

FIG-7.2.9 MICROTOPOGRAPHY MAP  
ANULING RIVER , BUDIAO RIVER

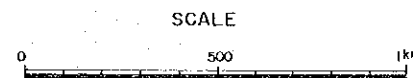
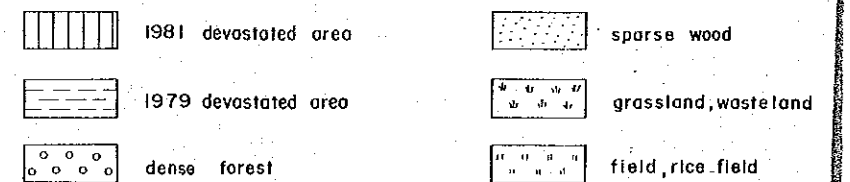
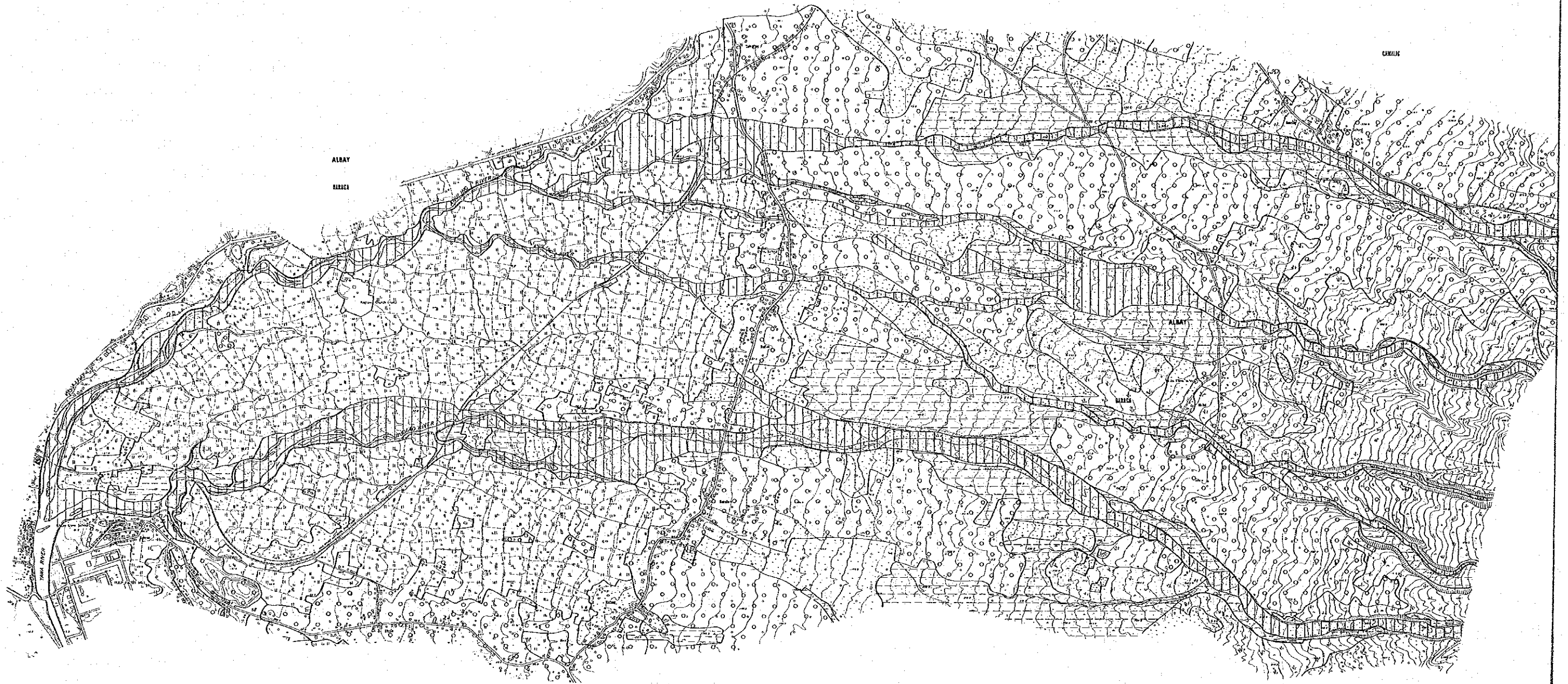
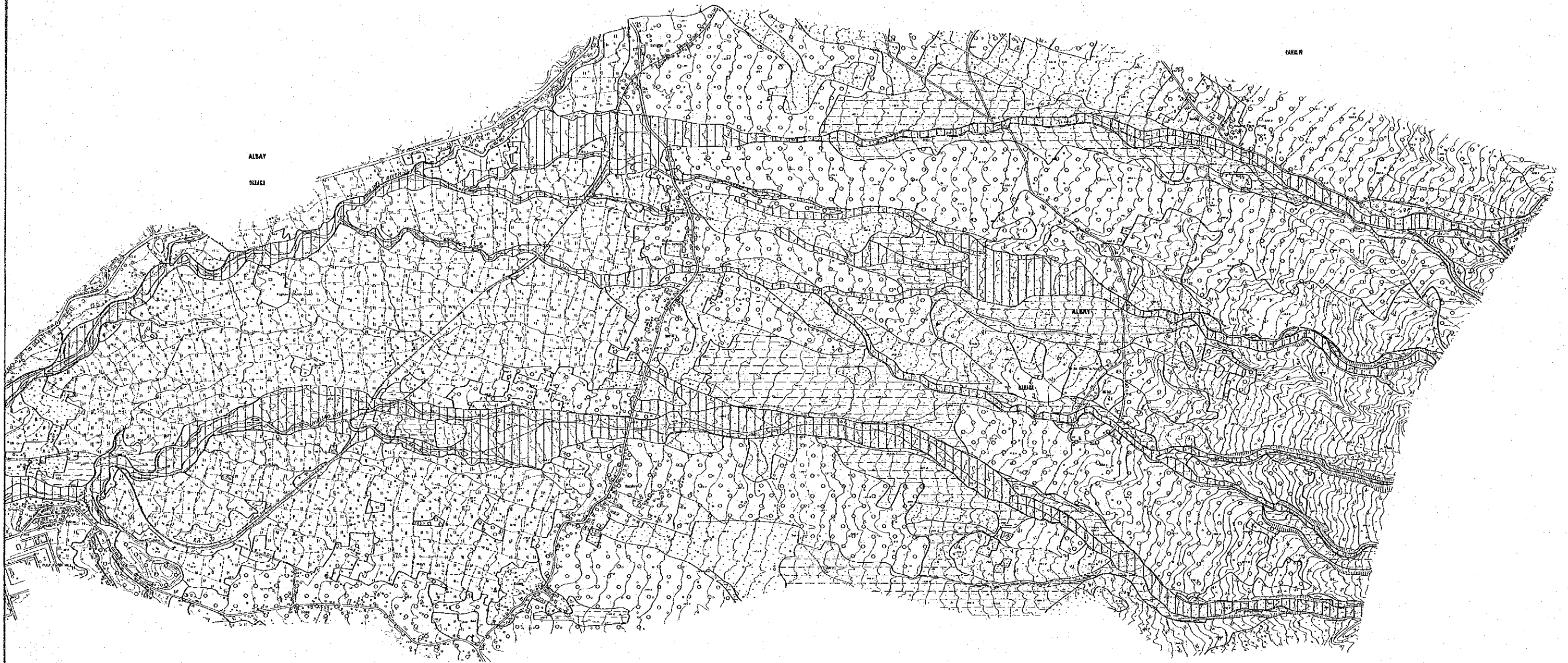


FIG-7.2.9 MICROTOPOGRAPHY MAP  
ANULING RIVER , BUDIAO RIVER



SCALE  
0 500 1km

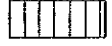

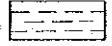
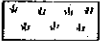
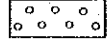
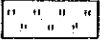
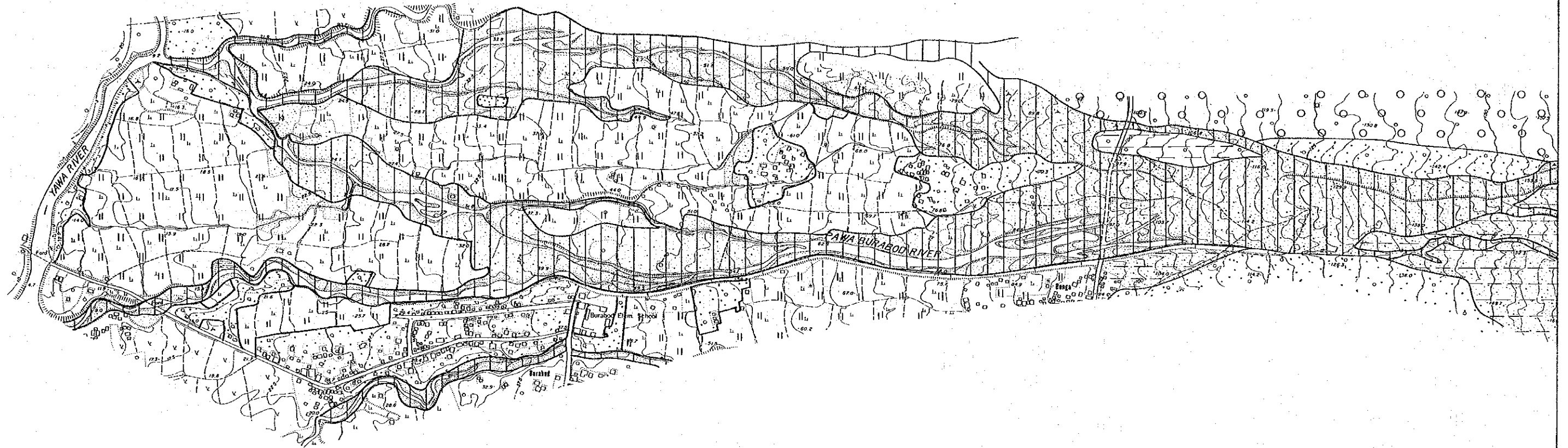
- |   |                      |   |                      |
|---|----------------------|---|----------------------|
|  | 1981 devastated area |  | sparse wood          |
|  | 1979 devastated area |  | grassland, wasteland |
|  | dense forest         |  | field, rice field    |

FIG.- 7.2.10

MICROTOPOGRAPHY MAP, PAW

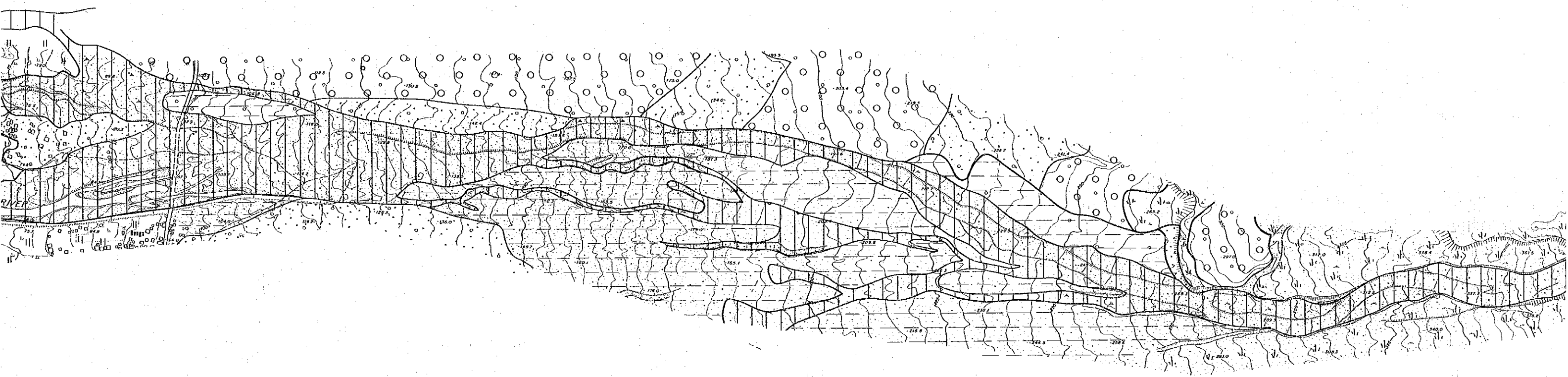
ALBAY  
DARAGA



LEGASPI

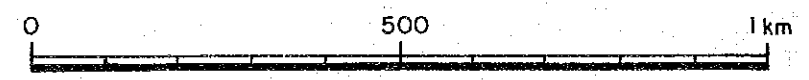
2.10

# MICROTOPOGRAPHY MAP, PAWA - BURABOD RIVER



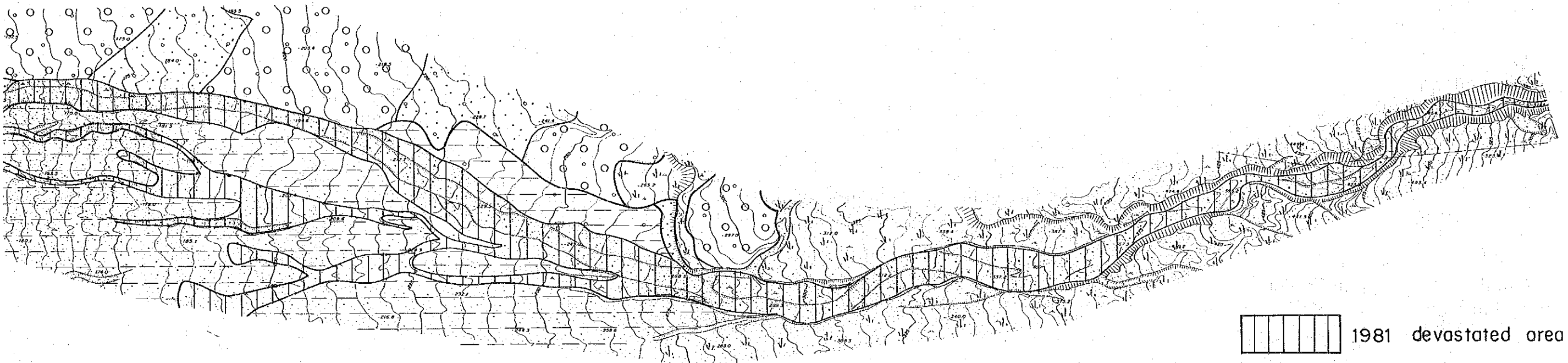
LEGASPI

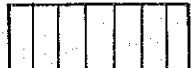

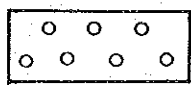
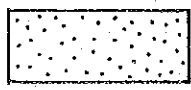
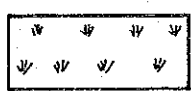
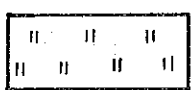
SCALE



# IWA - BURABOD RIVER

ALBAY  
DARAGA



-  1981 devastated area
-  1979 devastated area
-  dense forest
-  sparse wood
-  grassland, wasteland
-  field, rice field

