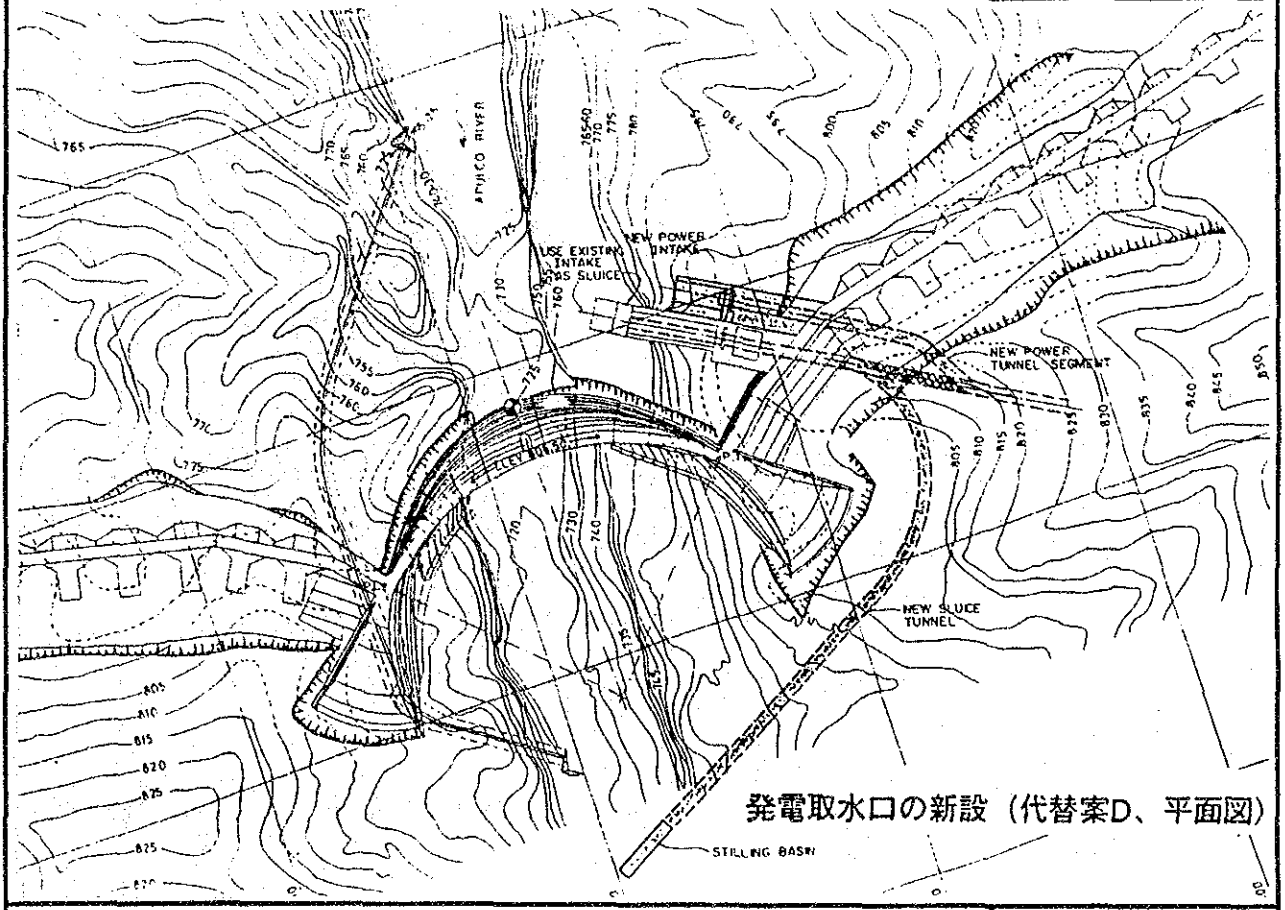
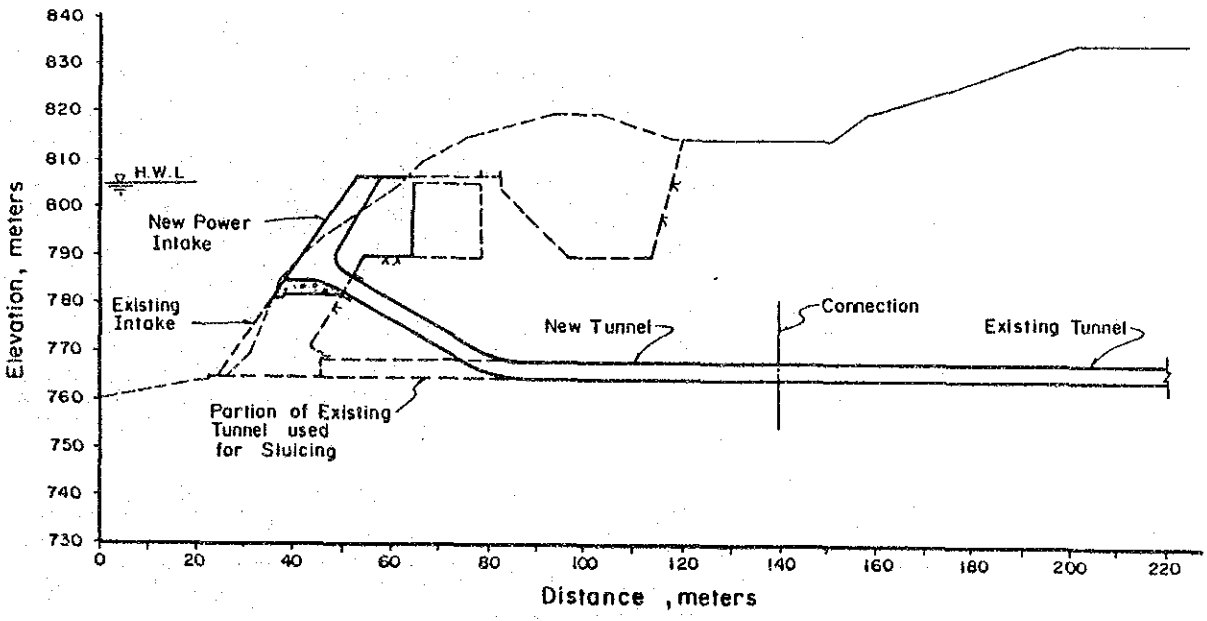
図　7.5



