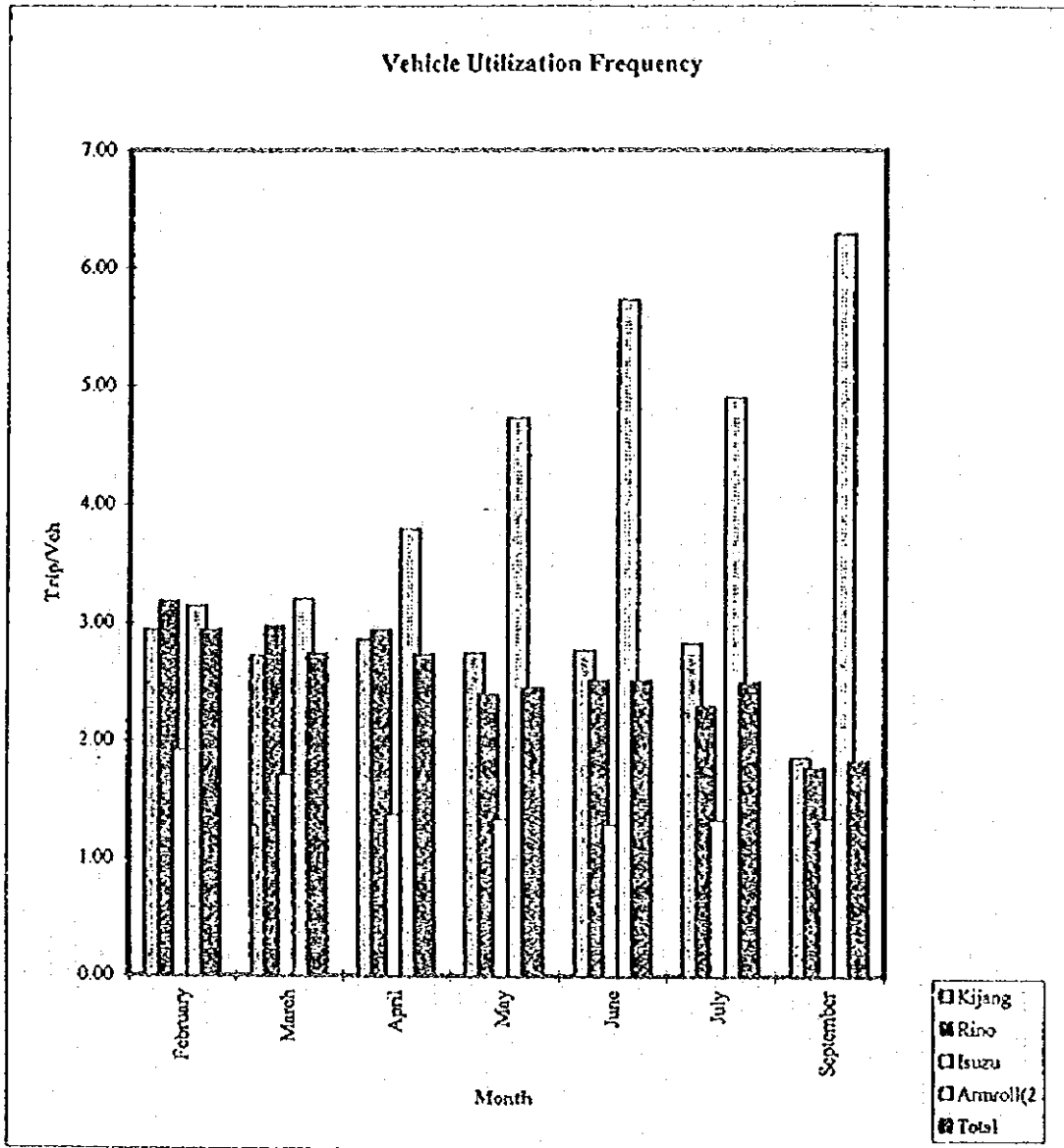


FIG. 6.6

Waste Collection Service Coverage by Kecamatan

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



Drop in Trips/Vehicle as follows;

- 1) Isuzu Veh: Feb. 1.92 to Sept. 1.34 (24% of vehicle fleet capacity)
- 2) Rino Veh: Feb. 3.18 to Sept. 1.77 (including new armroll vehicle)
- 3) Total Ave: Feb. 2.94 to Sept. 1.83

FIG. 6.7

### Drop in Trip Number per Vehicle

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE  
MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



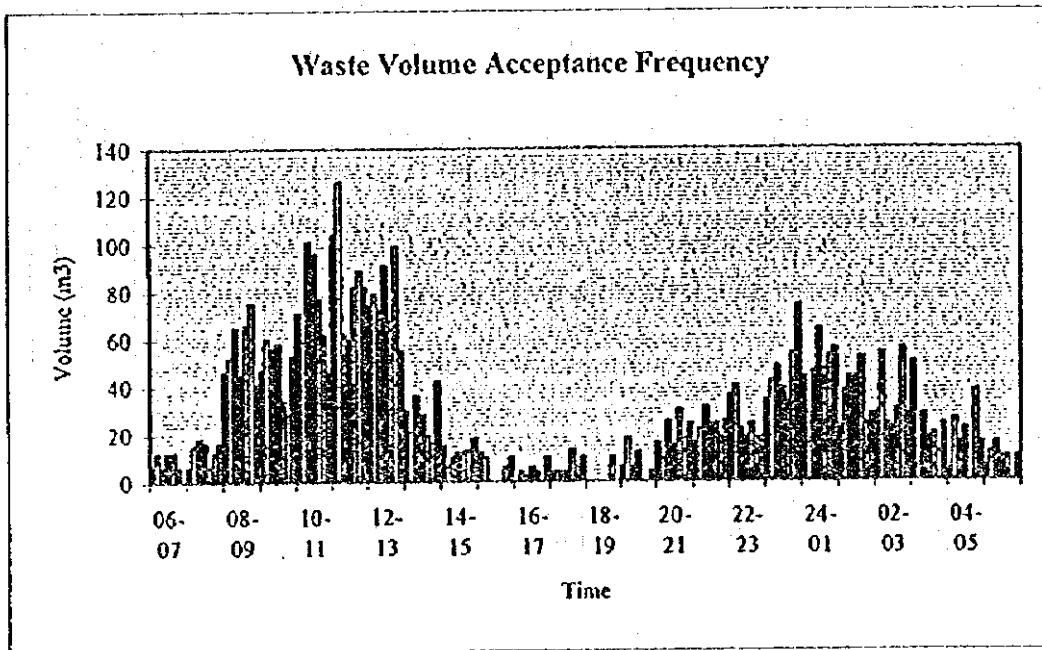
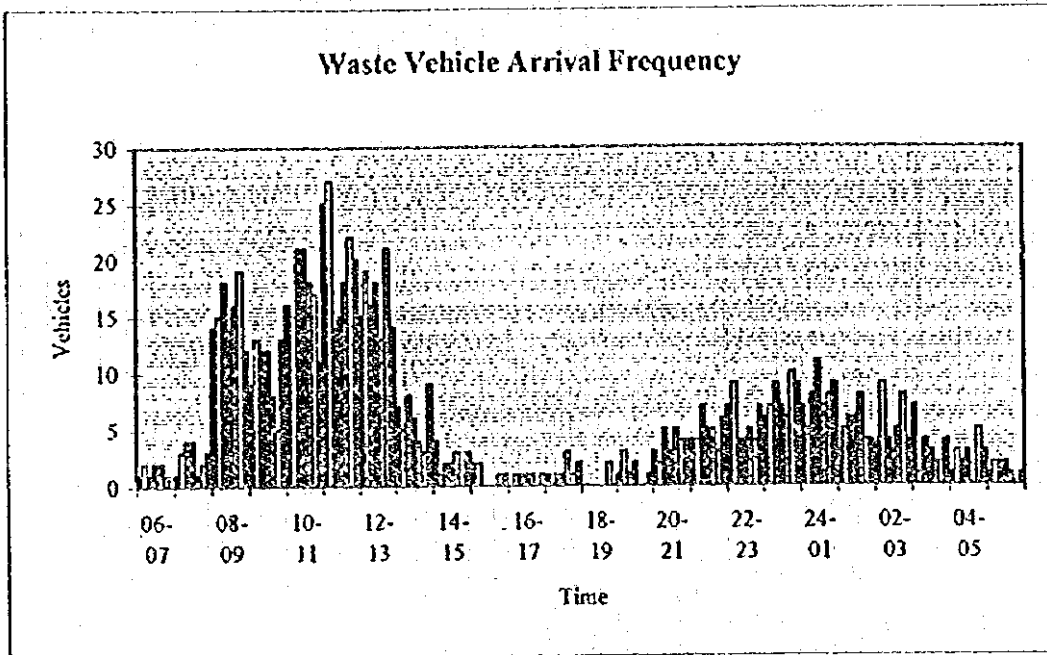


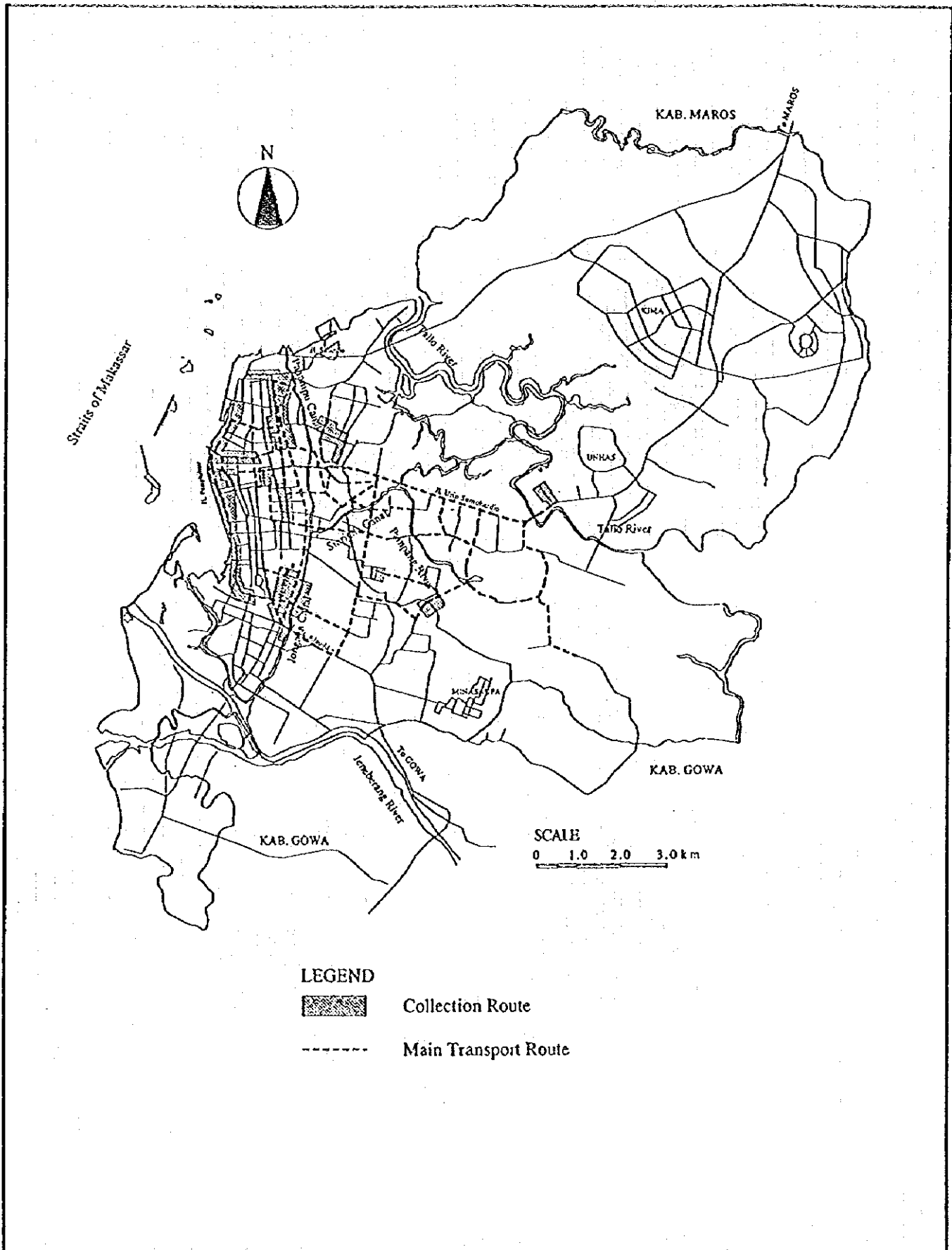
FIG. 6.8

Vehicle and Waste Arrival Frequency

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



A.D.1995



**FIG. 6.9**      **Collection and Transport Routes**

**MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA**

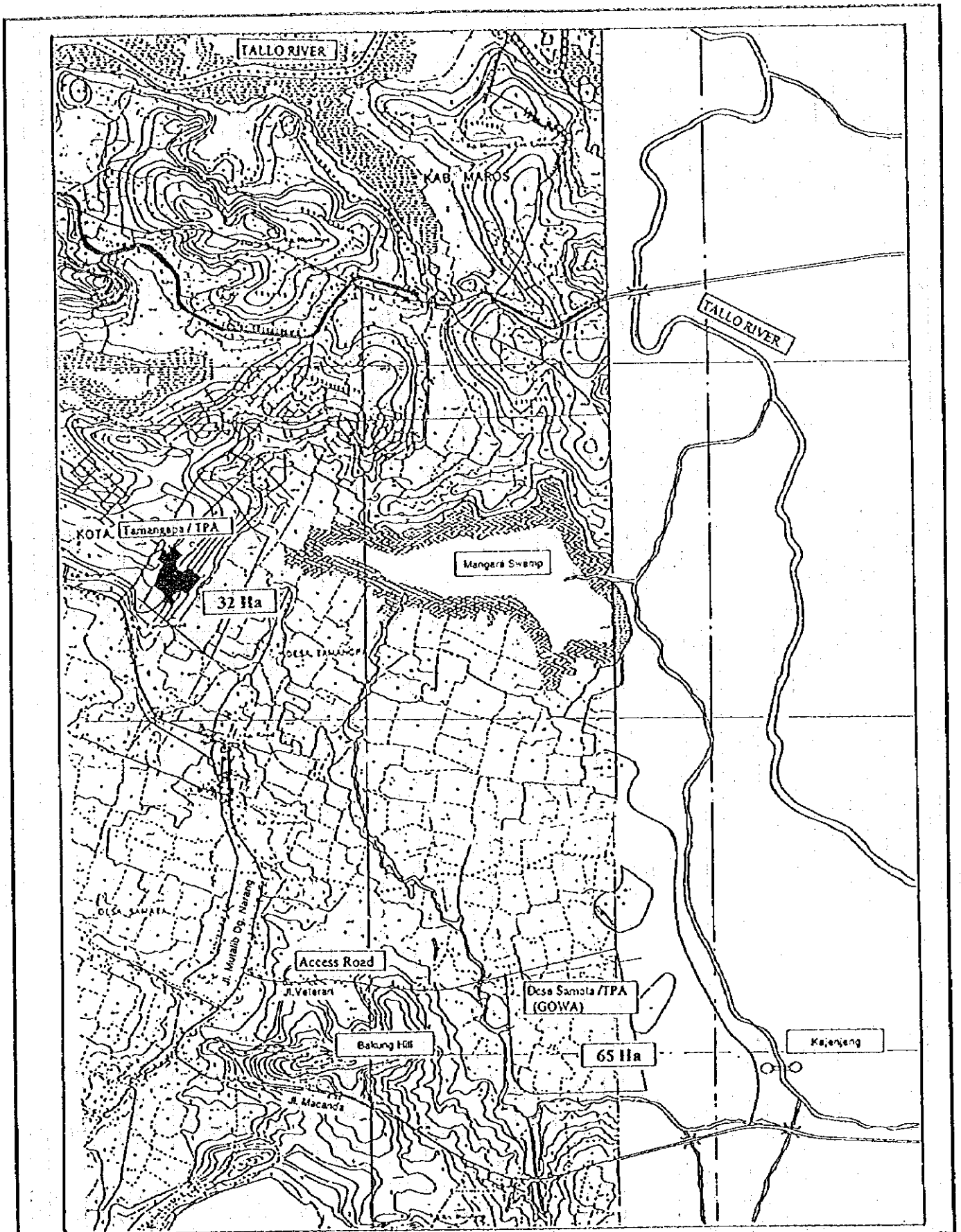


FIG. 6.10 Location Map of Tamangapa and Samata(Gowa)

