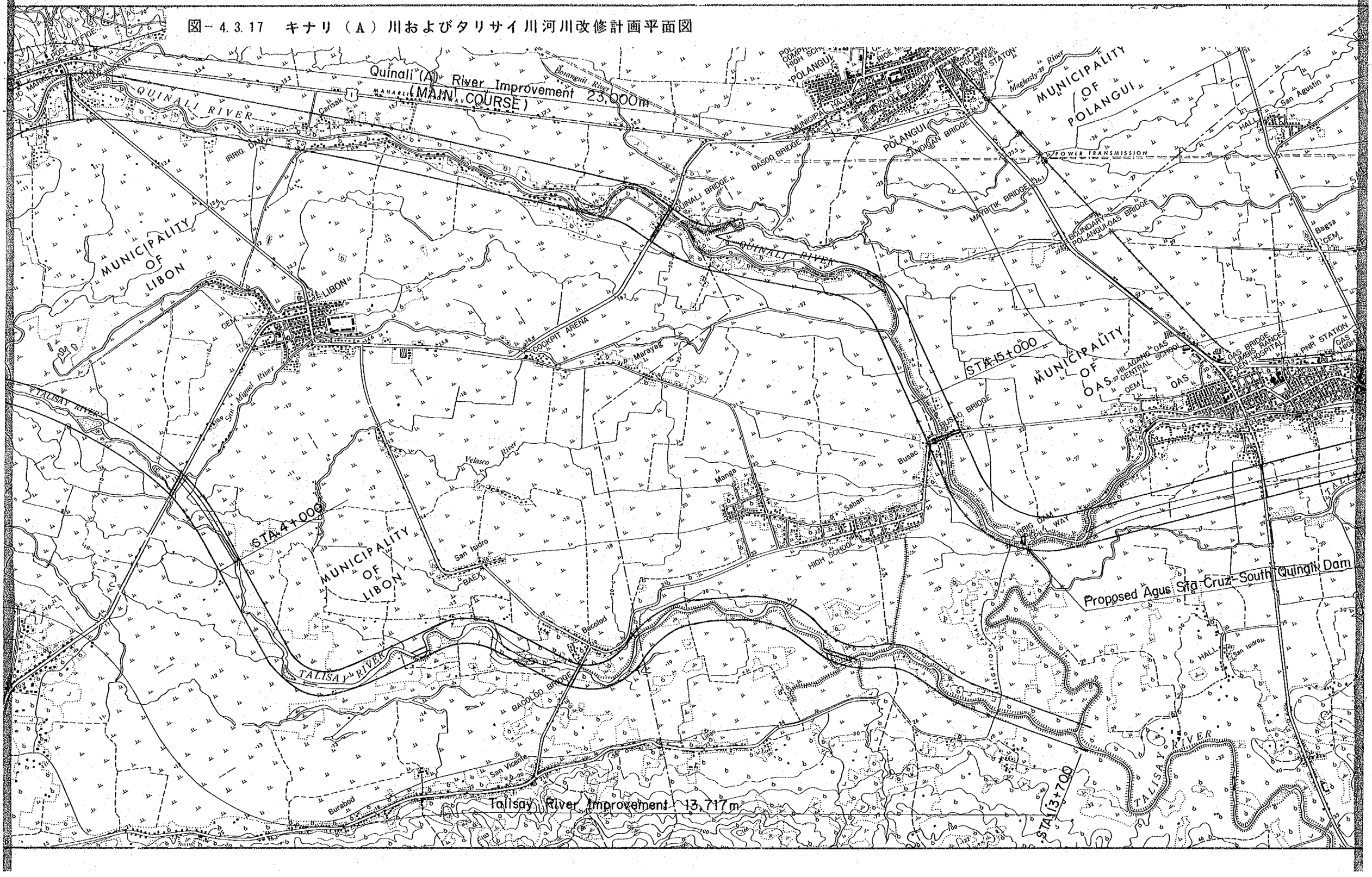
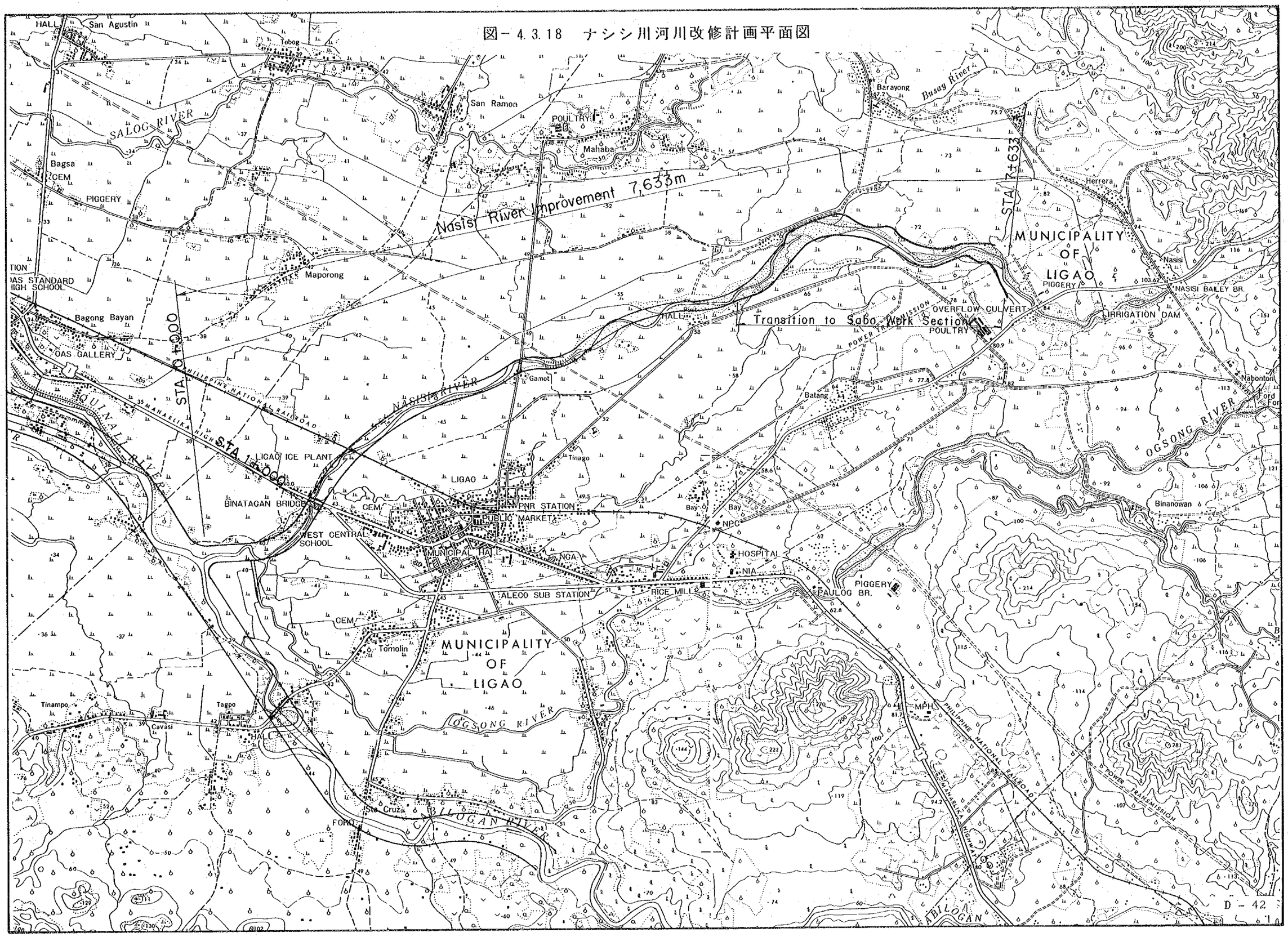
図－4.3.17　キナリ（A）川およびタリサイ川河川改修計画平面図

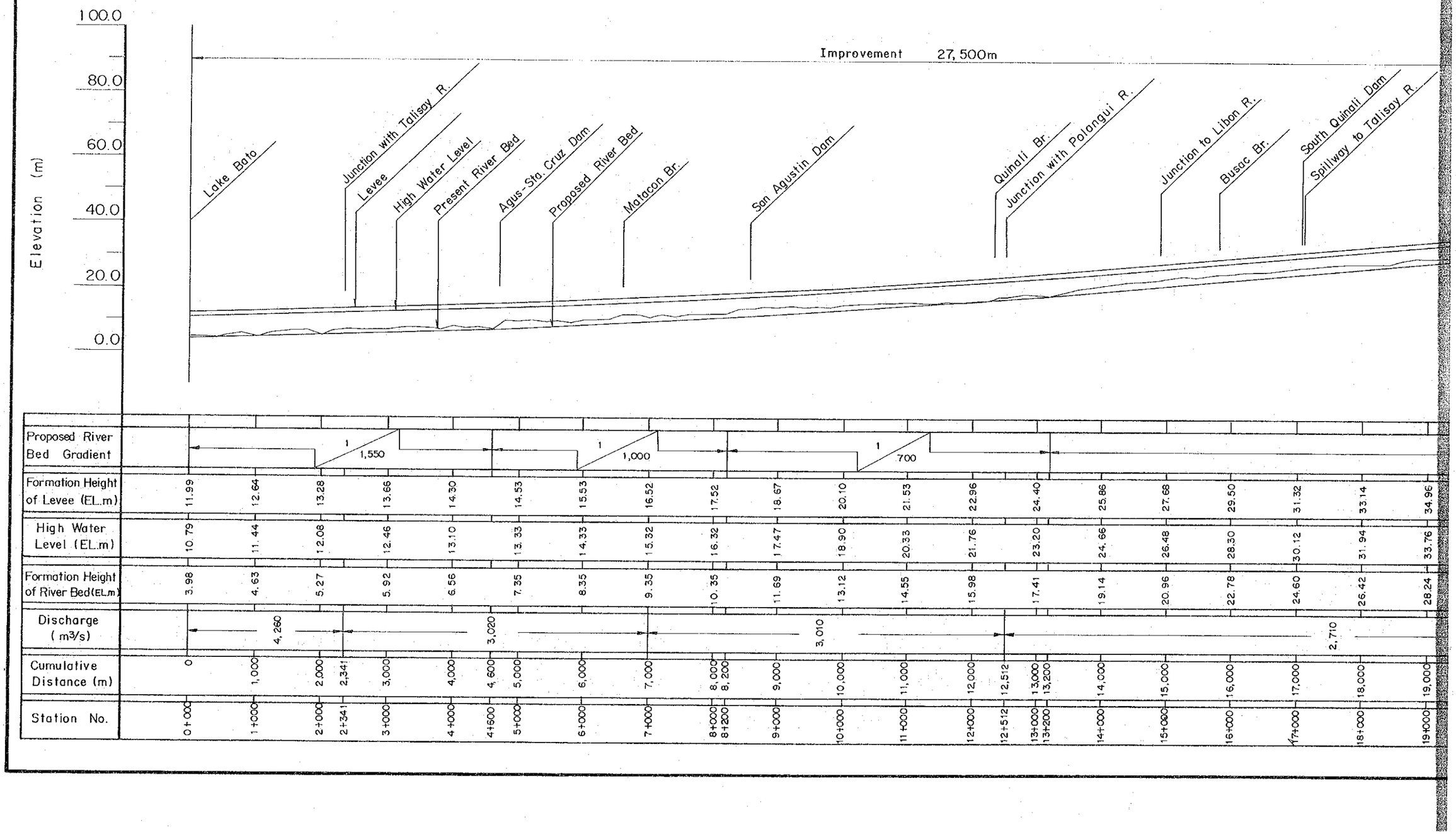



MUNICIPALITY OF POLANGUI
POLANGUI
POLANGUI BRIDGE
MABOLTIK BRIDGE
BOUNDARY POLANGUI-OAS BRIDGE
POWER TRANSMISSION
SALOG RIVER
San Agustin
Maporong
Bagsa
PIGGERY
MUNICIPALITY OF OAS
STA.15+000
HILAGANG OAS CENTRAL SCHOOL
OAS BRIDGE
LIMBIS RANGES HOSPITAL
PNR STATION
OAS STANDARD HIGH SCHOOL
Bagong Bayan
OAS GALLERY
MAHARLIKA HIGHWAY
PHILIPPINE NATIONAL RAILROAD
QUINALY RIVER
STA.23+000
LIGAO ICE PLANT
BINATAGAN BRIDGE
WEST CENTRAL SCHOOL
MUNICIPAL HALL
LIGAO
PUBLIC MARKET
PNR STATION
CALEOO SUB STATION
MUNICIPALITY OF LIGAO
Gamut
Tinago
Bay
NPC
HOSPITAL
NIA
RICE MILL
PAGLOG BR.
PIGGERY BR.
Busac
Busac BRIDGE
IRRIG DAM
SILA WAY
Proposed Agus Sta Cruz-South Quinali Dam
TALISAY RIVER
Tomolin
OGSONG RIVER
Proposed Cabilogan Dam
CABILOGAN RIVER
STA.23+500
Tagpo
Cruz
FORD
Quinali (A) River Improvement (Main Course)
4,500 m
STA.27+500
STA.13+700
San Isidro
San Vicente
Tinampo
Carabas
D - 41

