

No. 02

REPUBLIC OF TURKEY

THE GENERAL DIRECTORATE OF STATE HYDRAULIC WORKS

FEASIBILITY STUDY
ON
ADATEPE IRRIGATION PROJECT
FINAL REPORT

VOLUME 3
ATTACHED DRAWINGS

FEBRUARY 1990

JAPAN INTERNATIONAL COOPERATION AGENCY

AFT

90-06

34
833
AFT

国際協力事業団

20775

REPUBLIC OF TURKEY

THE GENERAL DIRECTORATE OF STATE HYDRAULIC WORKS

**FEASIBILITY STUDY
ON
ADATEPE IRRIGATION PROJECT
FINAL REPORT**

**VOLUME 3
ATTACHED DRAWINGS**

JICA LIBRARY



1080321111

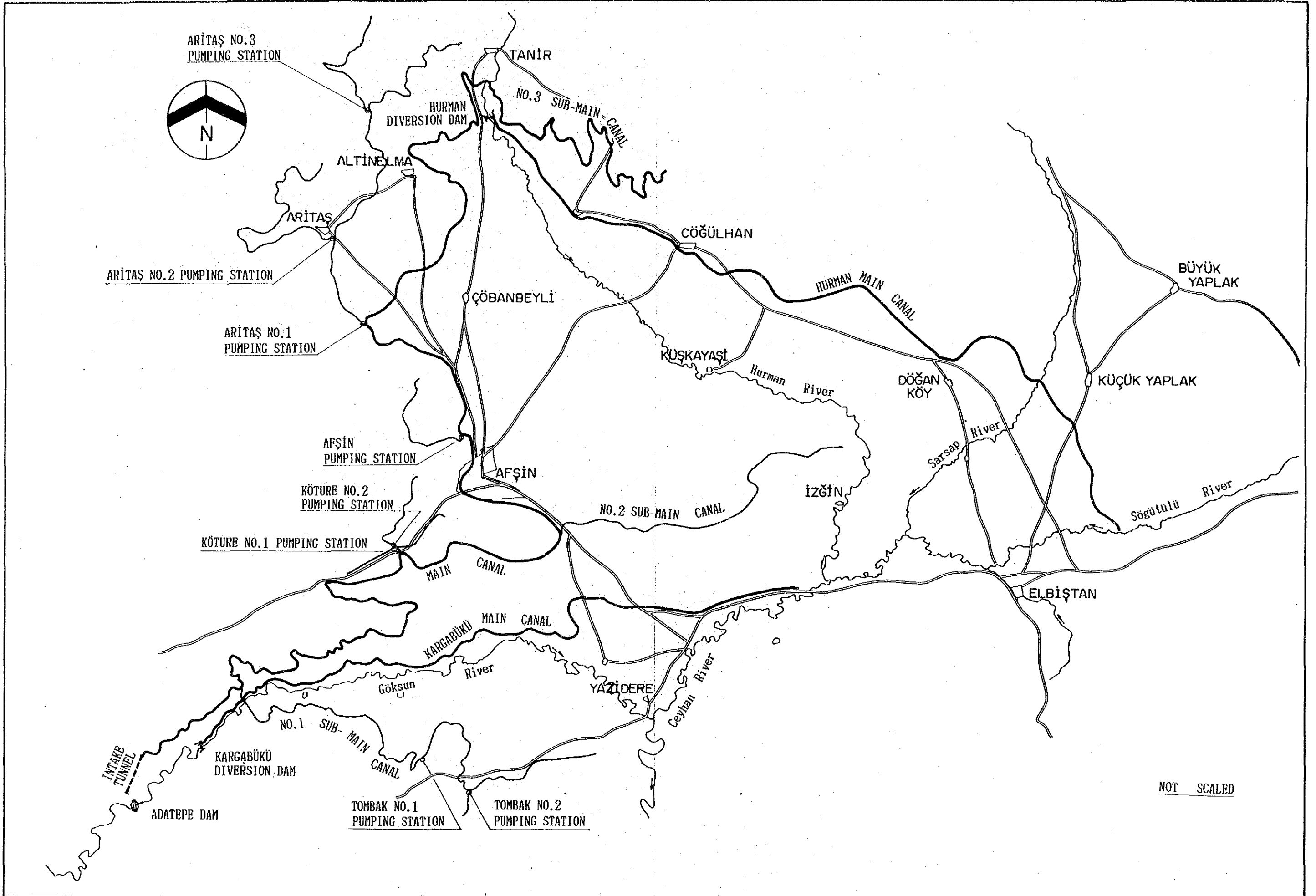
20775

FEBRUARY 1990

JAPAN INTERNATIONAL COOPERATION AGENCY

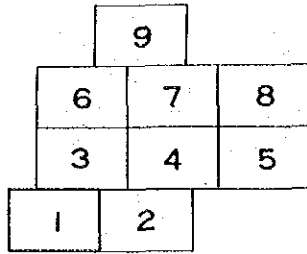
LIST OF EXHIBITS

| List Number | TITLE |
|--------------|---|
| Exhibit - 1 | GENERAL PLAN |
| Exhibit - 2 | PLAN OF IRRIGATION CANAL (1 of 9) |
| Exhibit - 3 | PLAN OF IRRIGATION CANAL (2 of 9) |
| Exhibit - 4 | PLAN OF IRRIGATION CANAL (3 of 9) |
| Exhibit - 5 | PLAN OF IRRIGATION CANAL (4 of 9) |
| Exhibit - 6 | PLAN OF IRRIGATION CANAL (5 of 9) |
| Exhibit - 7 | PLAN OF IRRIGATION CANAL (6 of 9) |
| Exhibit - 8 | PLAN OF IRRIGATION CANAL (7 of 9) |
| Exhibit - 9 | PLAN OF IRRIGATION CANAL (8 of 9) |
| Exhibit - 10 | PLAN OF IRRIGATION CANAL (9 of 9) |
| Exhibit - 11 | PROFILE OF MAIN CANAL |
| Exhibit - 12 | PROFILE OF MAIN CANAL (KARGABUKU AND HURMAN) |
| Exhibit - 13 | PROFILE OF SUB-MAIN CANAL (No. 1 No. 2 AND No. 3) |
| Exhibit - 14 | TYPICAL CROSS-SECTION OF IRRIGATION CANAL |
| Exhibit - 15 | INTAKE FACILITY (1 of 2) |
| Exhibit - 16 | INTAKE FACILITY (2 of 2) |
| Exhibit - 17 | SIPHON: Main Canal No. 0 |
| Exhibit - 18 | TURNOUT: Main Canal No. 7+250 |
| Exhibit - 19 | WASTEWAY AND SPILLWAY: Main Canal No. 26 (1 of 2) |
| Exhibit - 20 | WASTEWAY AND SPILLWAY: Main Canal No. 26 (2 of 2) |
| Exhibit - 21 | SIPHON: Main Canal No. 60+150 |
| Exhibit - 22 | TURNOUT: Main Canal No. 61+900 |
| Exhibit - 23 | TURNOUT AND SPILLWAY: Eed of Main Canal |
| Exhibit - 24 | SIPHON: No. 1 Sub-Main Canal No. 0+350 (1 of 2) |
| Exhibit - 25 | SIPHON: No. 1 Sub-Main Canal No. 0+350 (2 of 2) |
| Exhibit - 26 | KARGABUKU DIVERSION WORK |
| Exhibit - 27 | HURMAN DIVERSION WORK |
| Exhibit - 28 | PUMPING STATION (1 of 2) |
| Exhibit - 29 | PUMPING STATION (2 of 2) |
| Exhibit - 30 | DROP AND SMALL SIPHON |
| Exhibit - 31 | APPURTENANT STRUCTURE (1 of 2; BRIDGE) |
| Exhibit - 32 | APPURTENANT STRUCTURE (2 of 2; BRIDGE, CROSS-DRAIN) |
| Exhibit - 33 | TYPICAL ON-FARM CANAL |
| Exhibit - 34 | TYPICAL DRAINAGE CANAL |
| Exhibit - 35 | GENERAL PLAN OF ADATEPE DAM (by DSI) |










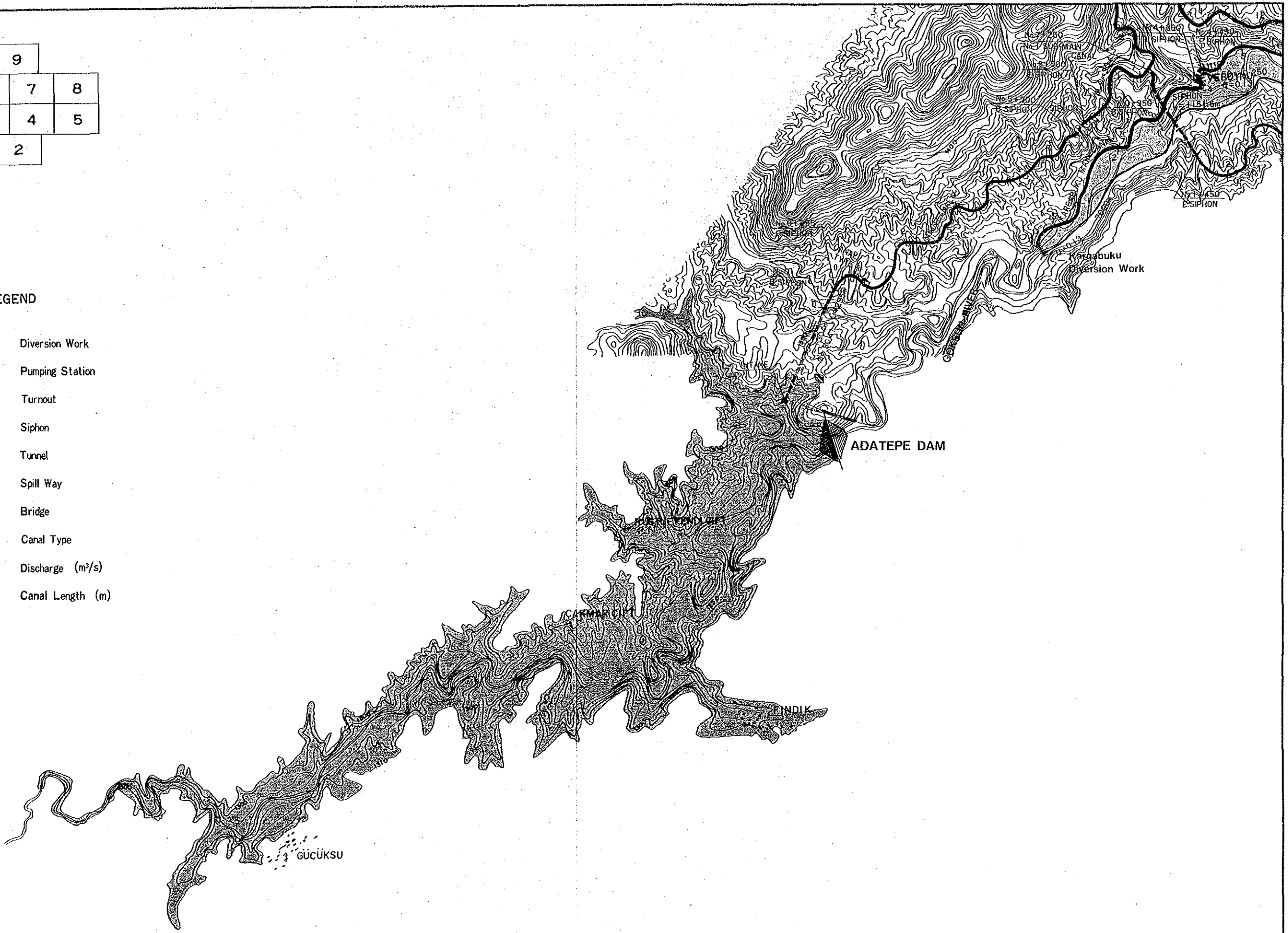
NOT SCALED

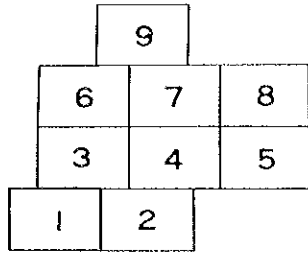
GENERAL PLAN



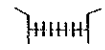

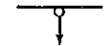
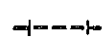
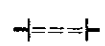
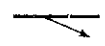
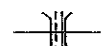
LEGEND

-  Diversion Work
-  Pumping Station
-  Turnout
-  Siphon
-  Tunnel
-  Spill Way
-  Bridge
- A, B, C Canal Type
- Q Discharge (m³/s)
- L Canal Length (m)