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

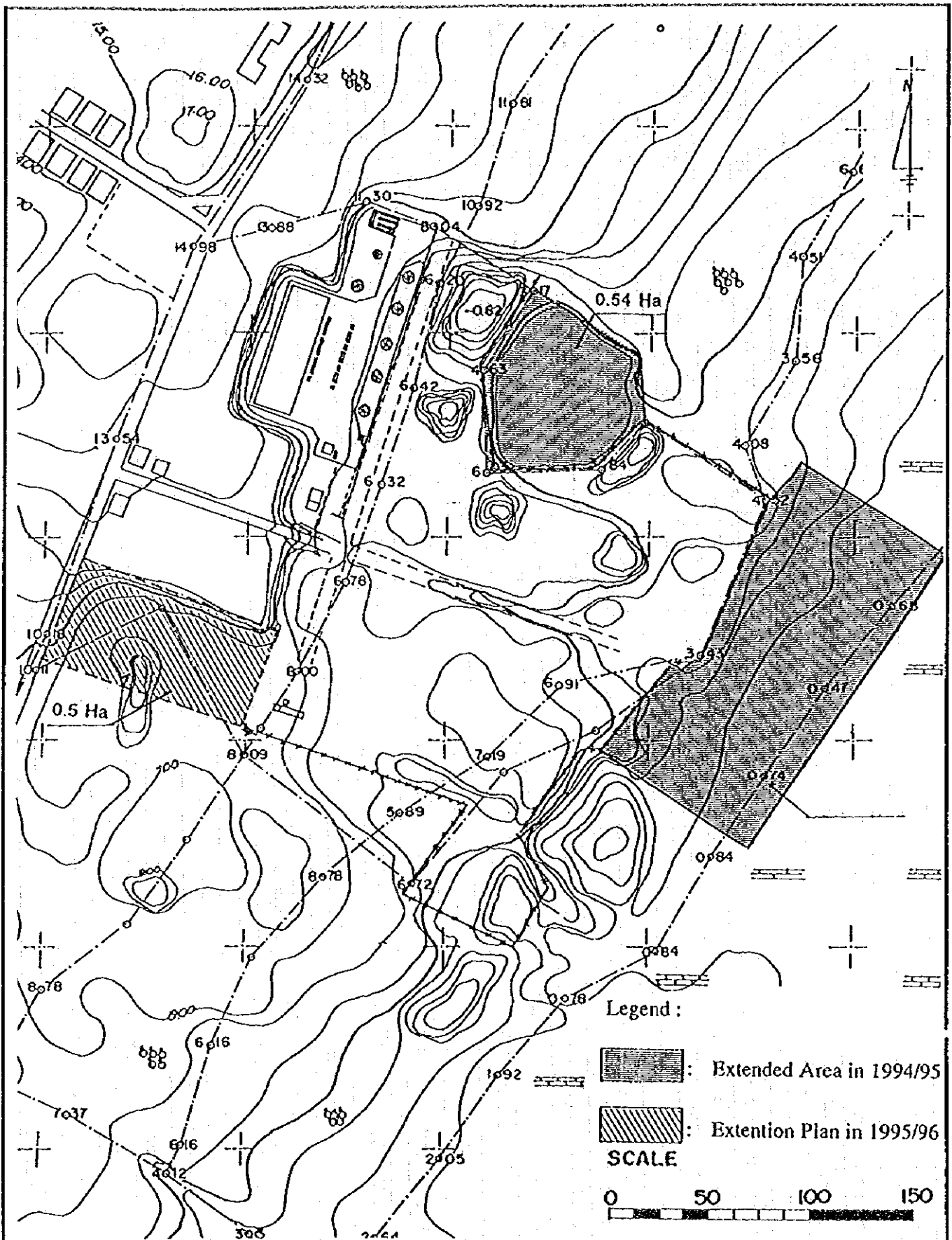


FIG. 6.11 Extension Area of Tamangapa Disposal Site

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



A.D.1995

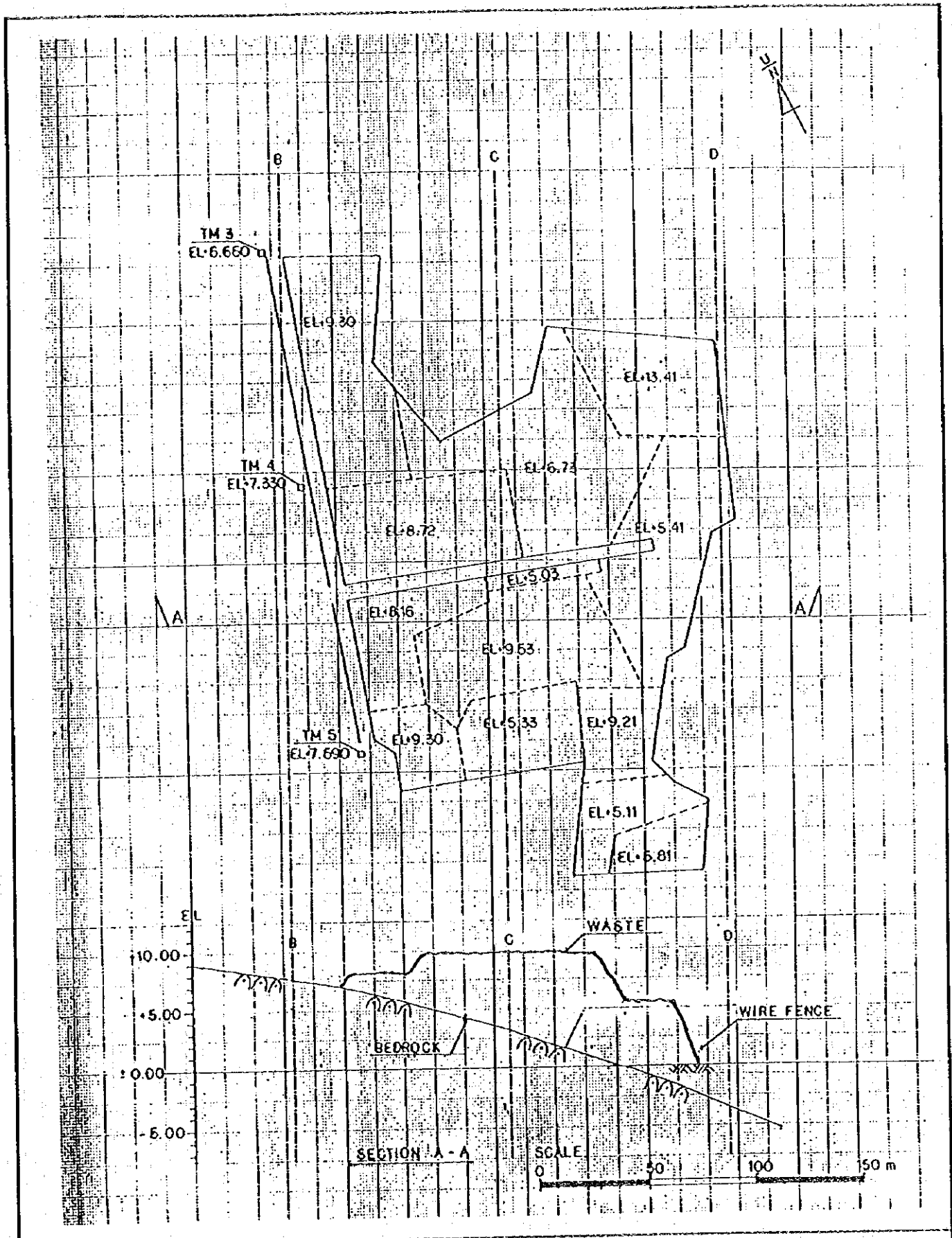


FIG. 6.12 Elevation Feature of The Waste Condition in Tamangapa Disposal Site

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



A.D. 1995

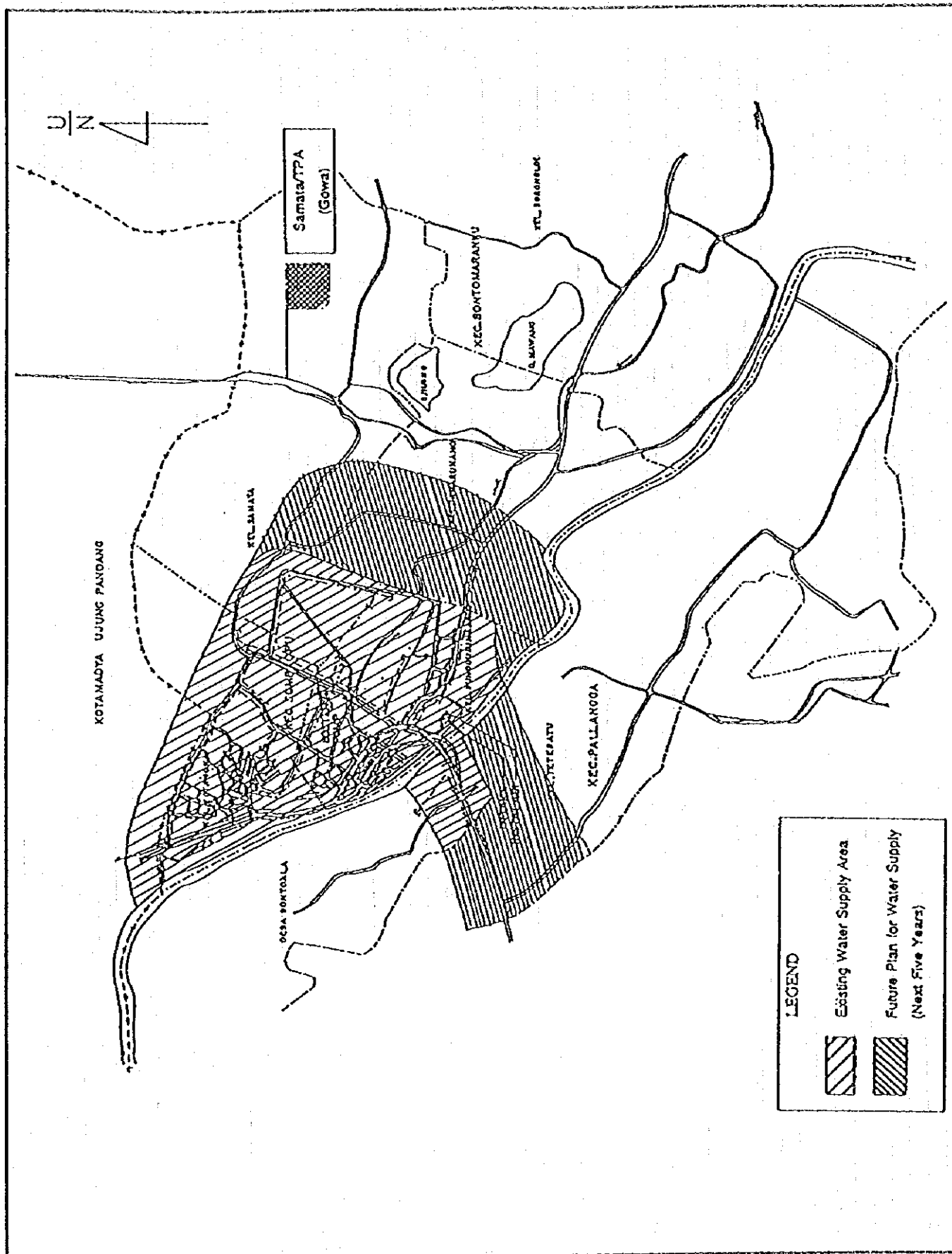


FIG. 6.13 | Water Supply Area in Gowa

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

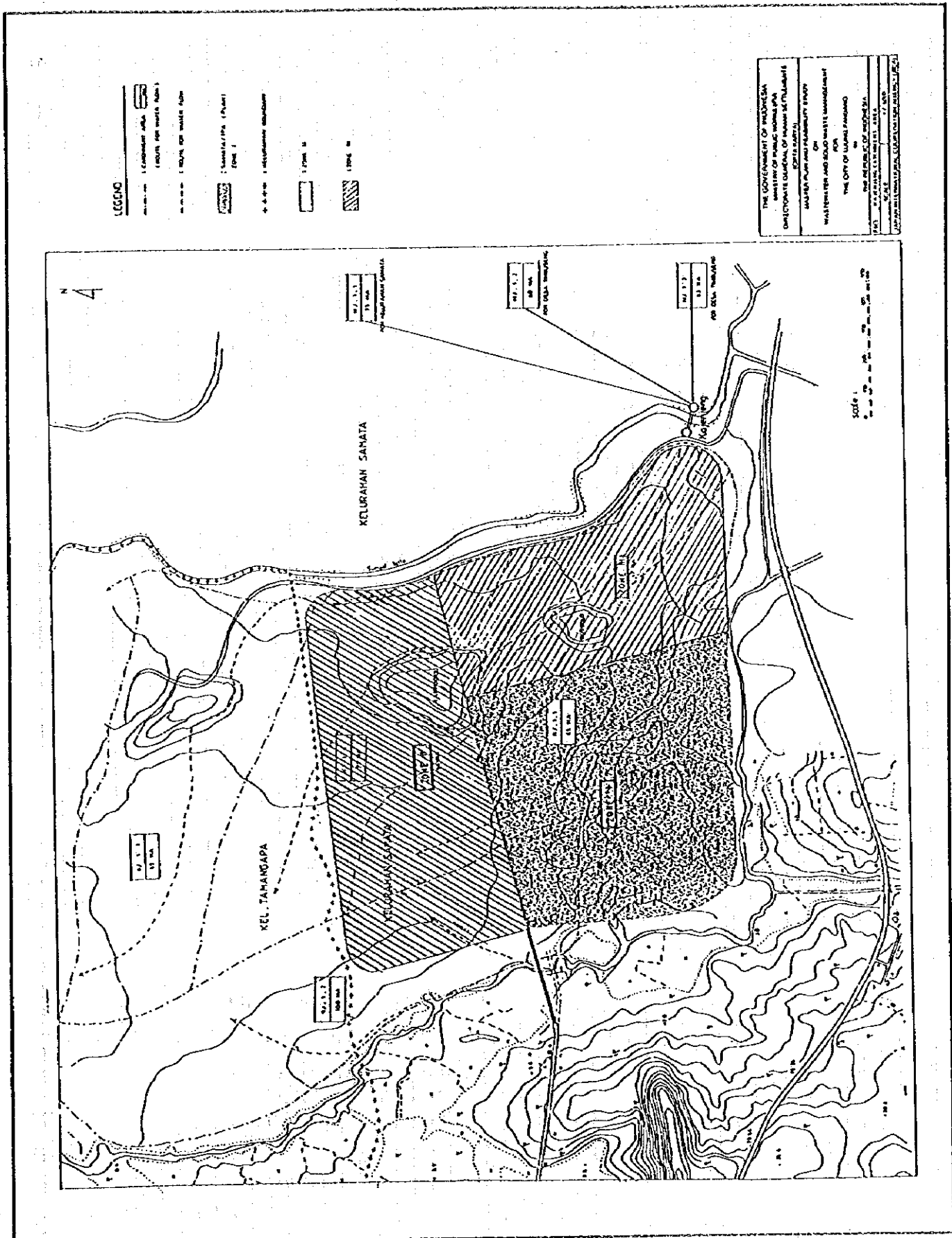
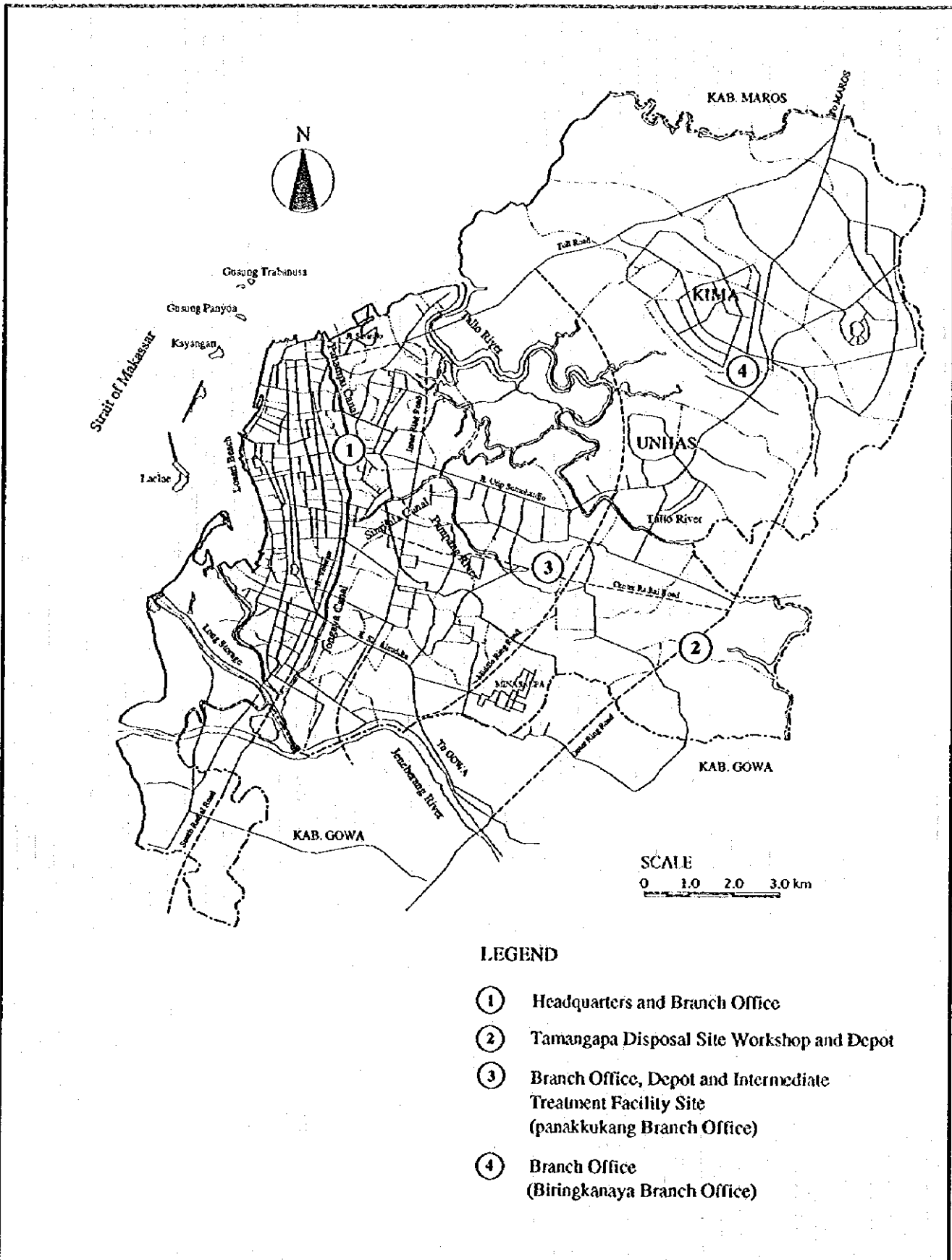


FIG. 6.14 Catchment Area of Kajenjeng/Irrigation

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



A.D.1995

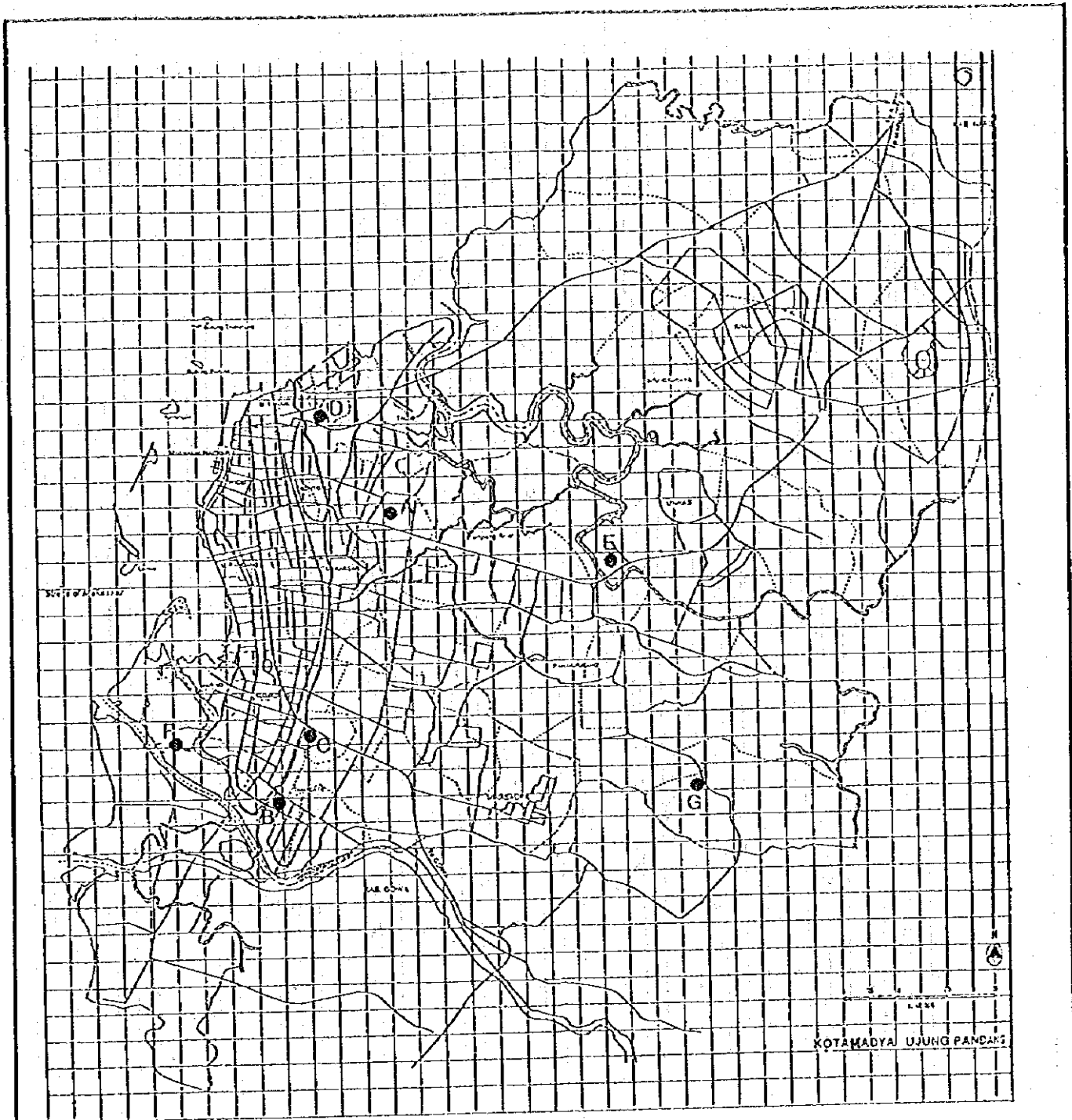


**FIG. 6.15**

**Location of Branch Offices**

**MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA**





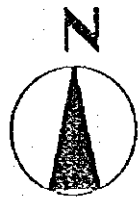
LEGEND :

- (A) : KARUWISI / Kec. Panakkukang
- (B) : SAPPABULO / Kec. Tamalate
- (C) : ANDI TONRO / Kec. Tamalate
- (D) : PANNAMPU / Kec. Tallo
- (E) : KANTISANG / Kec. Biringkanaya
- (F) : TANJUNG BUNGA / Kec. Tamalate
- (G) : TAMANGAPA / Kec. Panakkukang

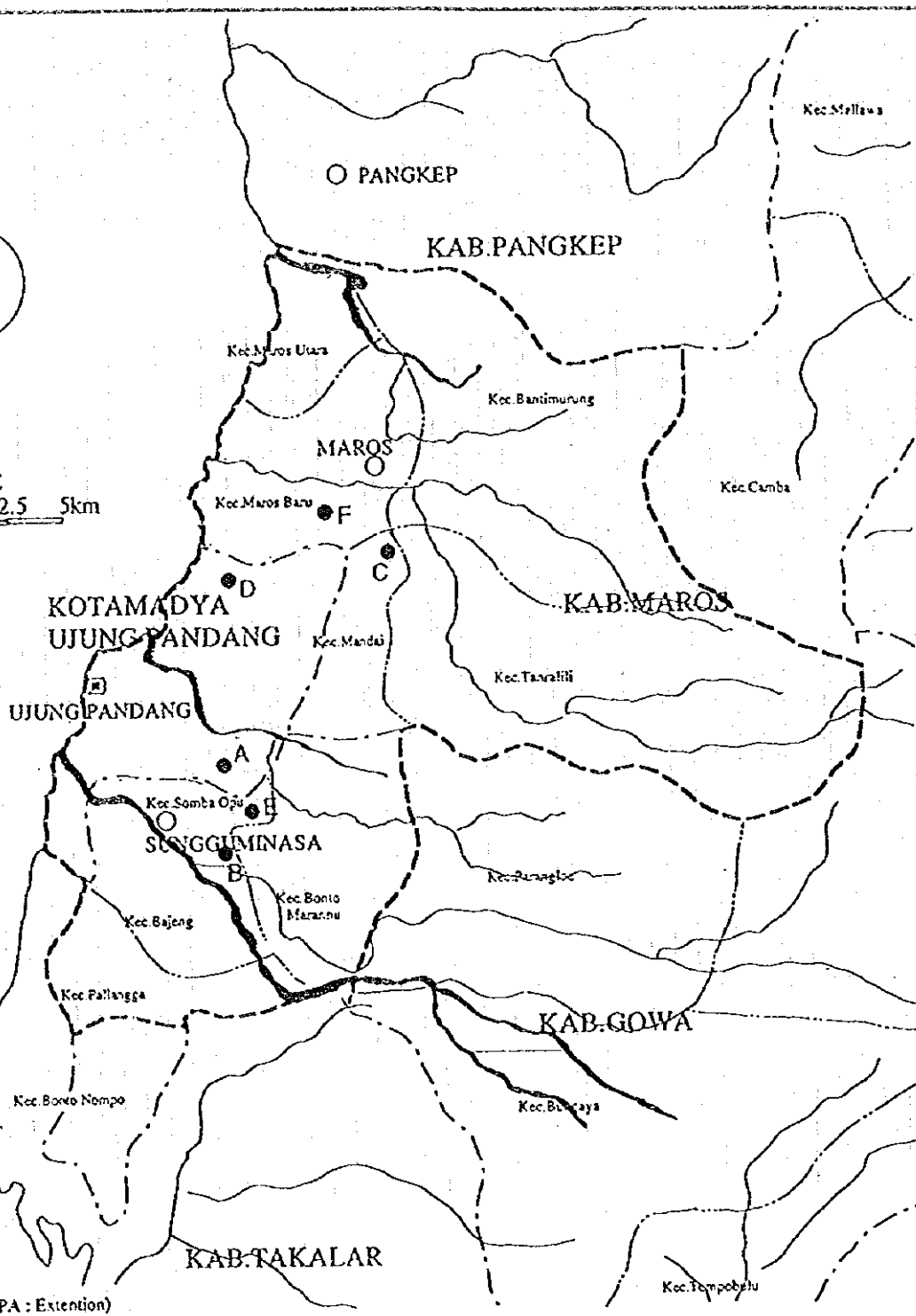
FIG. 6.16

Location of Present and Former Final Disposal Site

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



SCALE  
0 2.5 5km



**LEGEND**

- (Existing Site for TPA : Extention)
- (A) : Tamangapa /KEMUP
  - (B) : Mawang /GOWA
  - (C) : Bonto Matene /MAROS
- (Potential Site for TPA)
- (D) : Bulurokeng /KEMUP
  - (E) : Samata /GOWA
  - (F) : Palisi /MAROS