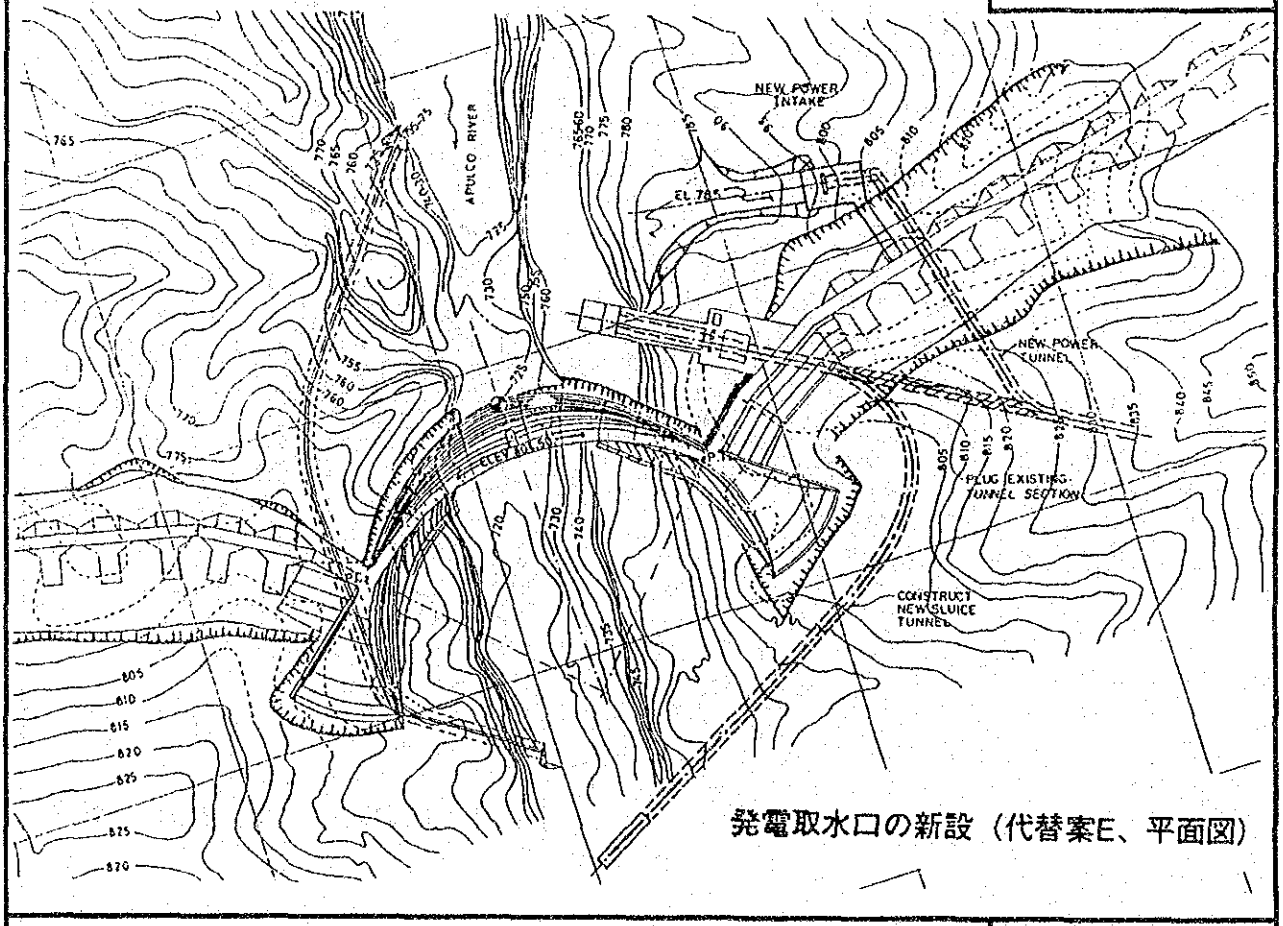
発電取水口の新設（代替案D、平面図）

図　7.6



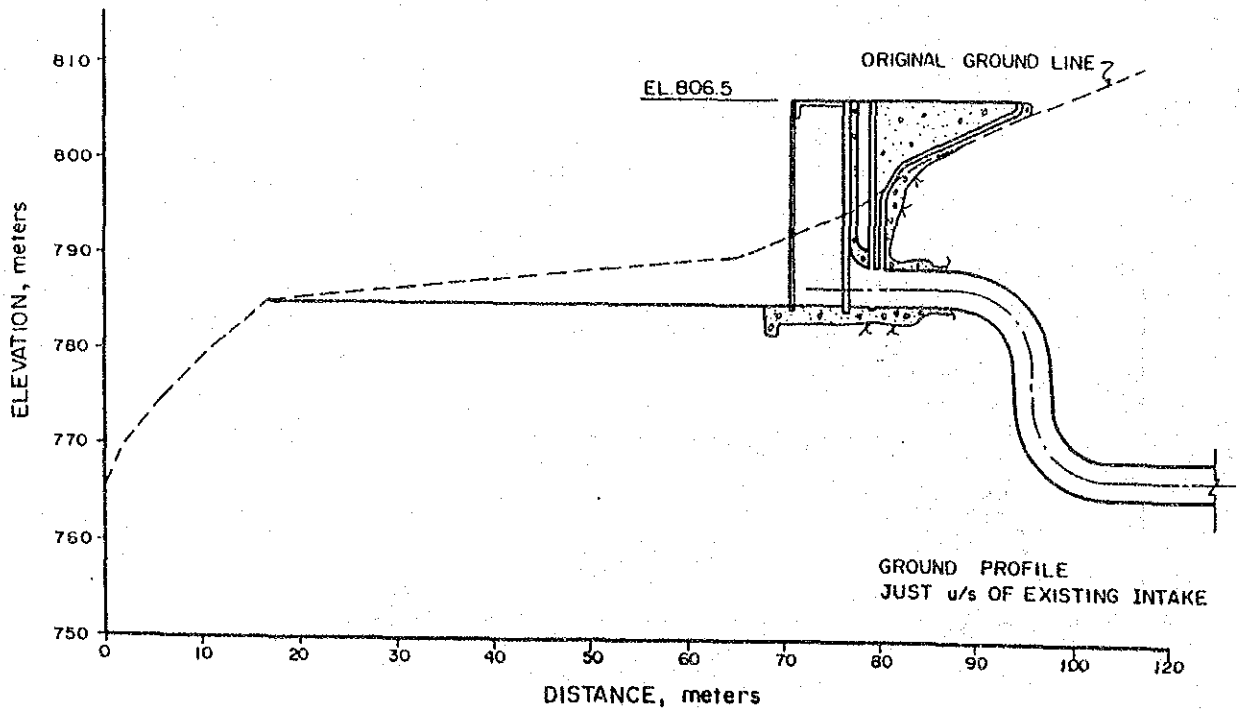
発電取水口の新設（代替案D、縦断図）

図 7.7



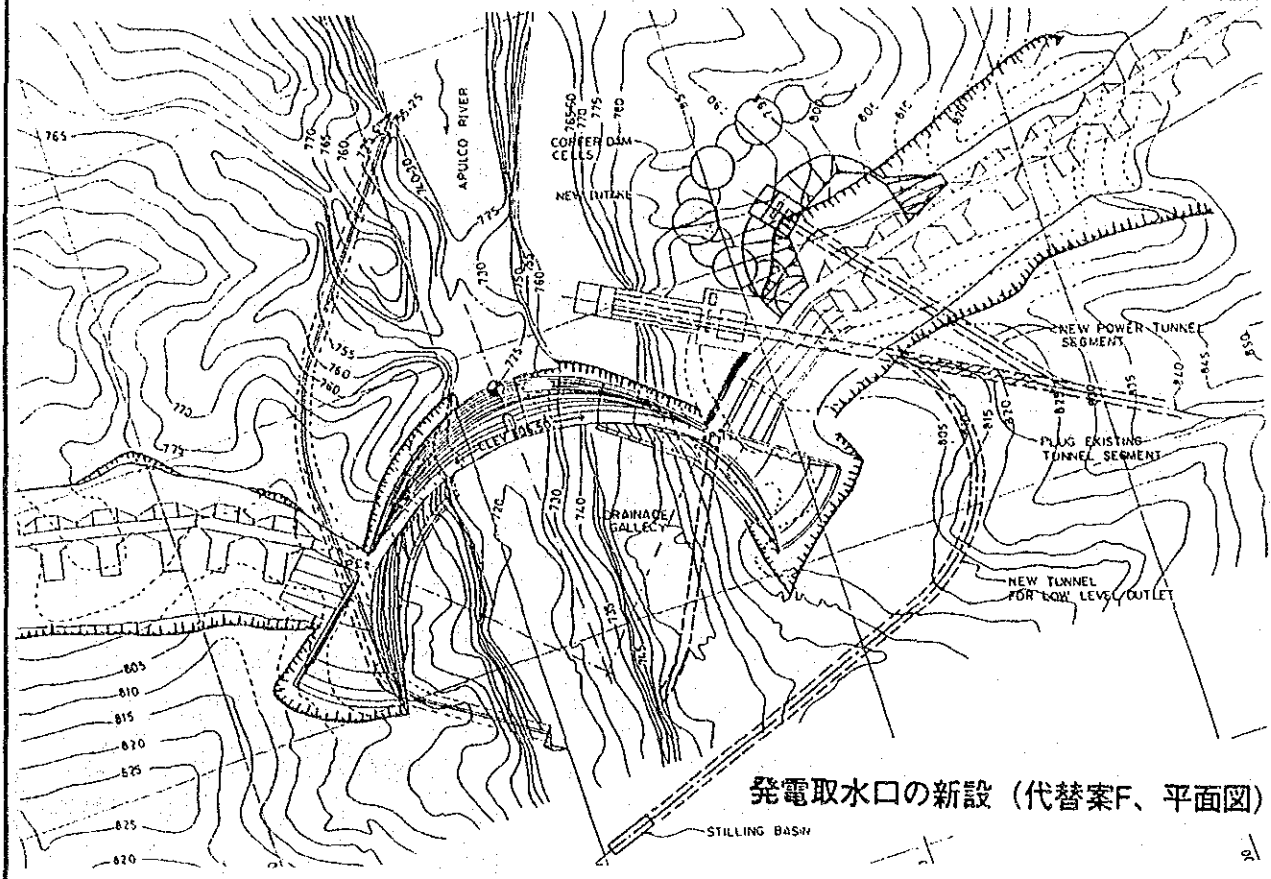
発電取水口の新設（代替案E、平面図）

図 7.8



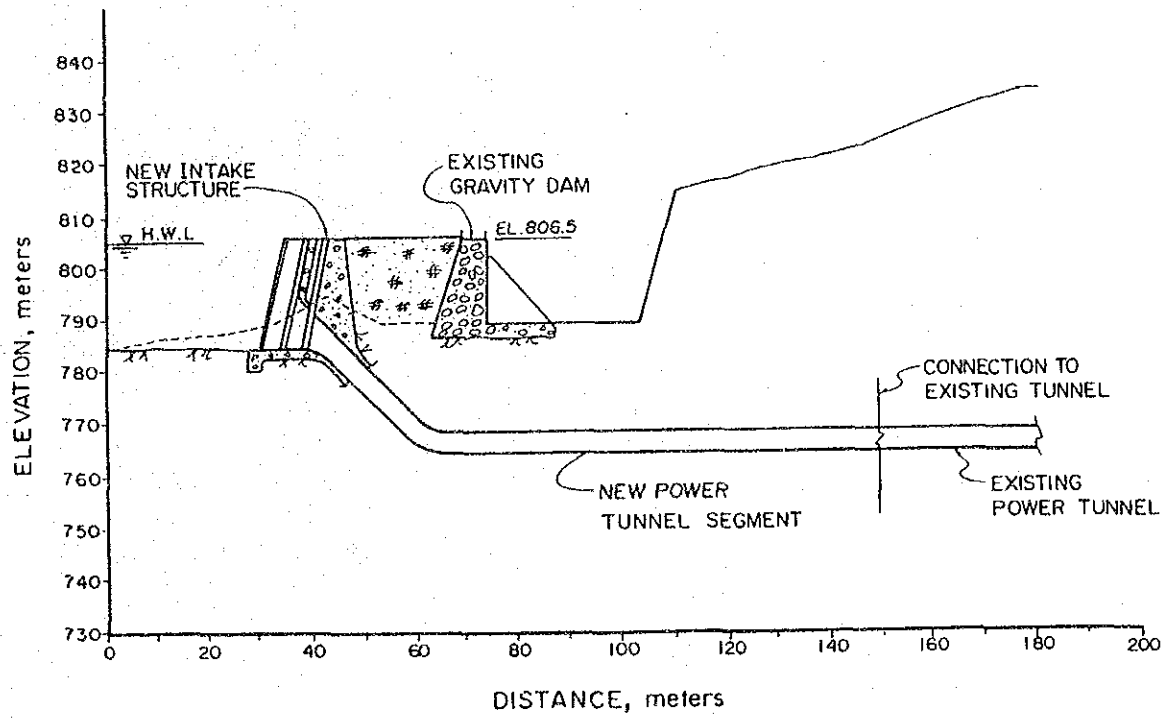
発電取水口の新設（代替案E、縦断図）

図　7.9



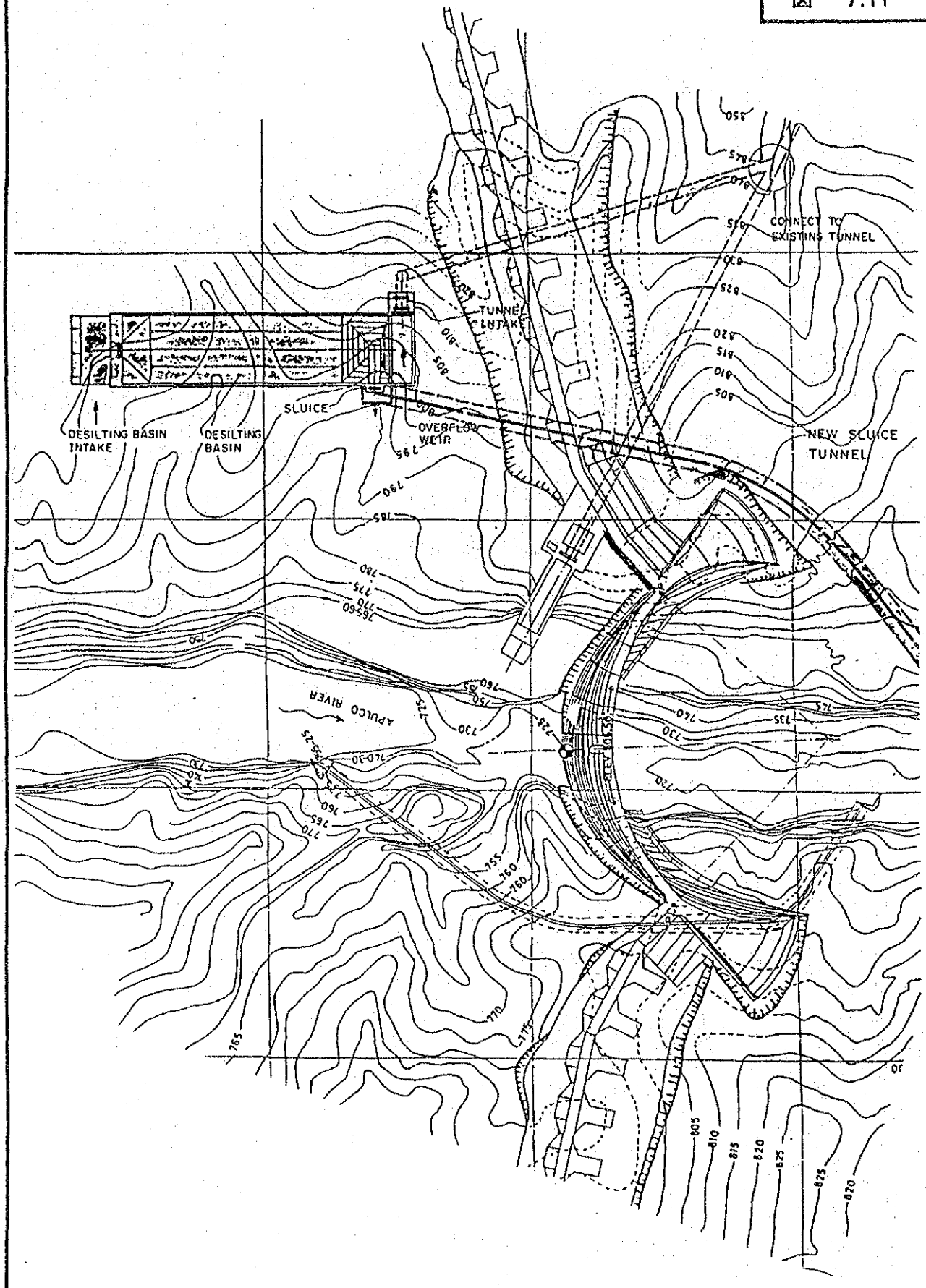
発電取水口の新設（代替案F、平面図）

図　7.10

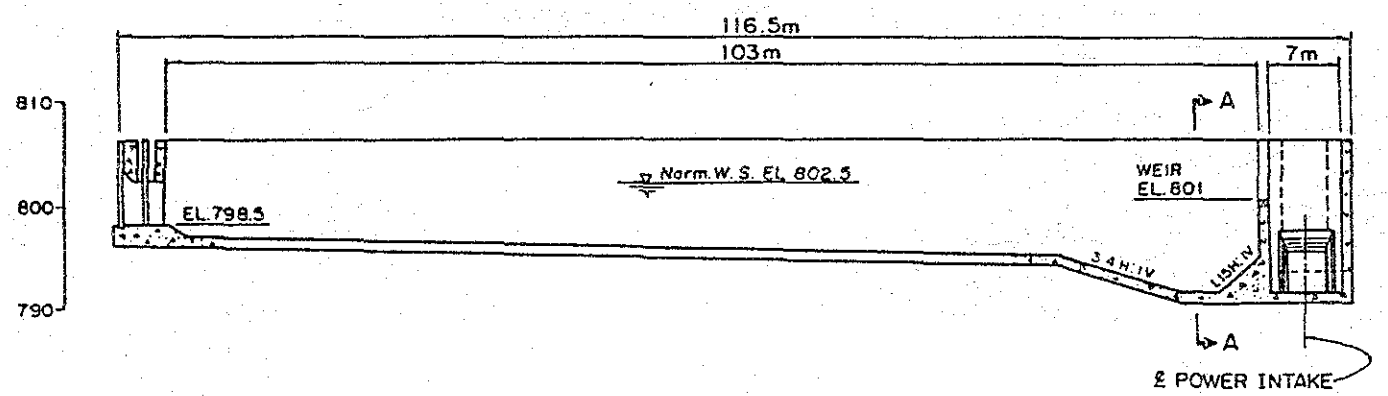


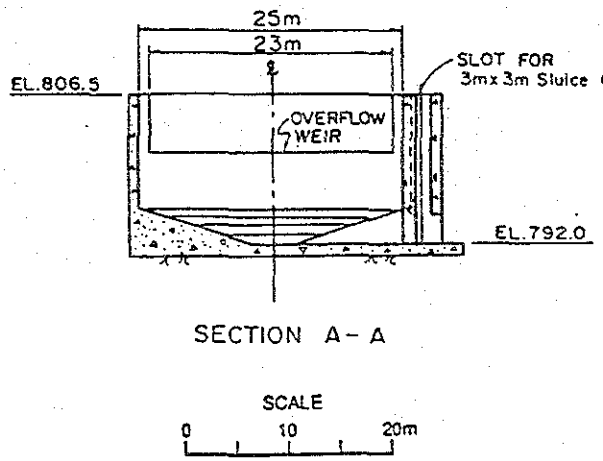
発電取水口の新設（代替案F、縦断図）

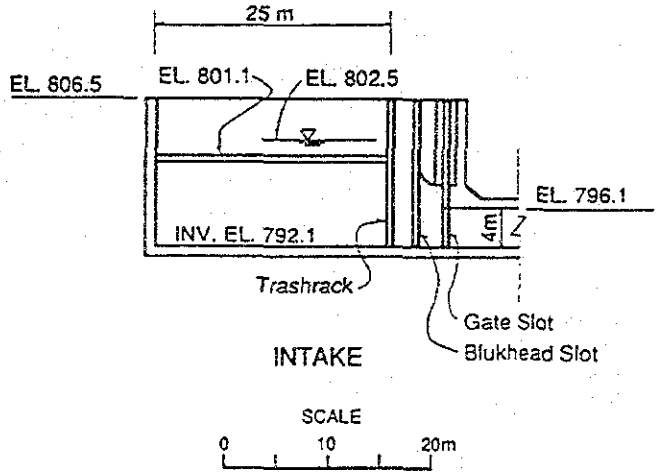
図 7.11



沈砂池の新設（代替案G、平面図）







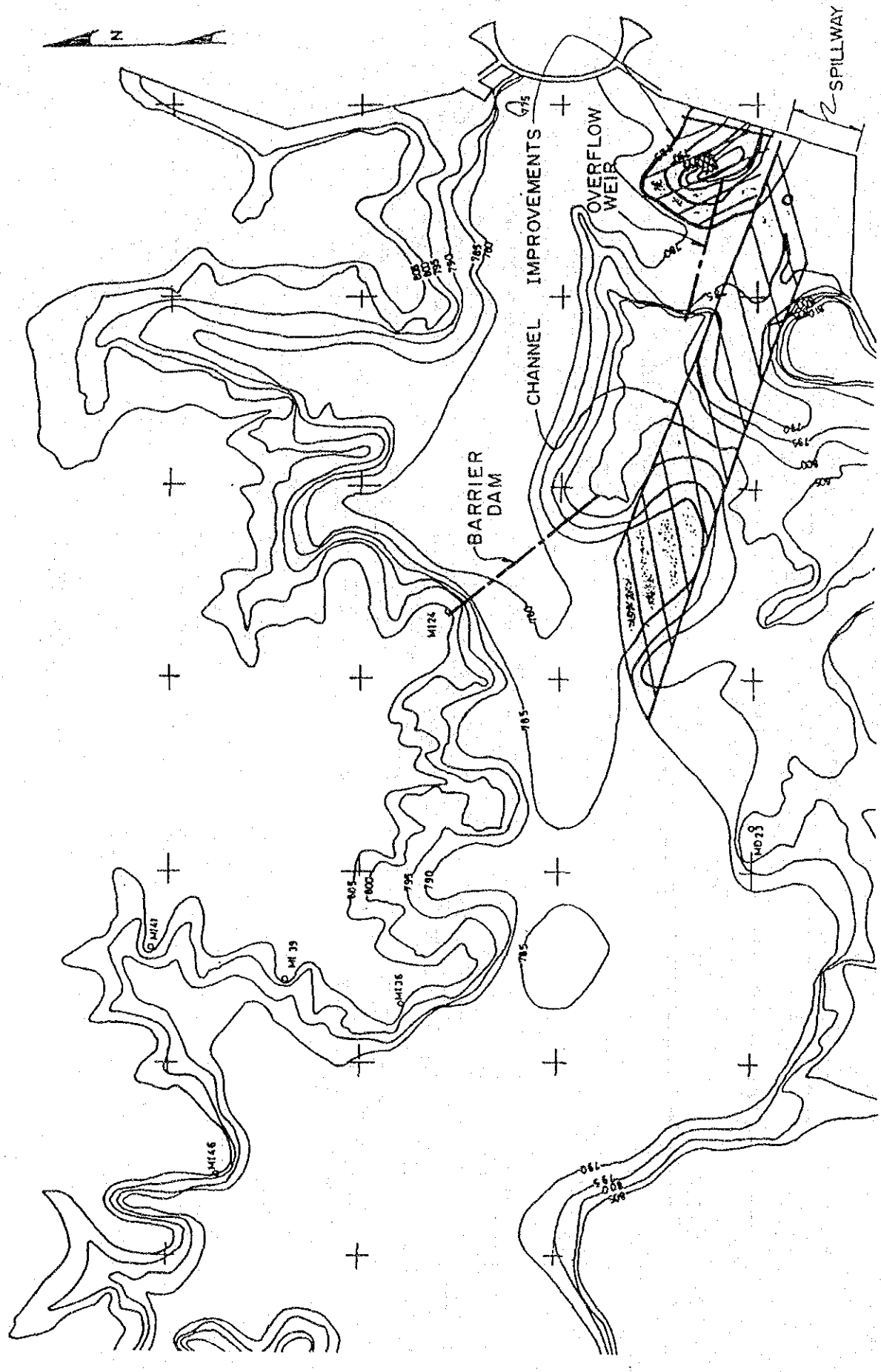
PRELIMINARY DESIGN FOR :

- Maximum Particle Size	:	0.5 mm
- Trap Efficiency for 0.5 mm	:	95%
- Annual Inflow	:	555 x 10^6 m^3/yr
- Total Sediment Inflow	:	122,000 tons/yr
- Volume Retained	:	16,581 m^3/yr
- Basin Dimensions	:	25 m (W) x 103 m (L)
- Sediment Storage Capacity below El. 798.5 m	:	6,550 m^3