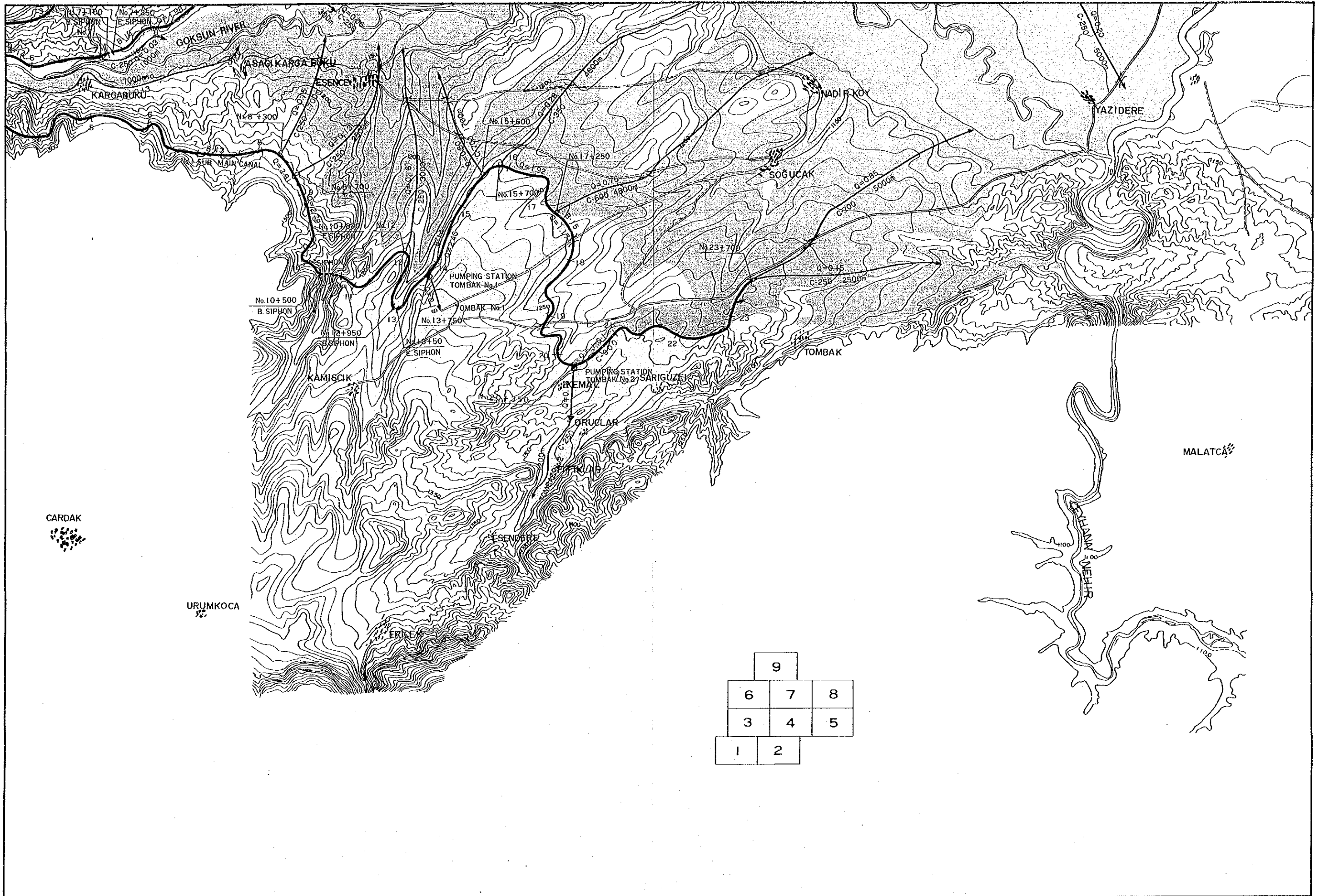




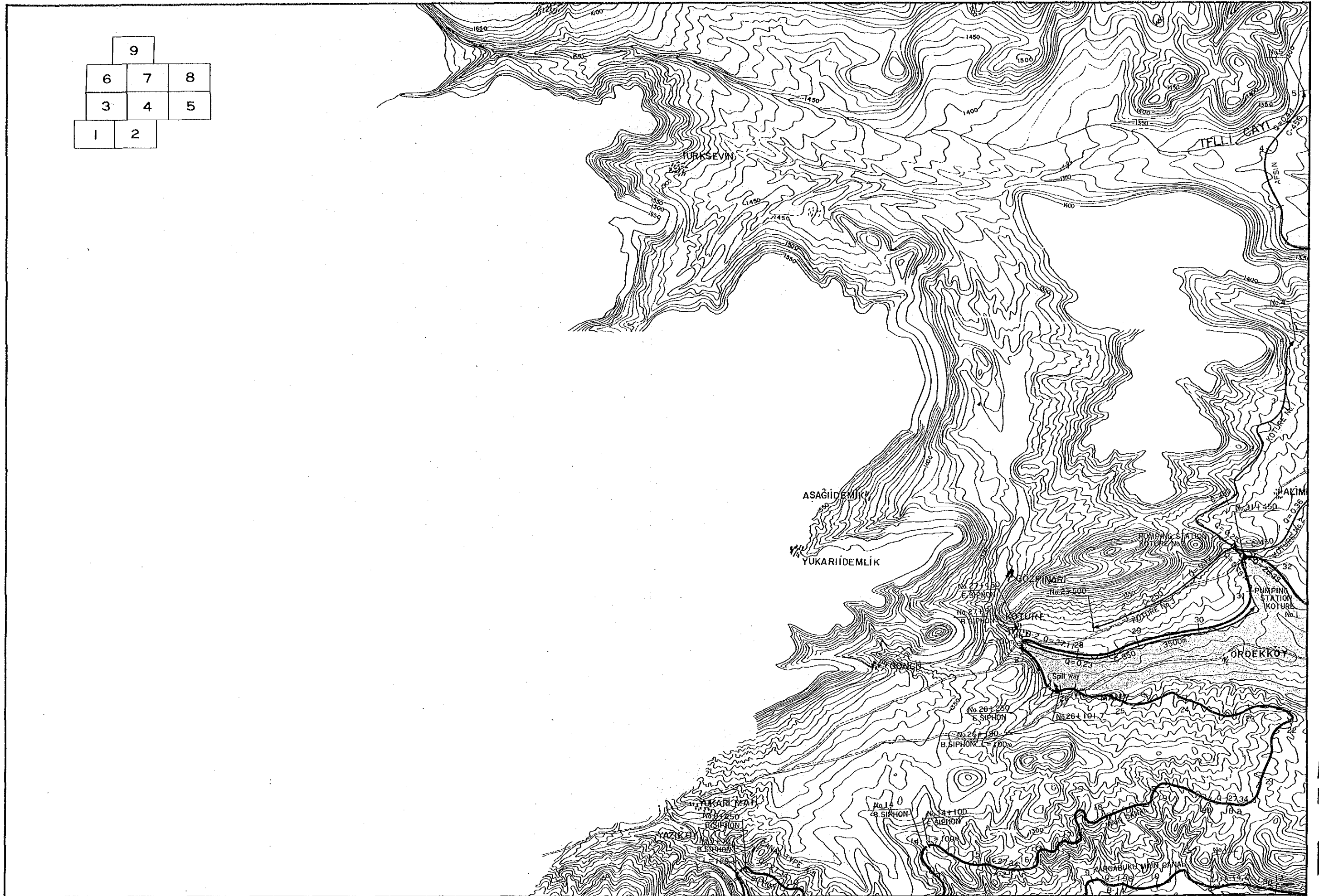
LEGEND

-  Diversion Work
-  Pumping Station
-  Turnout
-  Siphon
-  Tunnel
-  Spill Way
-  Bridge
- A, B, C Canal Type
- Q Discharge (m³/s)
- L Canal Length (m)





| | | |
|---|---|---|
| | 9 | |
| 6 | 7 | 8 |
| 3 | 4 | 5 |
| 1 | 2 | |

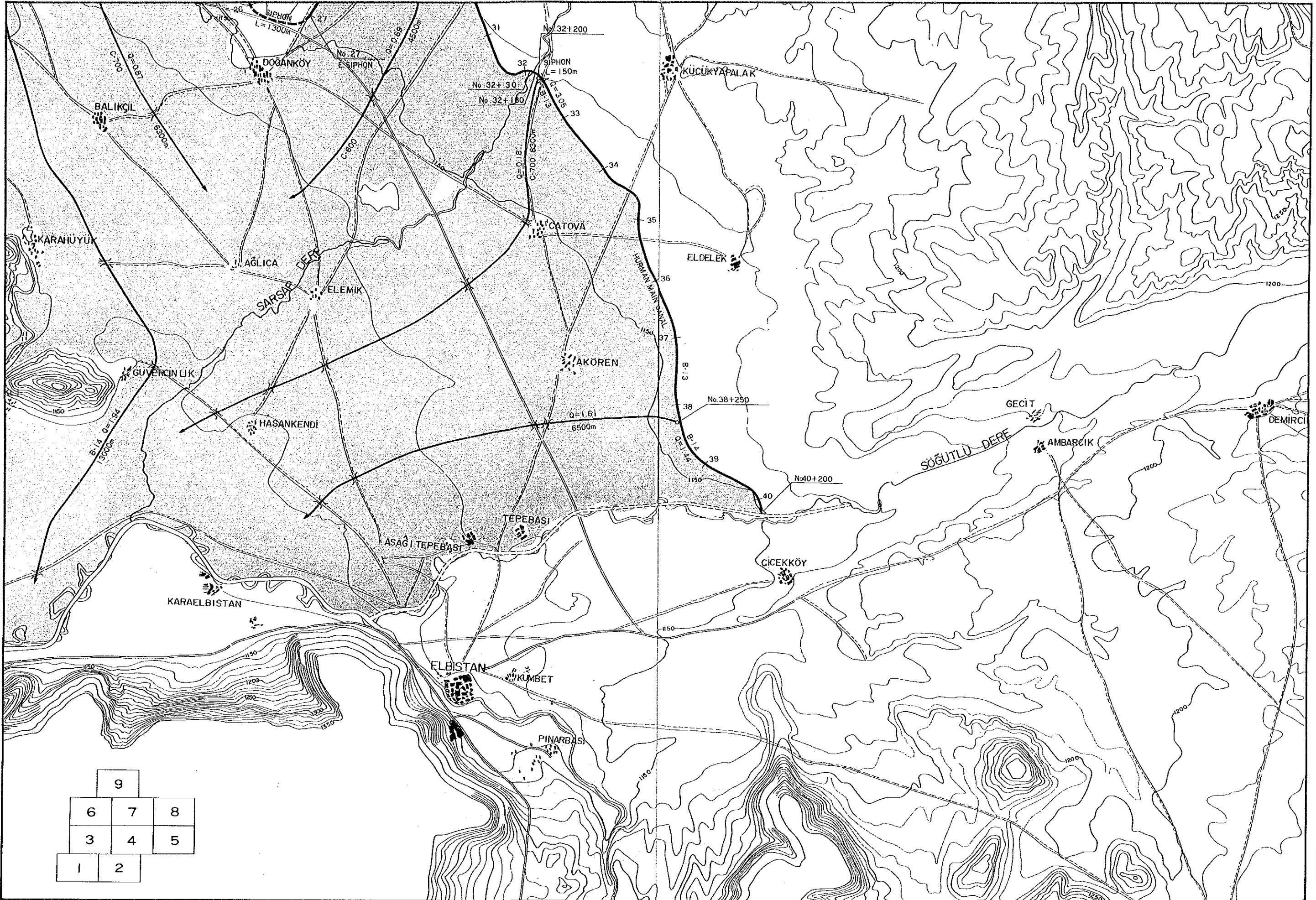


SCALE 1 : 50.000



SCALE 1 : 50,000

PLAN OF IRRIGATION CANAL (4 of 9)



SCALE 1 : 50,000

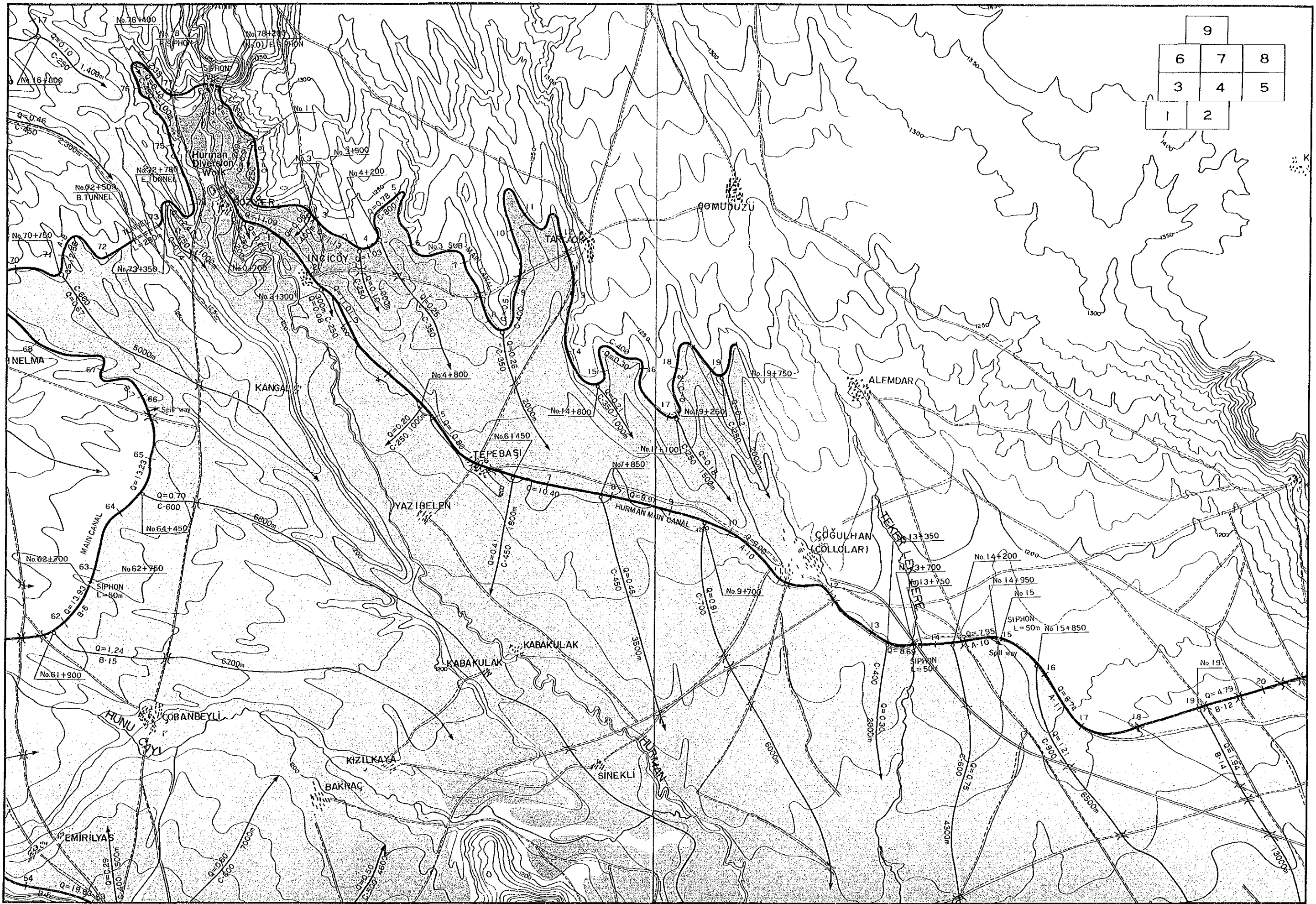
PLAN OF IRRIGATION CANAL (5 of 9)