**LEGEND**

- MINASAMAUPA AREA
- KABUPATEN BOUNDARY
- KECAMATAN BOUNDARY
- PROVINCIAL ROAD
- KABUPATEN ROAD

**FIG. 6.17** Location of Existing/Potential Site for Final Disposal (1/7)

**MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA**

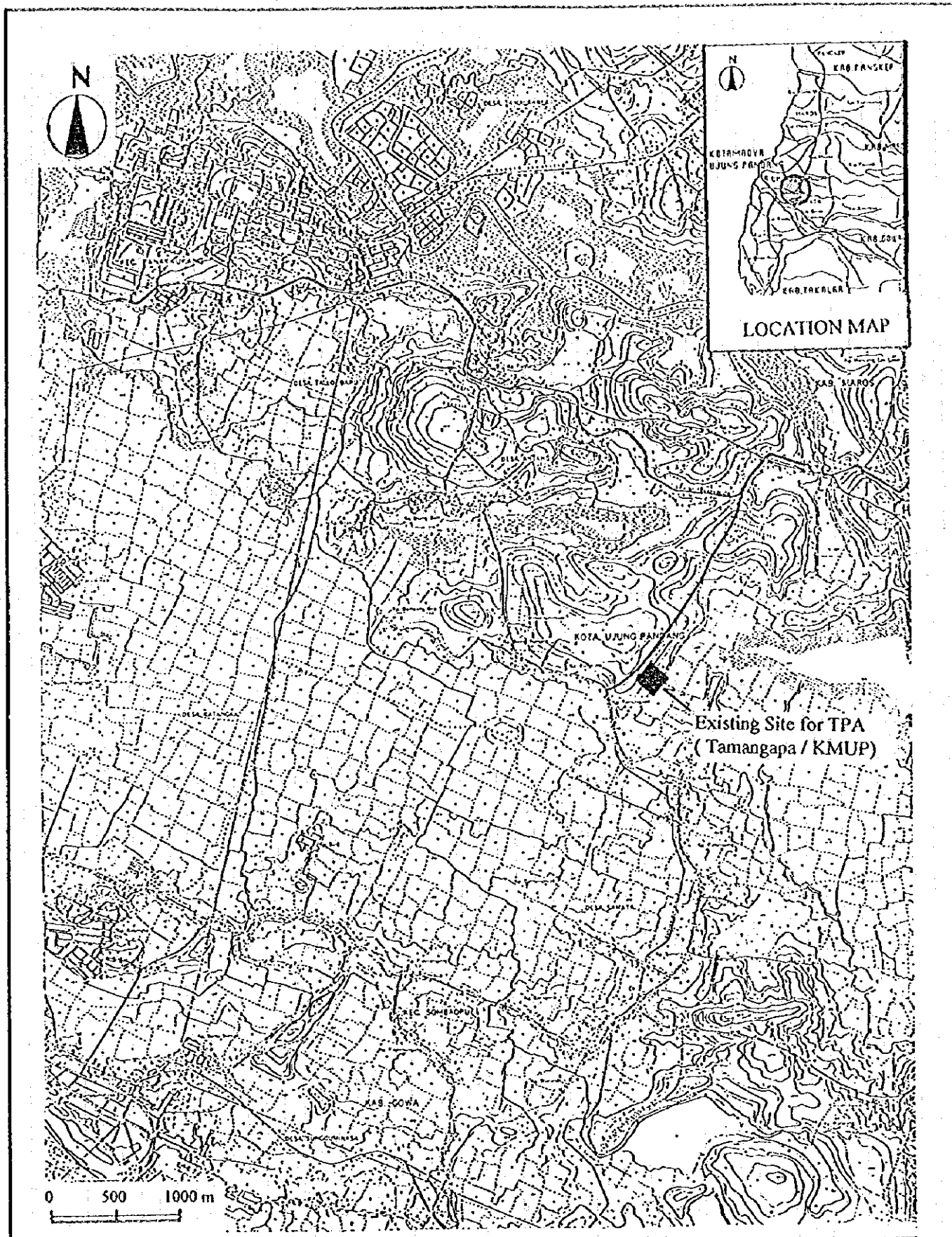


FIG. 6.18

Location of Existing/Potential Site for Final Disposal (2/7) Tamangapa/KMUP

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

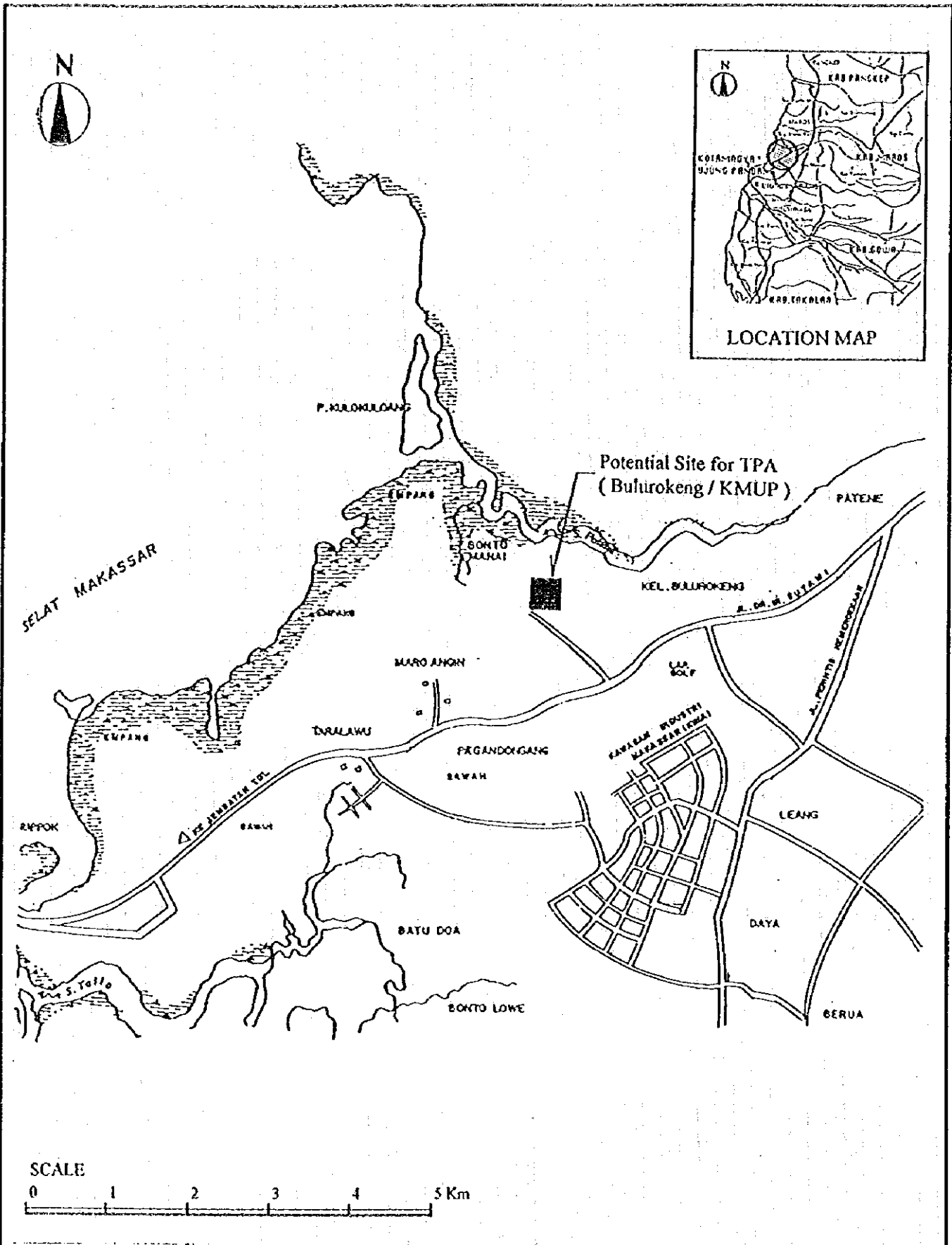
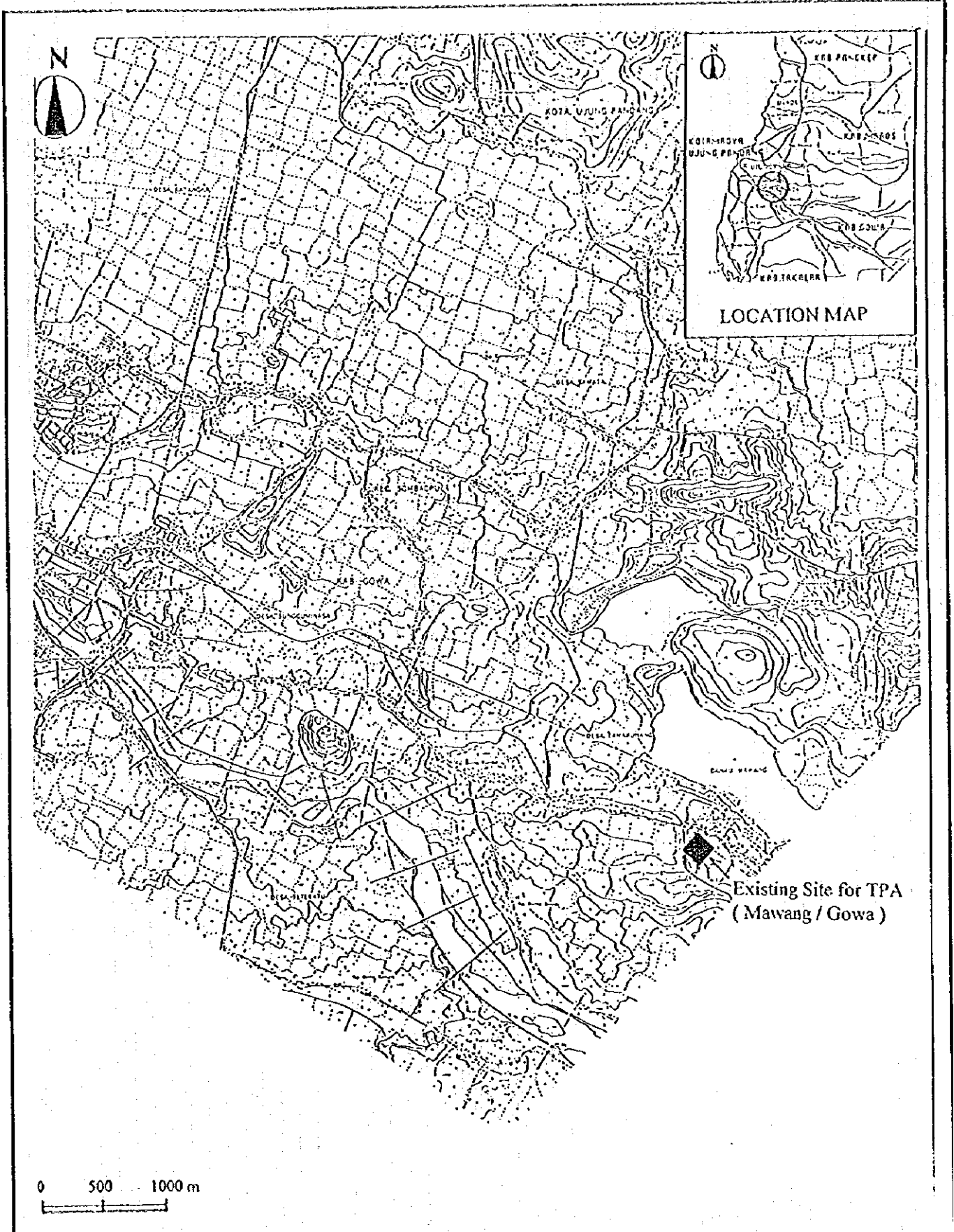


FIG. 6.19 | Location of Existing/Potential Site for Final Disposal (3/7) :Mawang/Gowa

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



**FIG. 6.20** | Location of Existing/Potential Site for Final Disposal (4/7) : Bonto Mate'ne/MAROS  
**MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA**

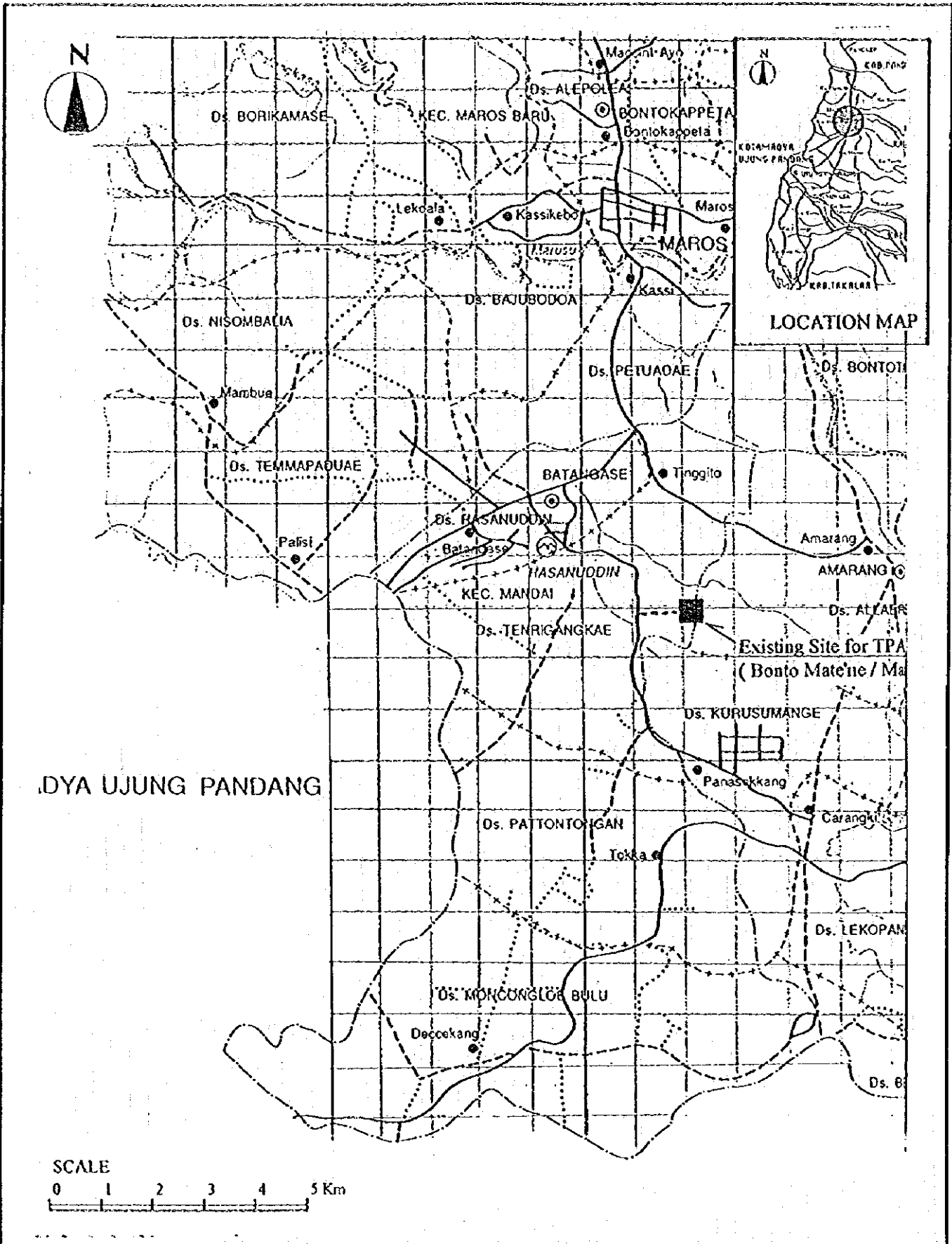
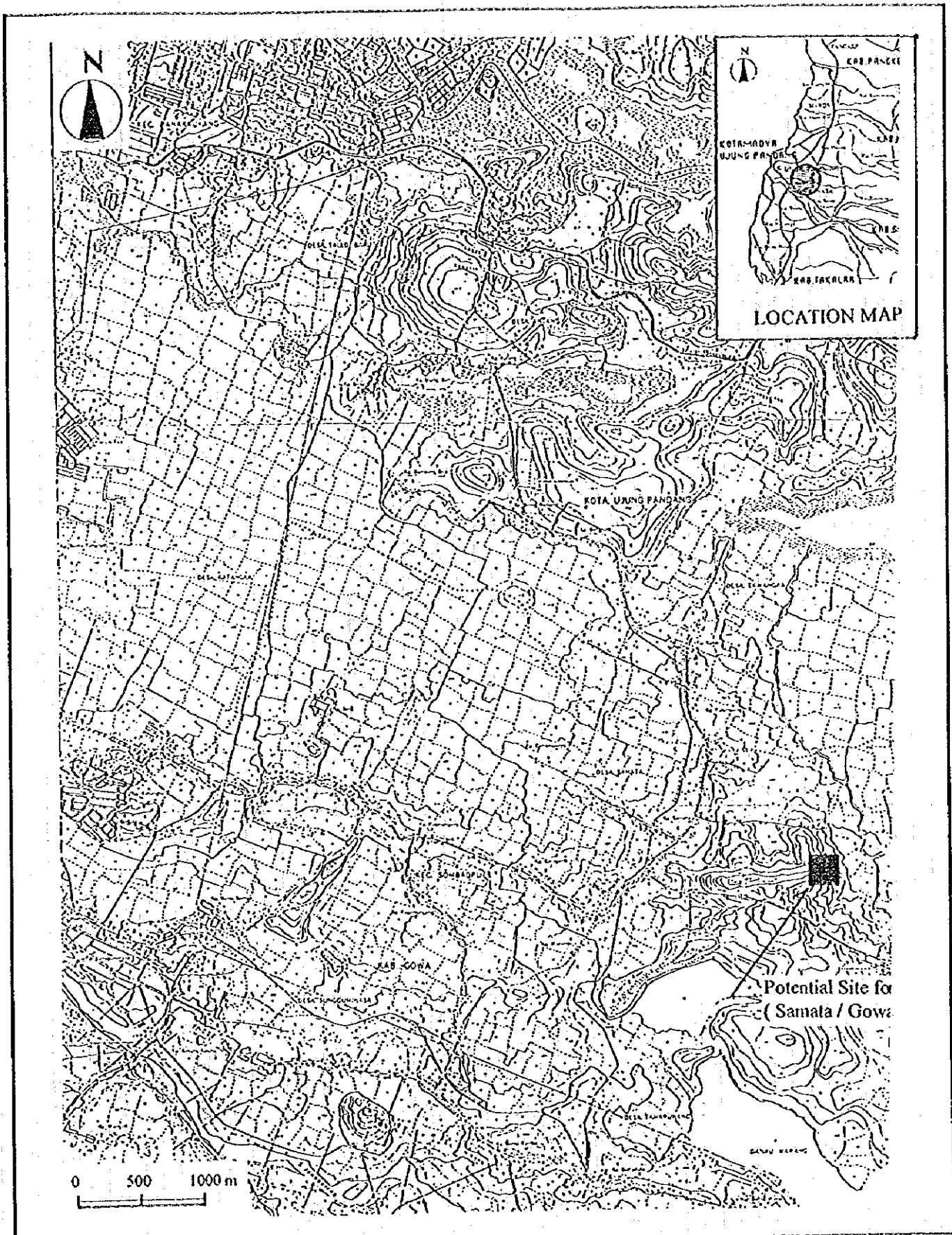


FIG. 6.21

Location of Existing/Potential Site for Final Disposal (5/7)  
Bulukangkung/KMUP

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE  
MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