LEGASPI

SCALE

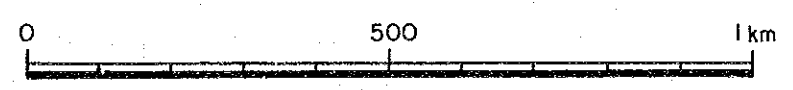
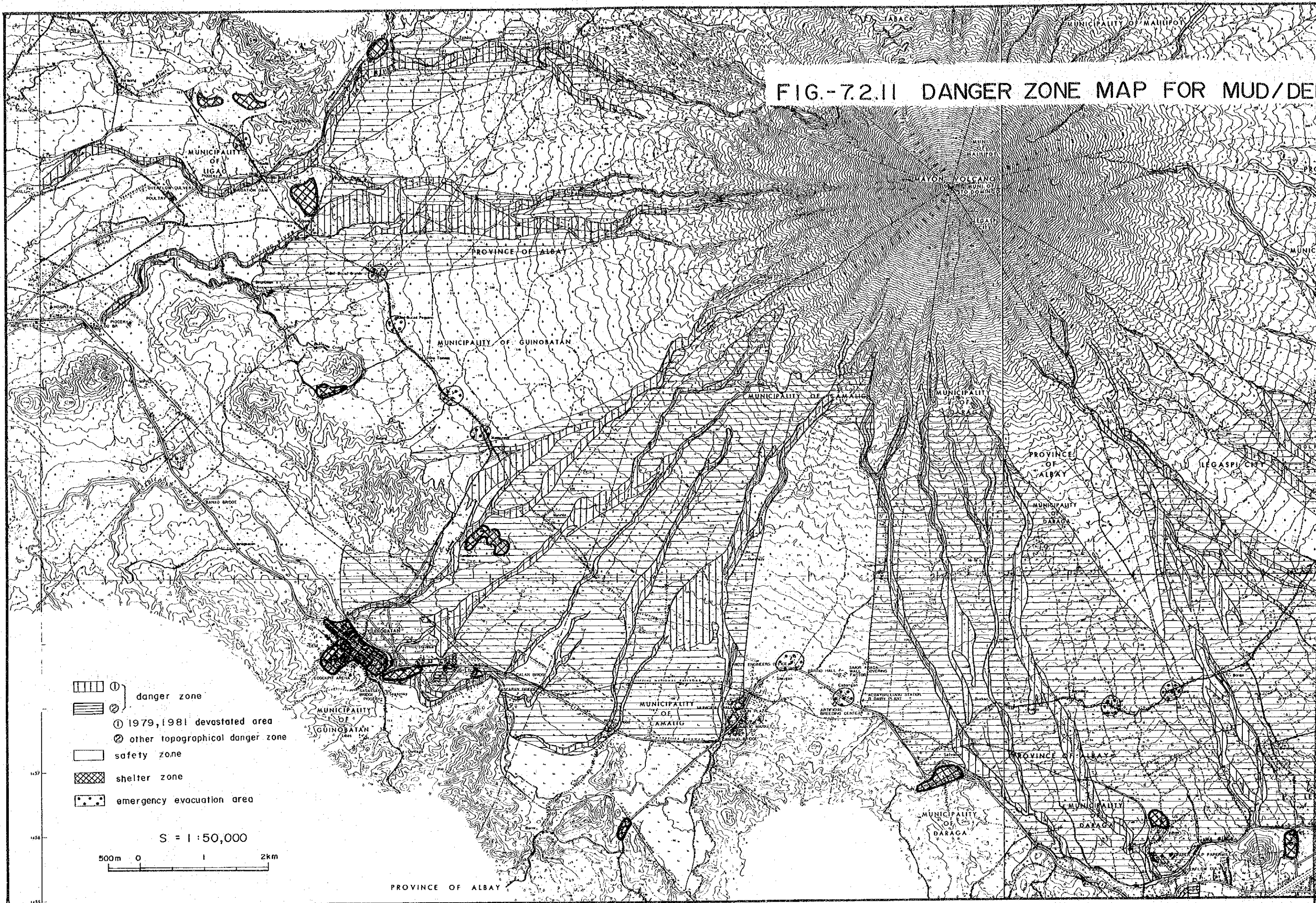




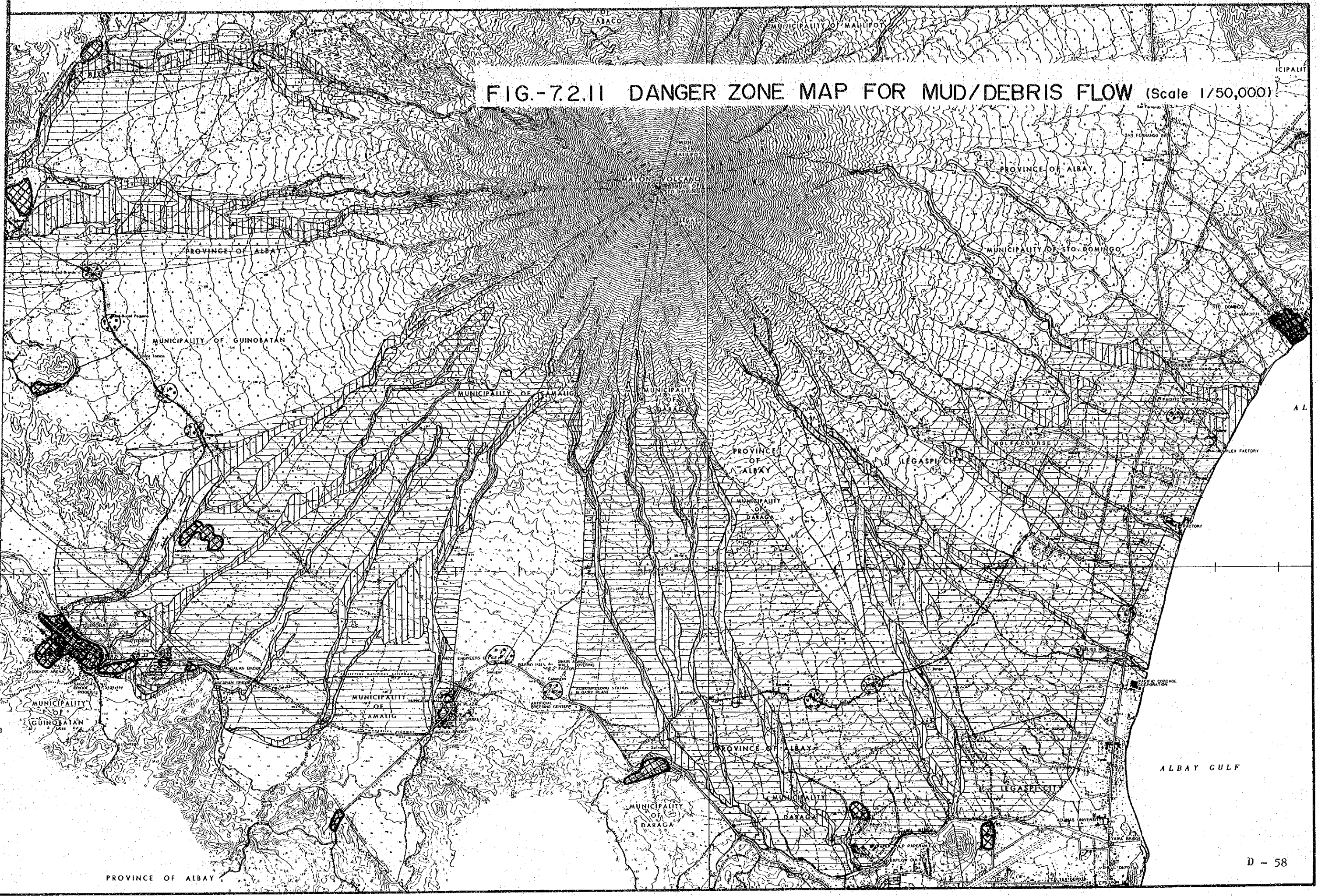
FIG.-7.2.11 DANGER ZONE MAP FOR MUD/DEBRIS



PROVINCE OF ALBAY



FIG.-7.2.11 DANGER ZONE MAP FOR MUD/DEBRIS FLOW (Scale 1/50,000)

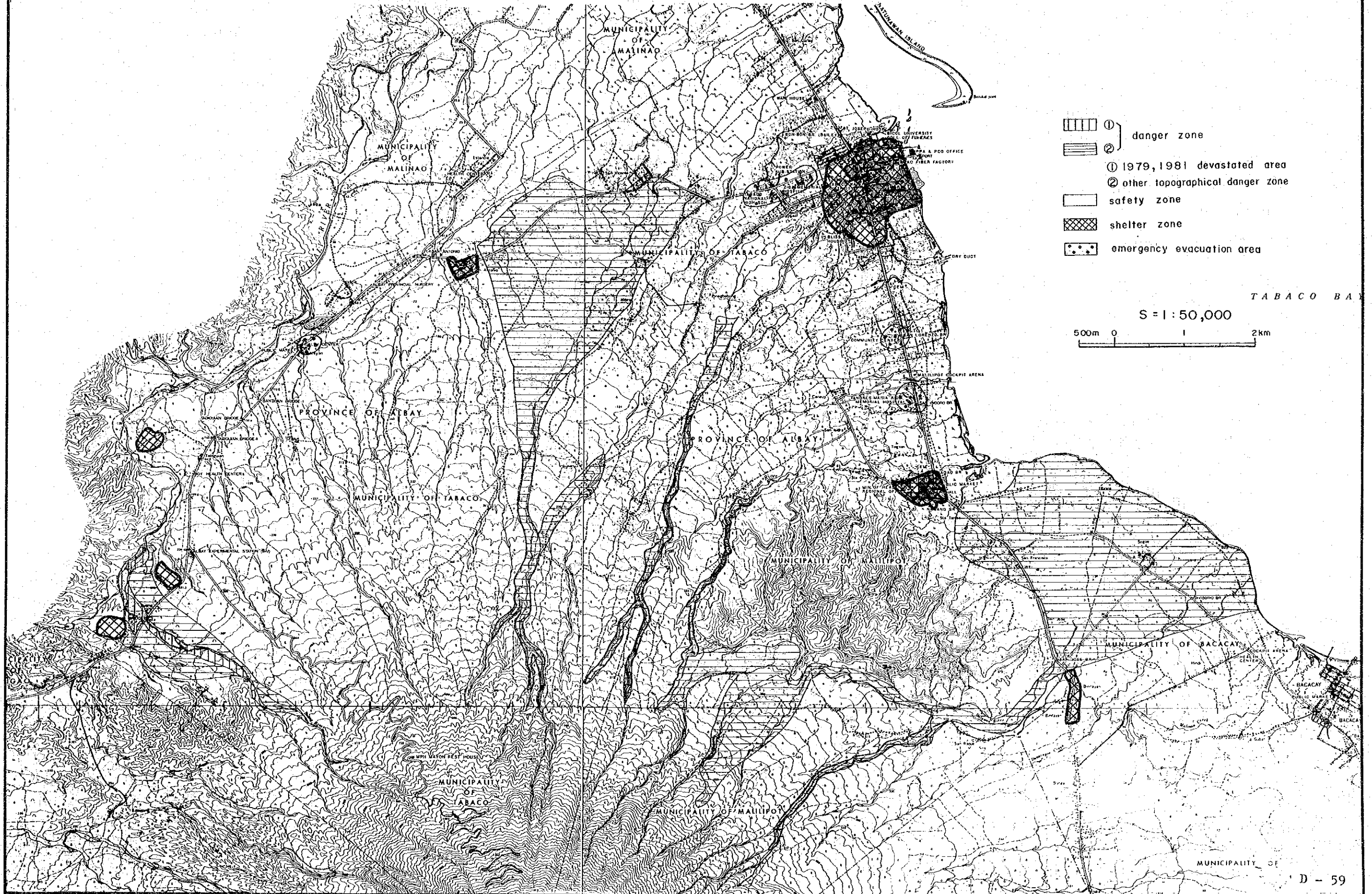








PROVINCE OF ALBAY

FIG. - 7. 2.12

DANGER ZONE MAP FOR MUD/DEBRIS FLOW

(Scale : 1 / 50,000)



-  ① danger zone
-  ① 1979,1981 devastated area
-  ② other topographical danger zone
-  safety zone
-  shelter zone
-  emergency evacuation area

