FIGURES

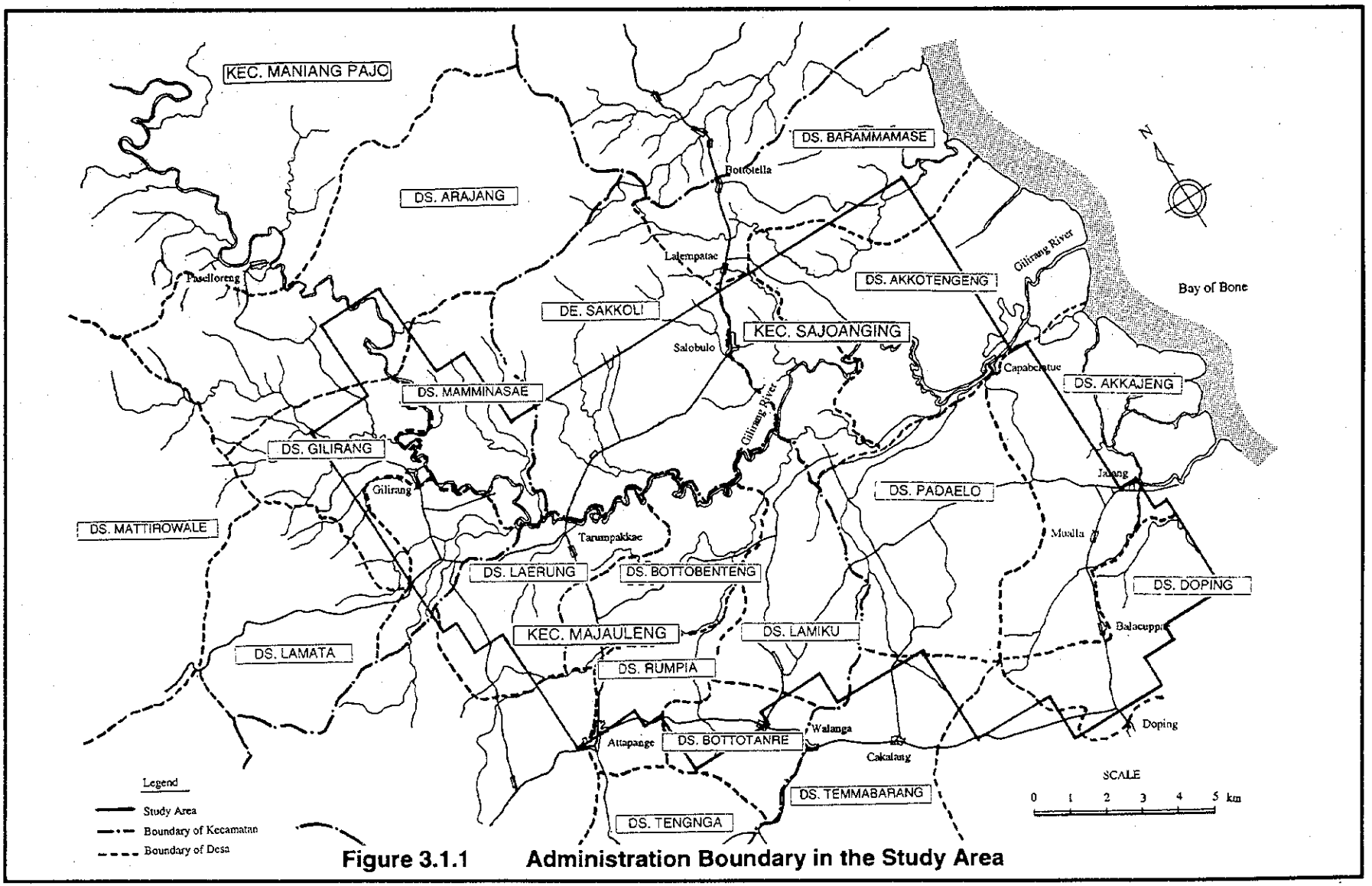
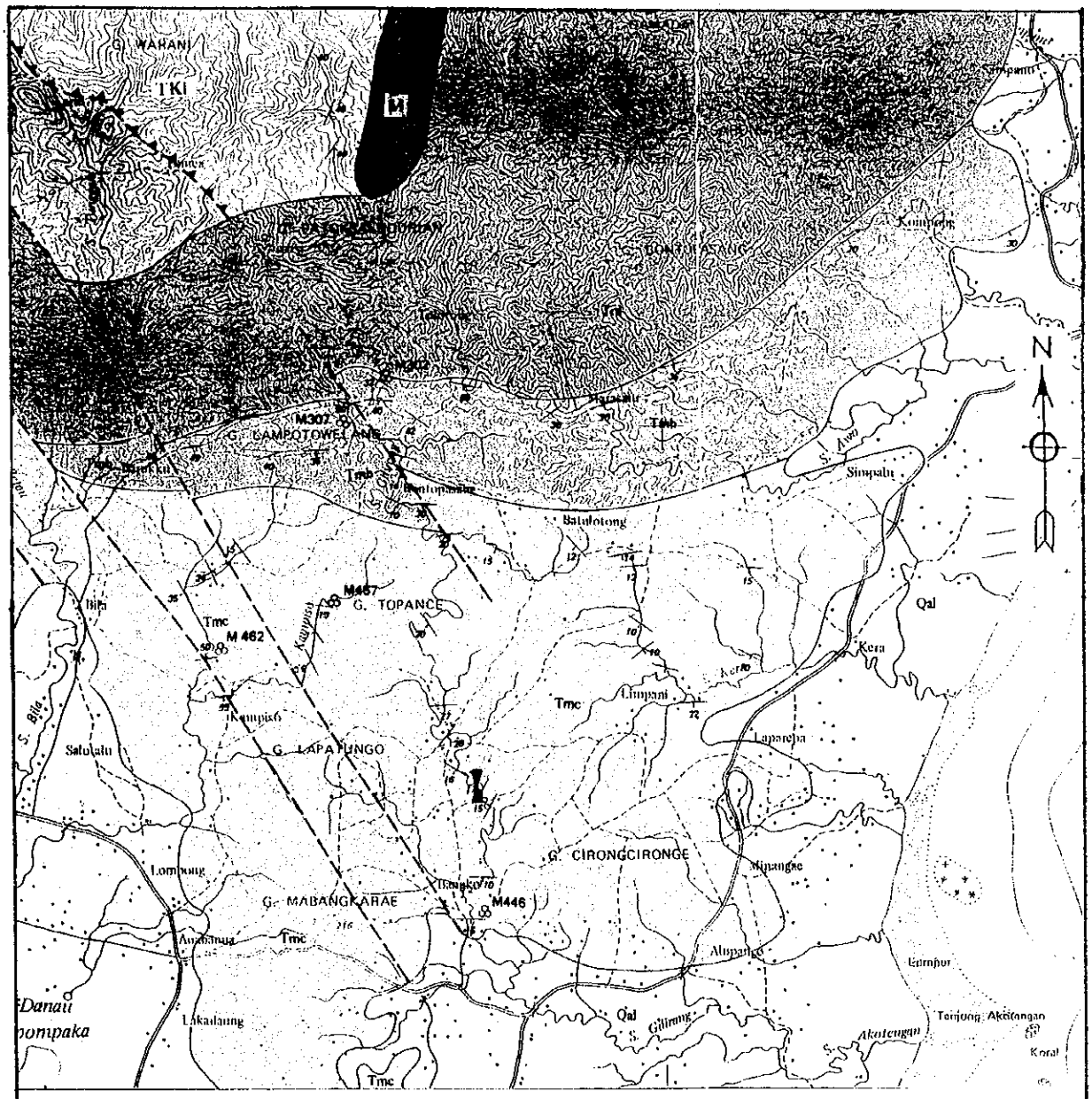


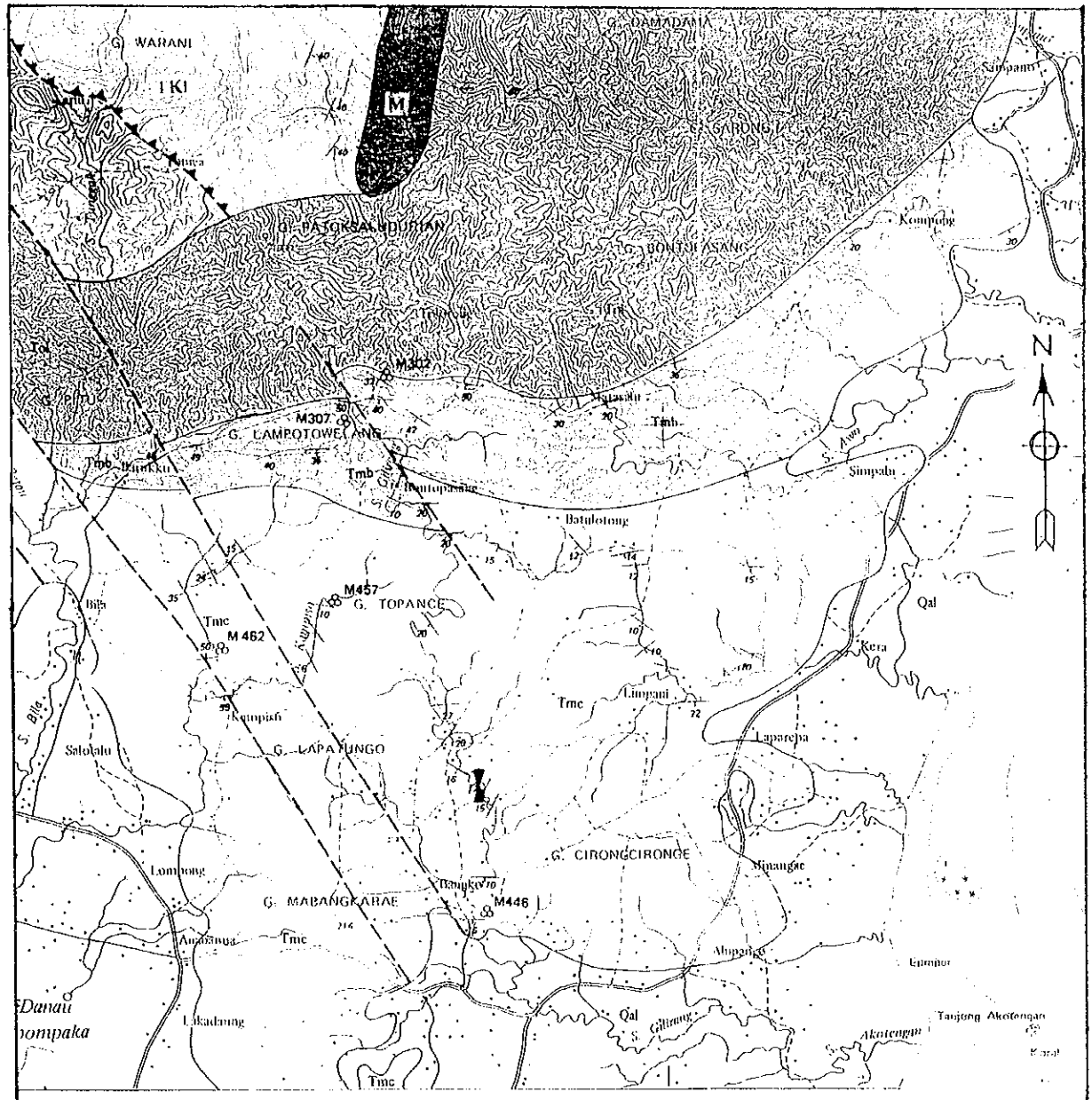
Figure 3.1.1 Administration Boundary in the Study Area



Qal	Allvium, Clay, silt,sand,gravel and reef limestone;tickness about 100m
Tmc	Conglomerate, includes a little glauconitic sandstone with shale, coquina and molluscs; unit forms undulating topography. Foraminifers range in age from late middle Miocene to Pliocene about 100m to 400m thick.
Tbm	Marl and intercalated limestone,locally contains bluish grey to block calcareous sandstone, conglomerate and breccia. Foraminifers range in age from late early Miocene to latest middle Miocene
	Lava flows,basaltic,to andesitic,volcanic breccia volcanic sandstone and siltstone;locally contain feldpathoids, Most rocks chloritized and silicified. No fossil found.
Tet	Shale,raddish brown and grey marly shale and limestone,quartzose sandstone, quartz conglomerate,and, locally, coal
TKl	LATIMOJONG FORMATION-Moderatelly metamorphozed rocks, slate,phyllite, chert,marble,quatzite and silicified breccia, some intermediate to basic intrusions. The formation is named from exposures in the Latimojong Montains. These are the oldest rocks exposed in the region,and because of pervasive folding and metamorphism,little is known about their thicness. No fossils have been found; nor top is exposed.
	Quartz monzonite and adamellite.
	Paseloreng Dam Site
	Fault
	Geological boundary

Scale : 1 : 250.000

Figure 3.3.1 Regional Geological Map



Qal Allvium, Clay, silt,sand,gravel and reef limestone;tickness about 100m

Tet Shale,raddish brown and grey marly shale and limestone,quartzose sandstone, quartz conglomerate,and, locally, coal

Tmc Conglomerate, includes a little glauconitic sandstone with shale, coquina and molluscs; unit forms undulating topography. Foraminifers range in age from late middle Miocene to Pliocene about 100m to 400m thick.

TKI LATIMOJONG FORMATION-Moderatelly metamorphozed rocks, slate,phyllite, chert,marble,quatzite and silicified breccia, some intermediate to basic intrusions. The formation is named from exposures in the Latimojong Montains. These are the oldest rocks exposed in the region,and because of pervasive folding and metamorphism,little is known about their thicness. No fossils have been found; nor top is exposed.

Tbm Marl and intercalated limestone,locally contains bluish grey to block calcareous sandstone, conglomerate and breccia. Foraminifers range in age from late early Miocene to latest middle Miocene

Tol Lava flows,basaltic,to andesitic,volcanic breccia volcanic sandstone and siltstone;locally contain feldpathoids, Most rocks chloritized and silicified. No fossil found.

M Quartz monzonite and adamellite.

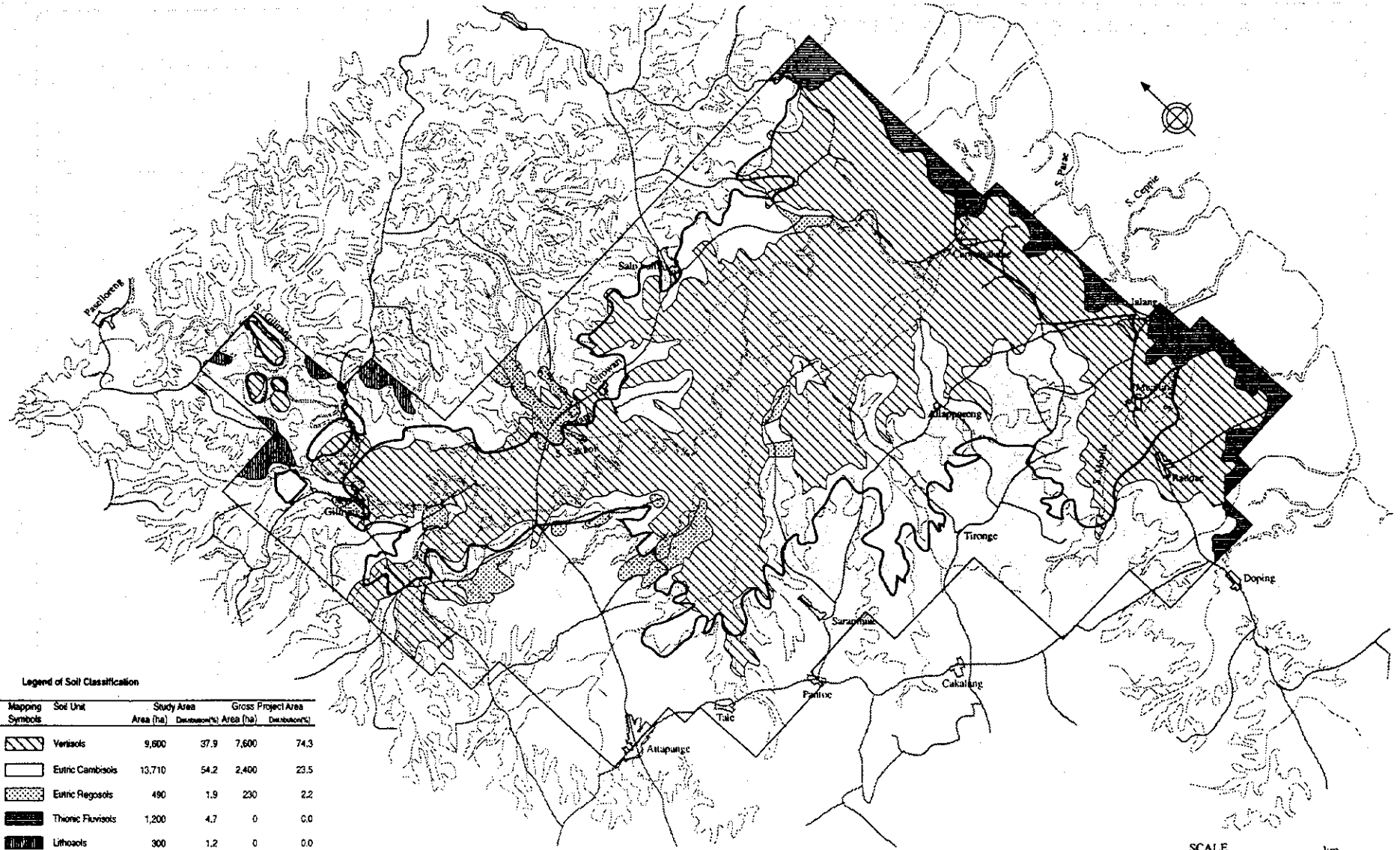
Paseloreng Dam Site

— — — Fault

Scale : 1 : 250.000

——— Geological boundary

Figure 3.3.1 Regional Geological Map



Legend of Soil Classification

Mapping Symbols	Soil Unit	Study Area Area (ha)	Study Area Distribution(%)	Gross Project Area Area (ha)	Gross Project Area Distribution(%)
	Vertisols	9,600	37.9	7,600	74.3
	Eutric Cambisols	13,710	54.2	2,400	23.5
	Eutric Regosols	490	1.9	230	2.2
	Thonic Fluvisols	1,200	4.7	0	0.0
	Lithosols	300	1.2	0	0.0
	Total	25,300	100.0	10,230	100.0