**FIG. 6.22** | Location of Existing/Potential Site for Final Disposal (6/7) :Samata/GOWA

**MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA**

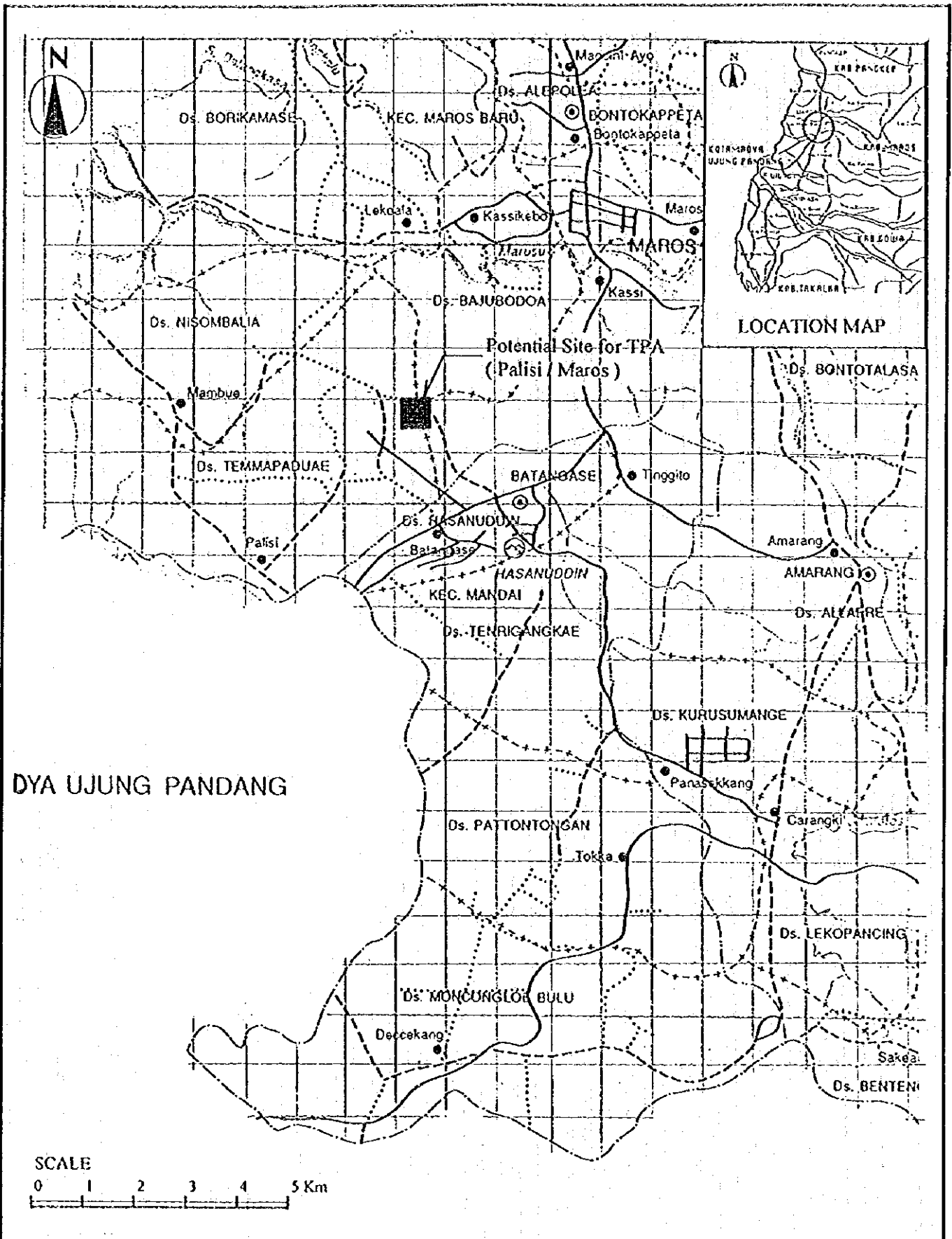
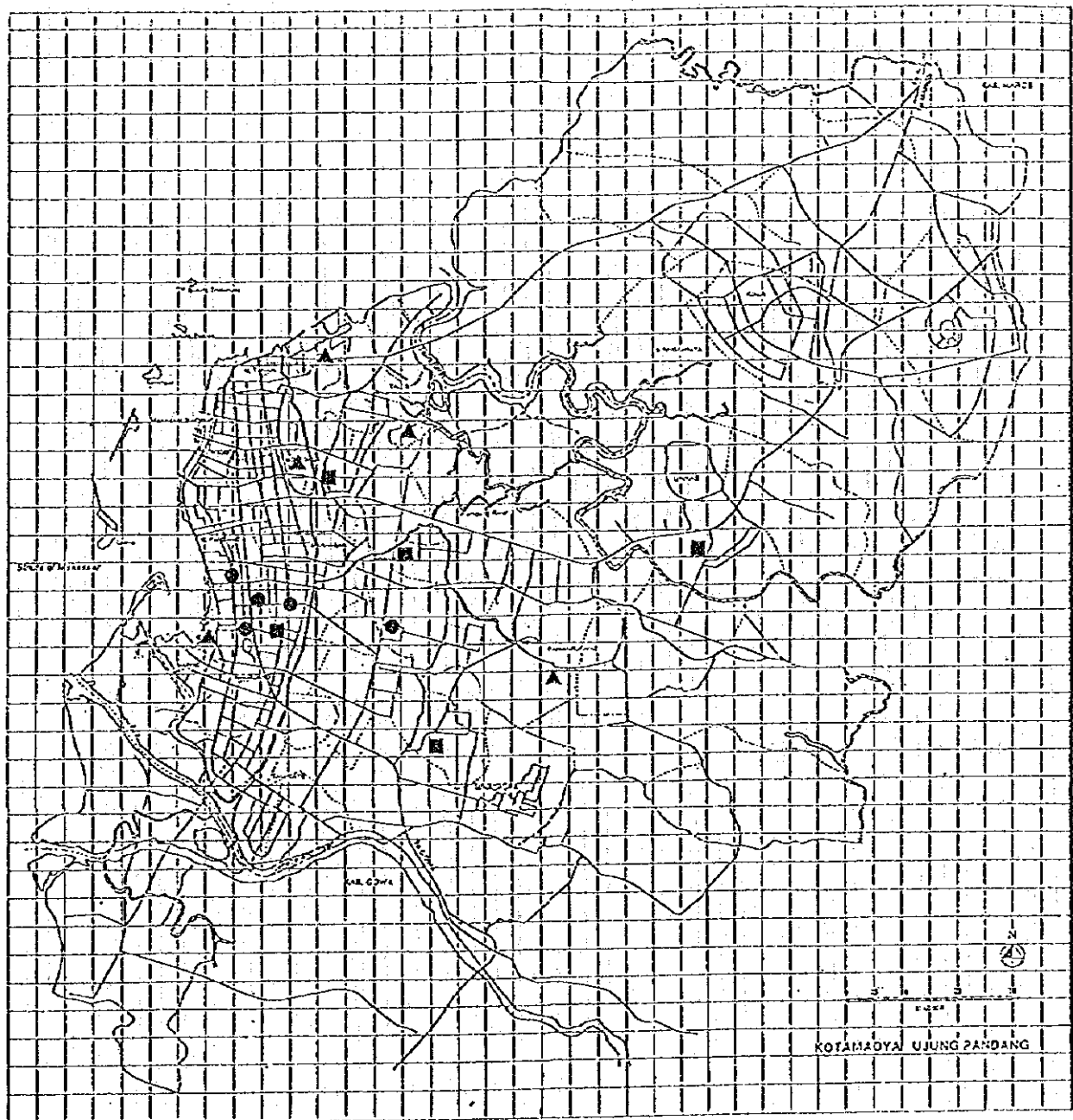


FIG. 6.23 Location of Existing/Potential Site for Final Disposal (7/7) :Palisi/MAROS

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



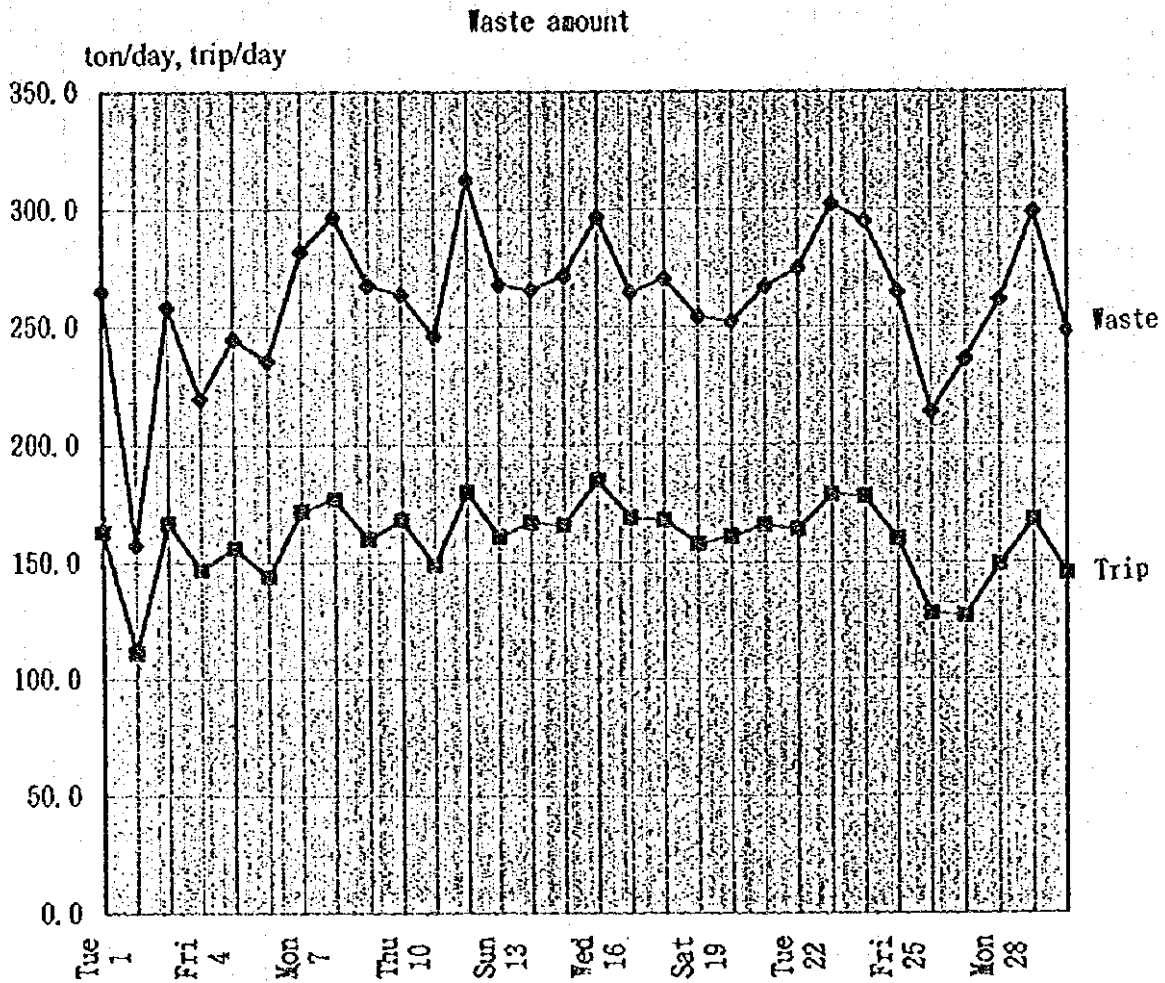


LEGEND :

- : High Income Location
- : Middle Income Location
- ▲ : Low Income Location

FIG. 6.24 | Sampling Area for Unit Generation Survey of Solid Waste

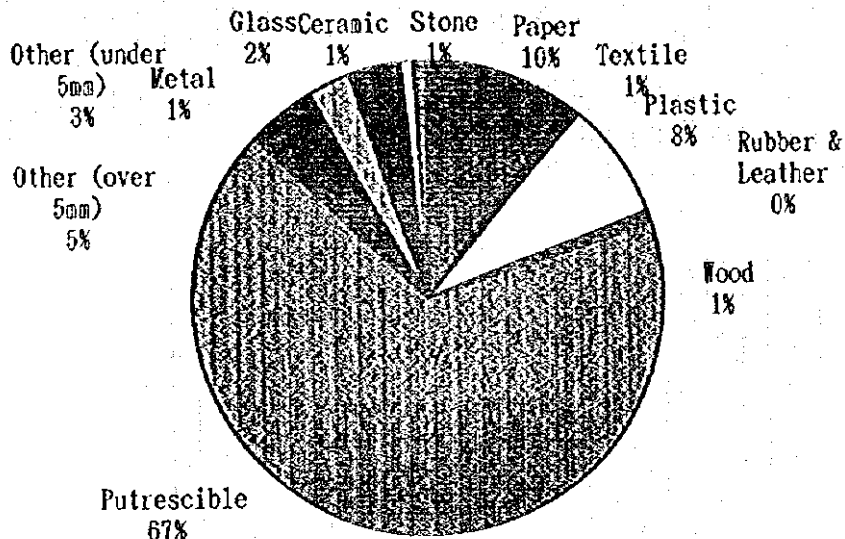
MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE  
MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



**FIG. 6.25 Disposal Amount in November 1994**

**MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA**

Wet base composition



Dry base composition

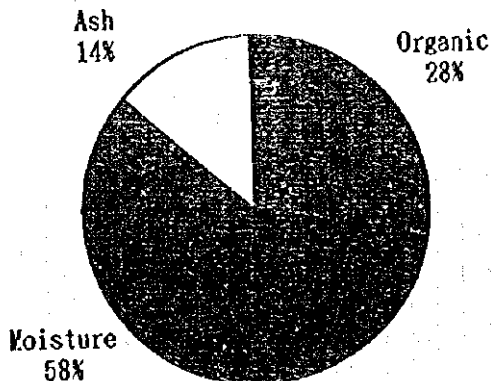
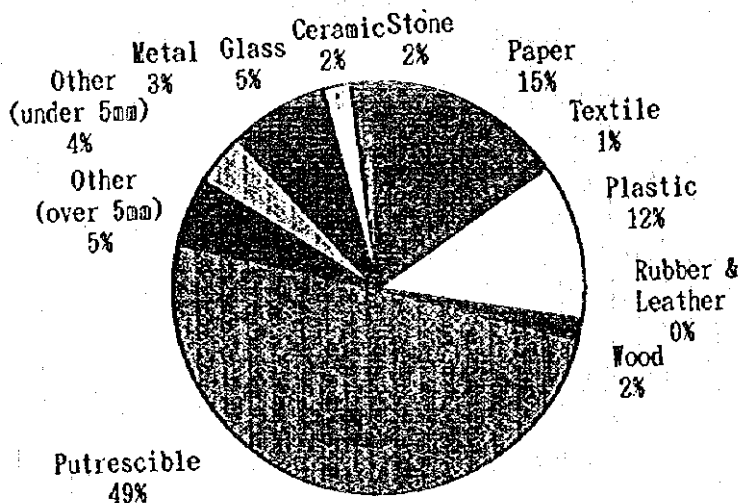


FIG. 6.26

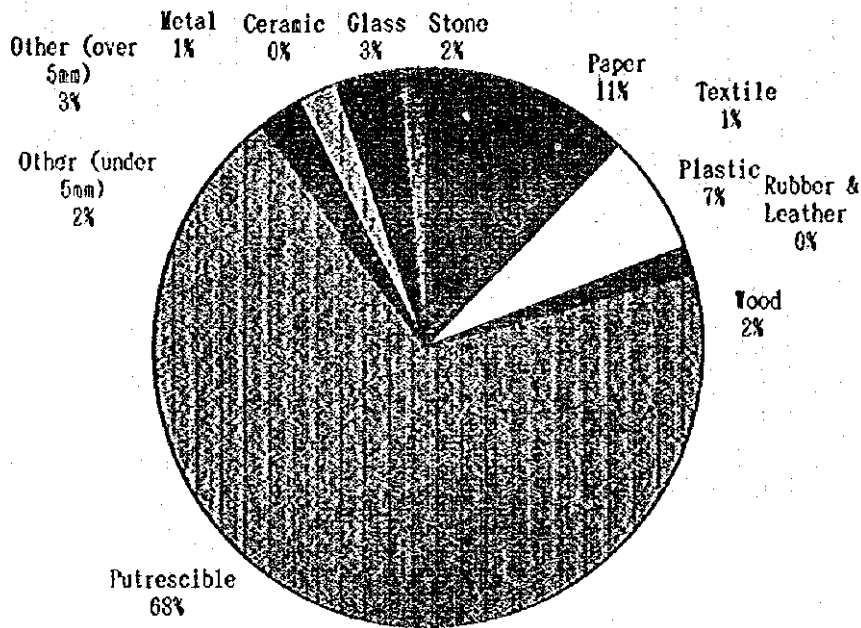
Solid Waste Composition in Dry Season

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



A.D.1995

Wet base composition



Dry base composition

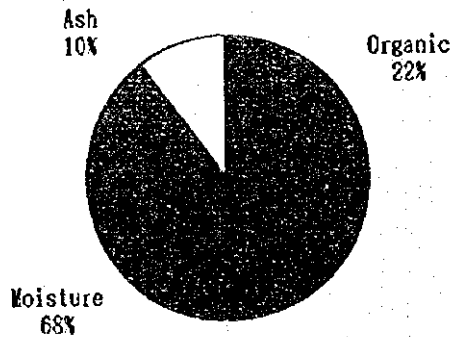
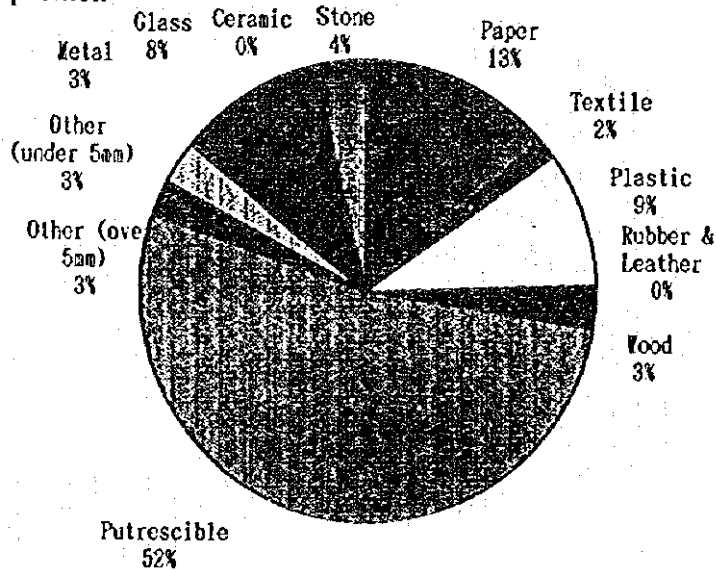