S = 1 : 50,000  
500m 0 1 2km





FIG.-7.2.13 FLOW CHART FOR RISK ANALYSIS AND IDENTIFICATION OF ZONING AREA

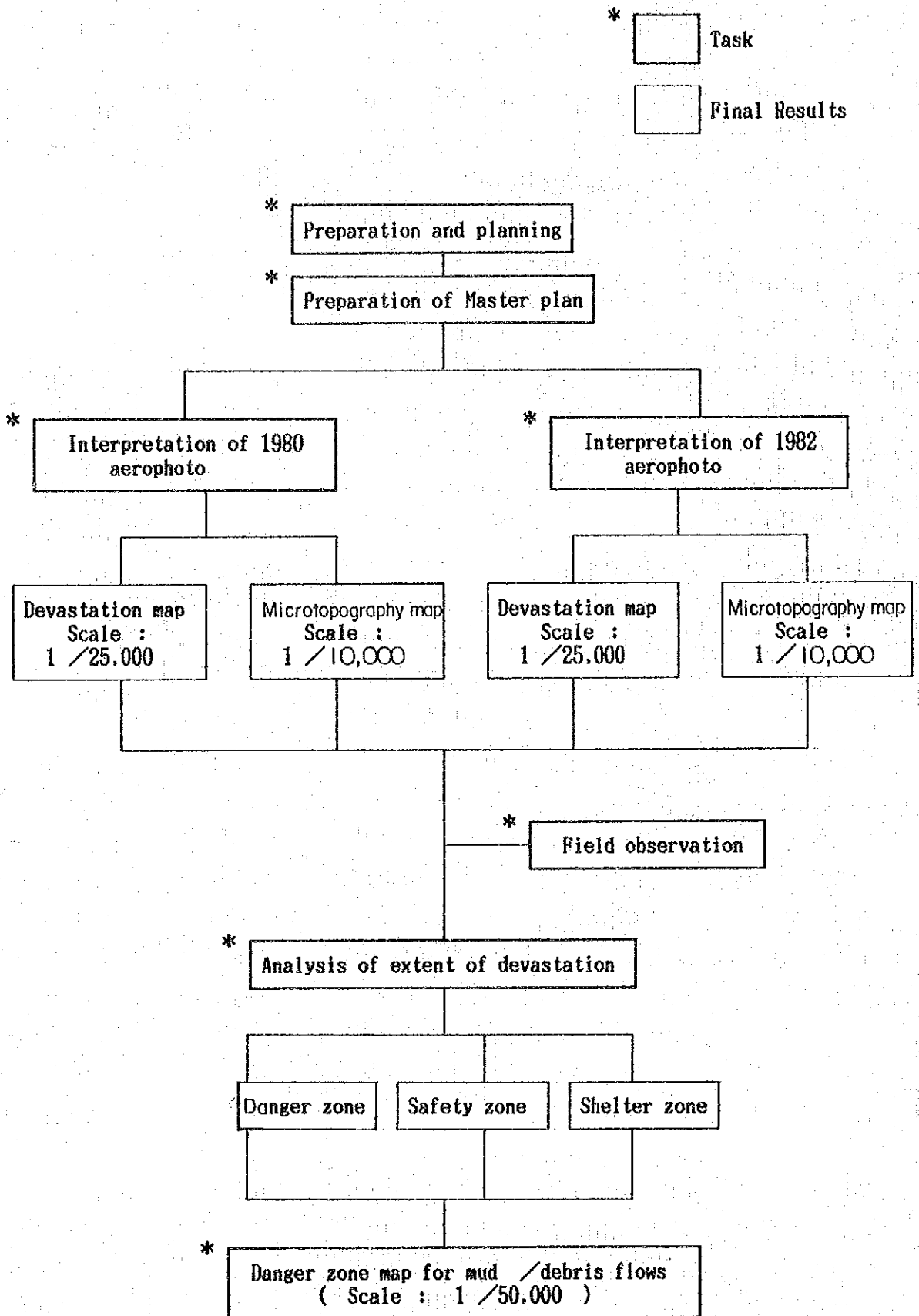


FIG.-7.3.1 LOCATION MAP OF BASE POINTS AND SUB-BASE POINTS IN THE QINALI(A) RIVER BASIN

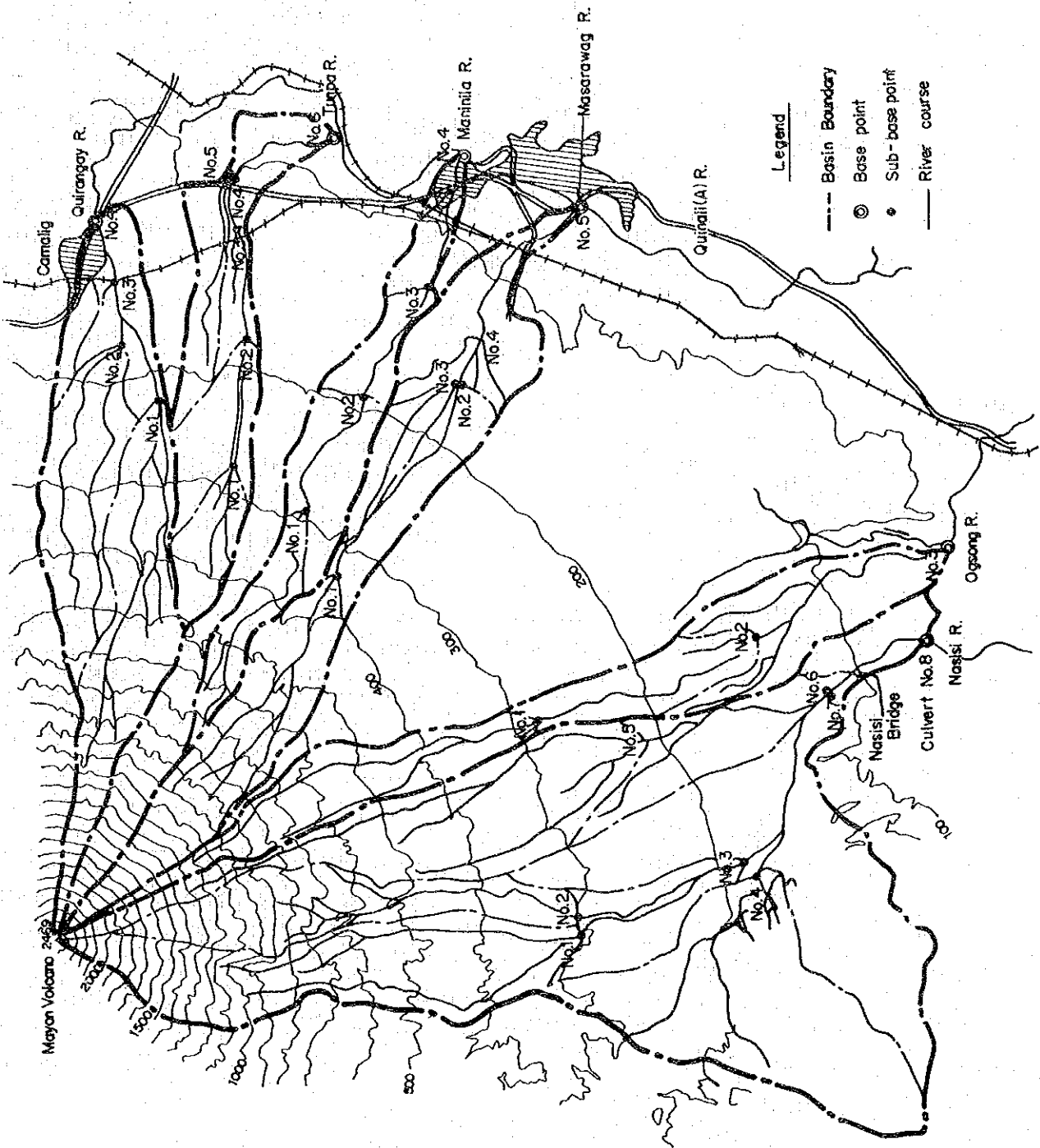




FIG.-7.3.2 LOCATION MAP OF BASE POINT AND SUB-BASE POINTS IN THE YAWA RIVER BASIN

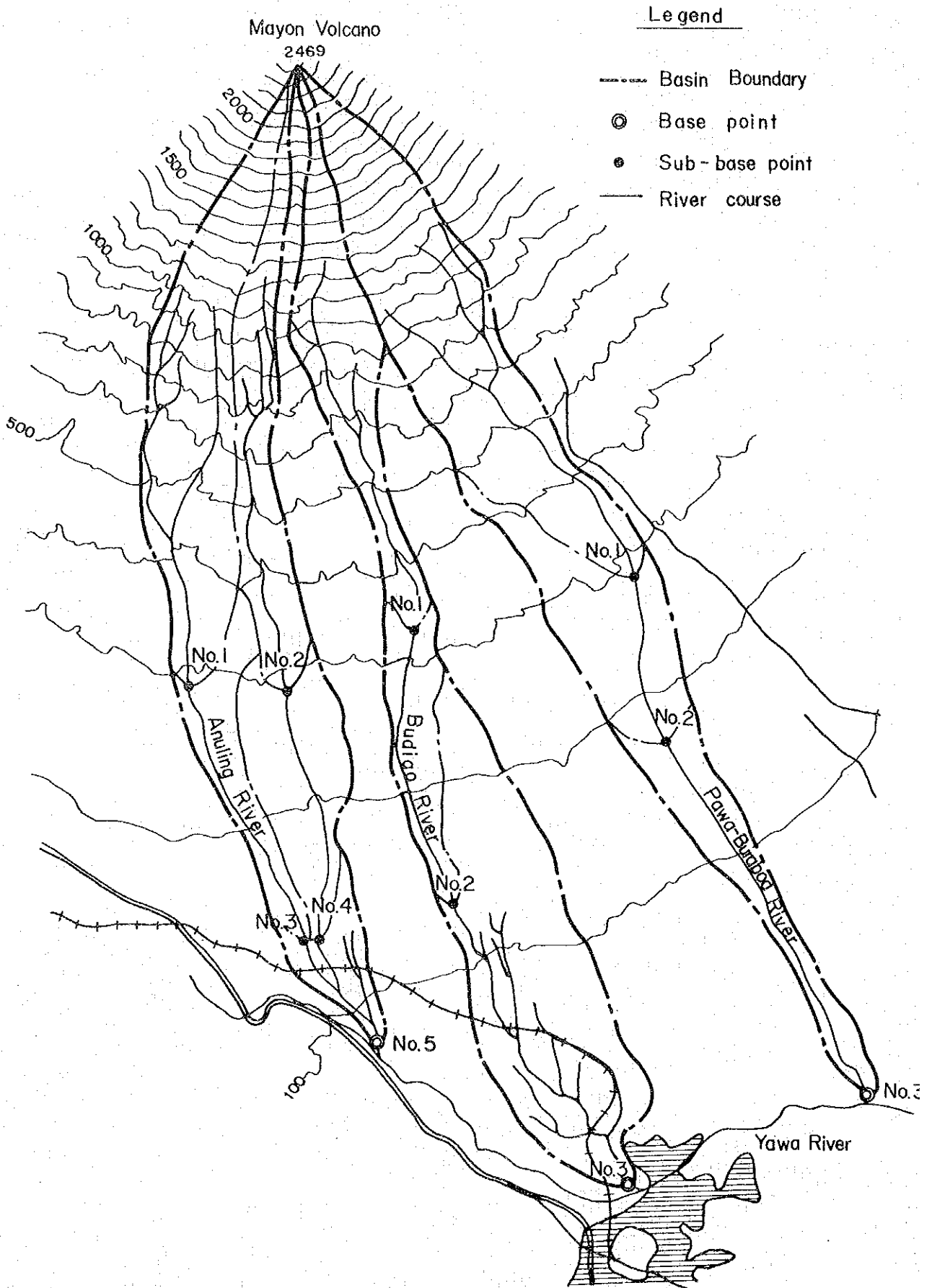
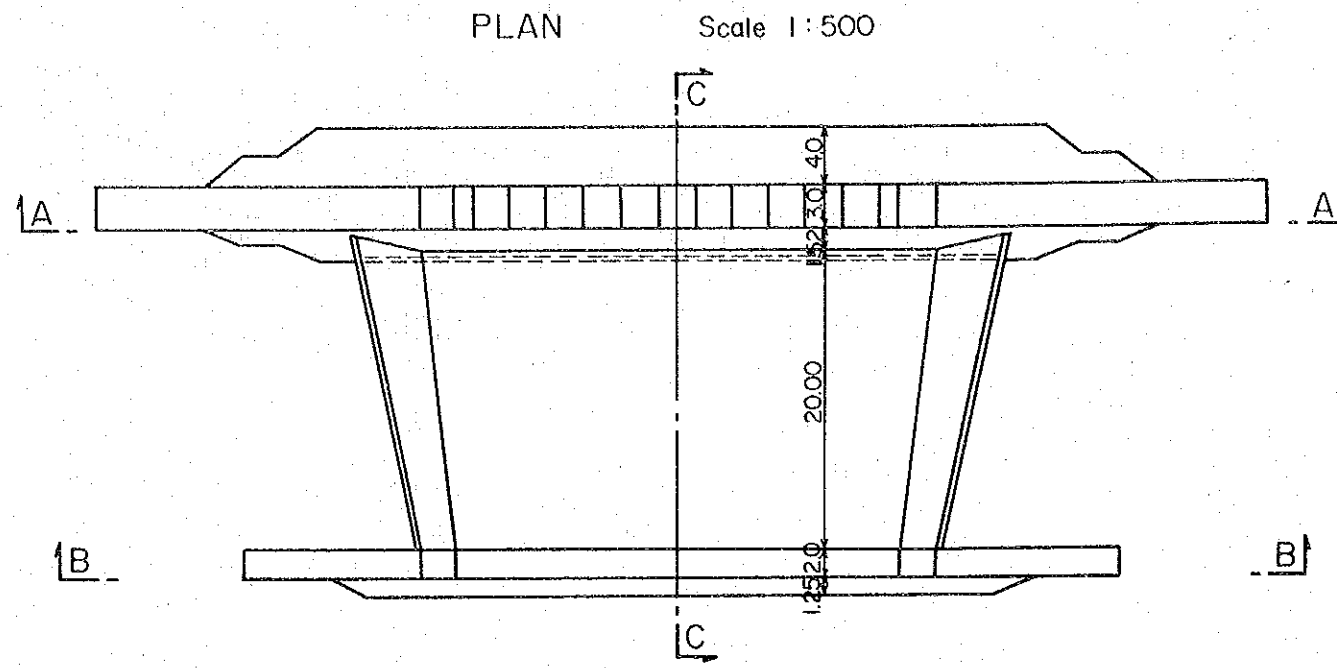
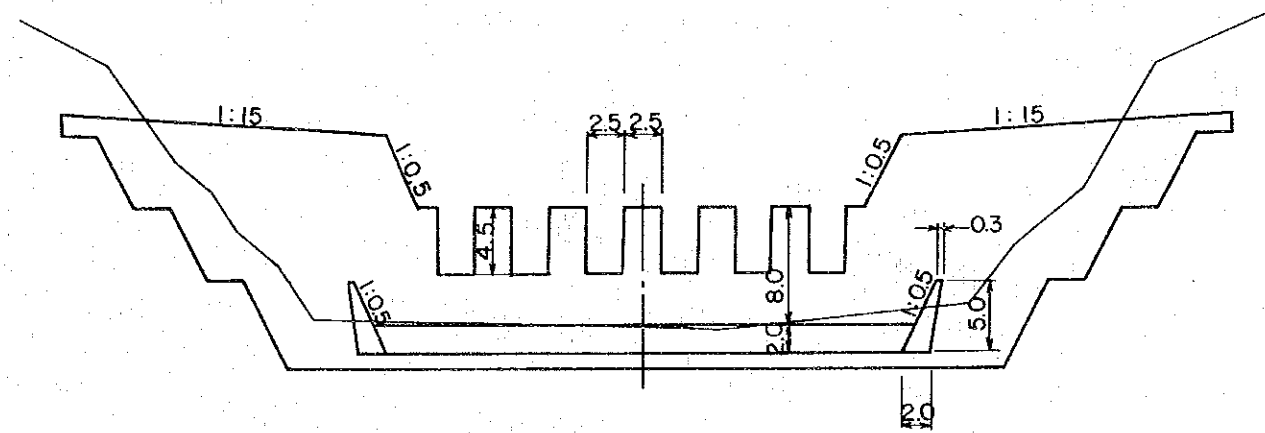


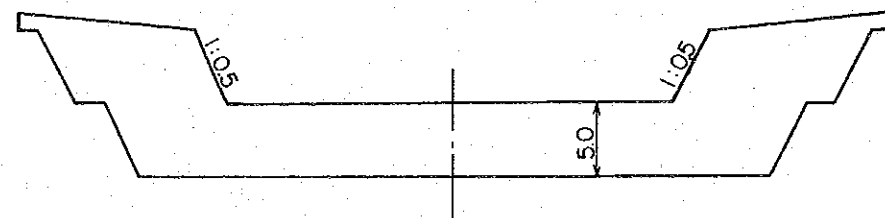
FIG-7.3.3 TYPICAL DESIGN OF SABO DAM (SLIT TYPE)