Gross Project Area

Figure 3.3.2 Soil Map

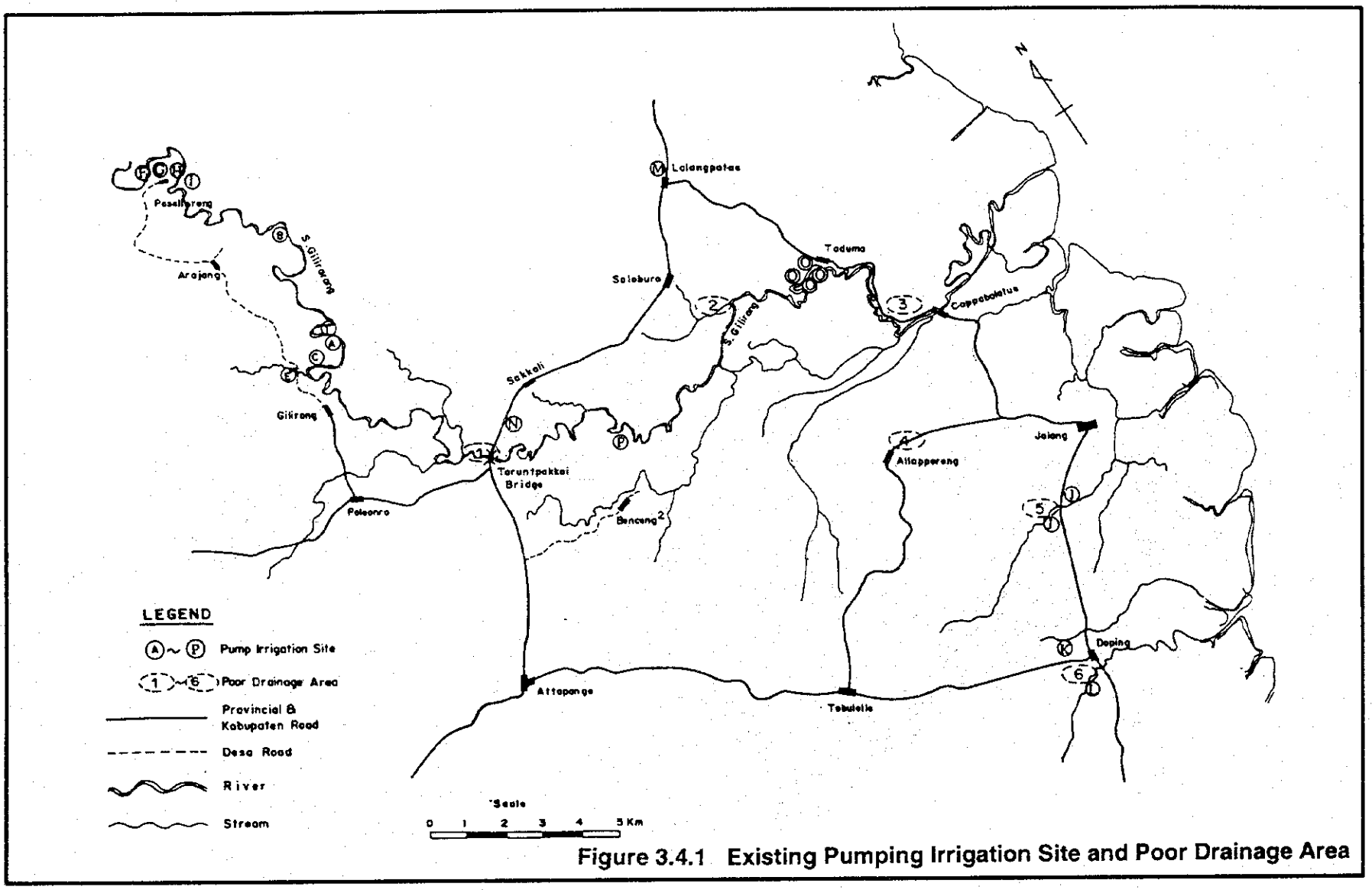


Figure 3.4.1 Existing Pumping Irrigation Site and Poor Drainage Area

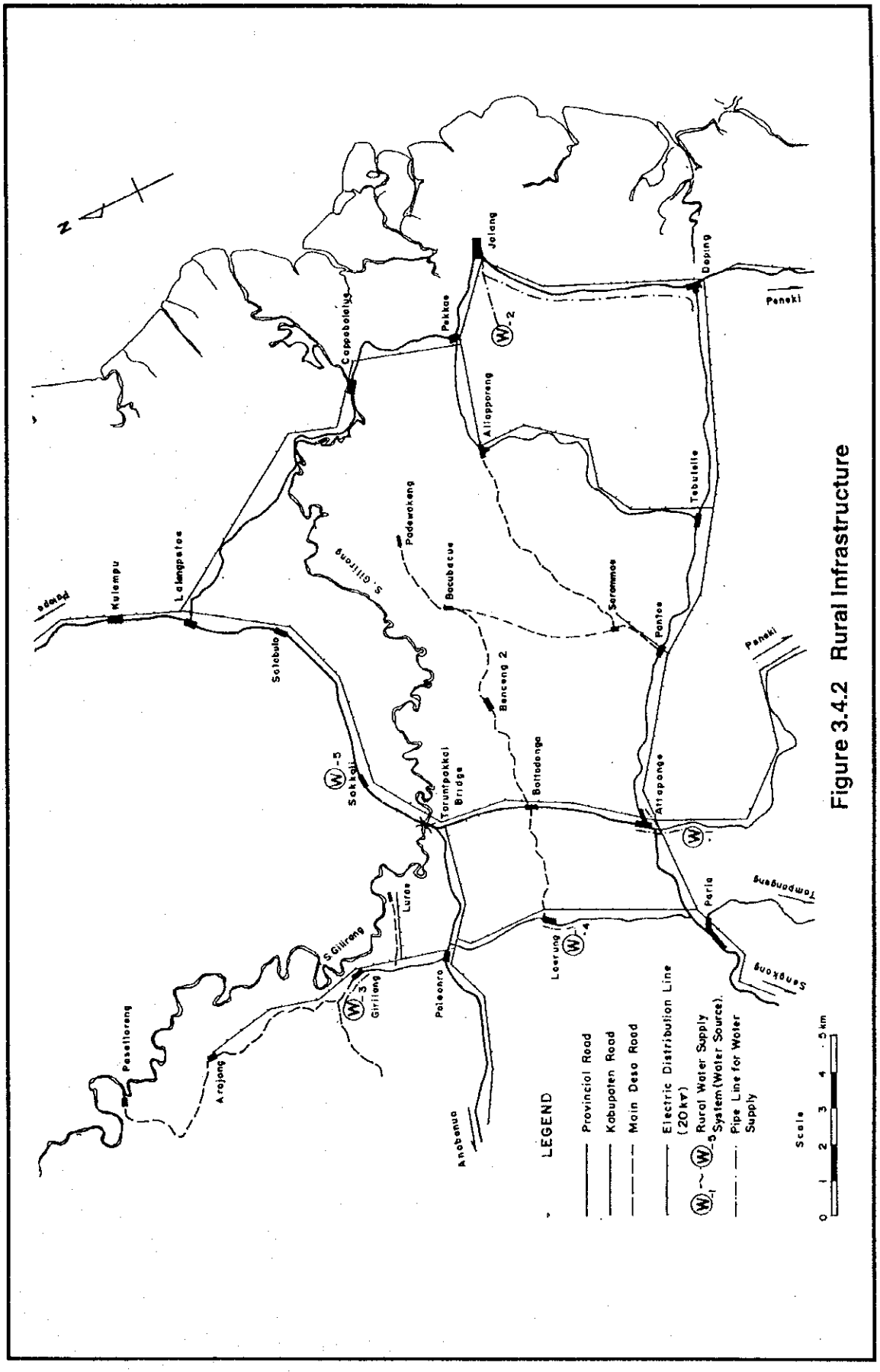
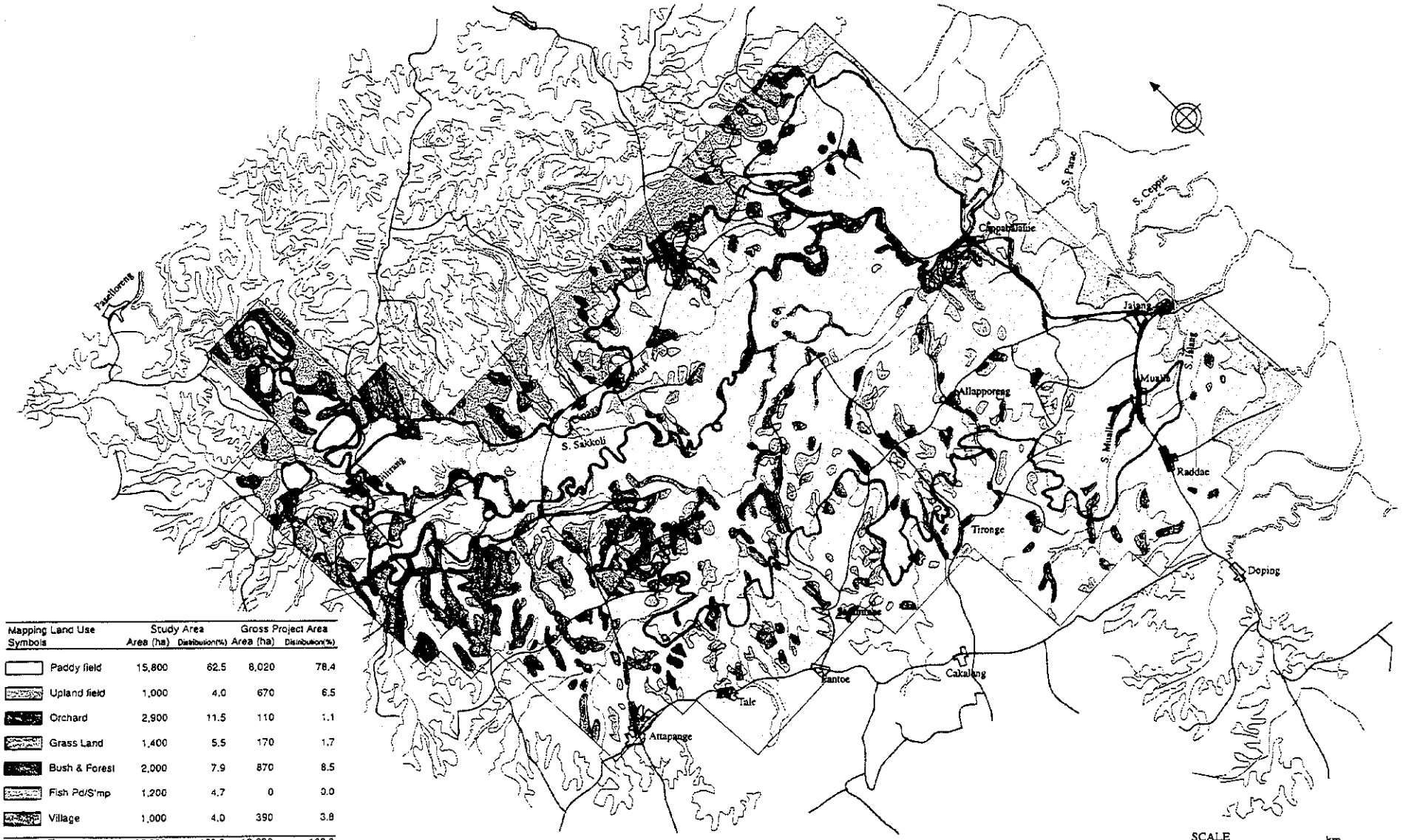


Figure 3.4.2 Rural Infrastructure



Mapping Land Use Symbols	Study Area Area (ha)	Distribution(%)	Gross Project Area Area (ha)	Distribution(%)
Paddy field	15,800	62.5	8,020	78.4
Upland field	1,000	4.0	670	6.5
Orchard	2,900	11.5	110	1.1
Grass Land	1,400	5.5	170	1.7
Bush & Forest	2,000	7.9	870	8.5
Fish Pd/S'mp	1,200	4.7	0	0.0
Village	1,000	4.0	390	3.8
Total	25,300	100.0	10,230	100.0

Gross Project Area

Figure 3.5.1 Present Land Use

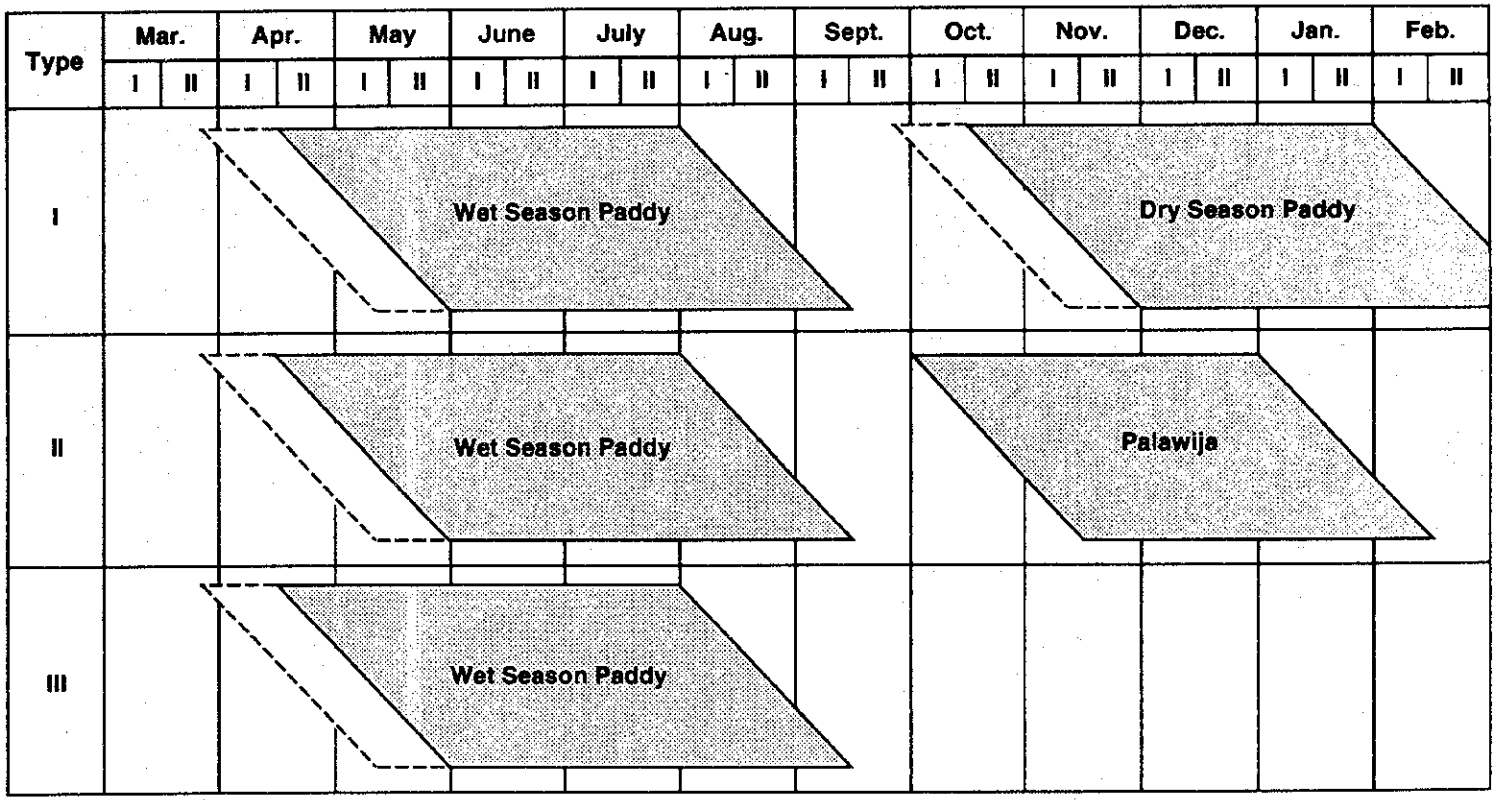
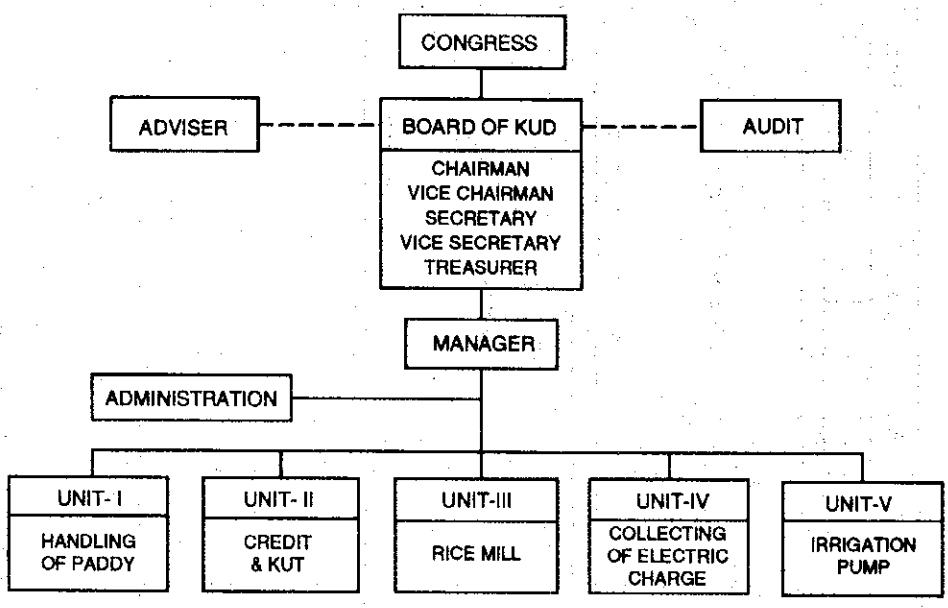
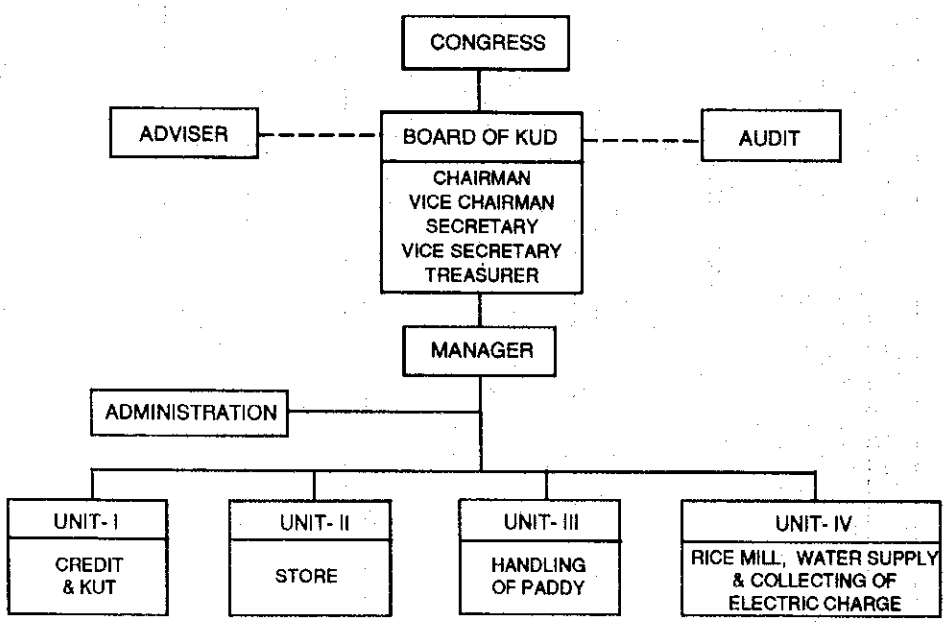


