

Figure 6-13 IMPLEMENTATION PLAN OF WATER SUPPLY PROJECTS FOR METRO MANILA (SCENARIO-2)

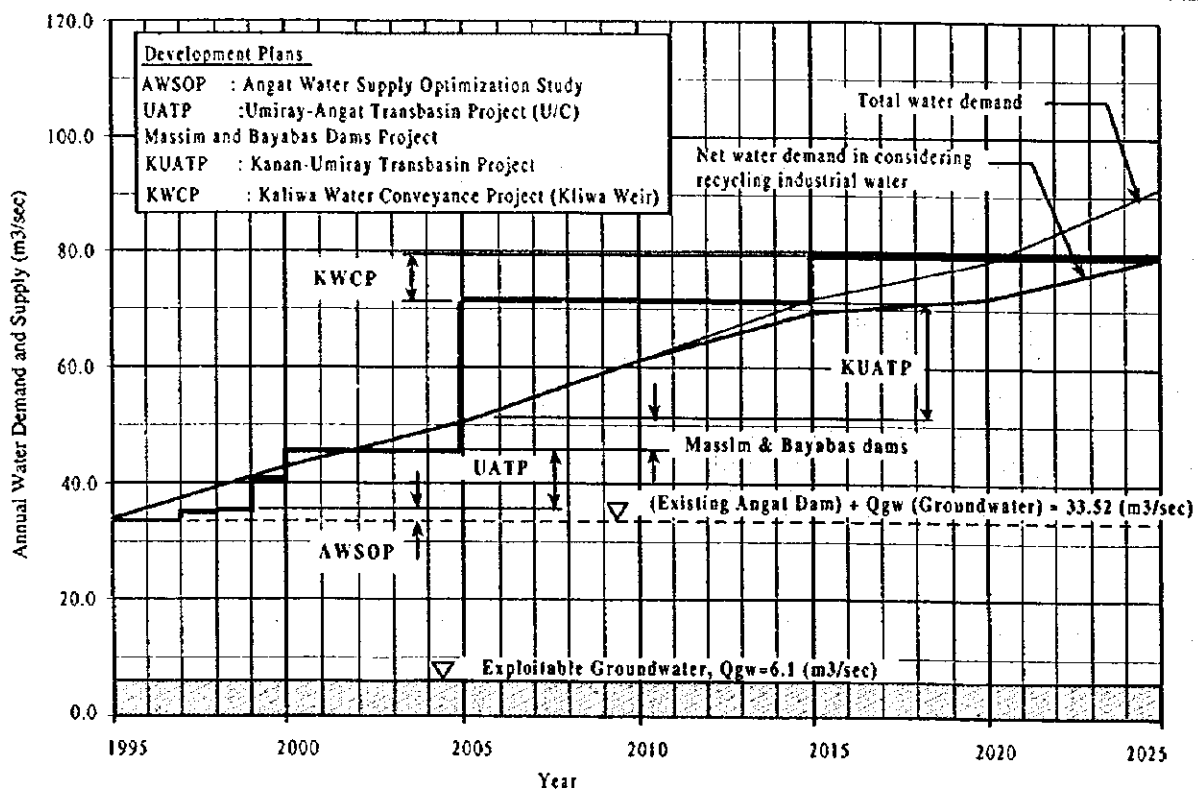


Figure 6-14 IMPLEMENTATION PLAN OF WATER SUPPLY PROJECTS FOR METRO MANILA (SCENARIO-3)

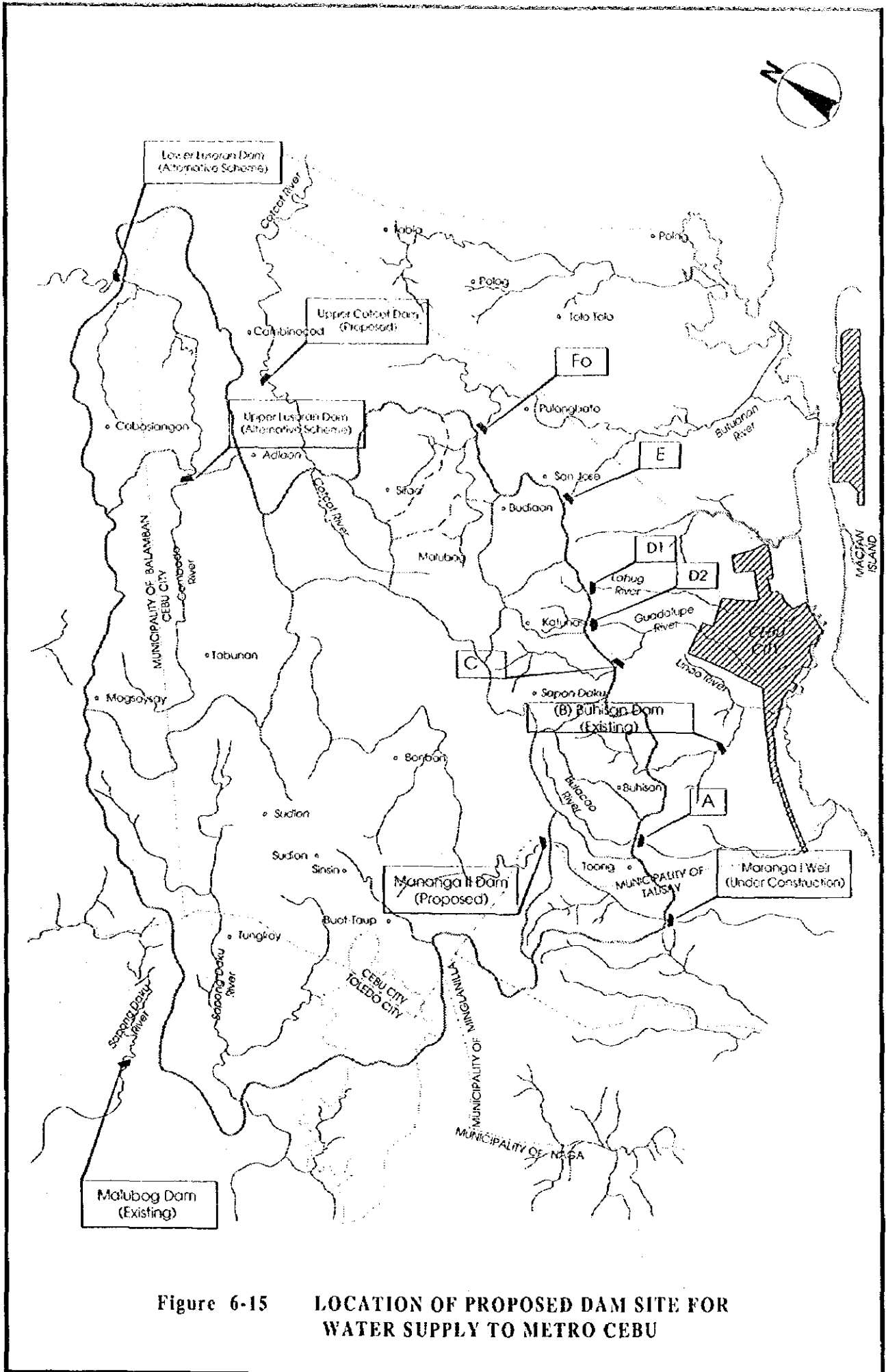


Figure 6-15 LOCATION OF PROPOSED DAM SITE FOR WATER SUPPLY TO METRO CEBU

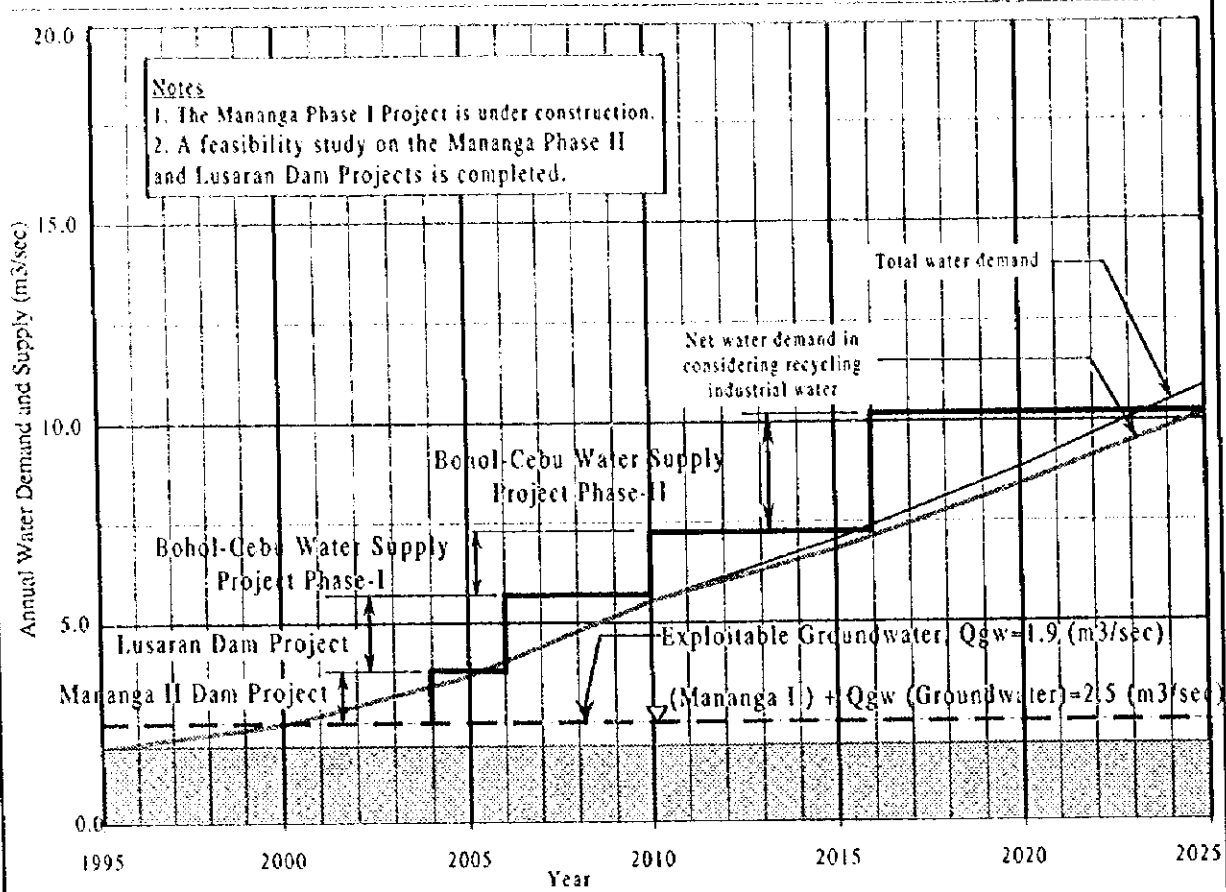


Figure 6-16 IMPLEMENTATION PLAN OF WATER SUPPLY PROJECTS FOR METRO CEBU (SCENARIO-1)