SECTION A-A Scale 1:500



SECTION B-B Scale 1:500



SECTION C-C Scale 1:500

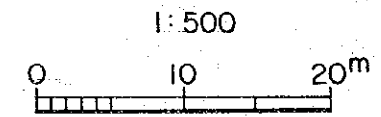
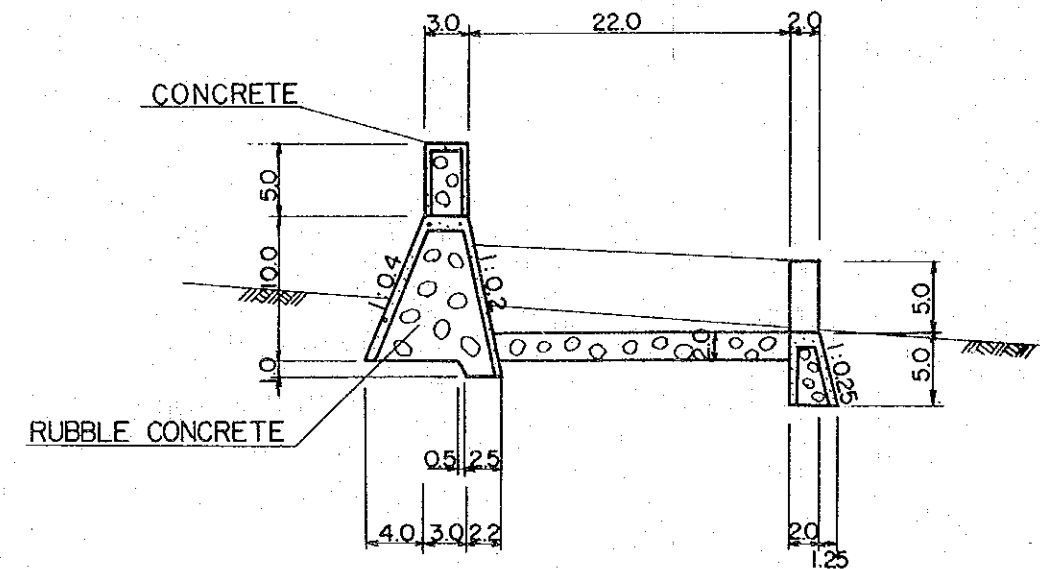
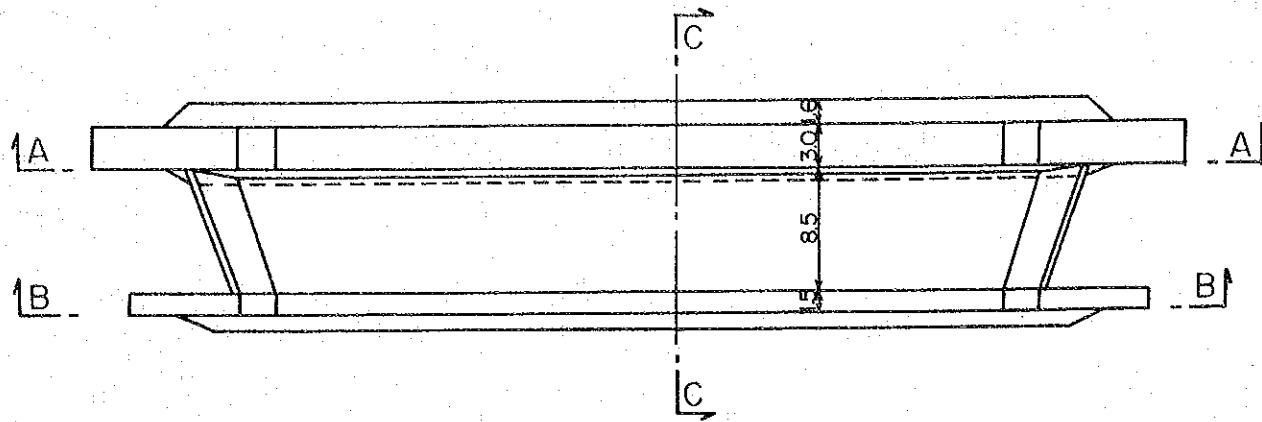


FIG.7.3.4 TYPICAL DESIGN OF CONSOLIDATION DAM

PLAN

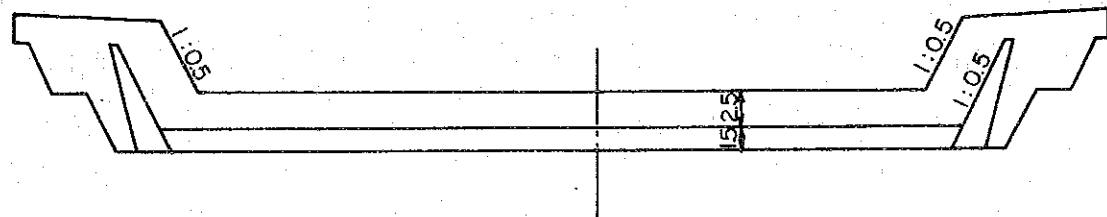
Scale 1:500



SECTION A - A

A - A

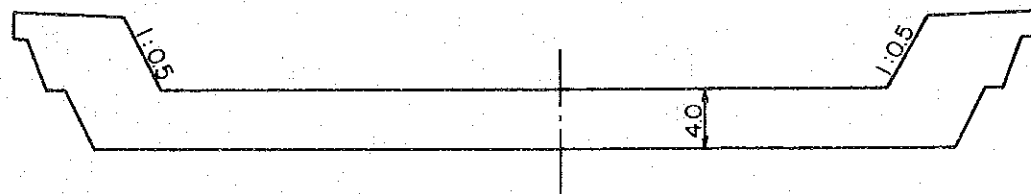
Scale 1:500



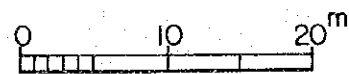
SECTION B - B

B - B

Scale 1:500



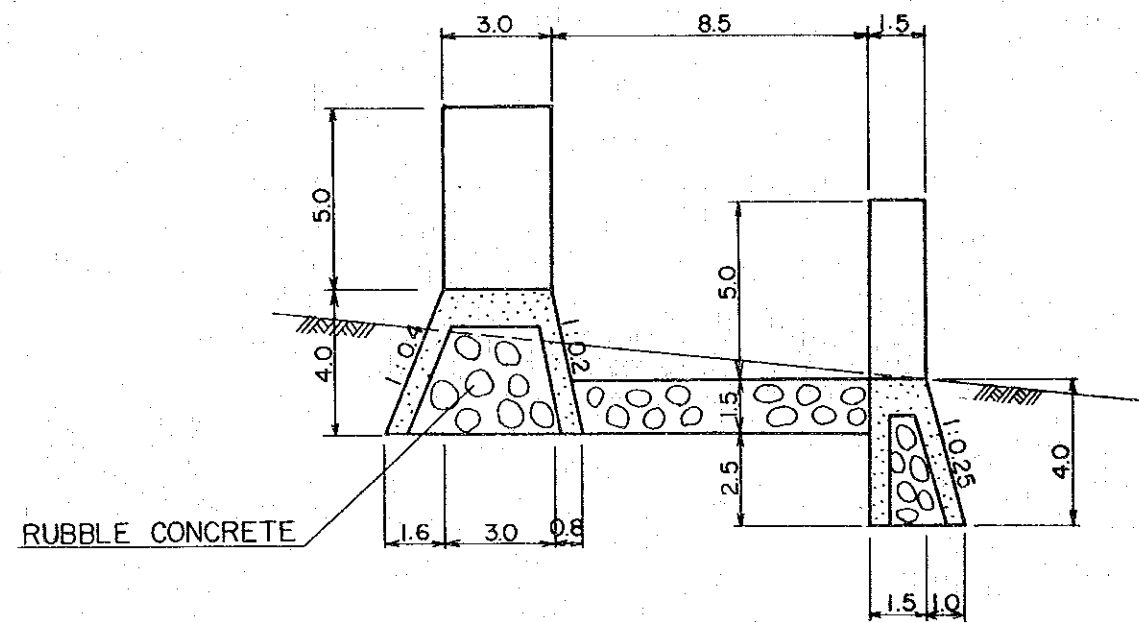
1:500



SECTION C - C

C - C

Scale 1:200



RUBBLE CONCRETE

1:200

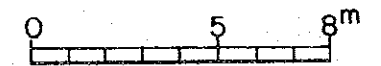




FIG.- 7.3.5 TYPICAL DESIGN OF TRAINING LEVEE

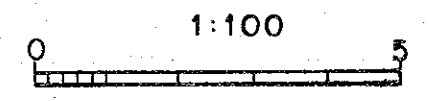
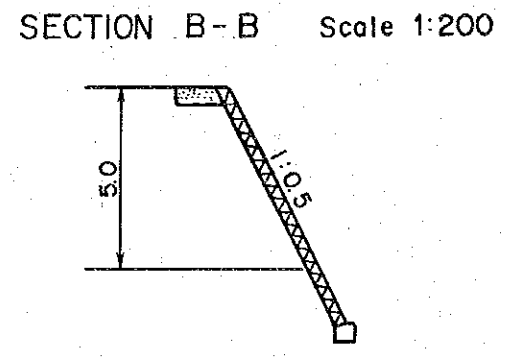
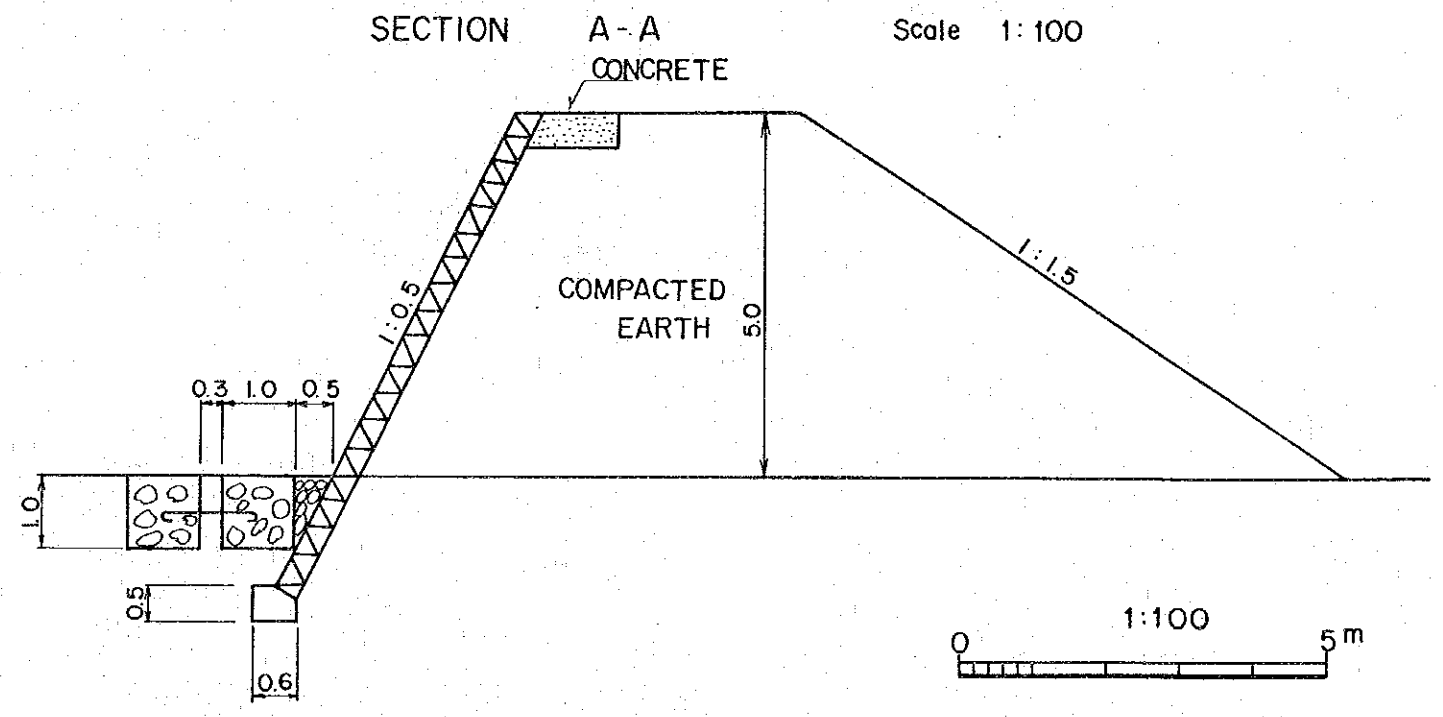
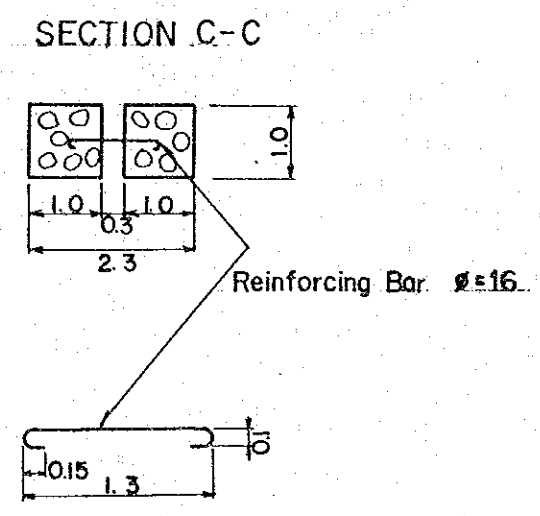
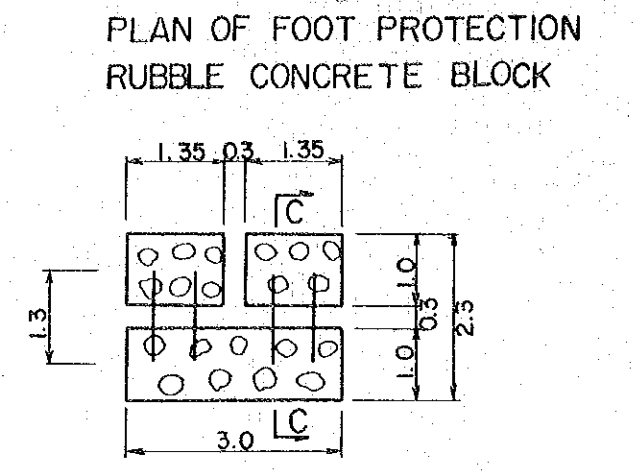
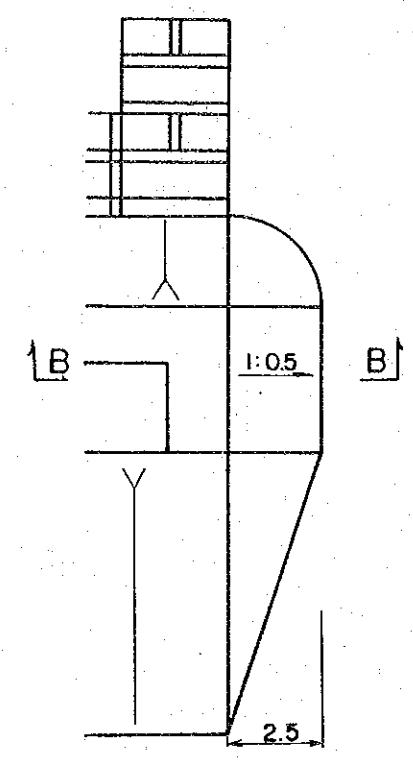
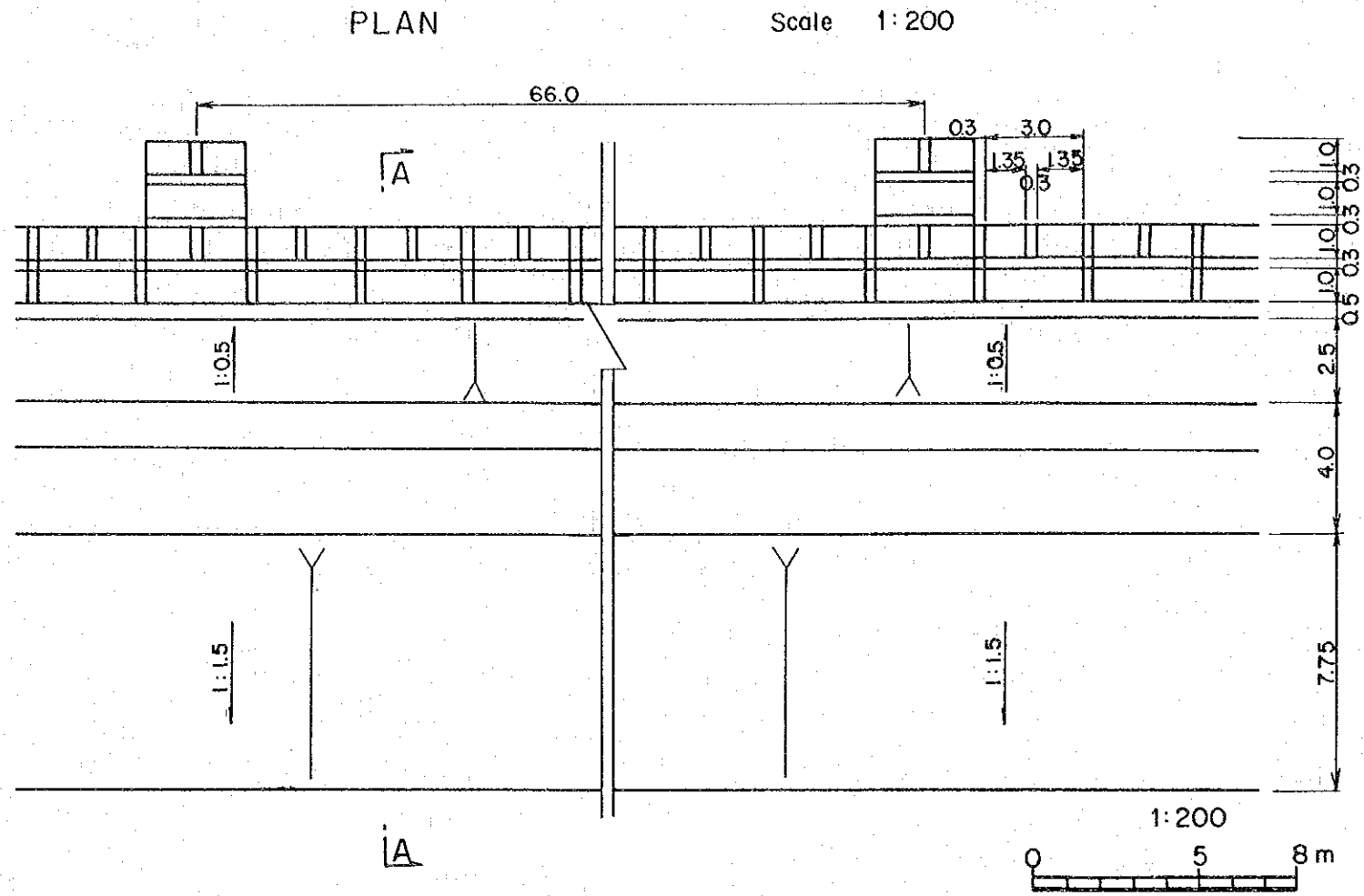
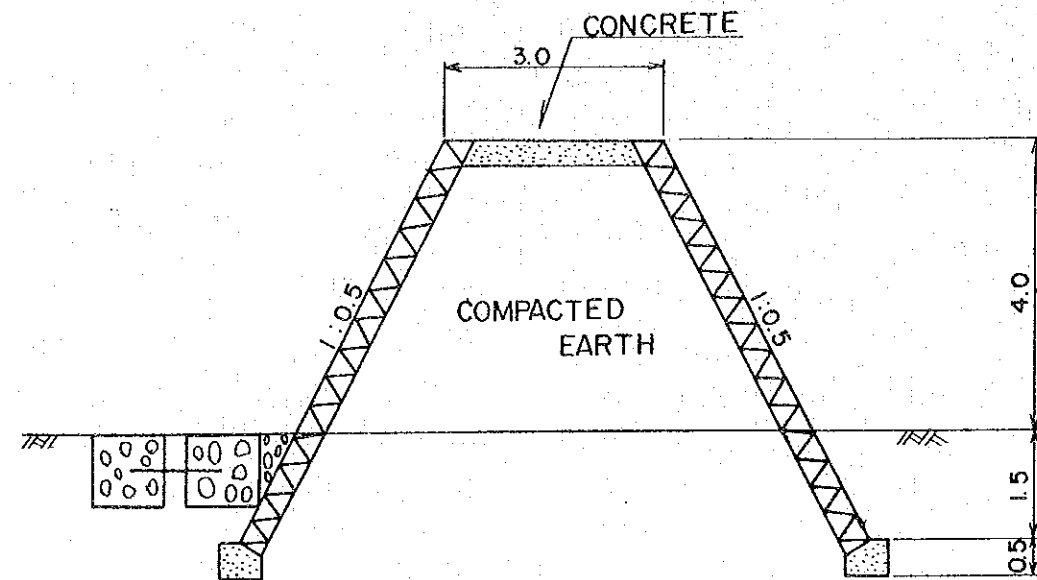
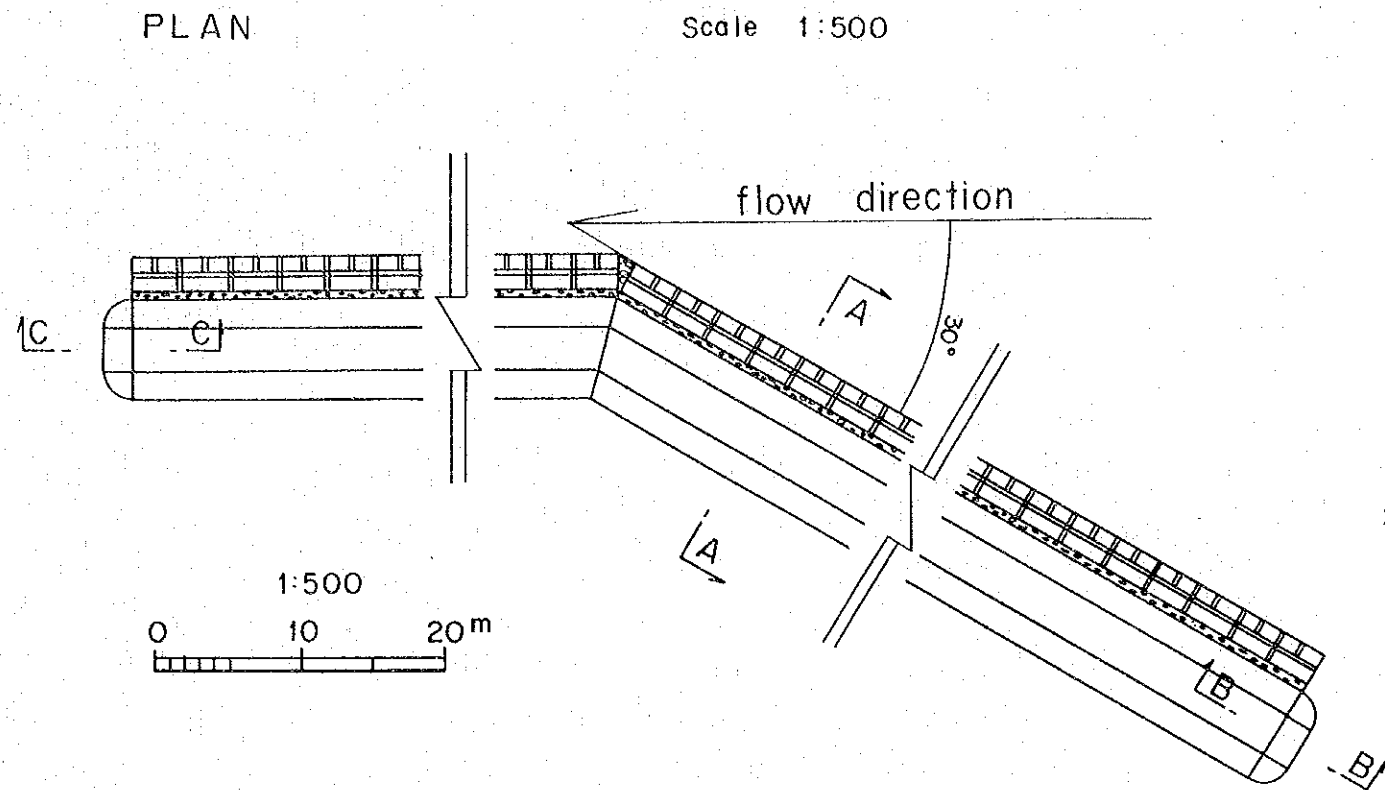
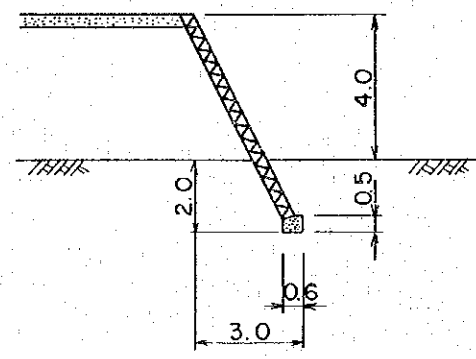