| | | |
|---|---|---|
| 9 | | |
| 6 | 7 | 8 |
| 3 | 4 | 5 |
| 1 | 2 | |



SCALE 1 : 50,000

| | | |
|---|---|---|
| 9 | | |
| 6 | 7 | 8 |
| 3 | 4 | 5 |
| 1 | 2 | |



SCALE 1 : 50,000

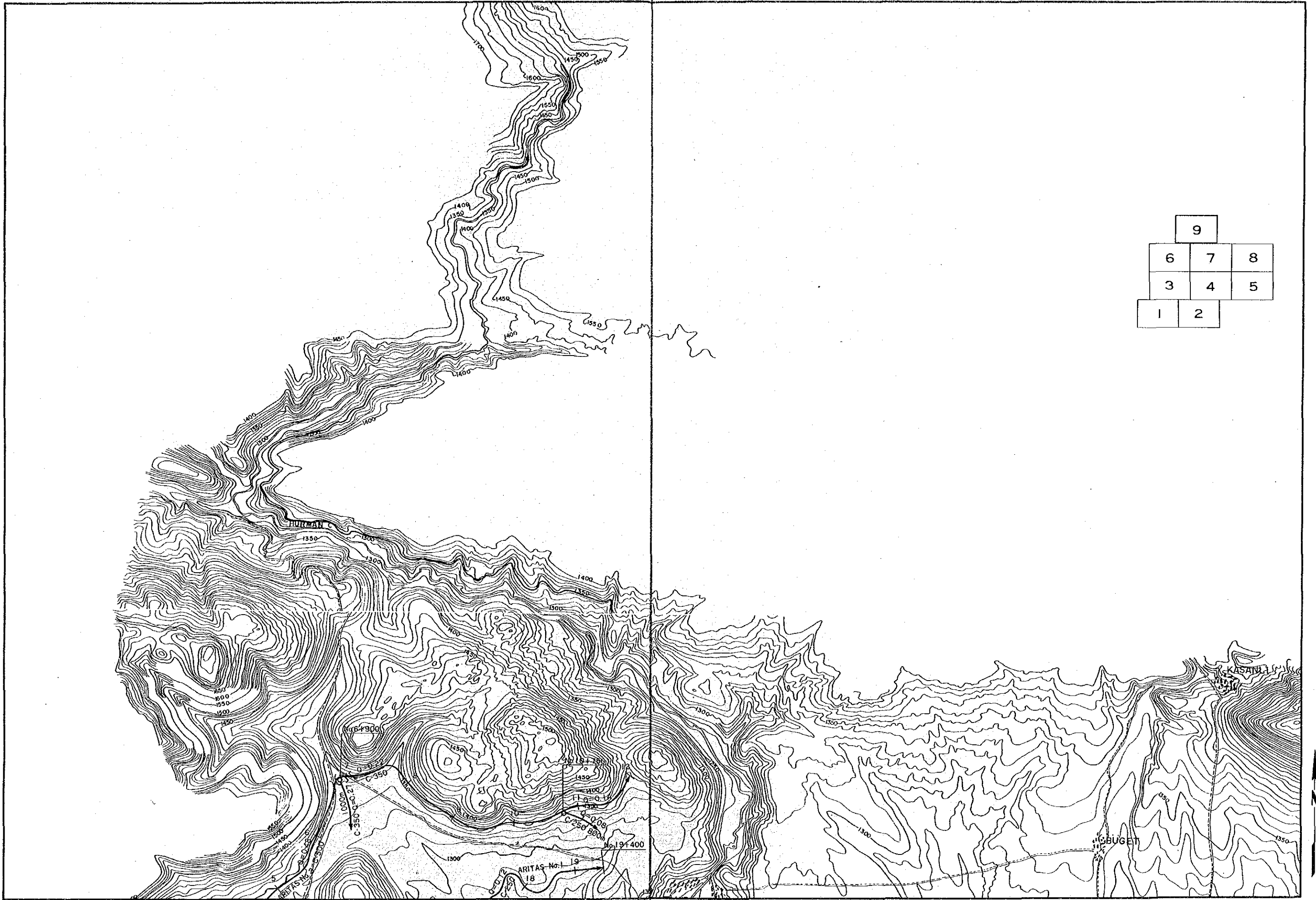
PLAN OF IRRIGATION CANAL (7 of 9)



| | | |
|---|---|---|
| 9 | | |
| 6 | 7 | 8 |
| 3 | 4 | 5 |
| 1 | 2 | |

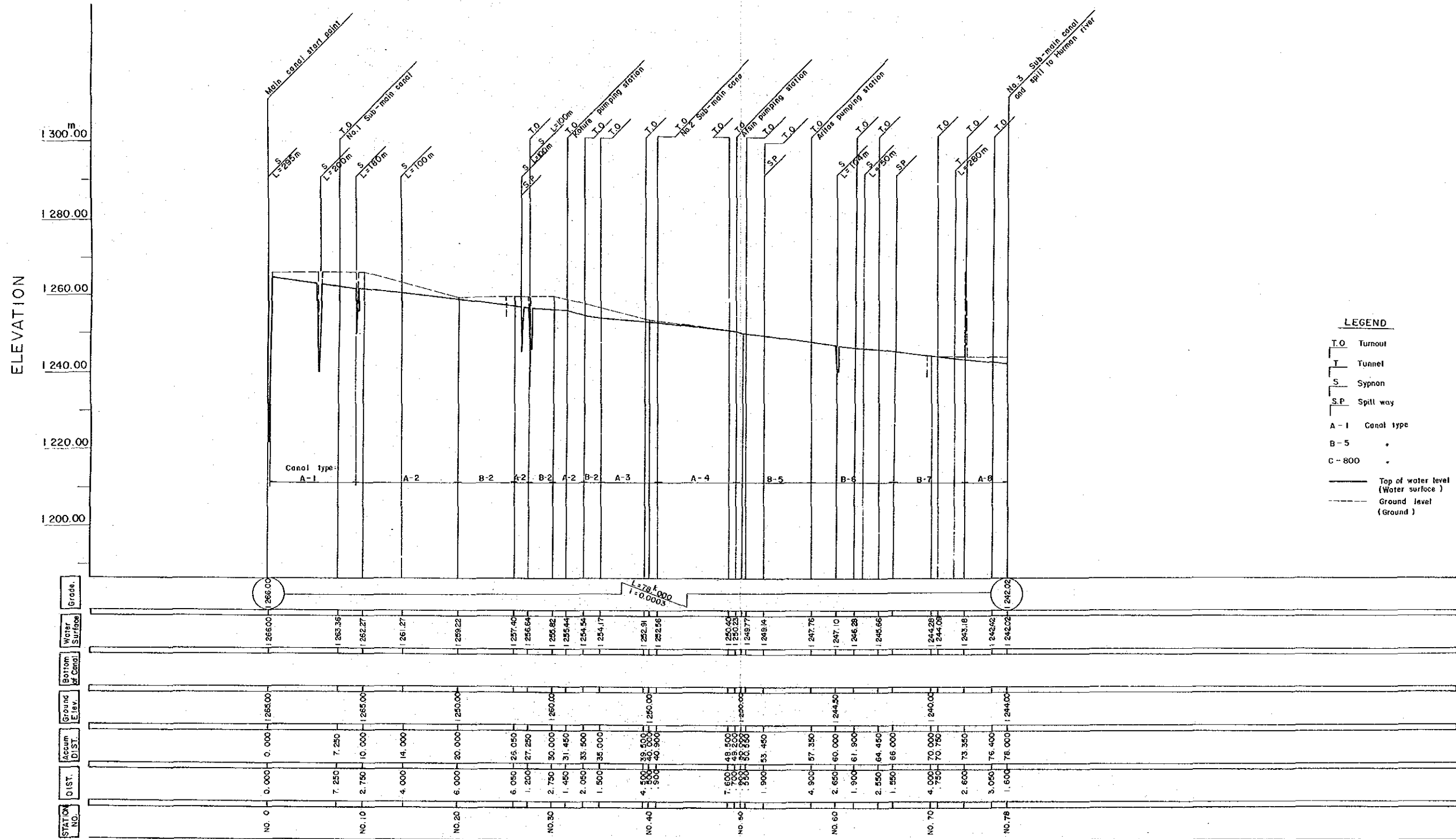
SCALE 1 : 50.000

PLAN OF IRRIGATION CANAL (8 of 9)