FIG. 6.27

Solid Waste Composition in Wet Season

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

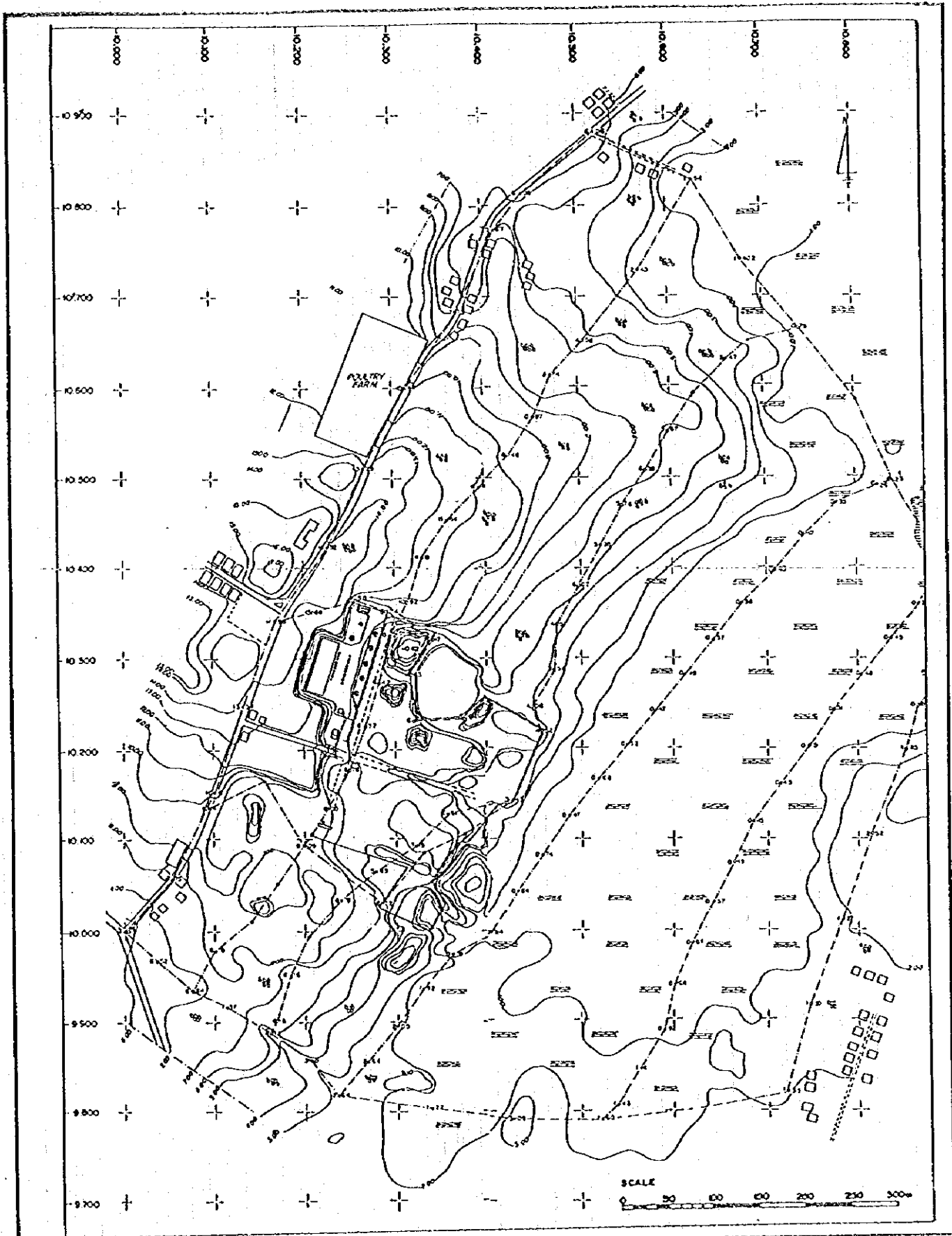
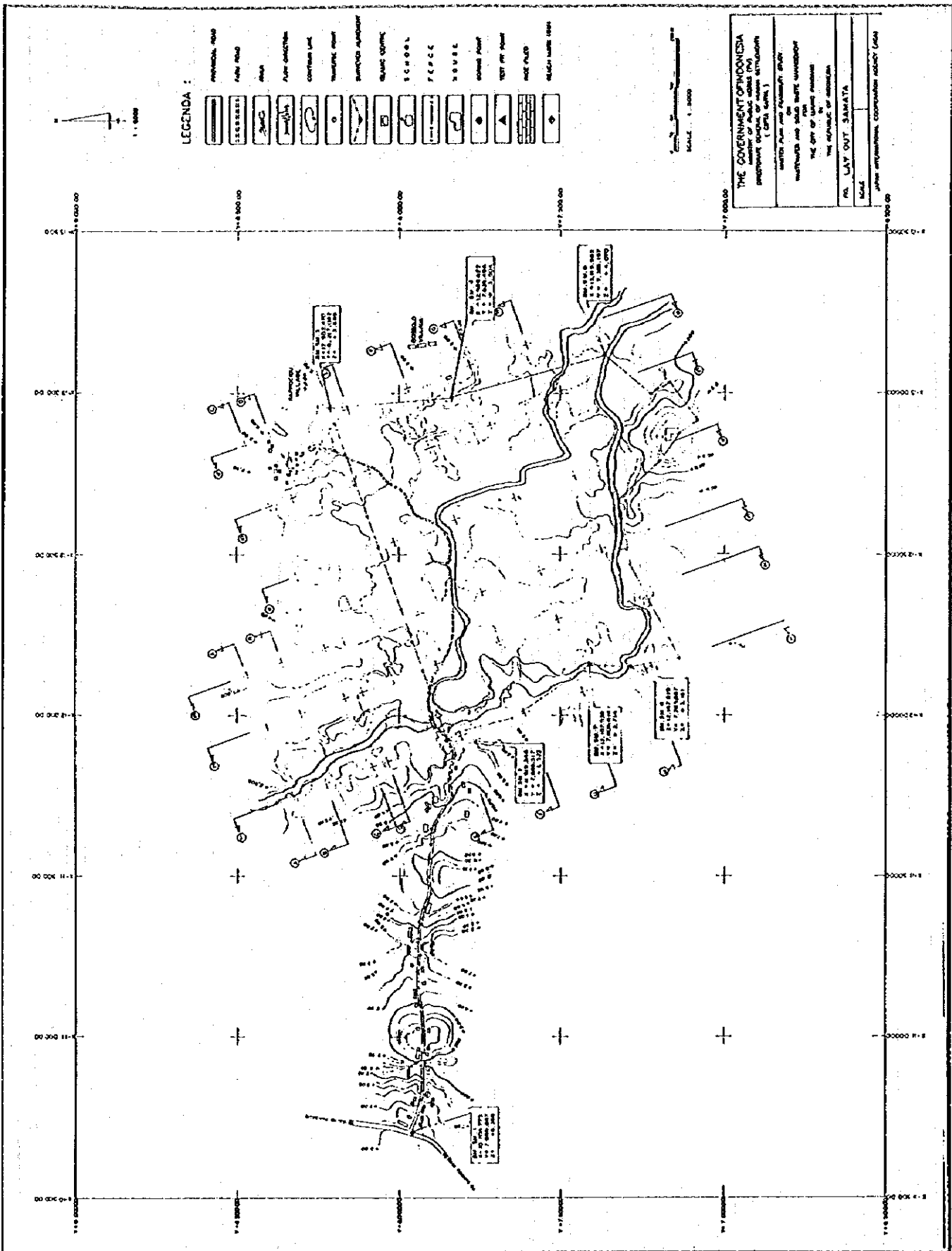


FIG. 6.28 Topographic Map of Tamangapa Disposal Site

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE  
MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

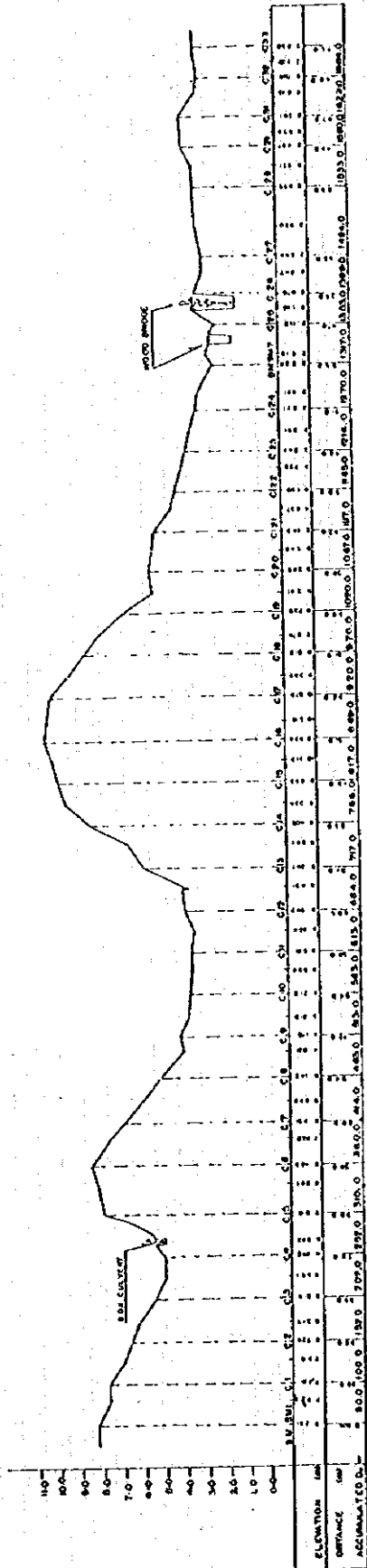


A.D.1995



**FIG. 6.29** Topographic Map of Samata Disposal Site and Access Road

**MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA**



LONG SECTION

THE GOVERNMENT OF INDONESIA  
 Ministry of Public Works and  
 Highways, Directorate of Urban Engineering  
 (Directorate III)

MASTER PLAN AND FEASIBILITY STUDY  
 ON WASTEWATER AND SOLID WASTE  
 MANAGEMENT FOR THE CITY OF UJUNG PANDANG  
 THE CITY OF UJUNG PANDANG  
 THE PROVINCE OF SULAWESI  
 NUSA TENGGARA

IN LONG SECTION ACCESS ROAD SAMATA  
 NUSA TENGGARA



FIG. 6.30 Longitudinal Section of Access Road(Samata Disposal Site)

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE  
 MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

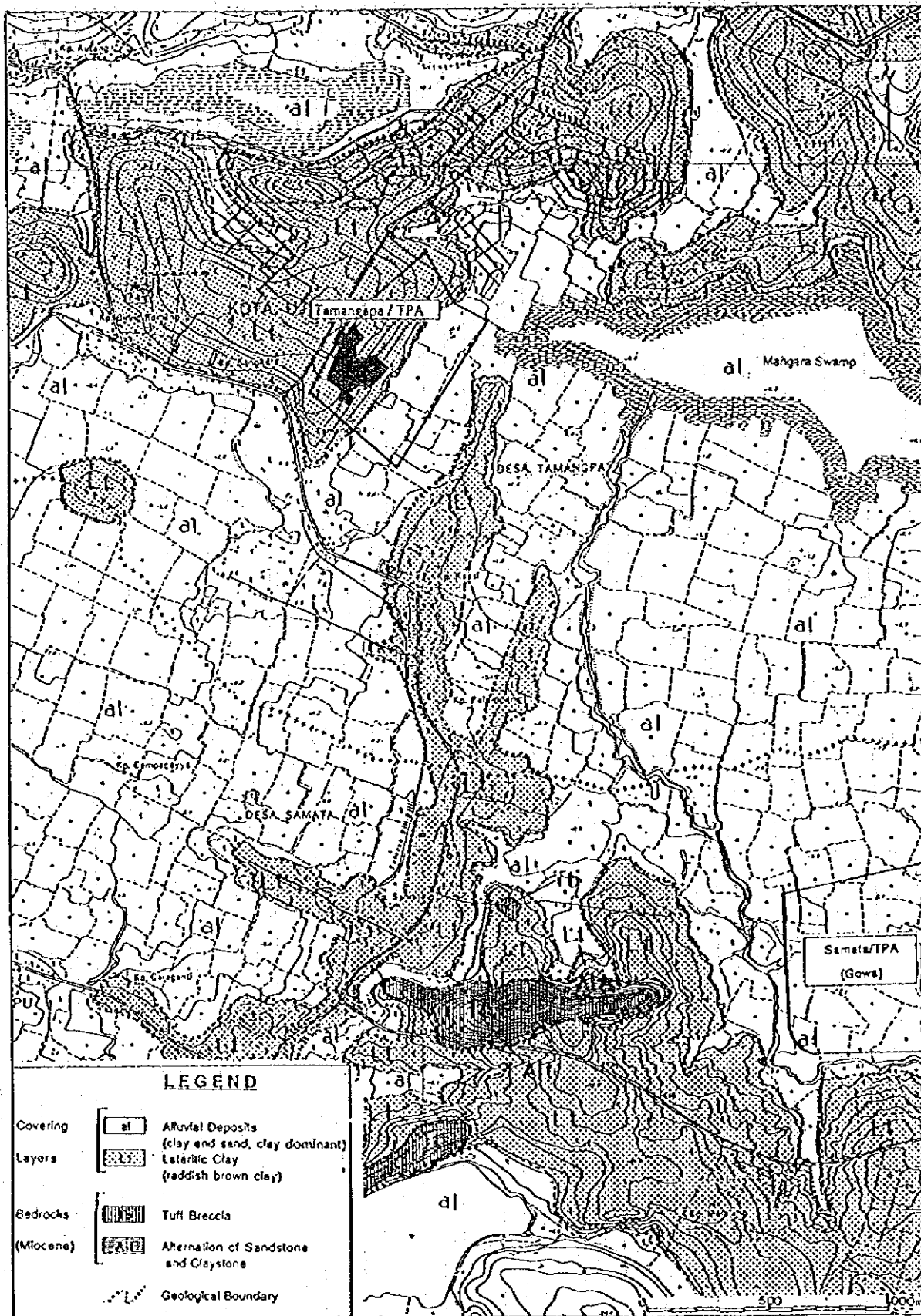


FIG. 6.31

**Geological Map of Solid Waste Landfill Sites**

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



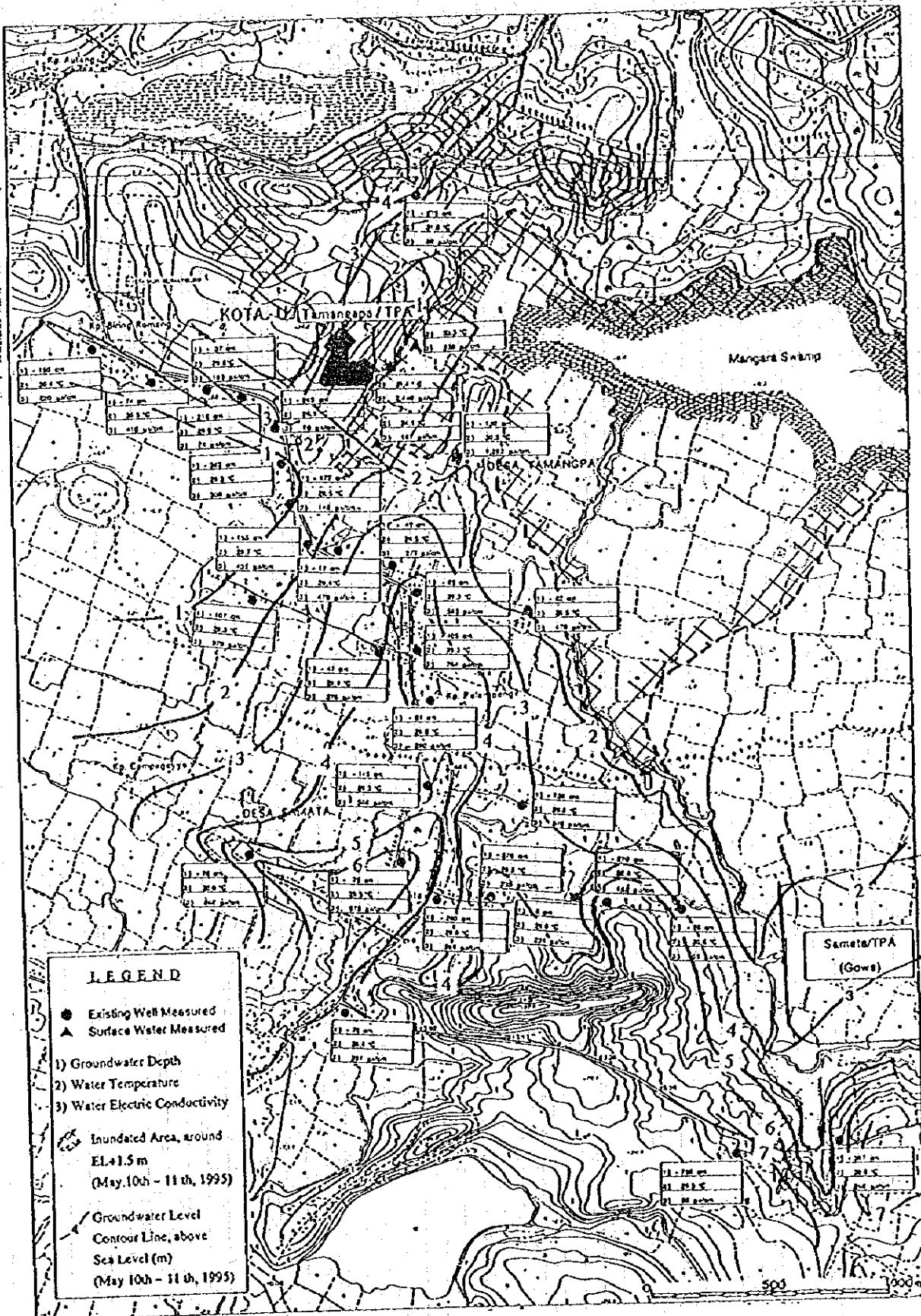


FIG. 6.32 Groundwater Level Contour Map After Rainy Days (measured in May 10th ~ 11th, 1995)