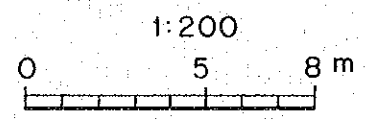
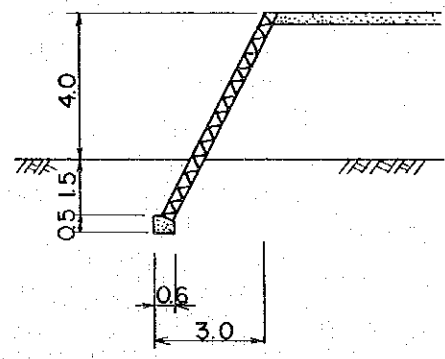
FIG.-7.3.6 TYPICAL DESIGN OF SPUR DIKE (TYPE A)



SECTION B-B  
Scale 1:200



SECTION C-C  
Scale 1:200



PLAN OF FOOT PROTECTION  
RUBBLE CONCRETE BLOCK  
Scale 1:100

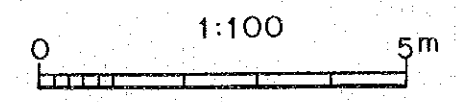
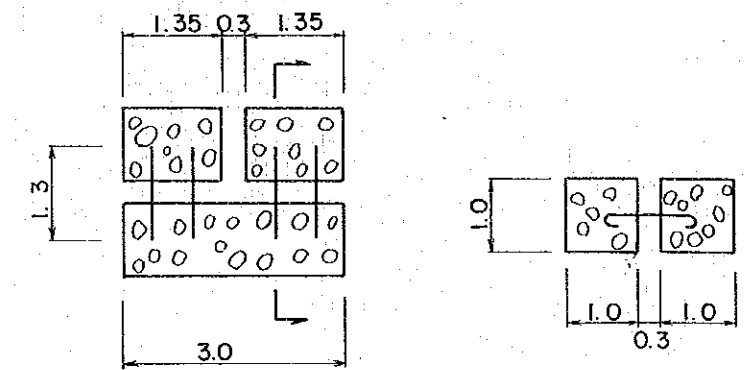
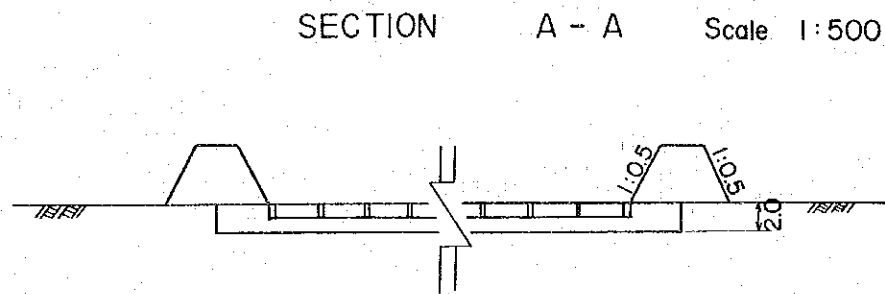
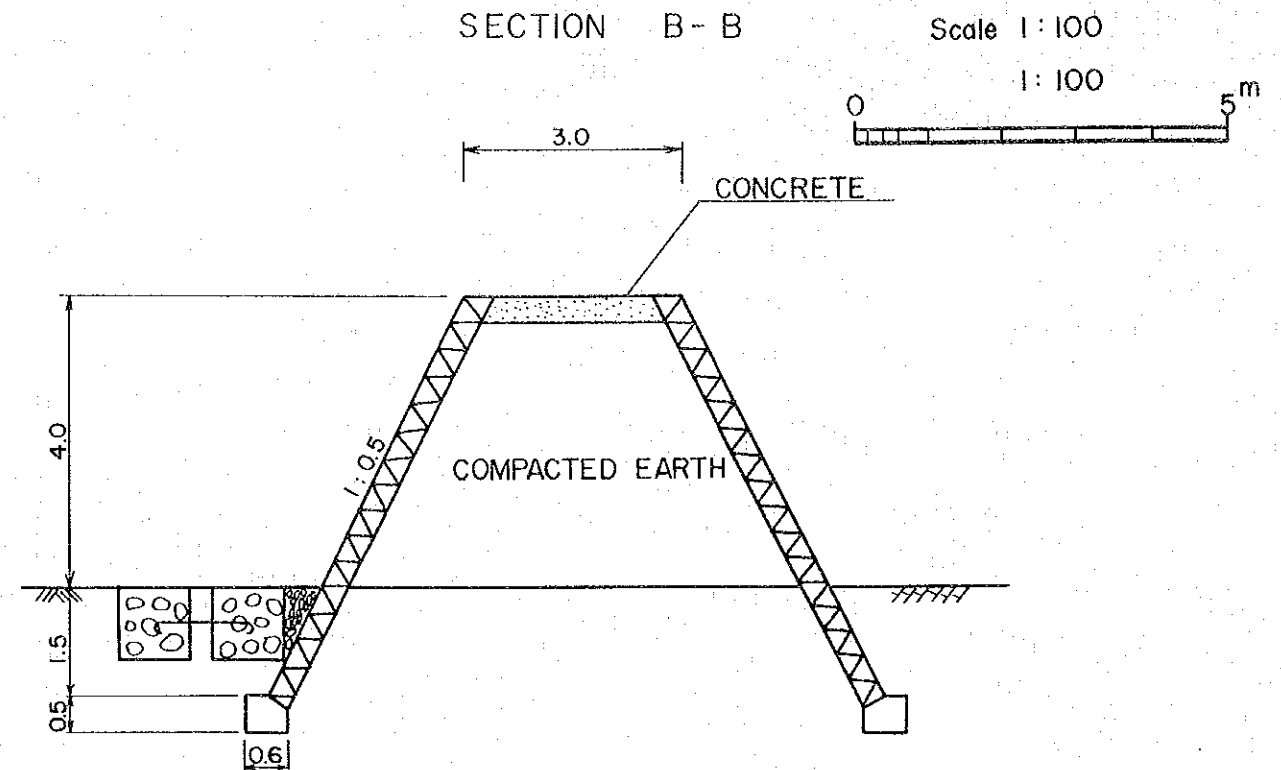
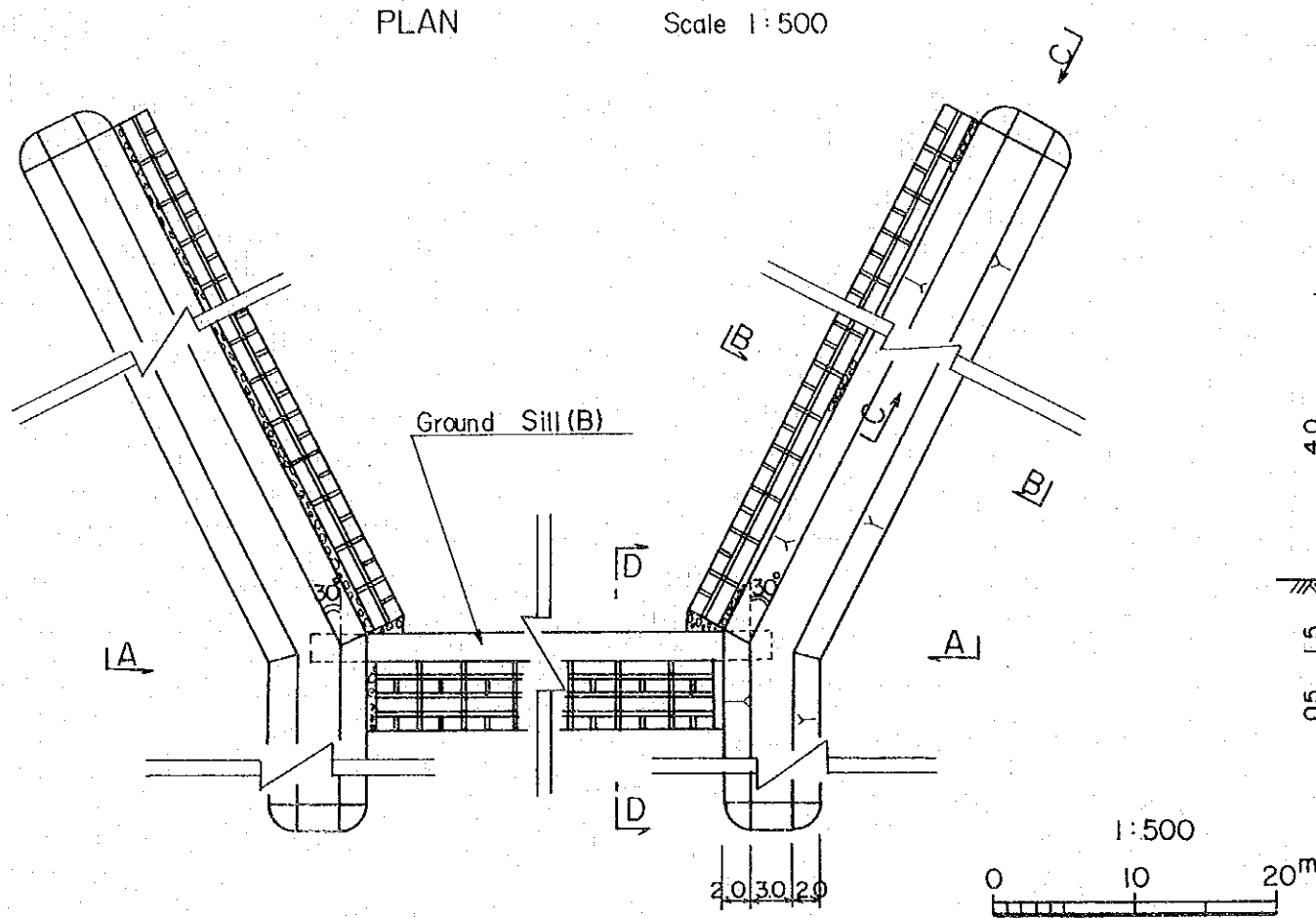
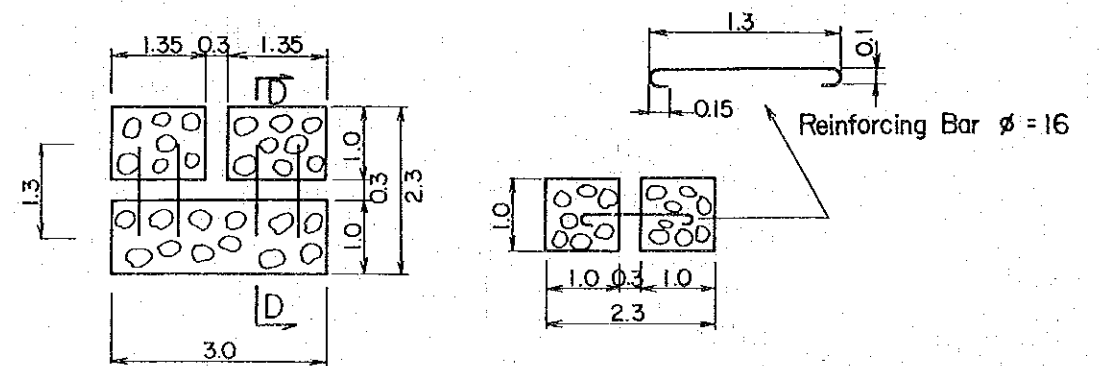