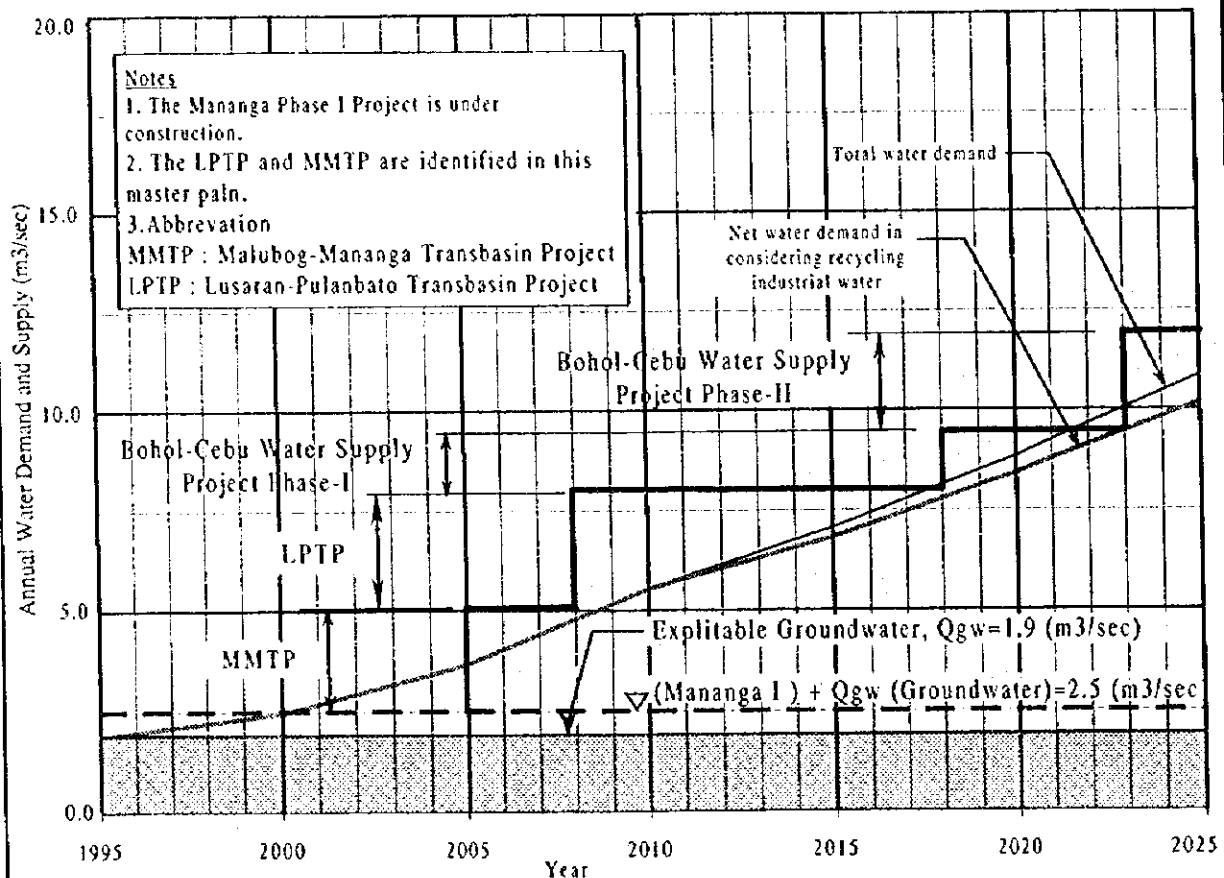
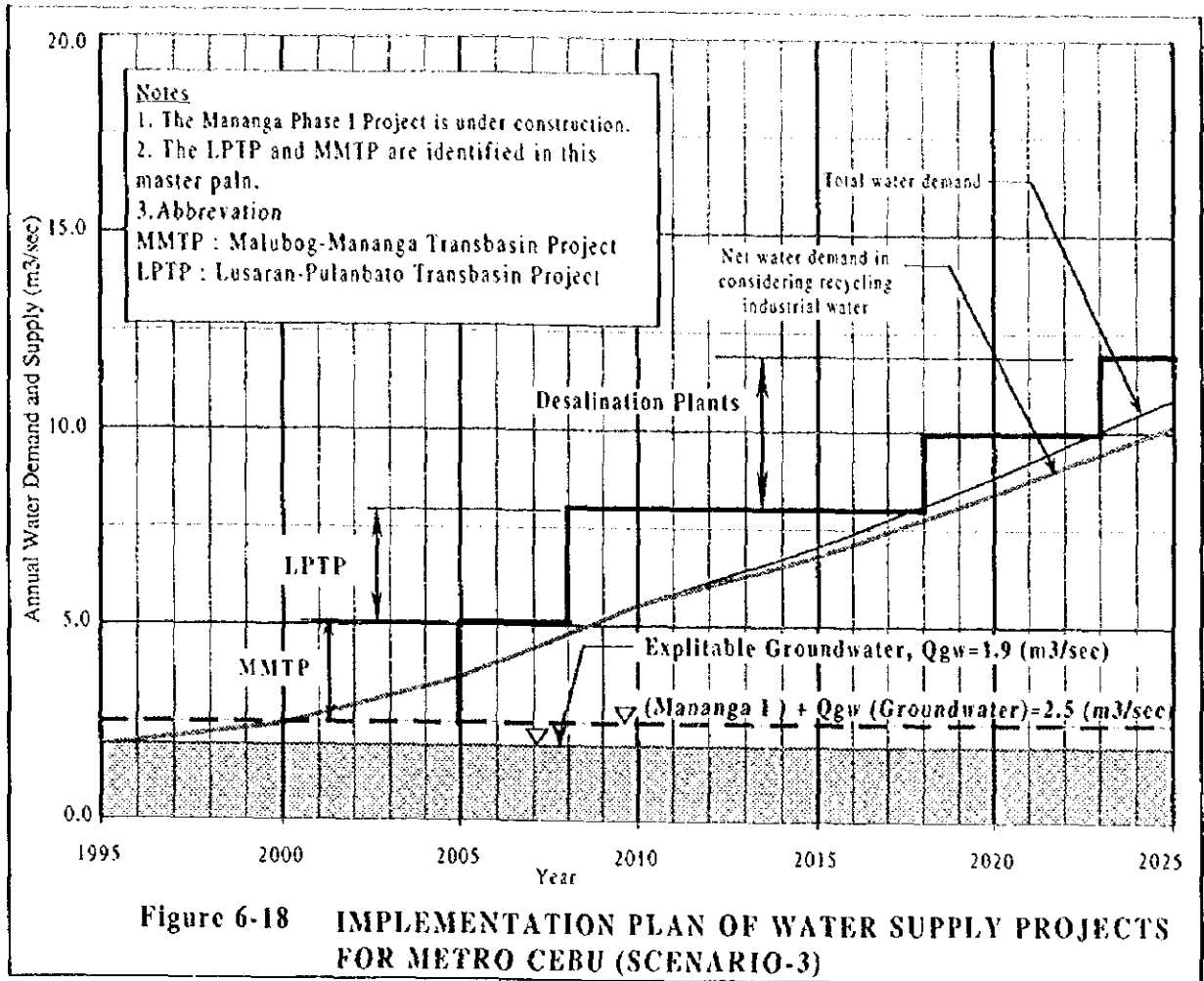
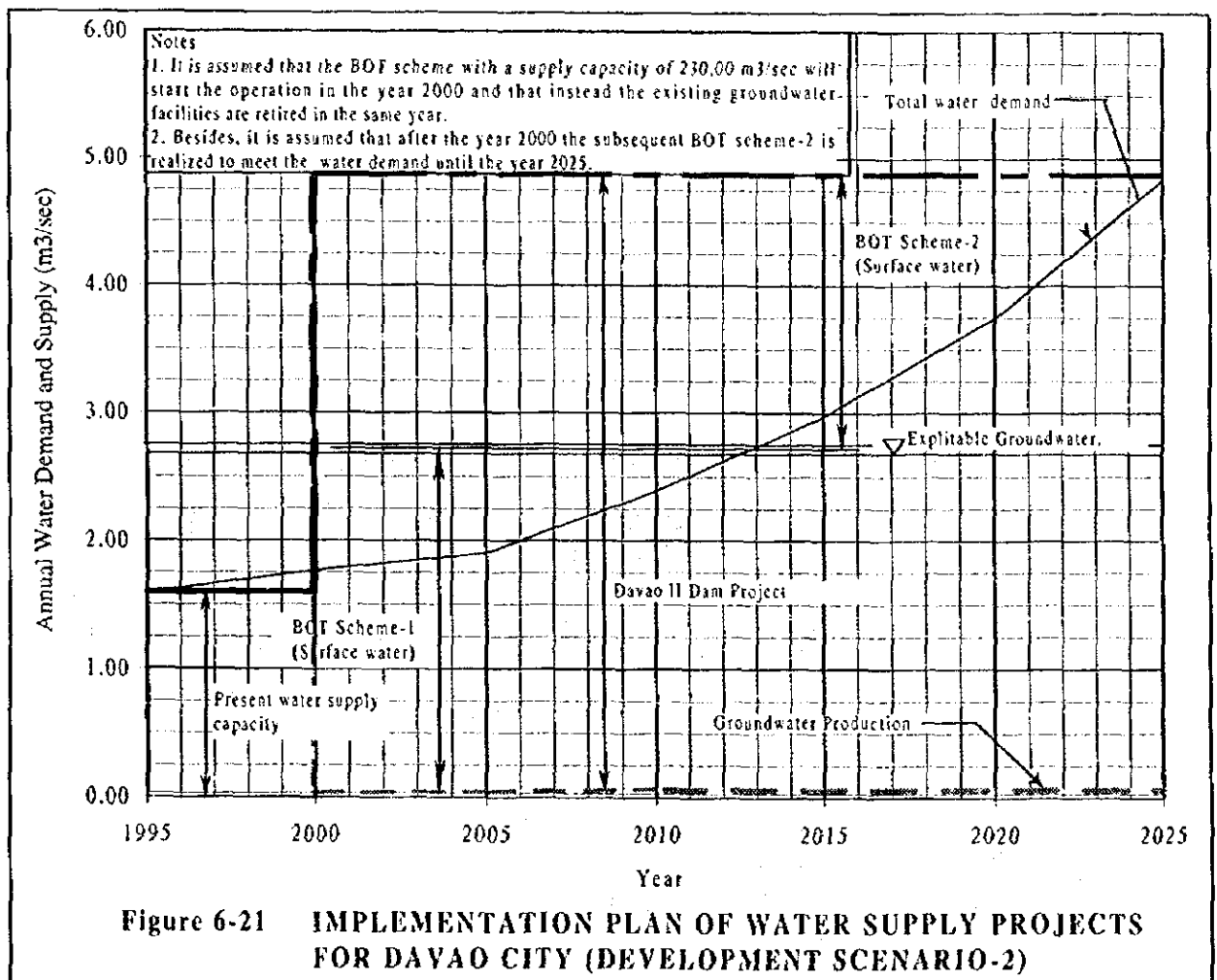
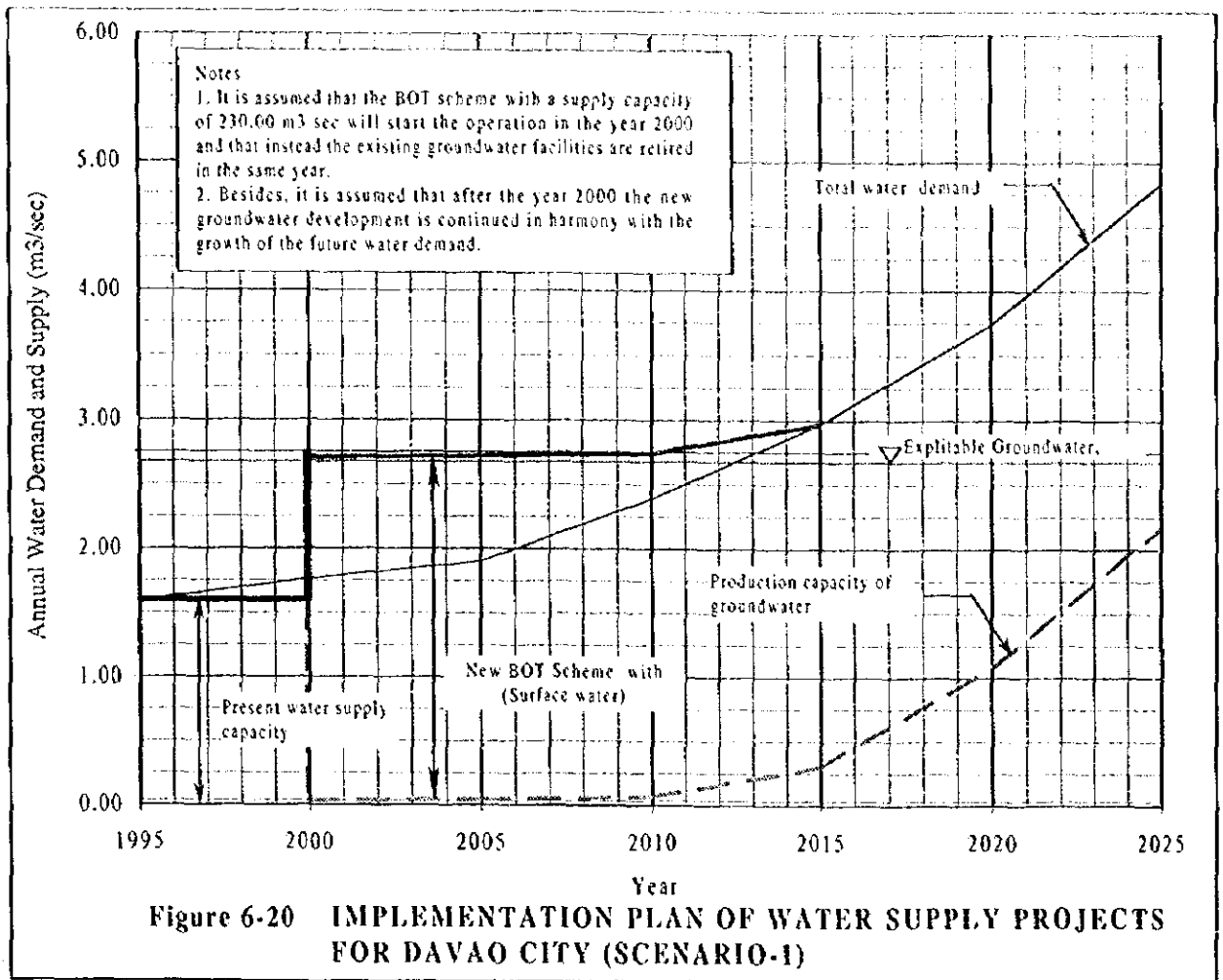


Figure 6-17 IMPLEMENTATION PLAN OF WATER SUPPLY PROJECTS FOR METRO CEBU (SCENARIO-2)







LEGEND :

- - - - - : Boundary of Water Supply Area
- ⬡ : Zone Number of Water Supply area
- : Spring
- : Reservoir
- ▭ : Weir
- ⬆ : Rain Basin
- ▶ : Water Supply Pipe Line

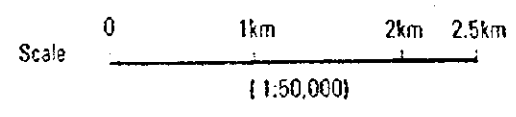
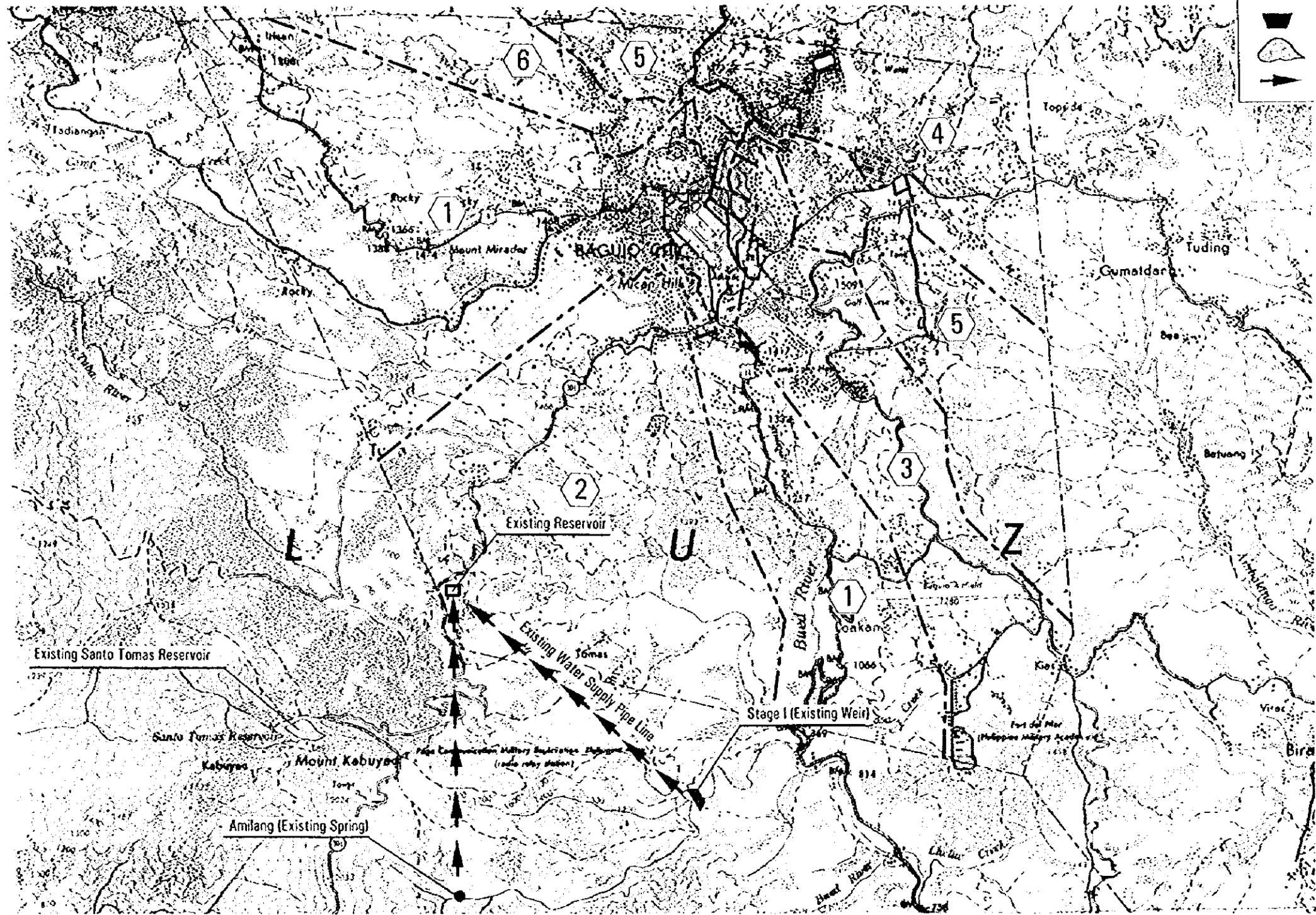