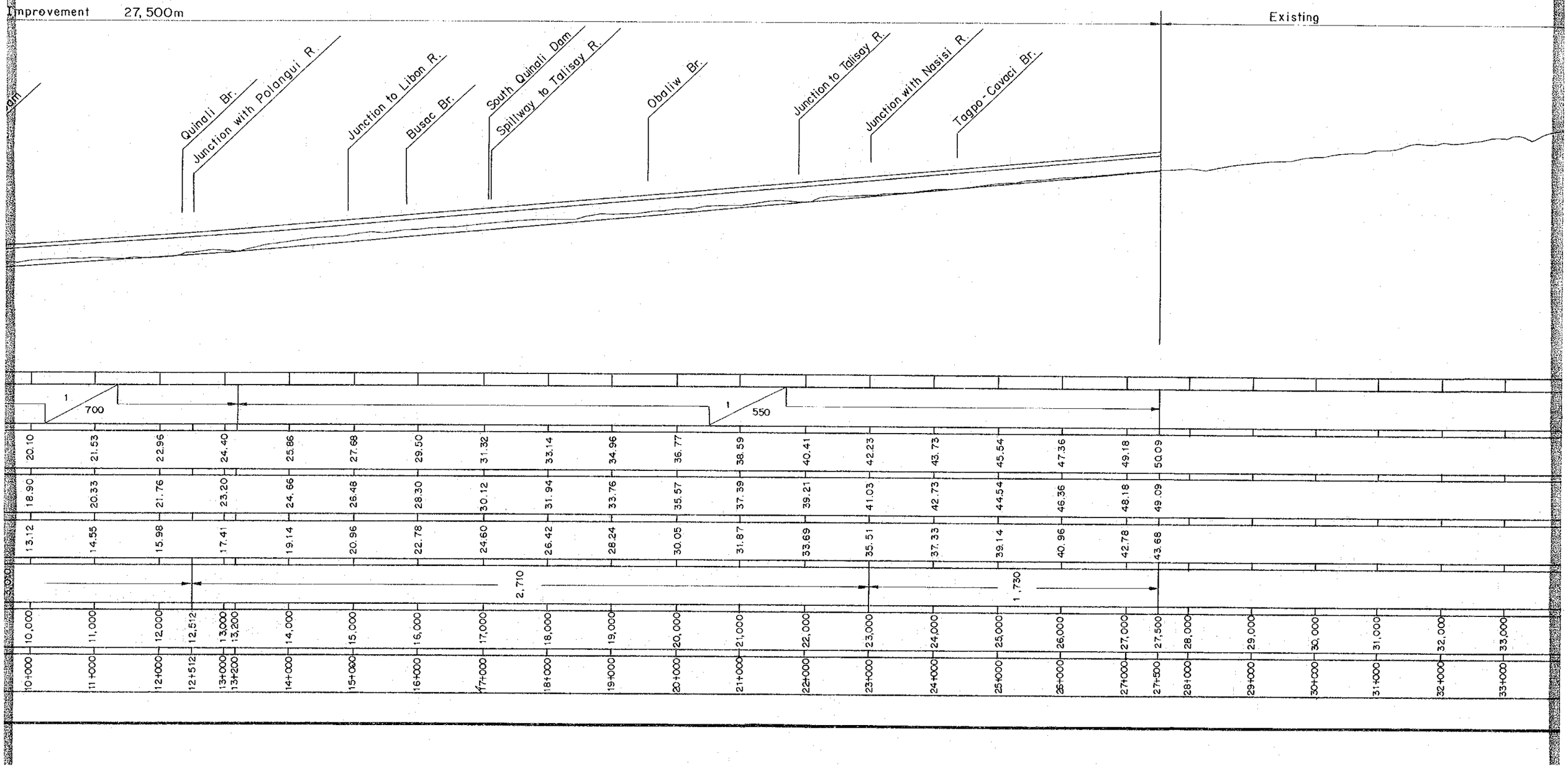
図－4.3.18　ナシシ川河川改修計画平面図

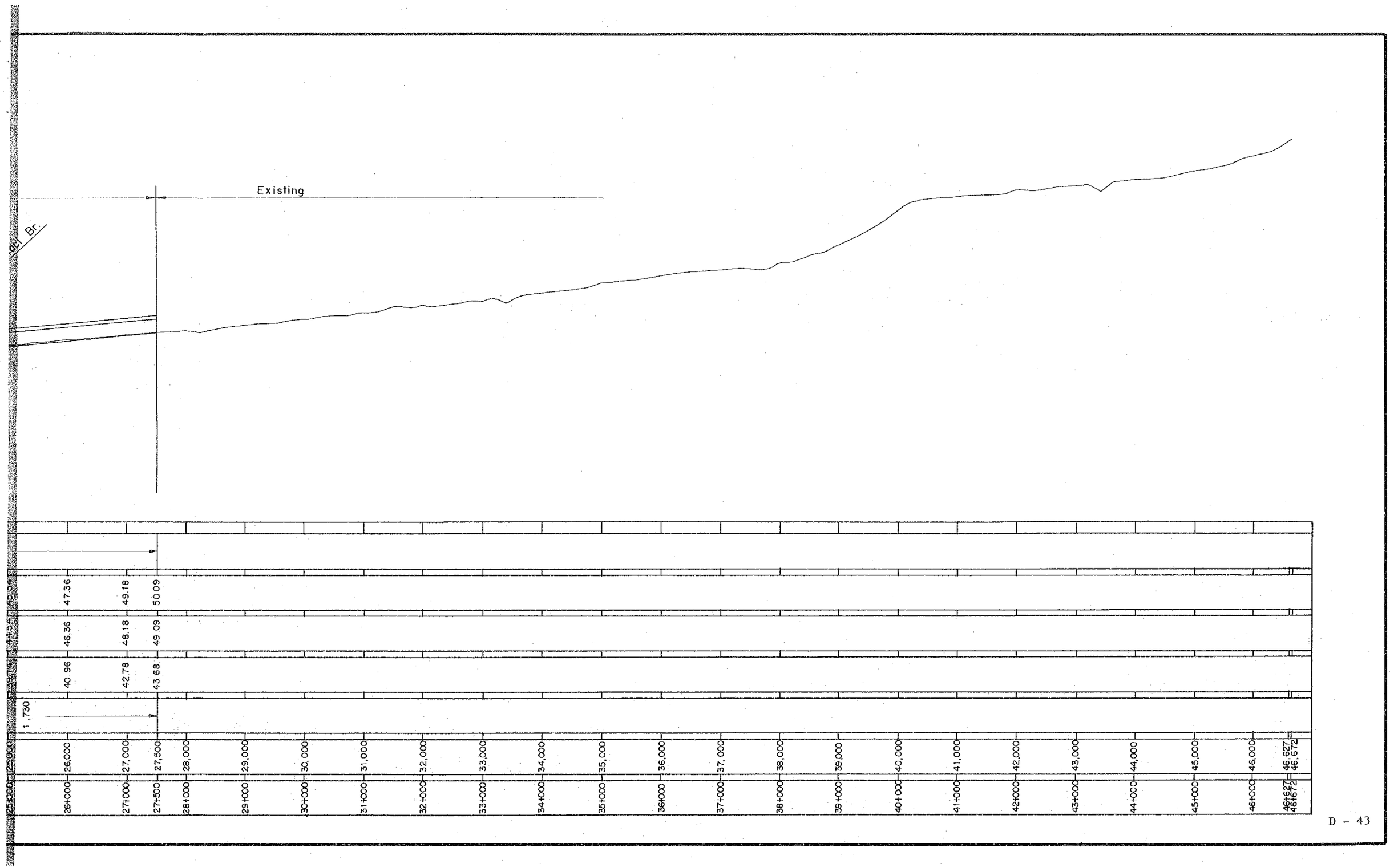


図－4.3.19　キナリ（A）川計画縦断図

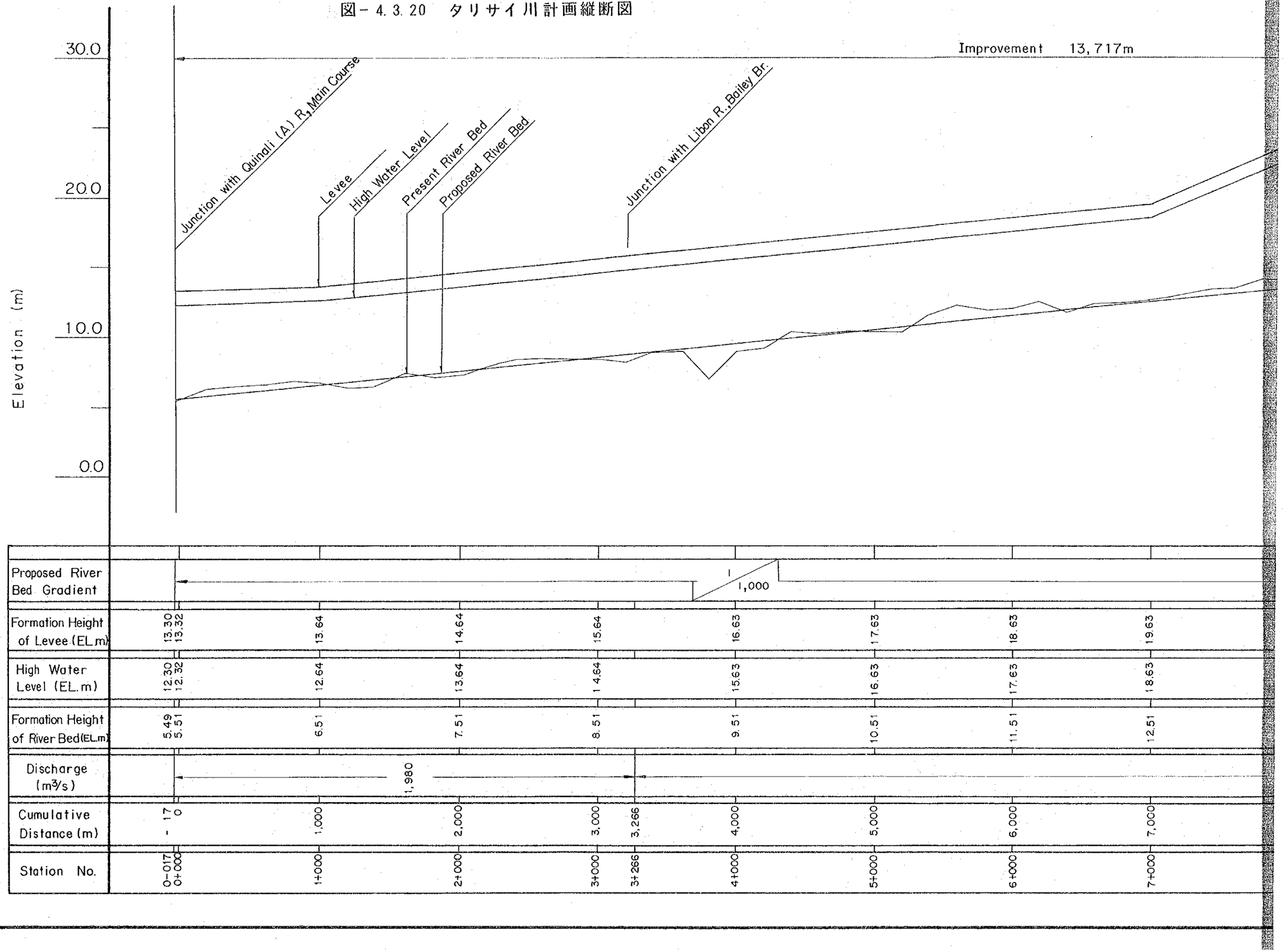


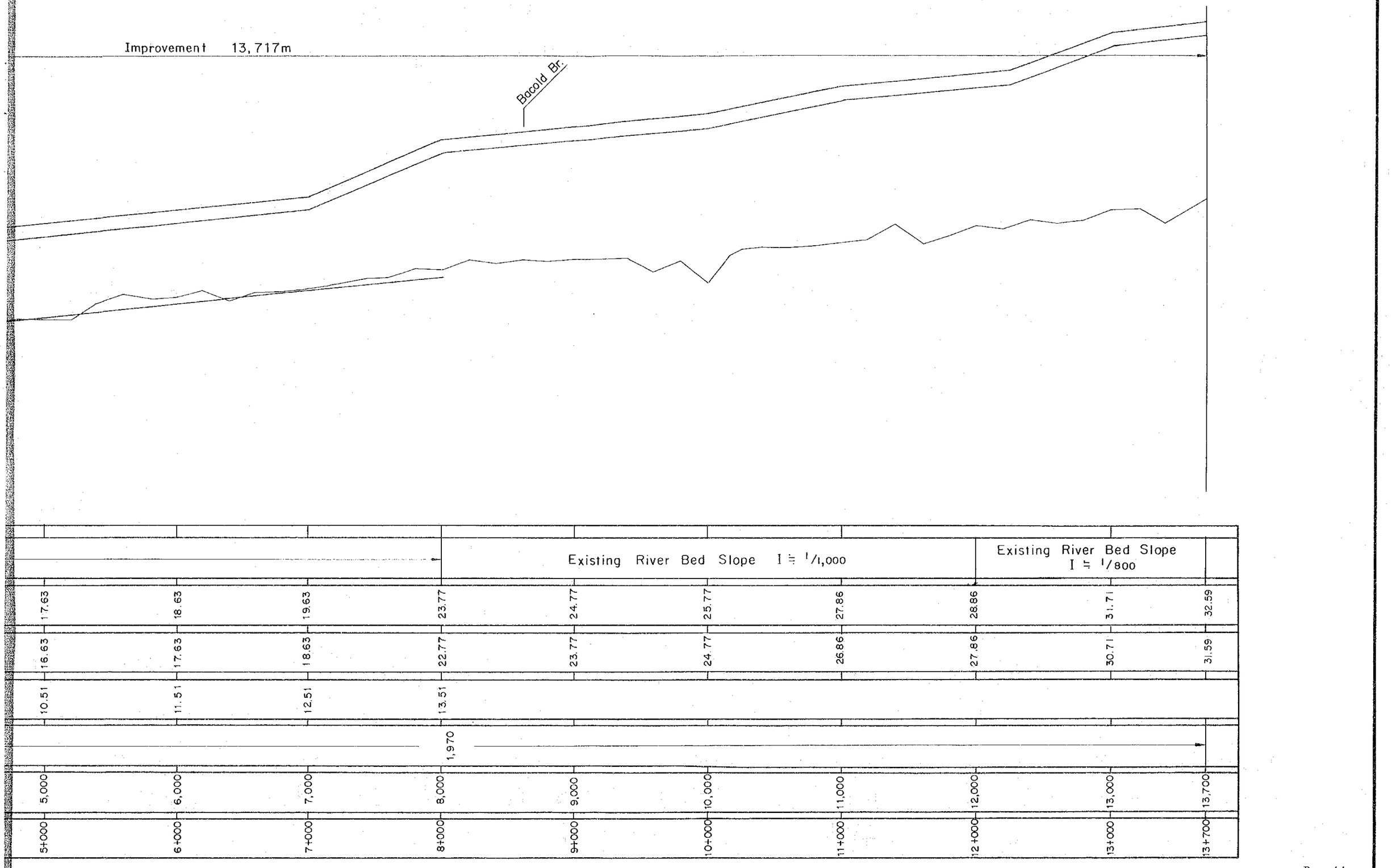
図－4.3.19　キナリ（A）川計画縦断図



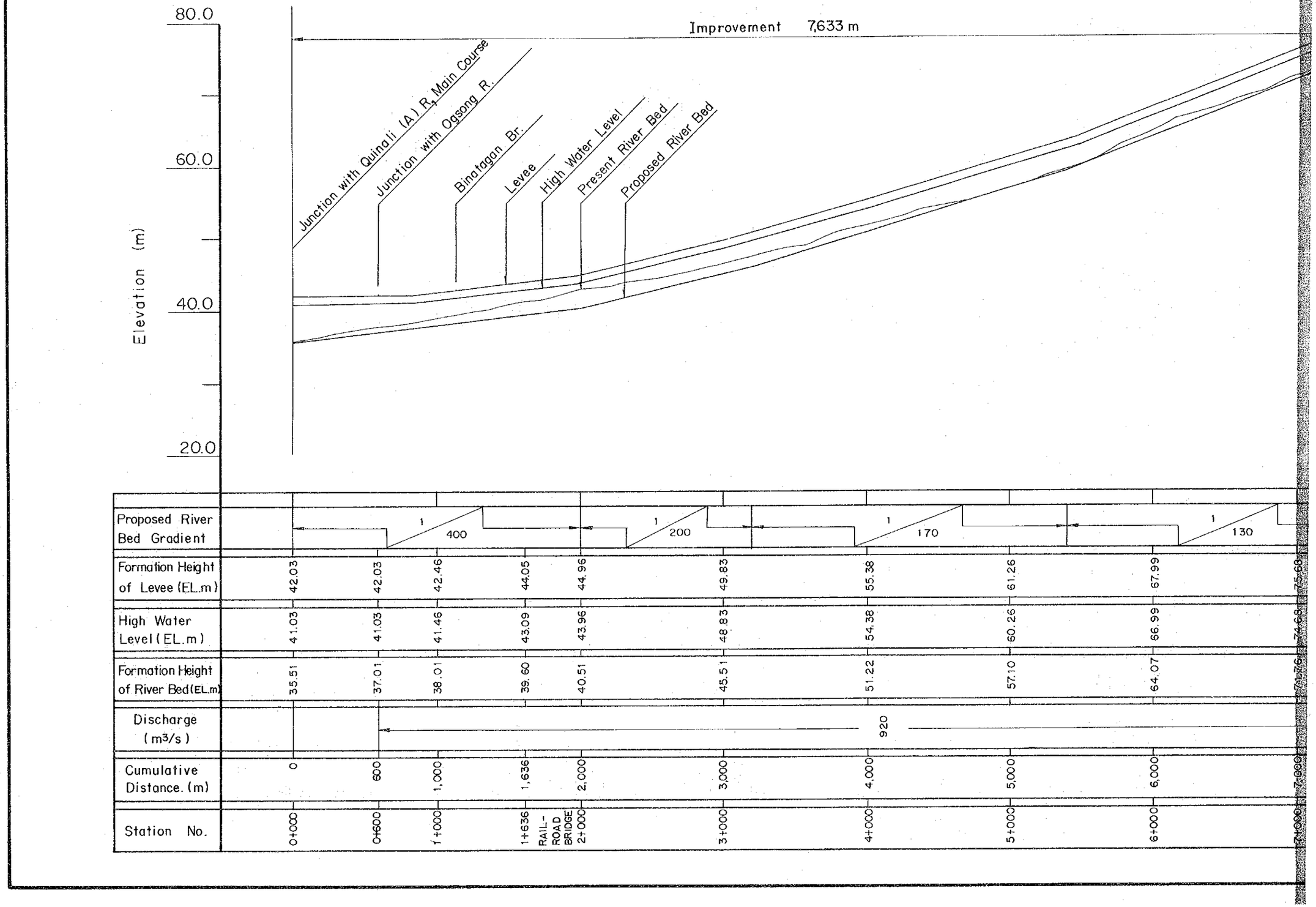

Existing
Br.
1.730
40.96
42.78
43.68
46.36
48.18
49.09
47.36
49.18
50.09
26,000
27,000
27,500
28,000
29,000
30,000
31,000
32,000
33,000
34,000
35,000
36,000
37,000
38,000
39,000
40,000
41,000
42,000
43,000
44,000
45,000
46,000
46,627
46,672
26+000
27+000
27+500
28+000
29+000
30+000
31+000
32+000
33+000
34+000
35+000
36+000
37+000
38+000
39+000
40+000
41+000
42+000
43+000
44+000
45+000
46+000
46+627
46+672

図－4.3.20　タリサイ川計画縦断図

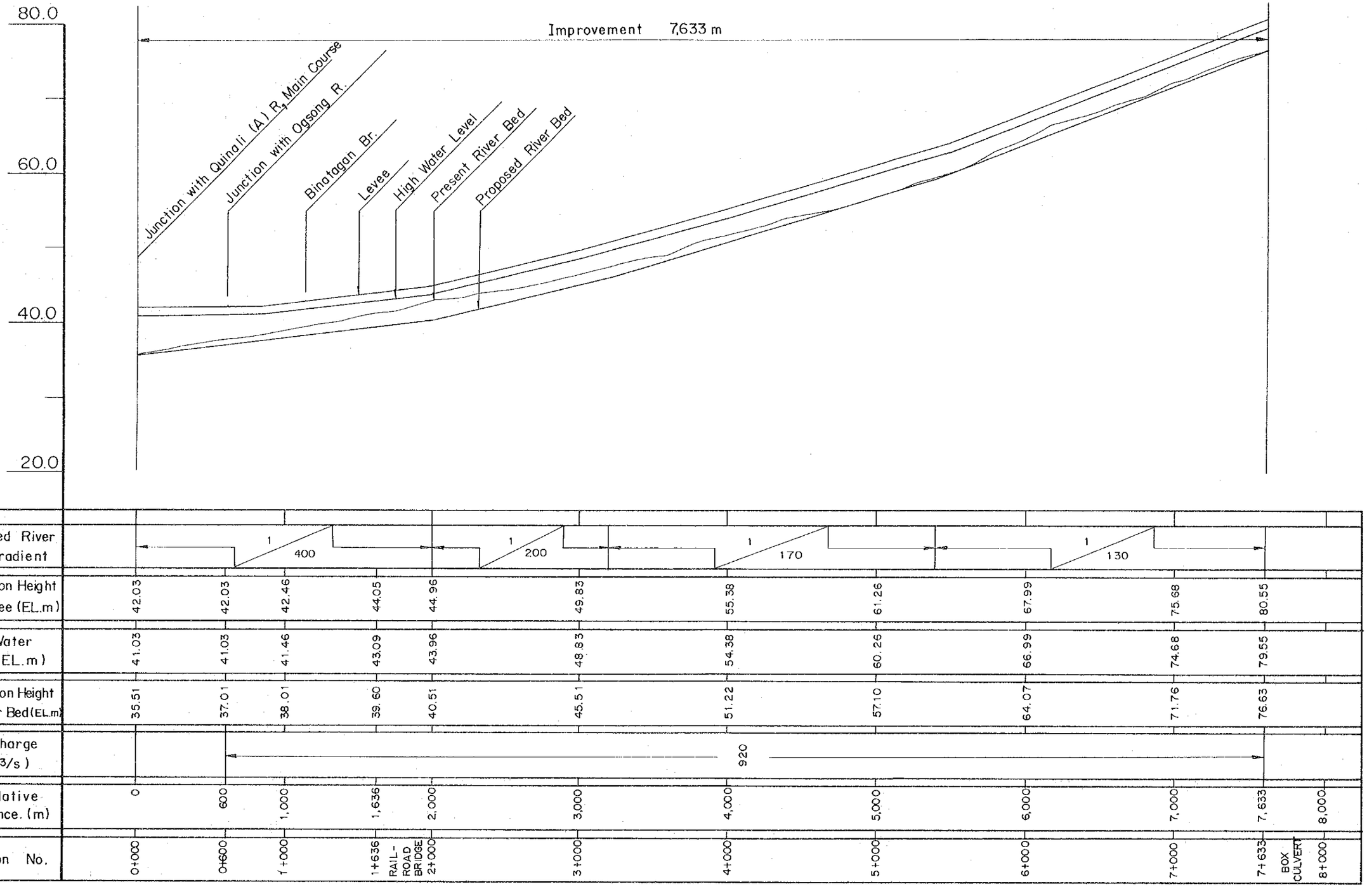



Improvement 13,717m
Bacold Br.
Existing River Bed Slope I = 1/1,000
Existing River Bed Slope I = 1/800
17.63
18.63
19.63
23.77
24.77
25.77
27.86
28.86
31.71
32.59
16.63
17.63
18.63
22.77
23.77
24.77
26.86
27.86
30.71
31.59
10.51
11.51
12.51
13.51
1,970
5,000
6,000
7,000
8,000
9,000
10,000
11,000
12,000
13,000
13,700
5+000
6+000
7+000
8+000
9+000
10+000
11+000
12+000
13+000
13+700