沈砂池の新設（代替案G、縦断図）

図 7.12

図 7.13

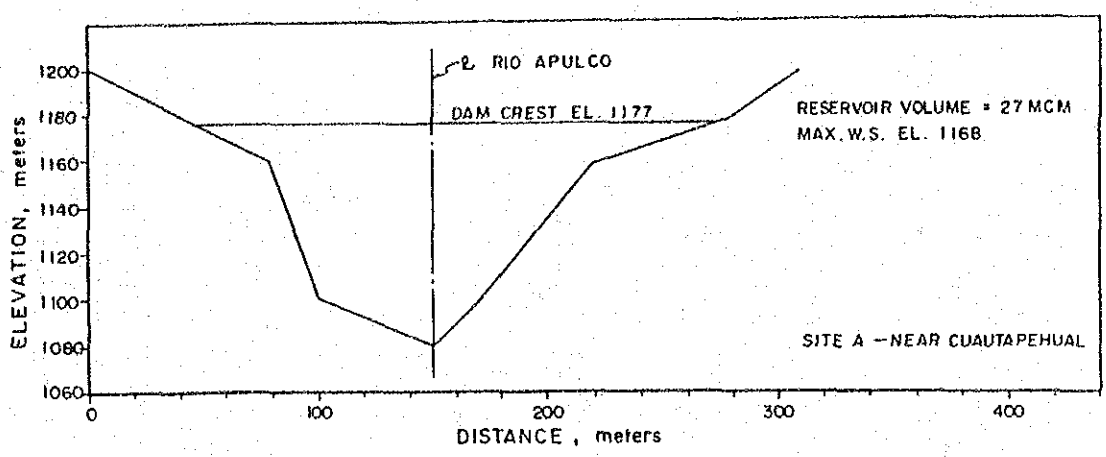


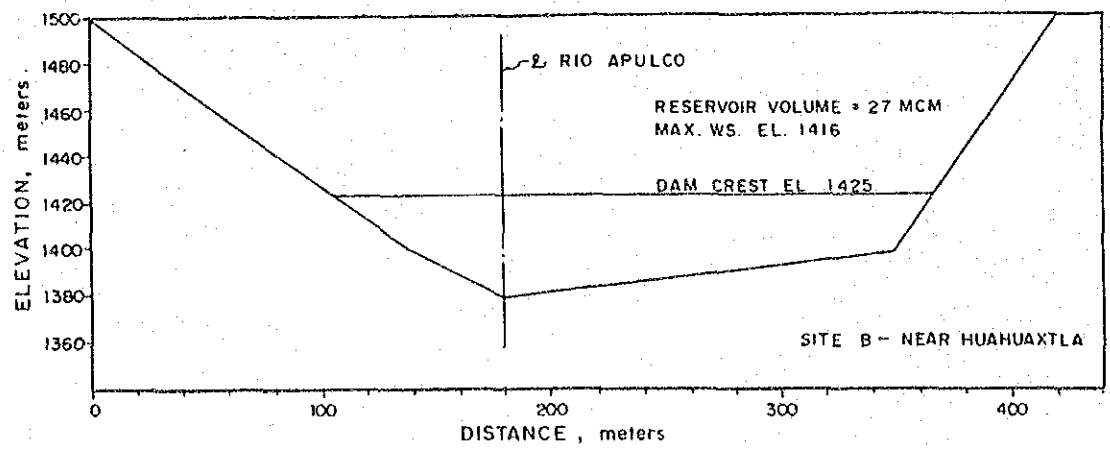
洪水吐上流部水路の改善（修正代替案H）

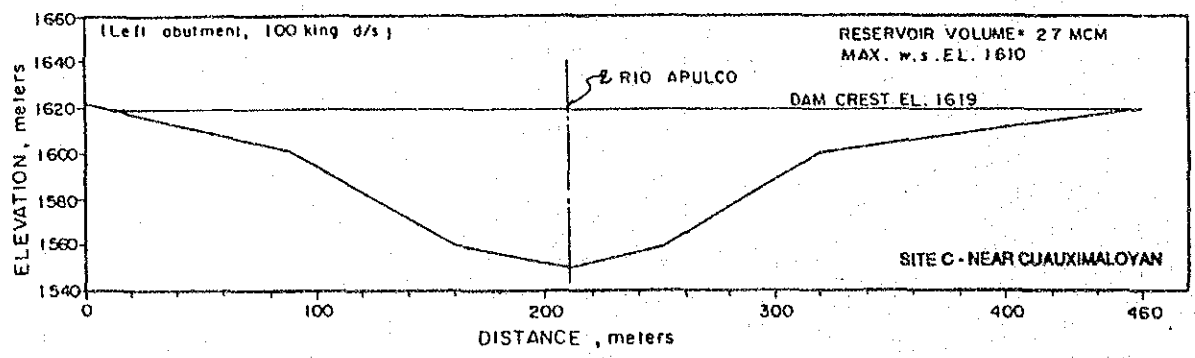
図 7.14

砂防ダムおよび転流排砂トンネルの候補地点（代替案I、J）

図 7.15



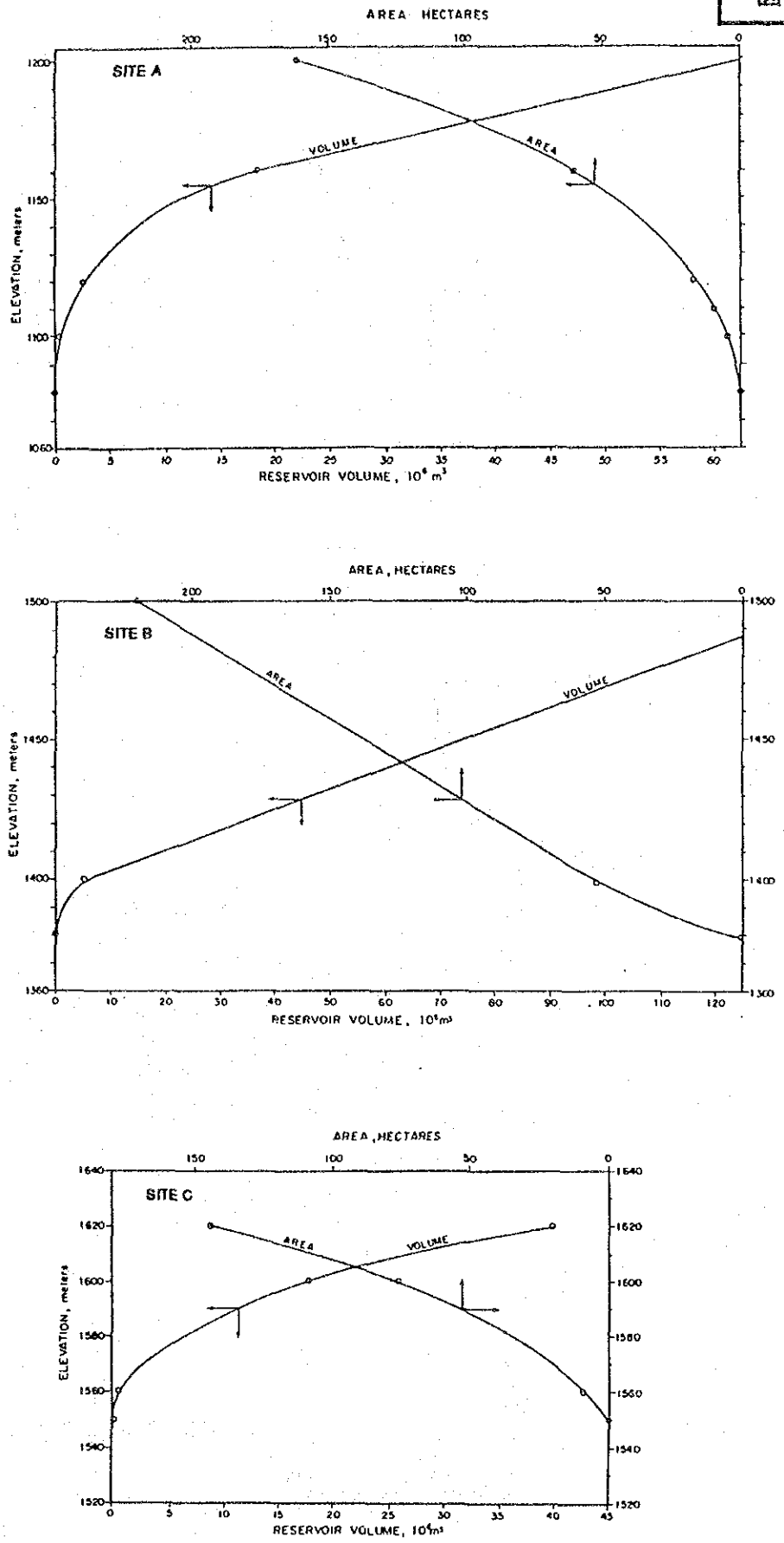




Note: '0' Distorce is left abutment

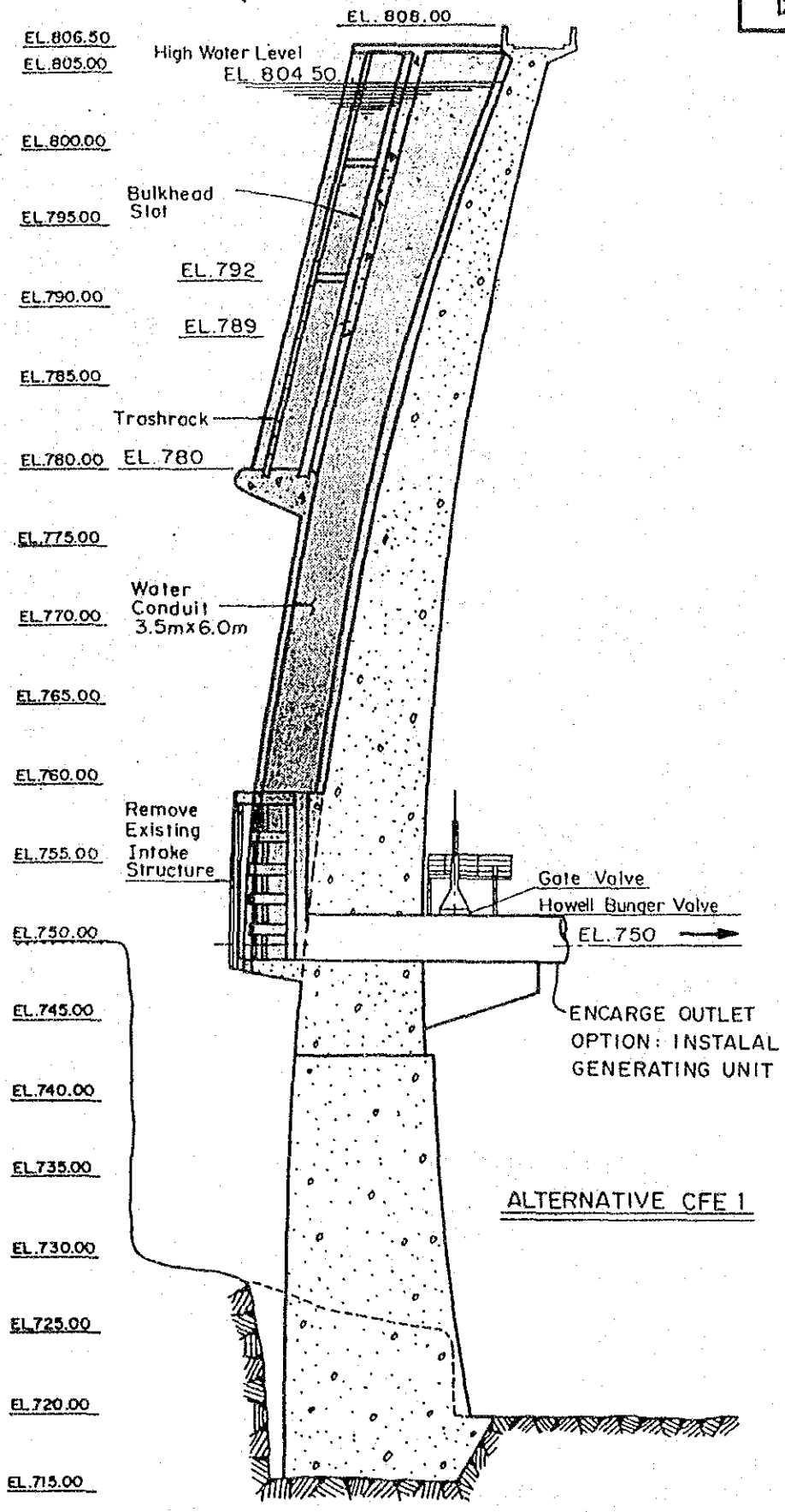
砂防ダムサイトの横断図

図 7.16



砂防ダムの標高ー貯水面積ー貯水容量曲線

図 7.17



既存放流施設のリハビリ（代替案L）

図　7.18

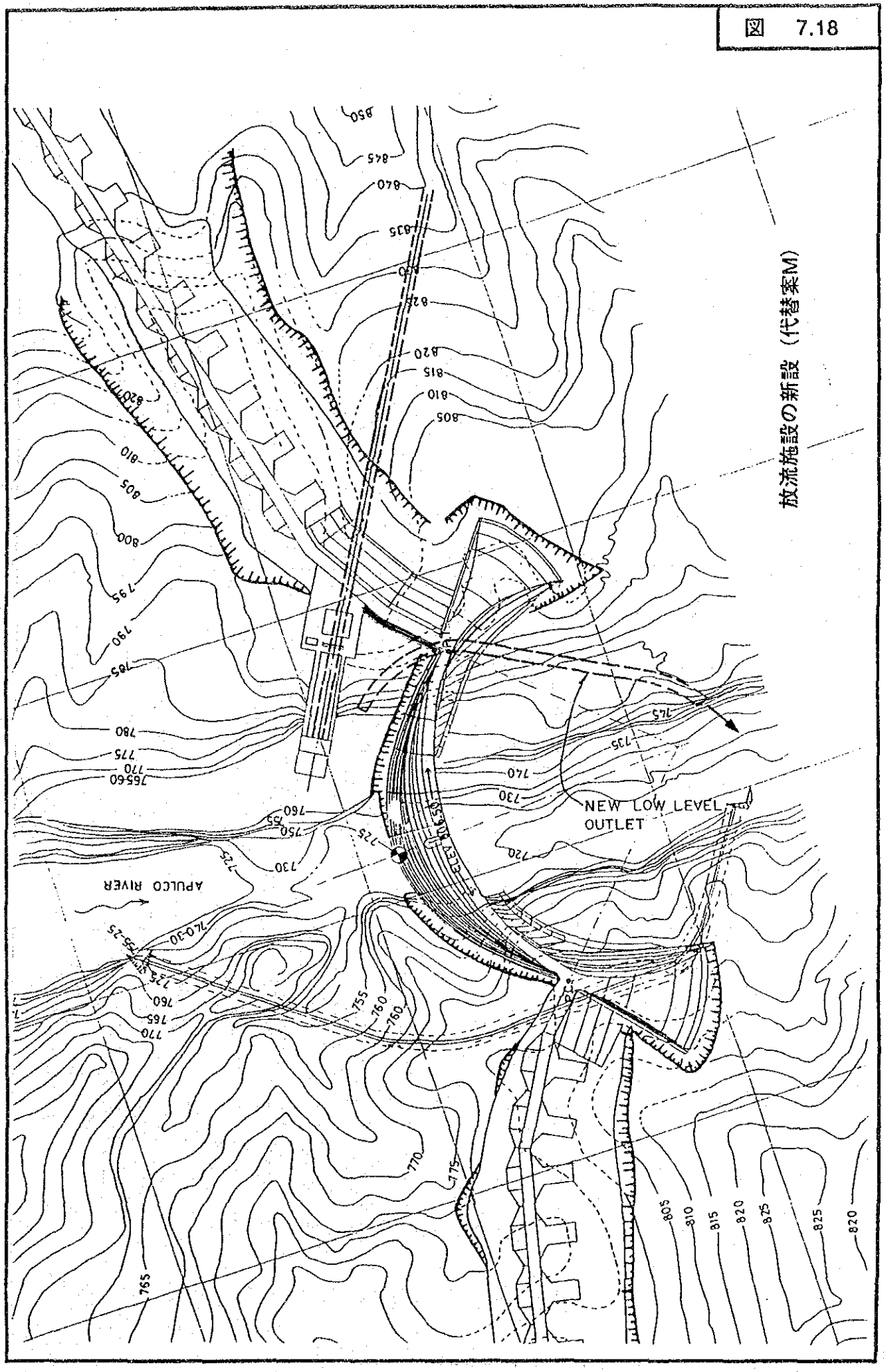
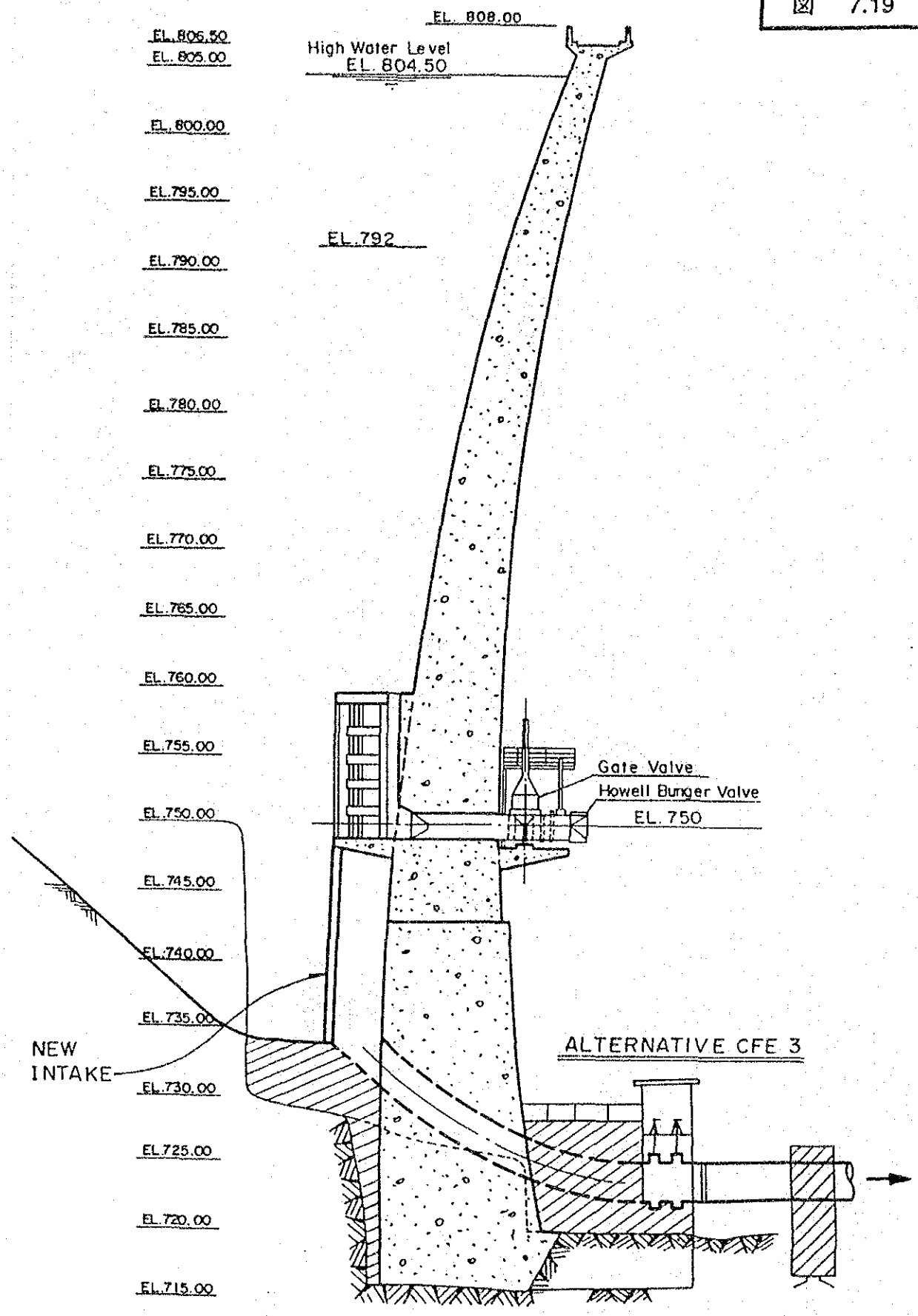
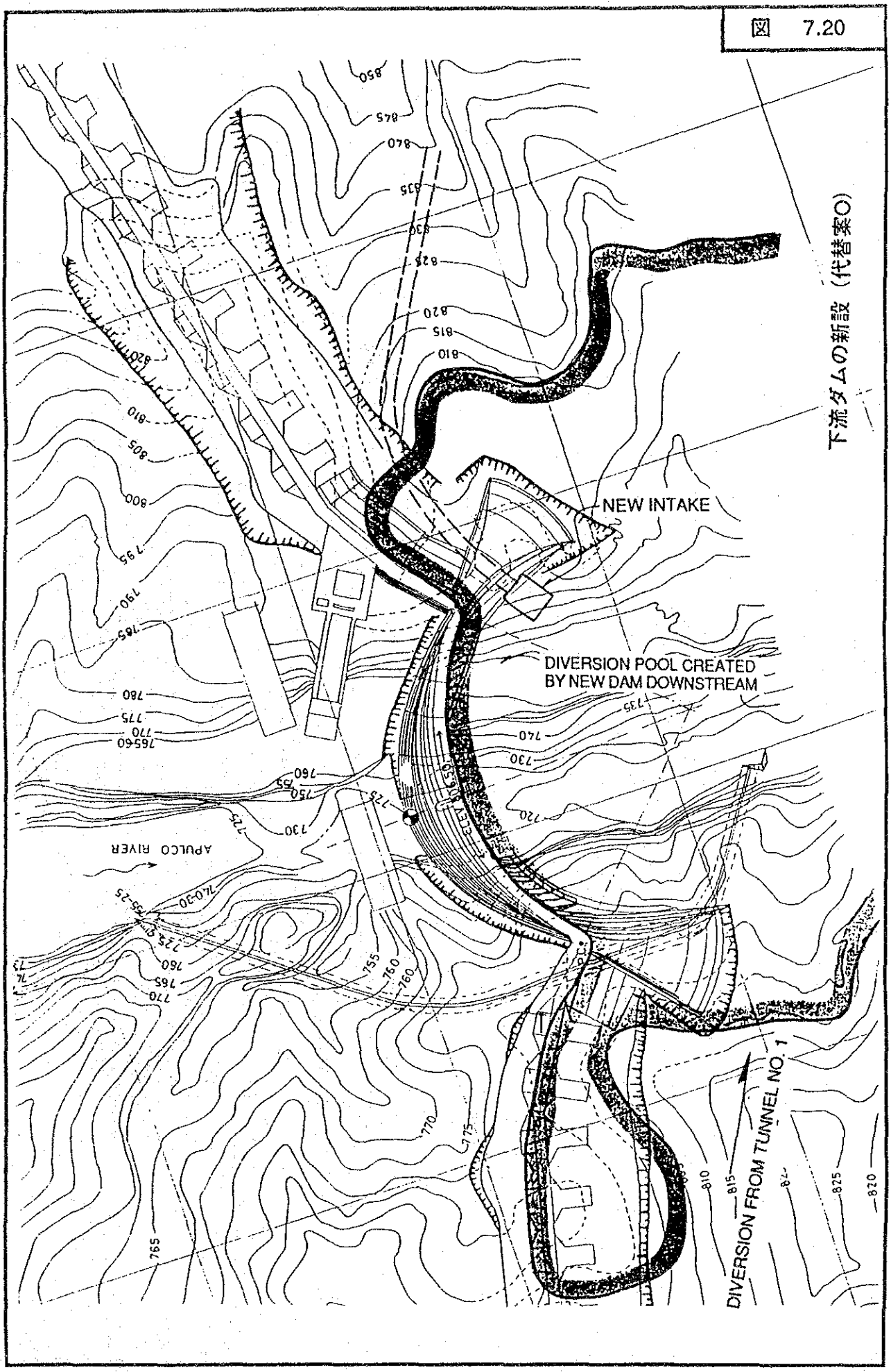