Figure 3.5.2 Major Cropping Patterns under Present Condition



KUD GILIRANG



KUD ATTAPANGE

Figure 3.6.1 Typical Organization of KUD

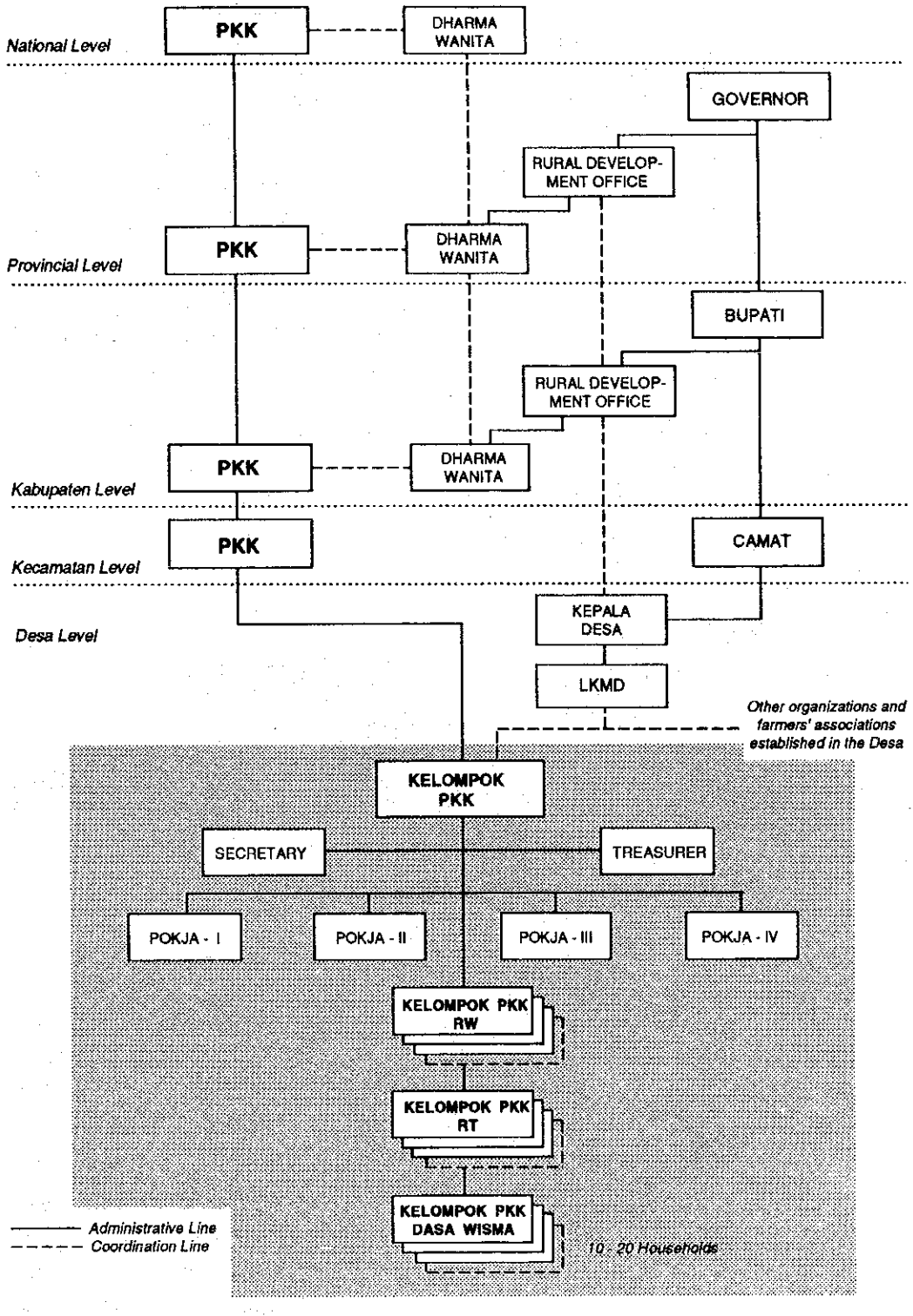
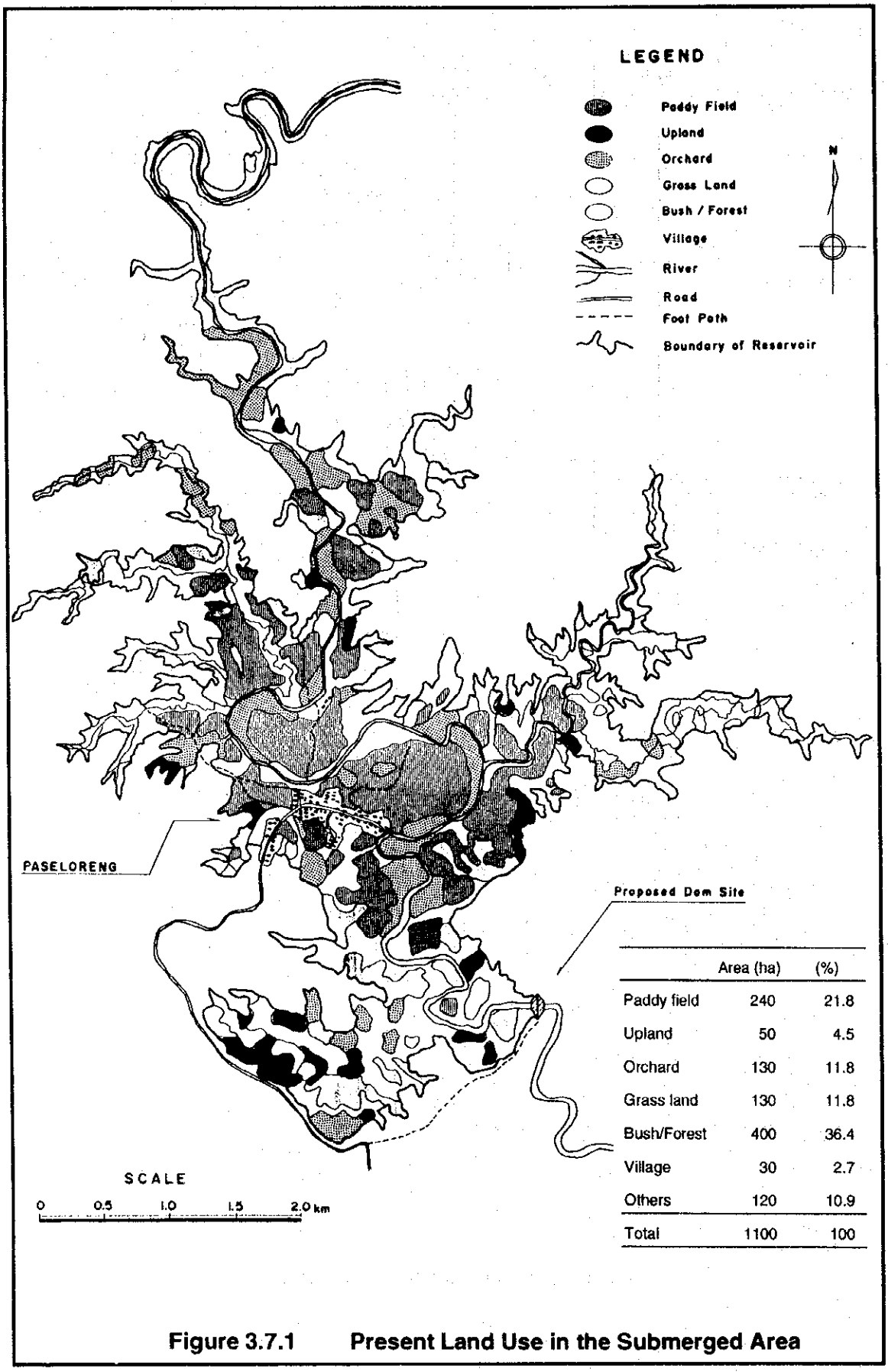


Figure 3.6.2 Overall Structure of PKK



	Area (ha)	(%)
Paddy field	240	21.8
Upland	50	4.5
Orchard	130	11.8
Grass land	130	11.8
Bush/Forest	400	36.4
Village	30	2.7
Others	120	10.9
Total	1100	100

Figure 3.7.1 Present Land Use in the Submerged Area

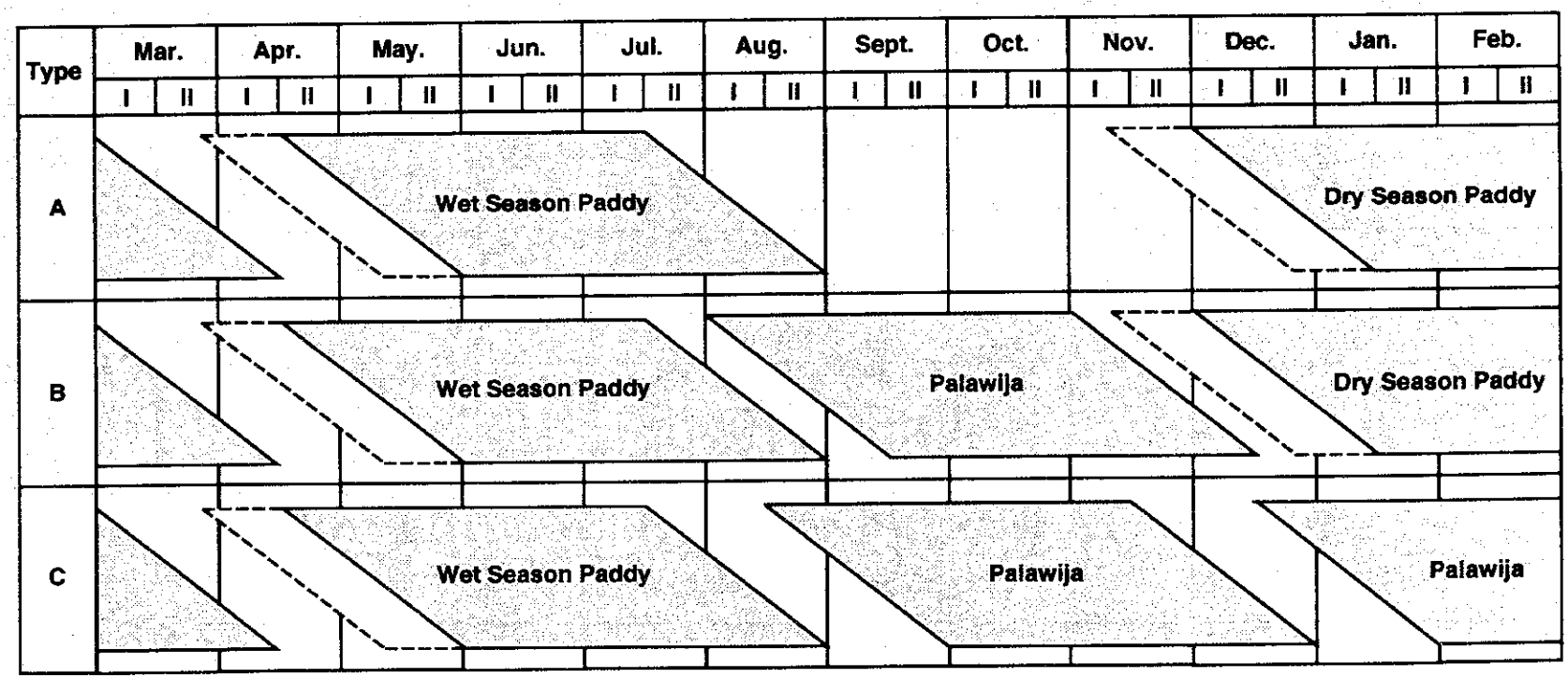


Figure 4.2.1 Alternative Cropping Patterns for Future with Project Condition

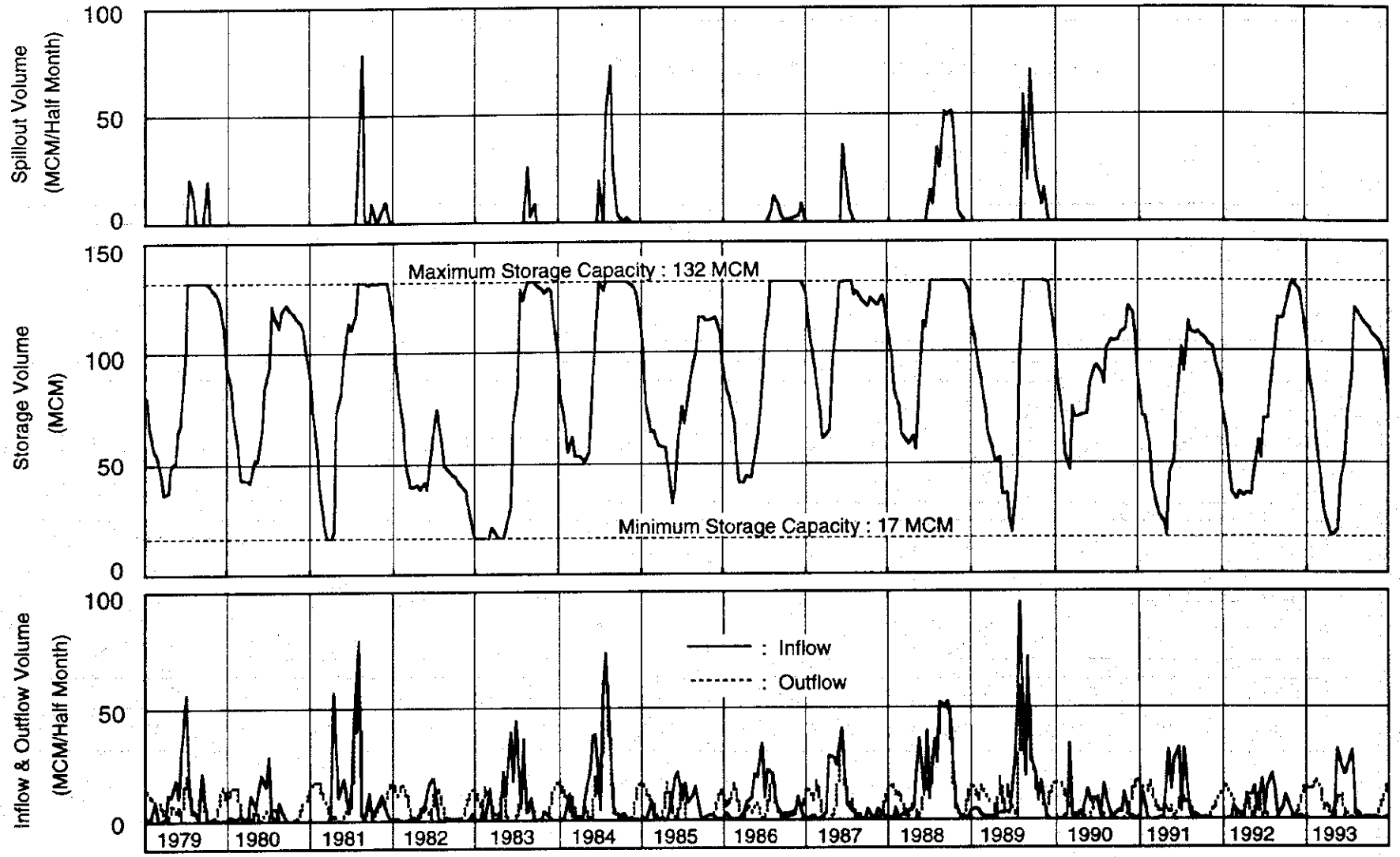


Figure 4.2.2 Result of Water Balance Study in the Paselloreng Dam (Alternative I)

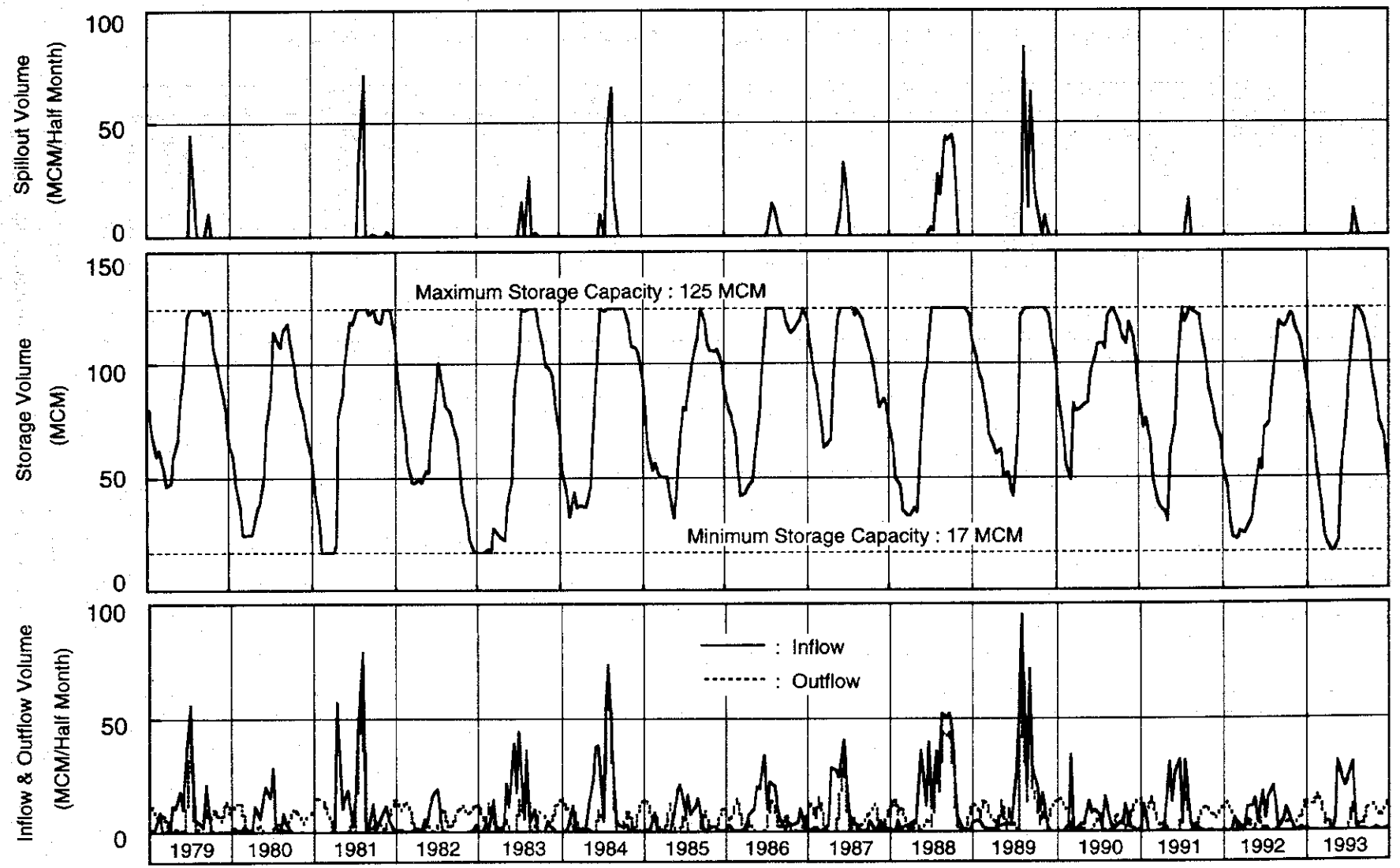


Figure 4.2.3 Result of Water Balance Study in the Paselloreng Dam (Alternative II)