図－4.3.21　ナシシ川計画縦断図

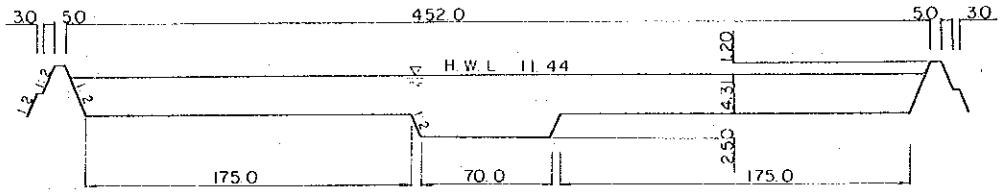


図－4.3.21　ナシシ川計画縦断図

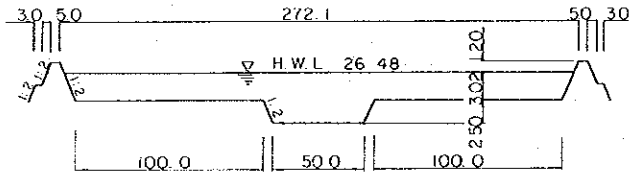


図－4.3.22　キナリ（A）川計画標準断面図

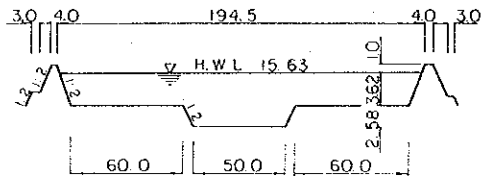
STA.　1　+　000　(Main　Course)



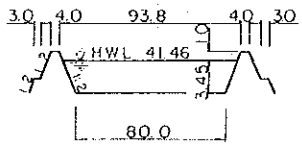
STA.　15　+　000　(Main　Course)



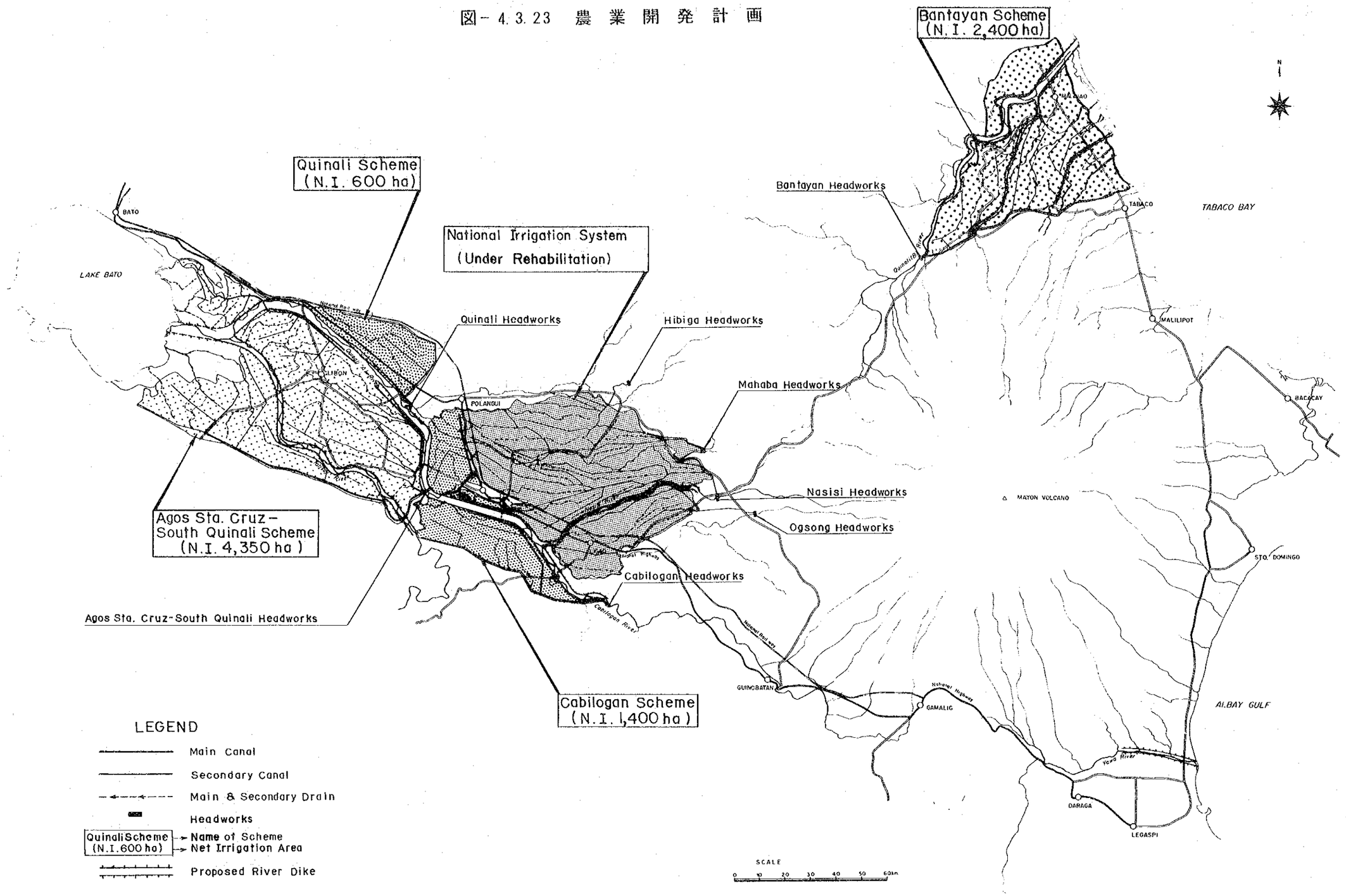
STA.　4　+　000　(Talisay　R.)



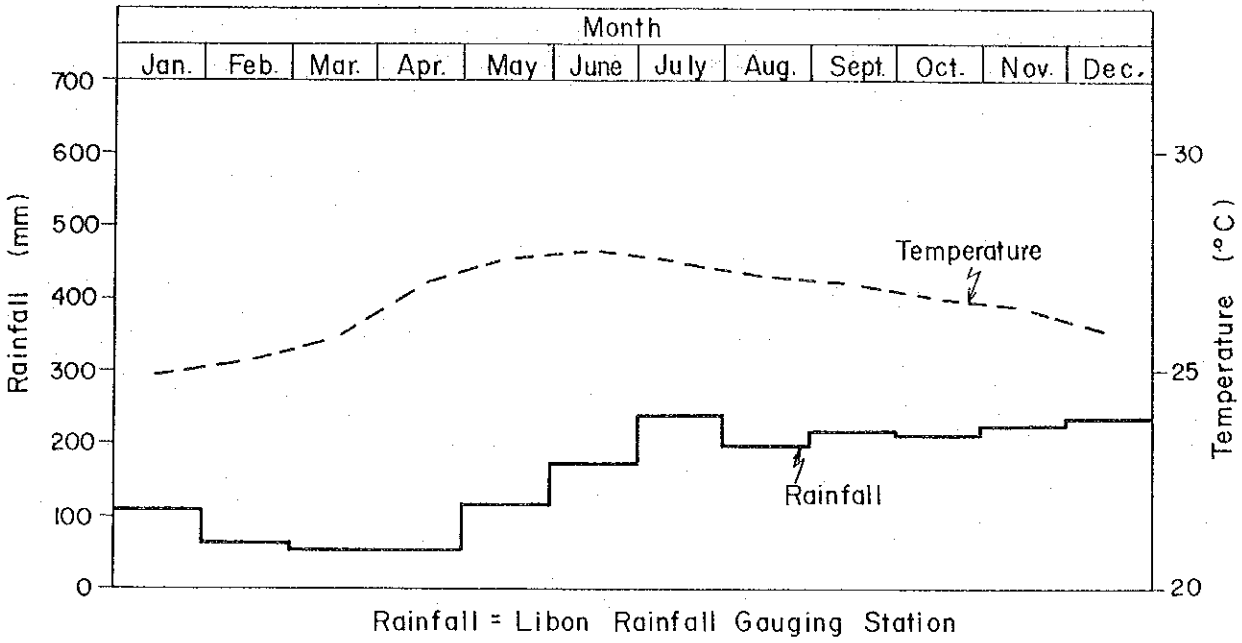
STA.　1　+　000　(Nosisi　R.)