図 7.19

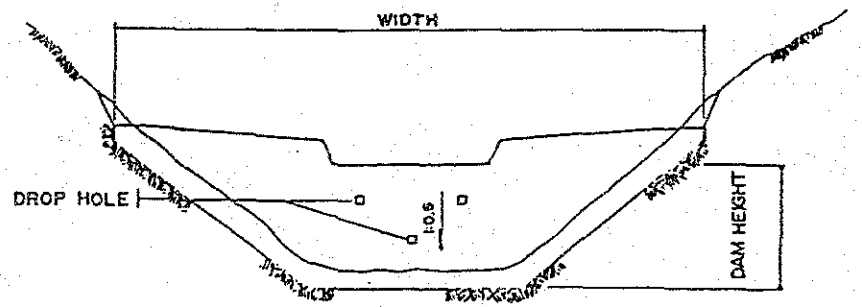


放流施設の新設（代替案N）

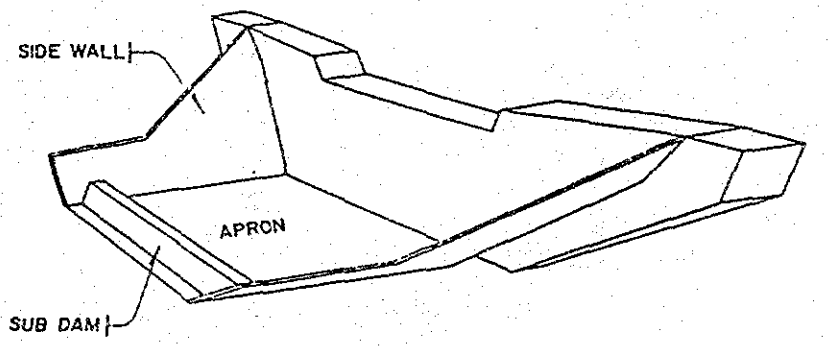
図 7.20


下流ダムの新設（代替案O）
NEW INTAKE
DIVERSION POOL CREATED
BY NEW DAM DOWNSTREAM
APULCO RIVER
DIVERSION FROM TUNNEL NO. 1

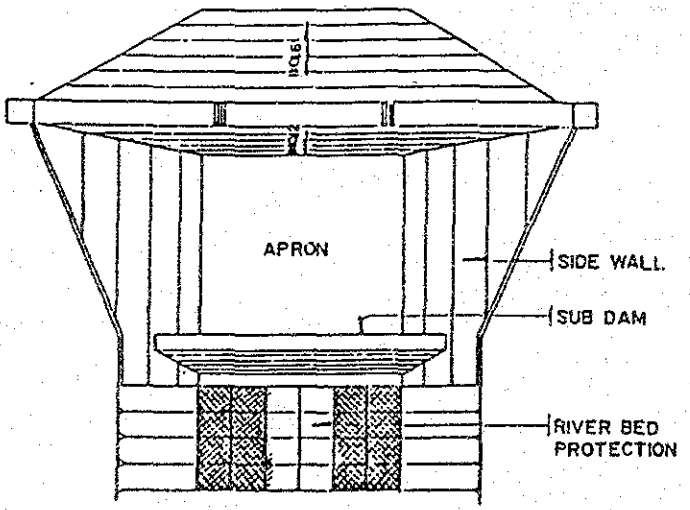
FRONT VIEW



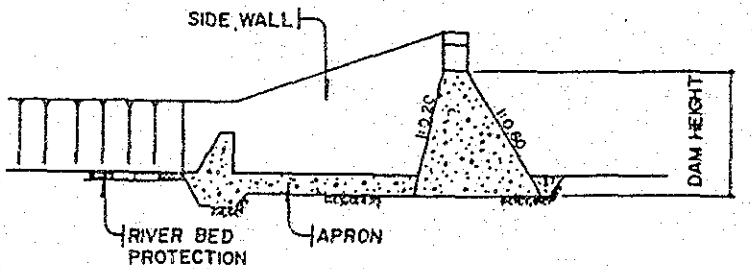
BIRD' EYE VIEW



PLAN



LONGITUDINAL PROFILE



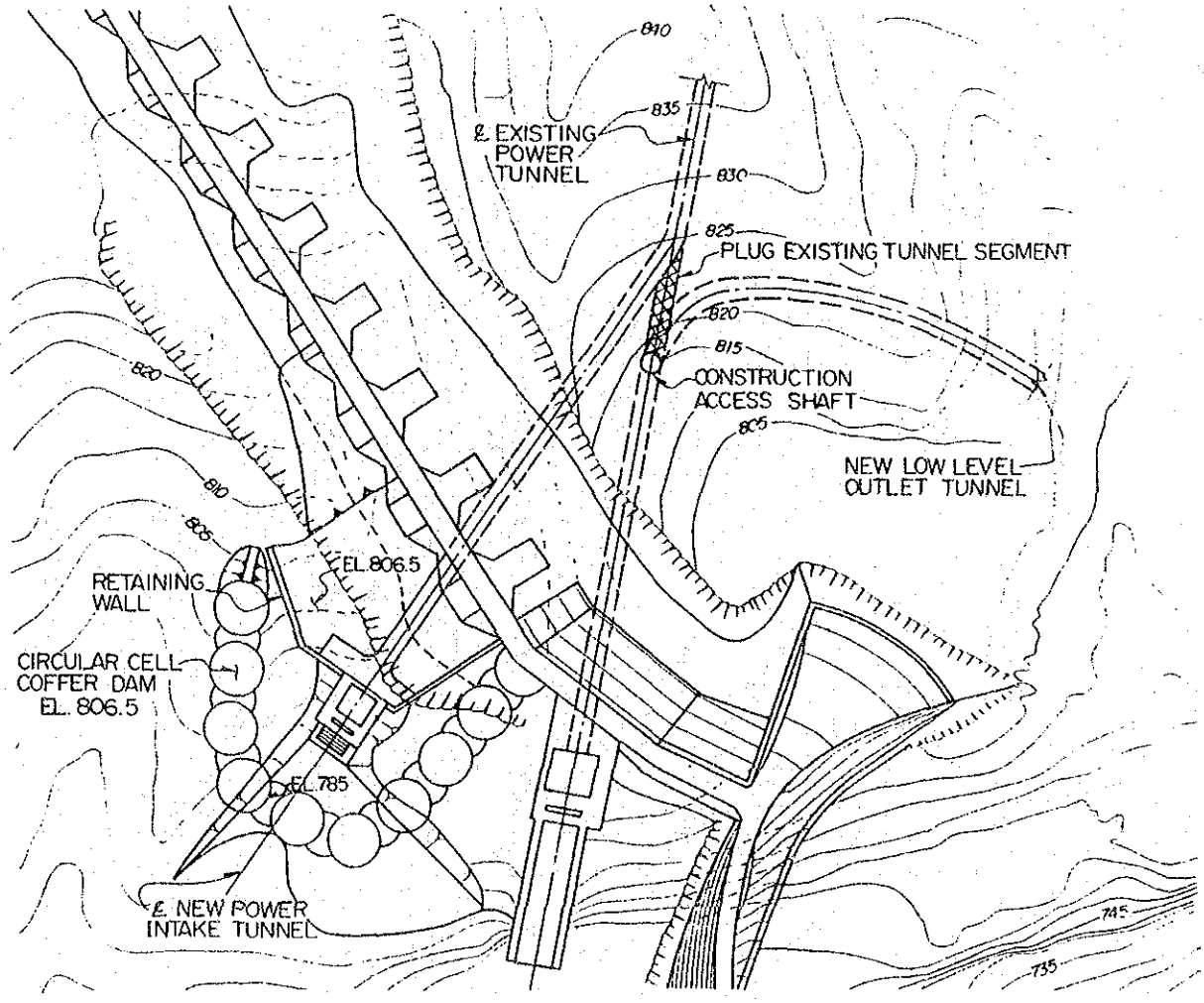
砂防ダムの標準図

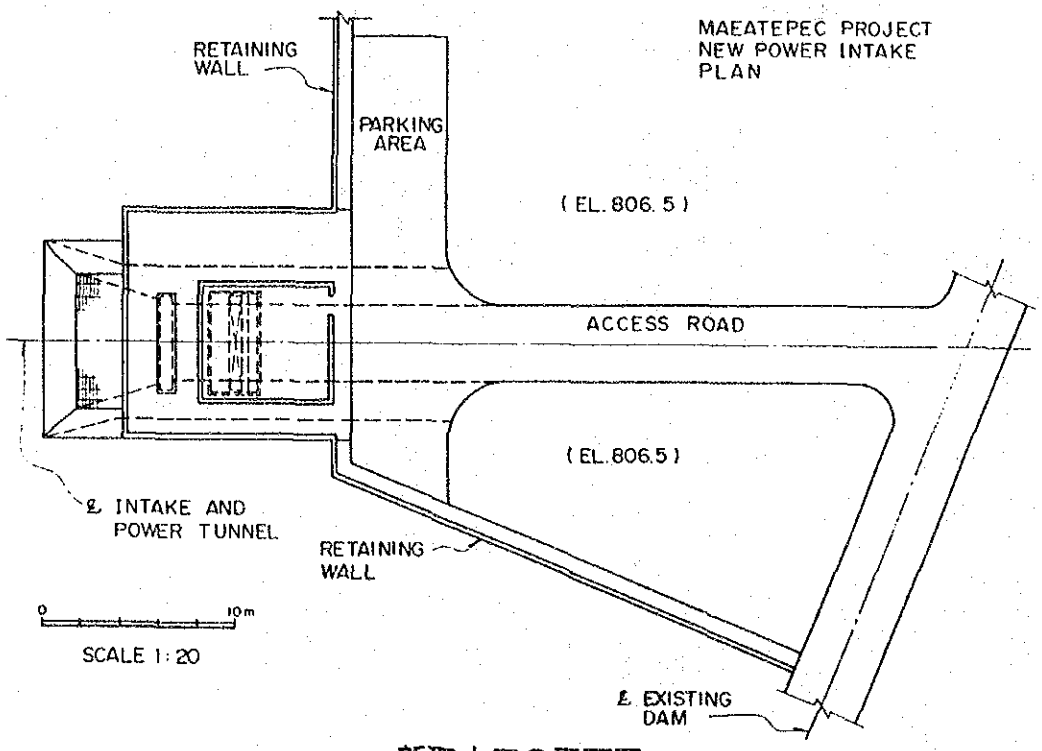
図 7.21

図 7.22