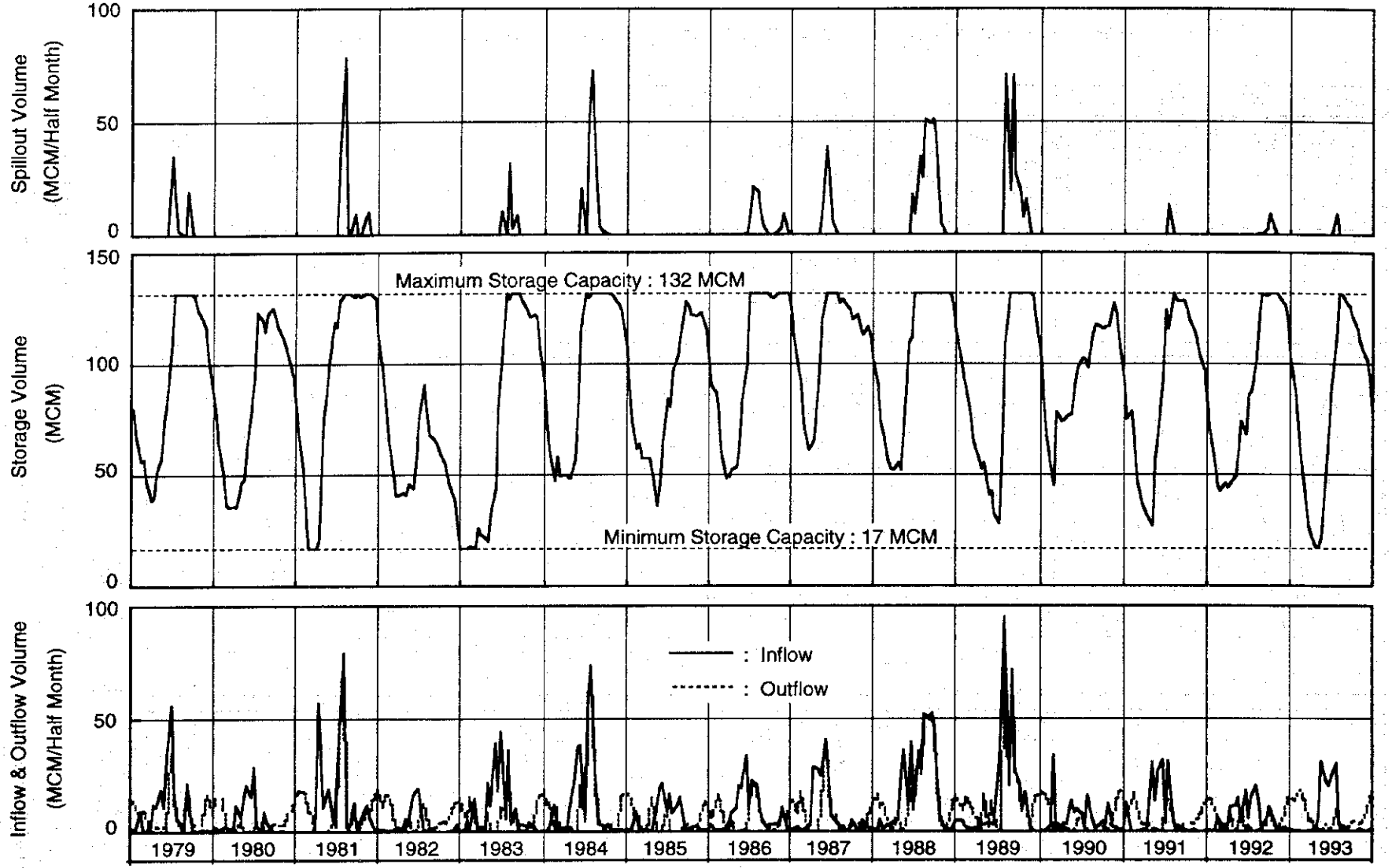


Figure 4.2.4 Result of Water Balance Study in the Paselloreng Dam (Alternative III)

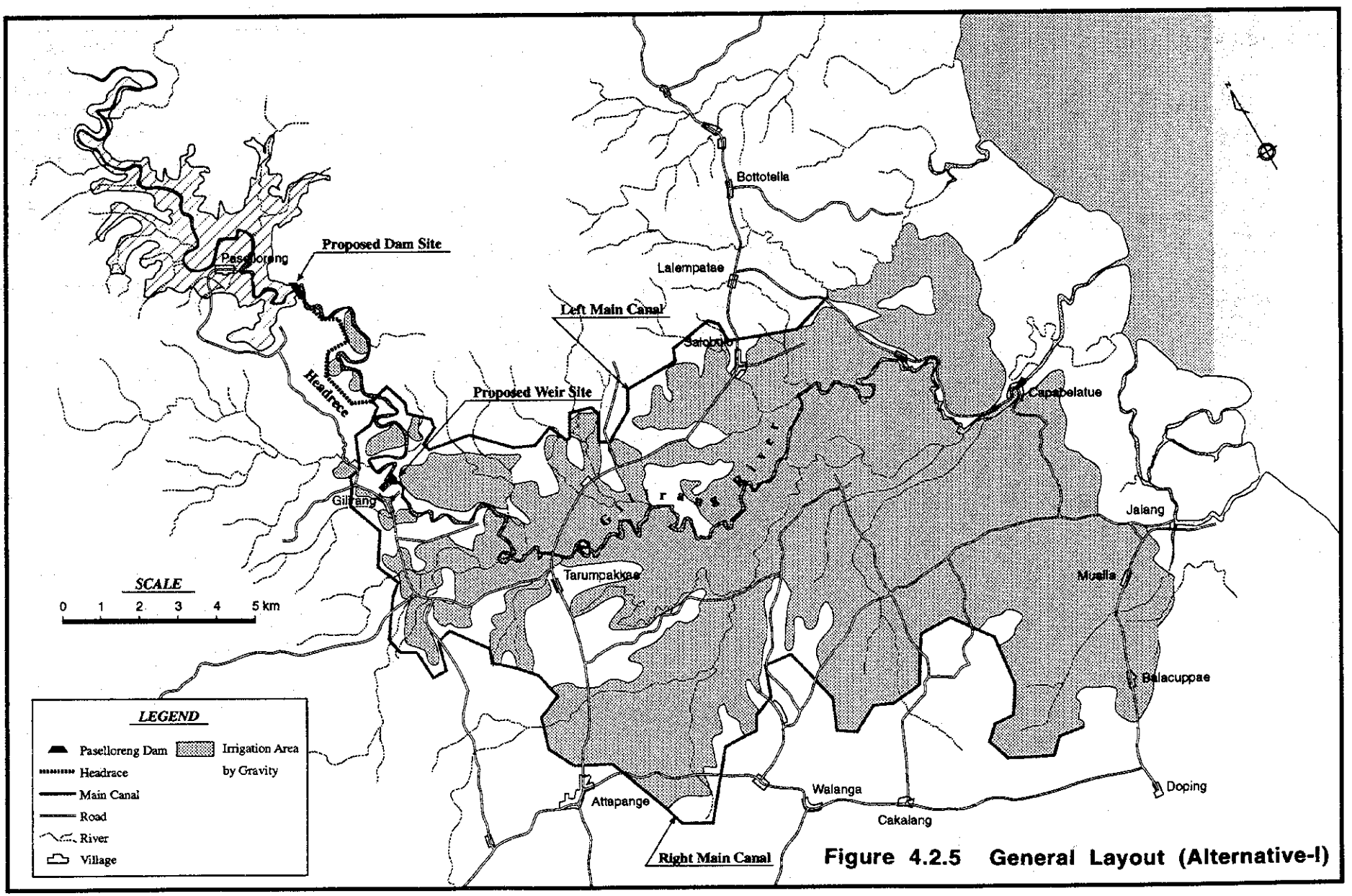


Figure 4.2.5 General Layout (Alternative-I)

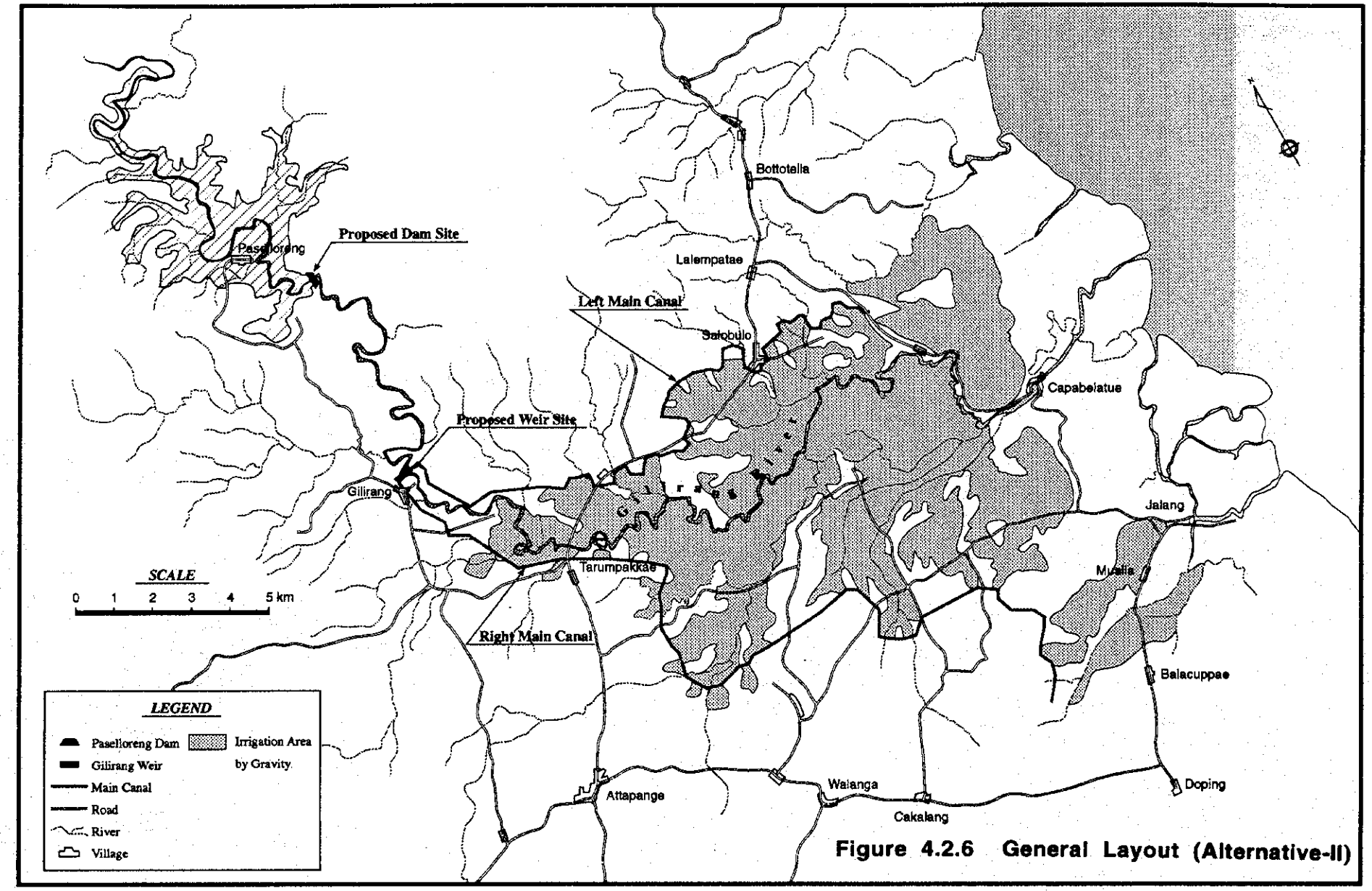


Figure 4.2.6 General Layout (Alternative-II)

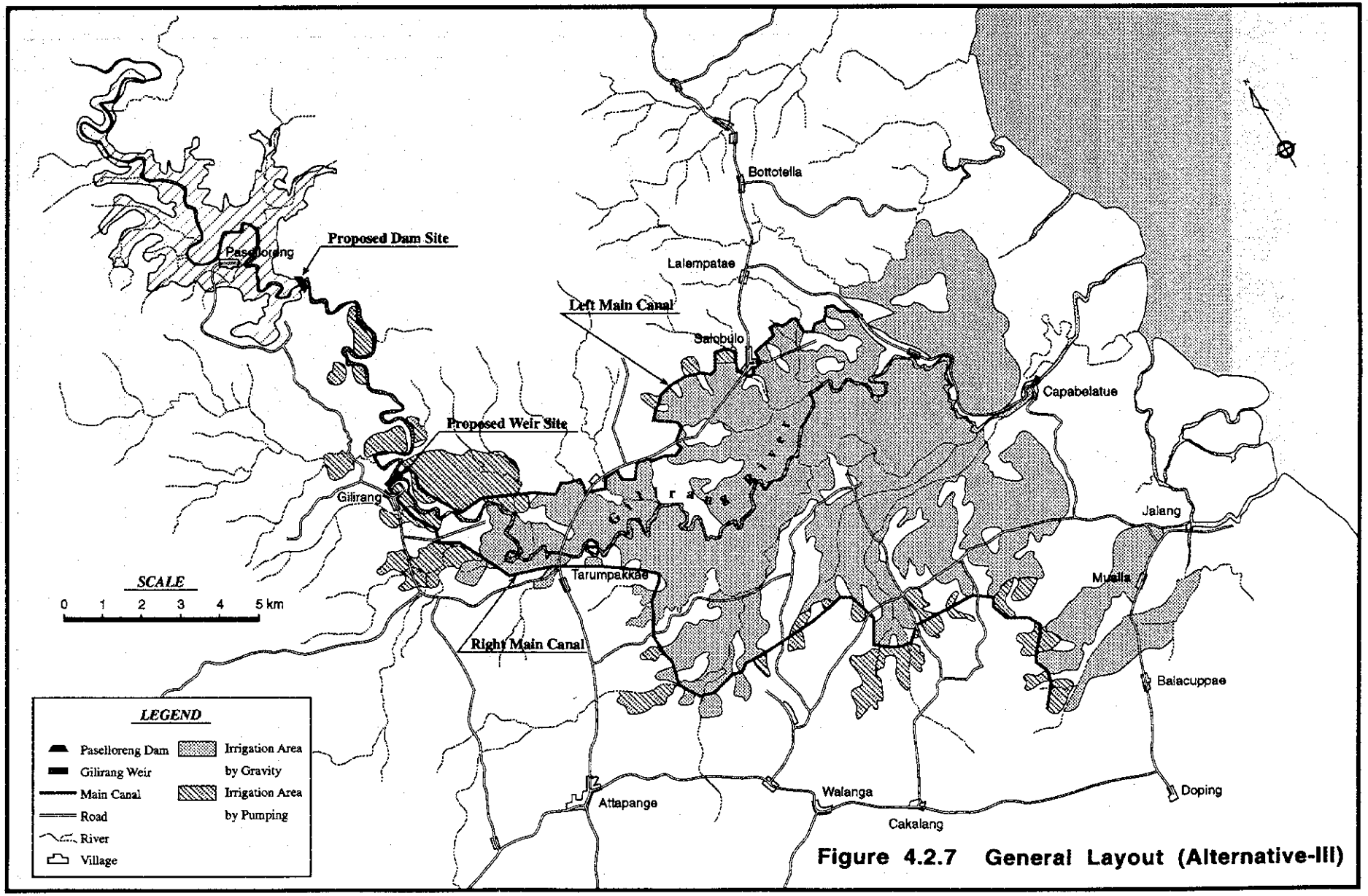


Figure 4.2.7 General Layout (Alternative-III)