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

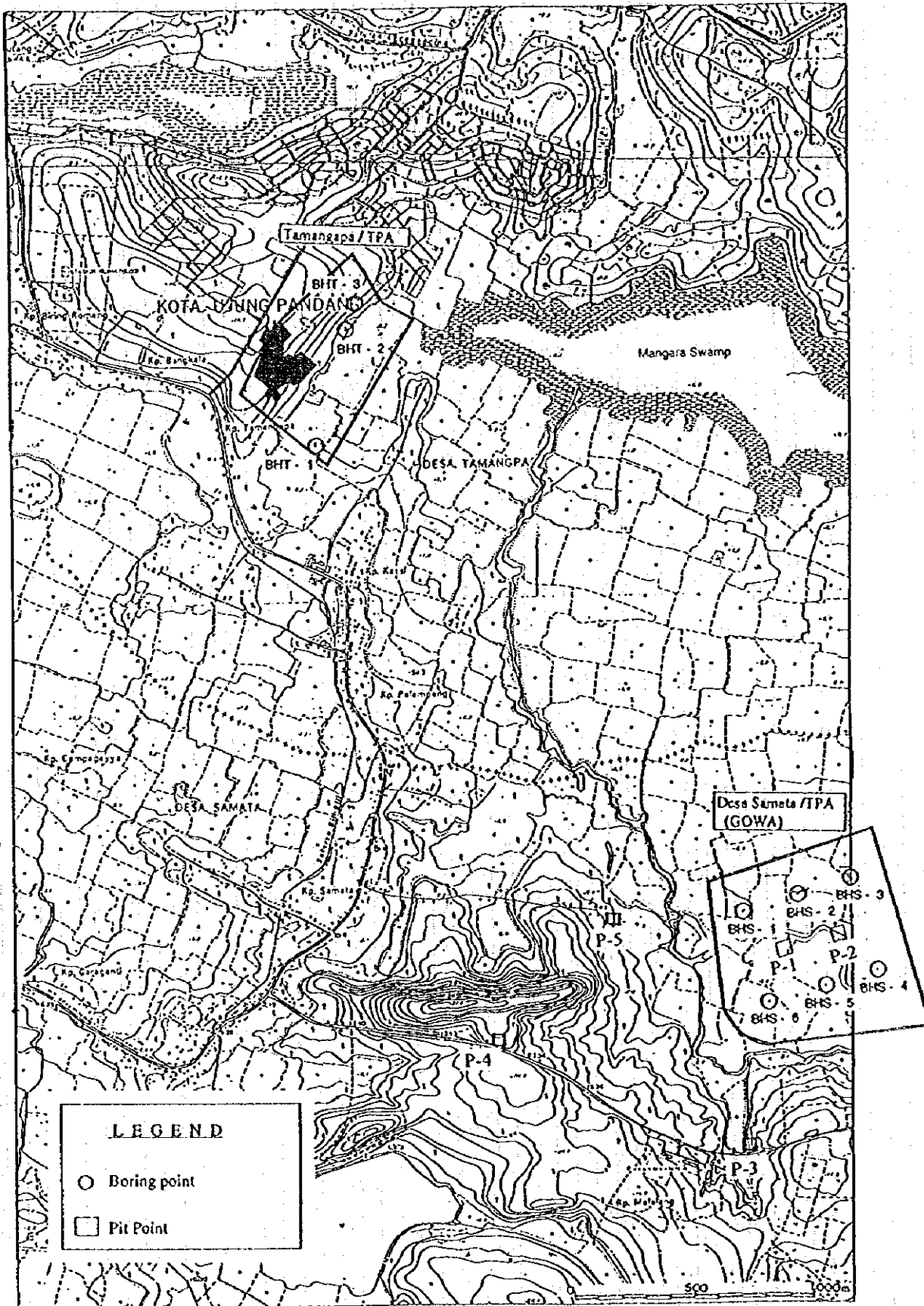


FIG. 6.33 Soil Investigation Point

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

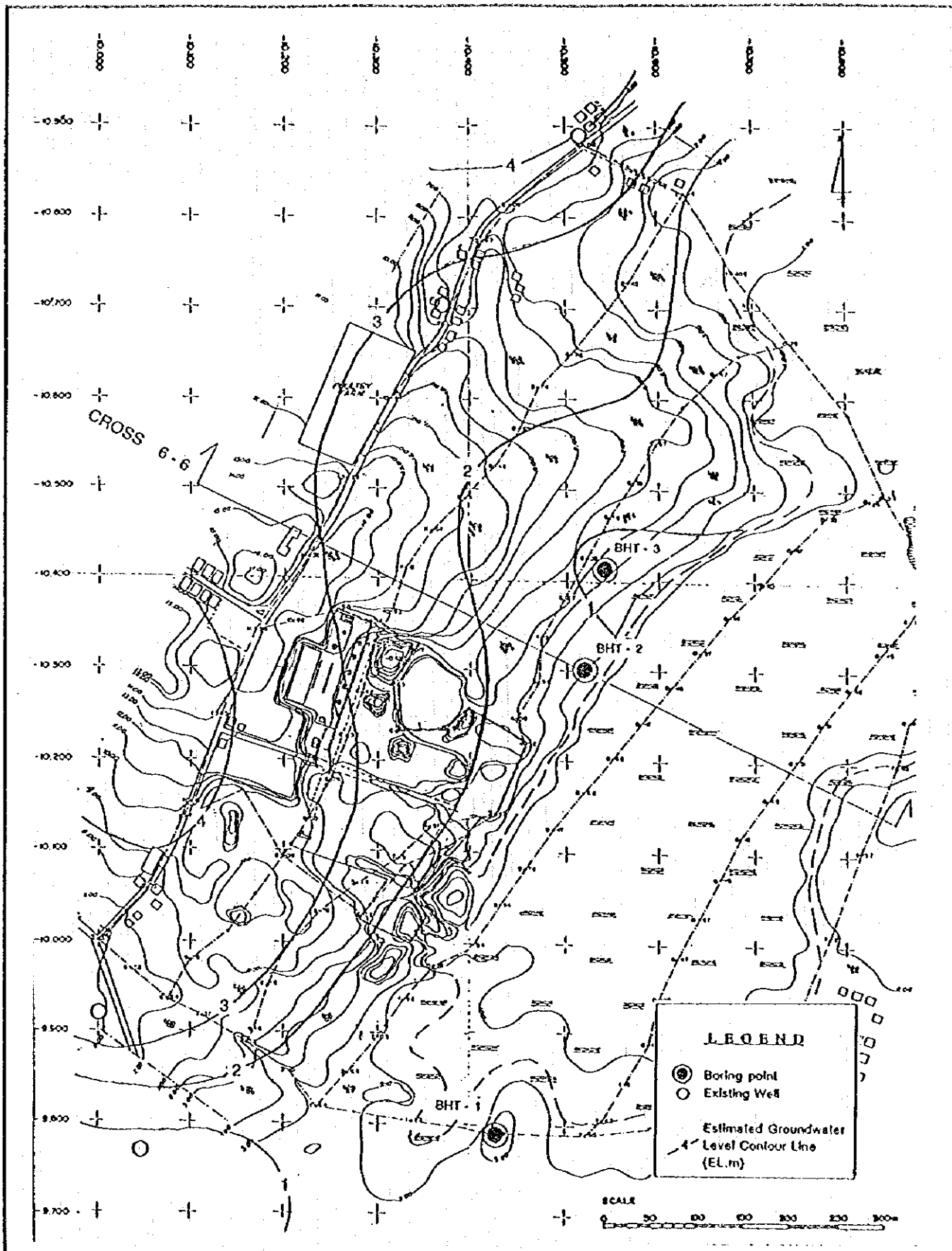


FIG. 6.34

Map of Tamangapa / TPA

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

CROSS 6-6

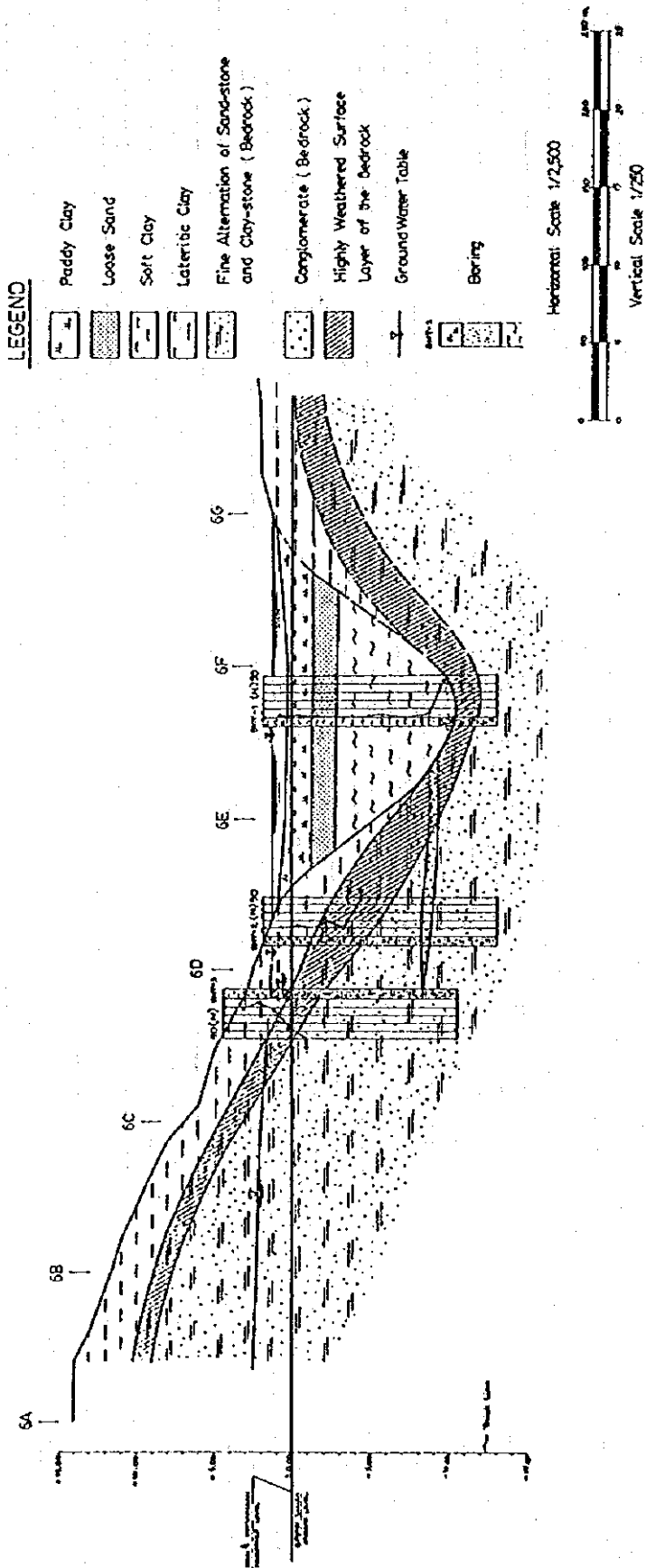


FIG. 6.35

Representative Geology Profile of Tamangapa (Cross 6-6)

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

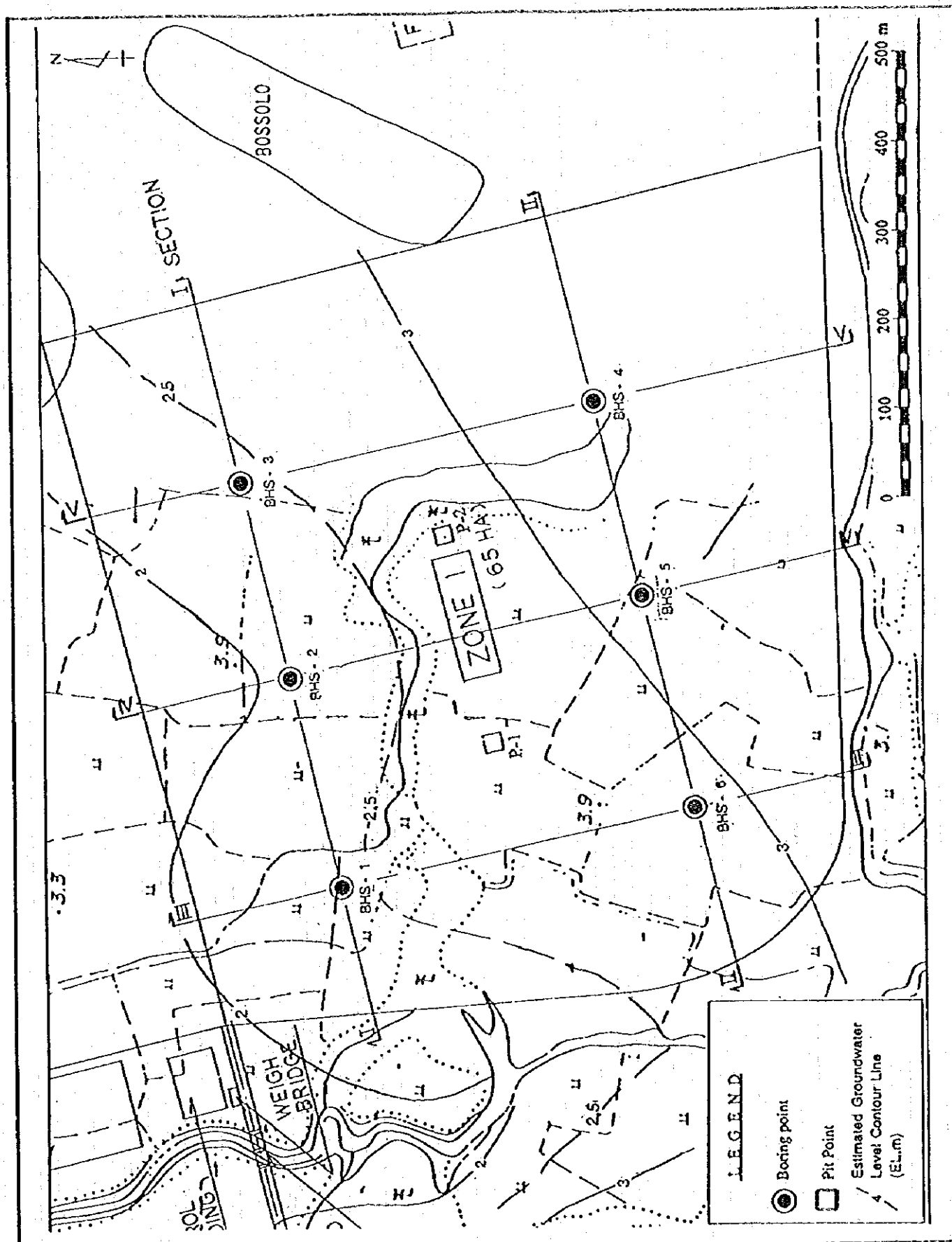


FIG. 6.36 Map of Desa Samata / TPA

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

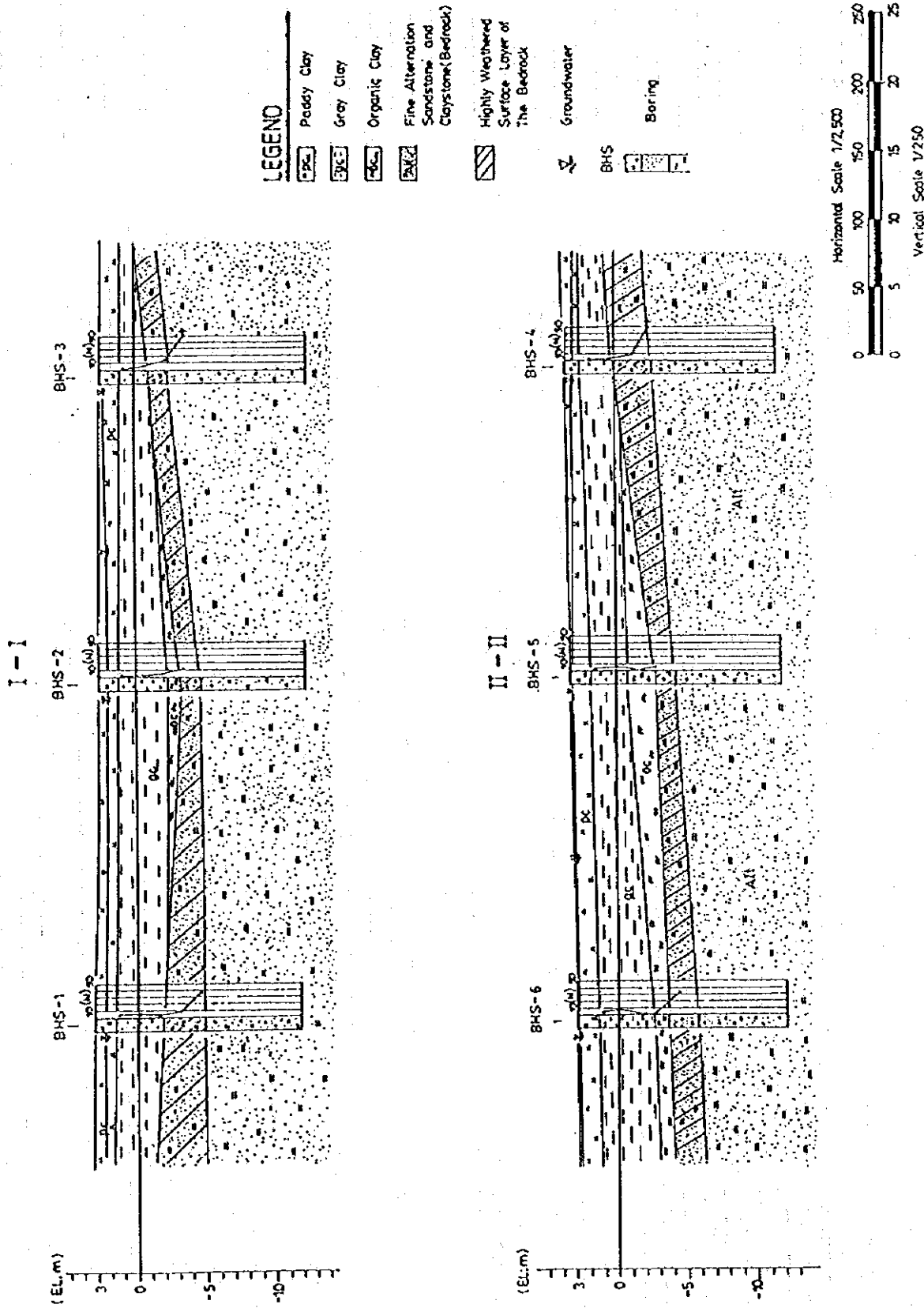
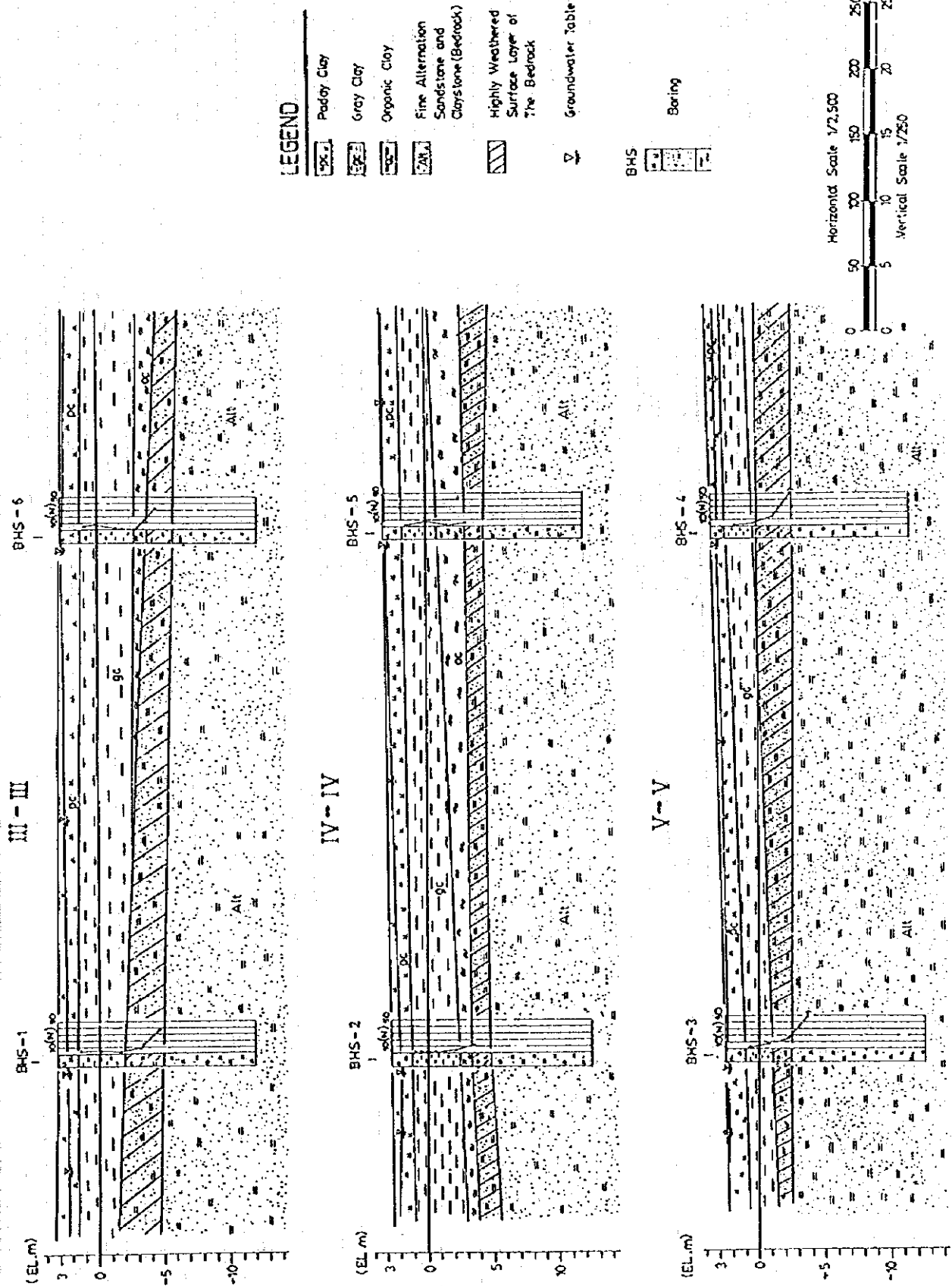


FIG. 6.37 Geological Profile of Desa Samata / TPA (I-I, II-II)

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



**FIG. 6.38** Geological Profile of Desa Samata / TPA (III-III, IV-IV, V-V)

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

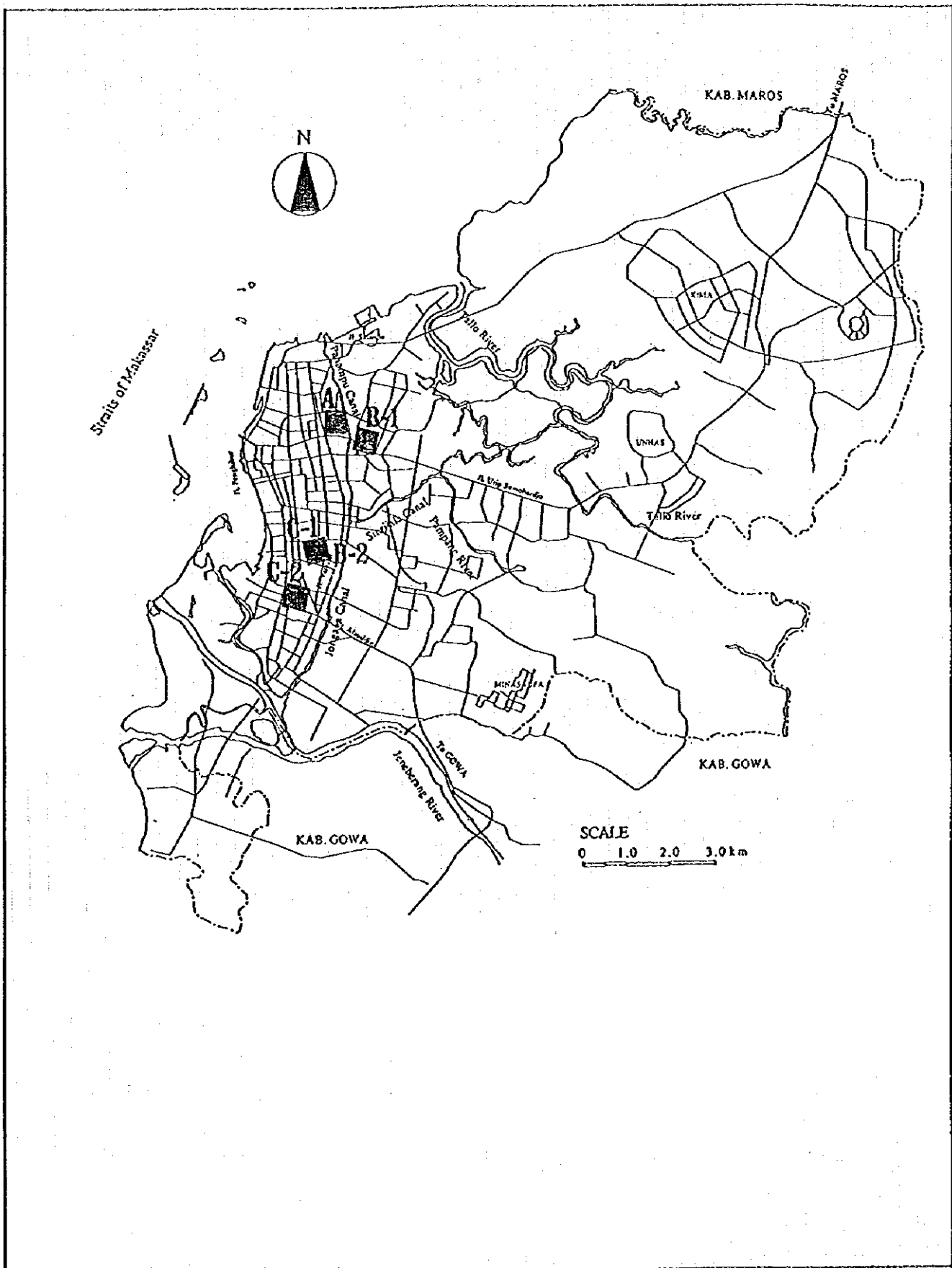


FIG. 6.39

TAS Sites

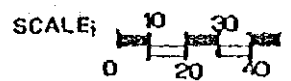
MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA