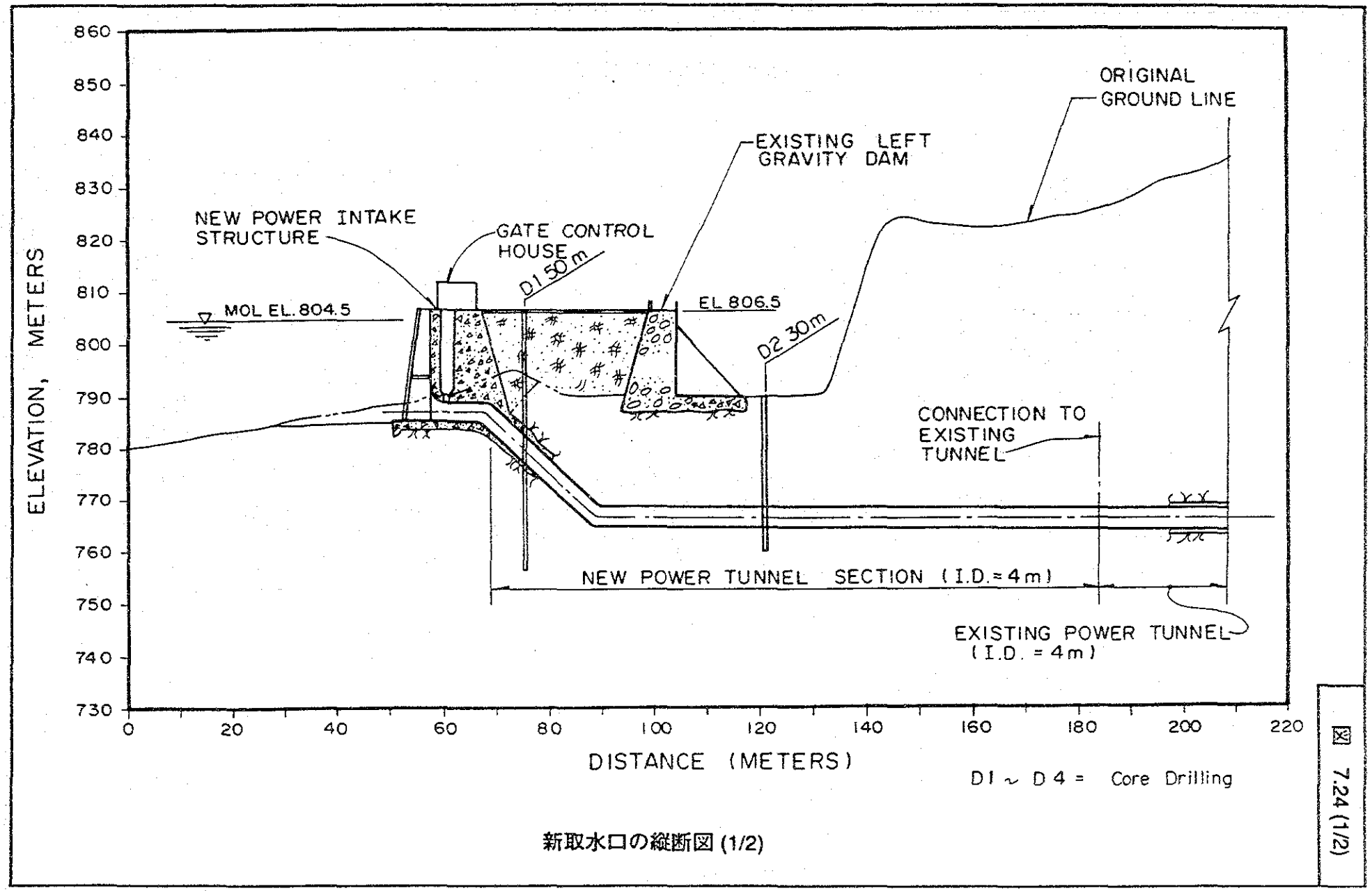
新取水口および新放流施設の一般平面図

図 7.23



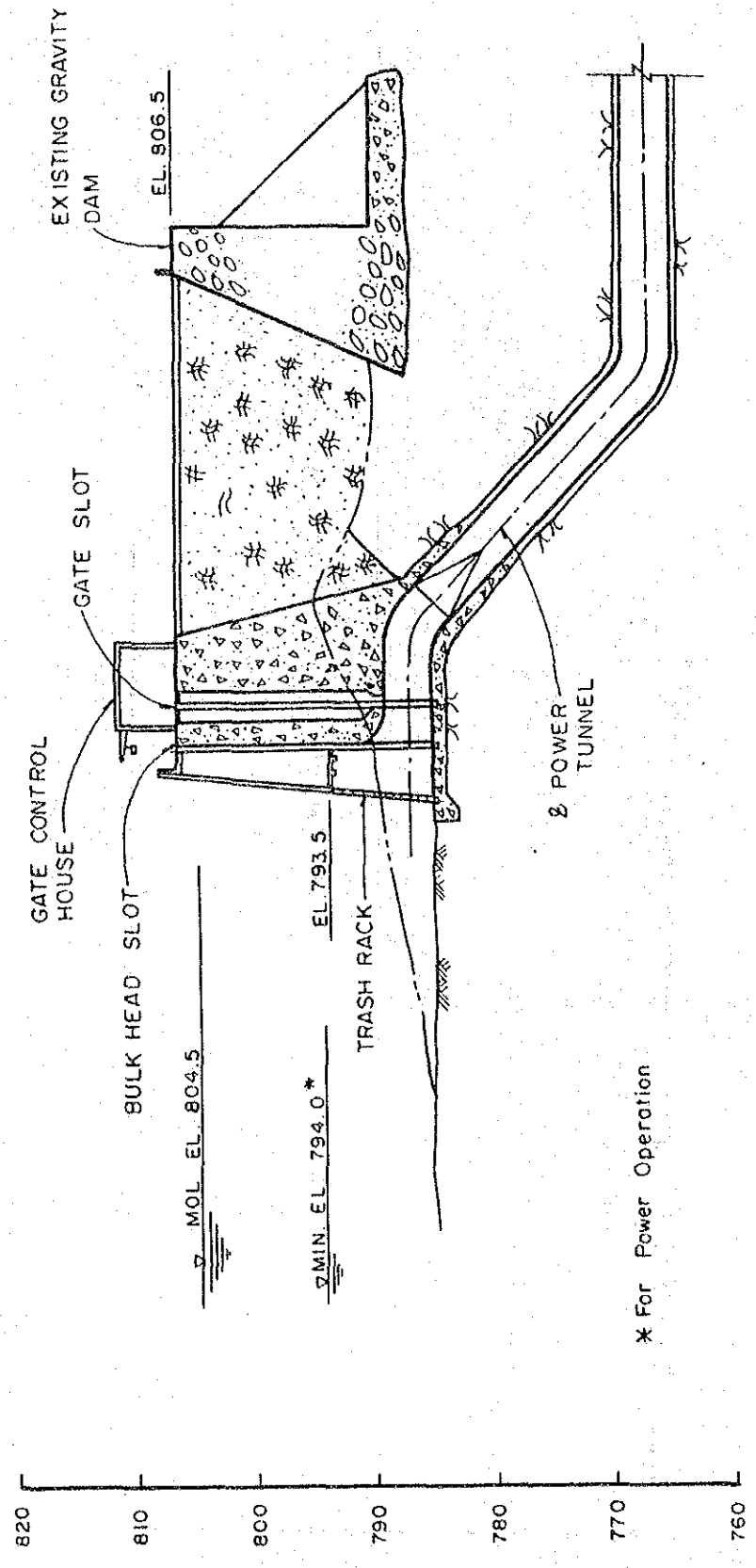


新取水口の平面図



新取水口の縦断図 (1/2)

図 7.24 (1/2)


EXISTING GRAVITY DAM
EL. 806.5
GATE SLOT
GATE CONTROL HOUSE
BULK HEAD SLOT
MOL EL 804.5
EL 793.5
TRASH RACK
MIN. EL 794.0*
∅ POWER TUNNEL
* For Power Operation
0
10
20m
820
810
800
790
780
770
760
ELEVATION , (meters)

新取水口の縦断図 (2/2)

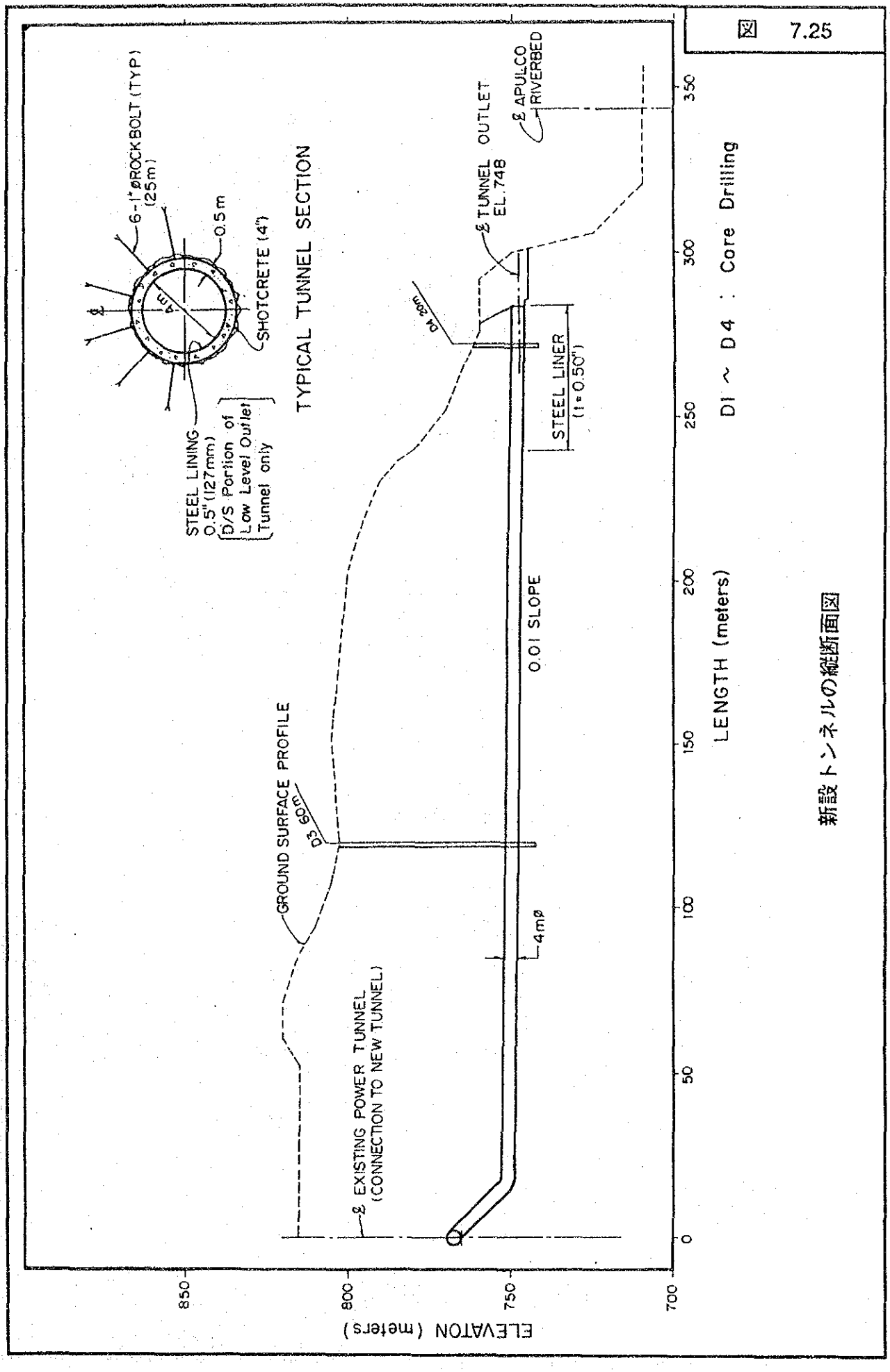
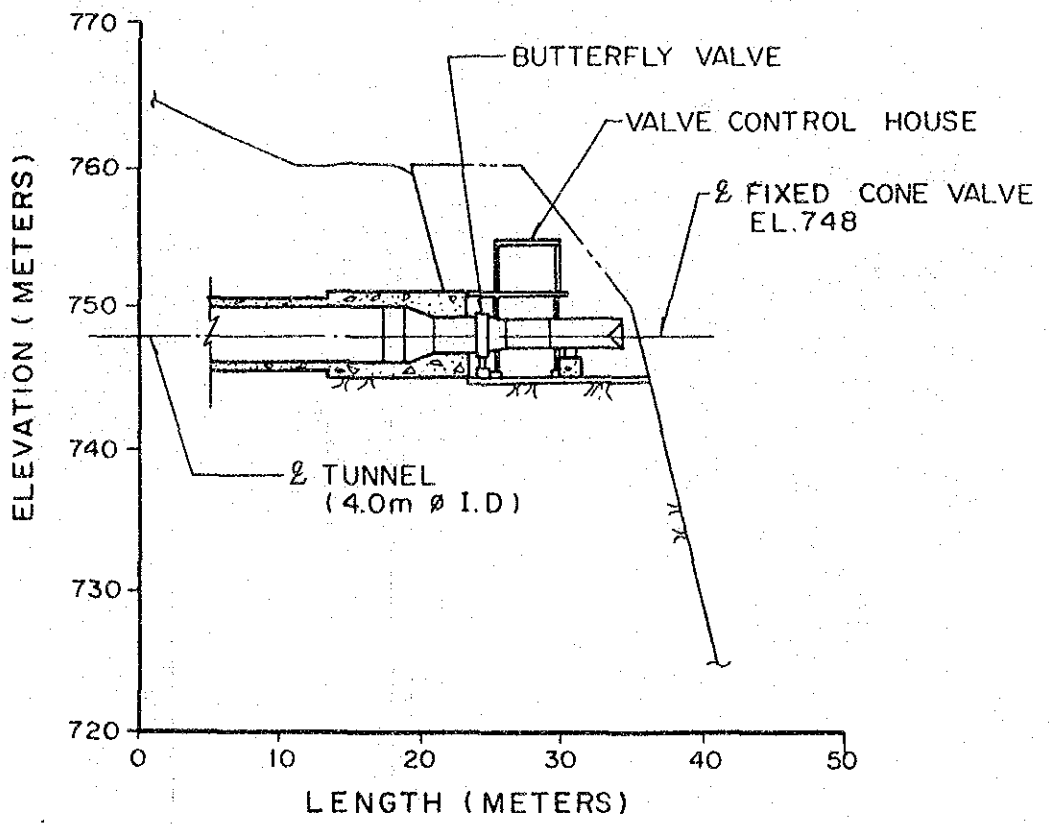
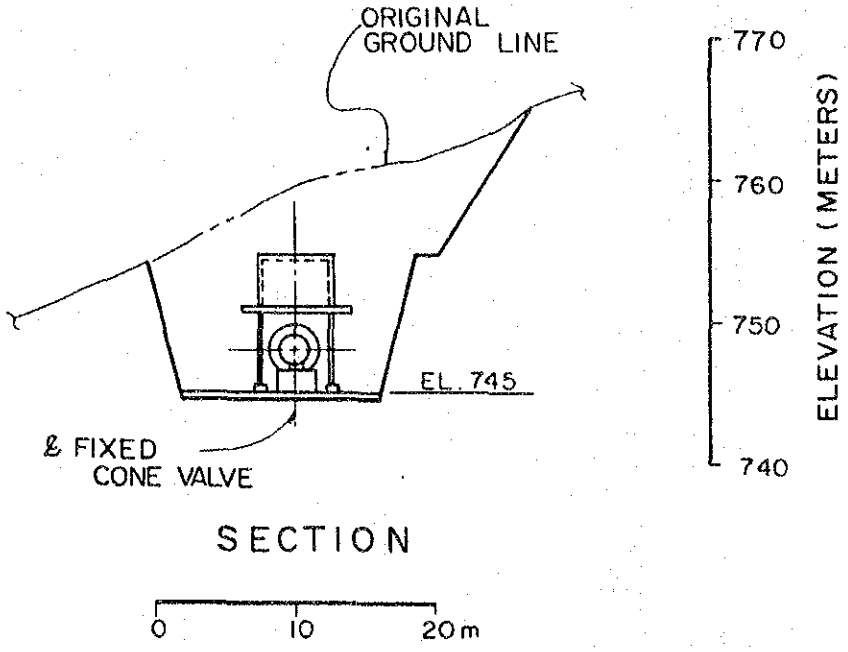