| | | |
|---|---|---|
| | 9 | |
| 6 | 7 | 8 |
| 3 | 4 | 5 |
| 1 | 2 | |

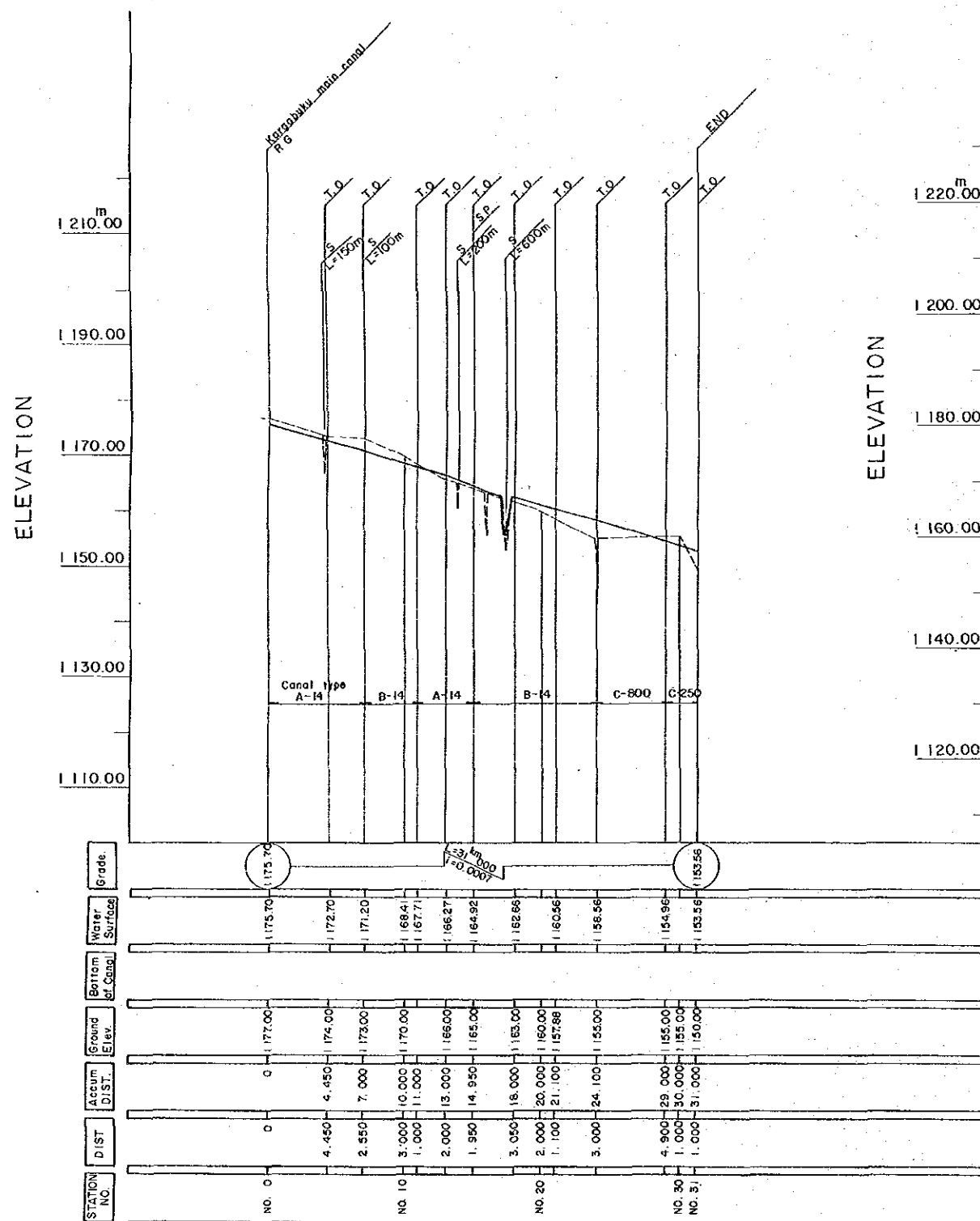
MAIN CANAL PROFILE



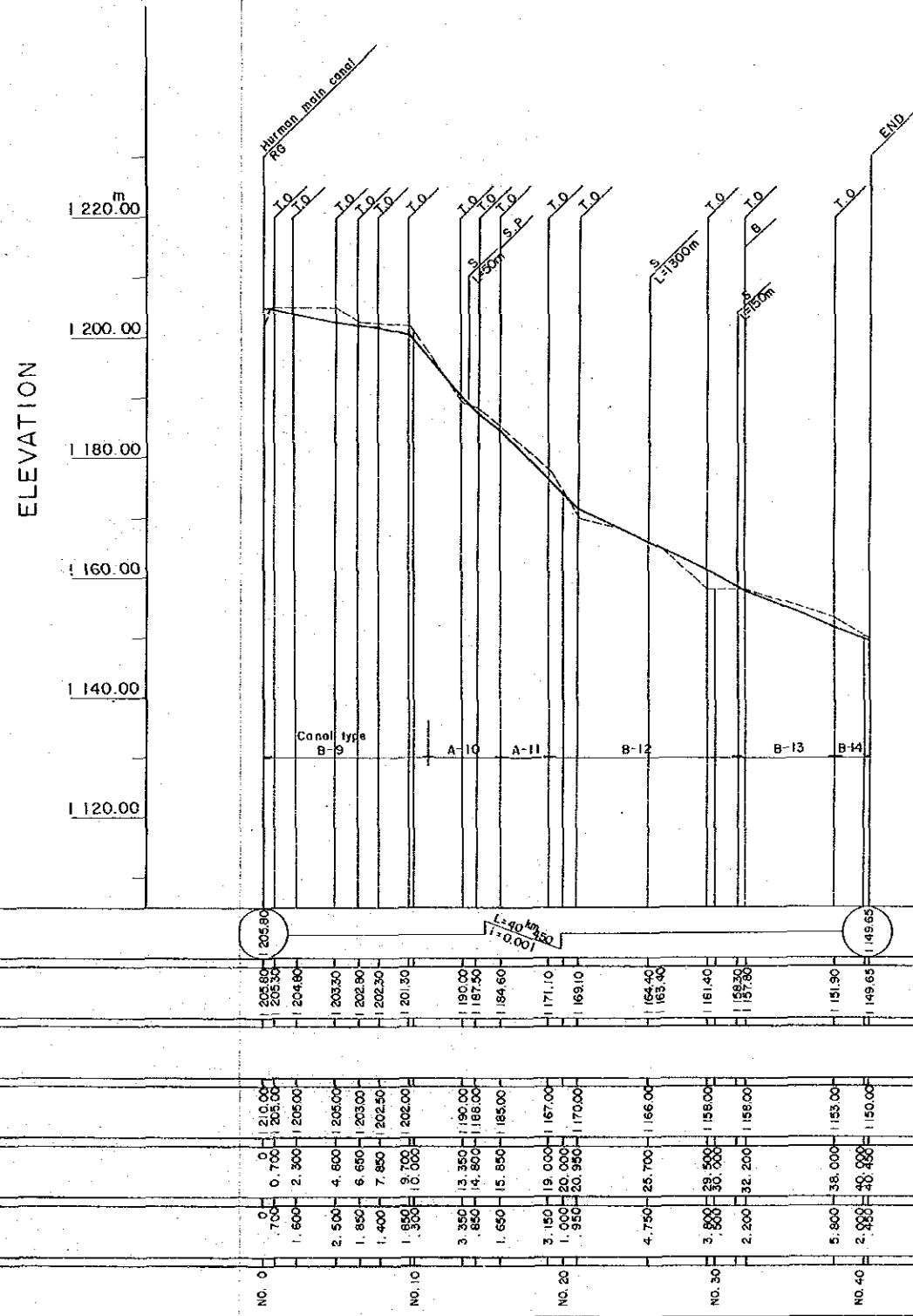
PROFILE OF MAIN CANAL

KARGABUKU MAIN CANAL PROFILE

HURMAN MAIN CANAL PROFILE



From Kargabuku
Diversion work.



From Hurman
Diversion work.

LEGEND
 T.O Turnout
 S Syphon
 SP Spill way
 A-1 Canal type
 B-15
 C-800
 ——— Top of water level (Water surface)
 - - - - - Ground level (Ground)

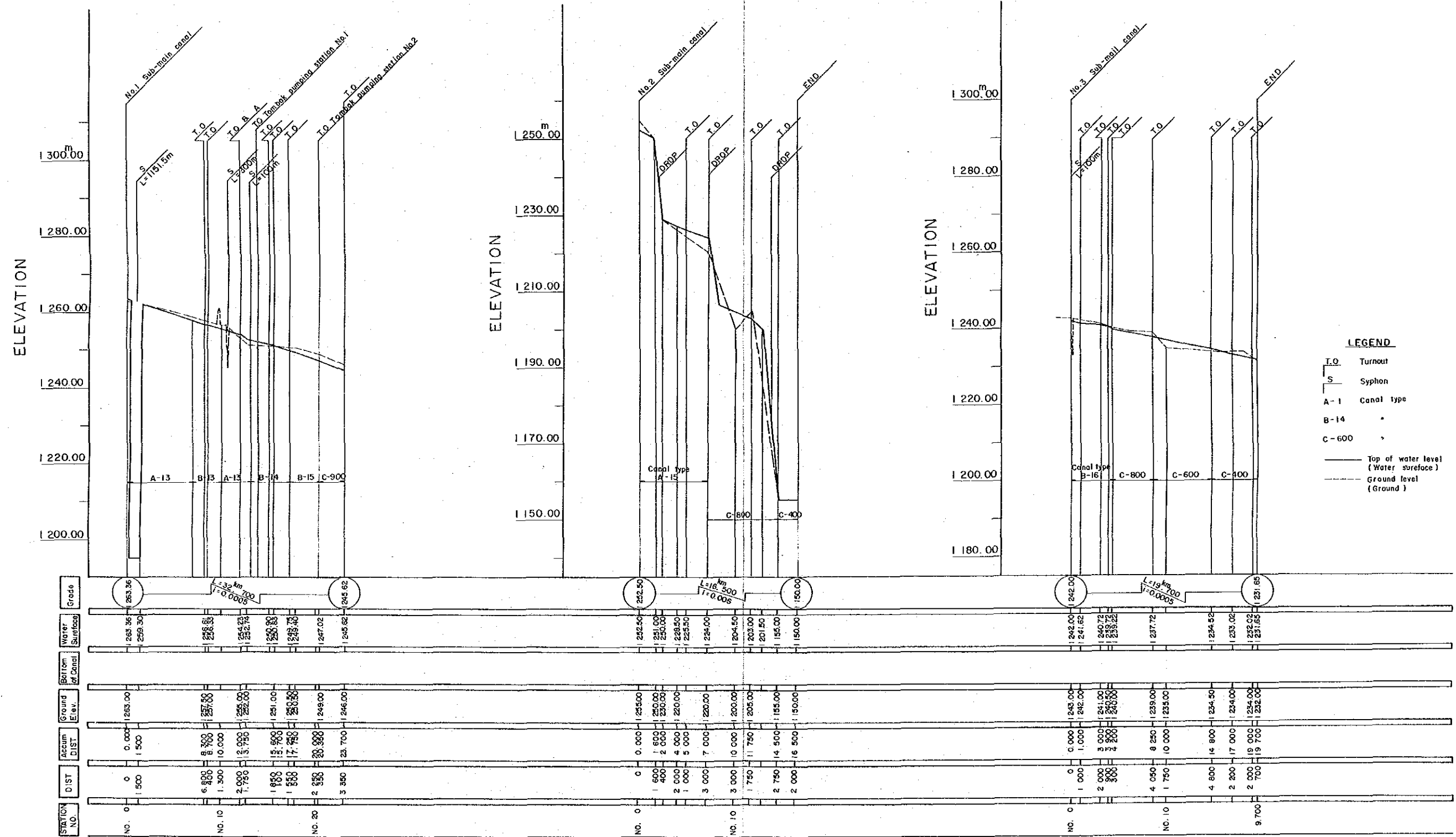
SCALE 5 0 5 10 km.

PROFILE OF MAIN CANAL (KARGABUKU AND HURMAN)

NO.1 SUB-MAIN CANAL PROFILE

NO.2 SUB-MAIN CANAL PROFILE

NO.3 SUB-MAIN CANAL PROFILE

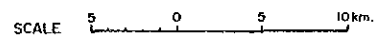


LEGEND
 T.O Turnout
 S Syphon
 A-1 Canal type
 B-14 "
 C-600 ">
 — Top of water level (Water surface)
 - - - Ground level (Ground)

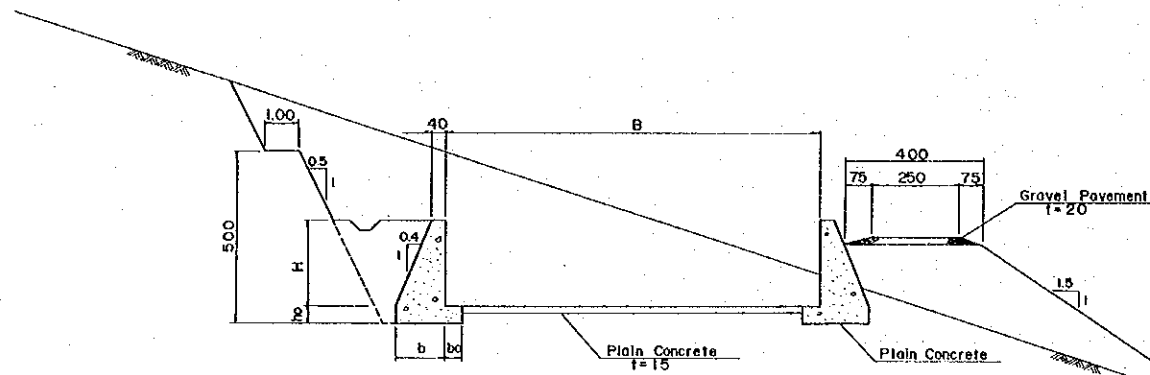
This point is as same as point of No.7+250 for main canal

This point is as some as point of No.40+900 for main canal.

This point is fixed with the end of main canal.



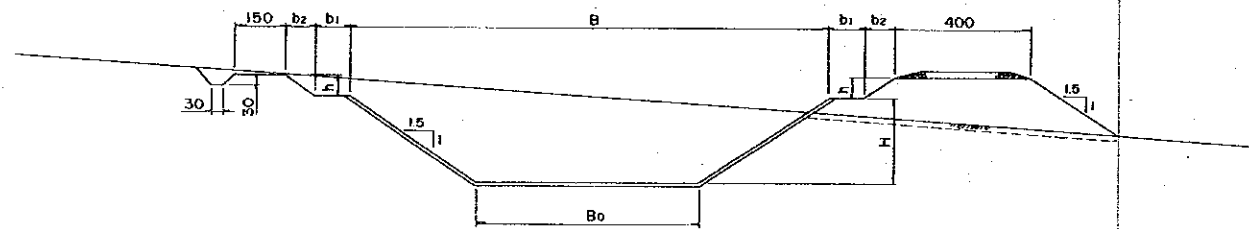
PROFILE OF SUB-MAIN CANAL(No. 1, No. 2 AND No. 3)



| TYPE | Q (m ³ /s) | i | B (cm) | H (cm) | b (cm) | bo (cm) | Ho (cm) |
|------|-----------------------|--------|--------|--------|--------|---------|---------|
| A-1 | 30.4 | 1/4000 | 1,100 | | | | |
| A-2 | 27.3 | 1/4000 | 1,000 | | | | |
| A-3 | 25.1 | 1/4000 | 950 | 250 | 140 | 50 | 50 |
| A-4 | 22.7 | 1/4000 | 850 | | | | |
| A-8 | 12.6 | 1/4000 | 520 | | | | |
| A-9 | 11.1 | 1/2000 | 480 | 200 | 140 | 50 | 50 |

| TYPE | Q (m ³ /s) | i | B (cm) | H (cm) | b (cm) | bo (cm) | Ho (cm) |
|------|-----------------------|--------|--------|--------|--------|---------|---------|
| A-10 | 9.00 | 1/700 | 420 | | | | |
| A-11 | 6.74 | 1/700 | 320 | 150 | 90 | 30 | 30 |
| A-12 | 3.98 | 1/2000 | 300 | | | | |
| A-13 | 3.07 | 1/1500 | 300 | | | | |
| A-14 | 1.99 | 1/1500 | 200 | 120 | 78 | 30 | 30 |
| A-15 | 1.67 | 1/650 | 180 | 100 | 70 | 30 | 30 |

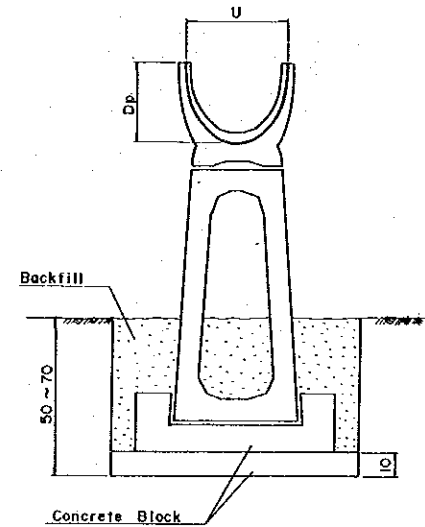
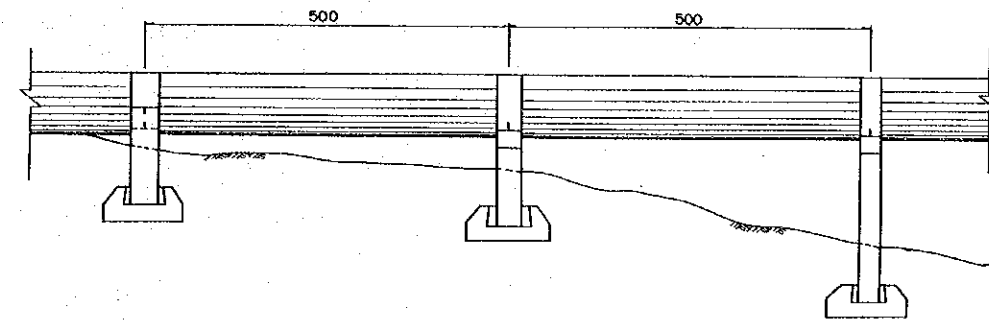
TYPE A



| TYPE | Q (m ³ /s) | i | Bo (cm) | B (cm) | H (cm) | b ₁ (cm) | b ₂ (cm) | h (cm) |
|------|-----------------------|--------|---------|--------|--------|---------------------|---------------------|--------|
| B-2 | 27.3 | 1/4000 | 650 | 1,400 | 250 | | | |
| B-3 | 25.1 | 1/4000 | 600 | 1,350 | 250 | | | |
| B-5 | 21.0 | 1/4000 | 450 | 1,200 | 250 | 100 | 90 | 60 |
| B-6 | 15.2 | 1/4000 | 300 | 1,050 | 250 | | | |
| B-7 | 13.2 | 1/4000 | 200 | 950 | 250 | | | |
| B-9 | 11.1 | 1/2000 | 220 | 820 | 200 | | | |