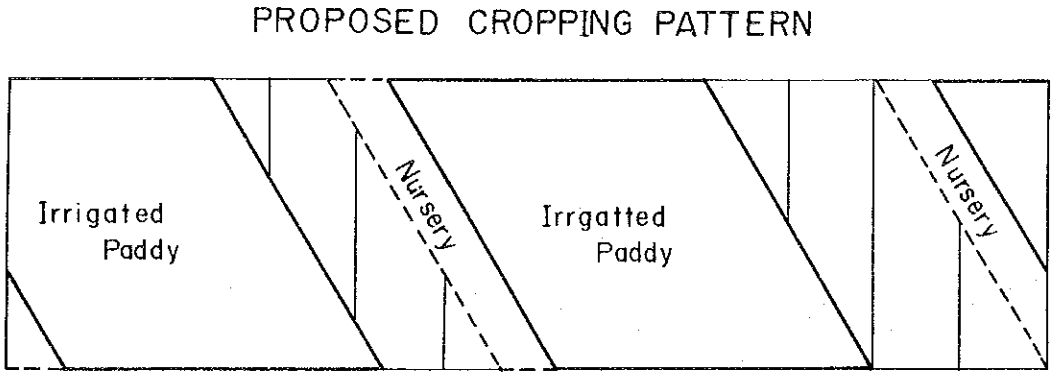


図－4.3.23　農業開発計画

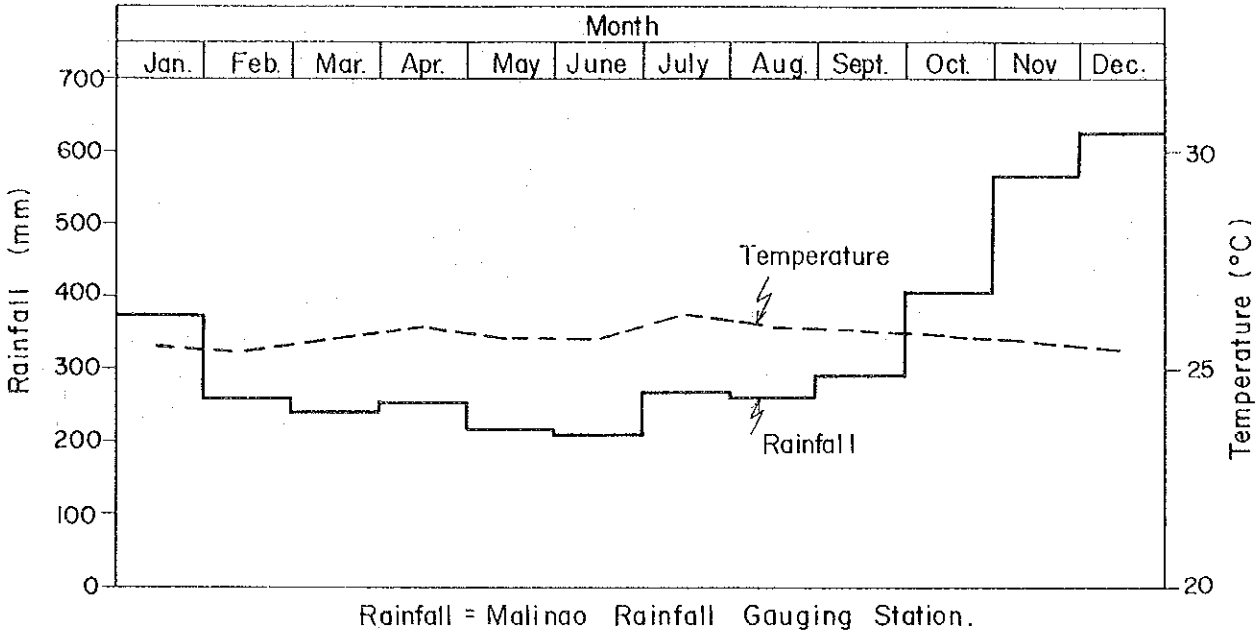


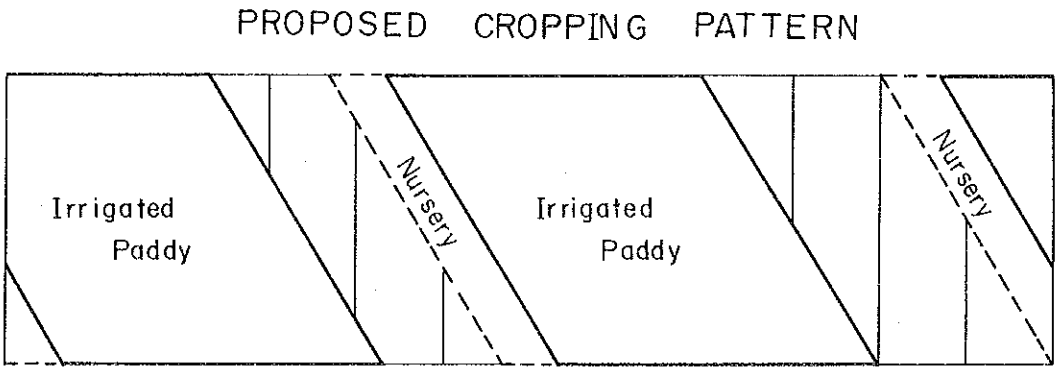
図－4.3.24　キナリ（A）川流域計画作付体系



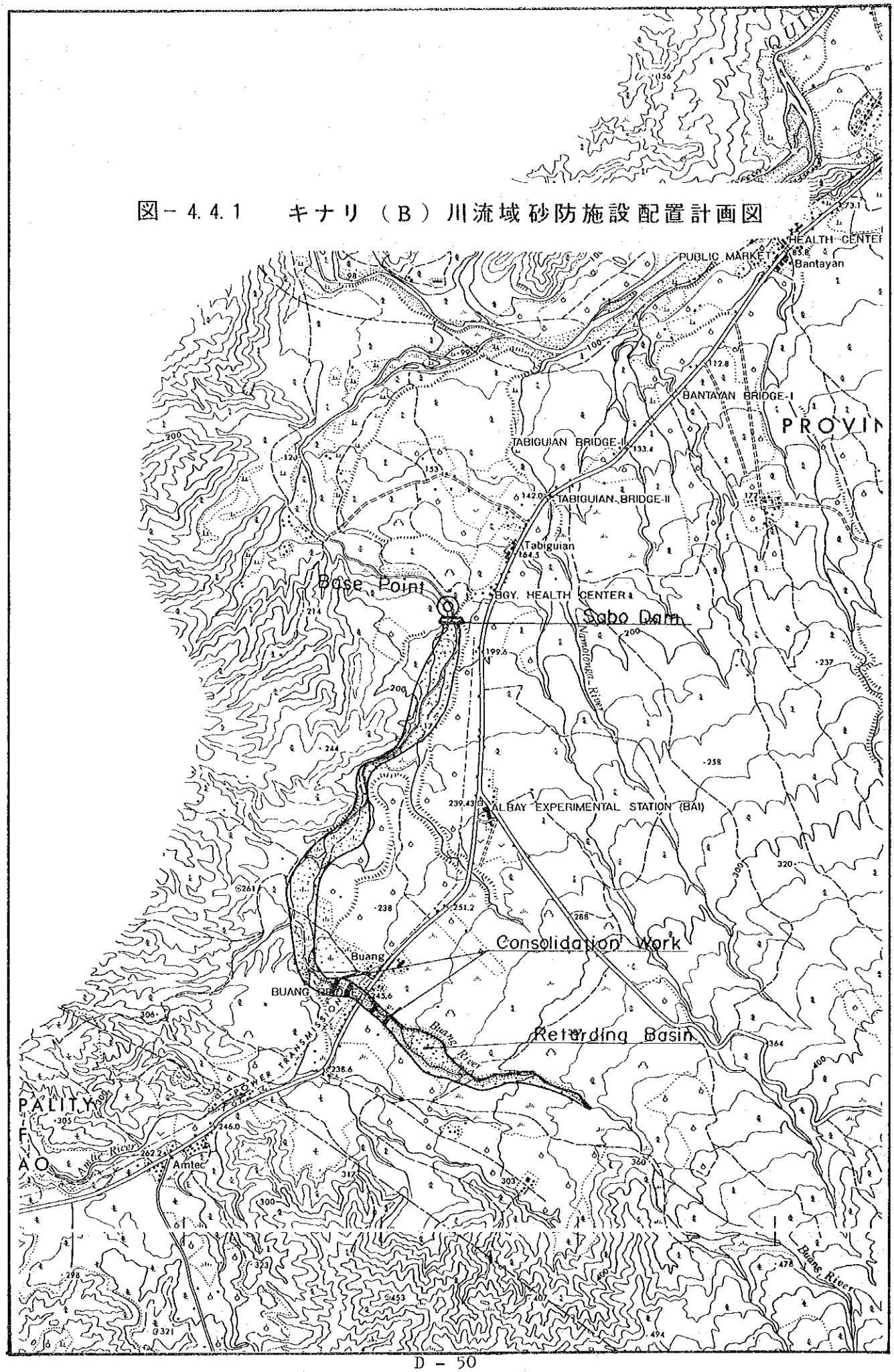


図－4.3.25　キナリ（B）川流域計画作付体系

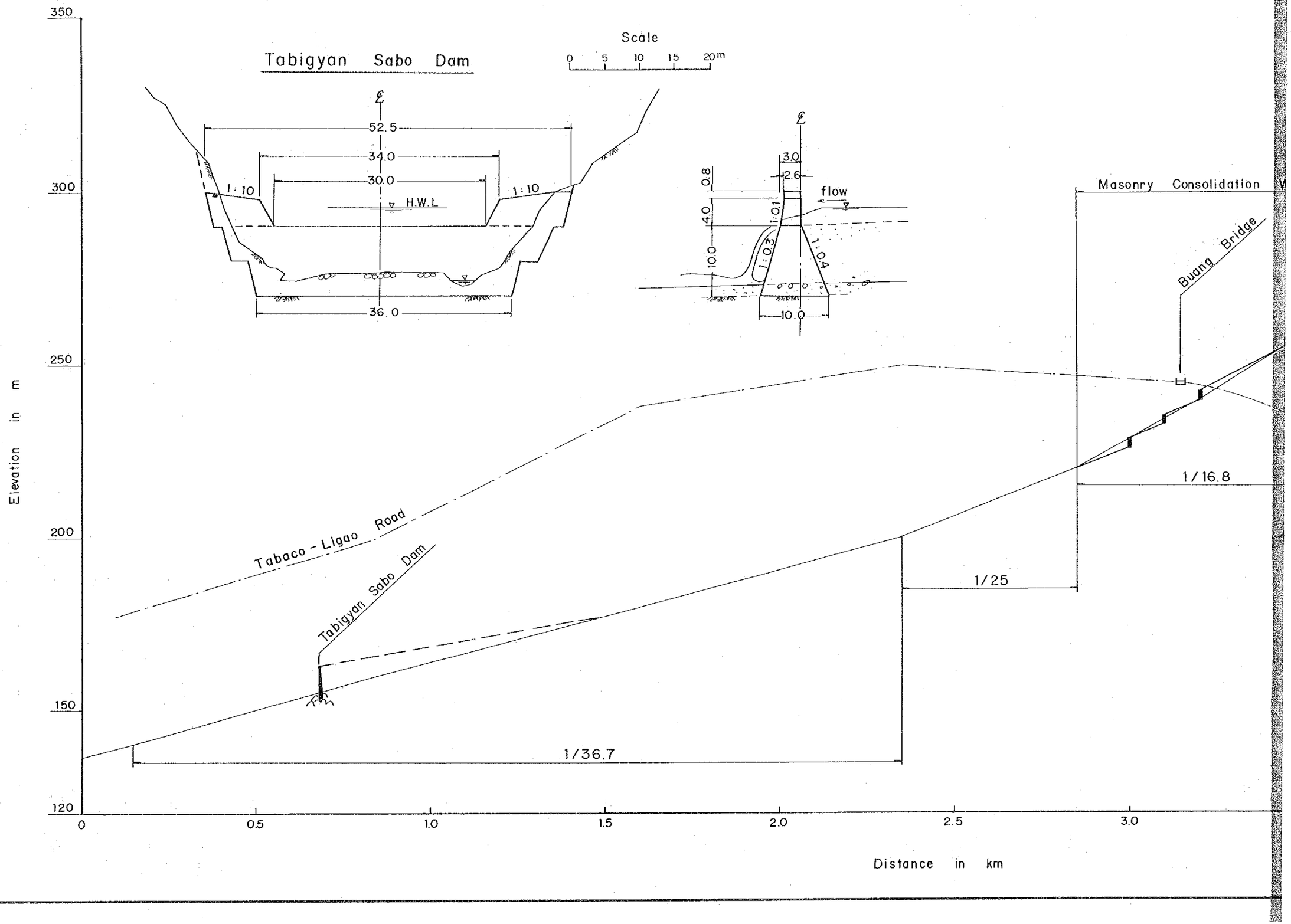




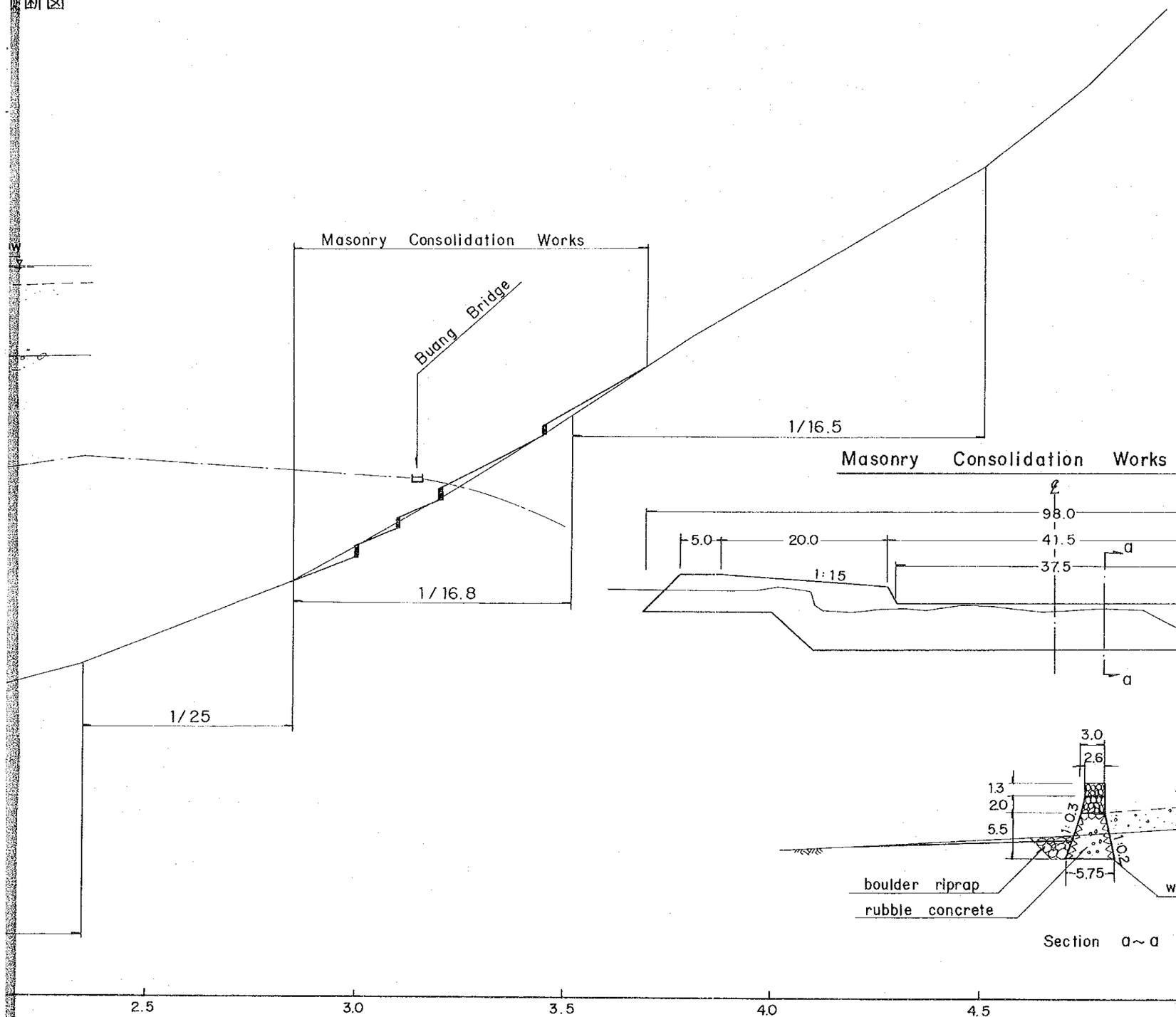
図－4.4.1　キナリ（B）川流域砂防施設配置計画図



図－4.4.2　キナリ（B）川縦断図

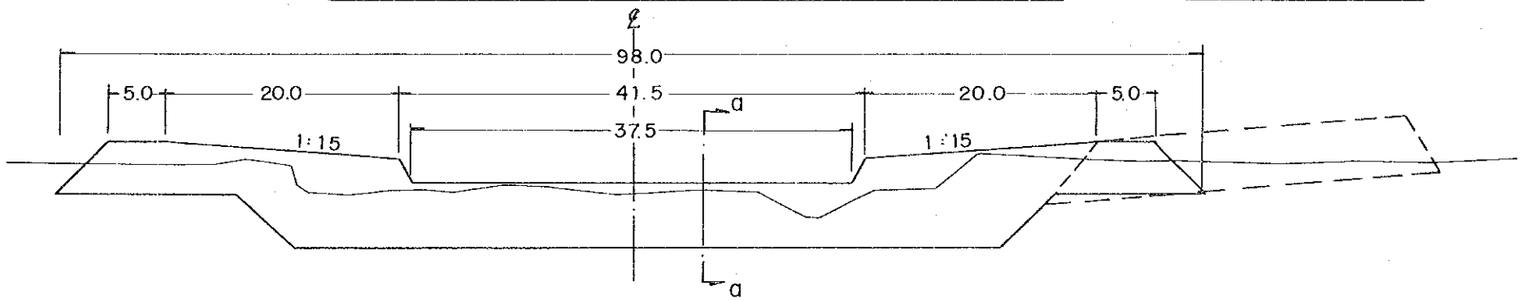


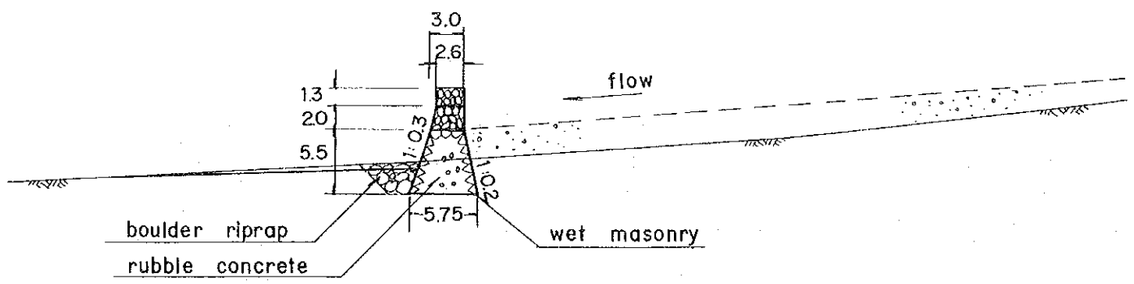
横断図



Masonry Consolidation Works with Spur Dyke

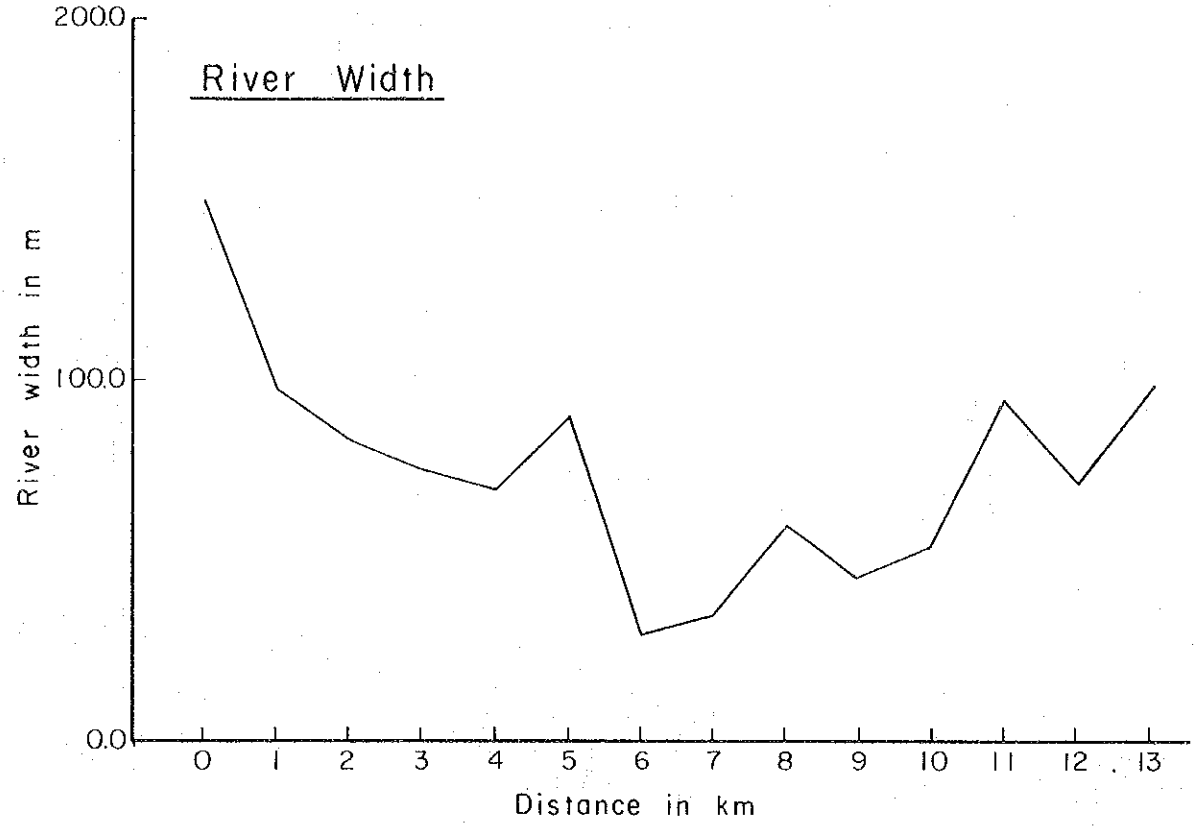
Scale 0 5 10 15 20m

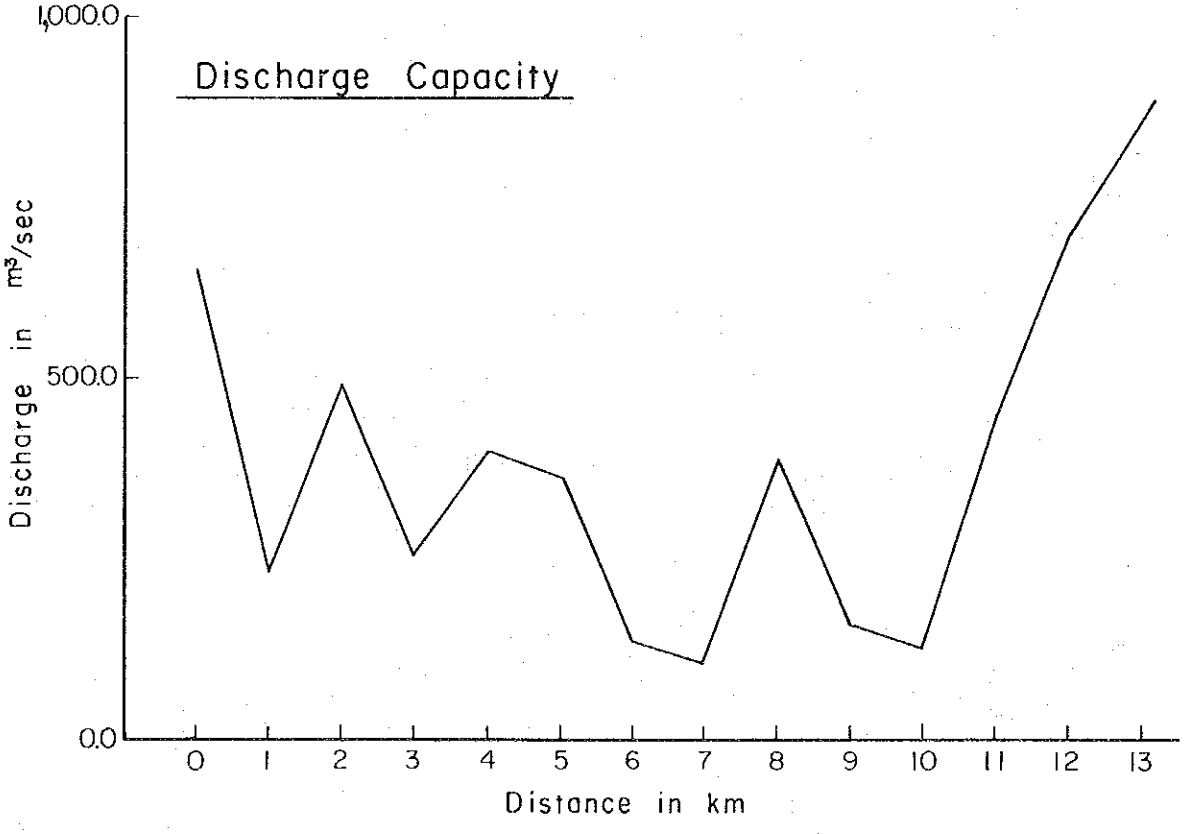




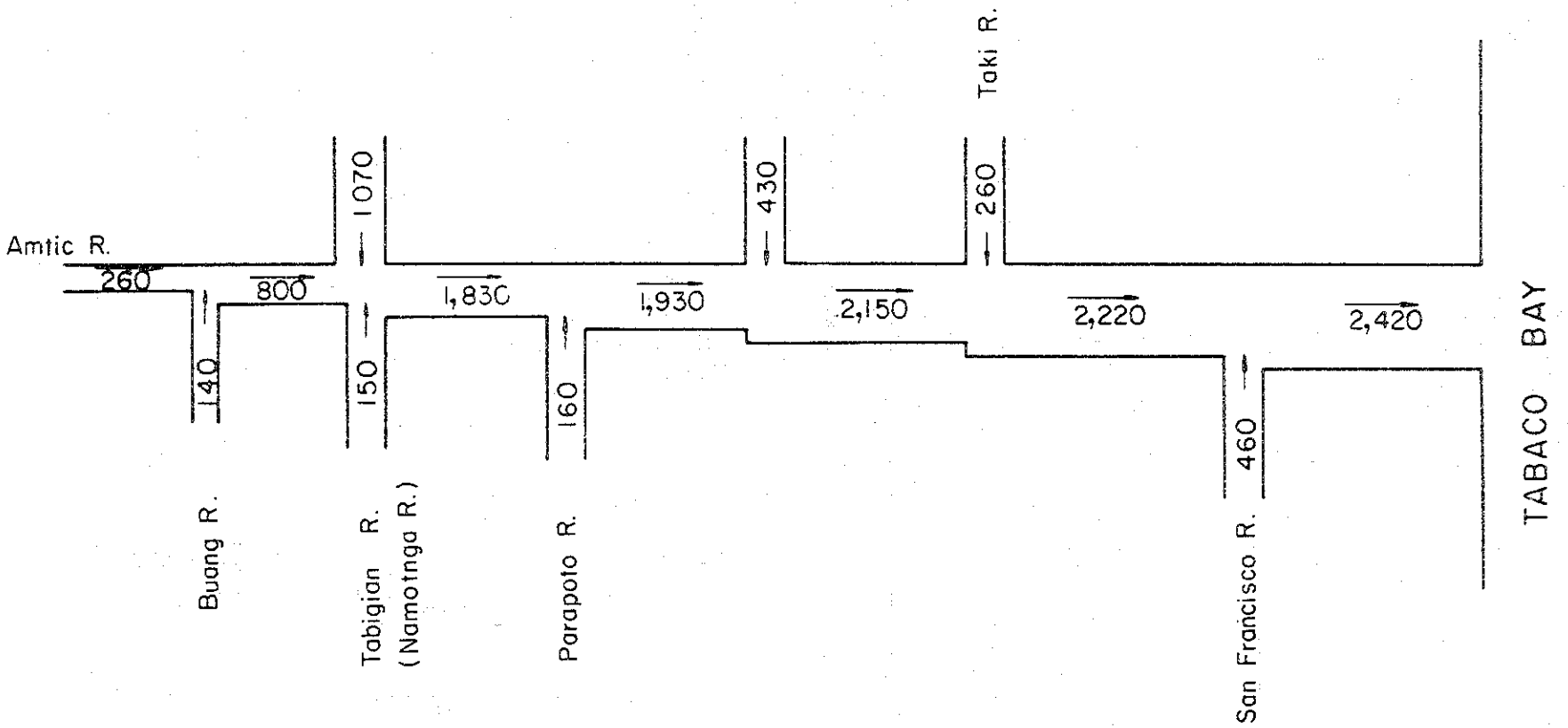
Section a~a

図－4.4.3　キナリ（B）川現河道の川幅と流下能力

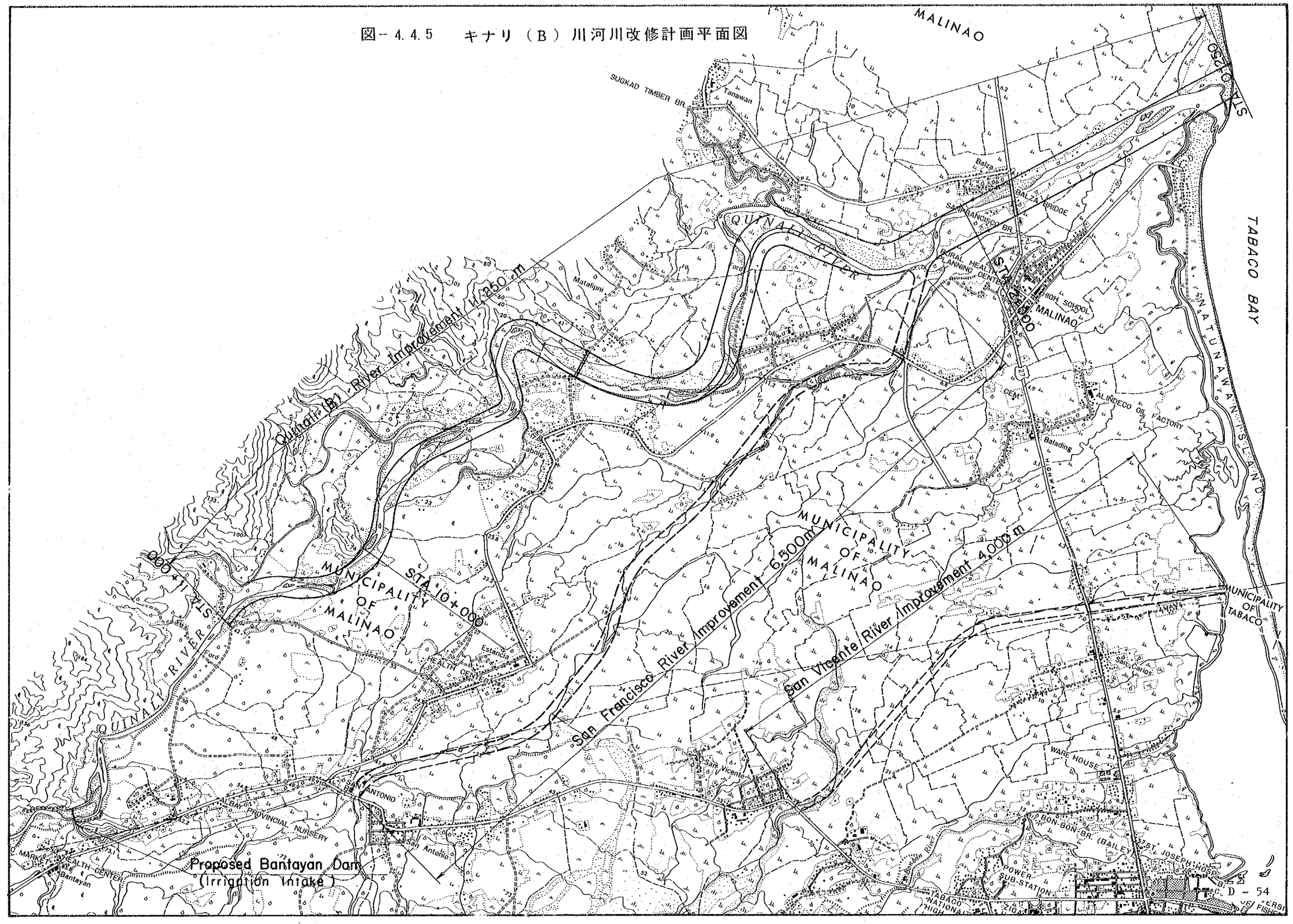




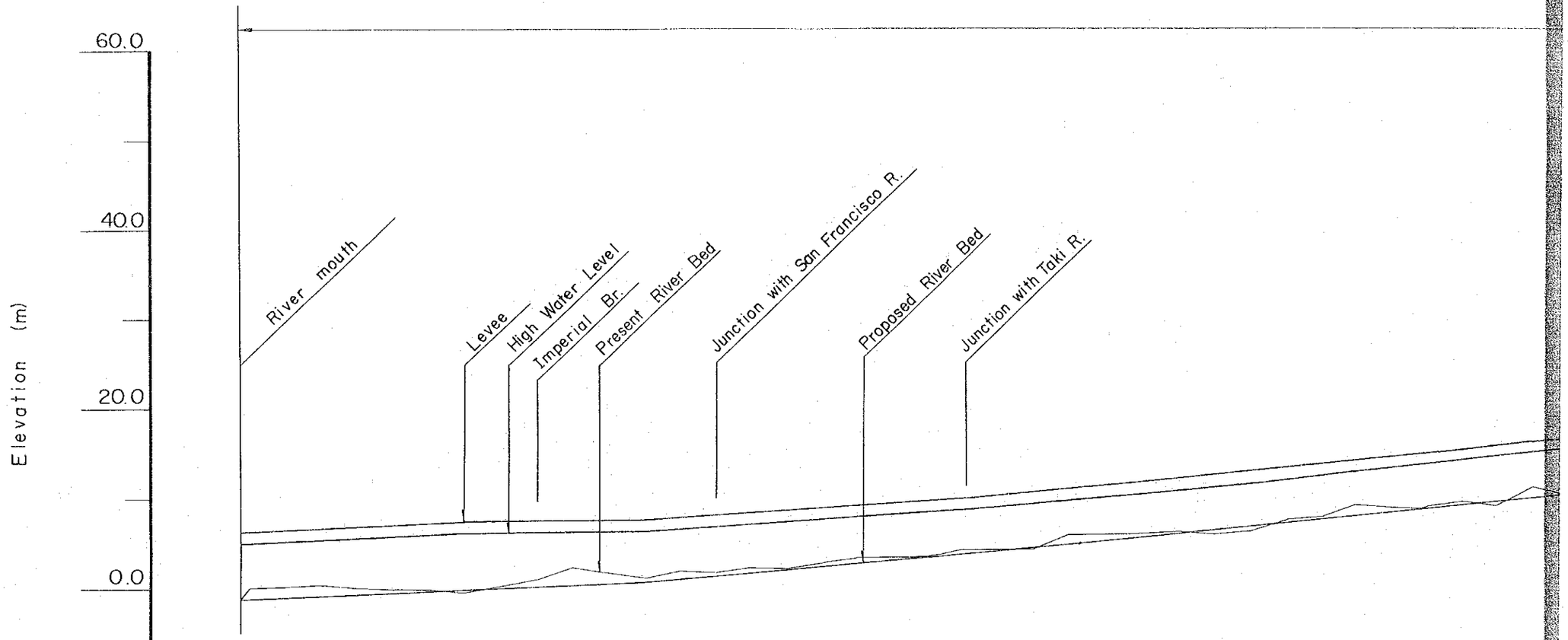
図－4.4.4　キナリ（B）川流量配分図



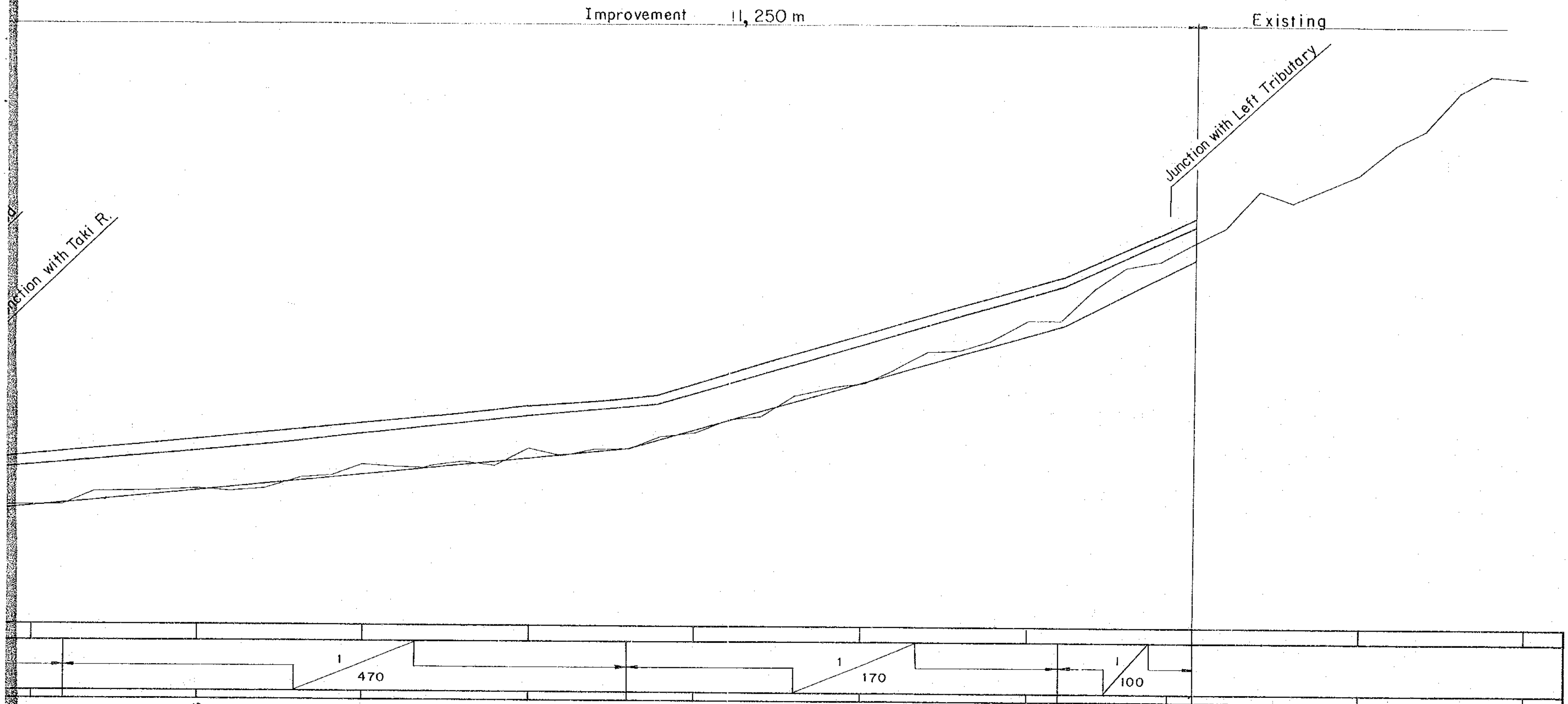
図－4.4.5　キナリ（B）川河川改修計画平面図



図－4.4.6　キナリ（B）川計画縦断図



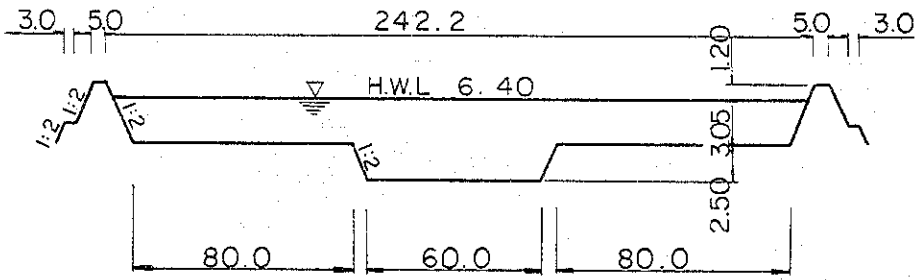