FIG-7.3.7 TYPICAL DESIGN OF SPUR DIKE (TYPE B)



PLAN OF FOOT PROTECTION RUBBLE CONCRETE BLOCK

Scale 1:100, 1:50



SECTION D - D

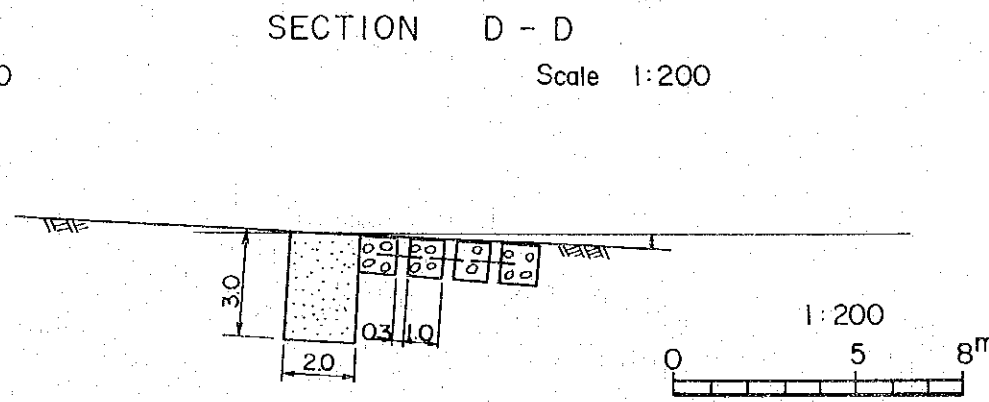
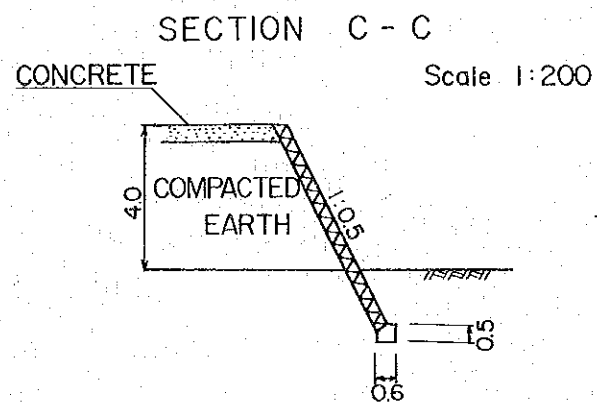
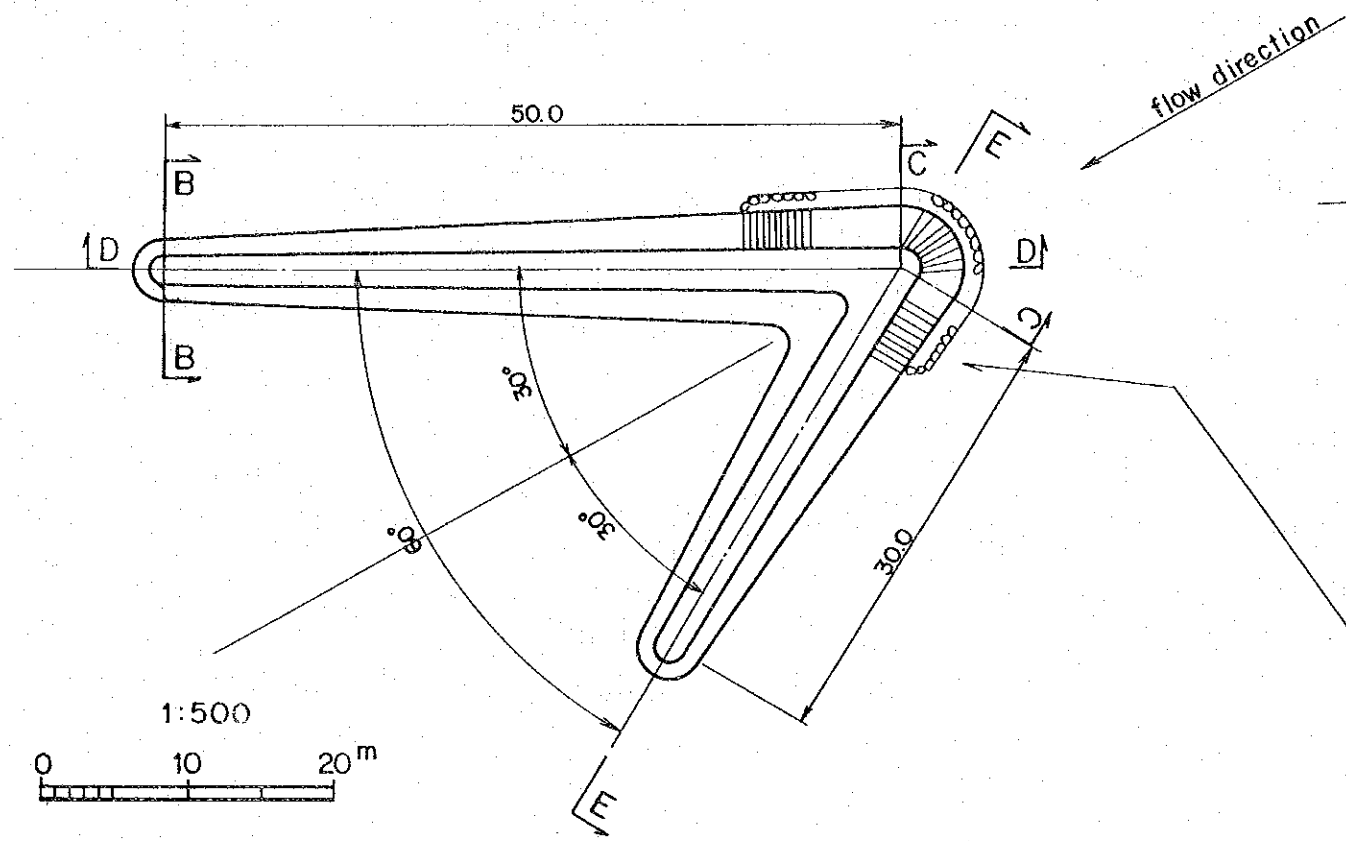




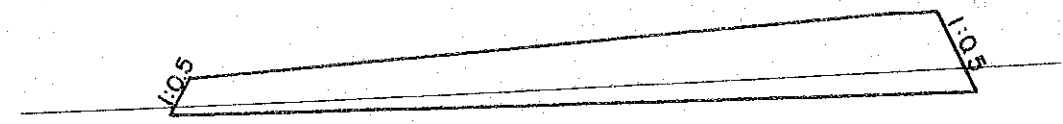
FIG-7.3.8 TYPICAL DESIGN OF JETTY

PLAN

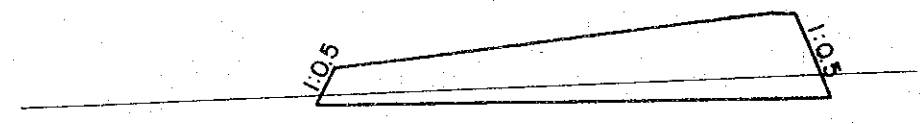
Scale 1:500



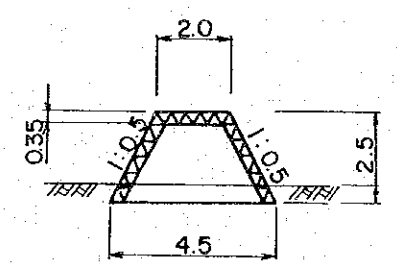
SECTION D-D Scale 1:500



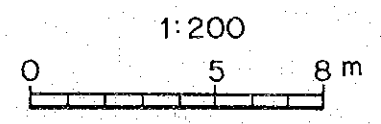
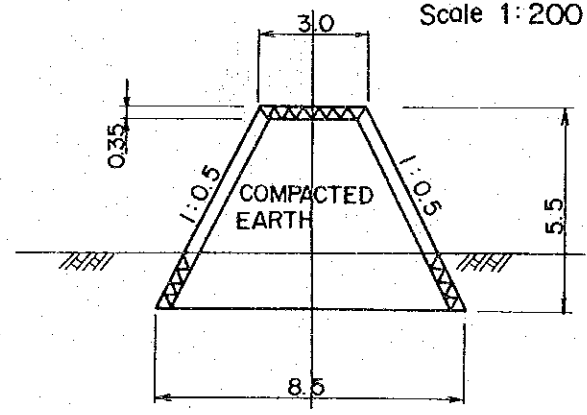
SECTION E-E Scale 1:500



SECTION B-B Scale 1:200



SECTION C-C Scale 1:200



Protection for debris flow Scale 1:200

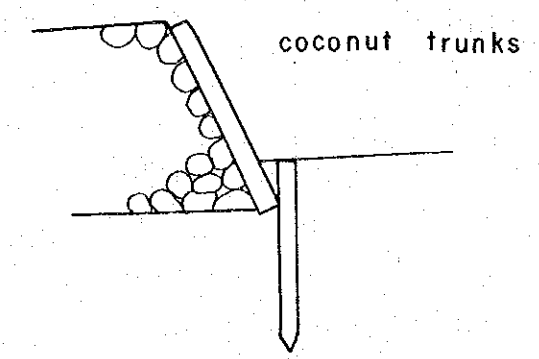
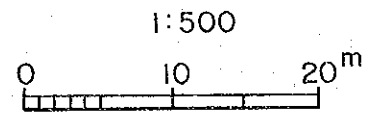
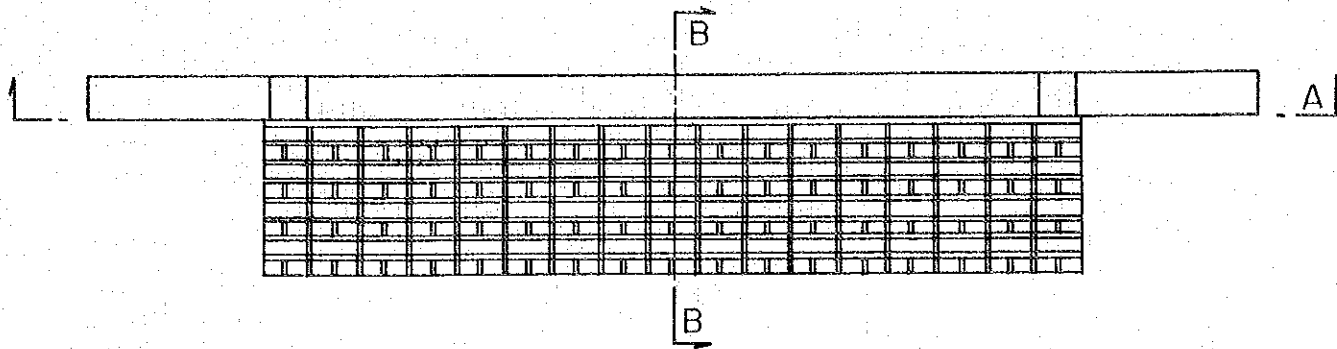


FIG-7.3.9 TYPICAL DESIGN OF GROUND SILL (TYPE A)