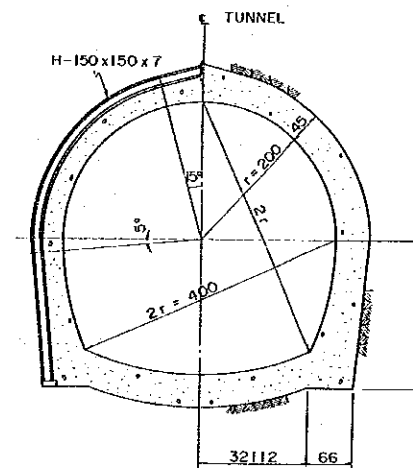
| TYPE | Q (m ³ /s) | i | Bo (cm) | B (cm) | H (cm) | b ₁ (cm) | b ₂ (cm) | h (cm) |
|------|-----------------------|--------|---------|--------|--------|---------------------|---------------------|--------|
| B-12 | 4.79 | 1/1000 | 100 | 550 | 150 | | | |
| B-13 | 3.07 | 1/1500 | 100 | 490 | 130 | 50 | 45 | 30 |
| B-14 | 2.40 | 1/1500 | 100 | 460 | 120 | | | |
| B-16 | 1.67 | 1/1500 | 100 | 400 | 100 | | | |

TYPE B



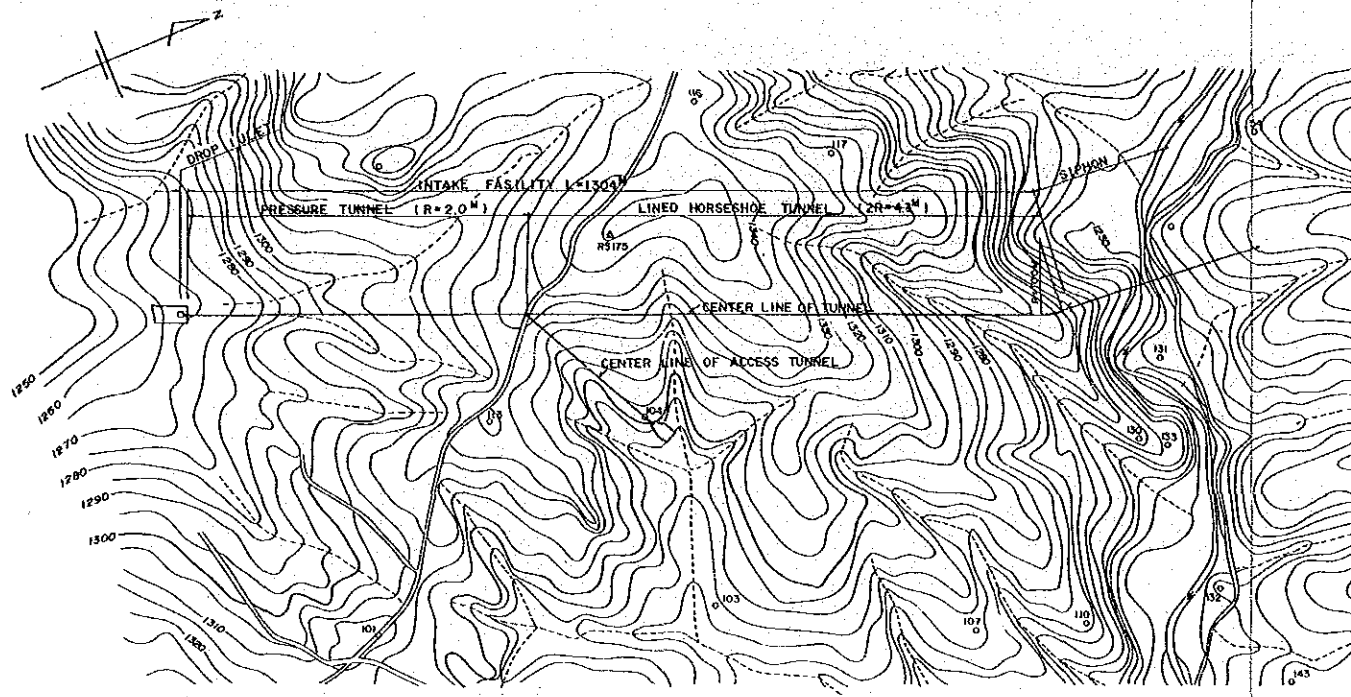
TYPE C

| TYPE | U (cm) | Dd (cm) | i max | Qmax (m ³ /s) |
|-------|--------|---------|--------|--------------------------|
| 70 | 35.70 | 37.88 | 0.0065 | 0.080 |
| 100 | 40.90 | 43.89 | 0.0062 | 0.030 |
| 135 | 46.08 | 50.35 | 0.0060 | 0.194 |
| 180 | 53.38 | 55.62 | 0.0053 | 0.278 |
| 230 | 61.46 | 59.82 | 0.0049 | 0.362 |
| 315 | 77.02 | 63.82 | 0.0040 | 0.513 |
| 450 | 101.22 | 68.57 | 0.0033 | 0.746 |
| 600 | 128.66 | 71.65 | 0.0028 | 0.987 |
| 800 | 154.72 | 82.86 | 0.0026 | 1.480 |
| 1,000 | 171.56 | 92.78 | 0.0025 | 1.980 |

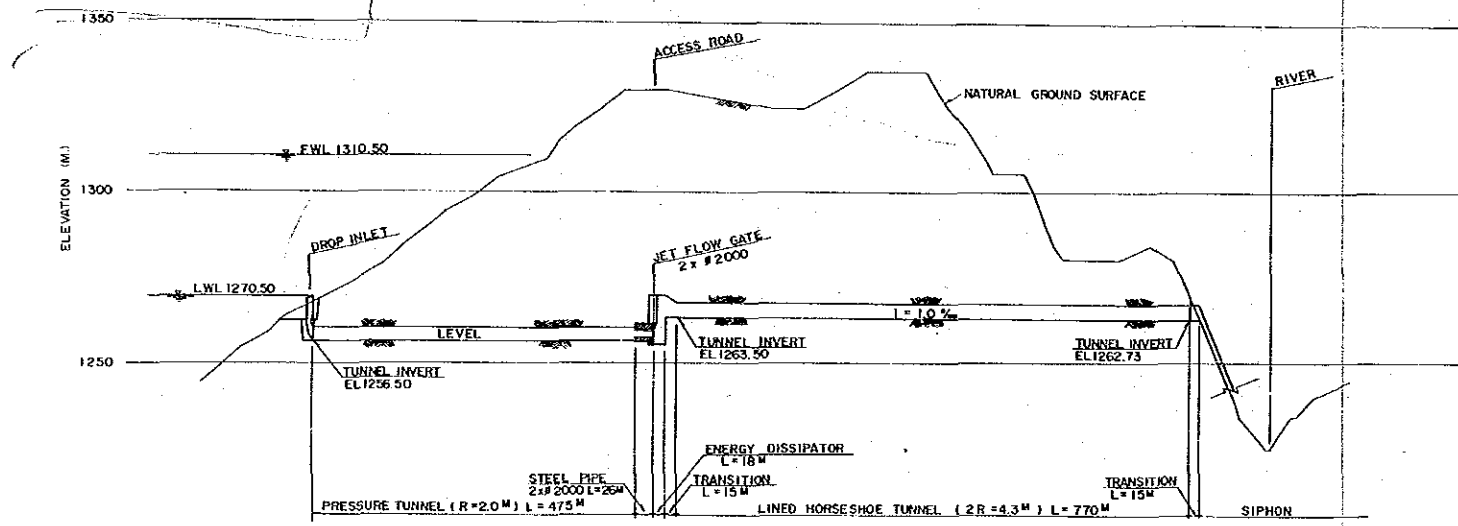


TUNNEL

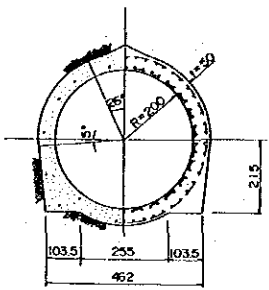
SCALE 0 1 2 M.



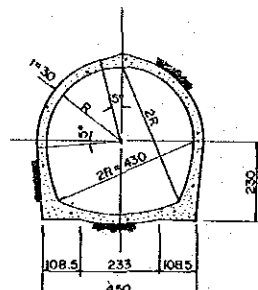
PLAN SCALE 1:1000



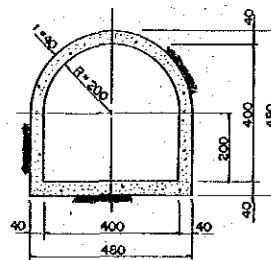
PROFILE



PRESSURE TUNNEL

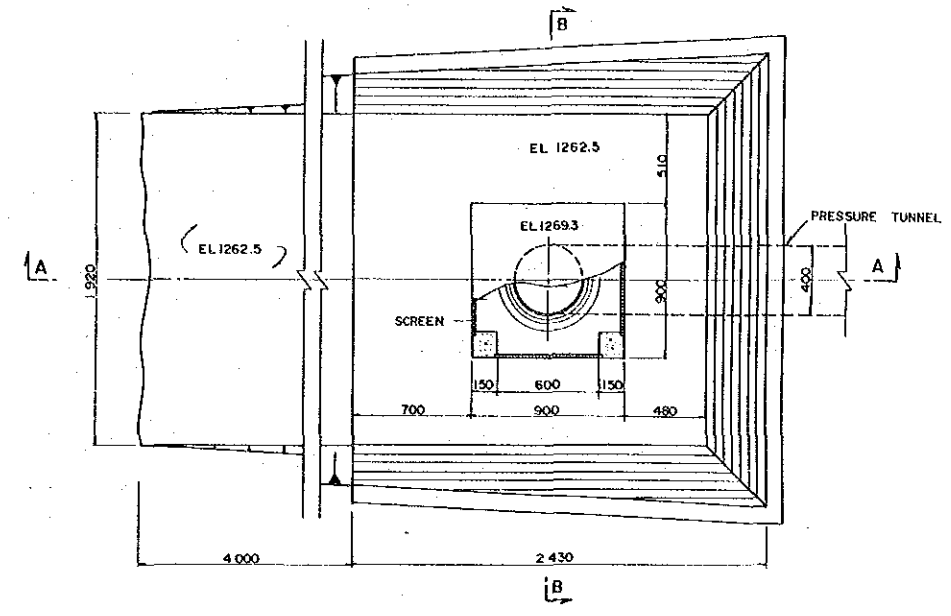
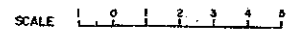