Figure WATER SUPPLY DISTRICTS IN BAGUIO CITY

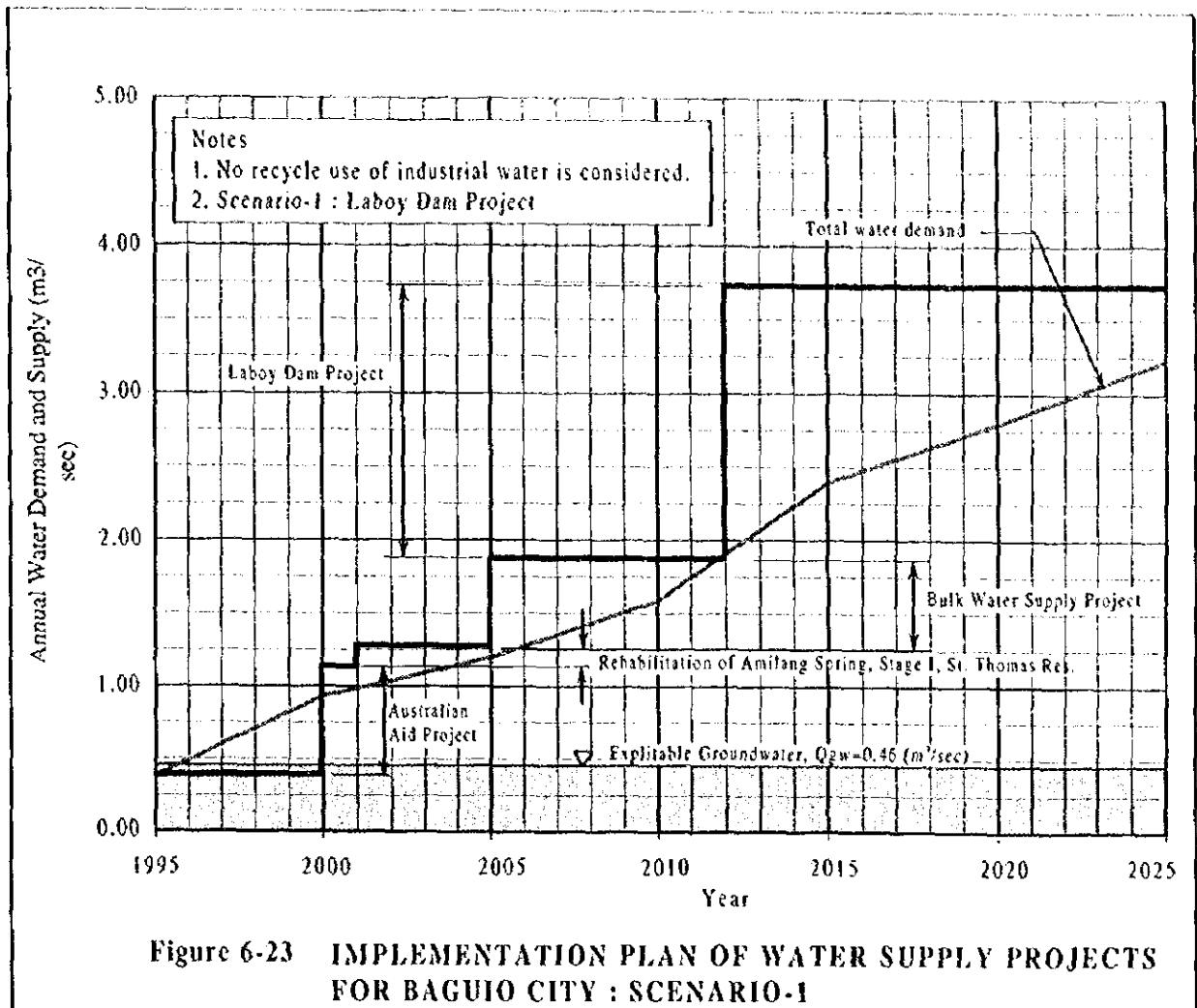


Figure 6-23 IMPLEMENTATION PLAN OF WATER SUPPLY PROJECTS FOR BAGUIO CITY : SCENARIO-1

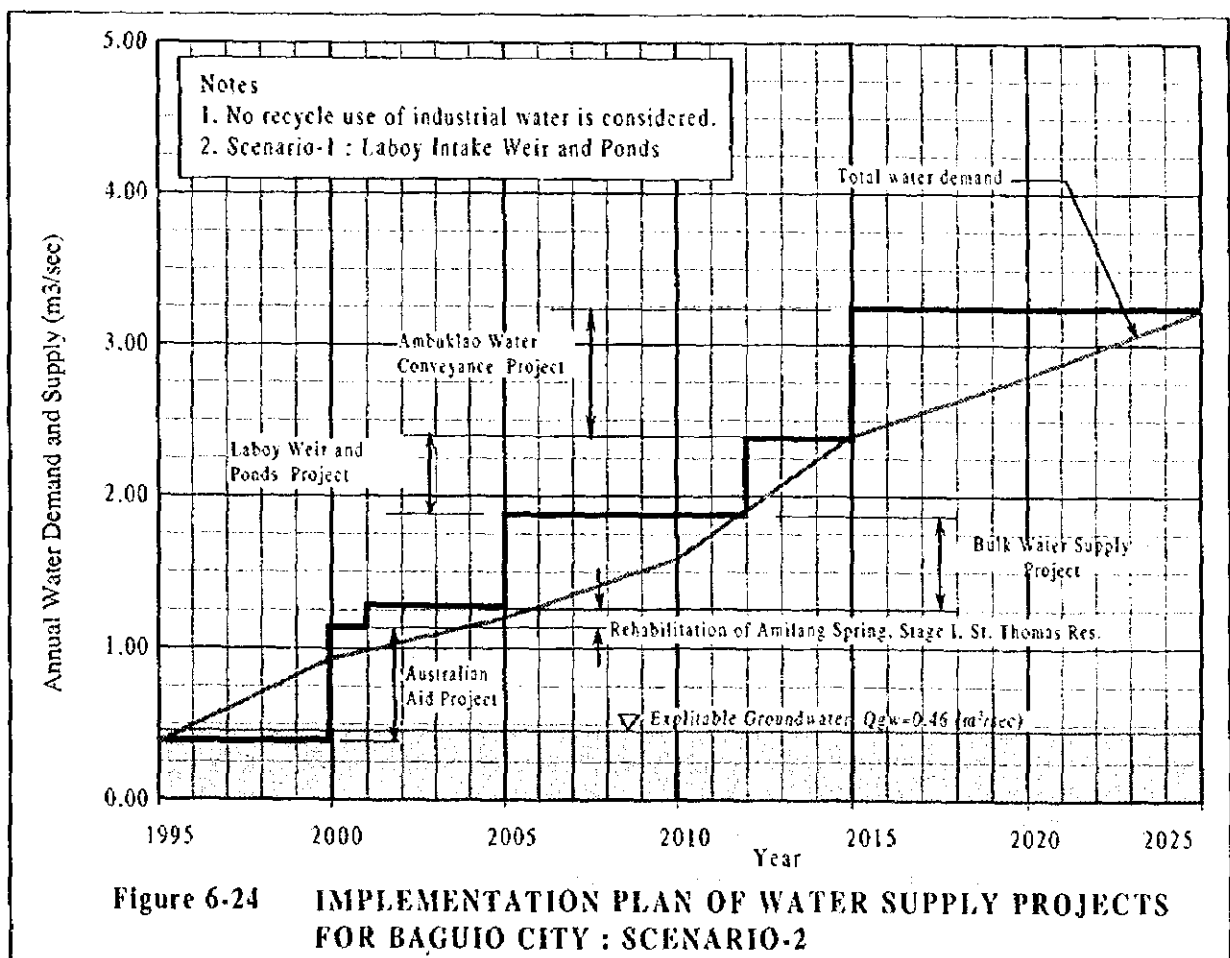


Figure 6-24 IMPLEMENTATION PLAN OF WATER SUPPLY PROJECTS FOR BAGUIO CITY : SCENARIO-2

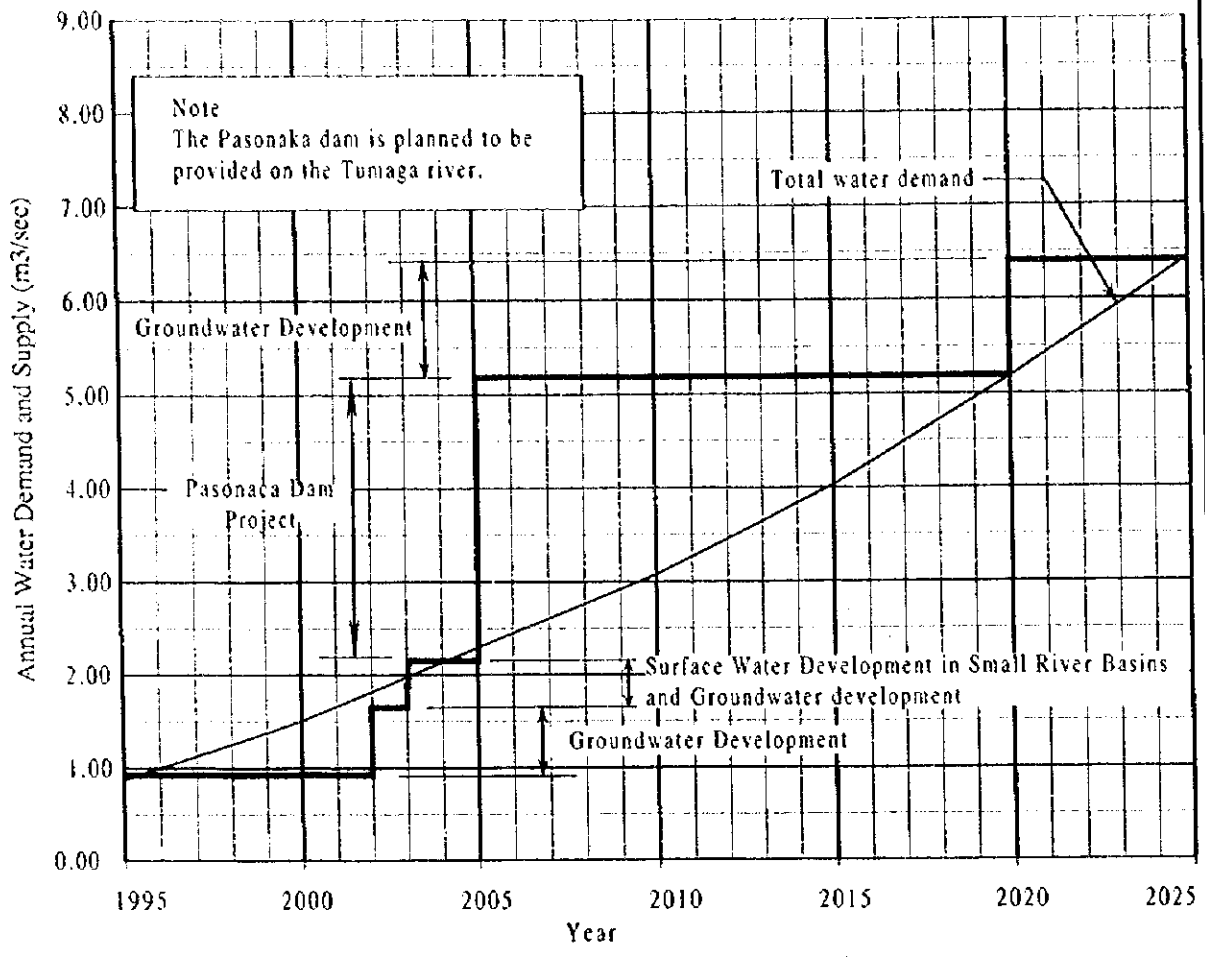
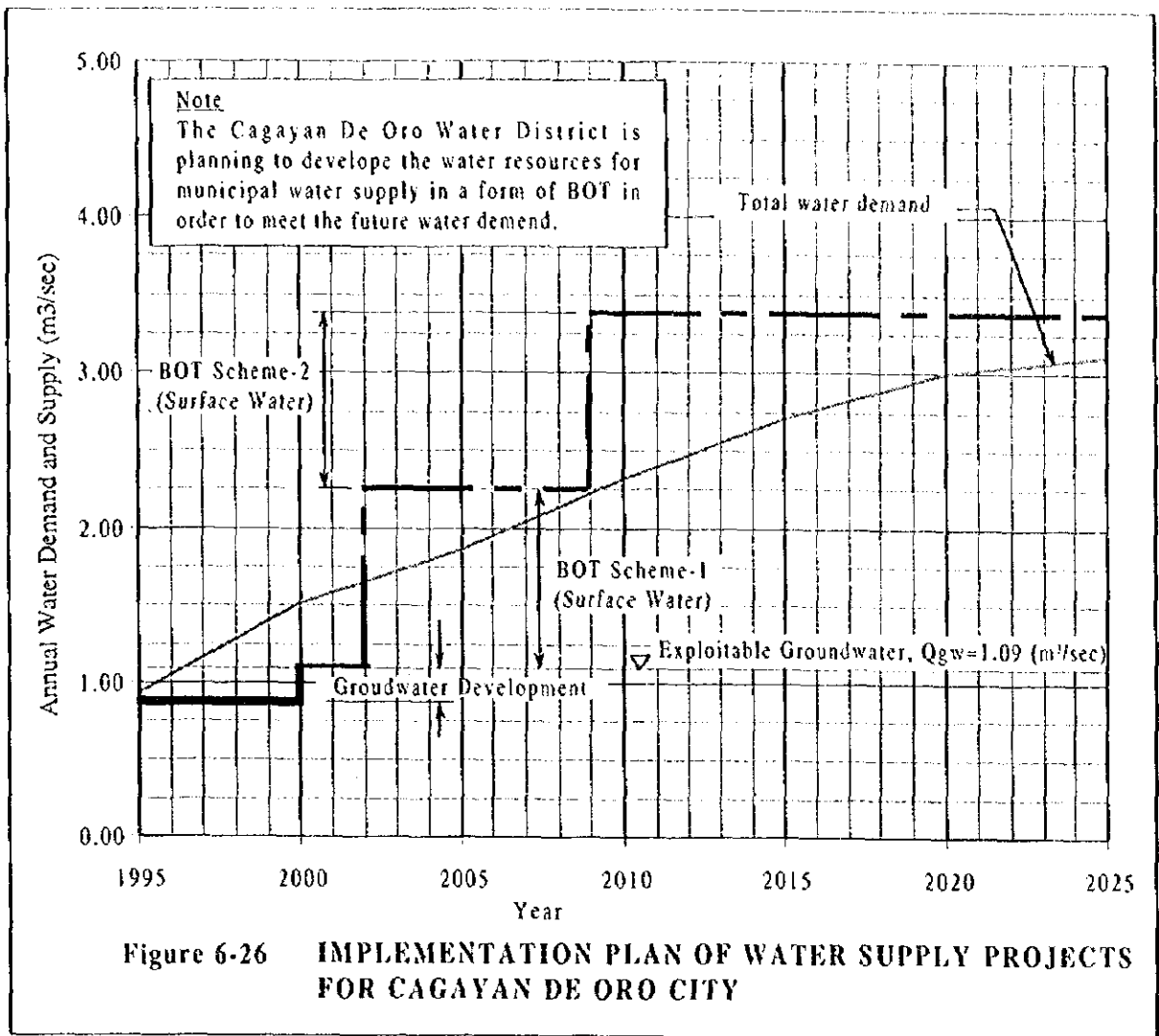