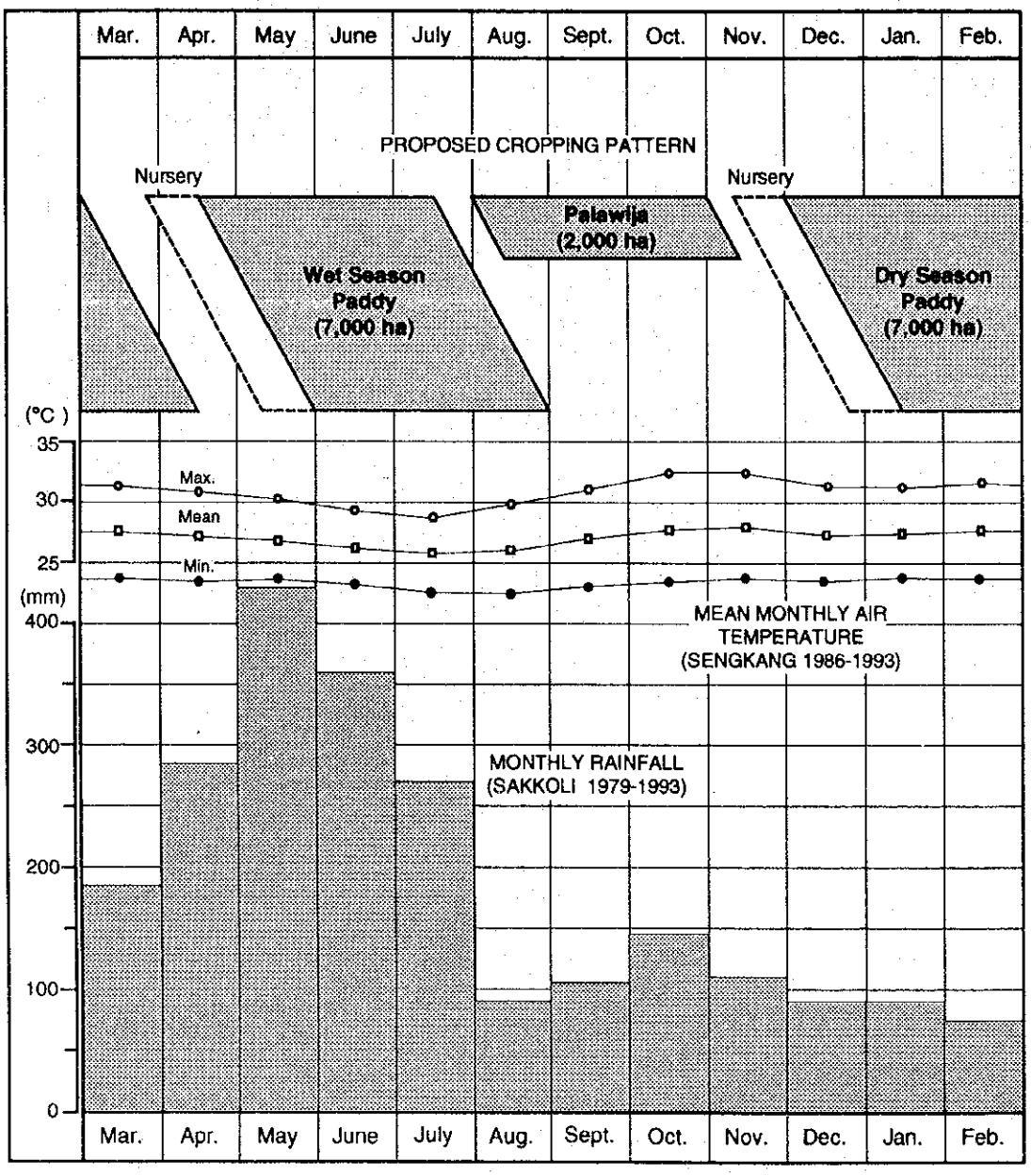


Figure 5.1.1 Proposed Cropping Pattern

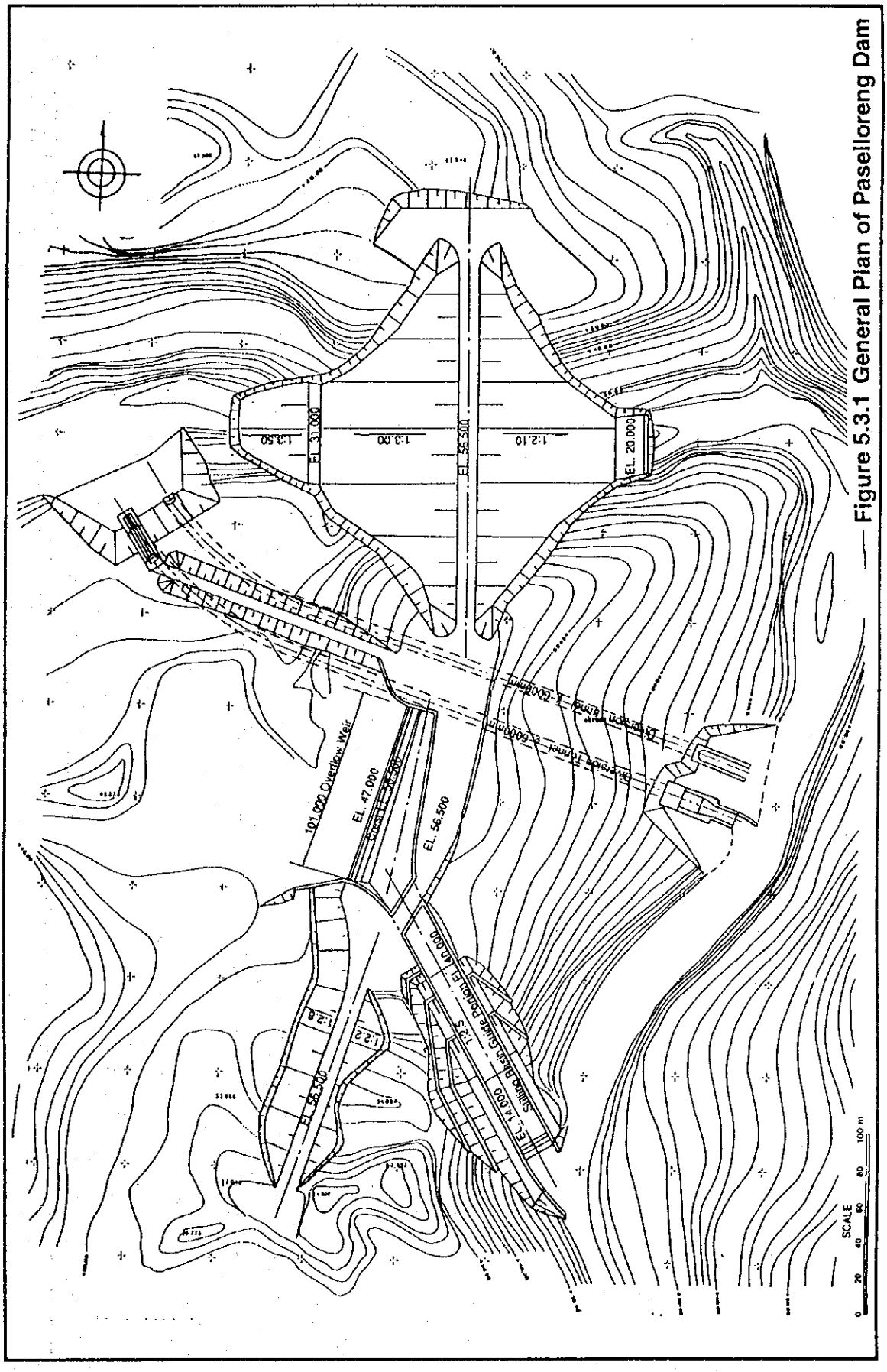
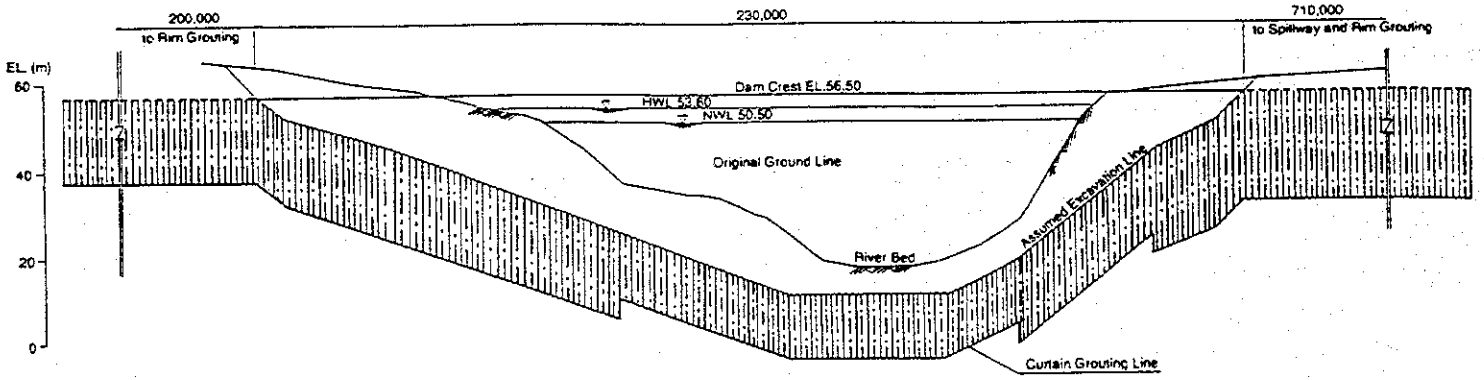
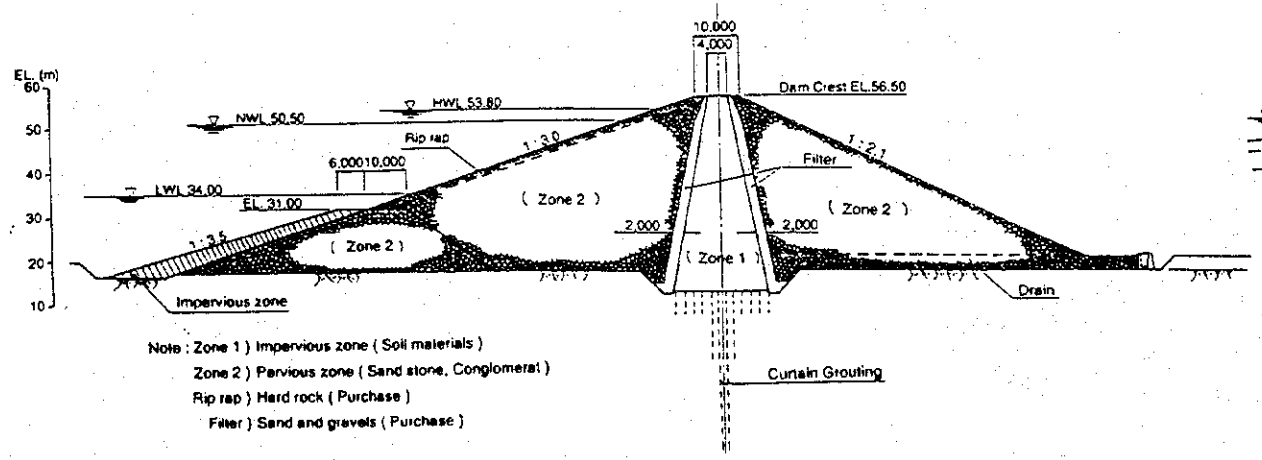


Figure 5.3.1 General Plan of Paselloreng Dam



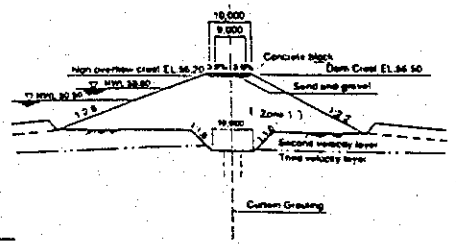
PROFILE OF MAIN DAM



Note : Zone 1) Impervious zone (Soil materials)
Zone 2) Pervious zone (Sand stone, Conglomerat)
Rip rap) Hard rock (Purchase)
Filter) Sand and gravels (Purchase)

SCALE
0 10 20 30 40 50 m

TYPICAL CROSS SECTION OF MAIN DAM



TYPICAL CROSS SECTION OF SADDLE DAM

Figure 5.3.2 Typical Cross Section of Paselloreng Dam

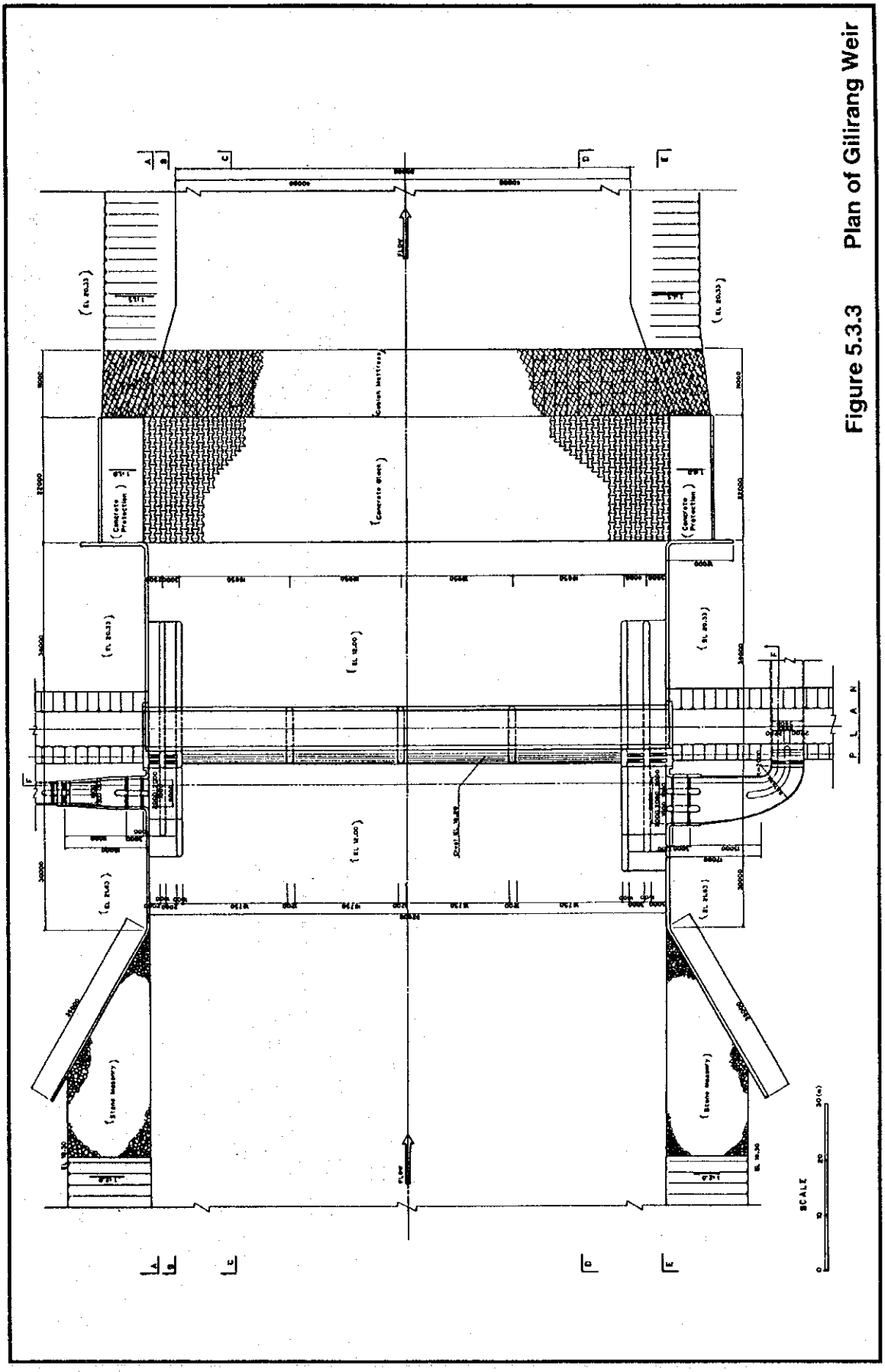


Figure 5.3.3 Plan of Gilirang Weir

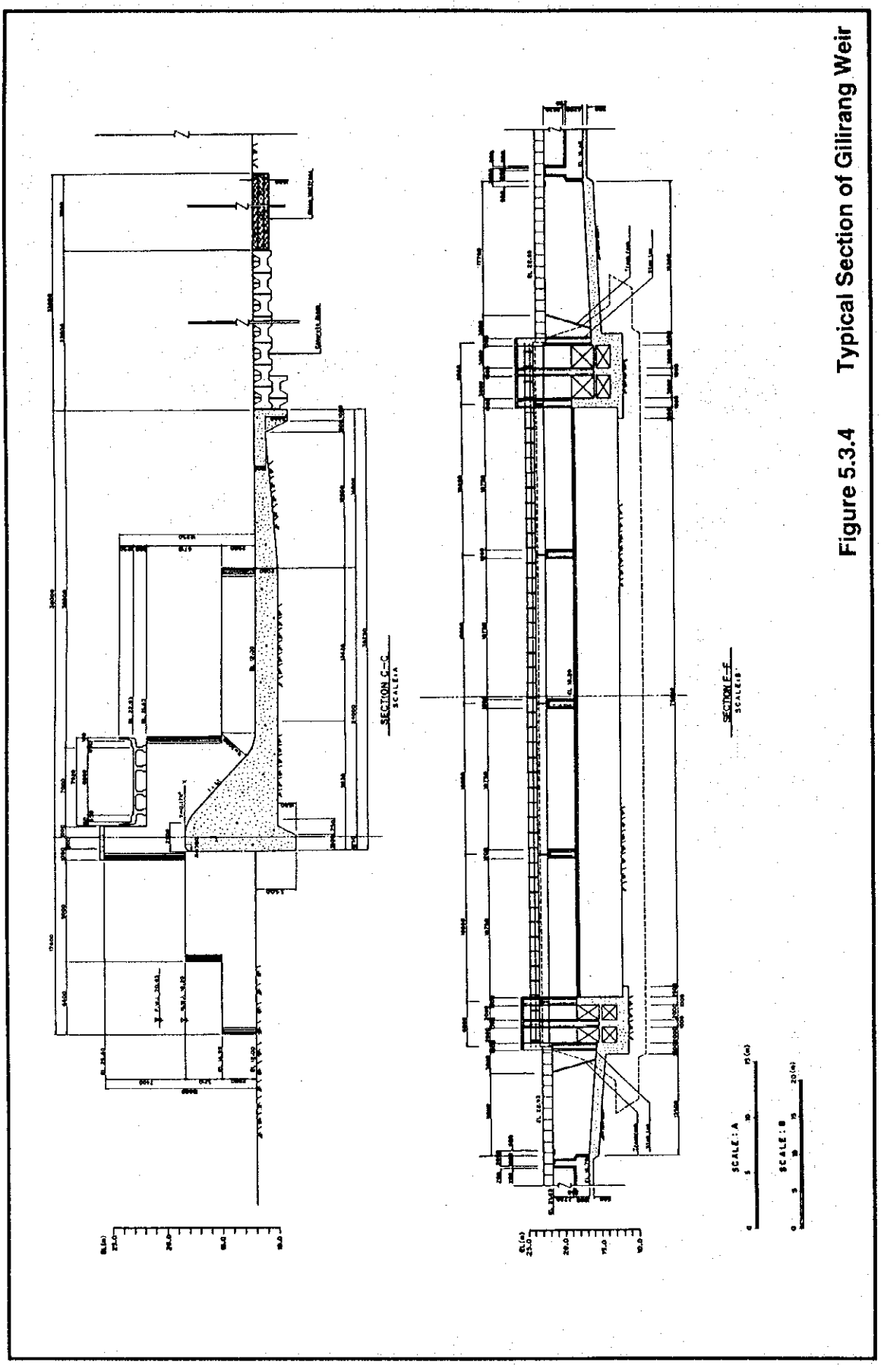
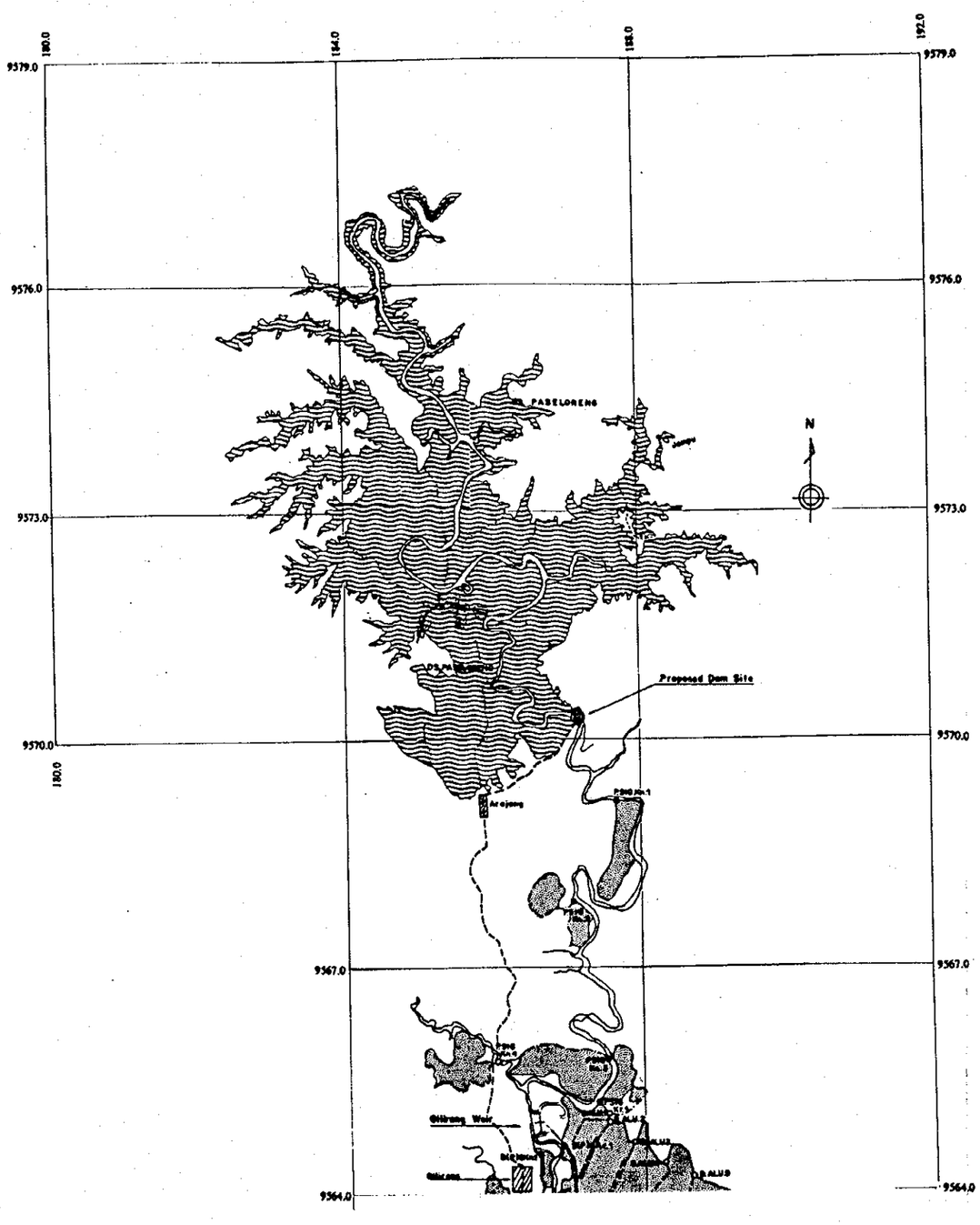
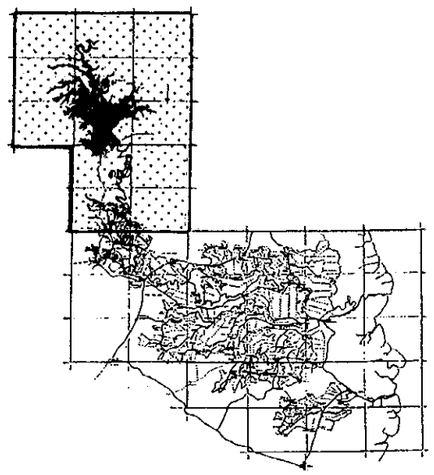