Station No.	0-250	0+000	1+000	2+000	2+400	3+000	3+800	4+000	4+200	5+000	6+000	7+000
Proposed River Bed Gradient	1/1,200			1/660					1/470			
Formation Height of Levee (EL.m)	6.33	6.54	7.38	7.60		8.91		10.36		12.33	14.45	16.58
High Water Level (EL.m)	5.13	5.34	6.18	6.40		7.71		9.16		11.13	13.25	15.38
Formation Height of River Bed (EL.m)	-1.02	-0.81	0.03	0.85		2.36		3.88		5.89	8.01	10.14
Discharge (m^3/s)	2,420				2,220							
Cumulative Distance (m)	-250	0	1,000	2,000	2,400	3,000	3,800	4,000	4,200	5,000	6,000	7,000



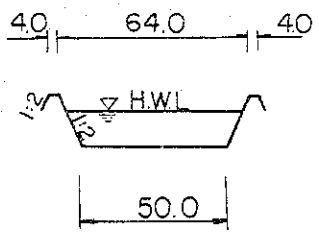
10.36		12.33	14.45	16.58		19.43	25.31	31.20			39.30		
9.16		11.13	13.25	15.38		18.23	24.11	30.00			38.30		
3.88		5.89	8.01	10.14		13.77	19.65	25.54			34.71		
	2,150										1,930		
4,000	4,200	5,000	6,000	7,000	7,600	8,000	9,000	10,000	10,200	10,850	11,000	12,000	13,000
4+000	4+200	5+000	6+000	7+000	7+600	8+000	9+000	10+000	10+200	10+850	11+000	12+000	13+000

図－ 4.4.7　キナリ（B）川計画標準断面図

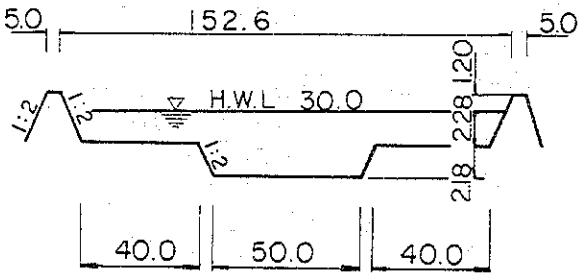
STA. 2 + 000 (Main Course)