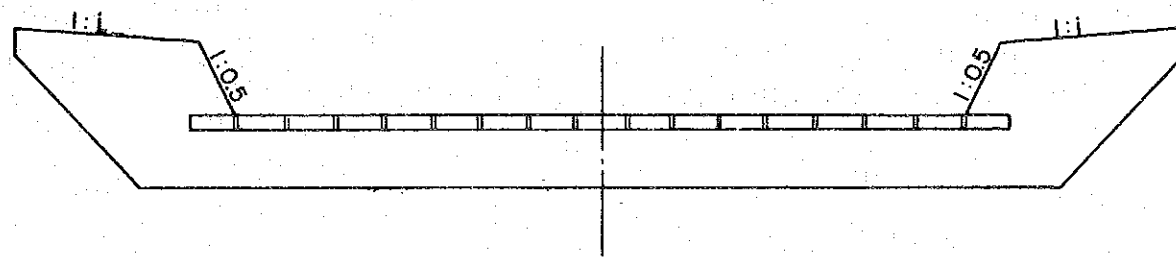
PLAN

Scale 1:500



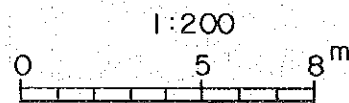
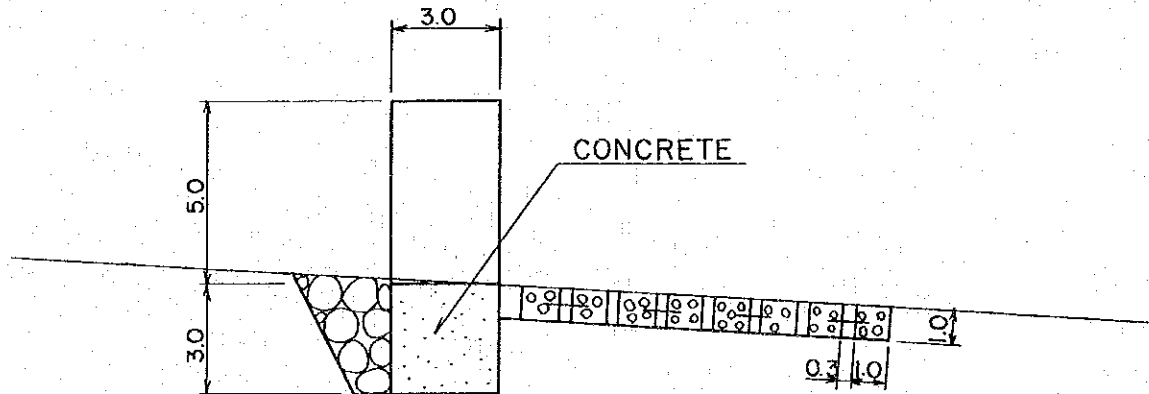
SECTION A-A

Scale 1:500



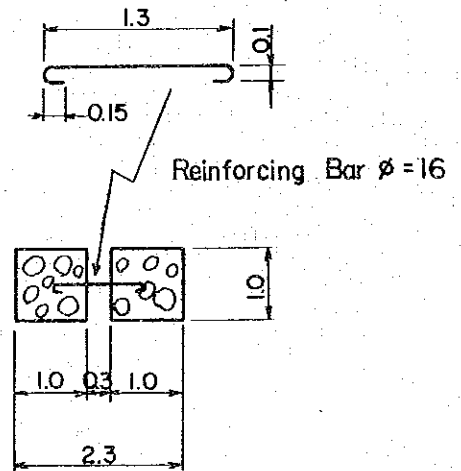
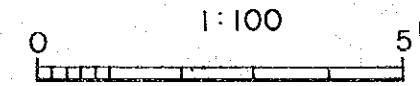
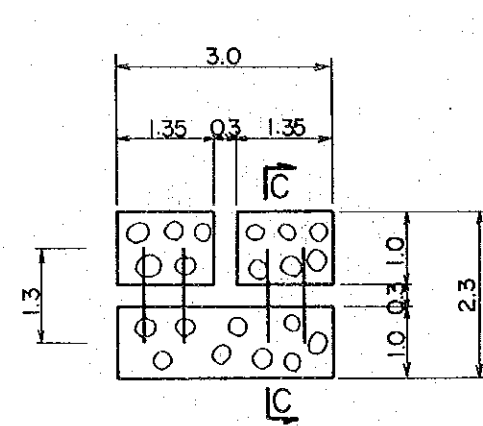
SECTION B-B

Scale 1:200



PLAN OF FOOT PROTECTION  
RUBBLE CONCRETE BLOCK

Scale 1:100, 1:50

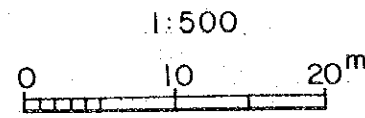
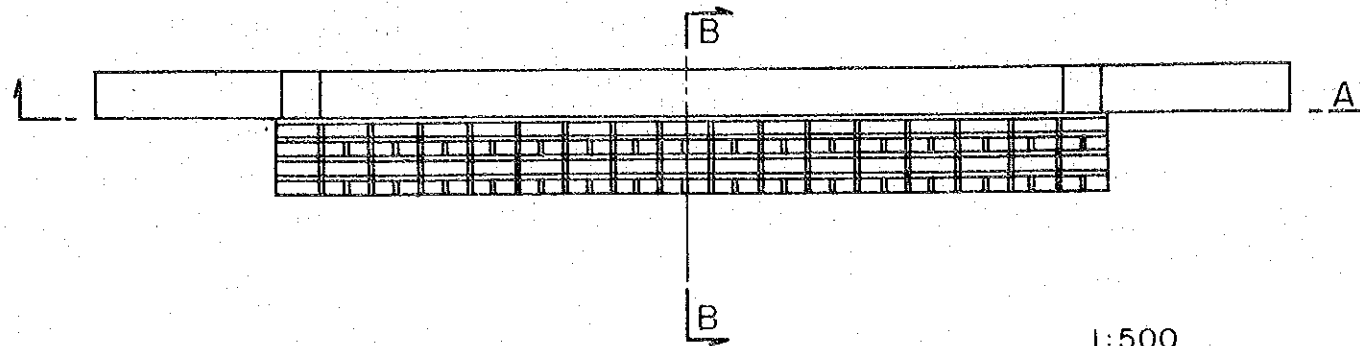


SECTION C-C

FIG.-7.3.10 TYPICAL DESIGN OF GROUND SILL (TYPE B)

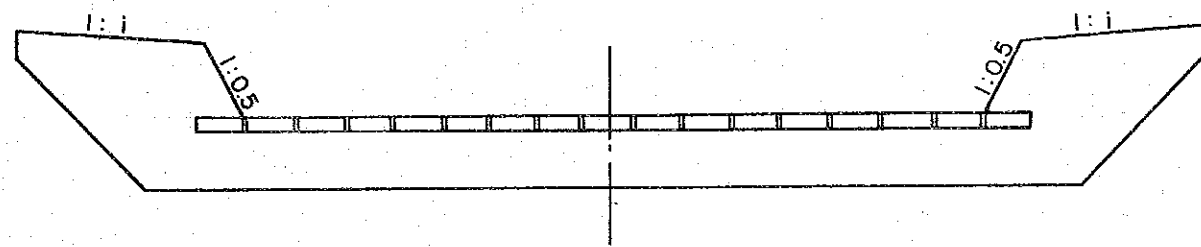
PLAN

Scale 1:500



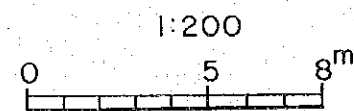
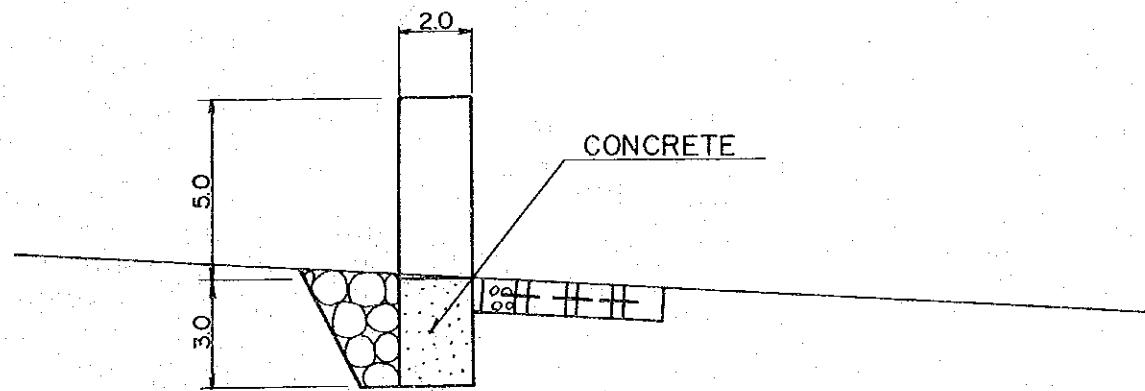
SECTION A-A

Scale 1:500



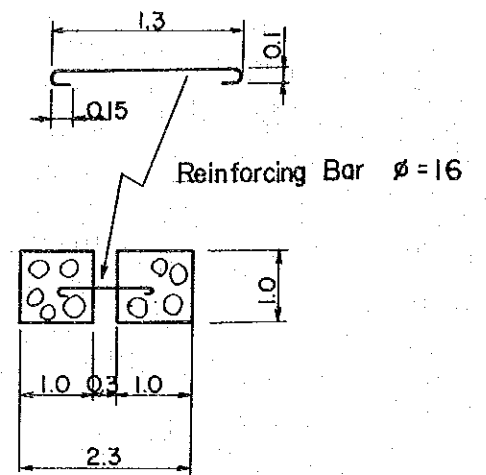
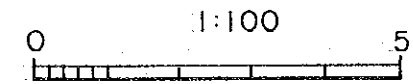
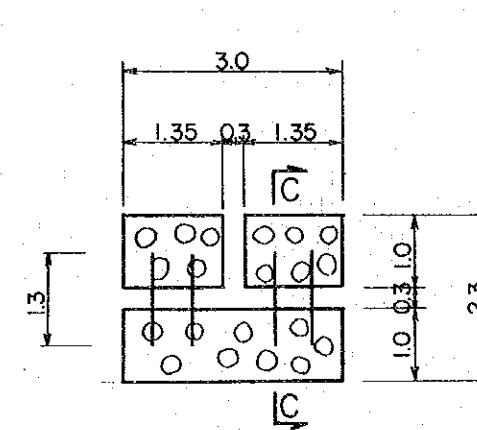
SECTION B-B

Scale 1:200



PLAN OF FOOT PROTECTION  
RUBBLE CONCRETE BLOCK

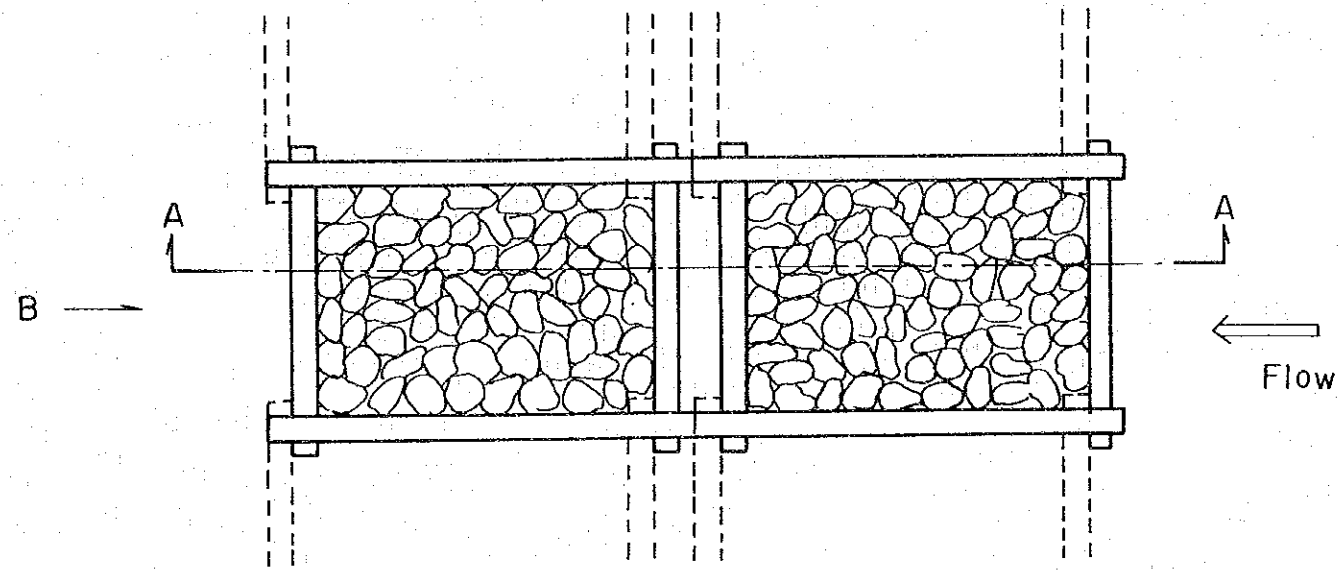
Scale 1:100



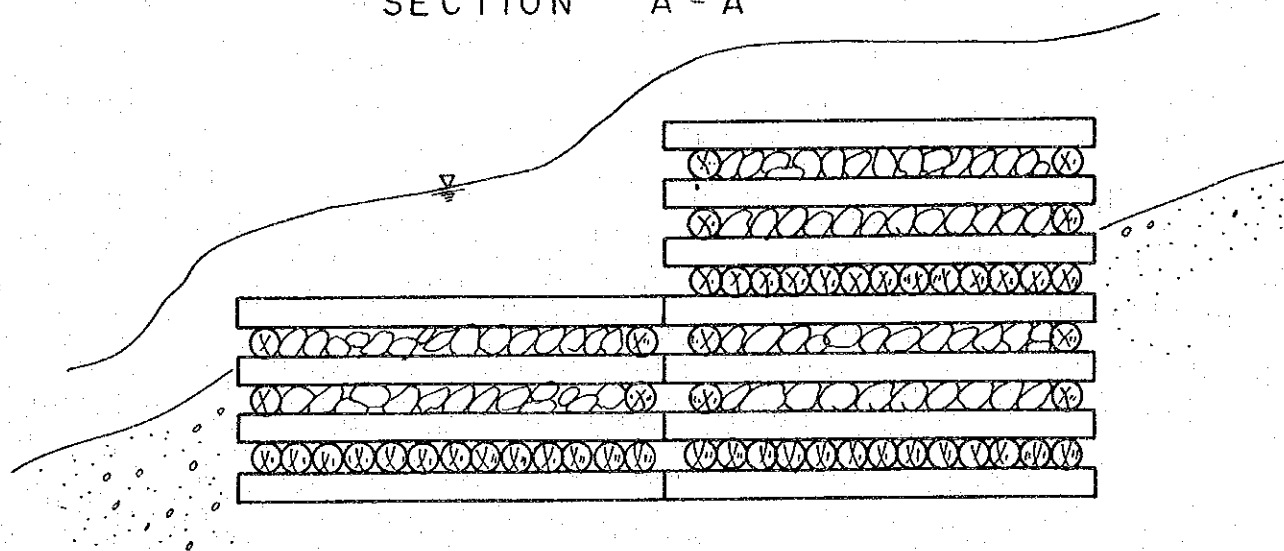
SECTION C-C

FIG.-7.3.11 TYPICAL DESIGN OF GROUND SILL WITH COCONUT TRUNK CRIB AND FENCE

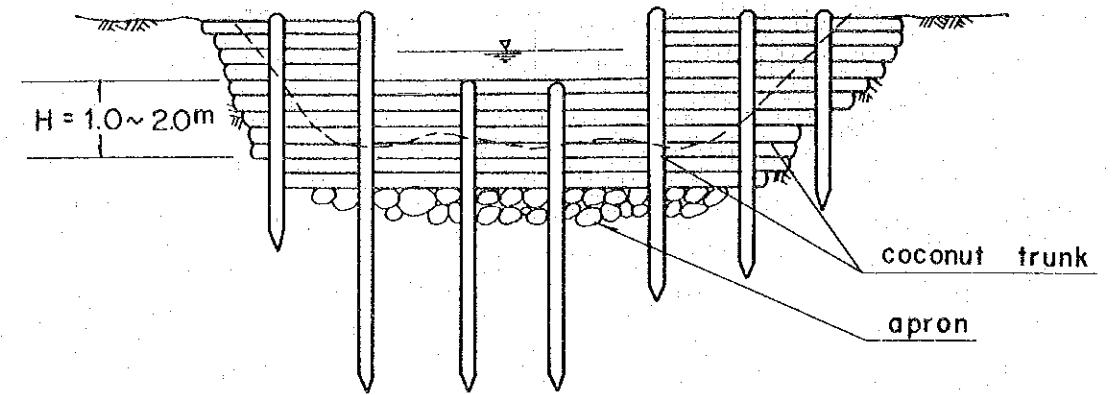
PLAN



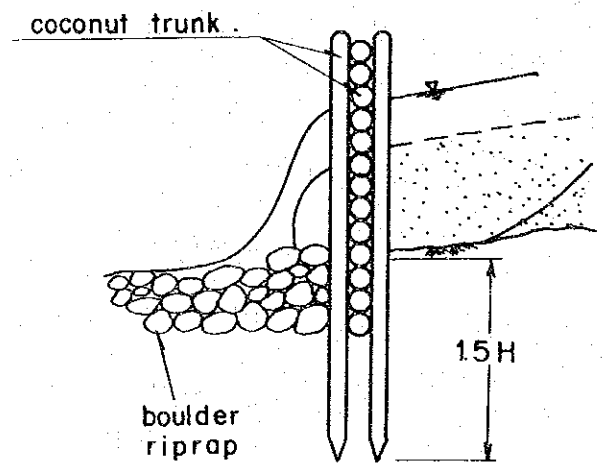
SECTION A - A



GROUND SILL WITH COCONUT TRUNK CRIB.