LINED HORSESHOE TUNNEL

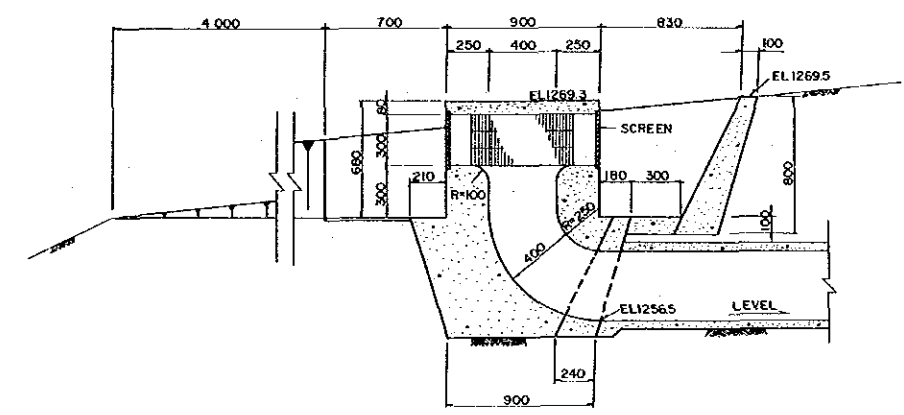


ACCESS TUNNEL

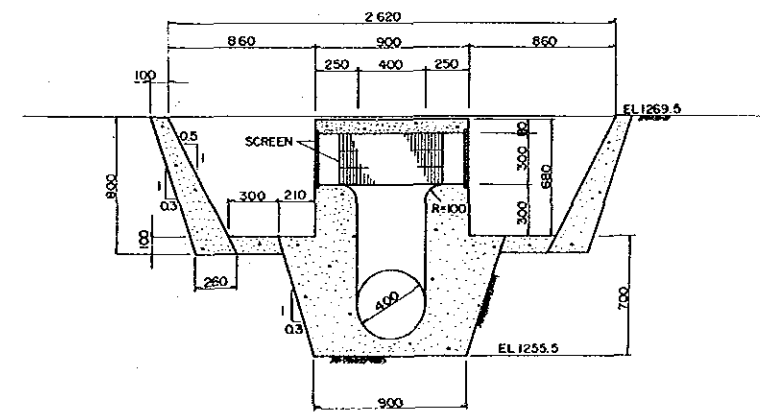
CROSS-SECTION OF TUNNELS



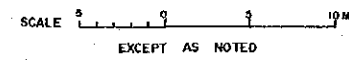
PLAN OF DROP INLET



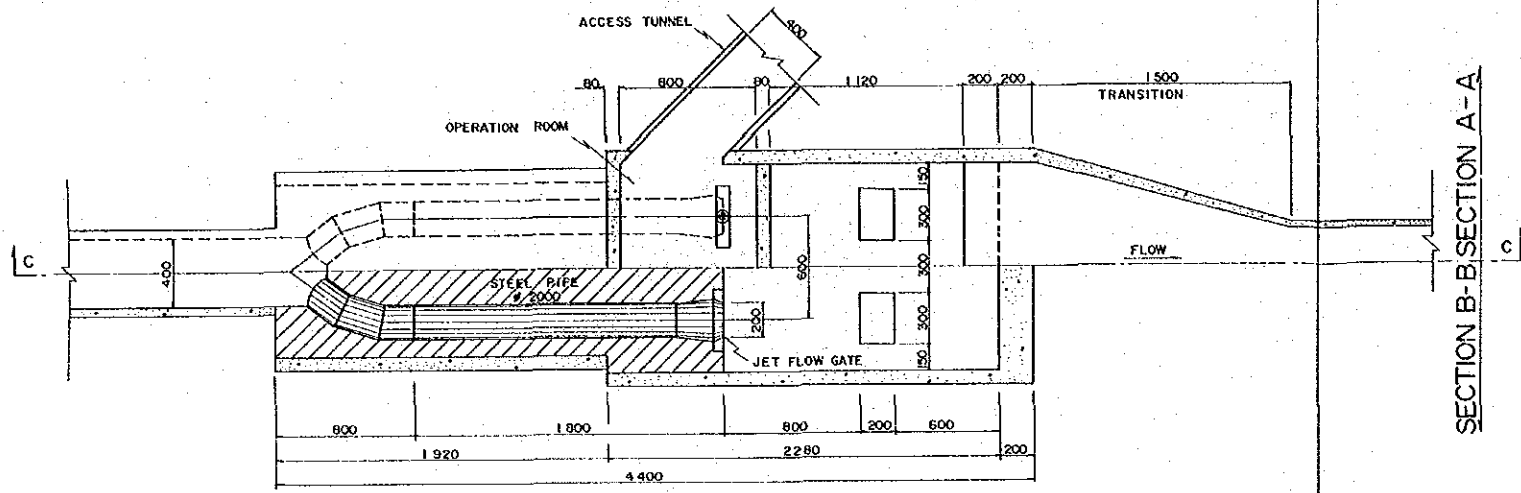
SECTION A-A



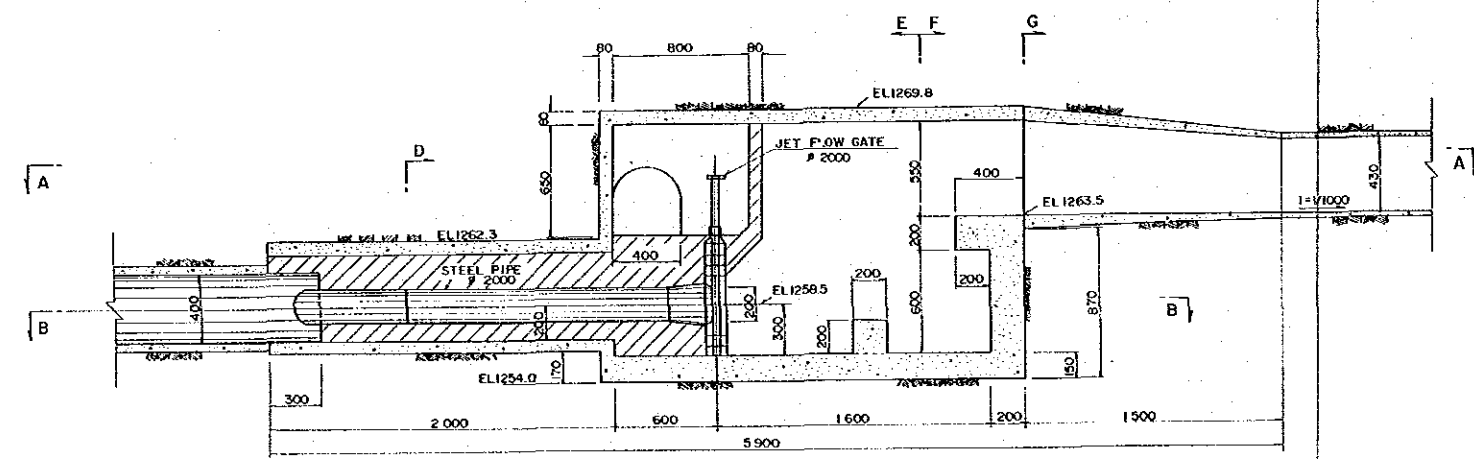
SECTION B-B



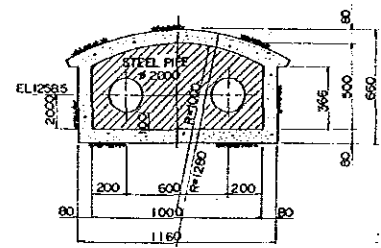
EXCEPT AS NOTED



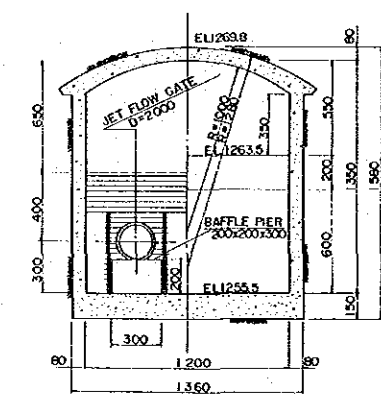
PLAN OF DISCHARGE REGULATOR



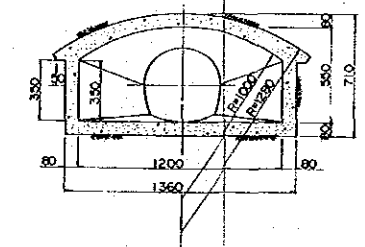
SECTION C-C



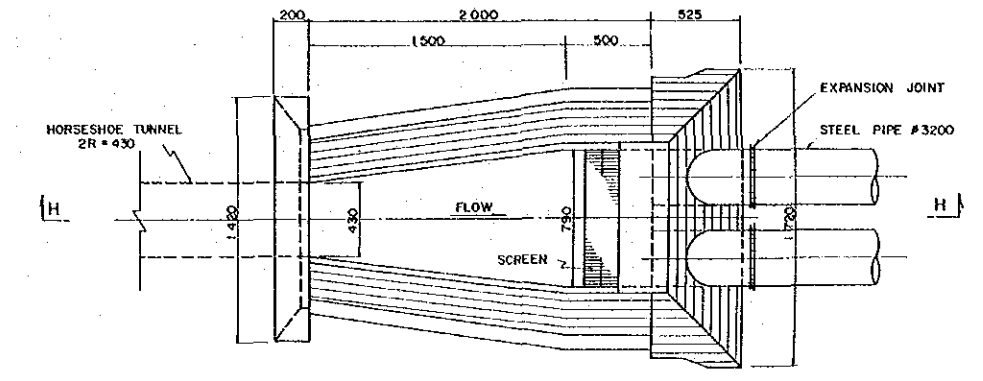
SECTION D-D



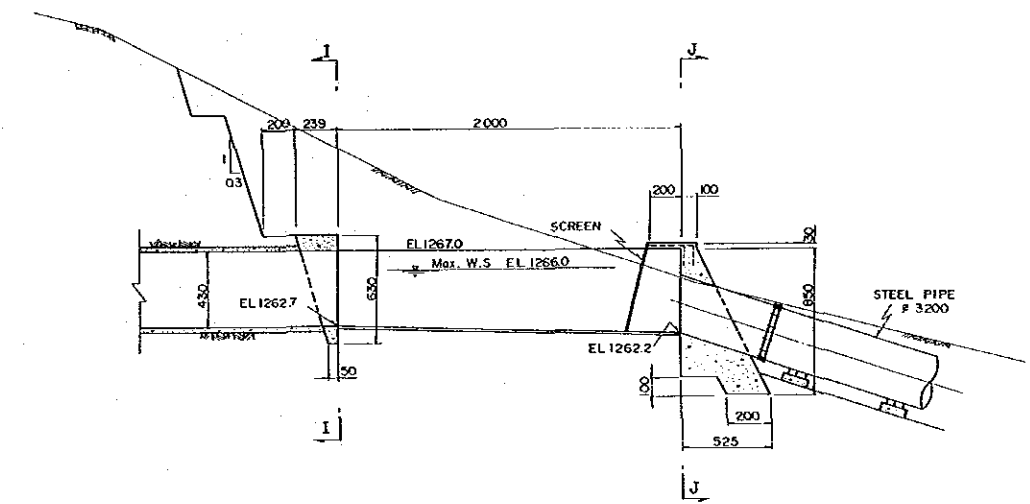
SECTION E-E SECTION F-F



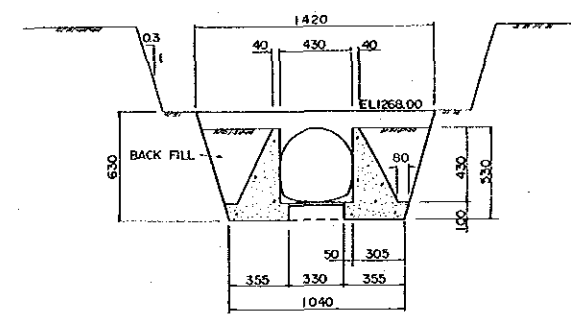
SECTION G-G



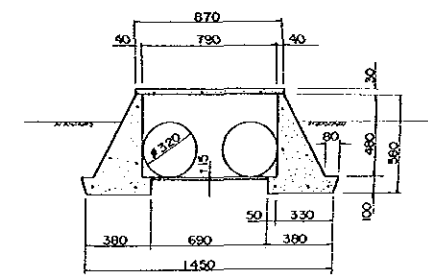
PLAN OF TRANSITION (UPSTREAM OF SIPHON)