図 7.25
TYPICAL TUNNEL SECTION
6-1"ØROCK BOLT (TYP)
(25m)
0.5m
SHOTCRETE (4")
STEEL LINING
0.5" (12.7mm)
D/S Portion of
Low Level Outlet
Tunnel only
GROUND SURFACE PROFILE
D3 60m
D4 70m
STEEL LINER
(t=0.50")
℄ TUNNEL OUTLET
EL. 748
℄ APULCO
RIVERBED
0.01 SLOPE
4mØ
℄ EXISTING POWER TUNNEL
(CONNECTION TO NEW TUNNEL)
D1 ~ D4 : Core Drilling
LENGTH (meters)
ELEVATION (meters)
0
50
100
150
200
250
300
350
700
750
800
850
新設トンネルの縦断面図

図 7.26



PROFILE

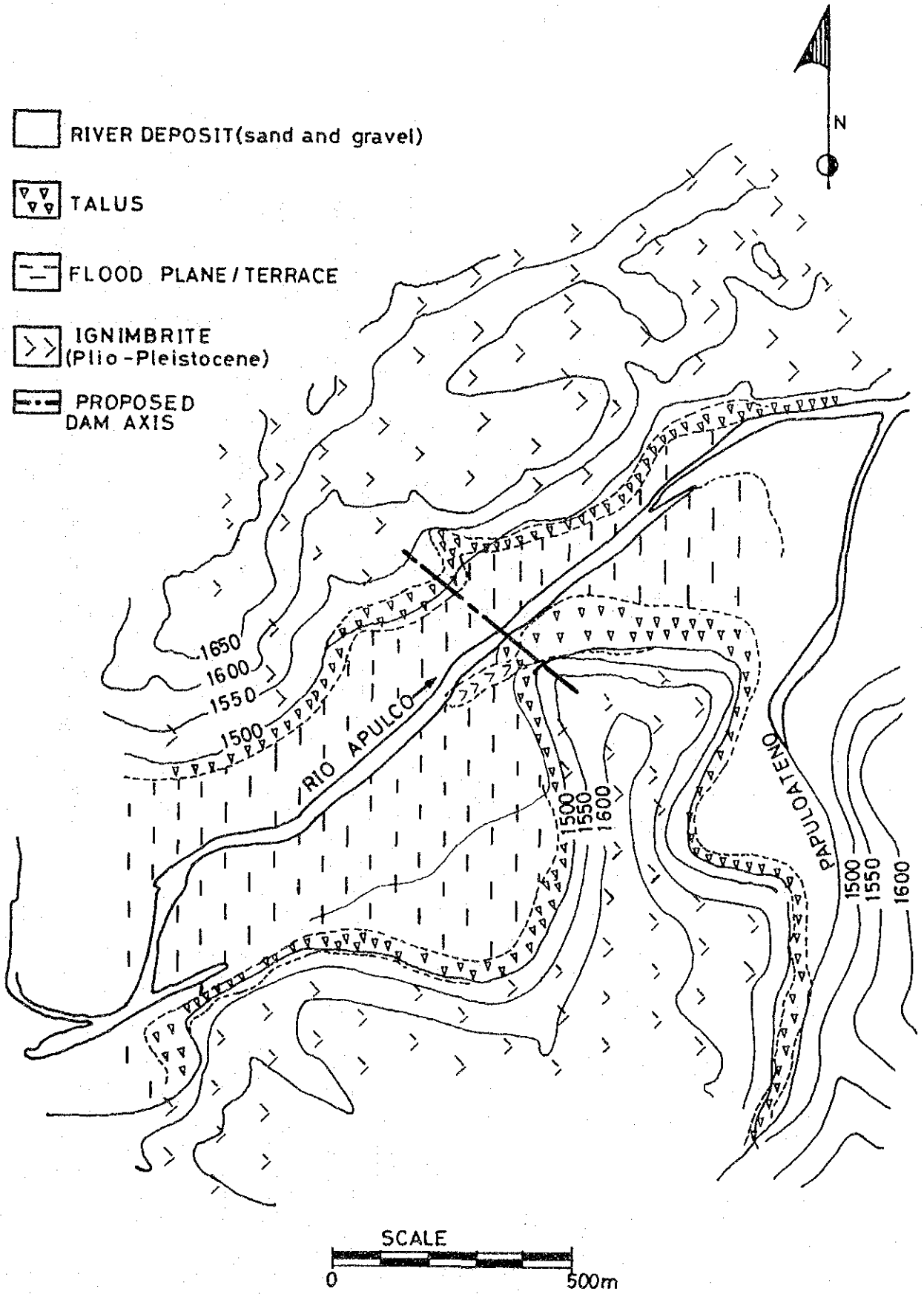


SECTION

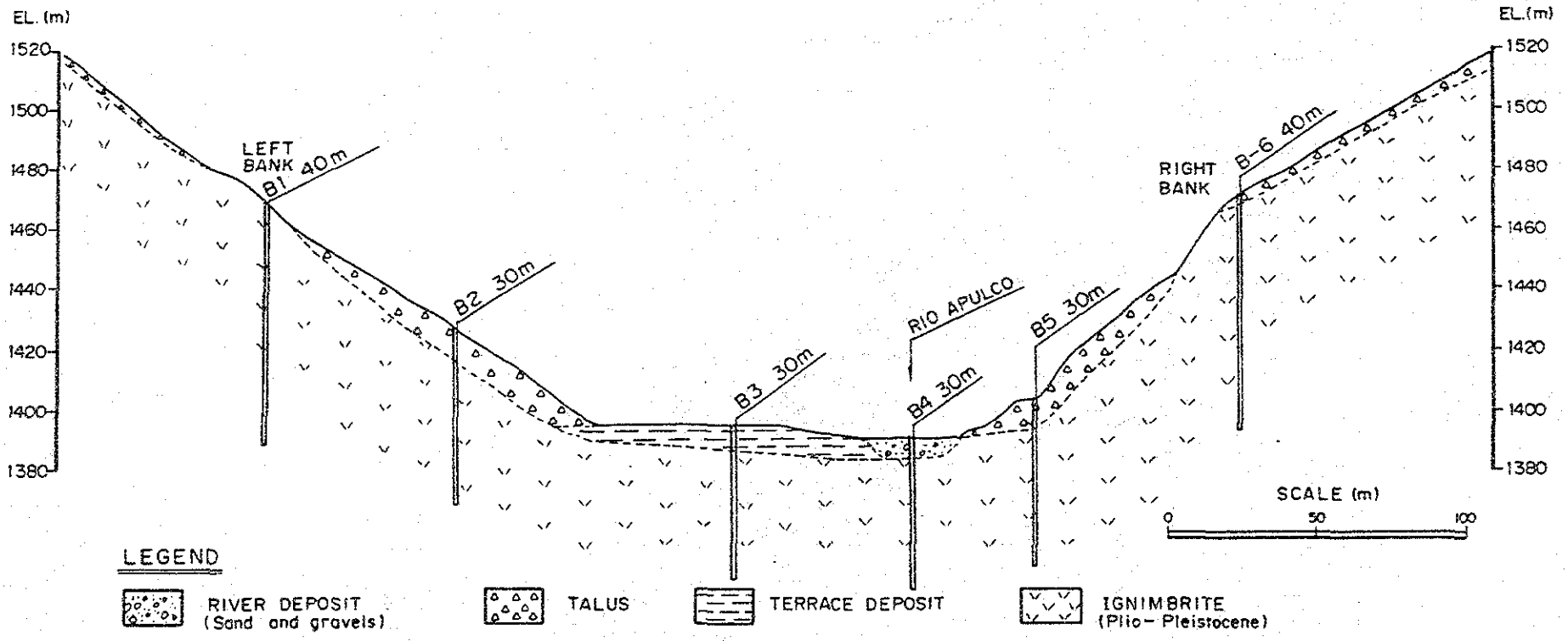
0 10 20m

新放流施設の縦断面図

図 7.27



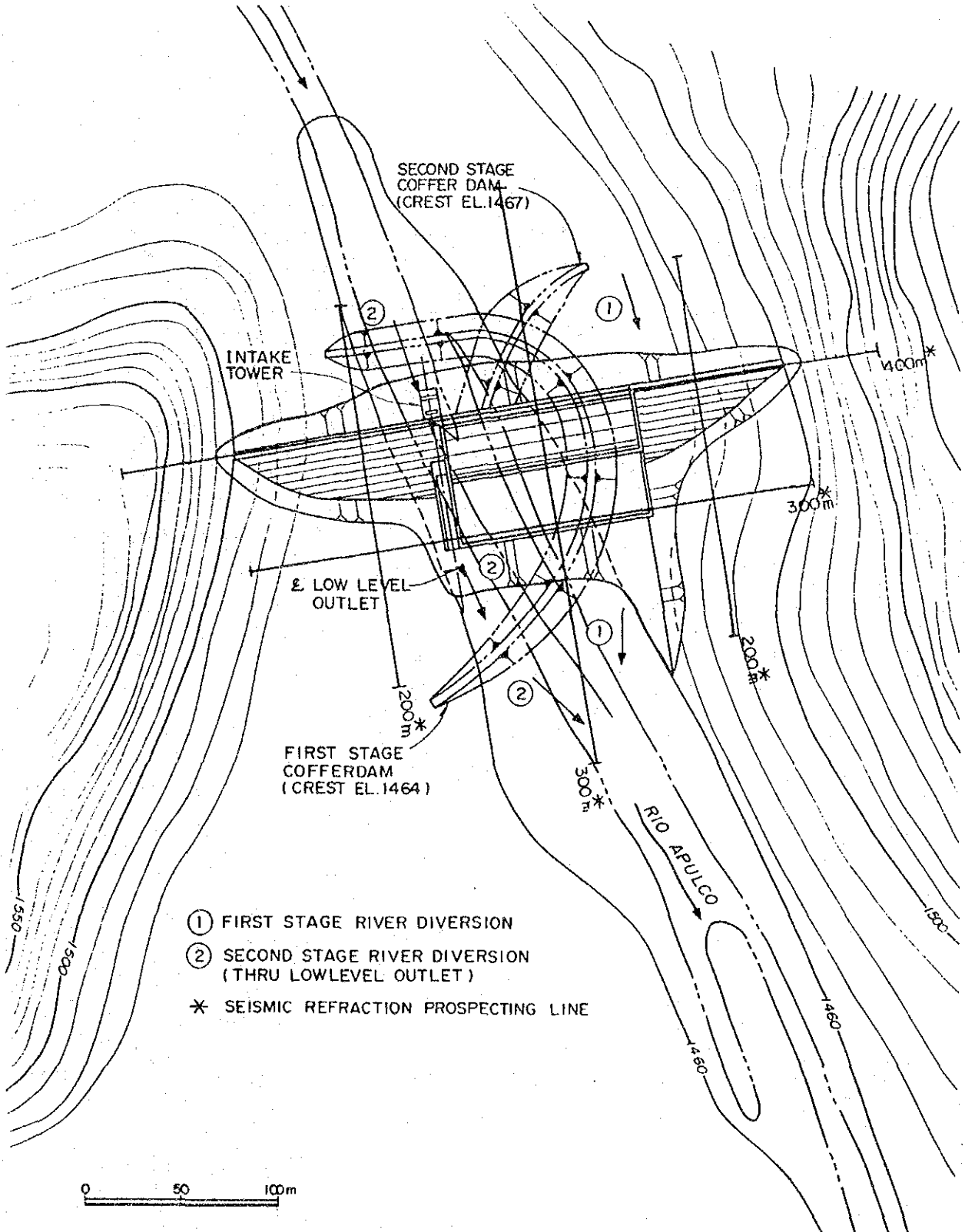
砂防ダム候補地点の地質平面図



砂防ダム候補地点の地質断面図

図 7.28

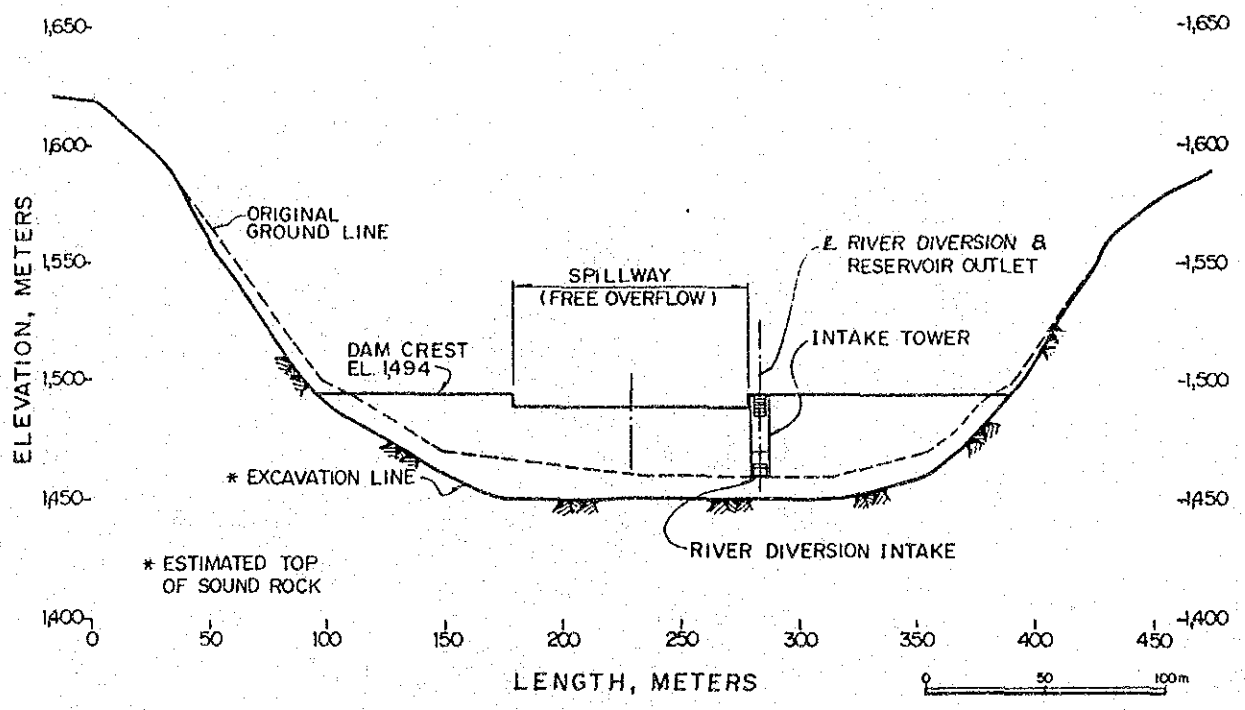
図　7.29



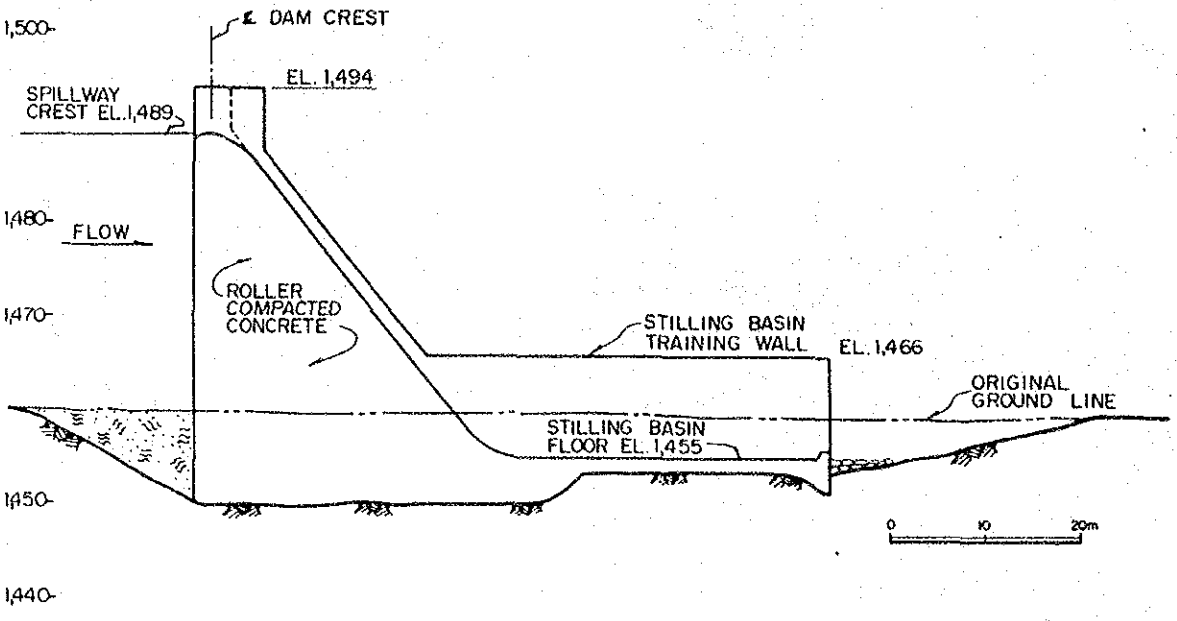
GENERAL LAYOUT AND RIVER DIVERSION SCHEME
OF CHECK DAM (15 YEAR LIFE).