Figure 6-25 IMPLEMENTATION PLAN OF WATER SUPPLY PROJECTS FOR ZAMBOANGA CITY



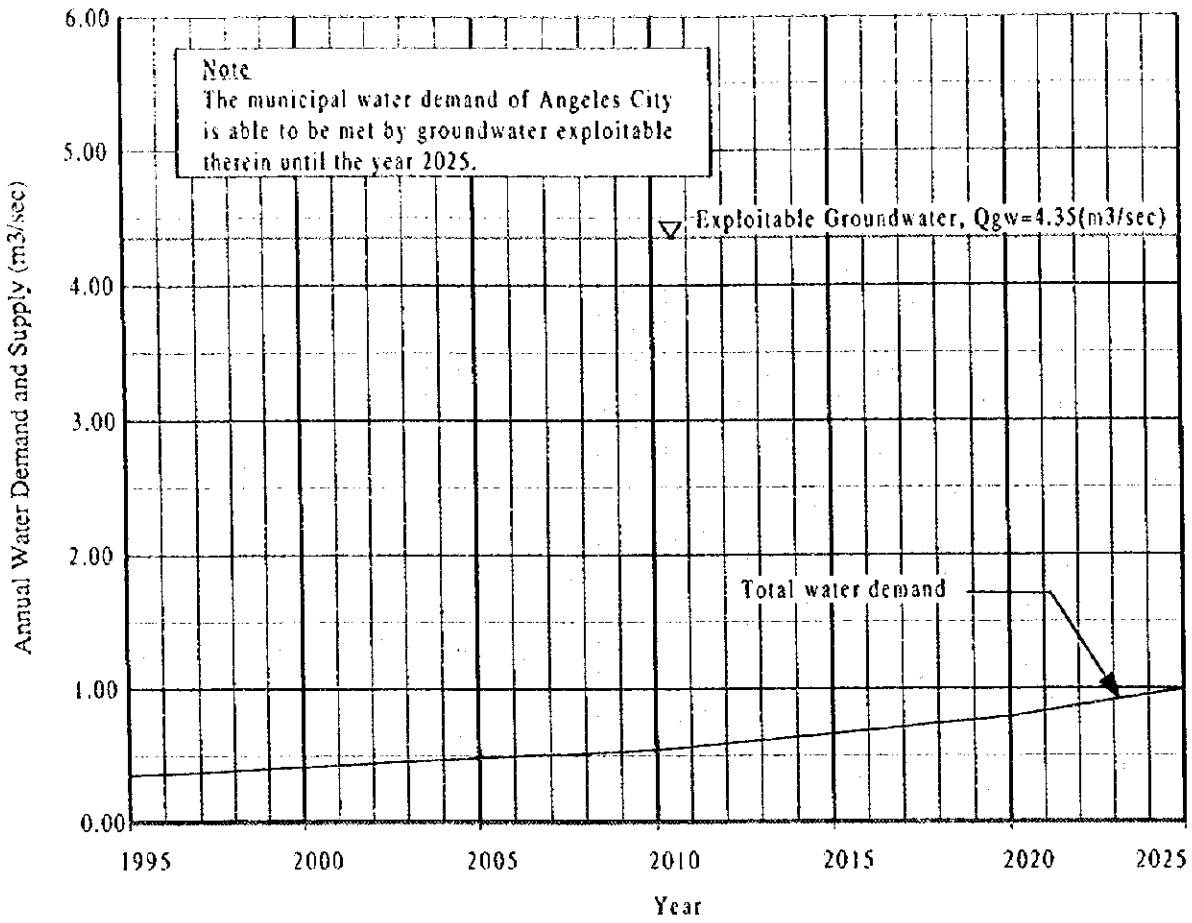
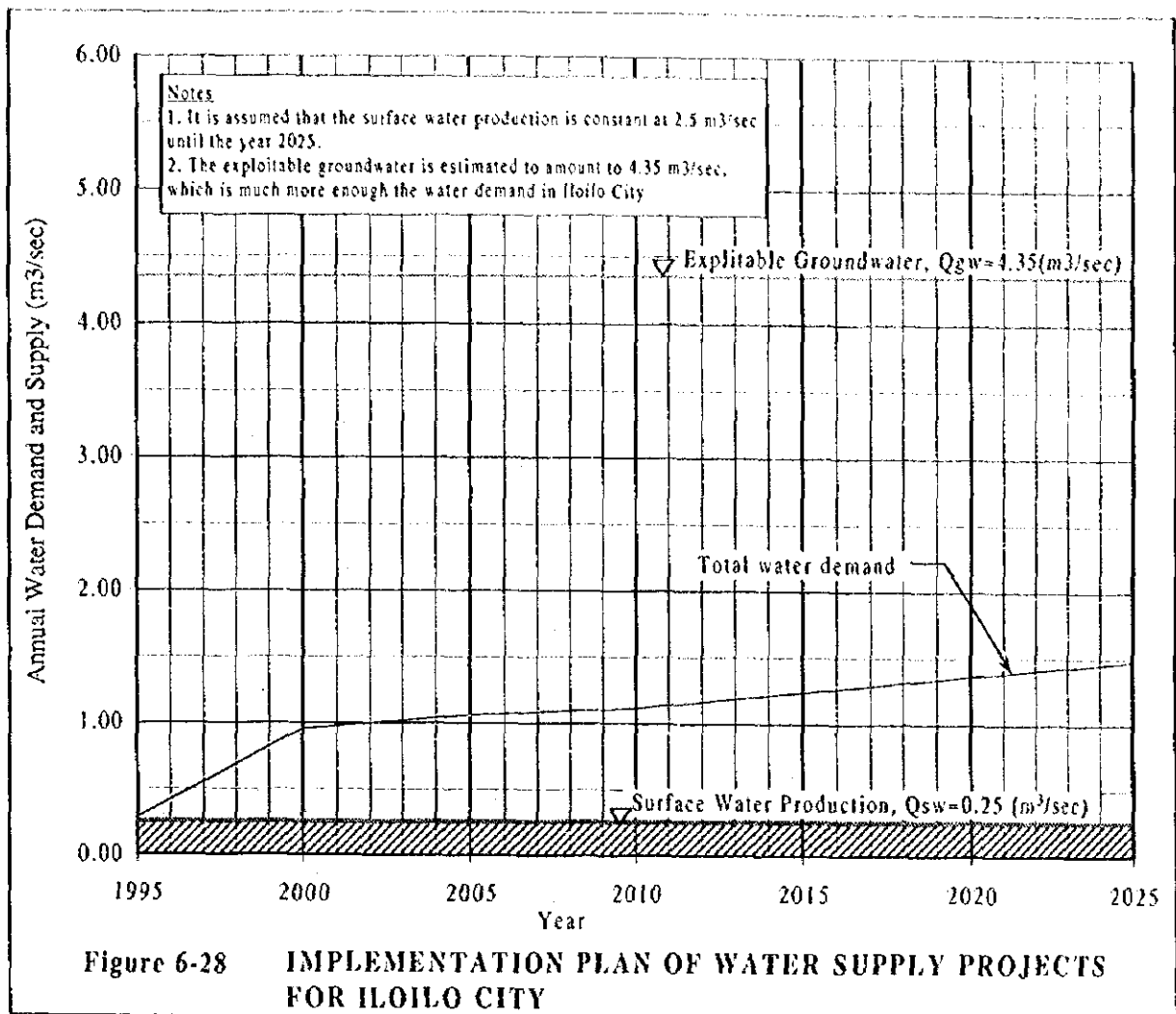


Figure 6-27 IMPLEMENTATION PLAN OF WATER SUPPLY PROJECTS FOR ANGELES CITY



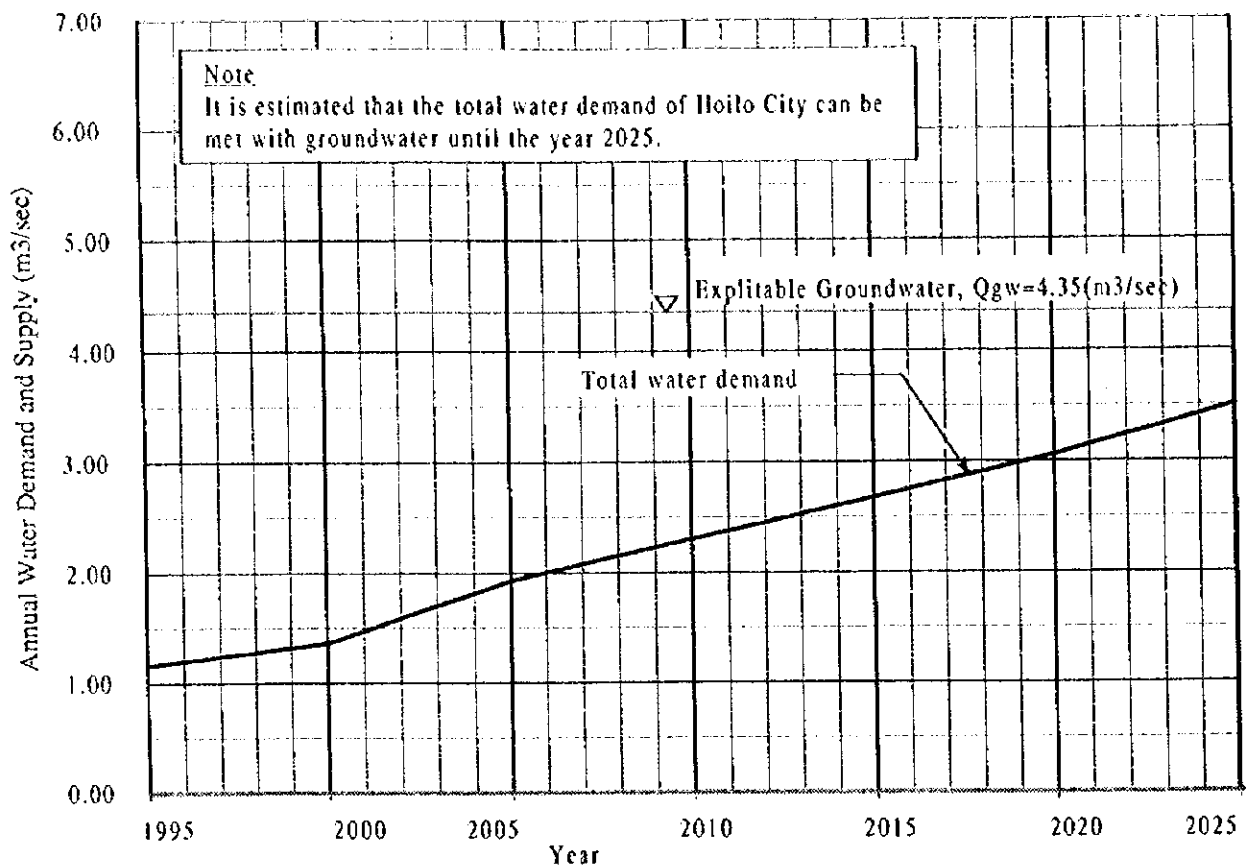


Figure 6-29 IMPLEMENTATION PLAN OF WATER SUPPLY PROJECTS FOR BACOLOD CITY (SCENARIO-1)

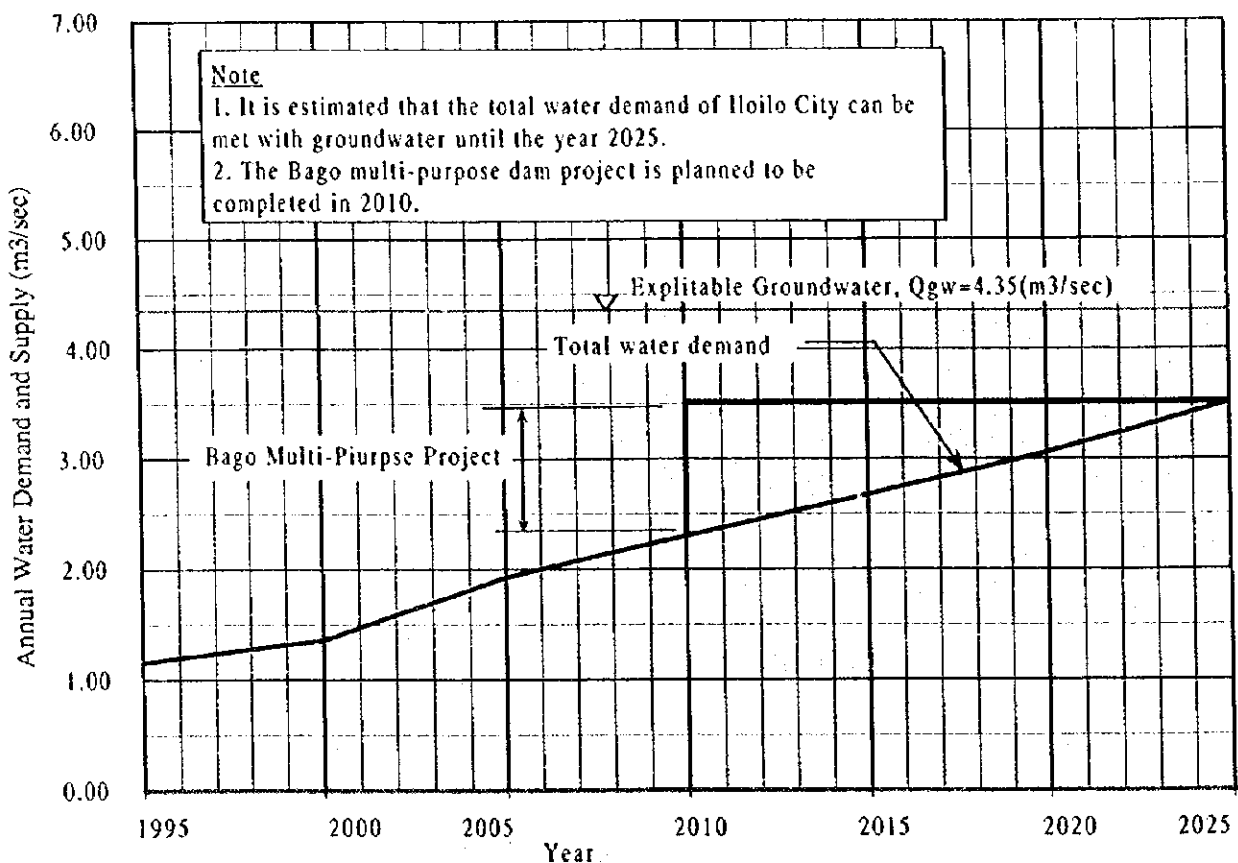


Figure 6-30 IMPLEMENTATION PLAN OF WATER SUPPLY PROJECTS FOR BACOLOD CITY (SCENARIO-2)