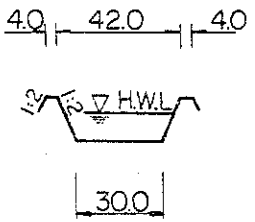
THE SAN FRANCISCO RIVER



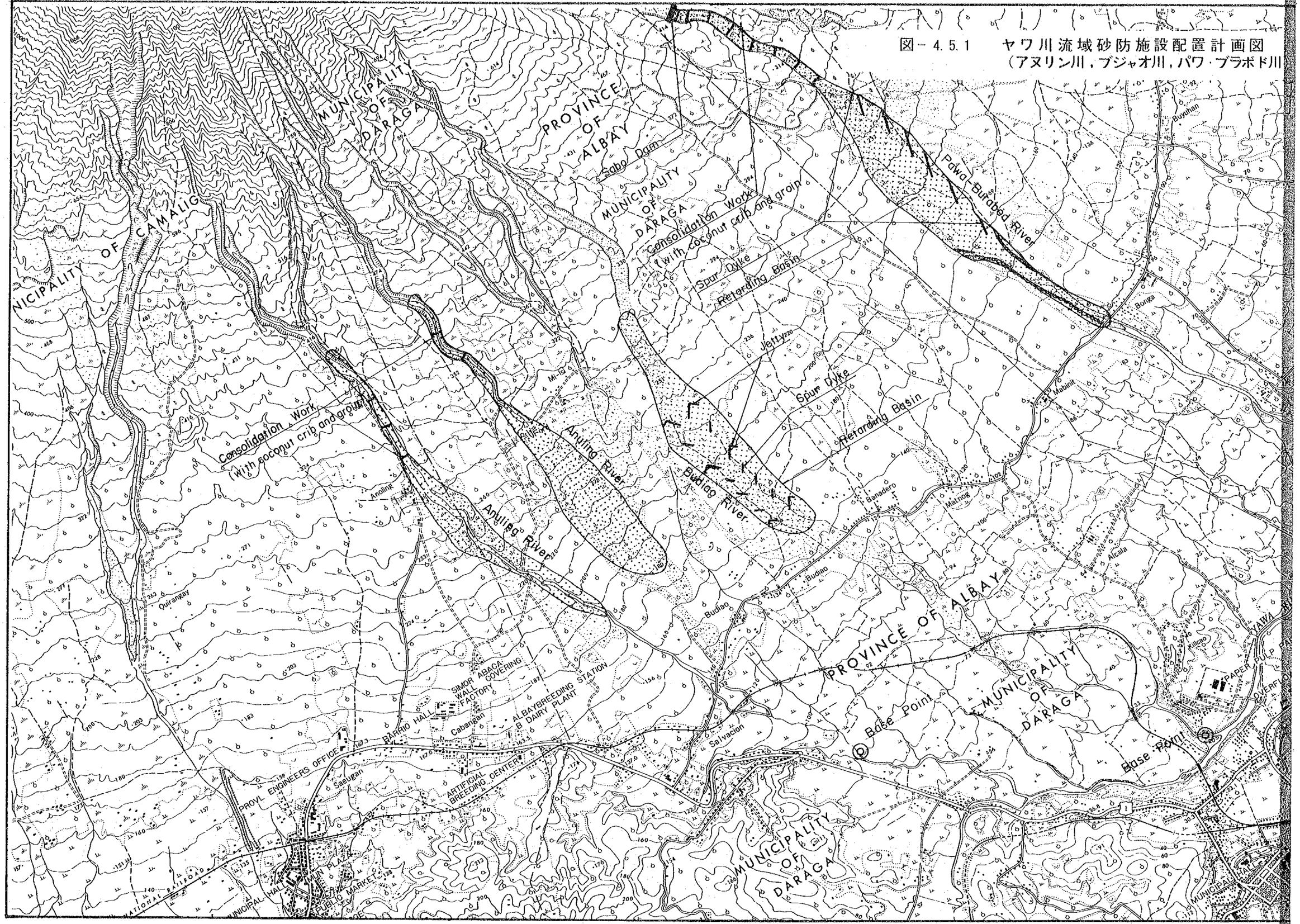
STA. 10 +000 (Main Course)



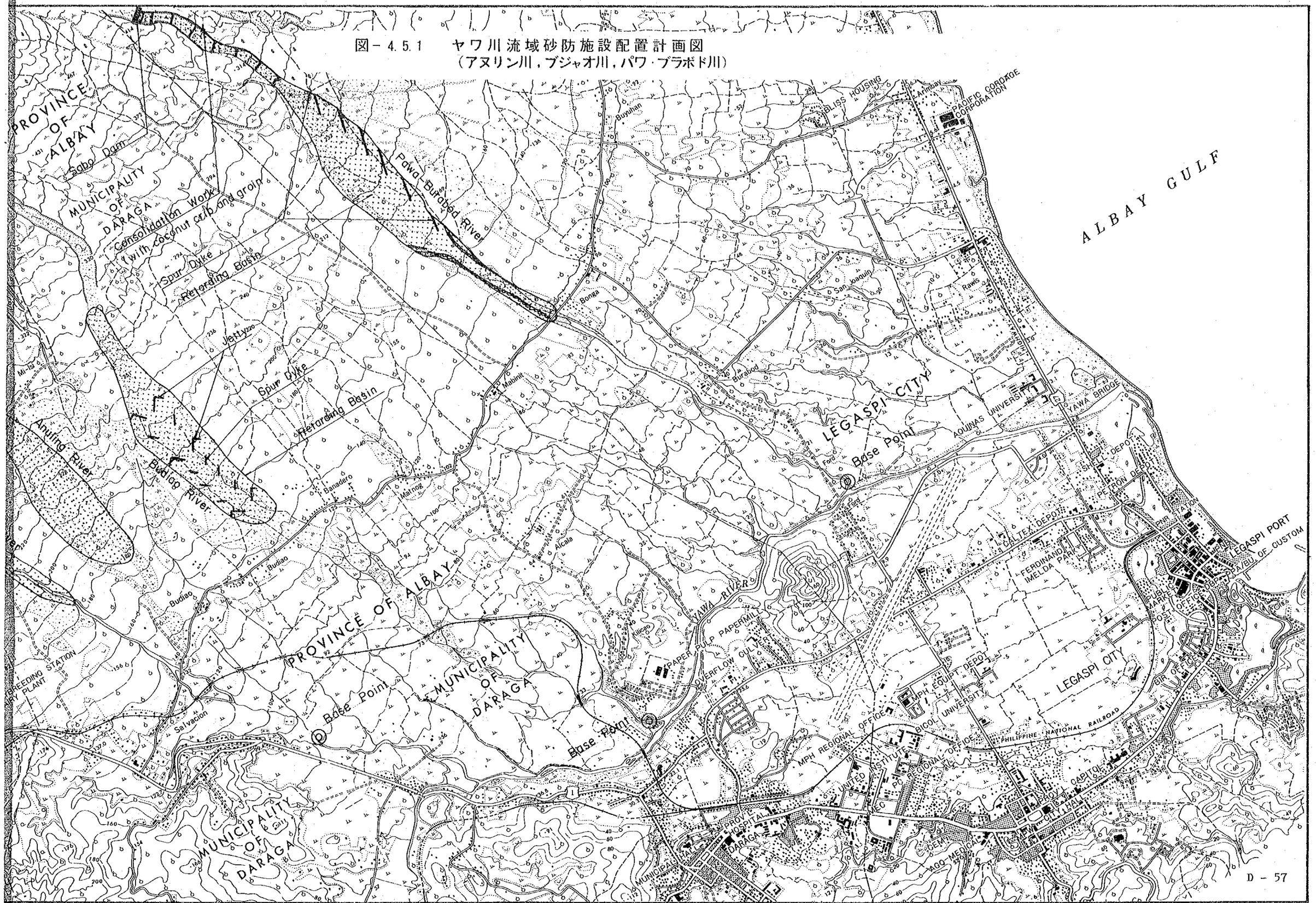
THE SAN VICENTE RIVER



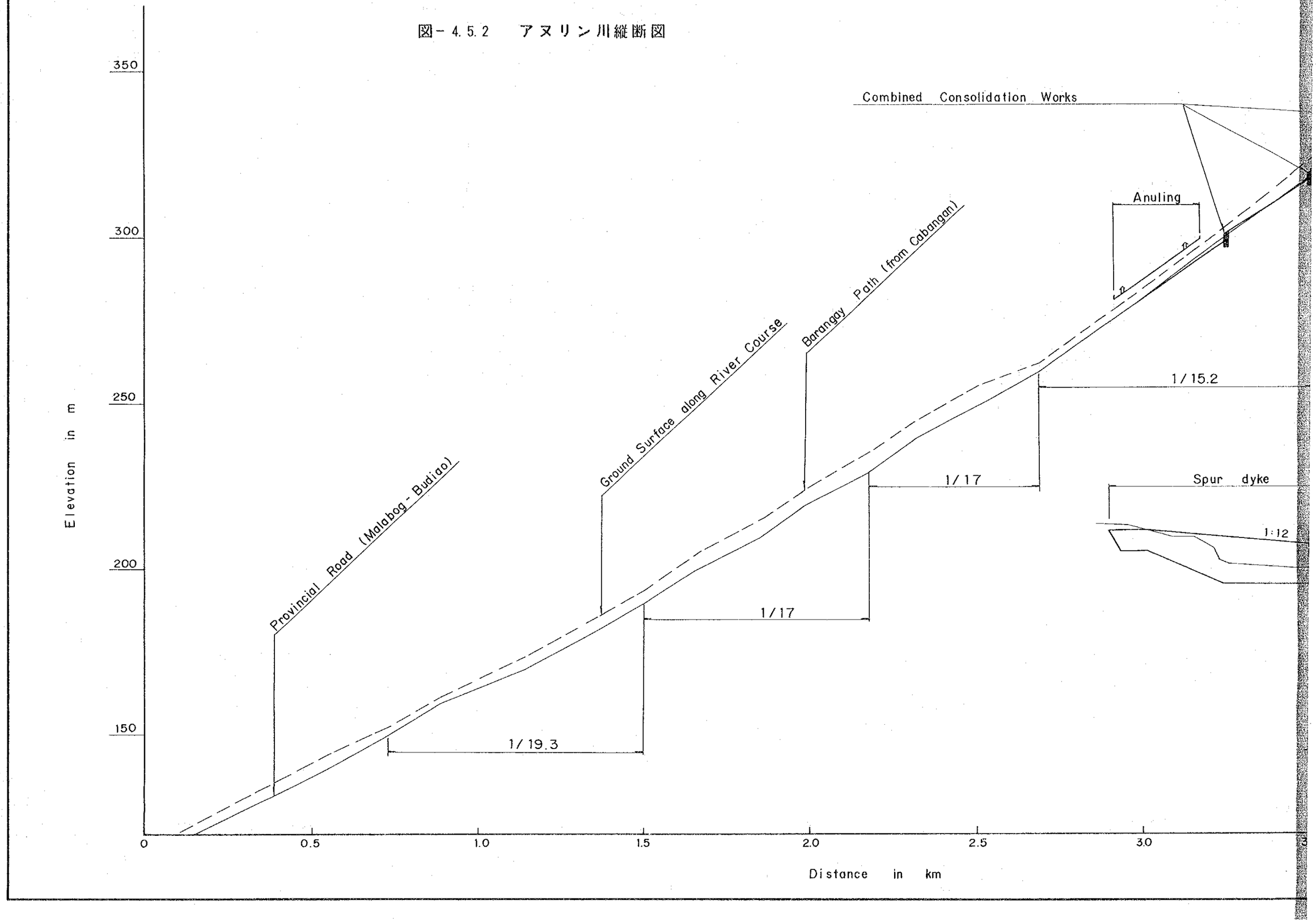
図－4.5.1　ヤワ川流域砂防施設配置計画図
（アヌリン川，ブジャオ川，パワ・ブラボド川）



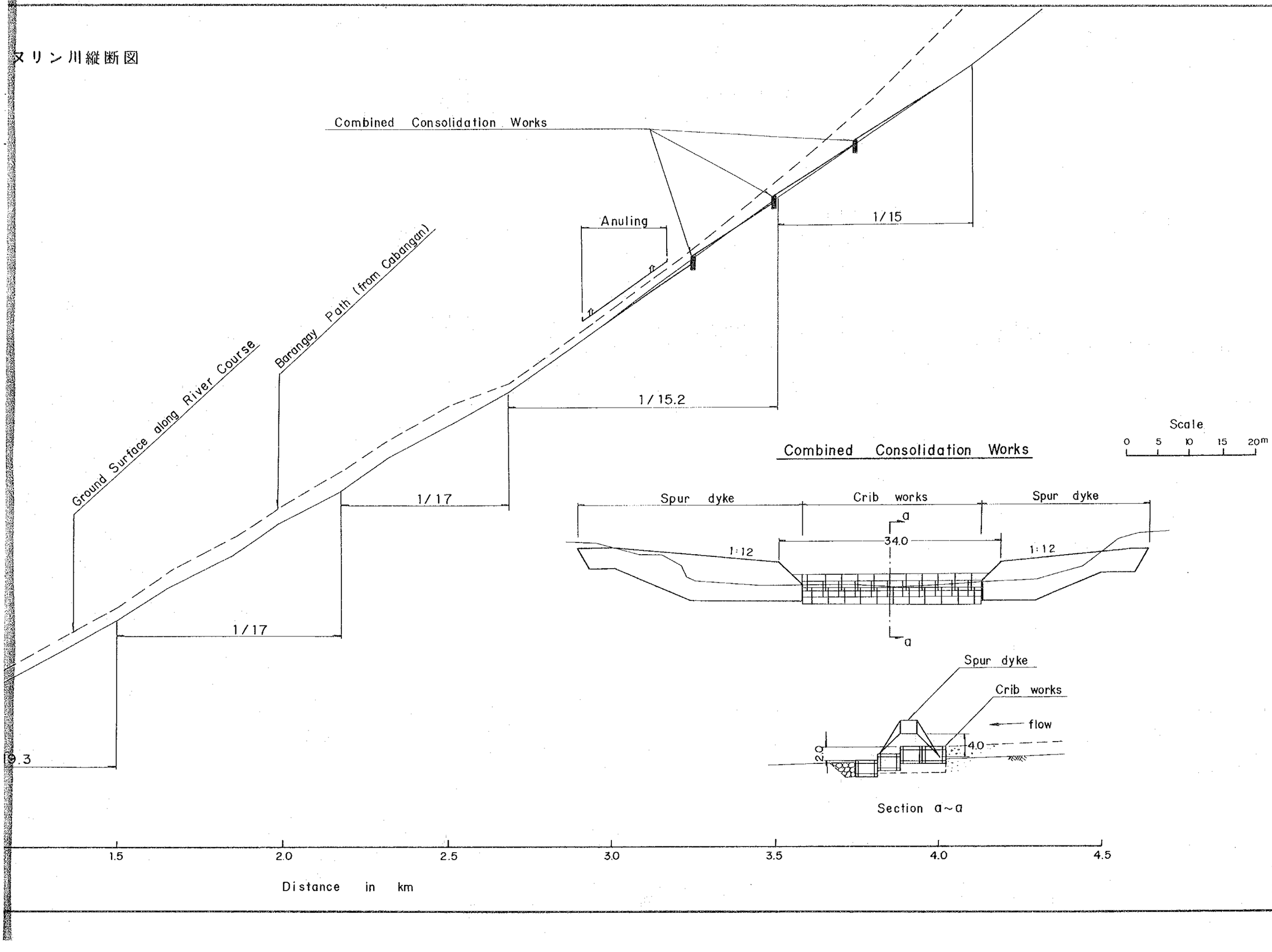
図－4.5.1　ヤワ川流域砂防施設配置計画図
（アヌリン川，ブジャオ川，パワ・ブラボド川）