新設砂防ダムの平面図

図 7.30

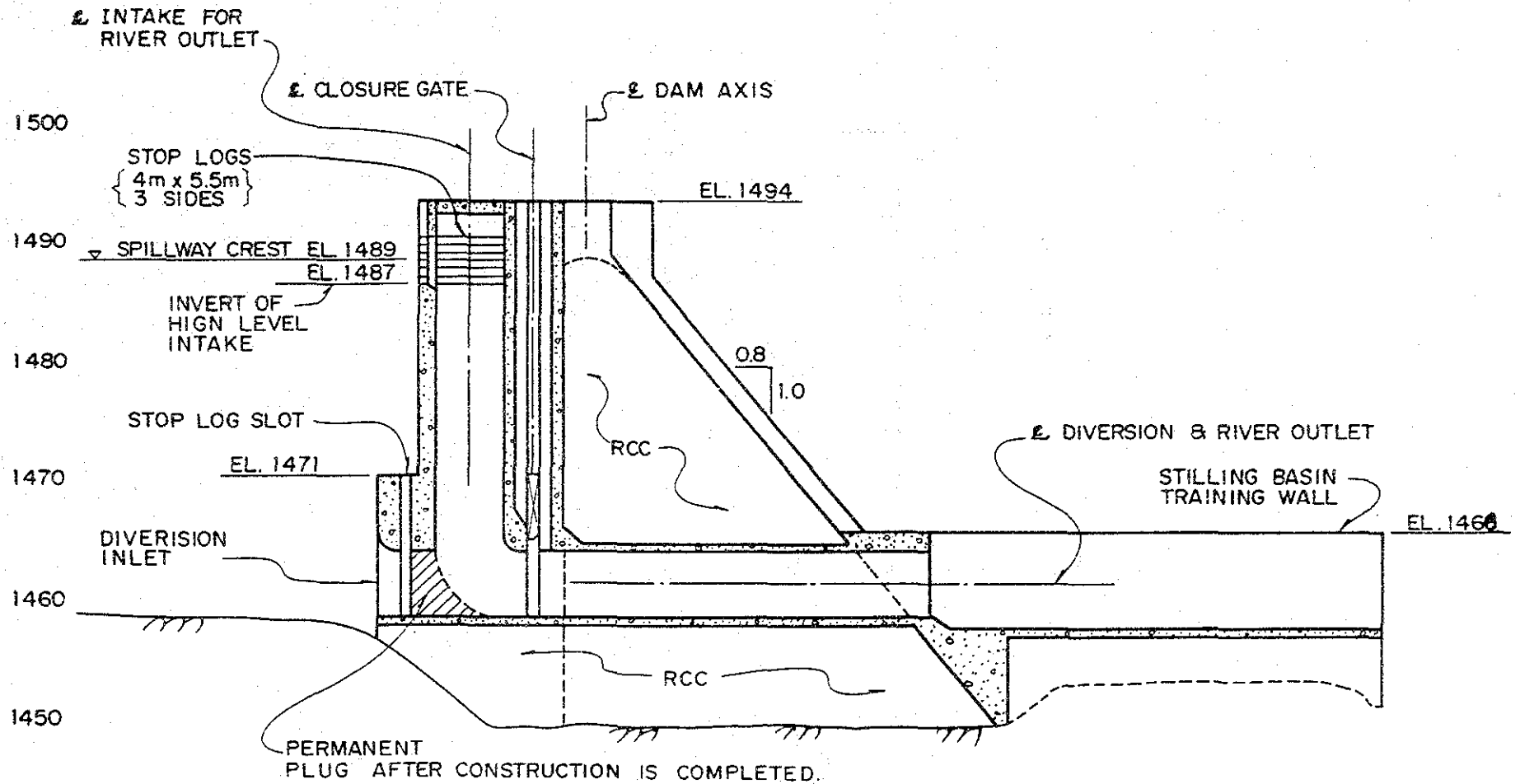


UPSTREAM ELEVATION OF CHECK DAM



SECTION THRU SPILLWAY CENTERLINE CHECK DAM

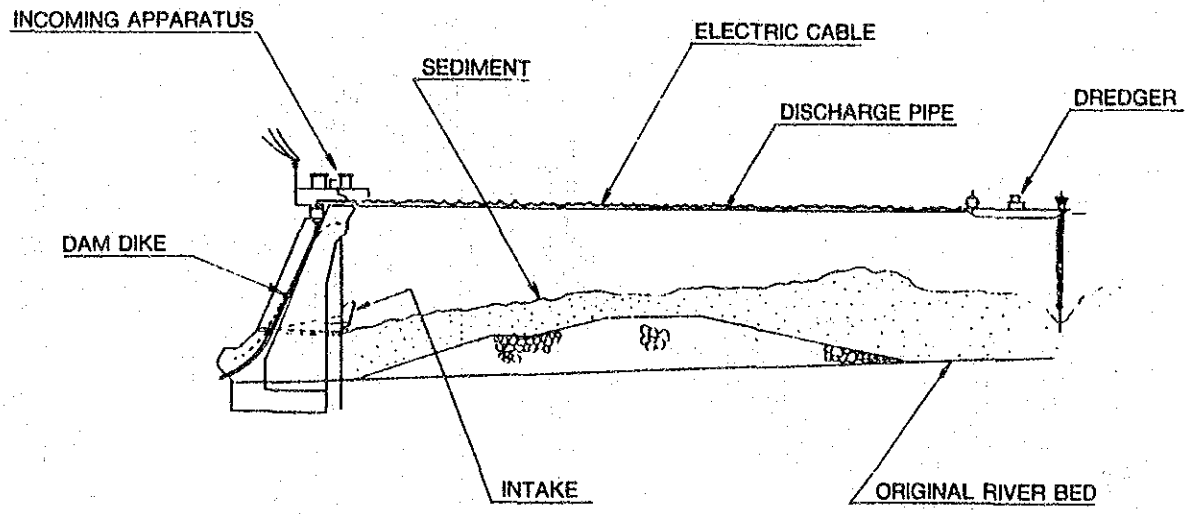
新設砂防ダムの断面図



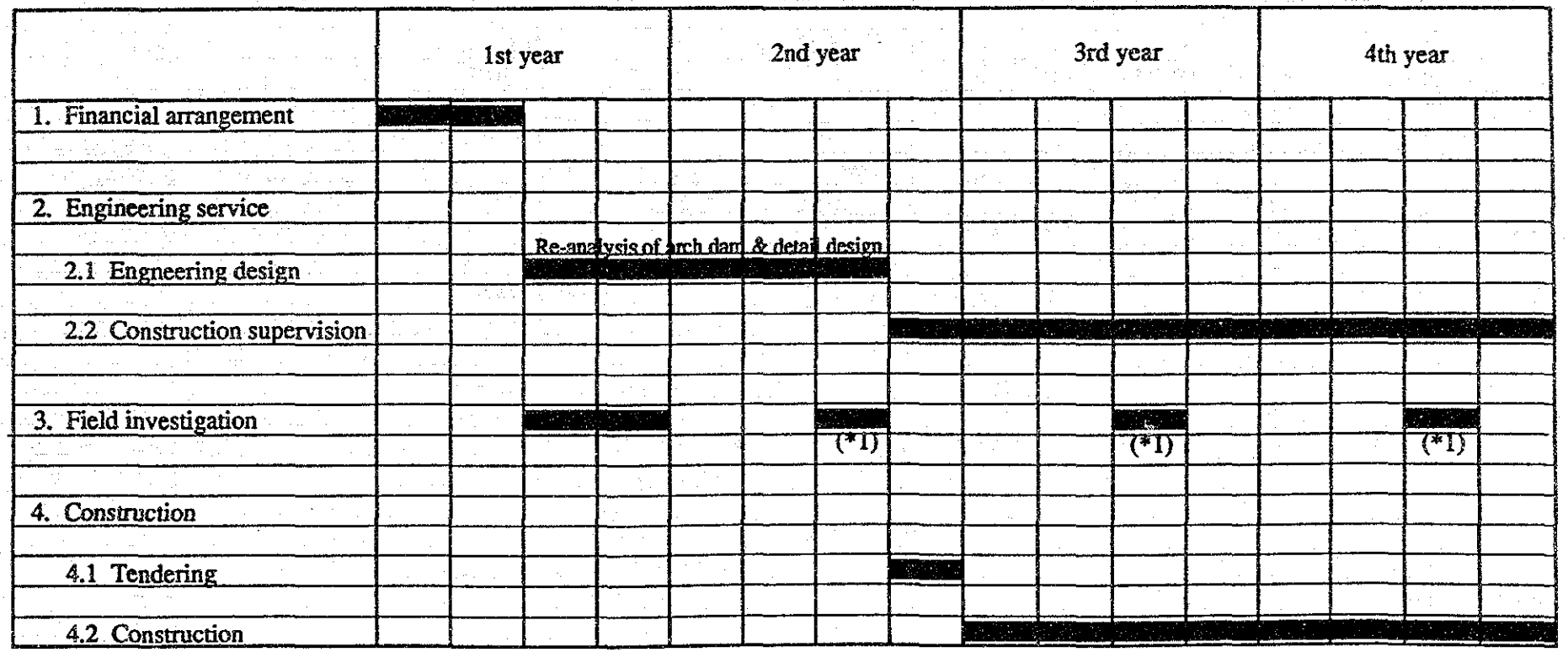
新設砂防ダムの転流及び放流施設

図 7.31

図 7.32



貯水池の浚渫計画



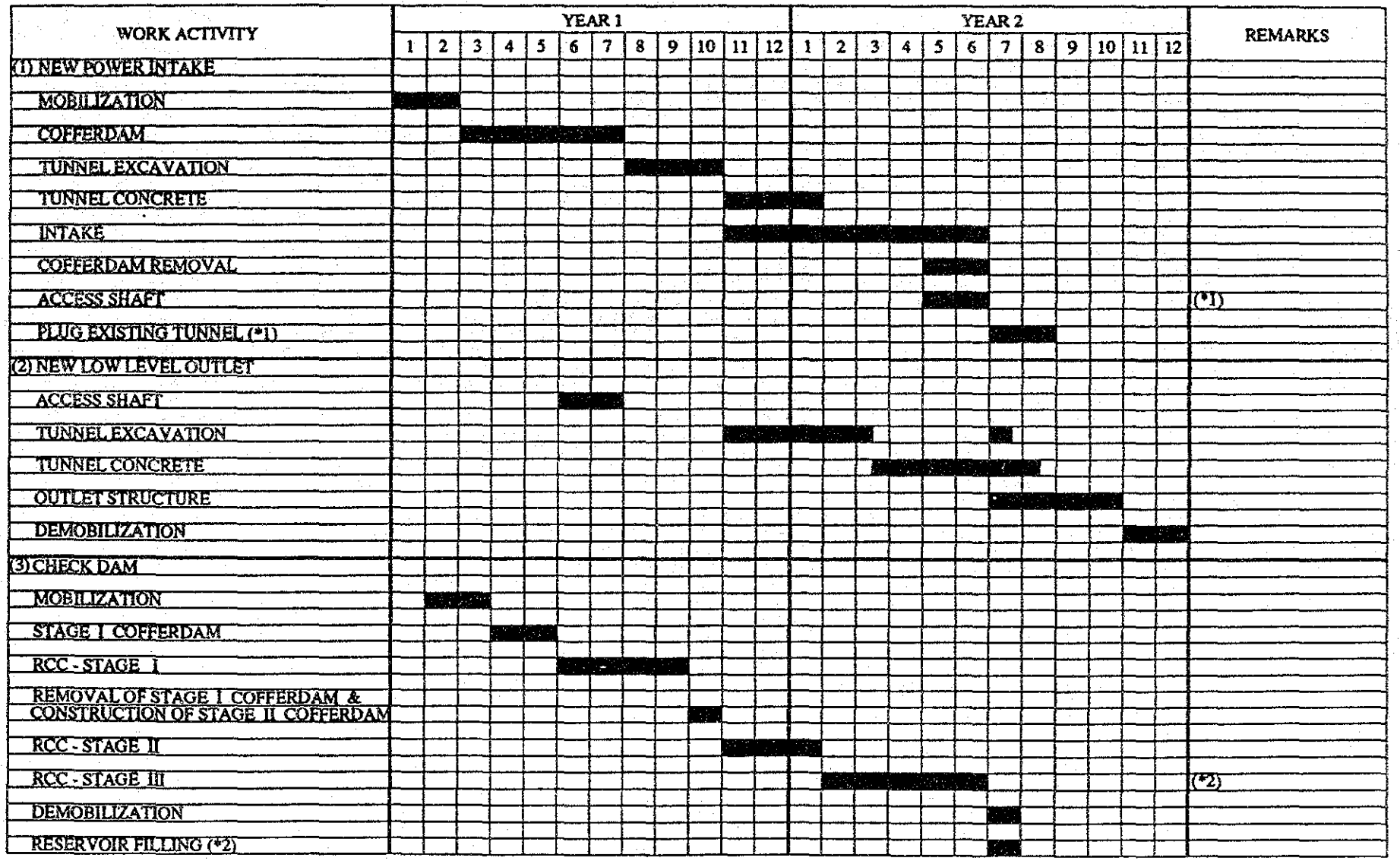
Note: (*1) Bathymetric survey in Soledad Reservoir

リハビリテーション計画実施工程

図 8.1

Work Items	Month 1	2	3	4	5	6	7	Remarks
A. Topographic Survey								
A-1 Preparation/Mobilization								
A-2 Aerophotographic mapping								For the proposed reservoir and road relocation,
(1) Shooting								20 km², 1/2,000
(2) Ground control survey								
(3) Levelling								
(4) Mapping								
A-3 Ground Survey								
(1) Profile/Section survey								For the check dam and intake site
(2) Plane table survey								- do -
B. Geological Survey								
B-1 Preparation/Mobilization								
B-2 Seismic refraction prospecting								For check dam site : 1,400 m for 5 lines
B-3 Core drilling								For check dam : 200 m long for 6 holes
								and intake and tunnel : 160 m long for 4 holes
C. Construction Material Survey								