**LEGEND :** Site A - RW Division Map

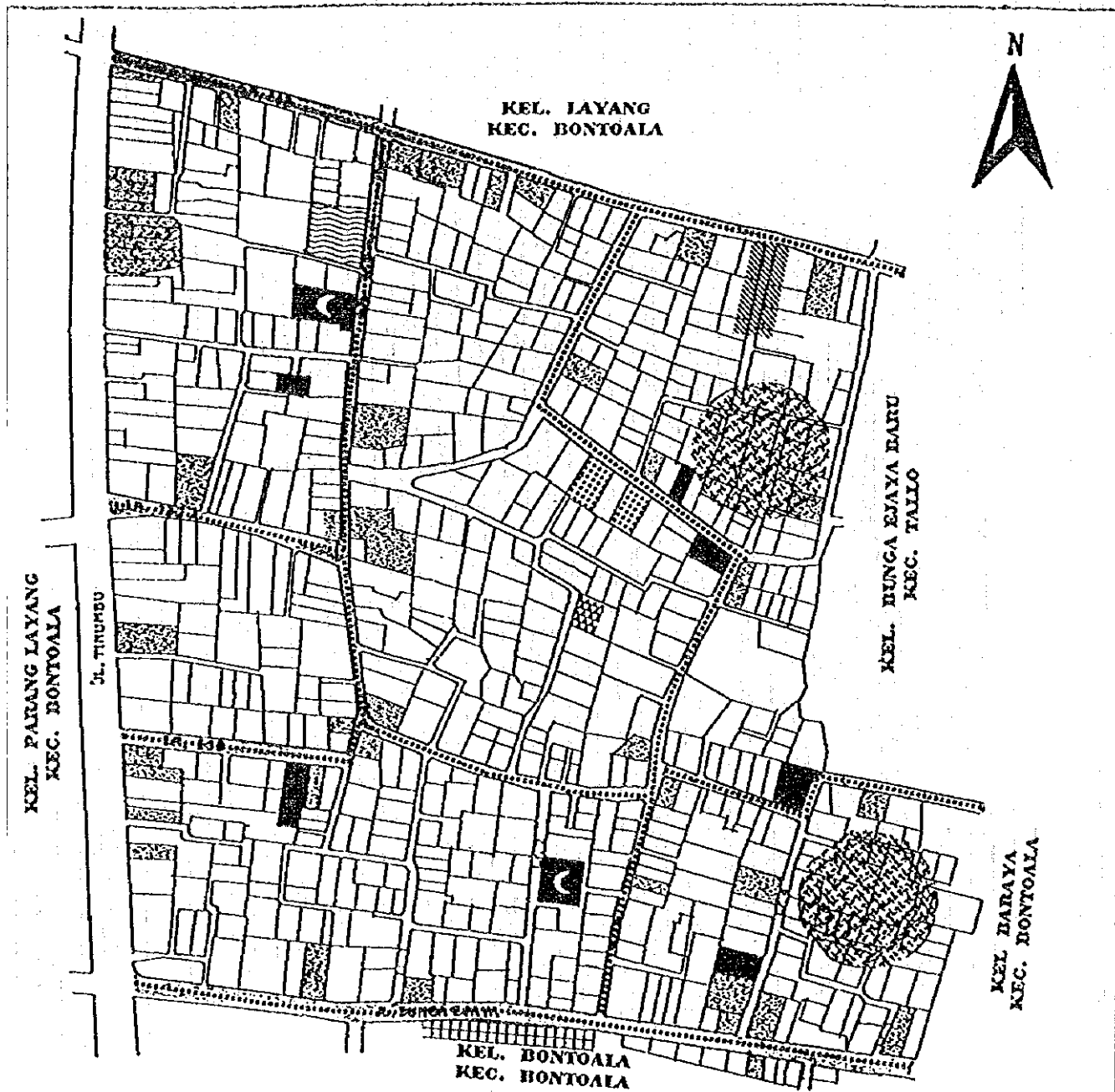
- |   |   |
|---|---|
|  RW - I ( Pop. = 1450 Persons )  |  RW - III ( Pop. = 1487 Persons ) |
|  RW - II ( Pop. = 1347 Persons ) |  RW - IV ( Pop. = 1548 Persons )  |














**FIG. 6.40**

**RW - MAP**  
 KELURAHAN BUNGA EJAYA - KECAMATAN BONTOALA

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE  
 MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



LEGEND : Site A - Land Use Map

- |   |                               |   |                  |
|---|-------------------------------|---|------------------|
|  | Residential                   |  | Private Cemetery |
|  | Commercial                    |  | Arab Cemetery    |
|  | Mixed Residential/ Commercial |  | Market Afternoon |
|  | Institutional                 |  | Slum Areas       |
|  | Mosque                        |  | KIP Area         |
|  | School                        |   |                  |

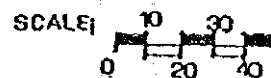
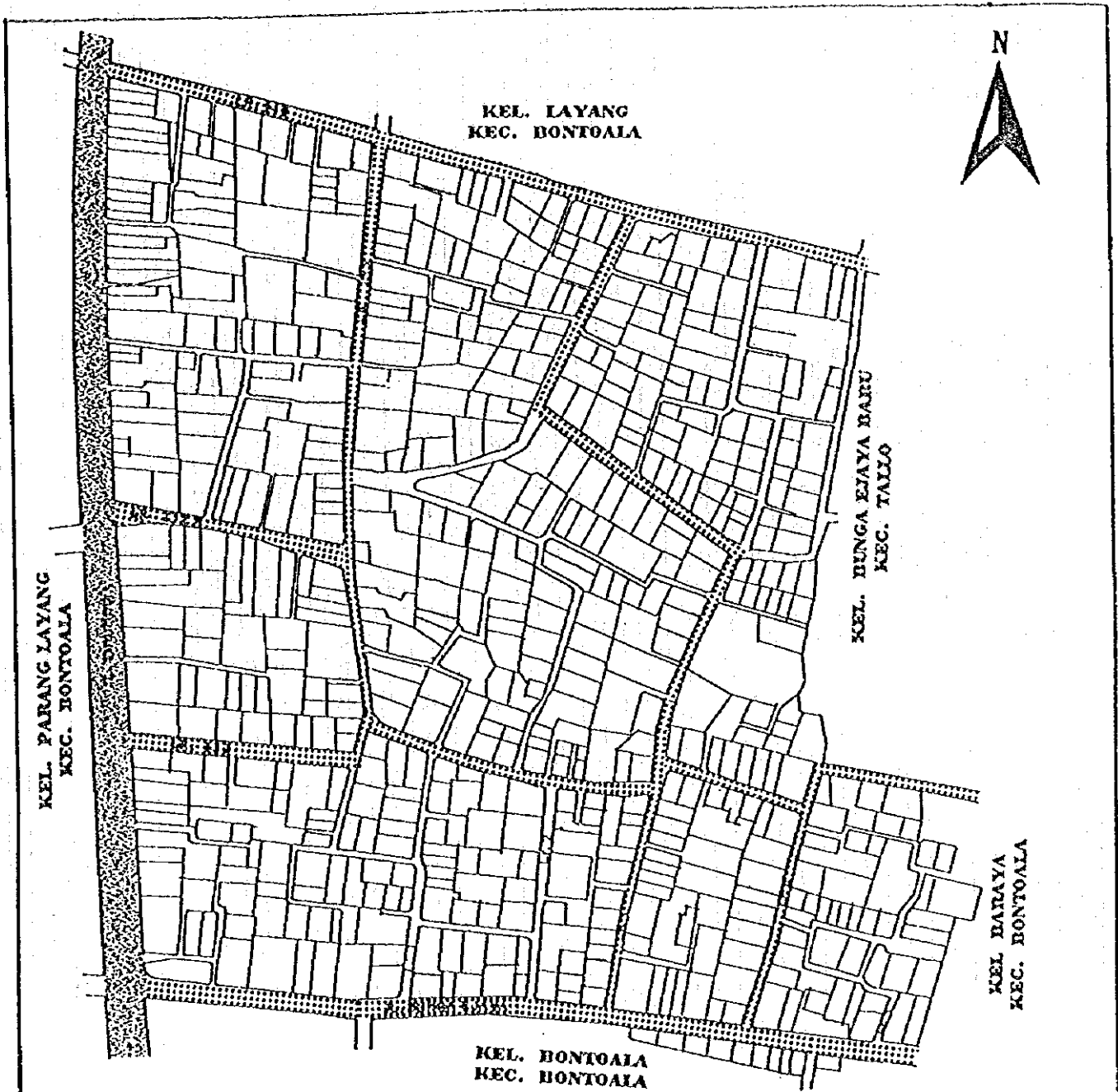





FIG. 6.41

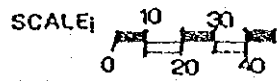
**LAND USE MAP**  
 KELURAHAN BUNGA EJAYA • KECAMATAN BONTOALA

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE  
 MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



**LEGEND :** Site A - Road Network Map

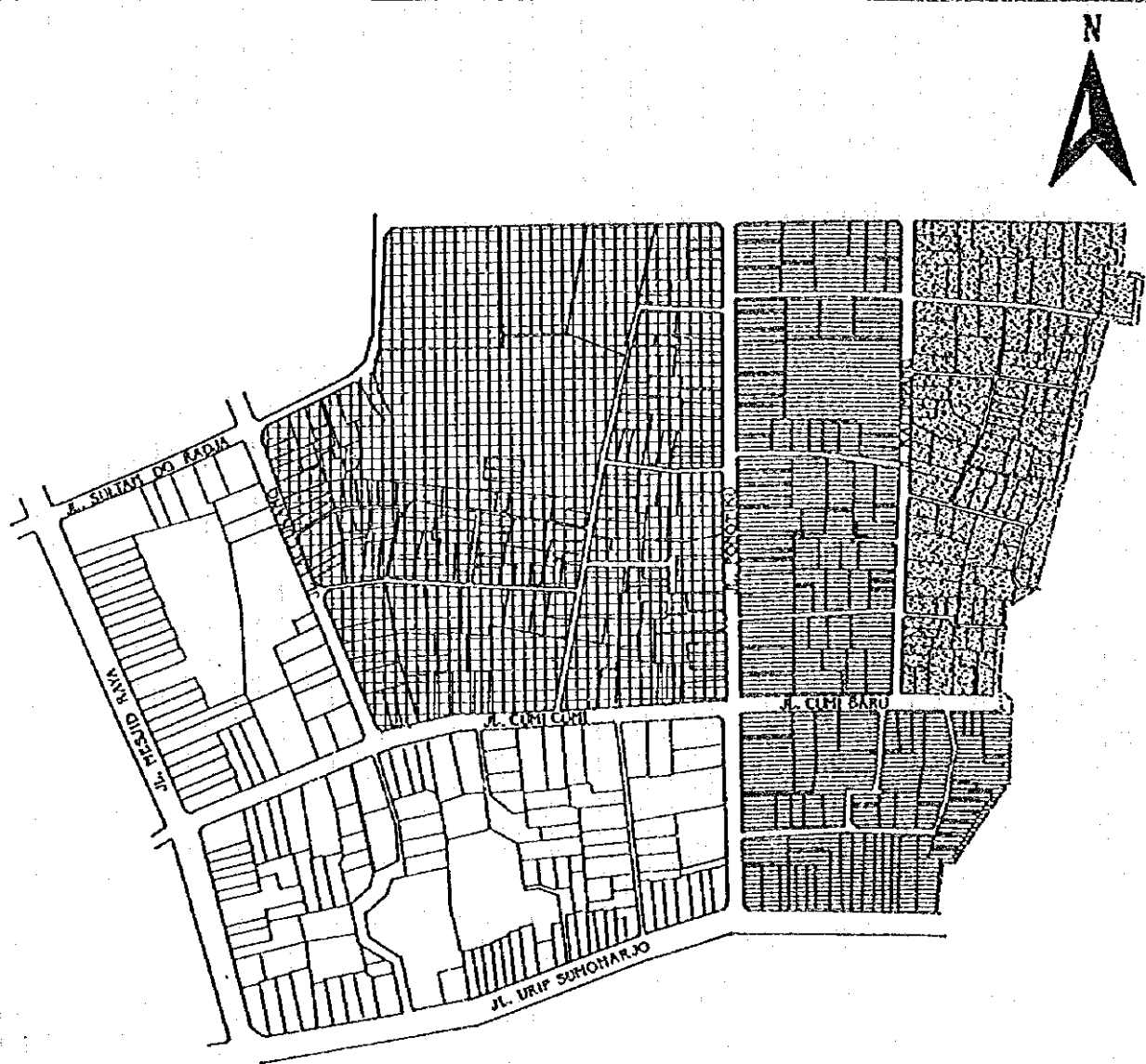
-  5 - 6.9 m
-  3 - 4.9 m
-  < 3 m



**FIG. 6.42**

**ROAD NETWORK MAP**  
 KELURAHAN BUNGA EJAYA • KECAMATAN BONTOALA

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE  
 MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



Site B1 - RW Division Map

- |   |                           |   |                            |
|---|---------------------------|---|----------------------------|
|  | RW - I [HOUSEHOLD • 198]  |  | RW - III [HOUSEHOLD • 166] |
|  | RW - II [HOUSEHOLD • 210] |  | RW - IV [HOUSEHOLD • 156]  |

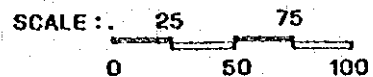


FIG. 6.43

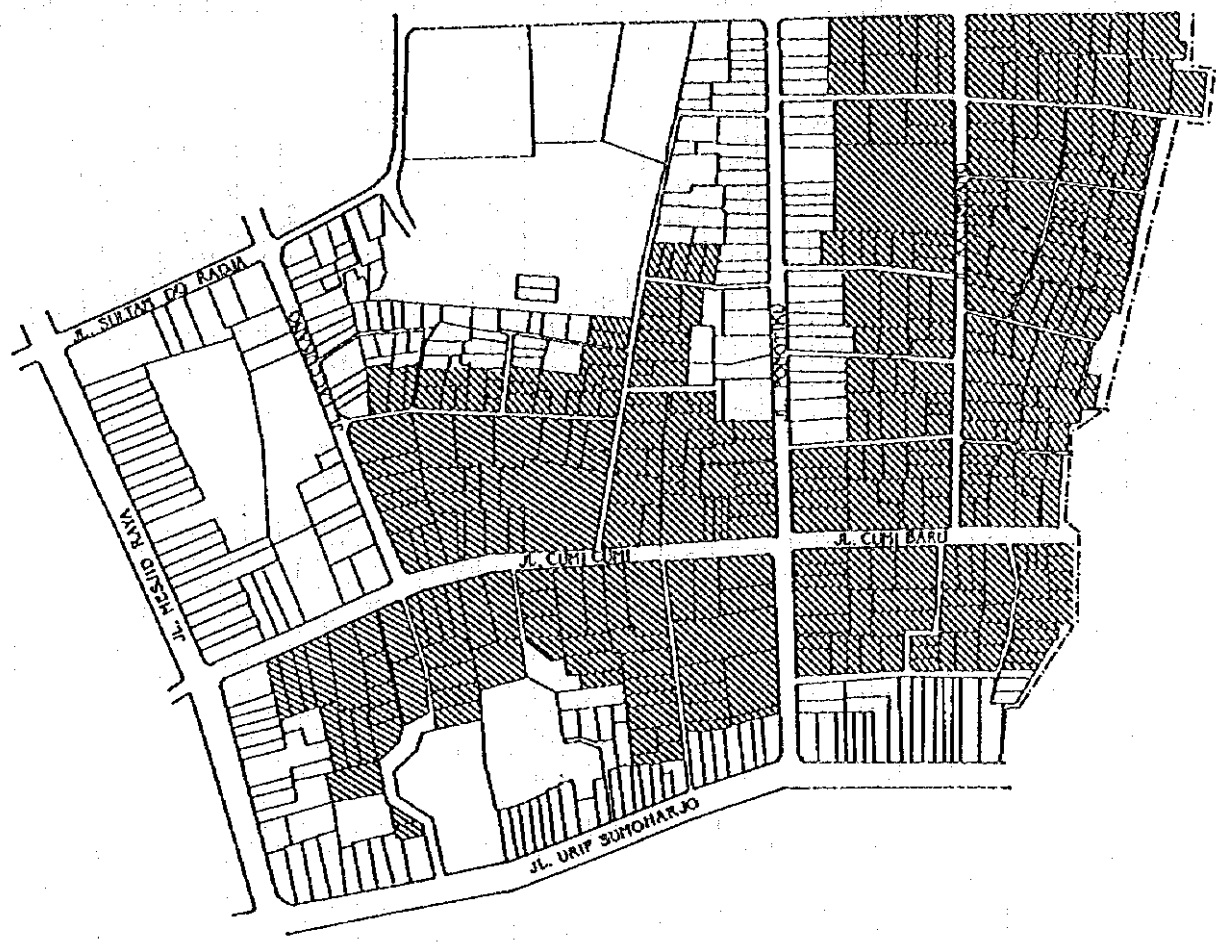
**RW - MAP**

KEL. MALIMONGAN BARU KEC. BONTOLIA


MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



A.D. 1995



**LEGEND :** Site B1 - TAS Study Area

 Study Area (325 - Bin)

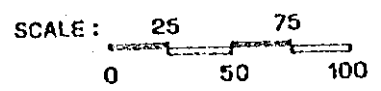


FIG. 6.44

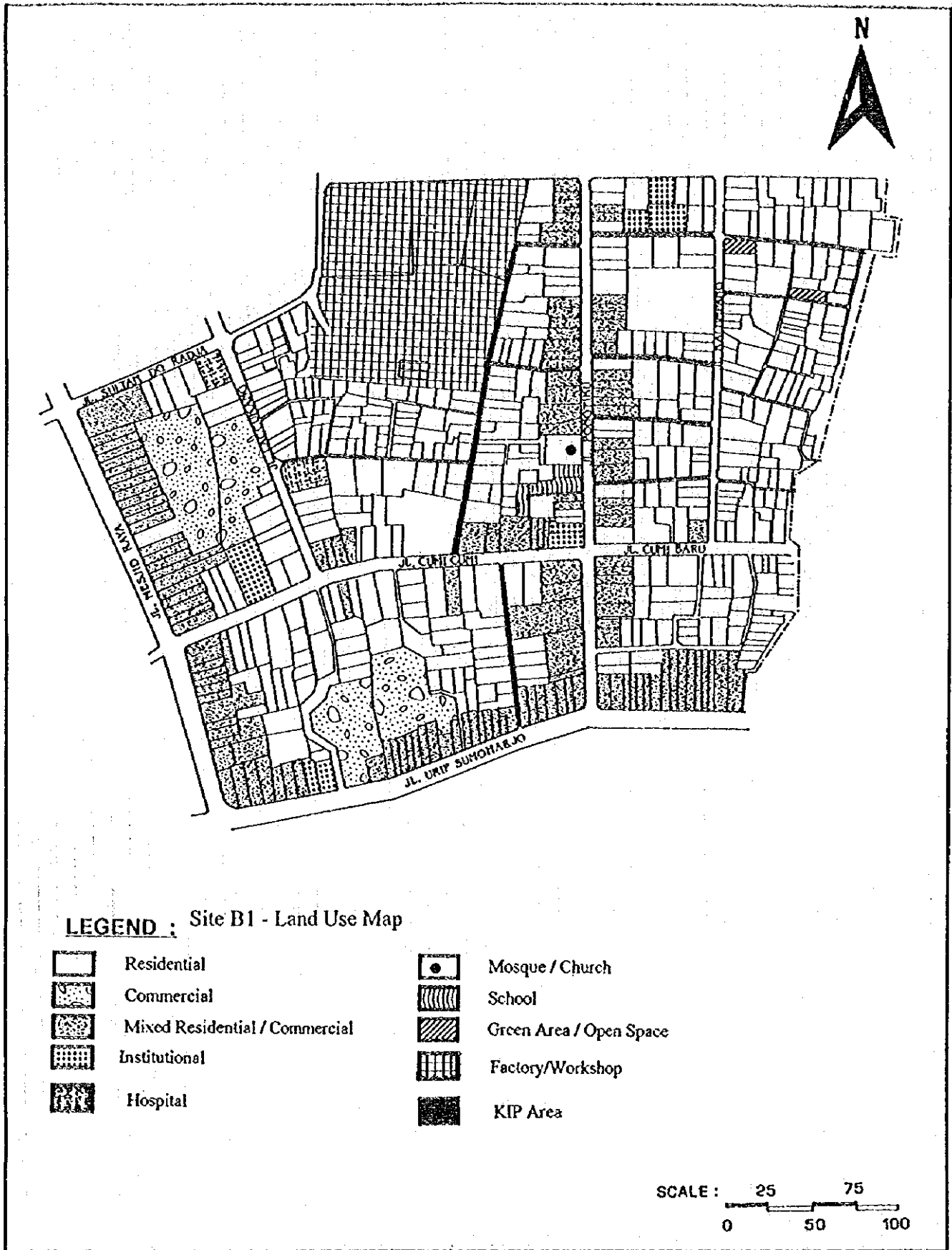
**TAS STUDY AREA MAP**

KEL. MALIMONGAN BARU KEC. BONTOLALA

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



A.D.1995



**LEGEND :** Site B1 - Land Use Map

- |  |                                |  |                         |
|--|--------------------------------|--|-------------------------|
|  | Residential                    |  | Mosque / Church         |
|  | Commercial                     |  | School                  |
|  | Mixed Residential / Commercial |  | Green Area / Open Space |
|  | Institutional                  |  | Factory/Workshop        |
|  | Hospital                       |  | KIP Area                |