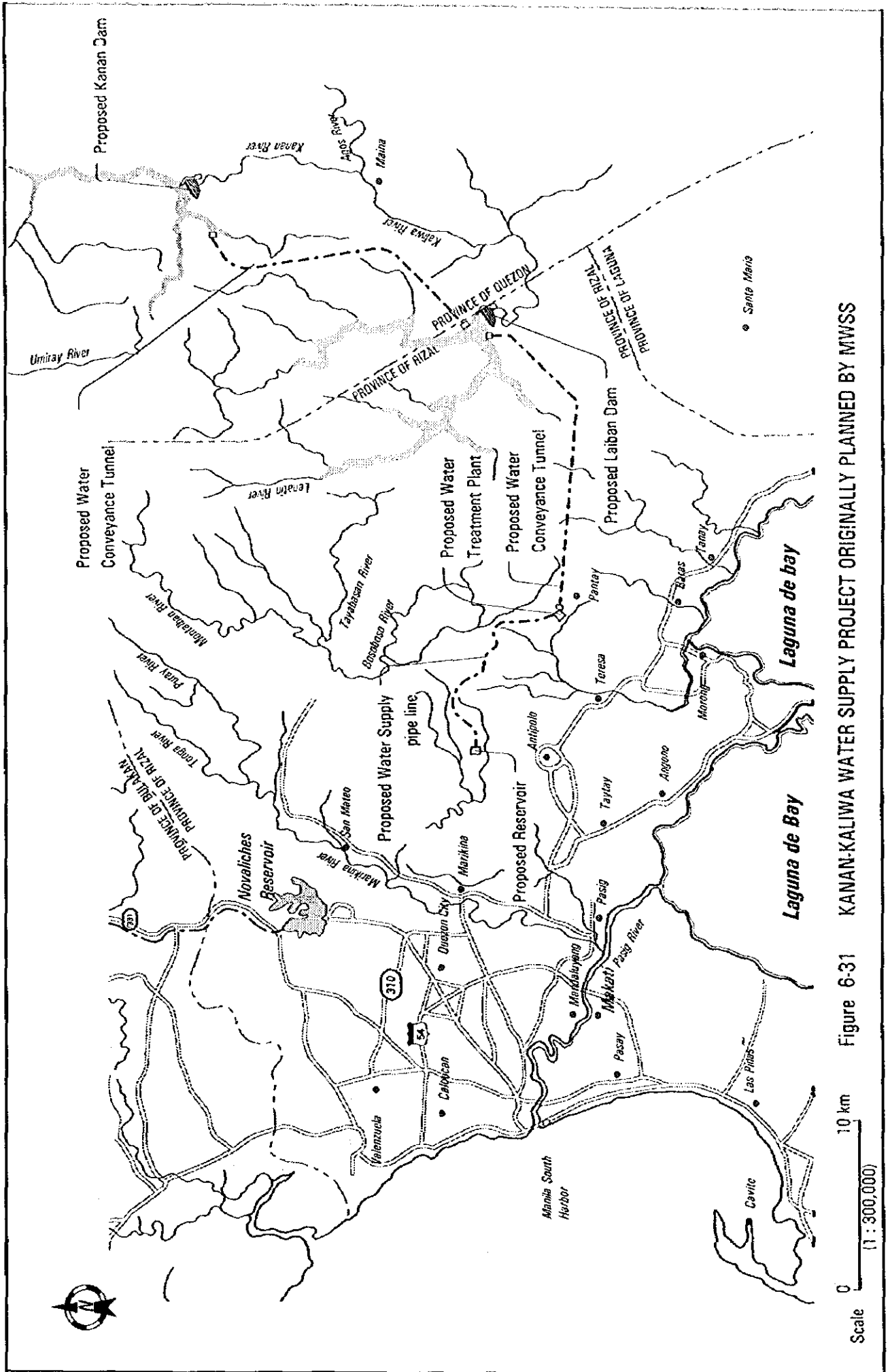


Figure 6-31 KANAN-KALIWA WATER SUPPLY PROJECT ORIGINALLY PLANNED BY MWSS

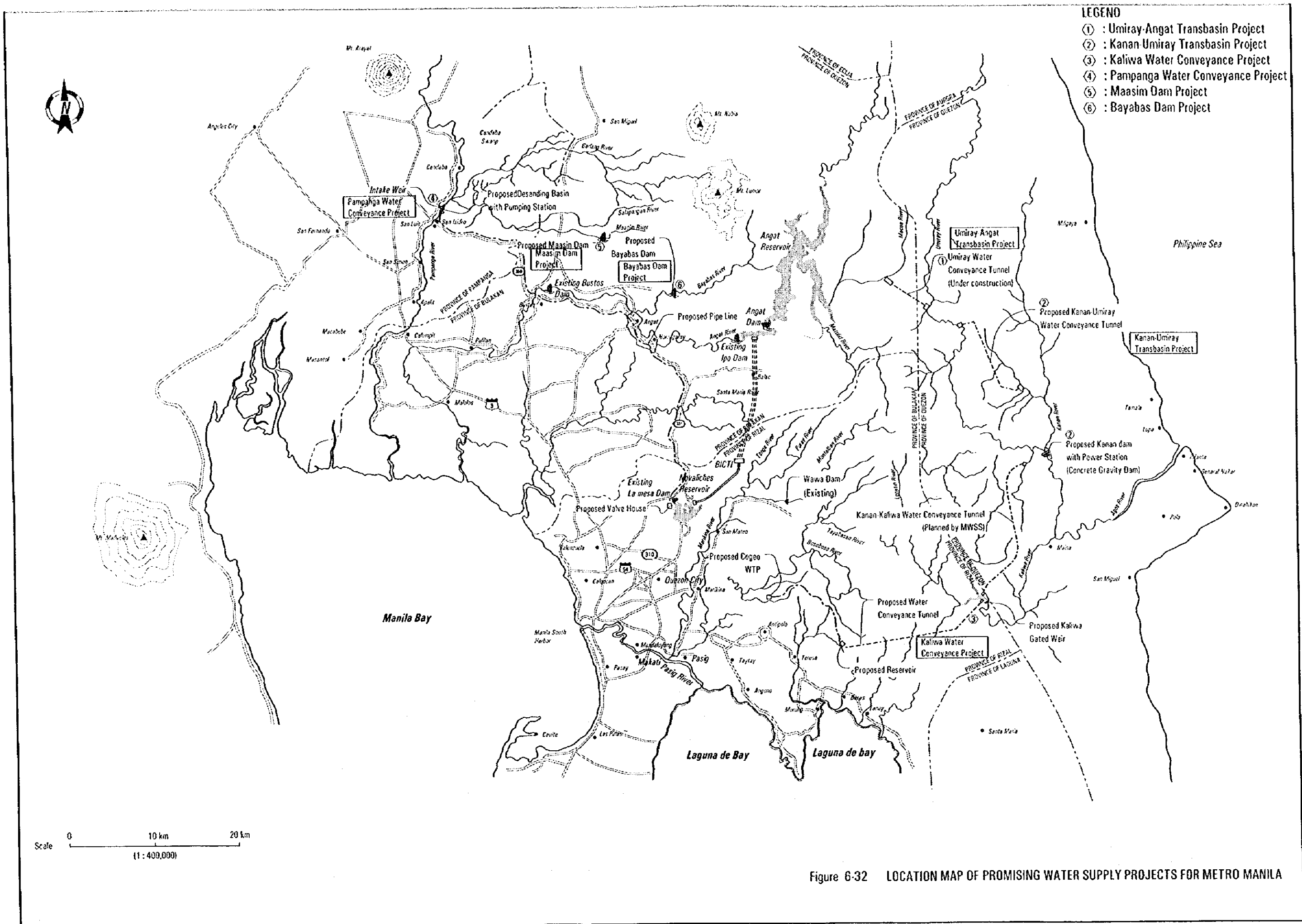


Figure 6-32 LOCATION MAP OF PROMISING WATER SUPPLY PROJECTS FOR METRO MANILA

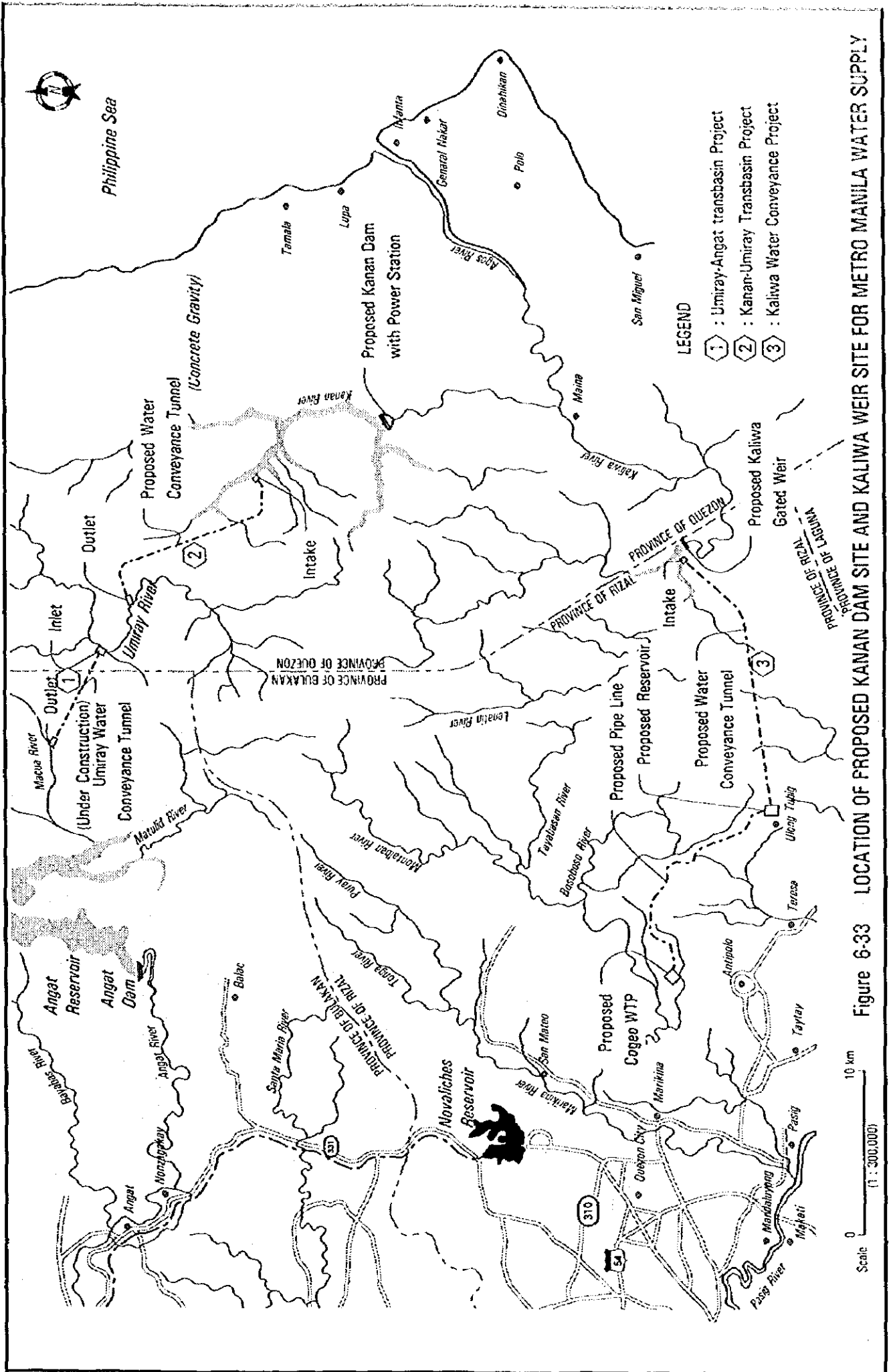


Figure 6-33 LOCATION OF PROPOSED KANAN DAM SITE AND KALIWA WEIR SITE FOR METRO MANILA WATER SUPPLY

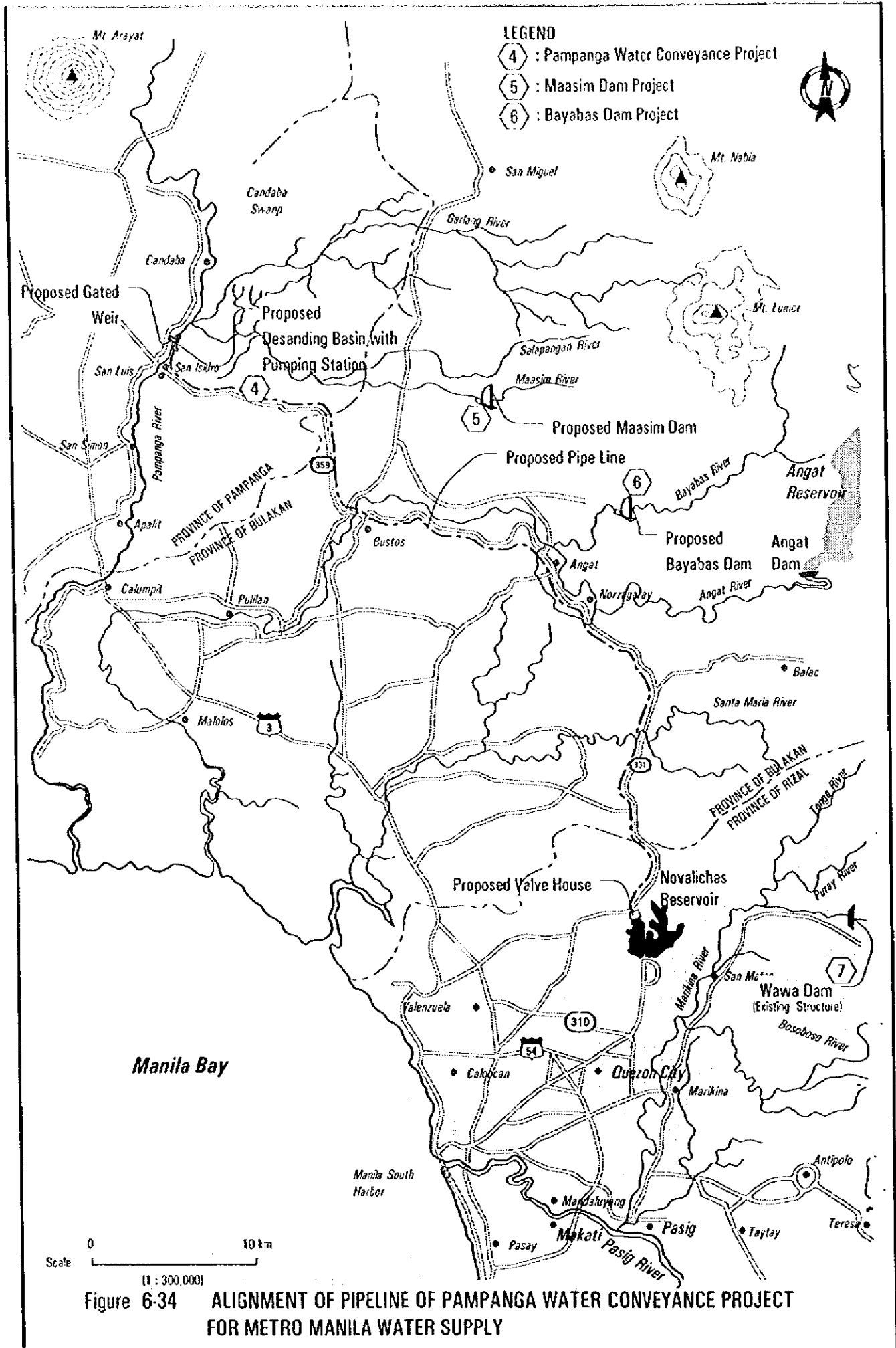


Figure 6-34 ALIGNMENT OF PIPELINE OF PAMPANGA WATER CONVEYANCE PROJECT FOR METRO MANILA WATER SUPPLY

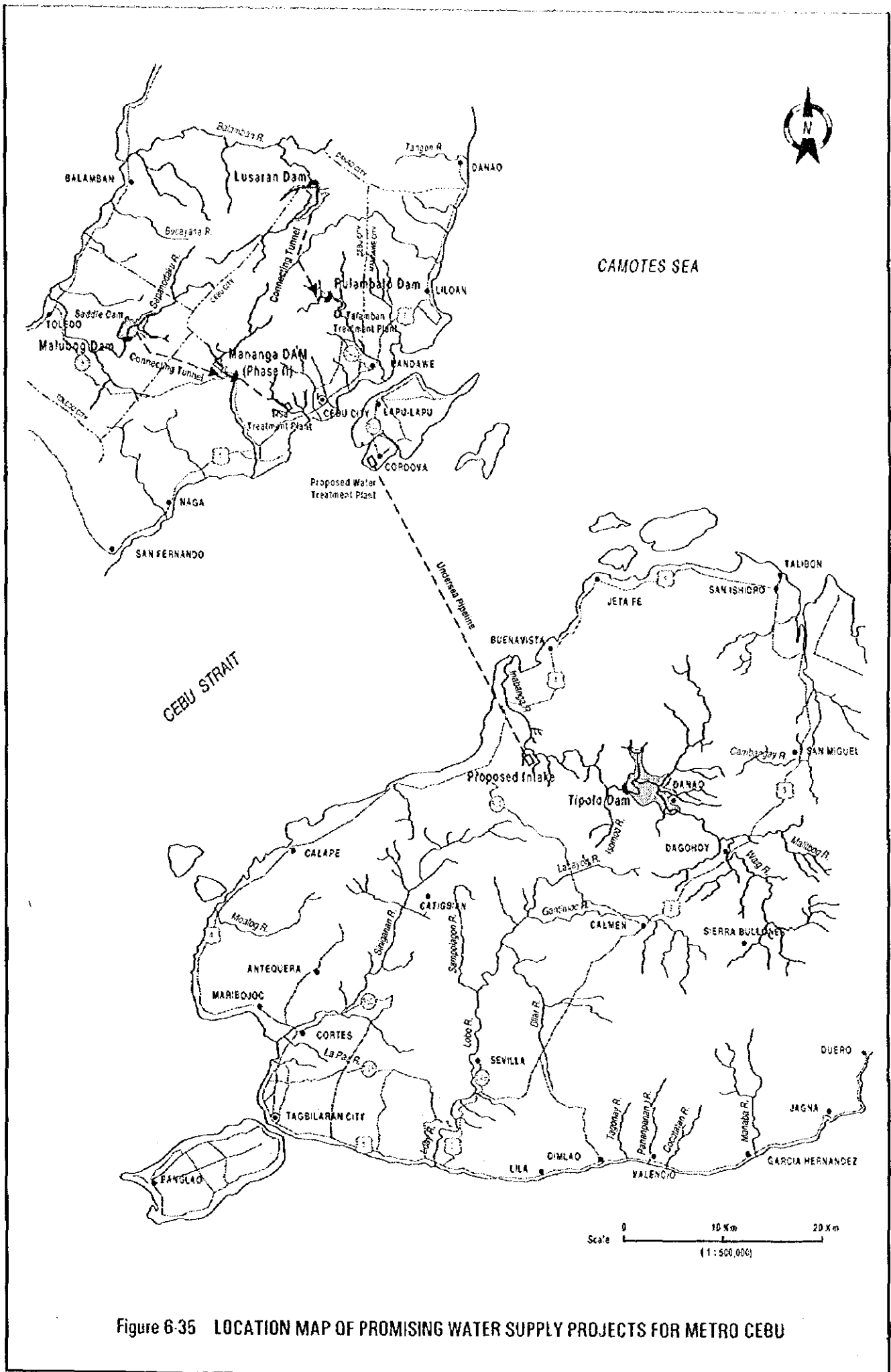