Figure 5.3.4 Typical Section of Gilirang Weir





LEGEND

- Main Irrigation Canal
- Secondary Irrigation Canal
- Tertiary Canal
- Proposed Major/Tertiary Drainage Canal
- Turnout for Gravity Irrigation
- Turnout for Pumping Irrigation
- Existing Road
- Proposed Road
- Irrigation Area by Gravity
- Irrigation Area by Pumping
- Natural River/Stream
- Reservoir and Gilirang Dam
- Gilirang Weir
- Village

Figure 5.4.1 Layout of Irrigation System (1/2)

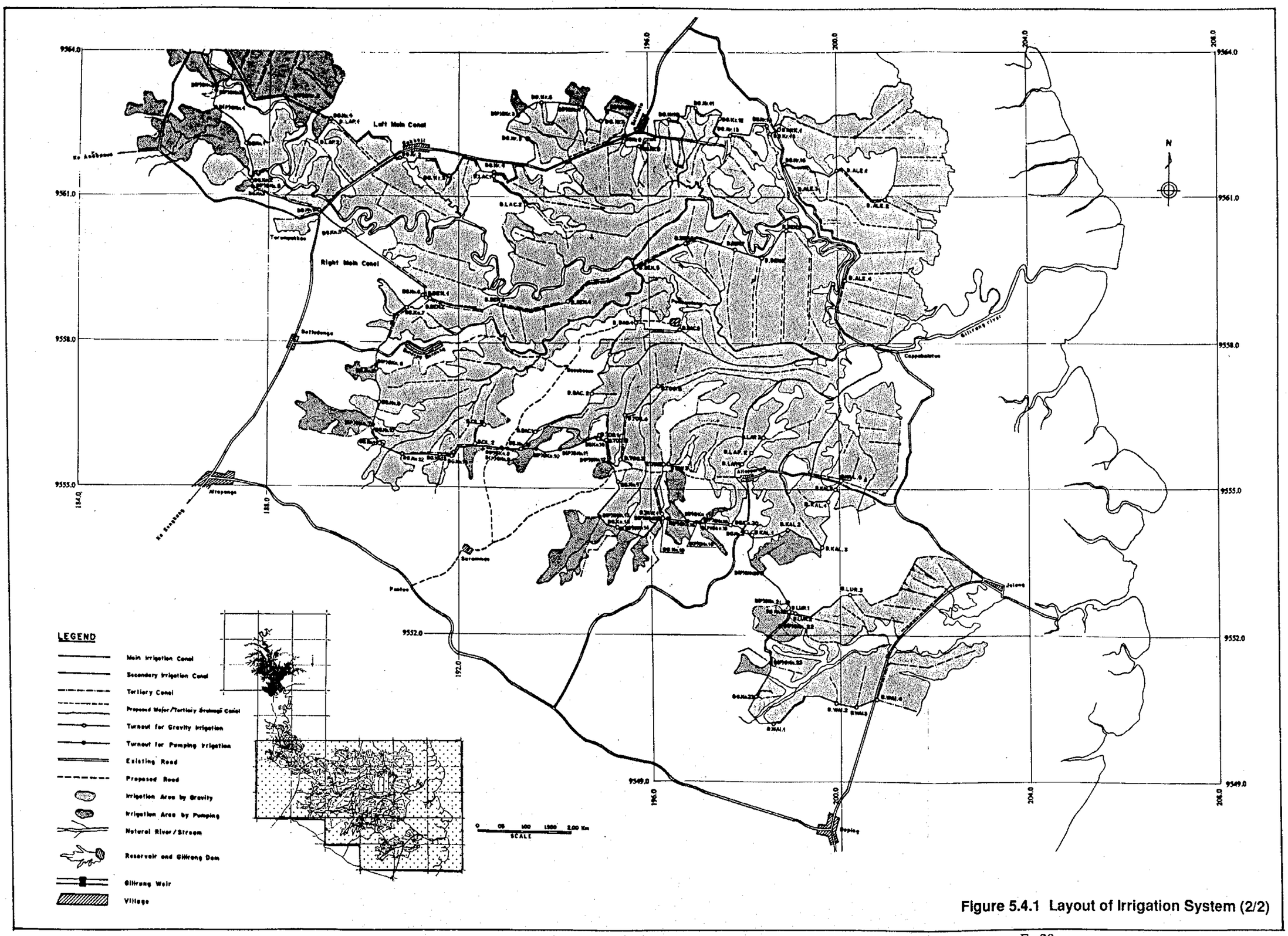


Figure 5.4.1 Layout of Irrigation System (2/2)

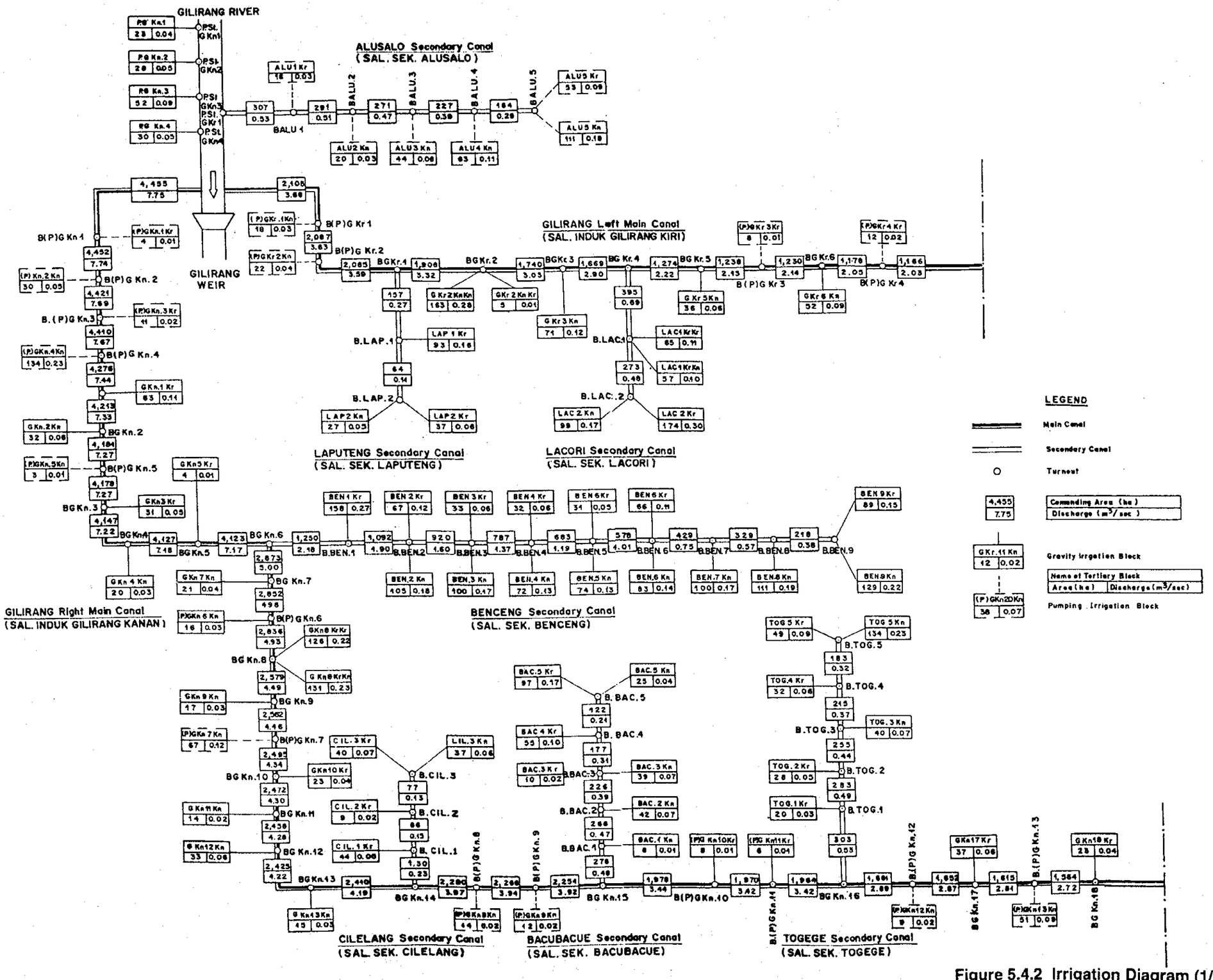


Figure 5.4.2 Irrigation Diagram (1/2)

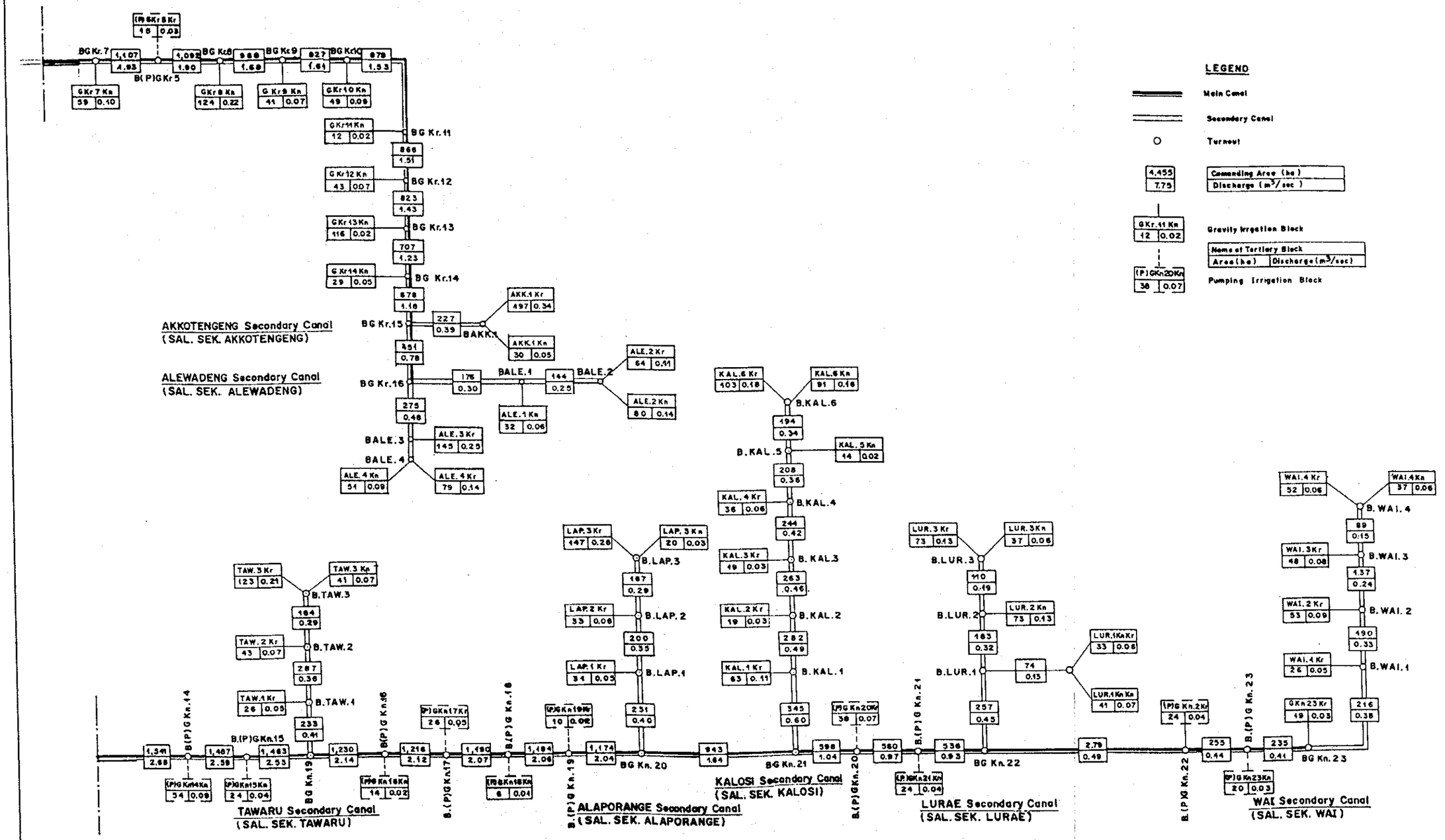
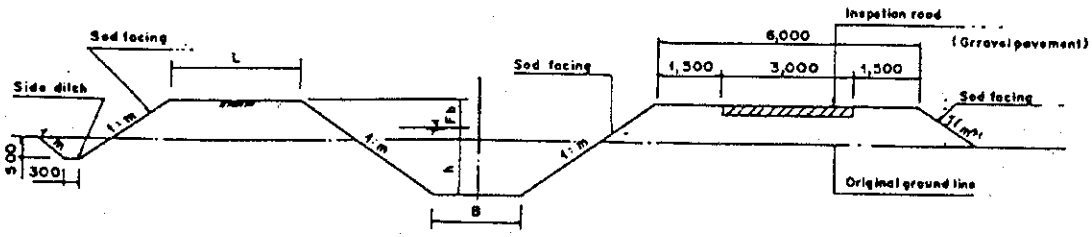
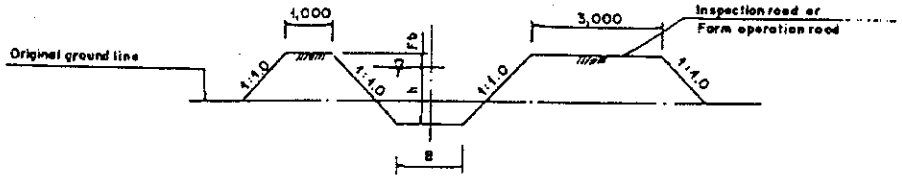


Figure 5.4.2 Irrigation Diagram (2/2)

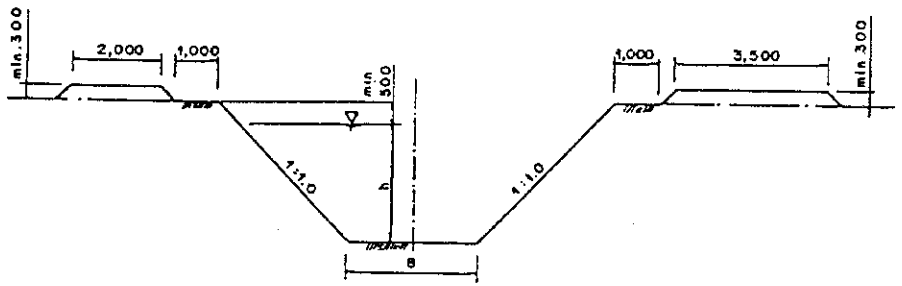
TYPICAL CROSS SECTION MAIN & SECONDARY IRRIGATION CANAL



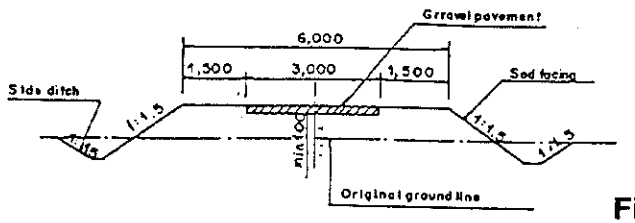
TYPICAL CROSS SECTION OF TERTIARY IRRIGATION CANAL



TYPICAL CROSS SECTION OF DRAINAGE CANAL



TYPICAL CROSS SECTION OF FARM ROAD



DIMESION TABLE OF CANAL AND FARM ROAD

Discharge Q (m^3/sec)	Side Slope 1 : m	Free Board F B (mm)	Width of Bank L Main C. (mm)	Width of Bank L Secondary C. (mm)	Ratio B / h
0 < 0.3	1.0	300	2 300	1500	1.0
0.30 ≦ Q < 0.8	1.0	300	2300	1500	1.0 ~ 1.2
0.80 ≦ Q < 1.00	1.0	300	2300	1500	1.2 ~ 1.5
1.00 ≦ Q < 1.80	1.0	300	2300	1500	1.5 ~ 1.8
1.80 ≦ Q < 5.00	1.5	500	2500	2000	1.8 ~ 2.9
5.00 ≦ Q < 10.00	1.5	700	2500	2000	2.9 ~ 3.9
10.00 ≦ Q < 15.00	1.5	900	2500	2000	3.9 ~ 4.9
15.00 ≦ Q < 40.00	1.5	1000	2500	2000	4.9 ~ 8.0