C-1 Sand & gravel								For concrete aggregate for building concrete dam
C-2 Quarry site								
D. Bathymetric Survey of Soledad Reservoir								By using echo sounder at every 6 month.
D-1 Entire reservoir area								
D-2 Dam and intake area								
E. Measurement of Turbidity of Water								
E-1 Reservoir								By using turbidity water at every 6 month.
E-2 Downstream								

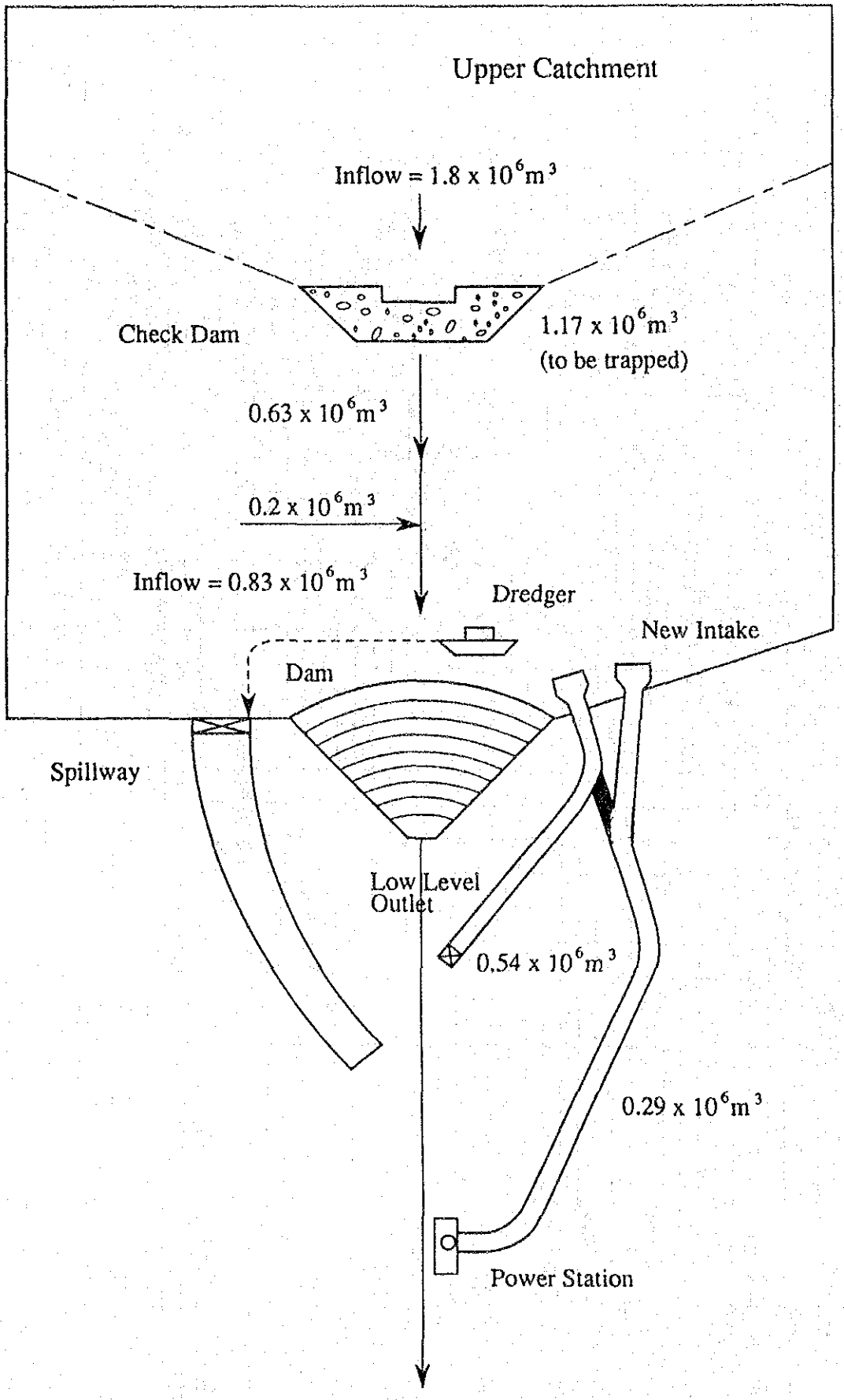
現地調査スケジュール



(*1) The existing power tunnel and Mazatepec Powerplant will be shut down during this period.
(*2)Coincides with the shutdown of the Mazatepec Powerplant after construction of the new power intake is complete.

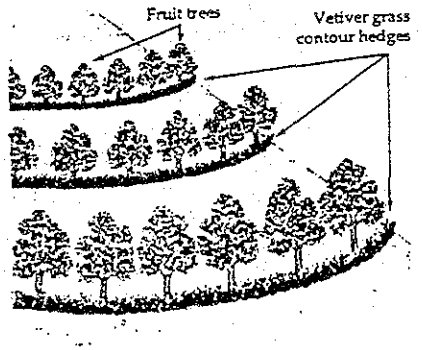
新取水口、放流施設及び新設砂防ダムの建設工程

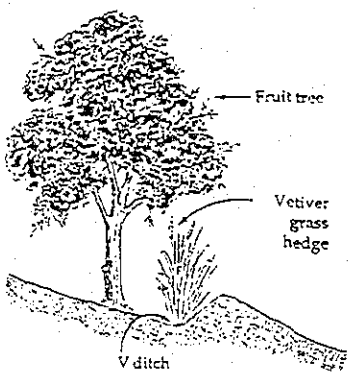
図 9.1



リハビリテーション計画の土砂収支

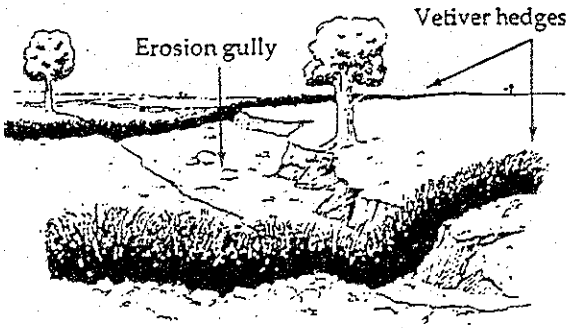
図　10.1

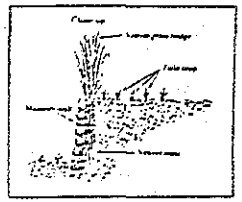


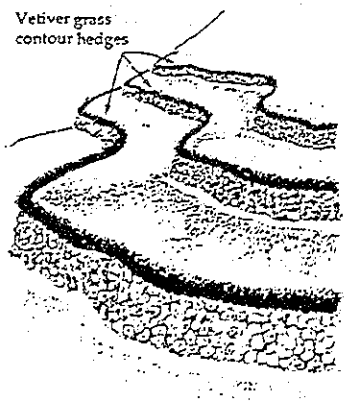


山腹における植林対策

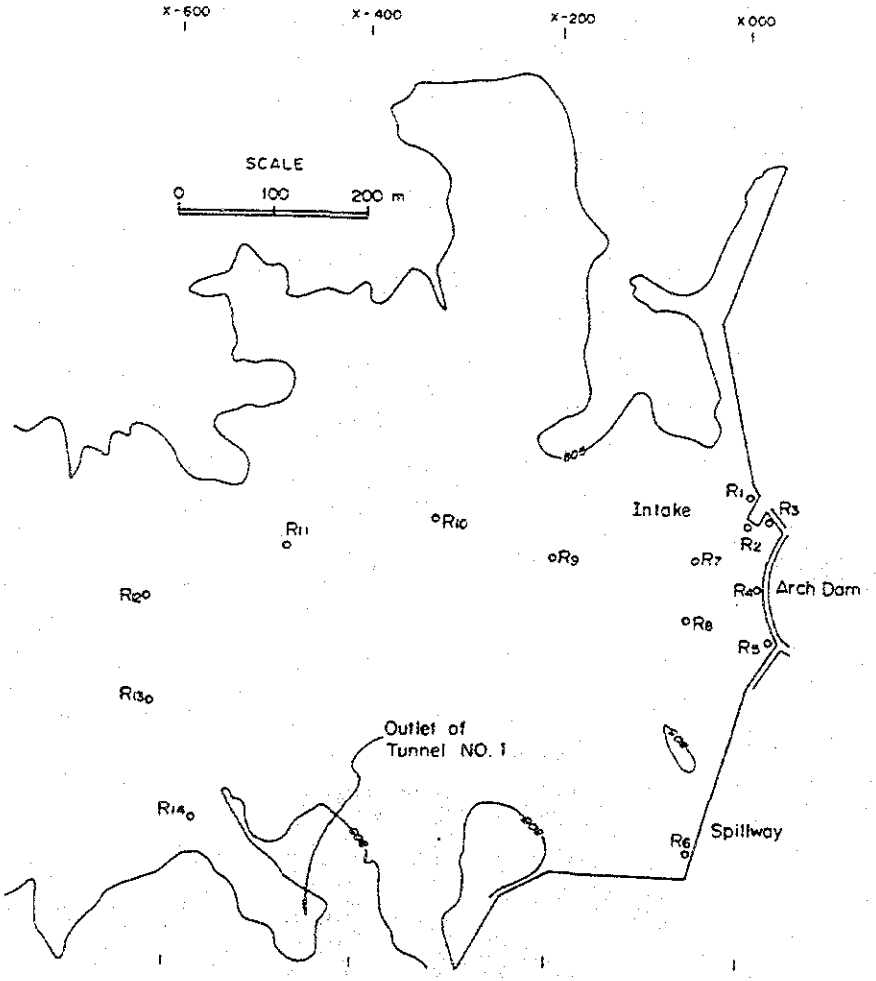
図　10.2



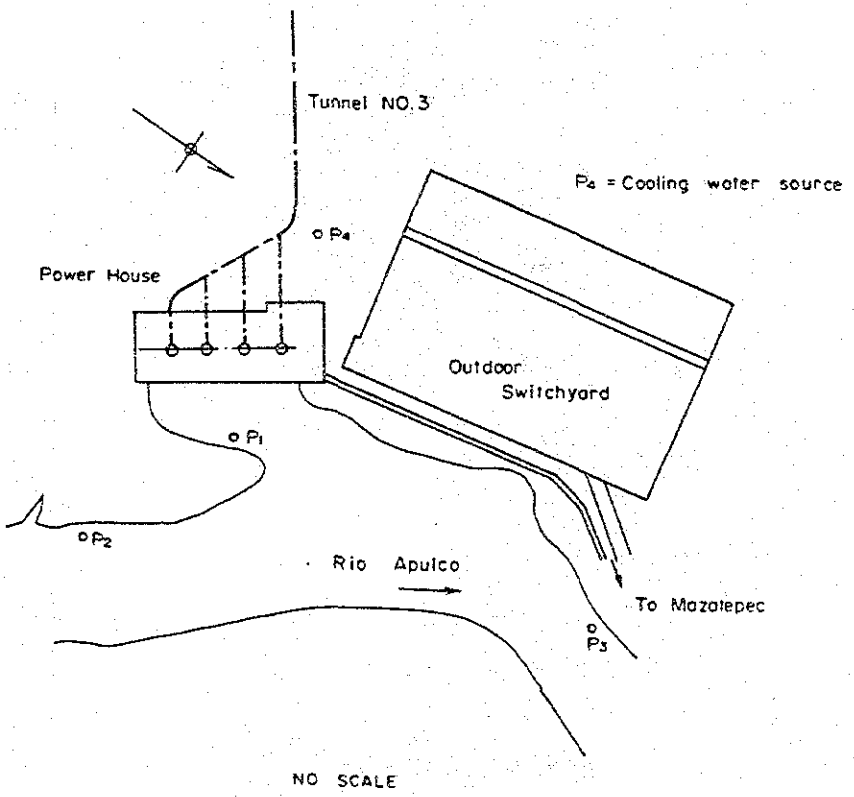




岩盤段丘部における草地化対策



DAM AND RESERVOIR AREA



LOCATION OF POWER HOUSE

濁度測定位置図

図 10.3