Figure 6-35 LOCATION MAP OF PROMISING WATER SUPPLY PROJECTS FOR METRO CEBU

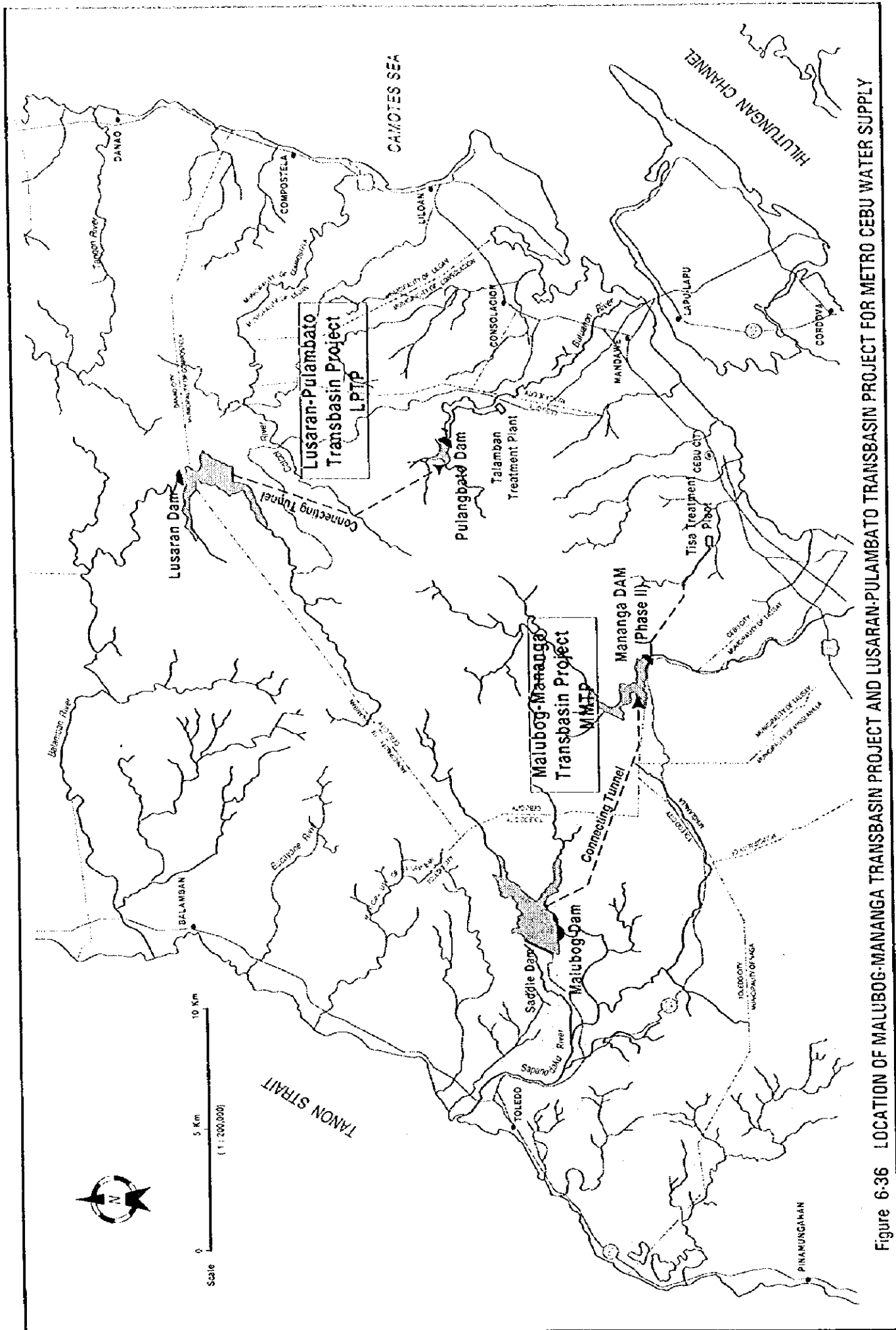


Figure 6-36 LOCATION OF MALUBOG-MANANGA TRANSBASIN PROJECT AND LUSARAN-PULAMBATO TRANSBASIN PROJECT FOR METRO CEBU WATER SUPPLY

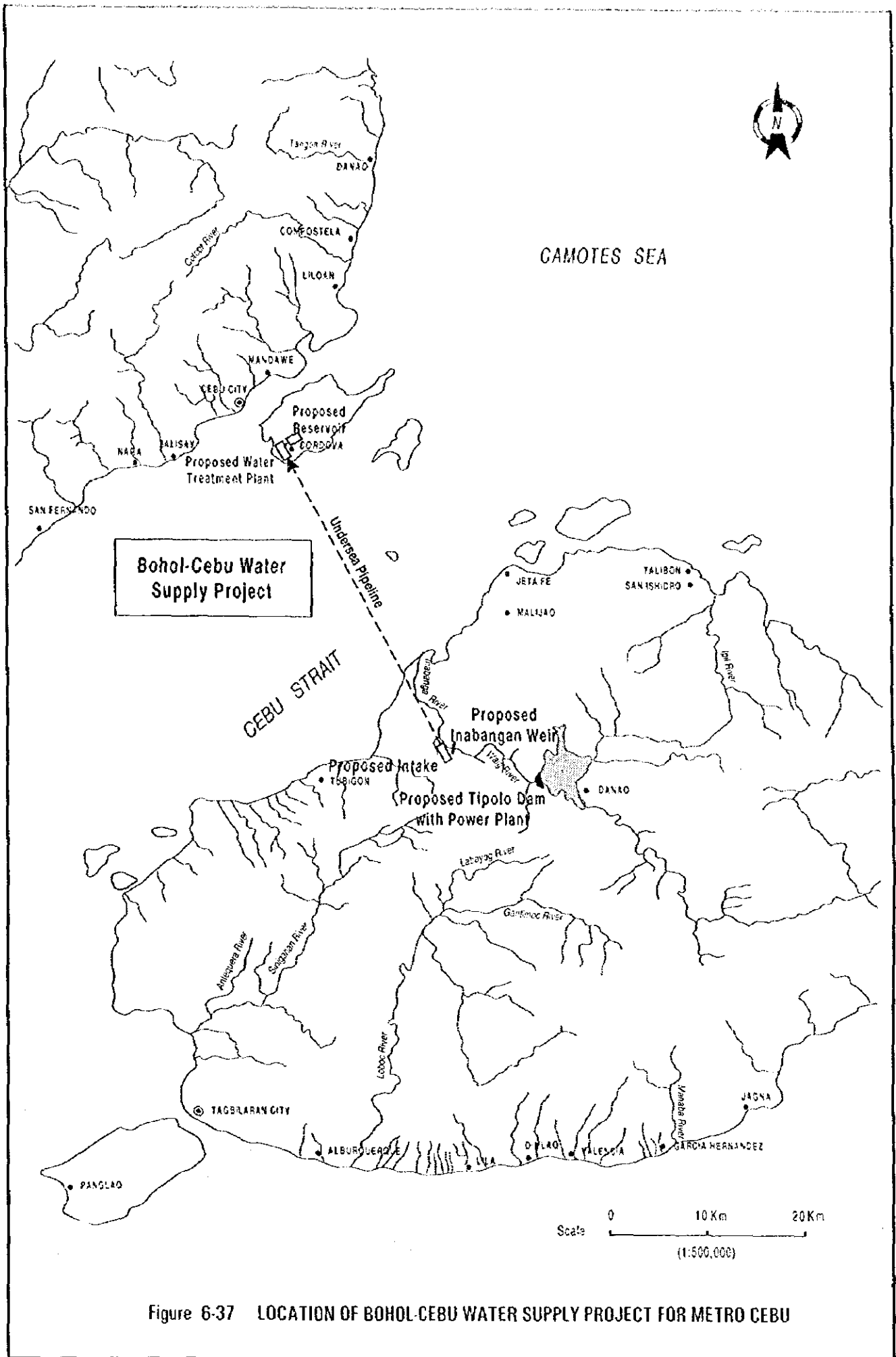
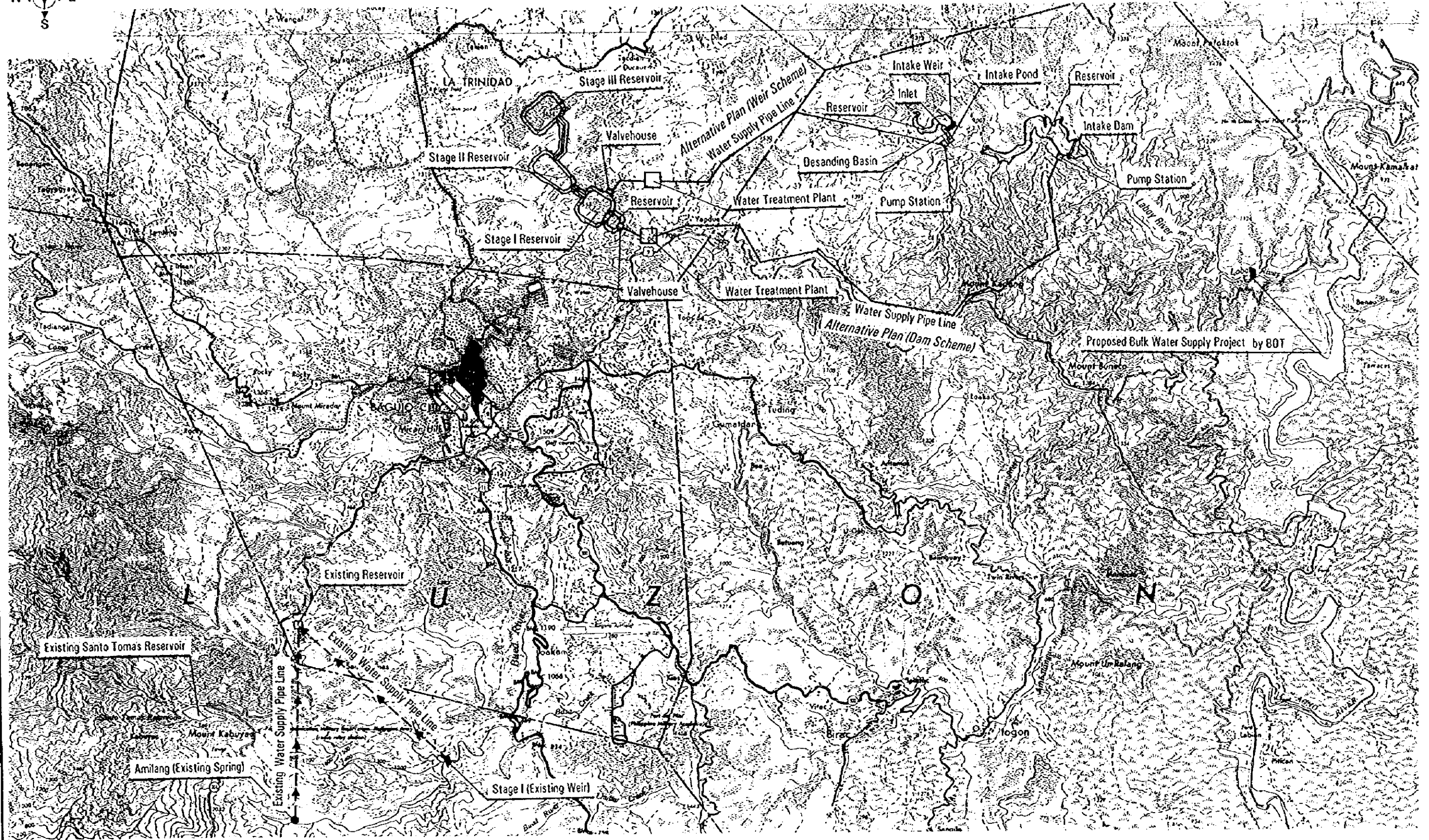
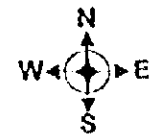


Figure 6-37 LOCATION OF BOHOL-CEBU WATER SUPPLY PROJECT FOR METRO CEBU



Scale 0 1km 2km 3km
(1: 60,000)

Figure 6 - 38 LOCATION MAP OF PROMISING WATER SUPPLY PROJECTS FOR BAGUIO CITY

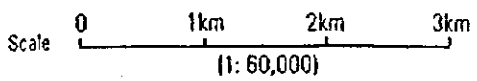
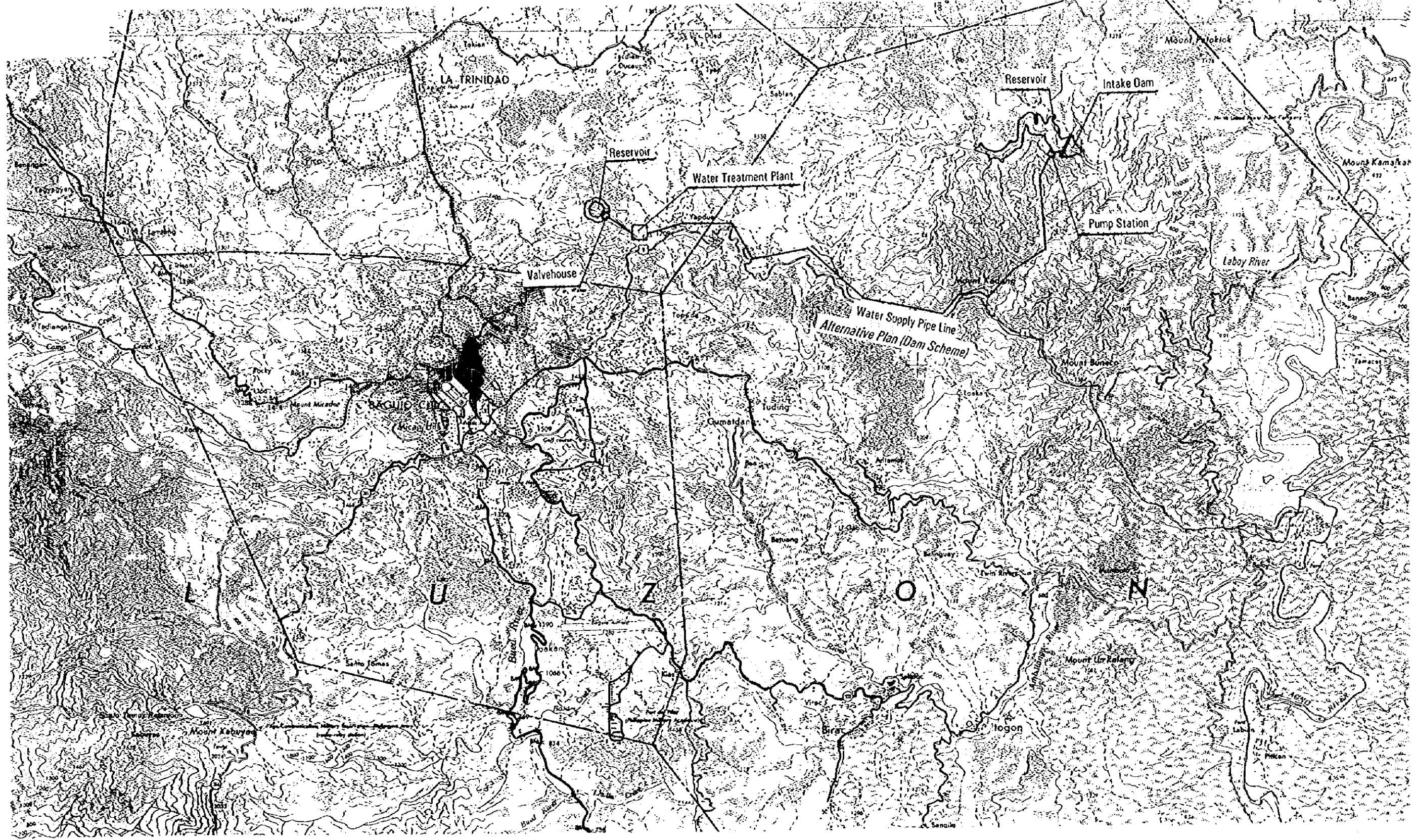