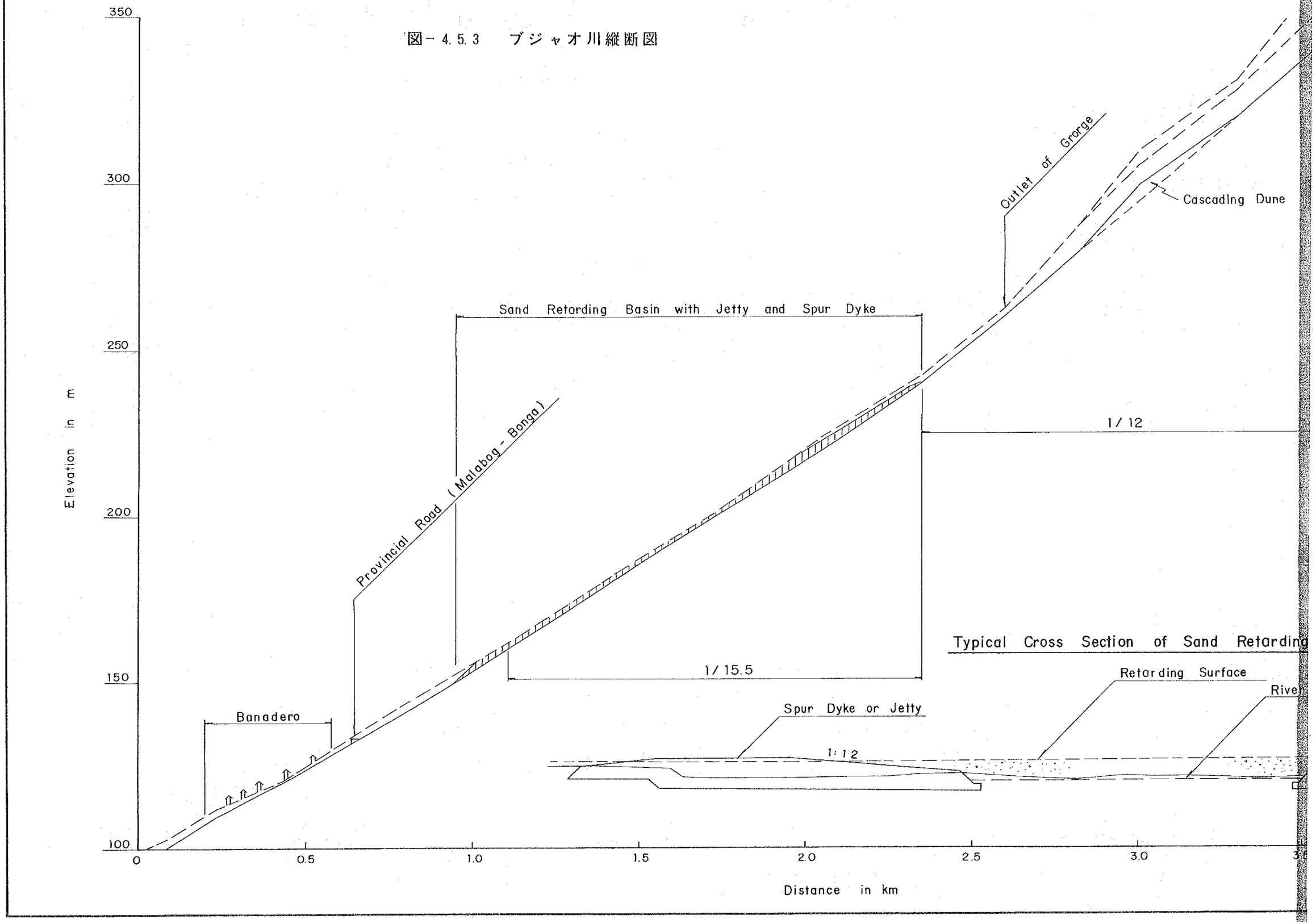
図－4.5.2　アヌリン川縦断図



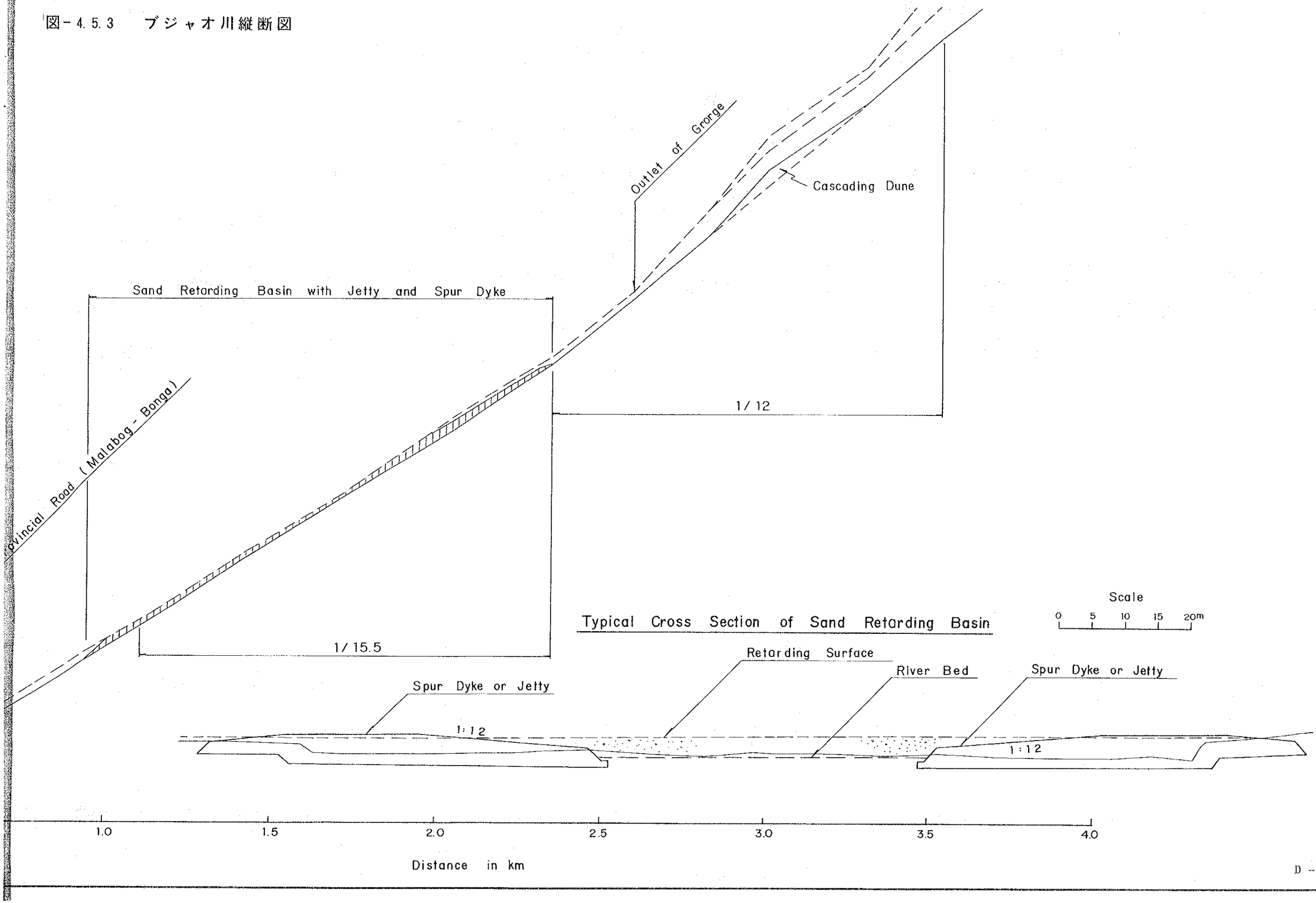
ヌリン川縦断図


Combined Consolidation Works
Anuling
1/15
Barangay Path (from Cabangan)
Ground Surface along River Course
1/15.2
1/17
1/17
9.3
1.5
2.0
2.5
3.0
3.5
4.0
4.5
Distance in km
Combined Consolidation Works
Scale
0 5 10 15 20m
Spur dyke
Crib works
Spur dyke
a
34.0
1:12
1:12
a
Spur dyke
Crib works
flow
2.0
4.0
Section a~a