Figure 5.4.3 Typical Cross Section of Canal and Road

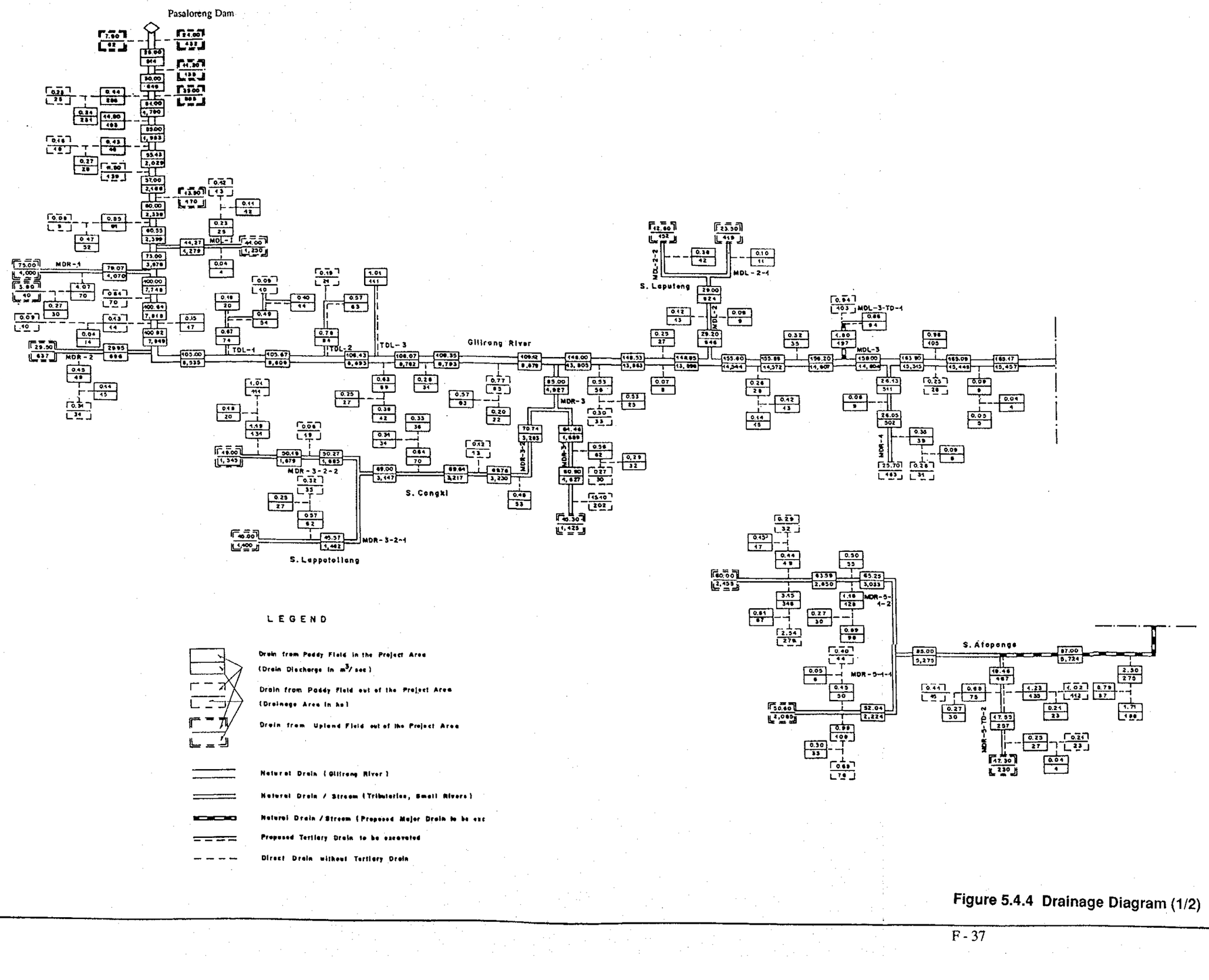


Figure 5.4.4 Drainage Diagram (1/2)

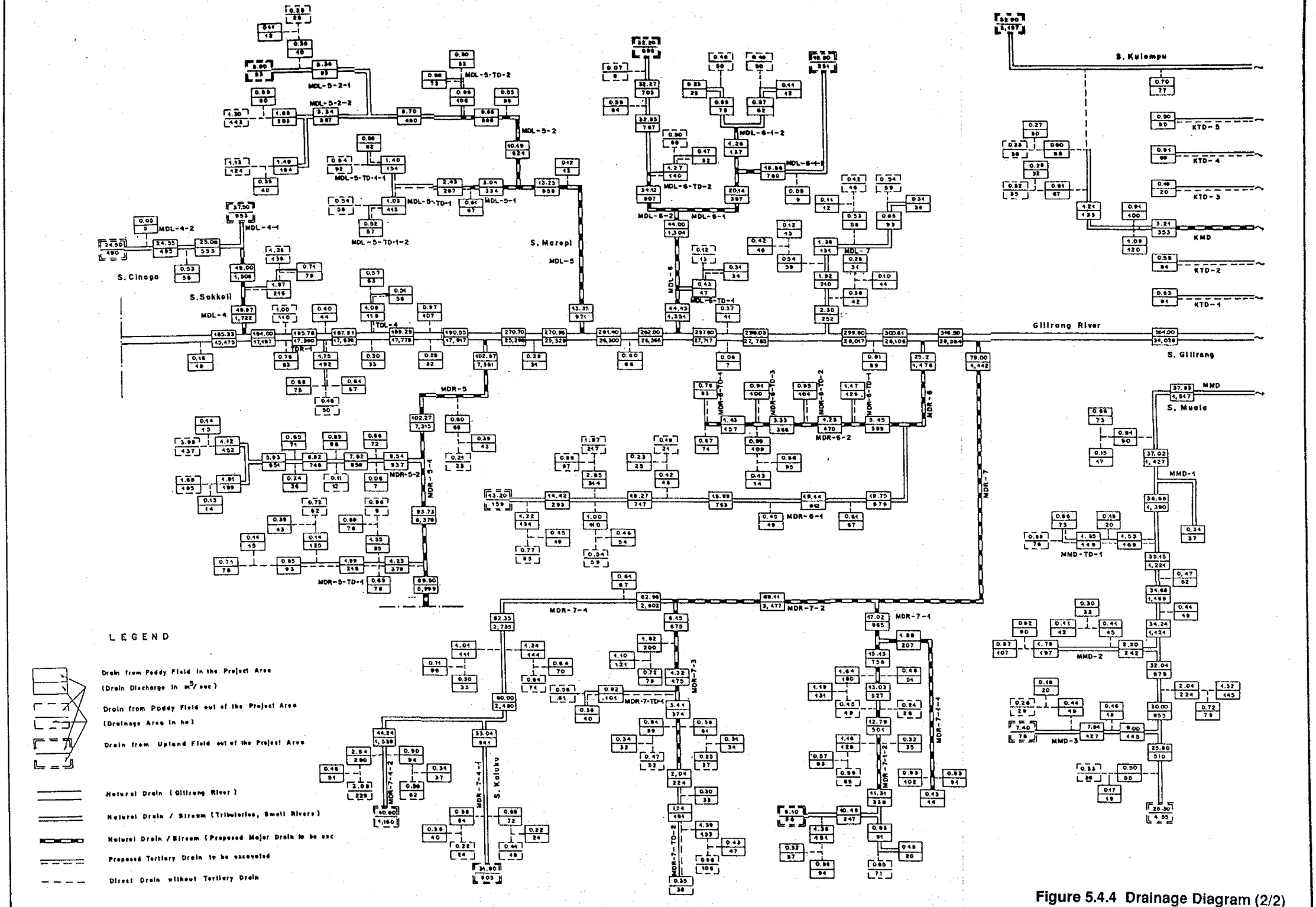


Figure 5.4.4 Drainage Diagram (2/2)