Figure 6 - 39 LOCATION OF PROPOSED LABOY DAM WATER SUPPLY PROJECT FOR BAGUIO CITY

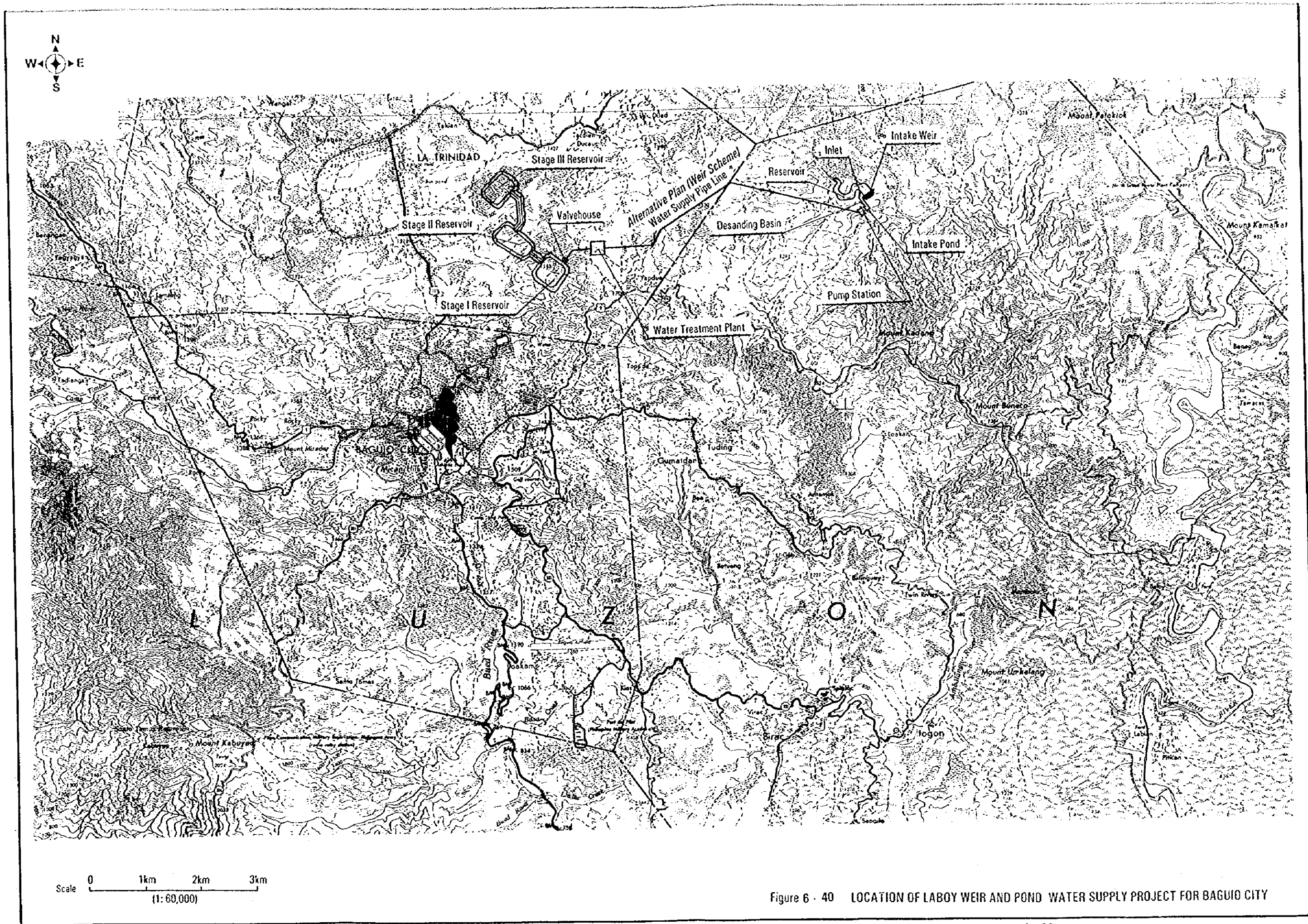
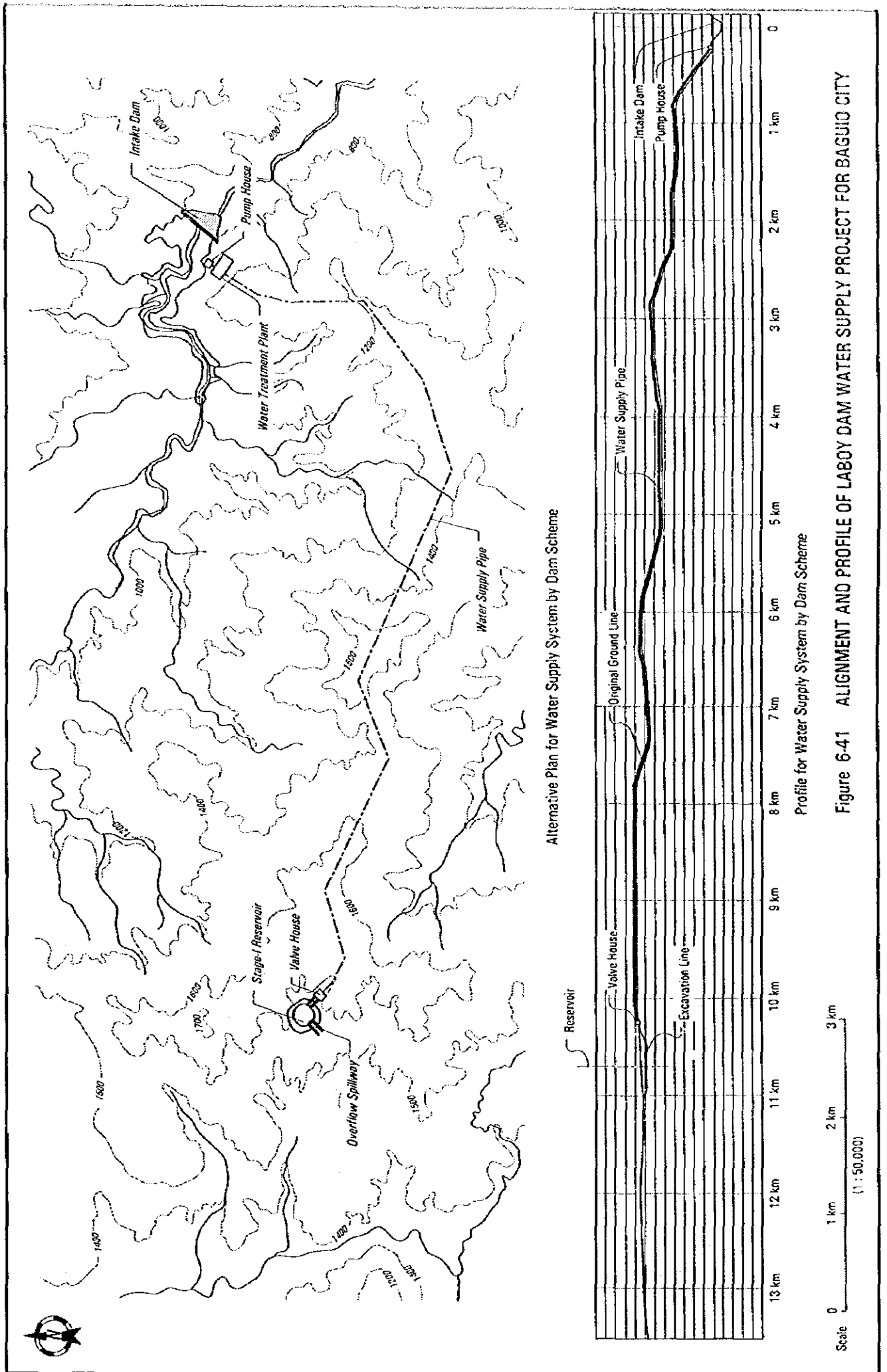


Figure 6 - 40 LOCATION OF LABOY WEIR AND POND WATER SUPPLY PROJECT FOR BAGUIO CITY



Alternative Plan for Water Supply System by Dam Scheme

Profile for Water Supply System by Dam Scheme

Figure 6-41 ALIGNMENT AND PROFILE OF LABOY DAM WATER SUPPLY PROJECT FOR BAGUIO CITY

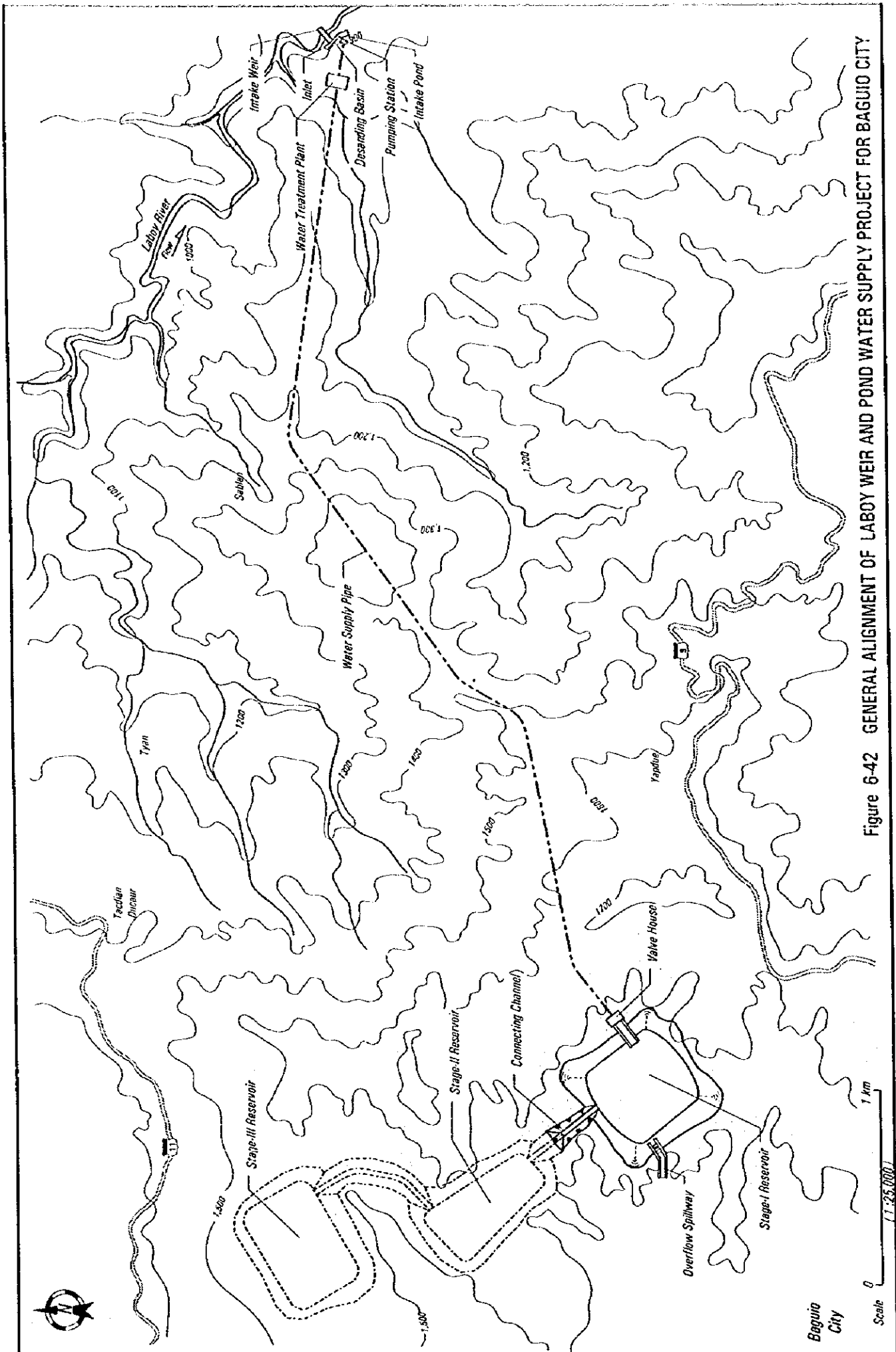
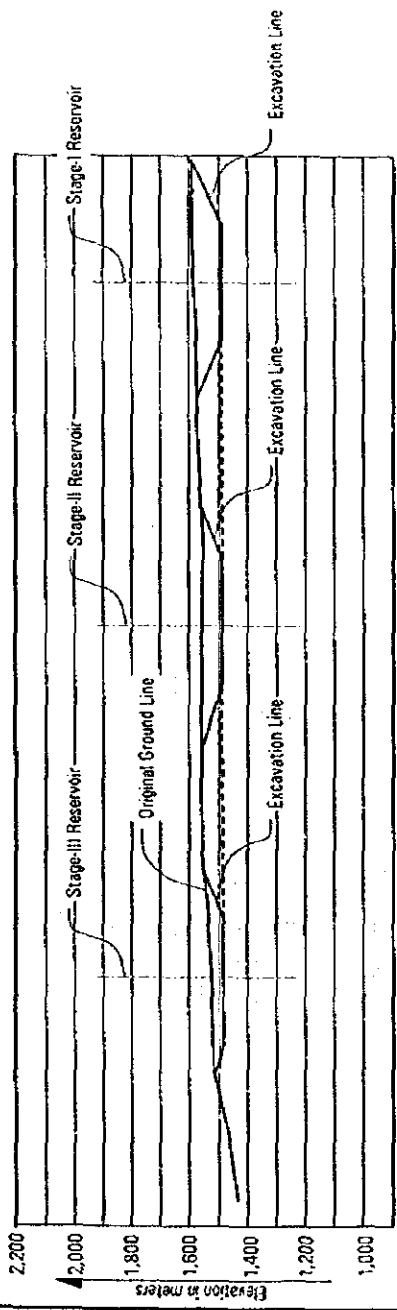
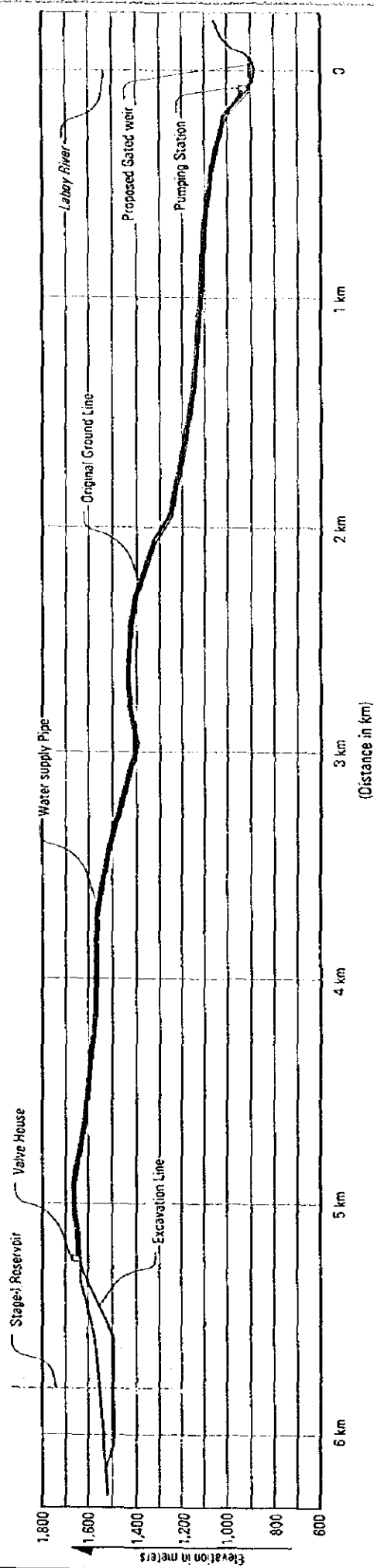