SCALE : 25 75  
0 50 100

**FIG. 6.45**

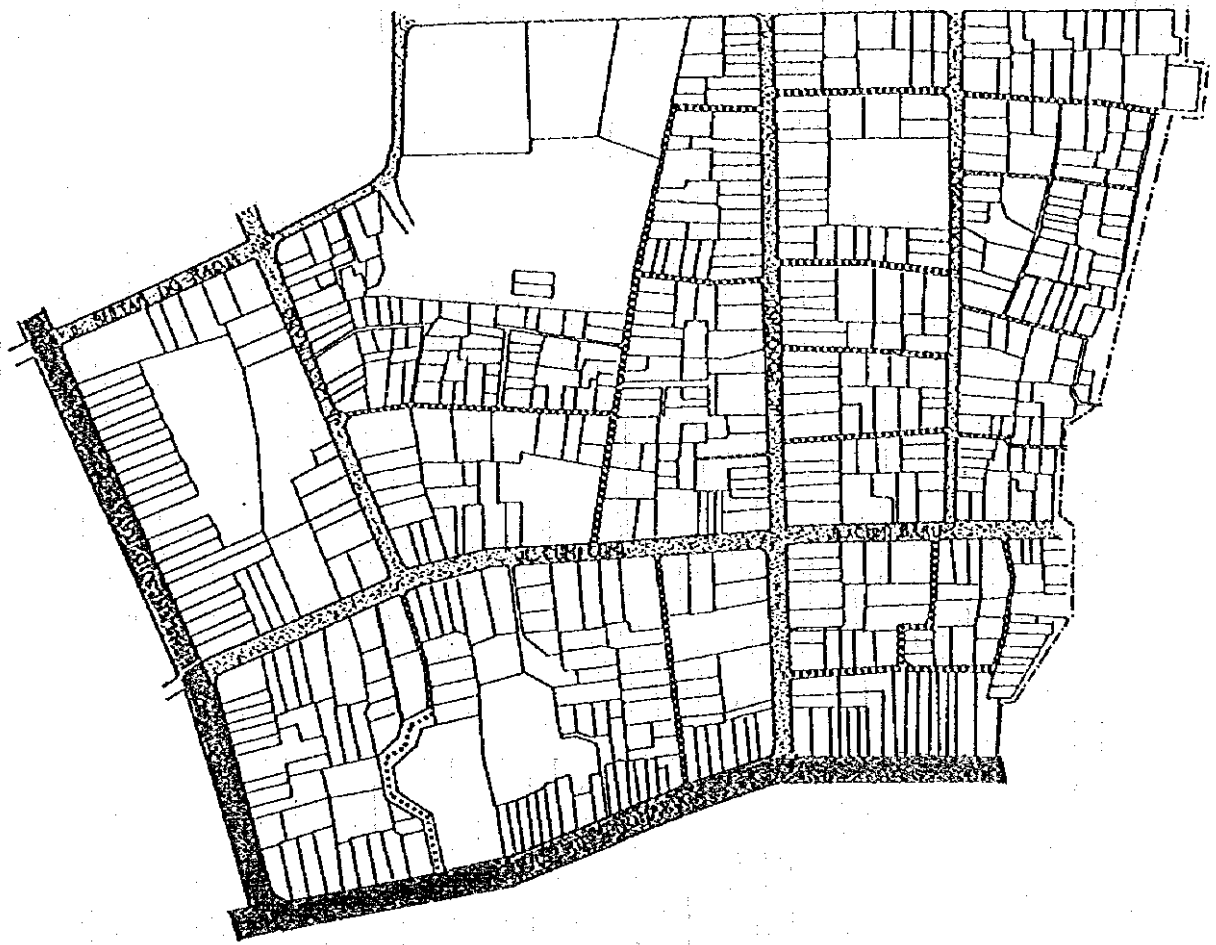
**LAND USE MAP**

KEL. MALIMONGAN BARU KEC. BONTOALA

**MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA**



A.D. 1995



**LEGEND** ; Site B1 - Road Network Map

- |   |   |
|---|---|
|  > 7 m     |  3 - 4.9 m |
|  5 - 6.9 m |  < 3 m     |

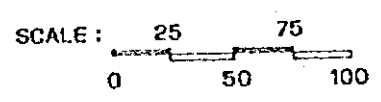
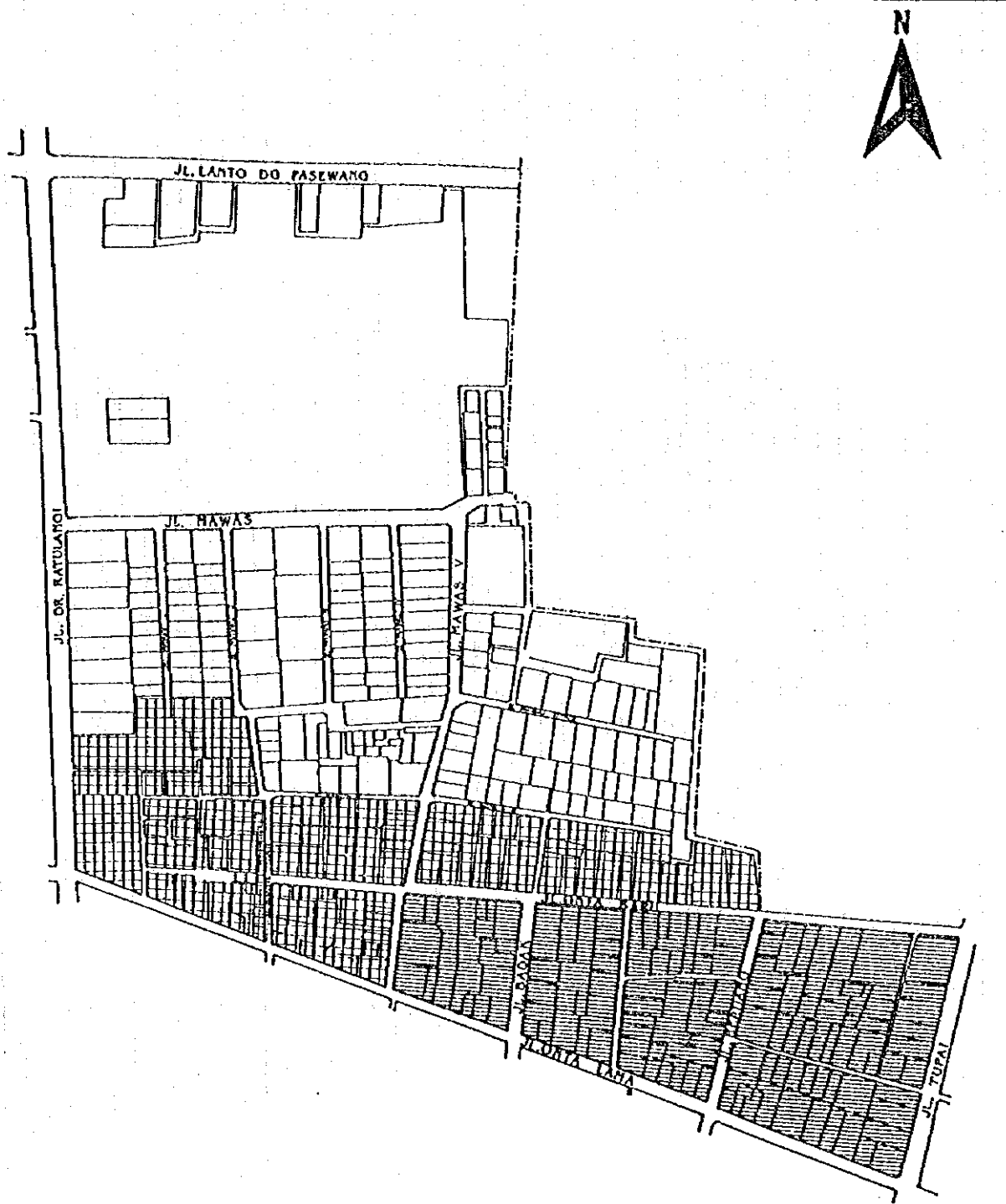



FIG. 6.46

**ROAD NETWORK MAP**  
KEL. MALIMONGAN BARU, KEC. BONTOLALA

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE  
MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



Site B2 - RW Division Map

- |   |                           |   |                            |
|---|---------------------------|---|----------------------------|
|  | RW - I (Household = 257)  |  | RW - III (Household = 288) |
|  | RW - II (Household = 145) |   |                            |

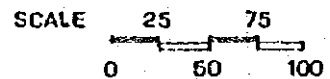


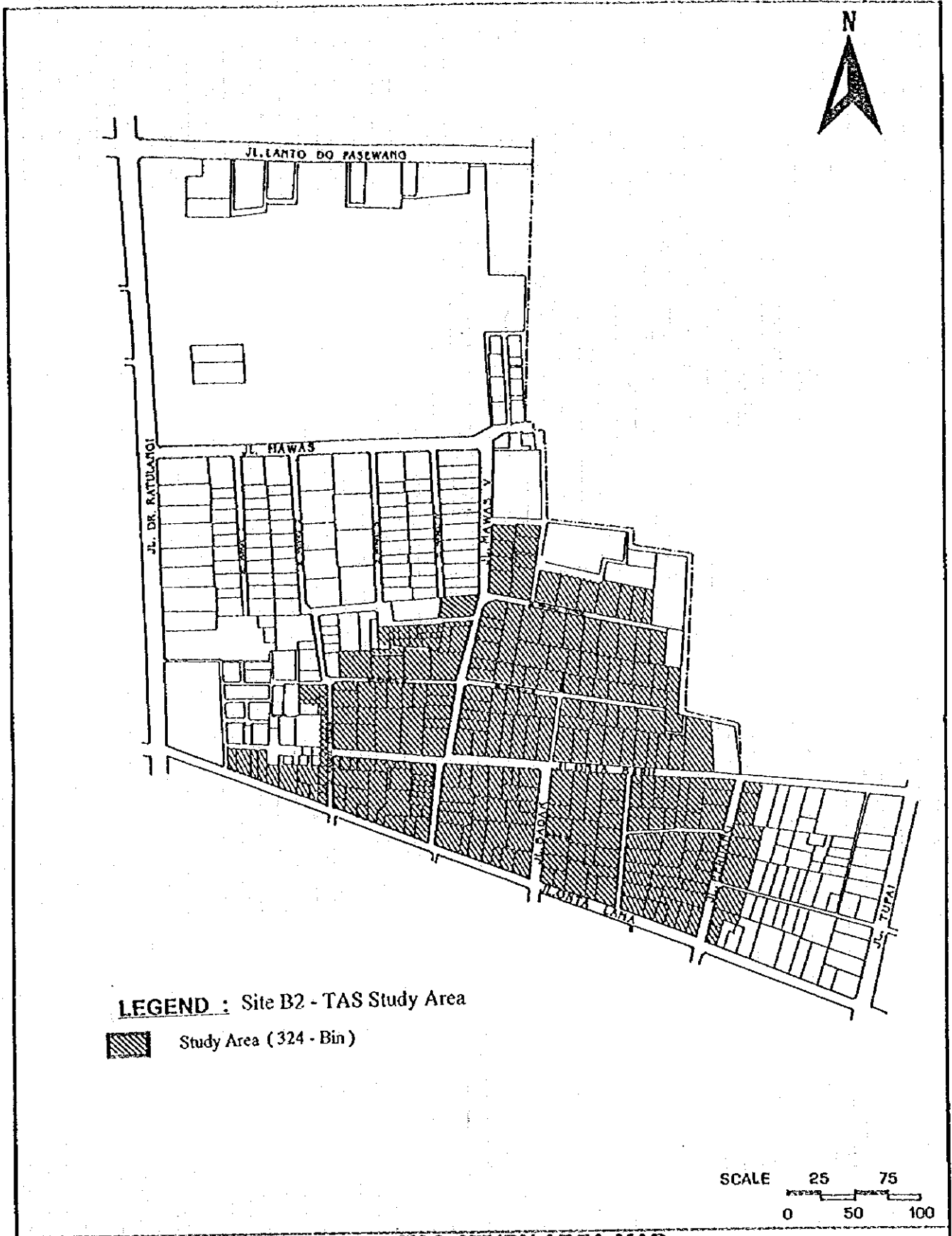
FIG. 6.47

**RW - MAP**


KEI. MAMAJANG LUAR KEC. MAMAJANG

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA





**LEGEND :** Site B2 - TAS Study Area

 Study Area (324 - Bin)

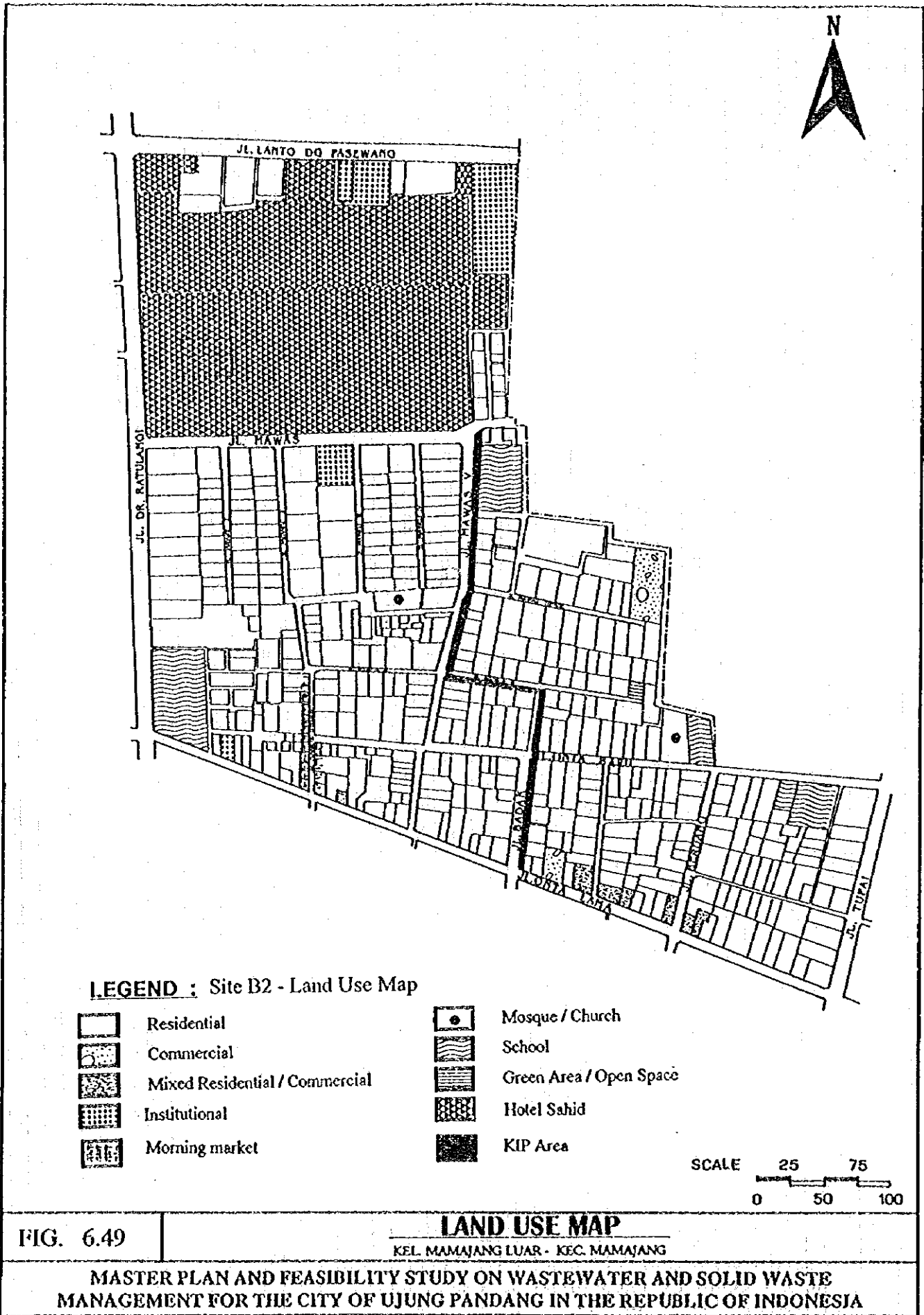
SCALE 25 75  
0 50 100

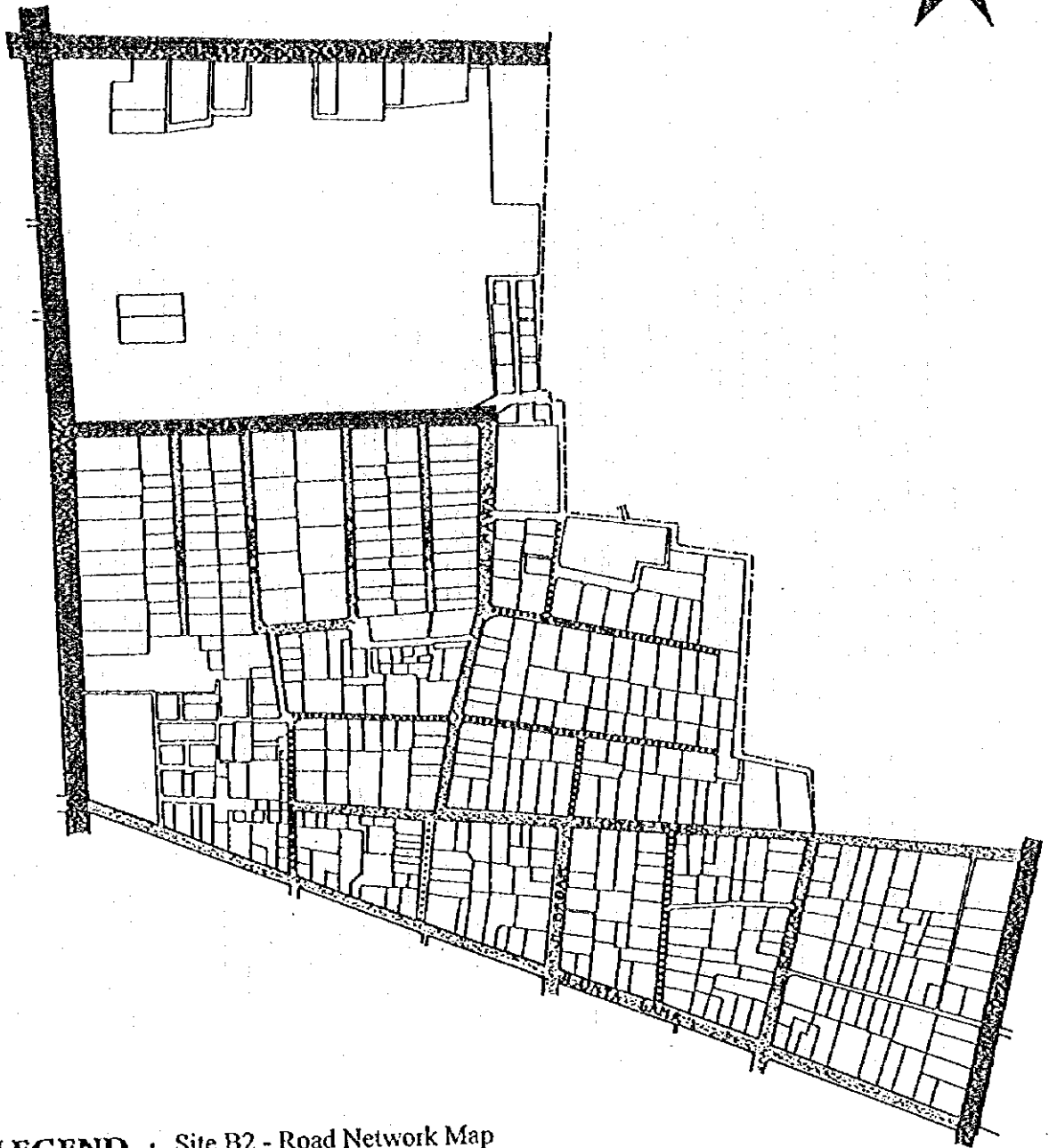
FIG. 6.48

**TAS STUDY AREA MAP**  
KEL. MAMAJANG LUAR - KEC. MAMAJANG

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA

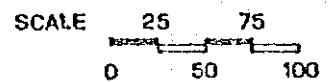
JICA A.D.1995





**LEGEND :** Site B2 - Road Network Map

- |   |   |
|---|---|
|  > 7 m     |  3 - 4.9 m |
|  5 - 6.9 m |  < 3 m     |



**FIG. 6.50**

**ROAD NETWORK MAP**  
KEL. MAMAJANG LUAR - KEC. MAMAJANG

MASTER PLAN AND FEASIBILITY STUDY ON WASTEWATER AND SOLID WASTE  
MANAGEMENT FOR THE CITY OF UJUNG PANDANG IN THE REPUBLIC OF INDONESIA



A.D.1995