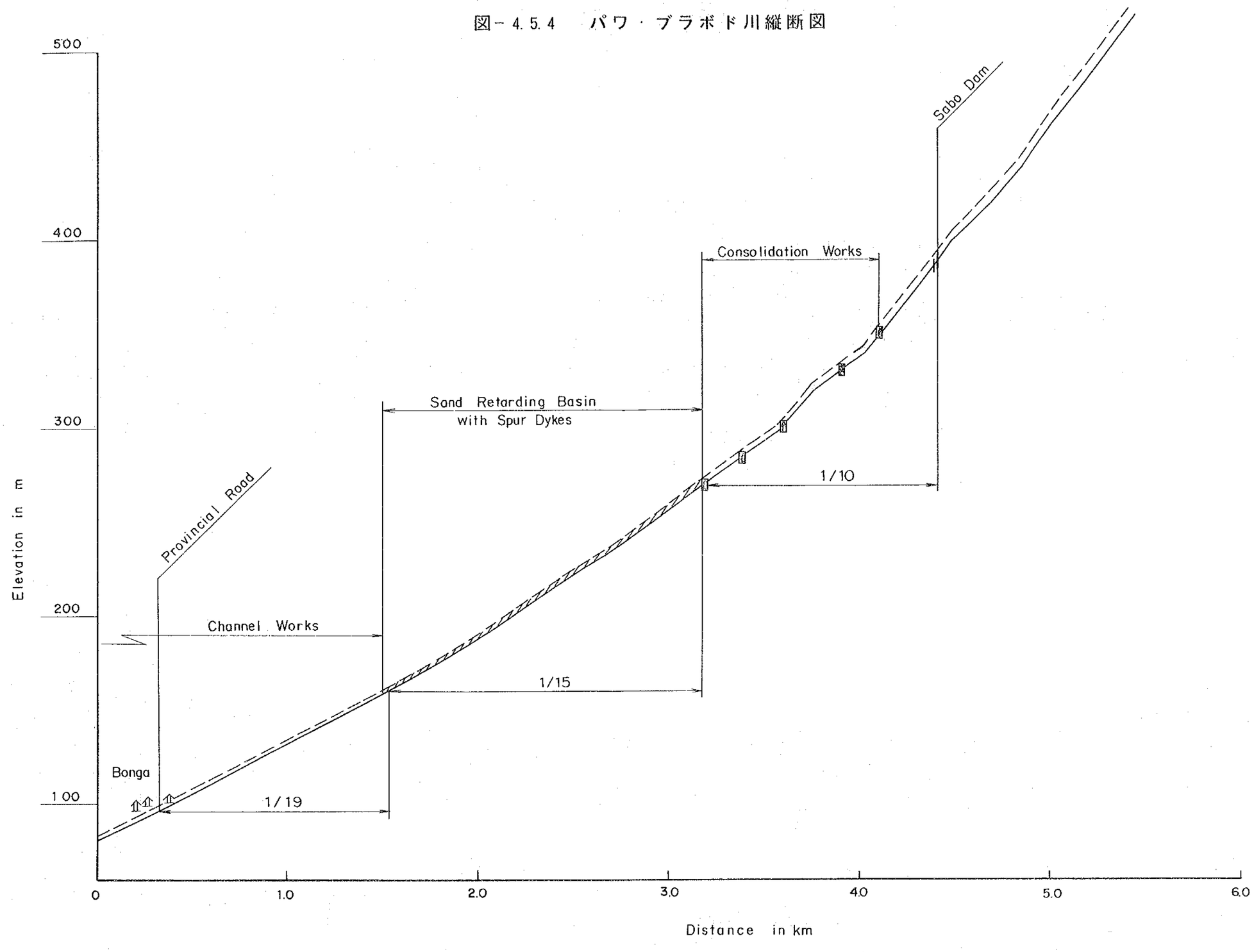
図－4.5.3　ブジャオ川縦断図



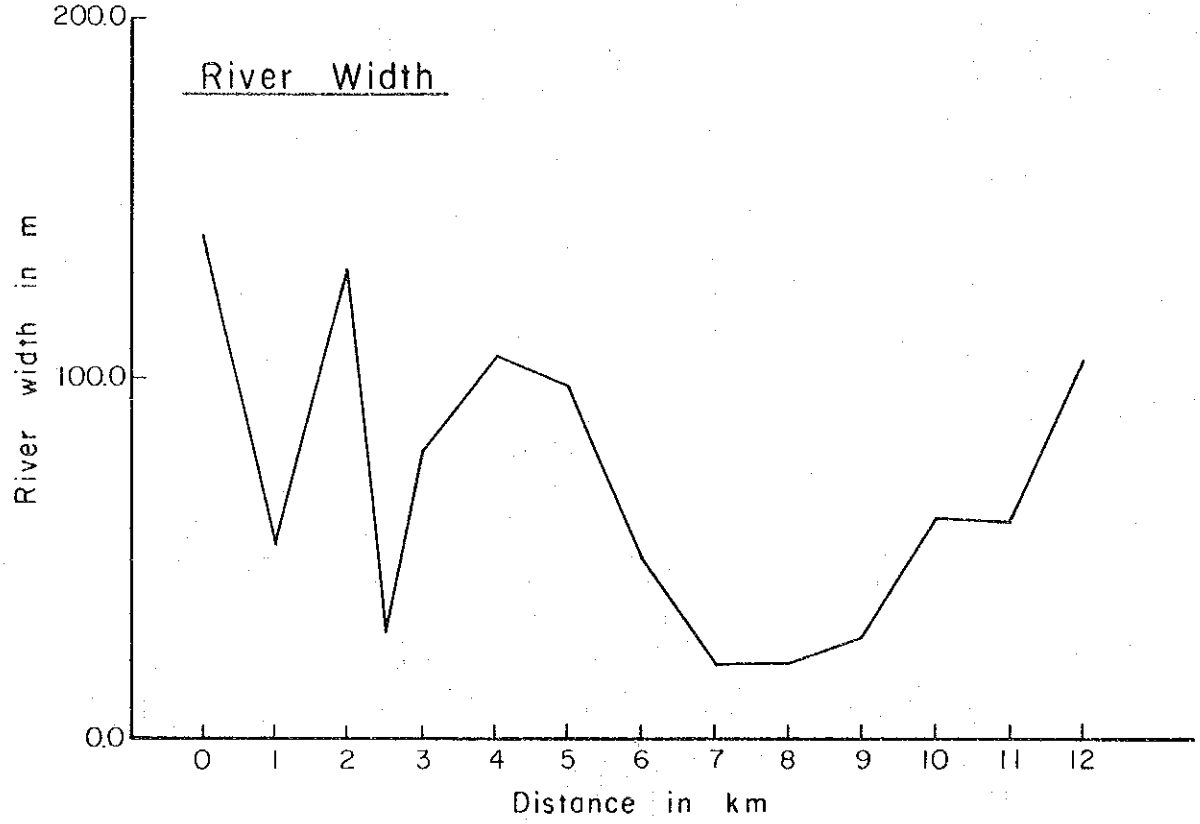
図－4.5.3　ブジャオ川縦断図

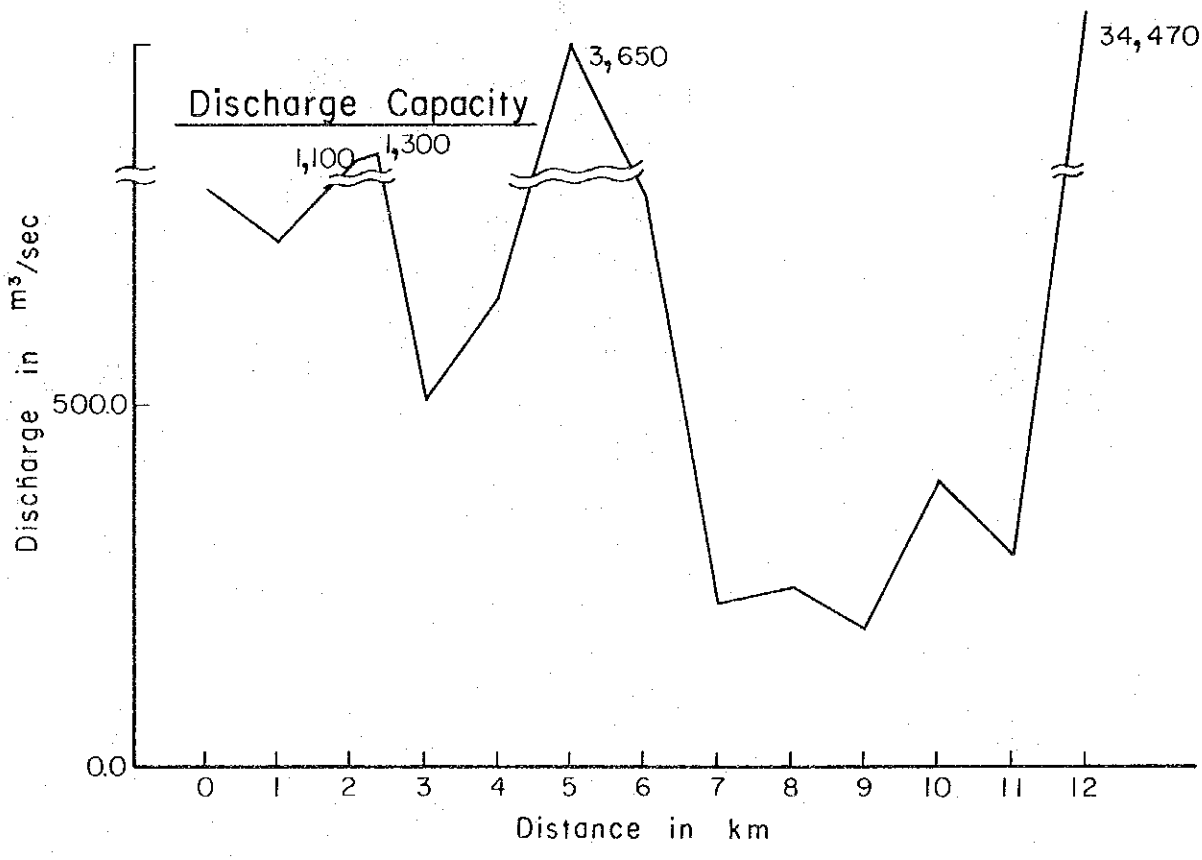


図－4.5.4　パワ・ブラボド川縦断図

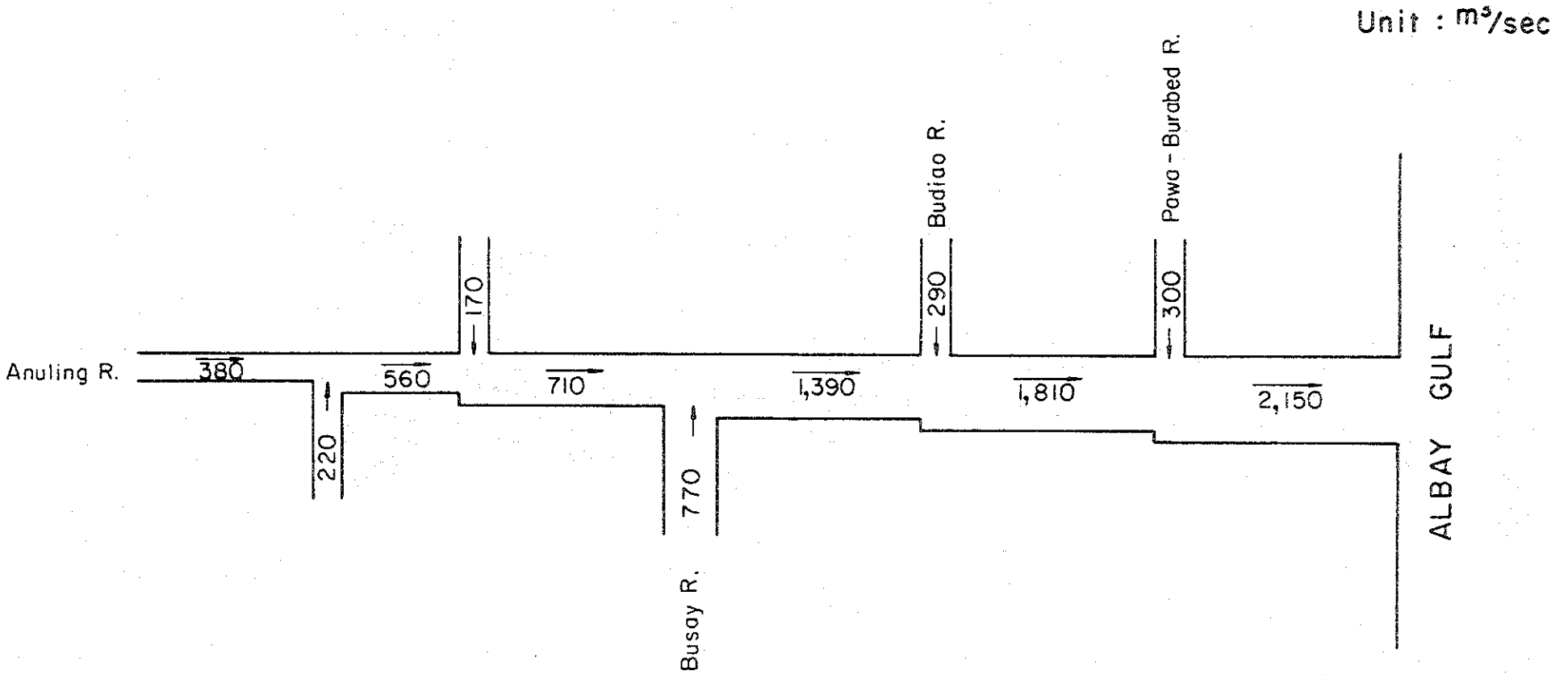


図－4.5.5　ヤワ川現河道の川幅と流下能力

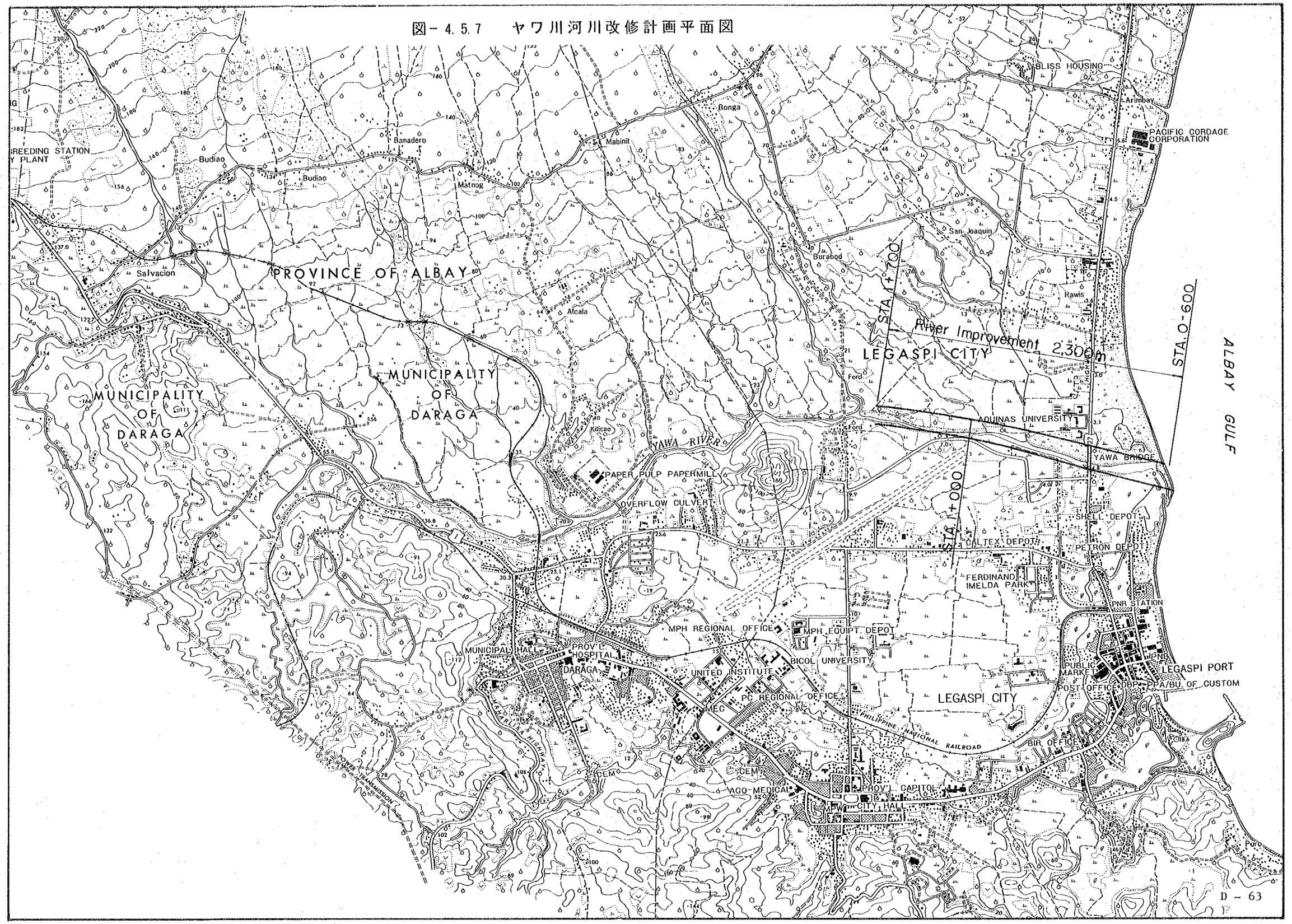




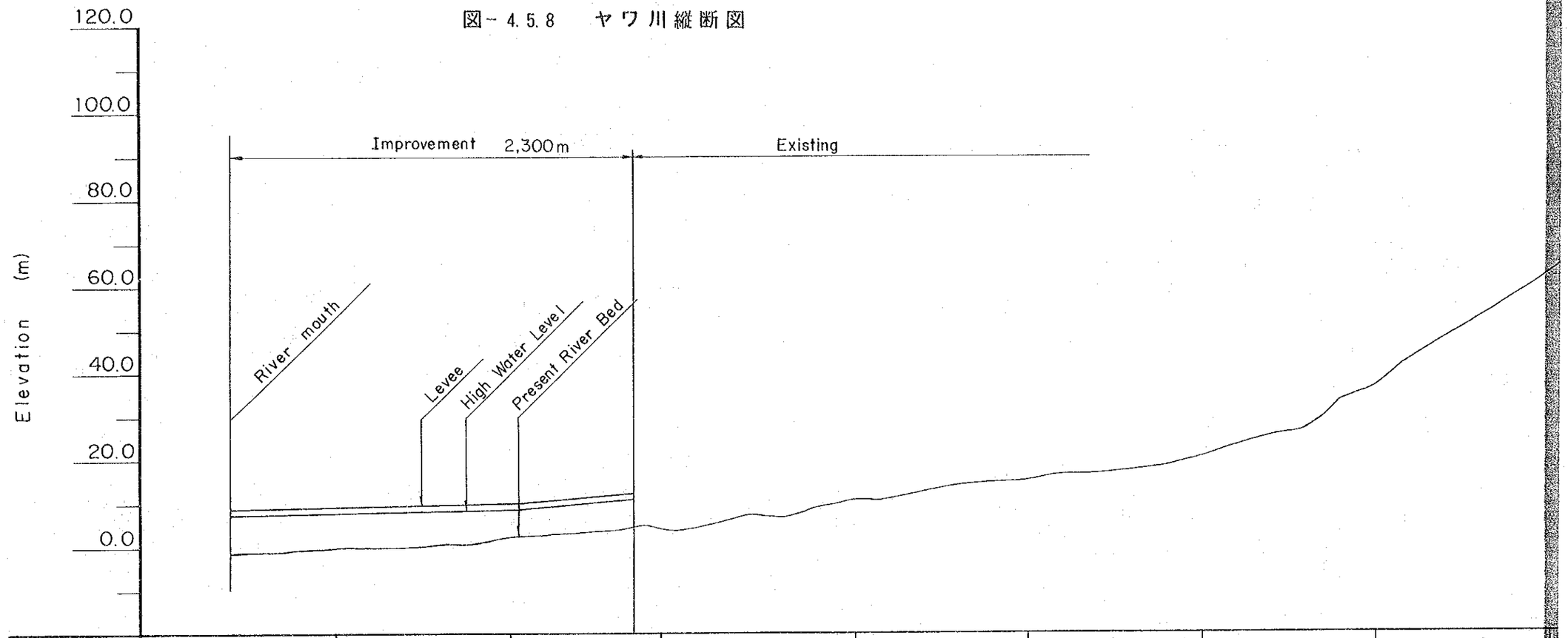
図－ 4.5.6　ヤワ川流量配分図



図－4.5.7　ヤワ川河川改修計画平面図

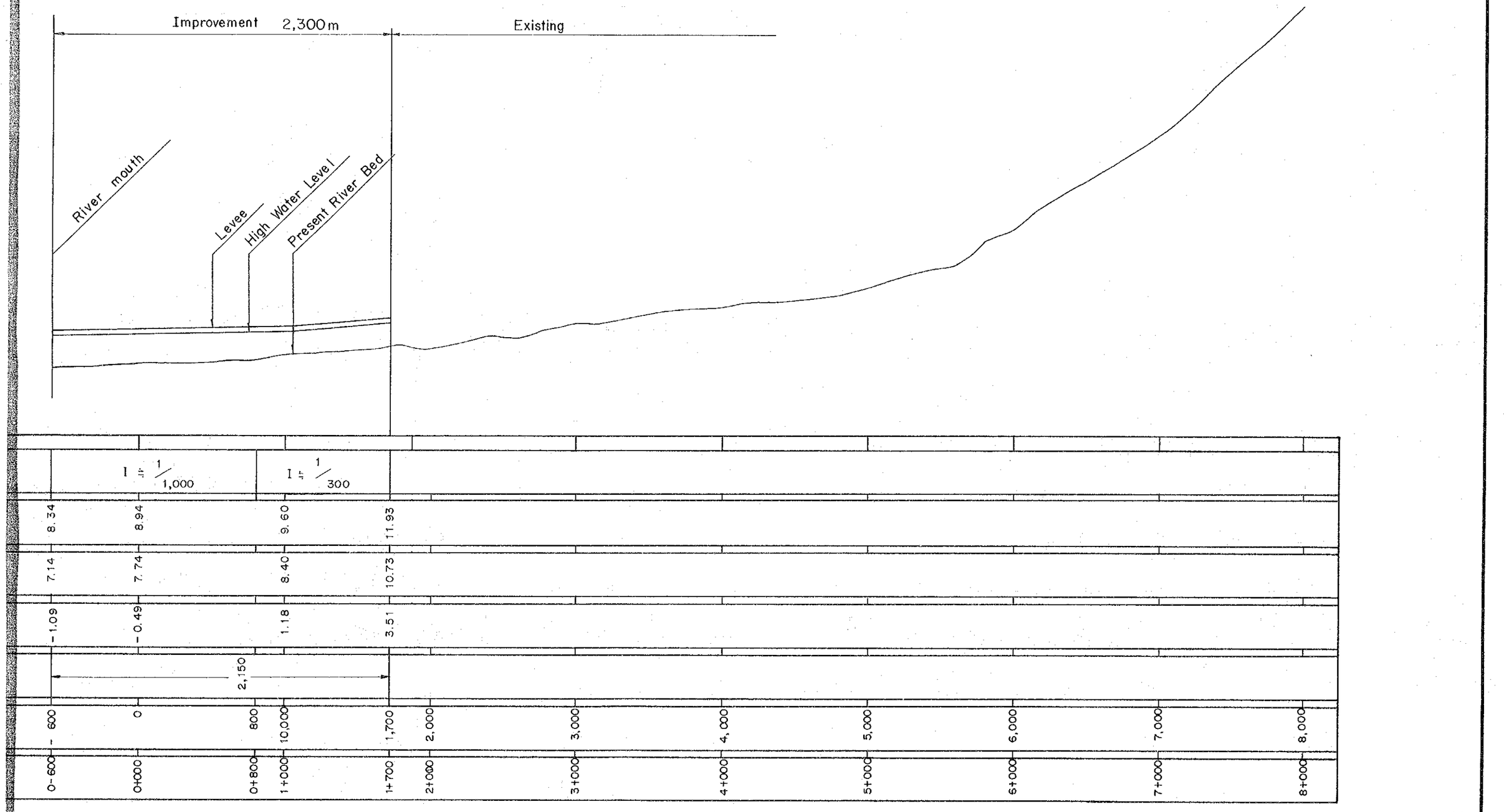


図－4.5.8　ヤワ川縦断図

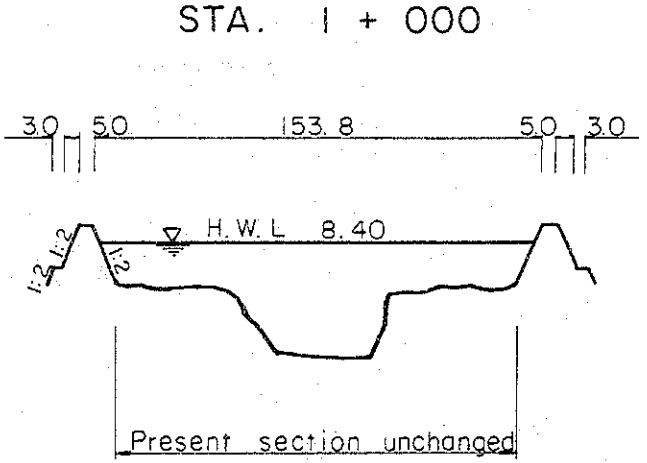


Station No.	0-600	0+000	0+800	1+000	1+700	2+000	3+000	4+000	5+000	6+000	7+000
Existing River Bed Gradient	I ≒ 1/1,000		I ≒ 1/300								
Formation Height of Levee (EL.m)	8.34	8.94		9.60	11.93						
High Water Level (EL.m)	7.14	7.74		8.40	10.73						
Formation Height of River Bed (EL.m)	-1.09	-0.49		1.18	3.51						
Discharge (m3/s)	2,150										
Cumulative Distance (m)	- 600	0	800	10,000	1,700	2,000	3,000	4,000	5,000	6,000	7,000

図－4.5.8　ヤワ川縦断図


Improvement
2,300m
Existing
River mouth
Levee
High Water Level
Present River Bed
I = 1/1,000
I = 1/300
8.34
8.94
9.60
11.93
7.14
7.74
8.40
10.73
-1.09
-0.49
1.18
3.51
2,150
-600
0
800
1,000
1,700
2,000
3,000
4,000
5,000
6,000
7,000
8,000
0-600
0+000
0+800
1+000
1+700
2+000
3+000
4+000
5+000
6+000
7+000
8+000

図－4.5.9　ヤワ川の計画標準断面図



図－5.2.1　工　事　工　程　表

Work Item	1st. Year	2nd Year	3rd. Year	4th. Year	5th. Year	6th. Year	7th. Year	8th. Year	9th. Year	10th. Year
QUINALI (A) RIVER										
Sabo Works										
Quirangay Spur Dike	(EL.140-EL.180)									
Jetty		(EL.150-EL.180)								
Tumpa Consolidation Work										(EL.240-EL.320)
Maninila Consolidation Work										(EL.100-EL.130)
Masarawag Spur Dike								(EL.270)	(EL.190-EL.220)	
Jetty								(EL.270)		
Consolidation Work										(EL.90-EL.120)
Ogsong Consolidation Work			(EL.120)	(EL.100)						
Spur Dike & Jetty			(EL.200-EL.280)							
Nasisi Consolidation Dam					EL.247 & EL.200					
Spur Dike						(EL.170)				
Groin & Levee						(EL.100-EL.170)				
Consolidation Work							(Culvert) (EL.80)			
River Improvement Works										
Levee for the Quinali (A) River										
STA.0+000－2+341										
2+341－6+615										
6+615－12+500										
12+500－17+074										
17+074－21+892	(Oas Diversion)									
21+892－27+500										
Levee for the Nasisi River										
STA.0+000－7+000										
Levee for the Talisay River										
STA.0+017－3+266										
3+266－7+500										
7+500－13+700										
Irrigation Works										

工 事 工 程 表

Work Item	1st. Year	2nd. Year	3rd. Year	4th. Year	5th. Year	6th. Year	7th. Year	8th. Year	9th. Year	10th. Year
QUINALI (B) RIVER										
Sabo Works										
Buang Consolidation Dam	(EL.220 - EL.270)									
Sabo Dam	(EL. 155)									
River Improvement Works										
Levee for the Quinali (B) River										
Levee for the San Francisco River										
Levee for the San Vicente River										
Irrigation Works										
YAWA RIVER										
Sabo Works										
Anuling Consolidation Work								(EL.300-EL.340)		
Budiao Spur Dike & Jetty						(EL.160-EL.230)				
Pawa-Burabod Sabo Dam	(EL.400)									
Spur Dike		(EL.160-EL.260)								
River Improvement Works										
Levee for the Yawa River										

図－6.4.1　事業の内部収益率曲線