Figure 6-42 GENERAL ALIGNMENT OF LABOY WEIR AND POND WATER SUPPLY PROJECT FOR BAGUIO CITY



Profile of along Reservoir



Profile of along Main Water Supply Pipe

Figure 6-43 PROFILE OF POND AND PIPELINE OF LABOY WEIR AND POND WATER SUPPLY PROJECT FOR BAGUIO CITY

Figure 6-44 CONSTRUCTION SCHEDULE FOR KANAN-UMIRAY TRANSBASIN PROJECT

Description	1st Year				2nd Year				3rd Year				4th Year				5th Year				6th Year				7th Year						
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III
1. Detailed Design	[Gantt bar: I, II, III, IV]																														
2. Land Acquisition and Compensation	[Gantt bar: I, II, III, IV]																														
3. Mobilization/ Demobilization	[Gantt bar: I, II, III, IV]																														
4. Preparatory Works	[Gantt bar: I, II, III, IV]																														
- Access Road	[Gantt bar: I, II, III, IV]																														
- Coffering	[Gantt bar: I, II, III, IV]																														
5. Civil Works	[Gantt bar: I, II, III, IV]																														
-Diversion Tunnel	[Gantt bar: I, II, III, IV]																														
-Inlet of Water Conveyance Tunnel	[Gantt bar: I, II, III, IV]																														
-Coveyance Tunnel	[Gantt bar: I, II, III, IV]																														
-Outlet of Water conveyance Tunnel	[Gantt bar: I, II, III, IV]																														
-Main Dam	[Gantt bar: I, II, III, IV]																														
-Spillway	[Gantt bar: I, II, III, IV]																														
-Intake	[Gantt bar: I, II, III, IV]																														
-Hi-pressure Tunnel	[Gantt bar: I, II, III, IV]																														
-Powerhouse	[Gantt bar: I, II, III, IV]																														
6. Mechanical Works	[Gantt bar: I, II, III, IV]																														
- Gate	[Gantt bar: I, II, III, IV]																														
7. Electrical works	[Gantt bar: I, II, III, IV]																														
- Generating Equipment	[Gantt bar: I, II, III, IV]																														

Figure 6-45 CONSTRUCTION SCHEDULE FOR BAYABAS-MAASIM DAM PROJECT (1/2)

<MAASIM>

Description	1st Year				2nd Year				3rd Year				4th Year				5th Year				6th Year				7th Year							
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV				
1. Detailed Design																																
2. Land Acquisition and Compensation																																
3. Mobilization/ Demobilization																																
4. Preparatory Works																																
- Access Road																																
- Base Camp																																
5. Civil Works																																
-Diversion Tunnel																																
-Main Dam																																
-Spillway																																
-Water Supply Conduit																																
6. Mechanical Works																																
- Gate																																
7. Electrical works																																

Figure 6-45 CONSTRUCTION SCHEDULE FOR BAYABAS-MAASIM DAM PROJECT (2/2)

<BAYABAS>

Description	1st Year		2nd Year		3rd Year		4th Year		5th Year		6th Year		7th Year			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
1. Detailed Design																
2. Land Acquisition and Compensation																
3. Mobilization/ Demobilization																
4. Preparatory Works																
- Access Road																
- Coffering																
5. Civil Works																
- Diversion Tunnel																
- Main Dam																
- Spillway																
- Water Supply Conduit																
6. Mechanical Works																
- Gate																
7. Electrical works																

Figure 6-46 CONSTRUCTION SCHEDULE FOR KALIWA-COGEO WATER SUPPLY PROJECT

Description	1st Year		2nd Year		3rd Year		4th Year		5th Year		6th Year		7th Year			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
1. Detailed Design	DDP															
2. Land Acquisition and Compensation	Land Acquisition															
3. Mobilization/ Demobilization	Mobil															
4. Preparatory Works																
- Access Road	Access Road															
- Base camp	Base camp															
5. Civil Works																
-River Diversion	Excavation															
-Gated Weir	Concrete															
-Inlet	Excavation															
-Outlet	Excavation															
-Gated Weir	Concrete															
- Water Conveyance Tunnel	Excavation															
- Desanding Basin	Concrete															
- Main Pump Station	Excavation															
- Booster Pump Station	Concrete															
- Water Treatment Plant	Excavation															
- Reservoir	Concrete															
6. Mechanical Works																
- Gate	Excavation															
- Water Supply Pipe Line	Pipe line installation															
7. Electrical works																
	Electric installation															

Figure 6-47 CONSTRUCTION SCHEDULE FOR PAMPANGA WATER CONVEYANCE PROJECT

Description	1st Year		2nd Year		3rd Year		4th Year		5th Year		6th Year		7th Year			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
1. Detailed Design																
2. Land Acquisition and Compensation																
3. Mobilization/ Demobilization																
4. Preparatory Works																
- Access Road																
- Base Camp																
5. Civil Works																
- River Diversion																
- Water Conveyance Tunnel																
- Gated Weir																
- Desanding Basin																
- Main Pump Station																
- Booster Pump Station																
- Water Treatment Plant																
- Reservoir																
6. Mechanical Works																
- Gate																
- Water Supply Pipe Line																
7. Electrical works																

Figure 6-48 CONSTRUCTION SCHEDULE FOR MALUBOG-MANANGA TRANSBASIN PROJECT

Description	1st Year				2nd Year				3rd Year				4th Year				5th Year				6th Year				7th Year						
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III
1. Detailed Design	[Blank]																														
2. Land Acquisition and Compensation	[Blank]																														
3. Mobilization/ Demobilization	[Blank]																														
4. Preparatory Works	[Blank]																														
- Access Road	[Blank]																														
- Coffering	[Blank]																														
5. Civil Works	[Blank]																														
-Diversion Tunnel (Malubog and Mananga)	[Blank]																														
-Water Coveyance Tunnel (No.1)	[Blank]																														
-Malubog Dam	[Blank]																														
-Intake	[Blank]																														
-Inspection Tunnel	[Blank]																														
-Valve Chamber	[Blank]																														
- Intake Weir	[Blank]																														
- Mananga Dam	[Blank]																														
-Water Coveyance Tunnel (No.2)	[Blank]																														
- Main Pump Station	[Blank]																														
- Water Treatment Plant	[Blank]																														
- Water Supply Pipe Line	[Blank]																														
- Reservoir	[Blank]																														
- Powerhouse	[Blank]																														
6. Mechanical Works	[Blank]																														
- Gate	[Blank]																														
- Water Supply Pipe Line	[Blank]																														
7. Electrical Works	[Blank]																														

Figure 6-49 CONSTRUCTION SCHEDULE FOR LUSARAN-PULAMBATO TRANSBASIN PROJECT

Description	1st Year				2nd Year				3rd Year				4th Year				5th Year				6th Year				7th Year						
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III
1. Detailed Design	[Bar chart showing activity from I-II to I-III]																														
2. Land Acquisition and Compensation	[Bar chart showing activity from I-III to I-IV]																														
3. Mobilization/ Demobilization	[Bar chart showing activity from I-III to I-III]																														
4. Preparatory Works	[Bar chart showing activity from I-III to I-III]																														
- Access Road	[Bar chart showing activity from I-III to I-III]																														
- Base Camp	[Bar chart showing activity from I-III to I-III]																														
5. Civil Works	[Bar chart showing activity from I-III to I-III]																														
- Diversion Tunnel	[Bar chart showing activity from I-III to I-III]																														
- Lusaran Dam	[Bar chart showing activity from I-III to I-III]																														
- Spillway	[Bar chart showing activity from I-III to I-III]																														
- Hi-pressure Tunnel	[Bar chart showing activity from I-III to I-III]																														
- Powerhouse	[Bar chart showing activity from I-III to I-III]																														
- Diversion Tunnel	[Bar chart showing activity from I-III to I-III]																														
- Pulampato Dam	[Bar chart showing activity from I-III to I-III]																														
- Spillway	[Bar chart showing activity from I-III to I-III]																														
- Hi-pressure Tunnel	[Bar chart showing activity from I-III to I-III]																														
- Powerhouse	[Bar chart showing activity from I-III to I-III]																														
- Concrete weir	[Bar chart showing activity from I-III to I-III]																														
- Water Treatment Plant	[Bar chart showing activity from I-III to I-III]																														
- Pump Station	[Bar chart showing activity from I-III to I-III]																														
- Reservoir	[Bar chart showing activity from I-III to I-III]																														
- Water Supply Pipe Line	[Bar chart showing activity from I-III to I-III]																														
6. Mechanical Works	[Bar chart showing activity from I-III to I-III]																														
- Gate	[Bar chart showing activity from I-III to I-III]																														
- Water Supply Pipe Line	[Bar chart showing activity from I-III to I-III]																														
7. Electrical Works	[Bar chart showing activity from I-III to I-III]																														

Figure 6-50 CONSTRUCTION SCHEDULE FOR BOHOL-CEBU WATER SUPPLY PROJECT: FIRST STAGE

Description	1st Year				2nd Year				3rd Year				4th Year				5th Year				6th Year				7th Year											
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV				
1. Detailed Design																																				
2. Land Acquisition and Compensation																																				
3. Mobilization/ Demobilization																																				
4. Preparatory Works																																				
- Access Road																																				
- Base Camp																																				
5. Civil Works																																				
- Gated Weir																																				
- Desanding Basin																																				
- Water Treatment Plant																																				
- Main Pump Station																																				
- Water Supply Pipe Line (Open-air)																																				
- Reservoir																																				
6. Mechanical Works																																				
- Gate																																				
- Water Supply Pipe Line (Under sea)																																				
7. Electrical Works																																				

Figure 6-51 CONSTRUCTION SCHEDULE FOR BOHOL-CEBU WATER SUPPLY PROJECT: SECOND STAGE

Description	1st Year				2nd Year				3rd Year				4th Year				5th Year				6th Year				7th Year						
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III
1. Detailed Design	[Gantt bar spanning from start of Year 1 to end of Year 1]																														
2. Land Acquisition and Compensation	[Gantt bar spanning from start of Year 1 to end of Year 1]																														
3. Mobilization/ Demobilization	[Gantt bar spanning from start of Year 2 to end of Year 2]																														
4. Preparatory Works	[Gantt bar spanning from start of Year 3 to end of Year 3]																														
- Access Road	[Gantt bar spanning from start of Year 3 to end of Year 3]																														
- Base Camp	[Gantt bar spanning from start of Year 3 to end of Year 3]																														
5. Civil Works	[Gantt bar spanning from start of Year 3 to end of Year 3]																														
-Diversion Tunnel	[Gantt bar spanning from start of Year 3 to end of Year 3]																														
-Tipolo Dam	[Gantt bar spanning from start of Year 3 to end of Year 3]																														
-Hi-pressure Tunnel	[Gantt bar spanning from start of Year 3 to end of Year 3]																														
-Powerhouse	[Gantt bar spanning from start of Year 3 to end of Year 3]																														
-Weir	[Gantt bar spanning from start of Year 3 to end of Year 3]																														
-Desanding Basin	[Gantt bar spanning from start of Year 3 to end of Year 3]																														
-Booster Station	[Gantt bar spanning from start of Year 3 to end of Year 3]																														
-Water Treatment Plant	[Gantt bar spanning from start of Year 3 to end of Year 3]																														
6. Mechanical Works	[Gantt bar spanning from start of Year 6 to end of Year 6]																														
- Gate	[Gantt bar spanning from start of Year 6 to end of Year 6]																														
- Water Supply Pipe Line	[Gantt bar spanning from start of Year 6 to end of Year 6]																														
7. Electrical Works	[Gantt bar spanning from start of Year 6 to end of Year 6]																														

Figure 6-52 CONSTRUCTION SCHEDULE FOR LABOY DAM WATER SUPPLY PROJECT

Description	1st Year				2nd Year				3rd Year				4th Year				5th Year				6th Year				7th Year															
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV								
1. Detailed Design	DDP																																							
2. Land Acquisition and Compensation					Land Acquisition																																			
3. Mobilization/ Demobilization					Mobil																																			
4. Preparatory Works																																								
- Access Road									Access Road																															
- Base Camp									Base Camp																															
5. Civil Works																																								
- Diversion Tunnel									Excavation				Excavation				Concrete																							
- Laboy Dam									Excavation				Excavation				Excavation				Rebar/Installation																			
- Water Treatment Plant									Excavation				Excavation				Concrete				Concrete																			
- Main Pump Station									Excavation				Excavation				Concrete				Concrete																			
- Booster Pump Station									Excavation				Excavation				Concrete				Concrete																			
- Reservoir									Excavation				Excavation				Excavation				Concrete																			
6. Mechanical Works																																								
- Gate									Excavation				Concrete				Concrete				Gate Installation																			
- Water Supply Pipe Line									Excavation				Concrete				Installation				Installation																			
7. Electrical Works																																								

Figure 6-53 CONSTRUCTION SCHEDULE FOR LABOY WEIR AND POND WATER SUPPLY PROJECT

Description	1st Year		2nd Year		3rd Year		4th Year		5th Year		6th Year		7th Year			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
1. Detailed Design	[Bar chart showing activity from I-II to I-III]															
2. Land Acquisition and Compensation	[Bar chart showing activity from I-III to I-IV]															
3. Mobilization/ Demobilization	[Bar chart showing activity from I-III to I-IV]															
4. Preparatory Works	[Bar chart showing activity from I-III to I-IV]															
- Access Road	[Bar chart showing activity from I-III to I-IV]															
- Coffering	[Bar chart showing activity from I-III to I-IV]															
5. Civil Works	[Bar chart showing activity from I-III to I-IV]															
-Diversion Tunnel	[Bar chart showing activity from I-III to I-IV]															
-Laboy bdam	[Bar chart showing activity from I-III to I-IV]															
-Desanding Basin	[Bar chart showing activity from I-III to I-IV]															
-Water Treatment Plant	[Bar chart showing activity from I-III to I-IV]															
-Main Pump Station	[Bar chart showing activity from I-III to I-IV]															
-Booster Pump Station	[Bar chart showing activity from I-III to I-IV]															
-Reservoir	[Bar chart showing activity from I-III to I-IV]															
6. Mechanical Works	[Bar chart showing activity from I-III to I-IV]															
- Gate	[Bar chart showing activity from I-III to I-IV]															
- Water Supply Pipe Line	[Bar chart showing activity from I-III to I-IV]															
7. Electrical Works	[Bar chart showing activity from I-III to I-IV]															