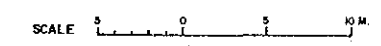
SECTION H-H

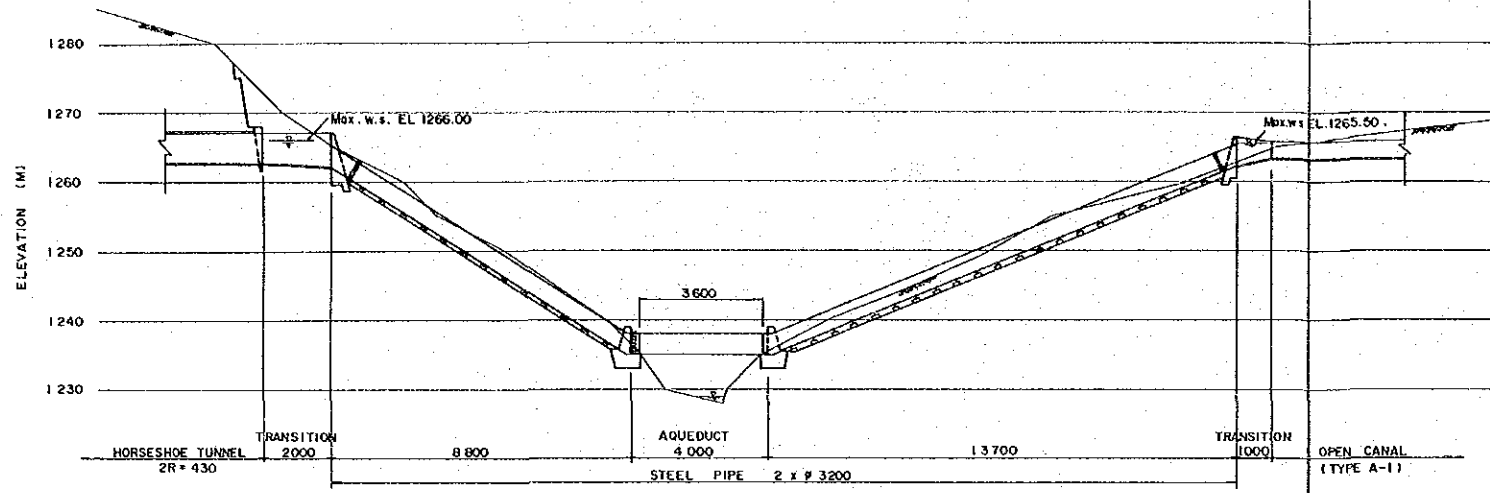


SECTION I-I

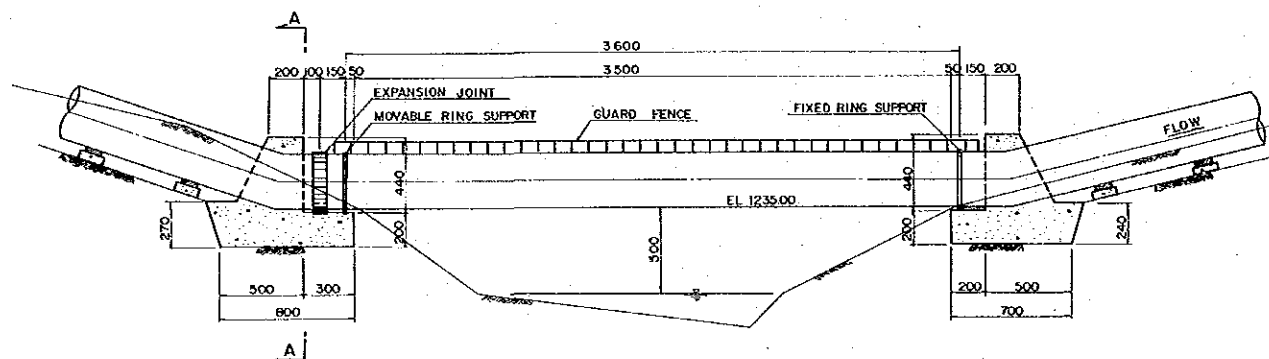


SECTION J-J

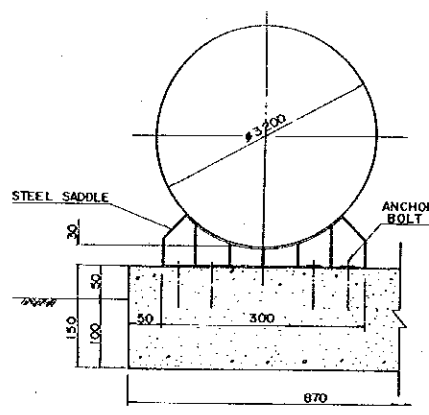




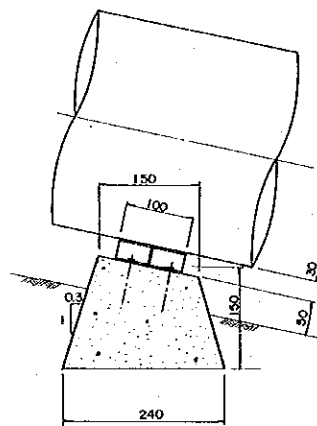
PROFILE OF SIPHON



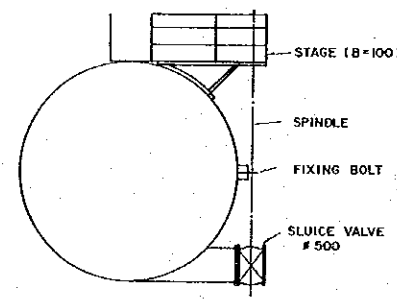
PROFILE OF AQUEDUCT



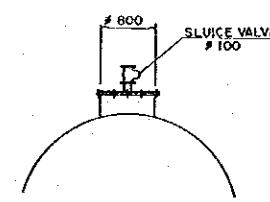
SADDLE



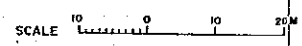
DETAIL



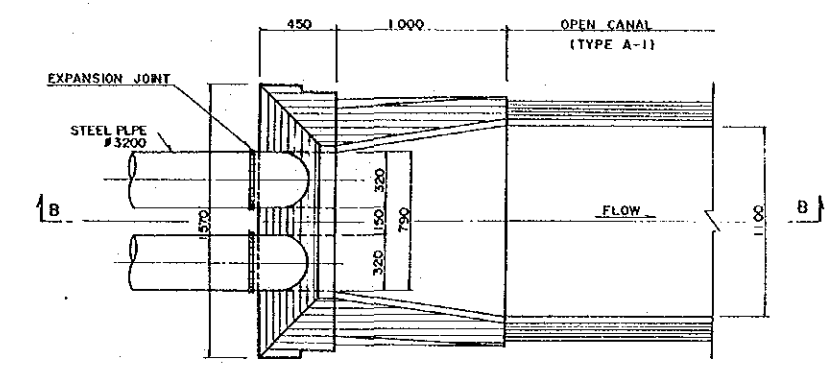
BLOW-OFF



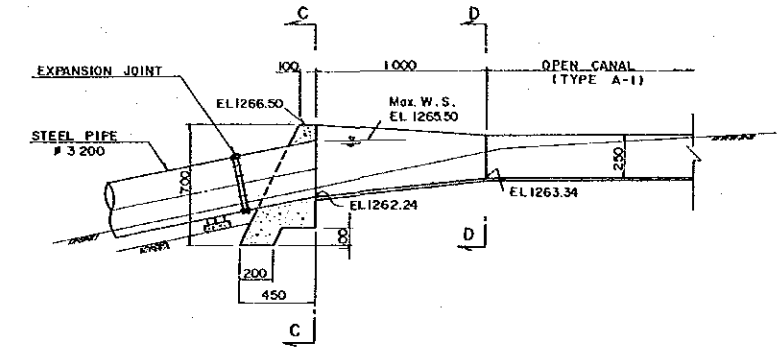
MANHALL



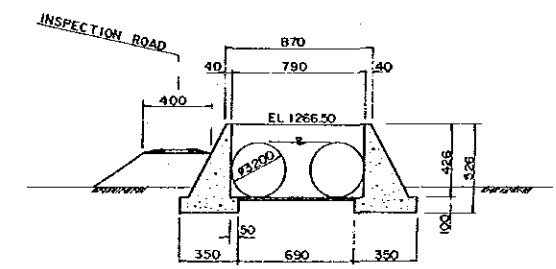
SCALE 10 0 10 20M



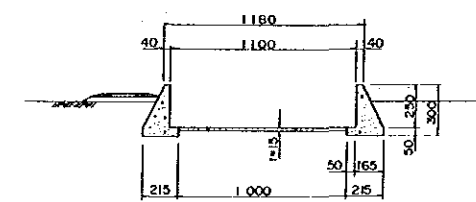
PLAN OF TRANSITION (DOWN STRAM OF SIPHON)



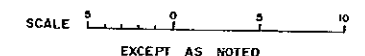
SECTION B-B



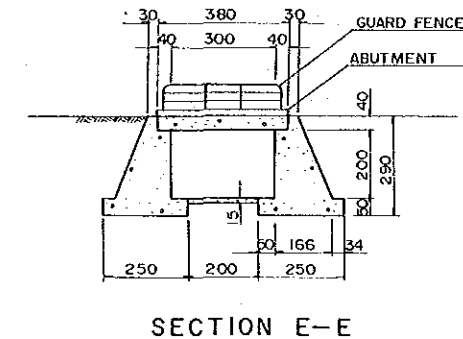
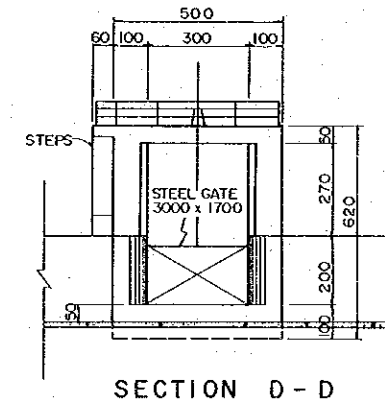
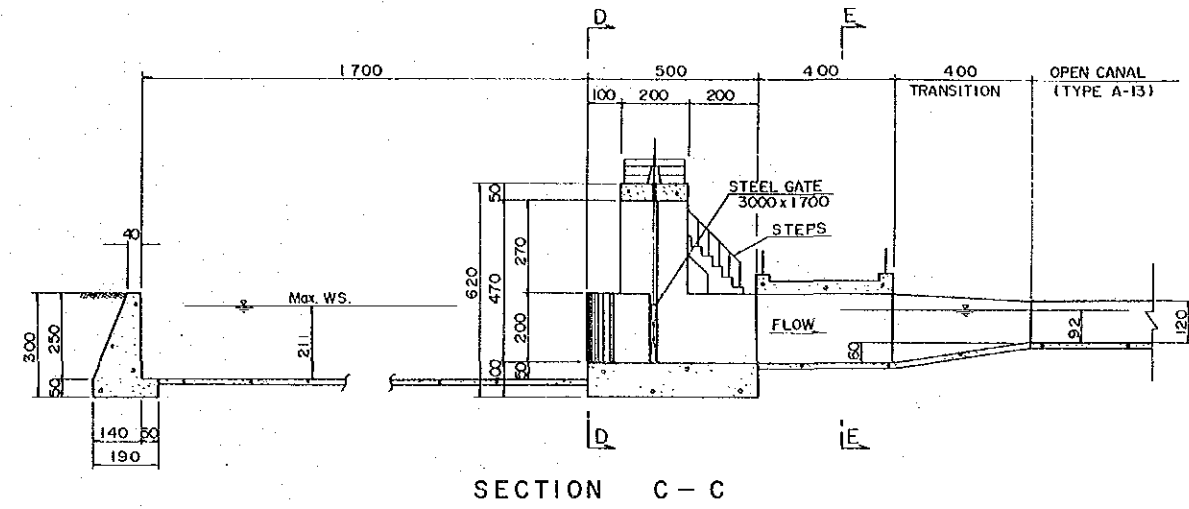
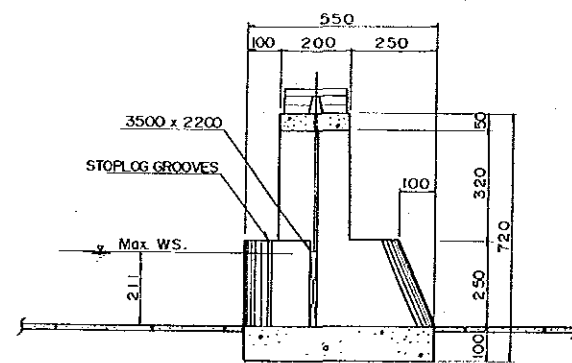
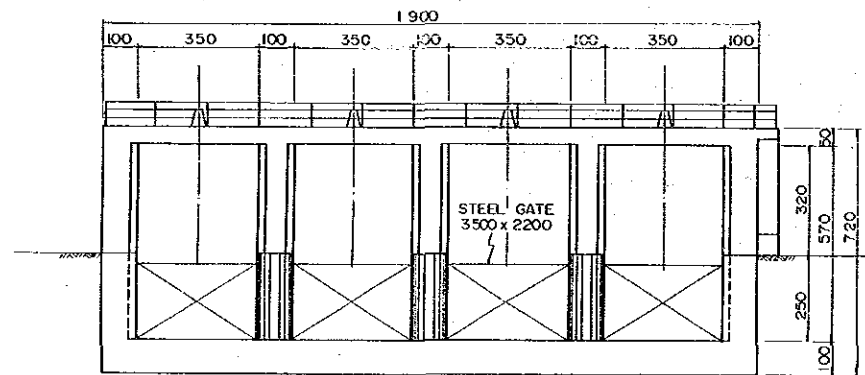
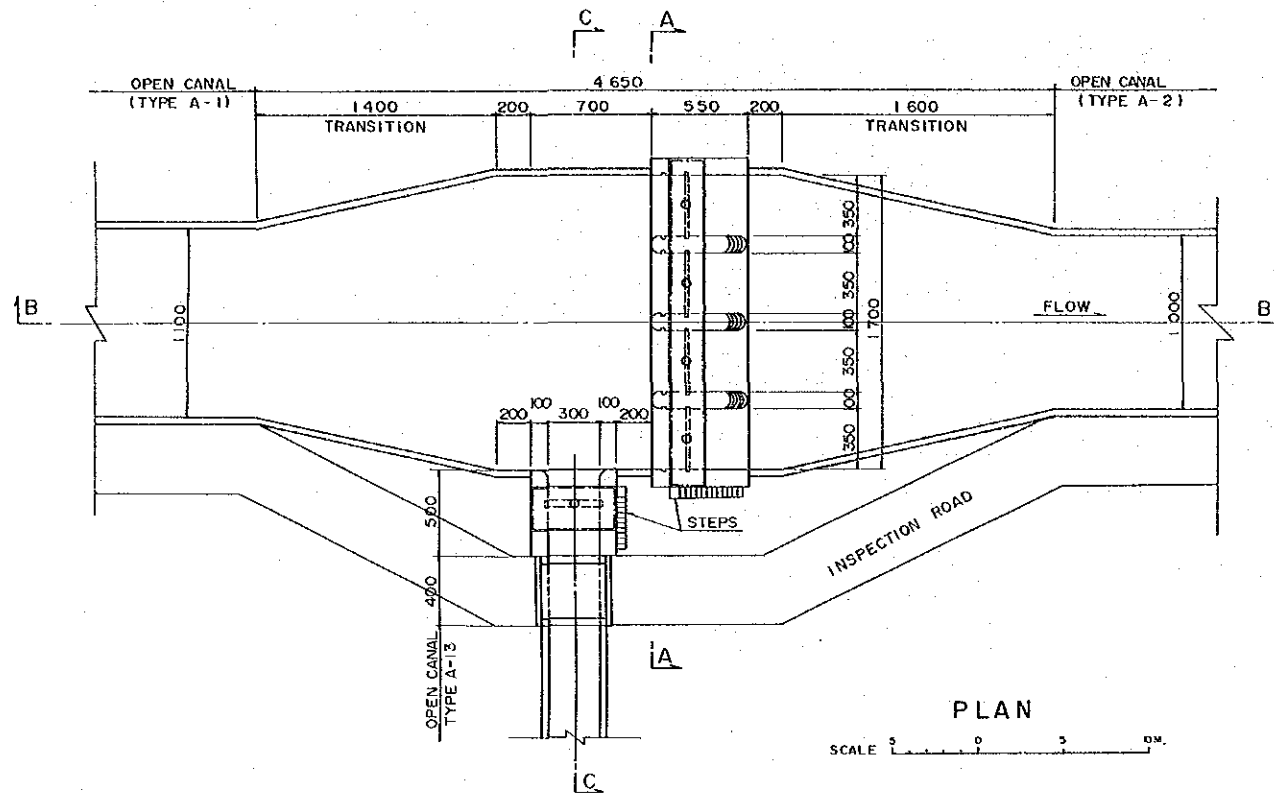
SECTION C-C