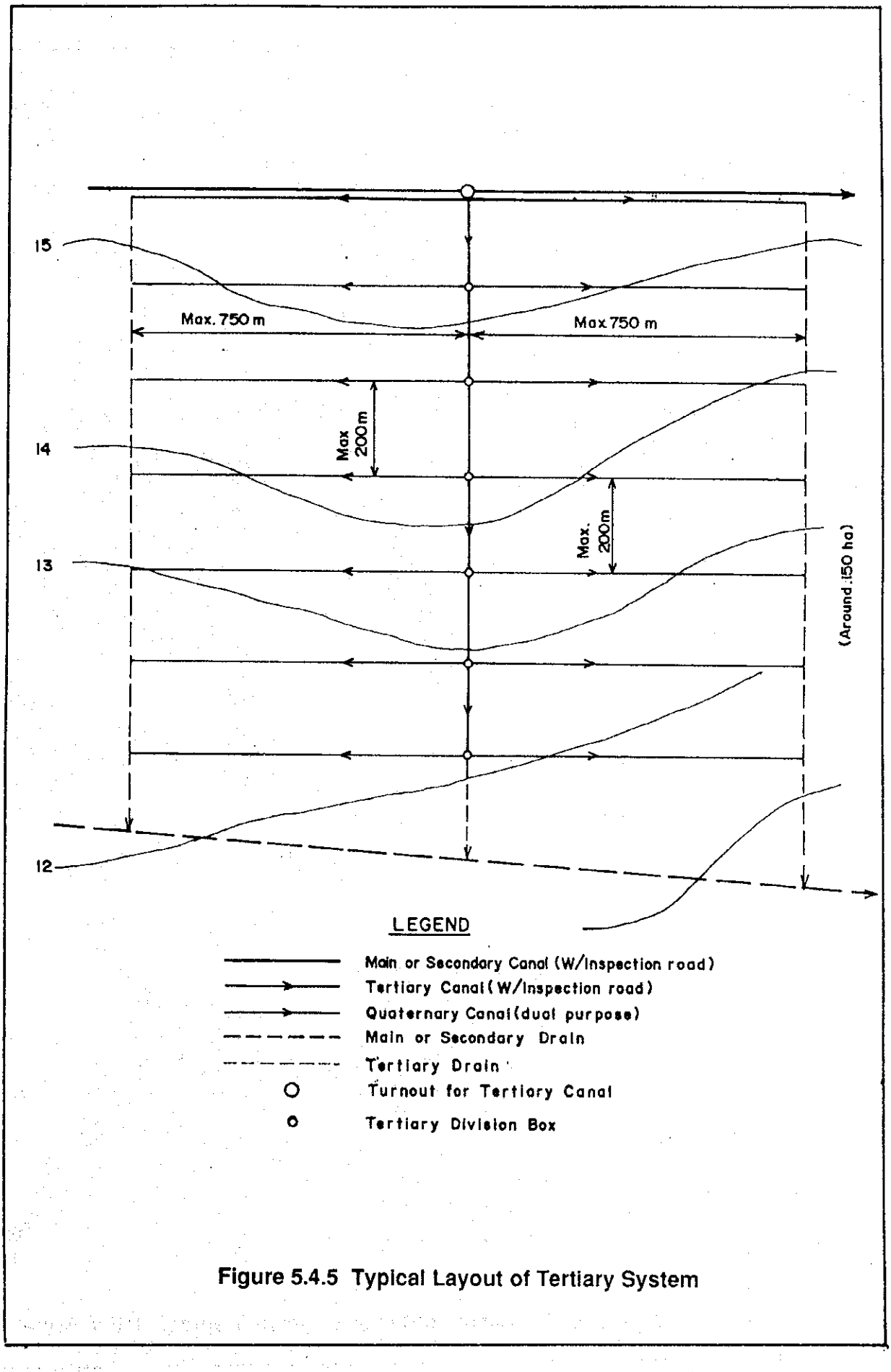


Figure 5.4.5 Typical Layout of Tertiary System

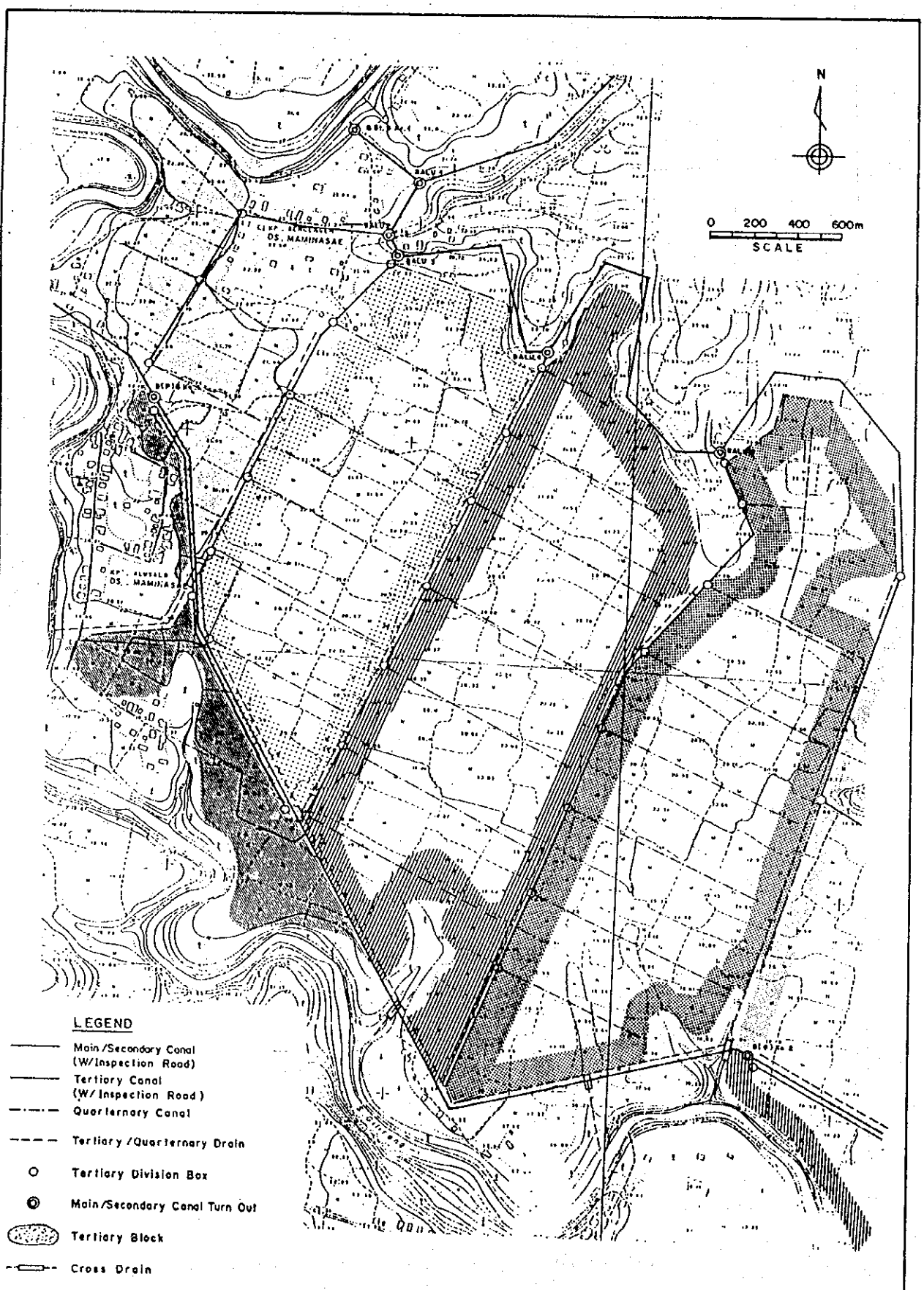


Figure 5.4.6 Layout of Tertiary System Representative Area-1

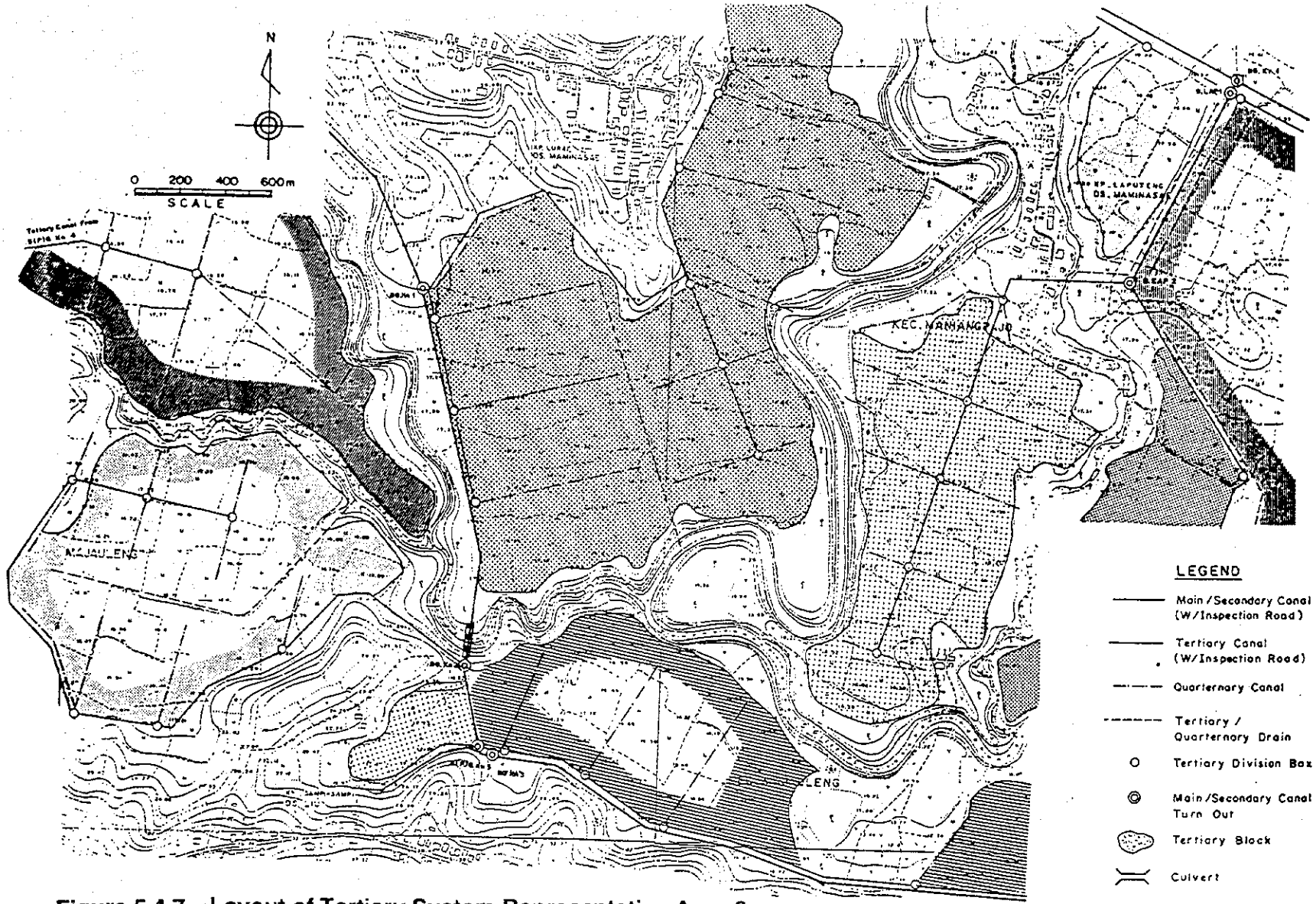


Figure 5.4.7 Layout of Tertiary System Representative Area-2

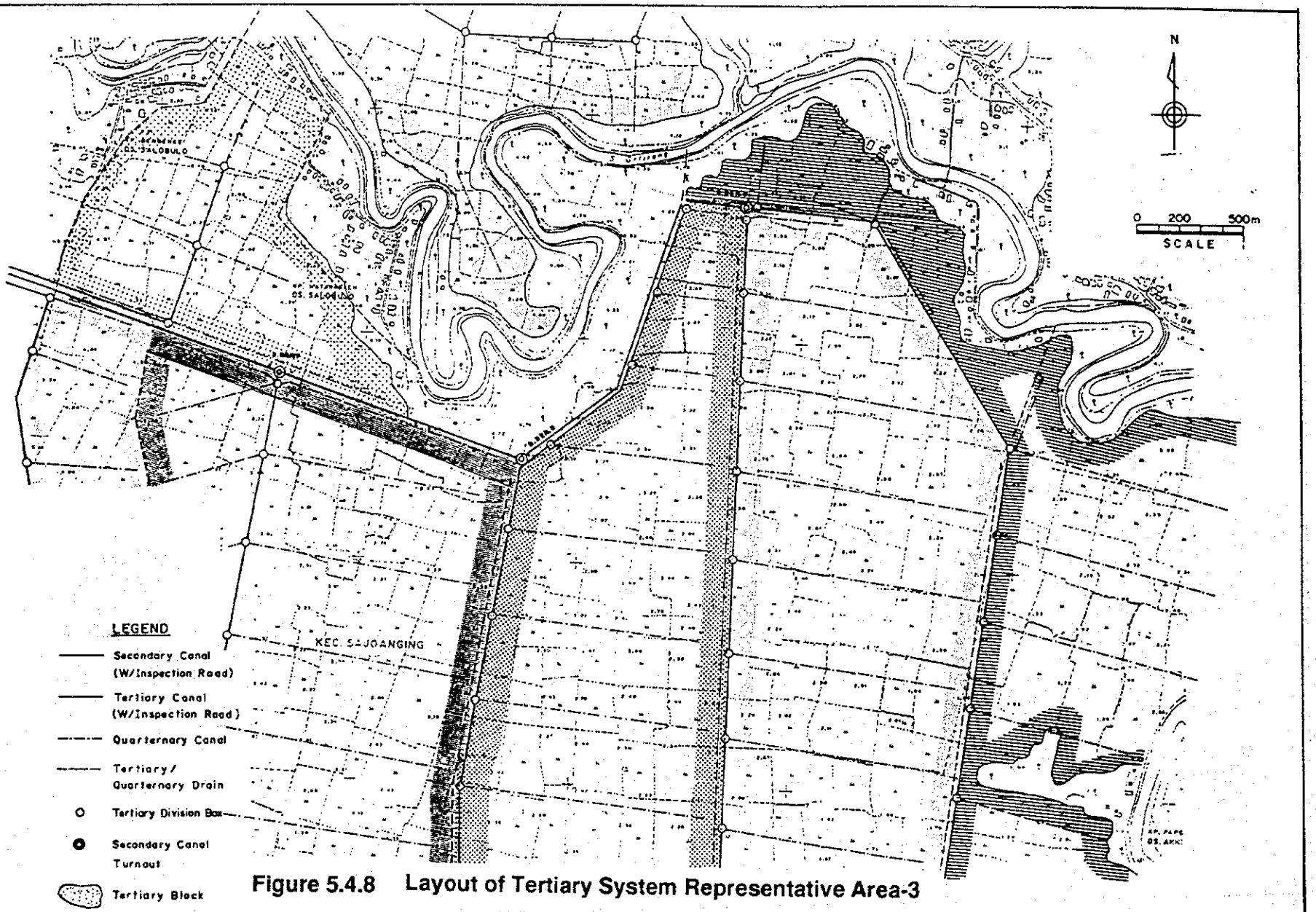
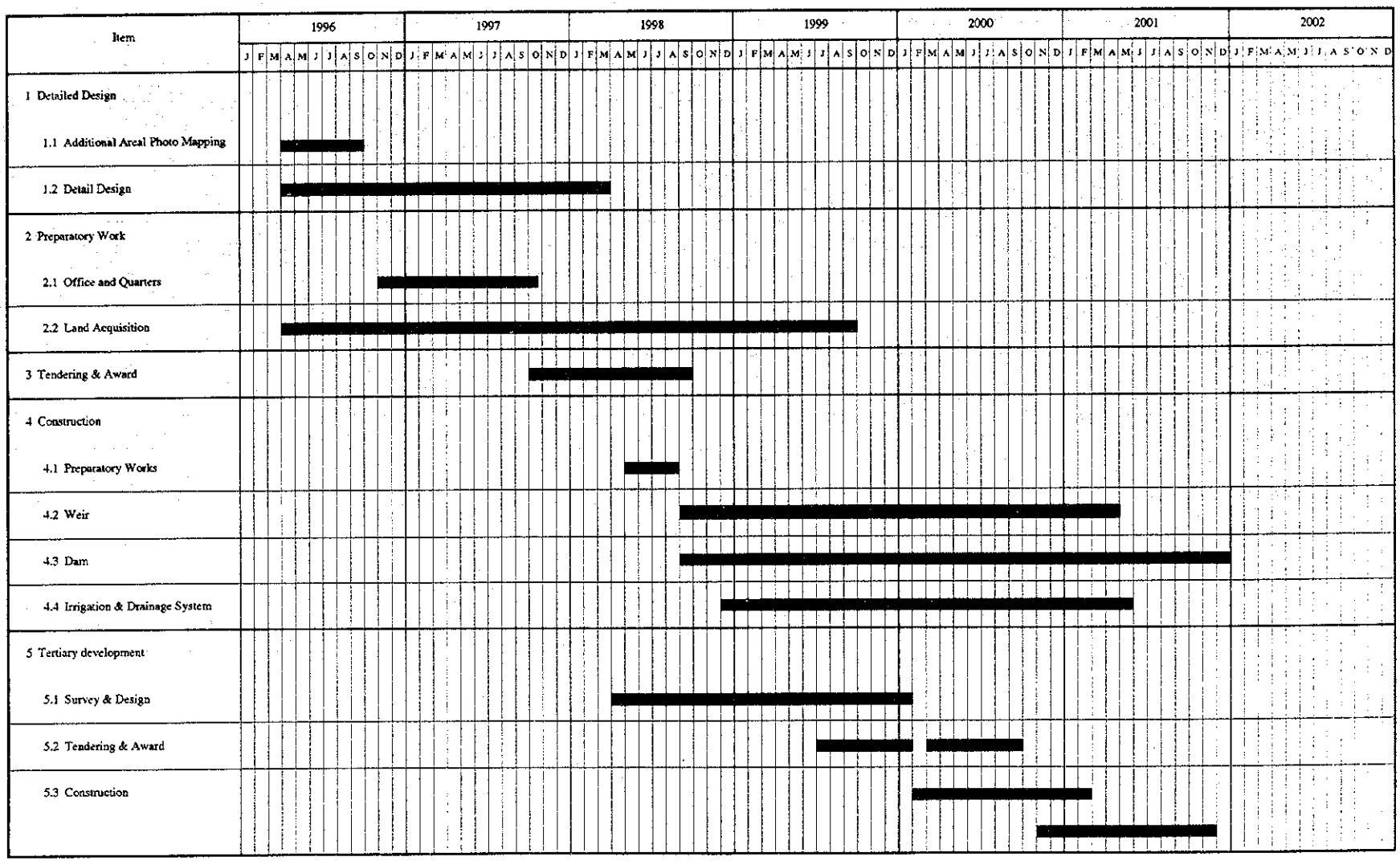


Figure 5.4.8 Layout of Tertiary System Representative Area-3

Figure 5.5.1 Implementation Schedule



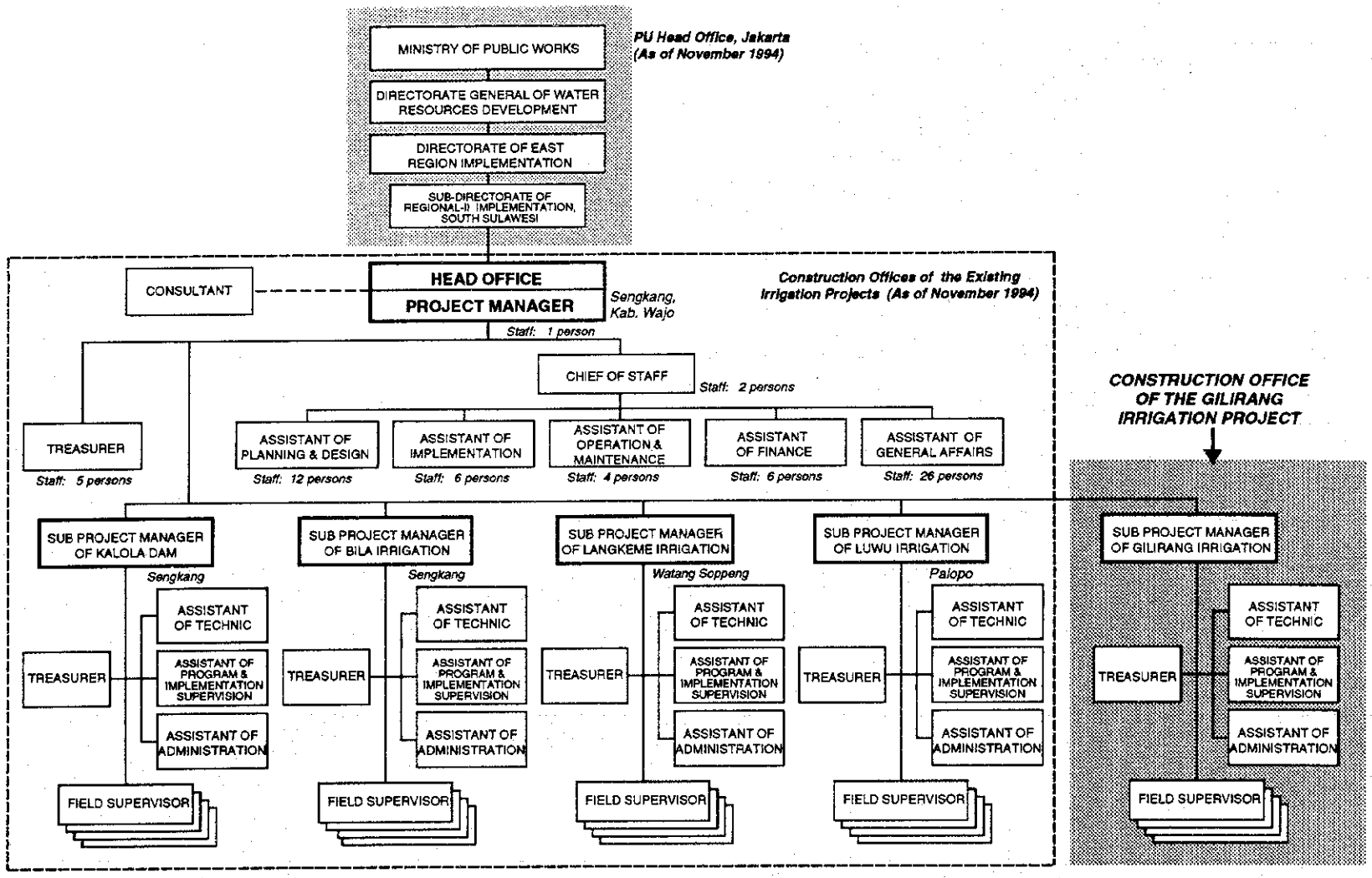


Figure 6.1.1 Organizational Structure of Construction Office of the Gilirang Irrigation Project

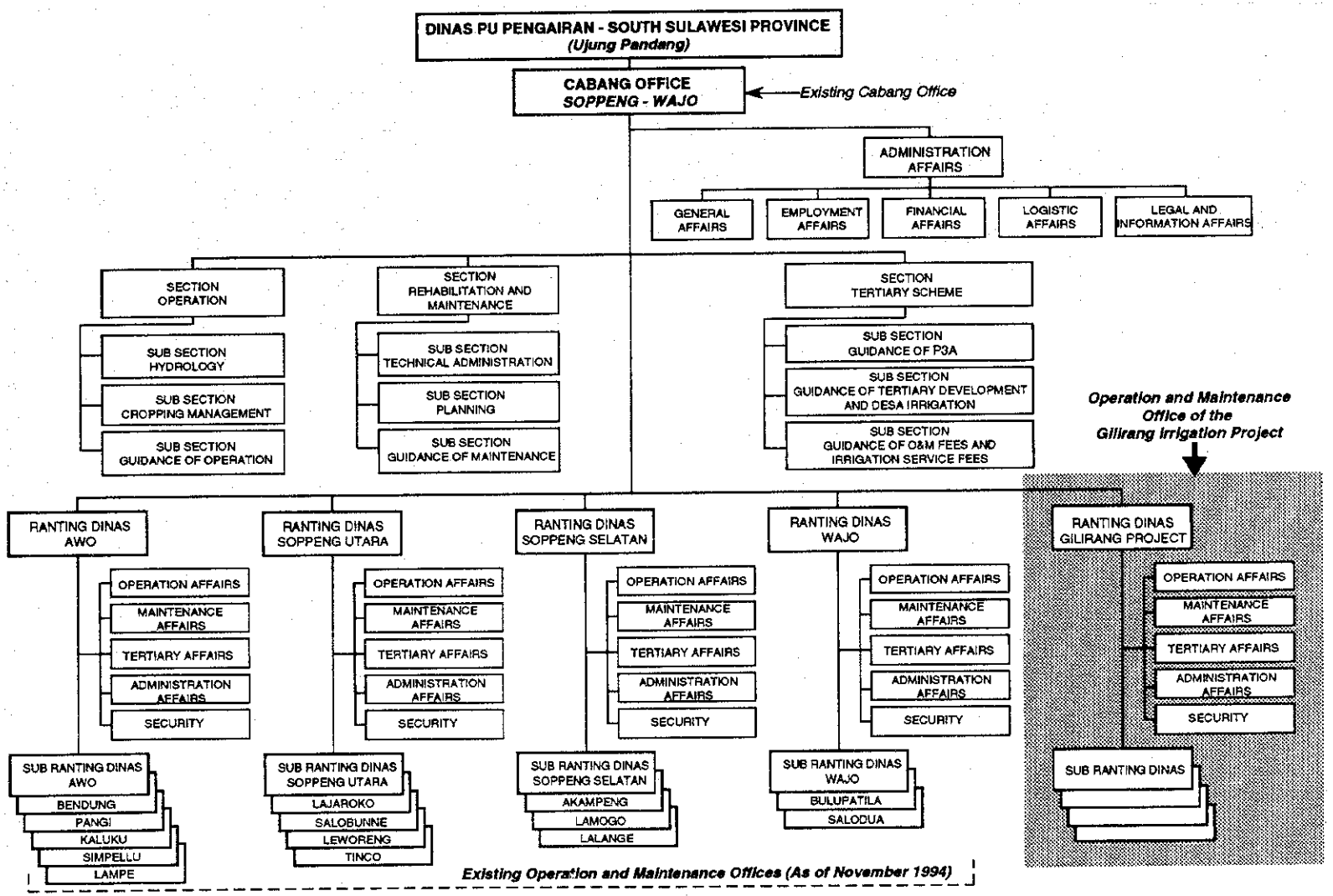


Figure 6.2.1 Organizational Structure for Existing and Proposed Operation and Maintenance Office

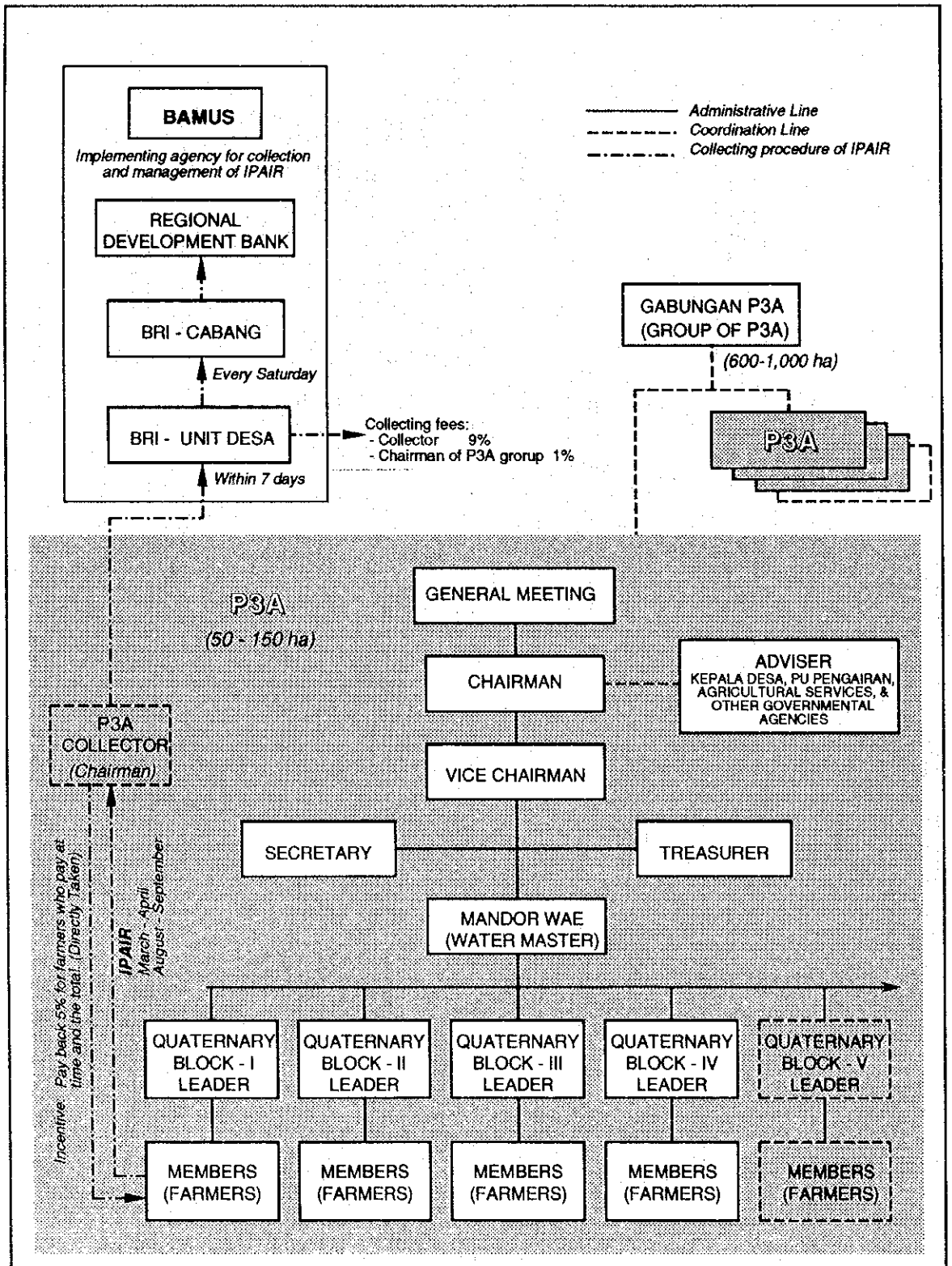


Figure 6.3.1 Organizational Structure of Water User's Association (P3A) and Collecting Procedure of IPAIR