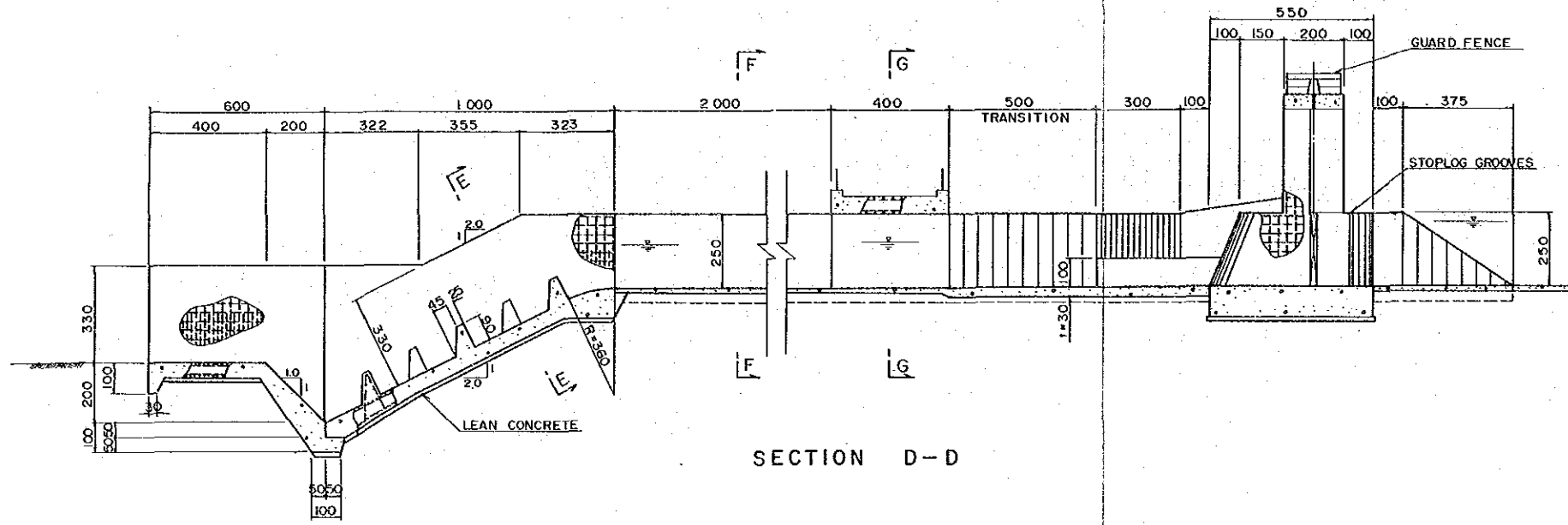
SECTION D-D



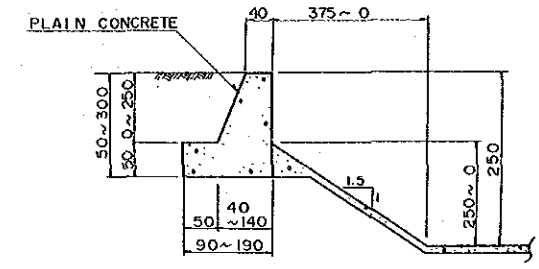
SCALE 5 0 5 10 EXCEPT AS NOTED



SCALE 1" = 5' 0"
EXCEPT AS NOTED

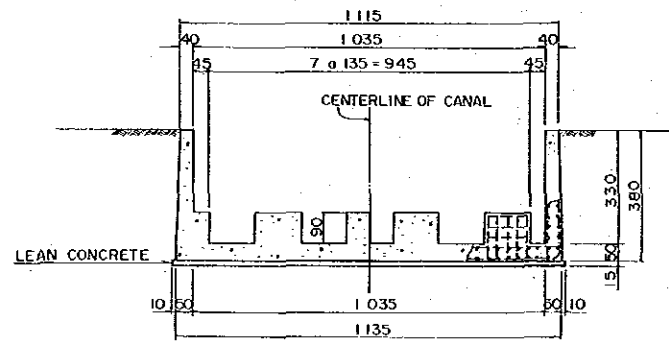


SECTION D-D

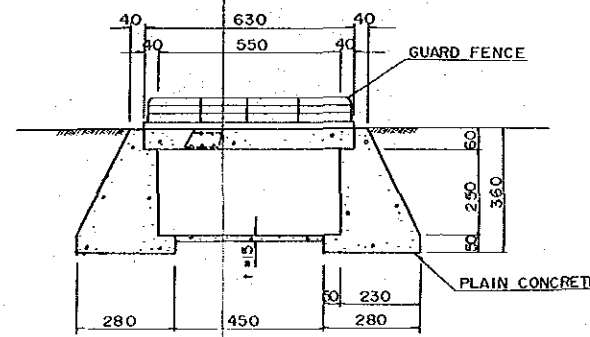


SECTION H-H

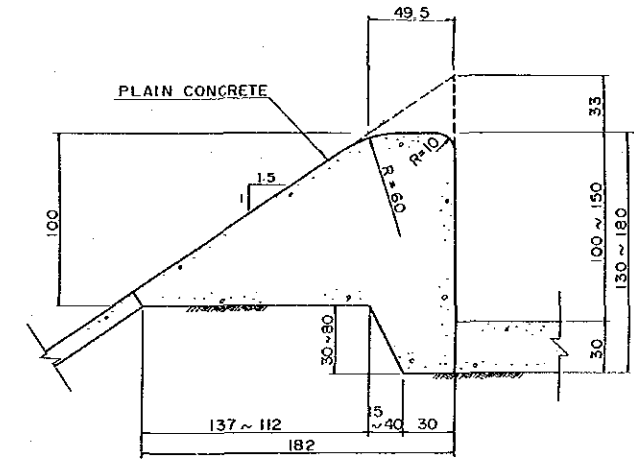
SCALE 1:200



SECTION E-E

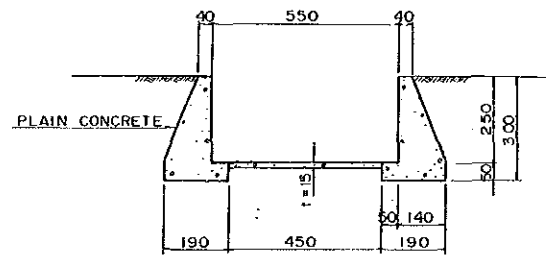


SECTION G-G



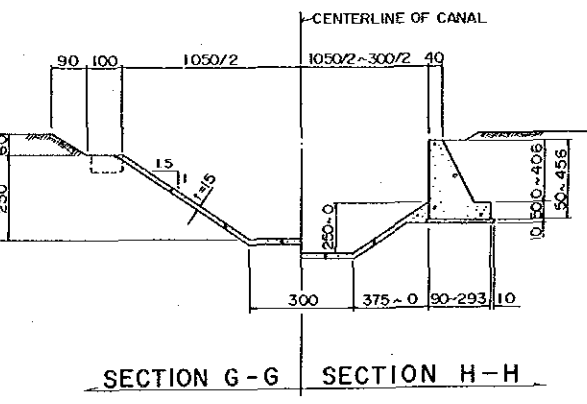
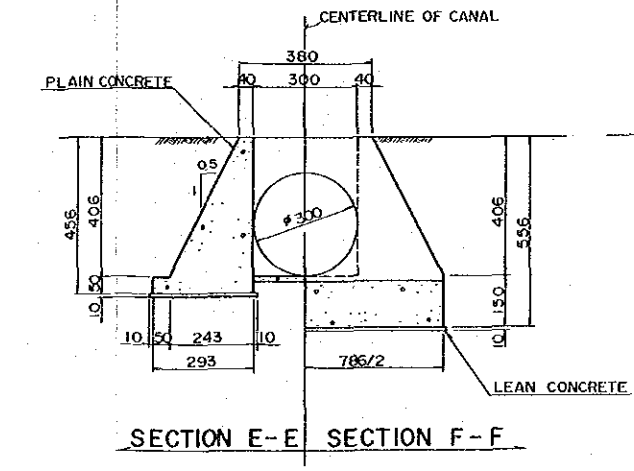
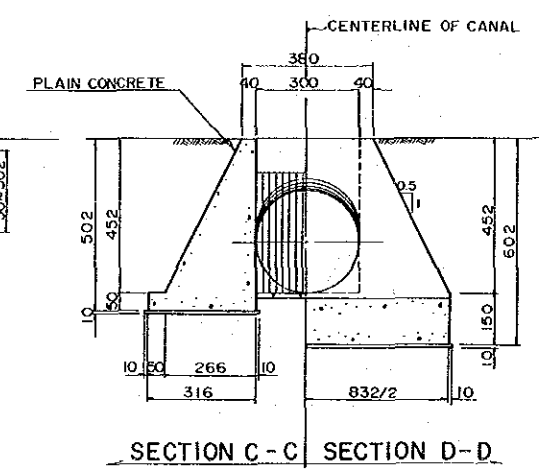
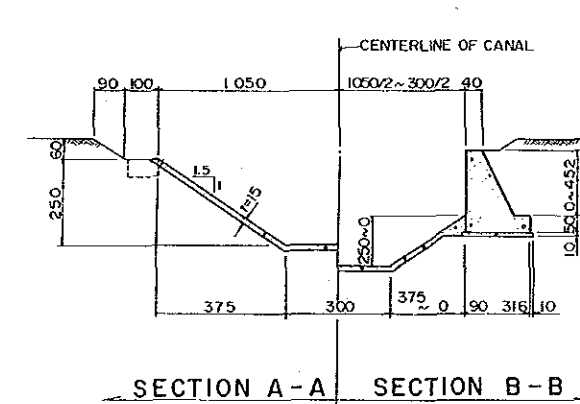
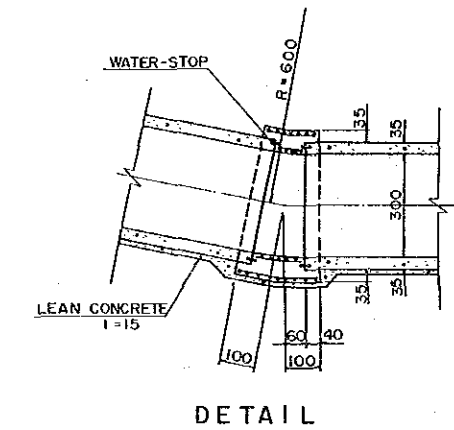
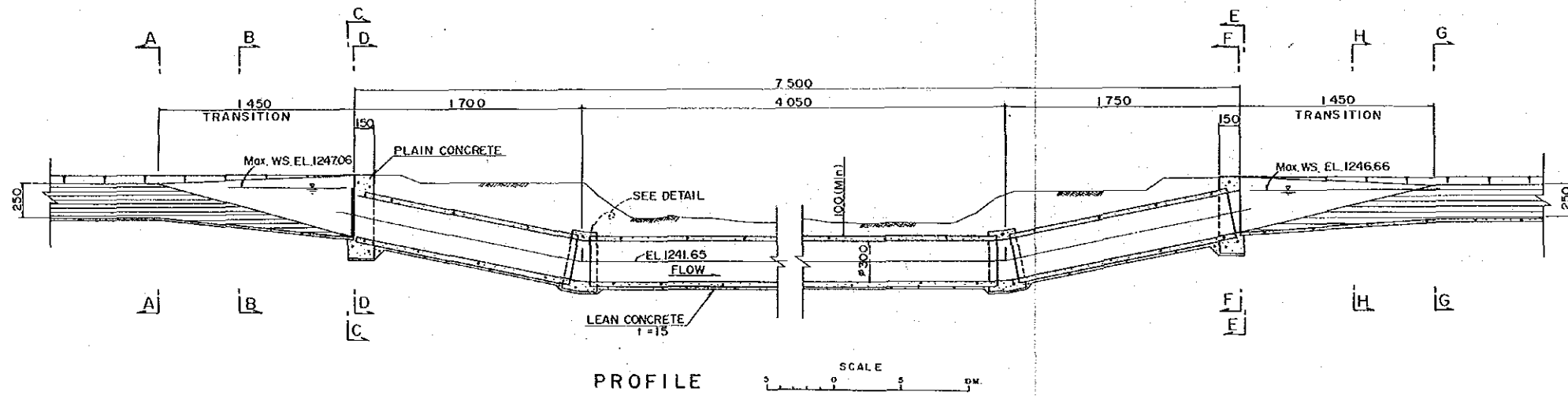
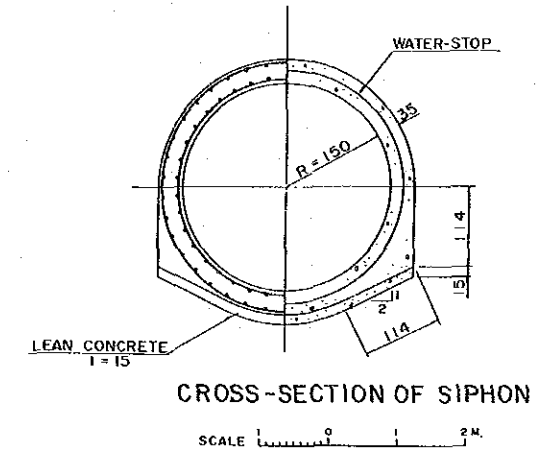
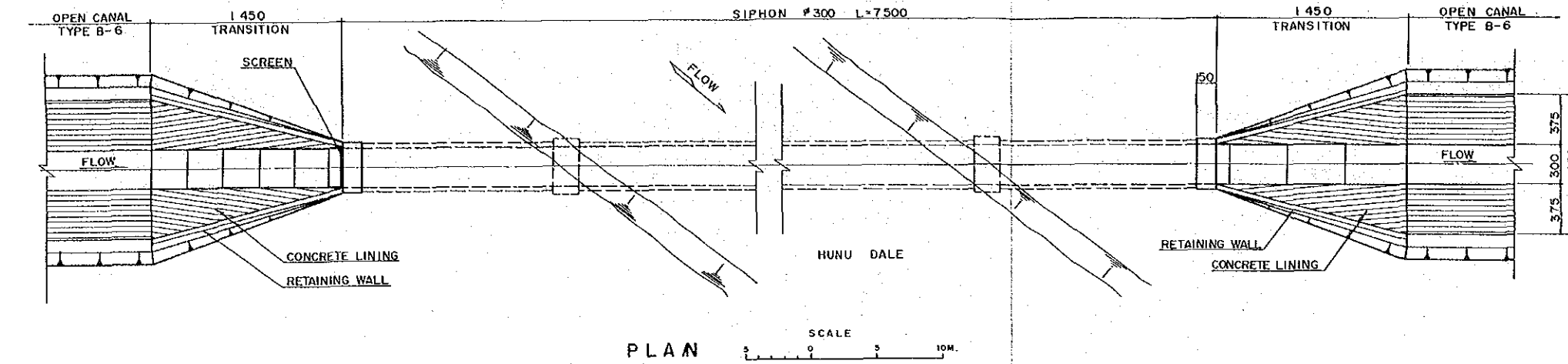
OVERFLOW WEIR

SCALE 1:100



SECTION F-F

SCALE 1:50
EXCEPT AS NOTED



SCALE 1:5M EXCEPT AS NOTED