GROUND SILL WITH COCONUT TRUNK FENCE



FRONT VIEW B

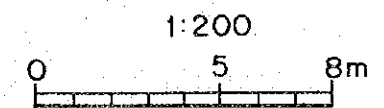
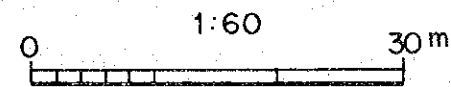
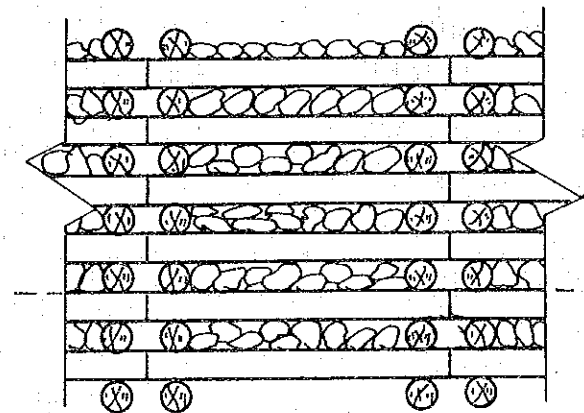
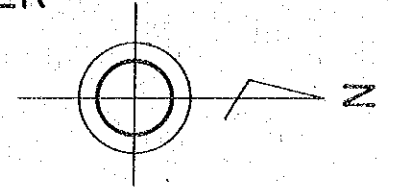
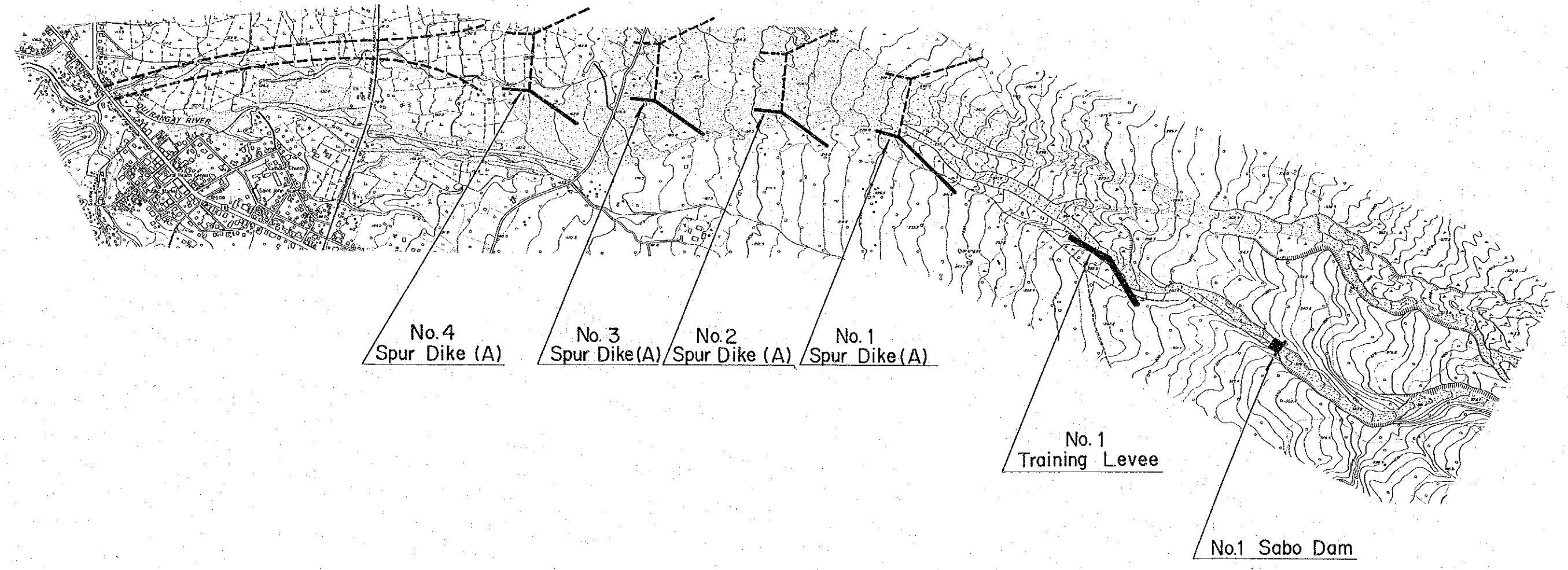




FIG.-7.3.12 LOCATION MAP OF SABO WORKS IN THE QUIRANGAY RIVER



ALBAY  
CAGAYAN



No. 4  
Spur Dike (A)

No. 3  
Spur Dike (A)

No. 2  
Spur Dike (A)

No. 1  
Spur Dike (A)

No. 1  
Training Levee

No.1 Sabo Dam

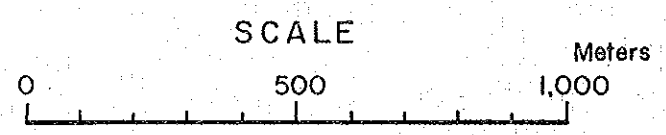




FIG.-7.3.13 LOCATION MAP OF SABO WORKS  
IN THE TUMPA RIVER

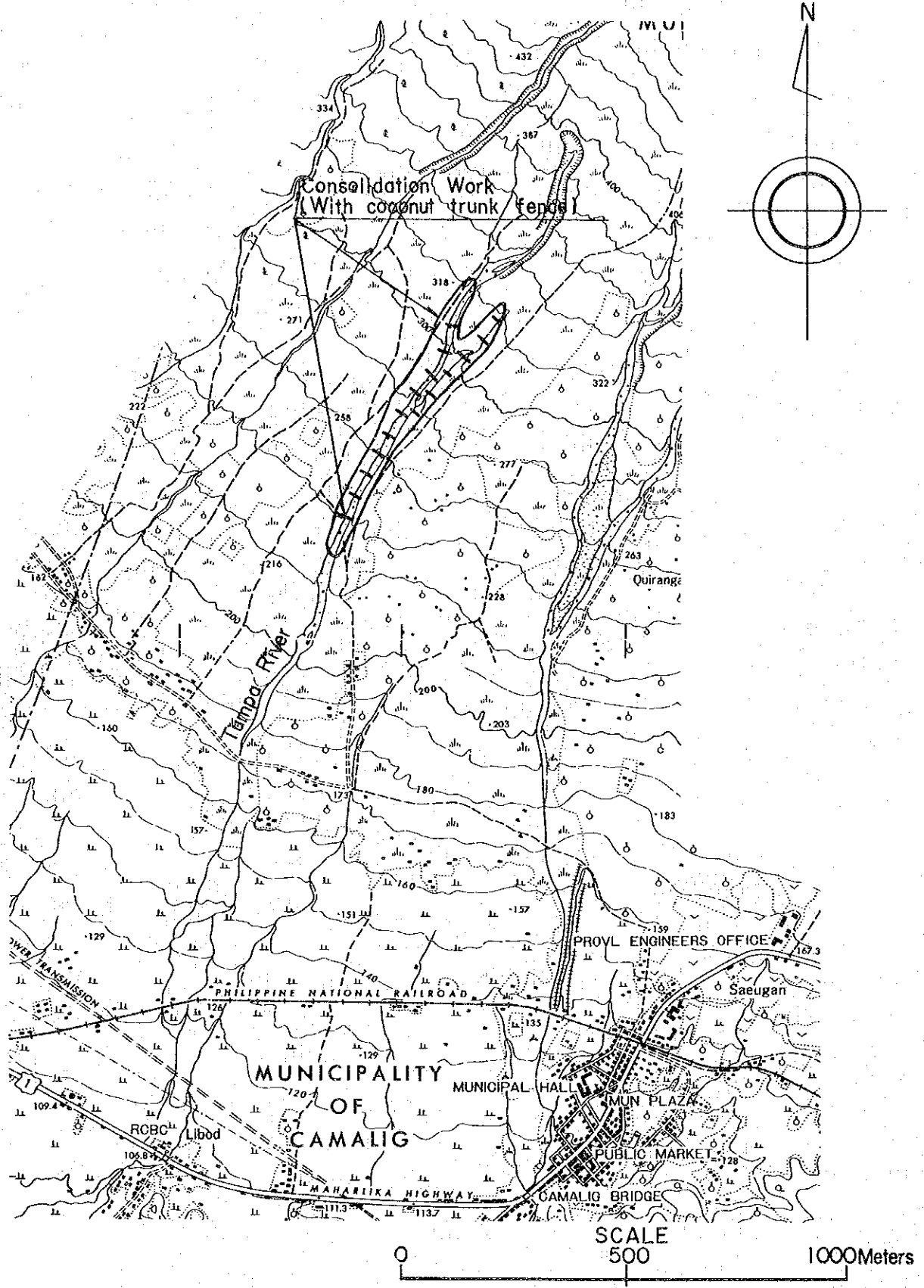


FIG-7.3.14 LOCATION MAP OF SABO WORKS IN THE MANINILA RIVER

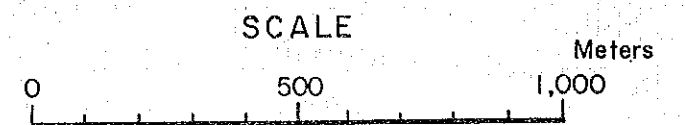
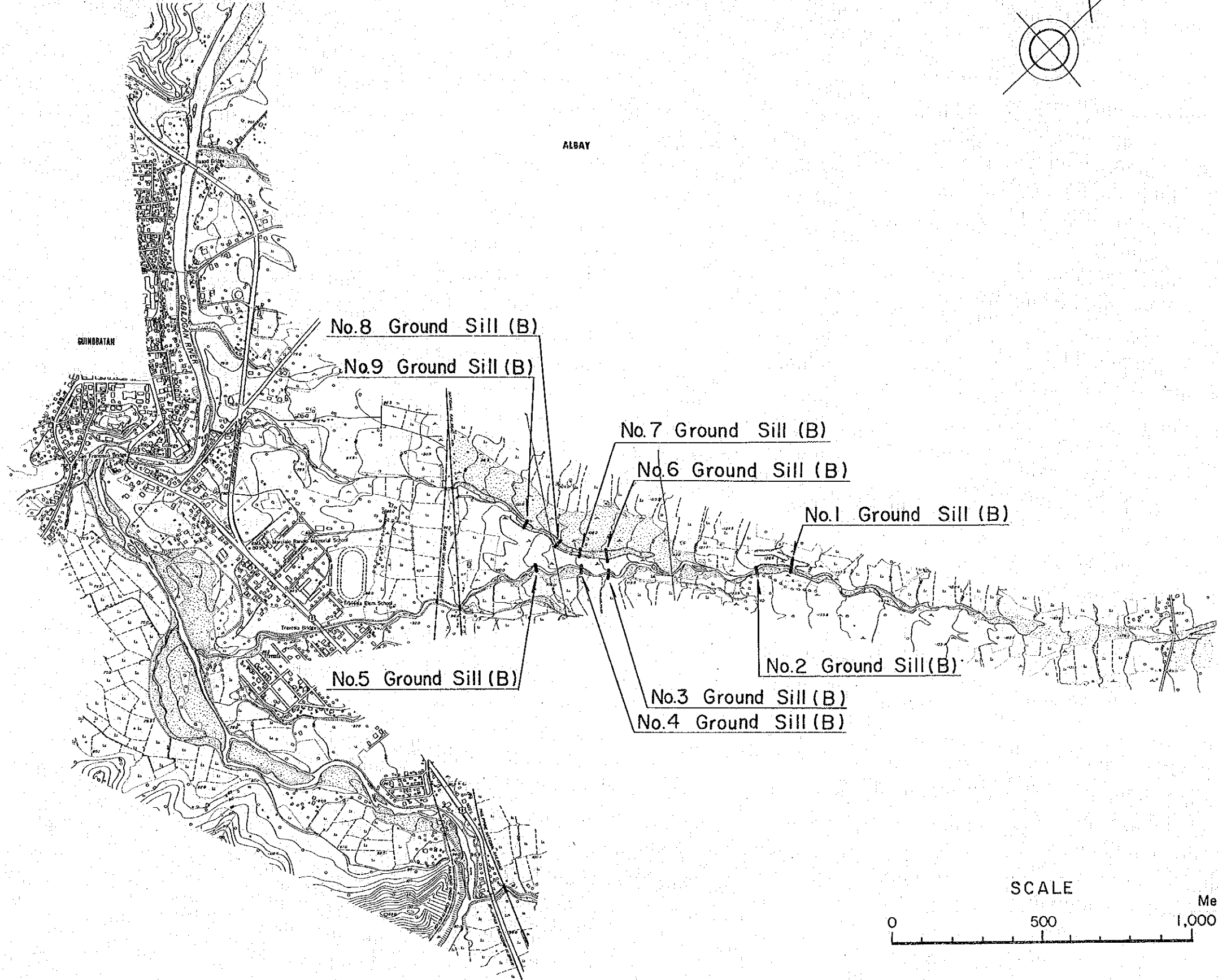
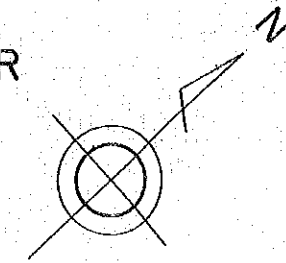
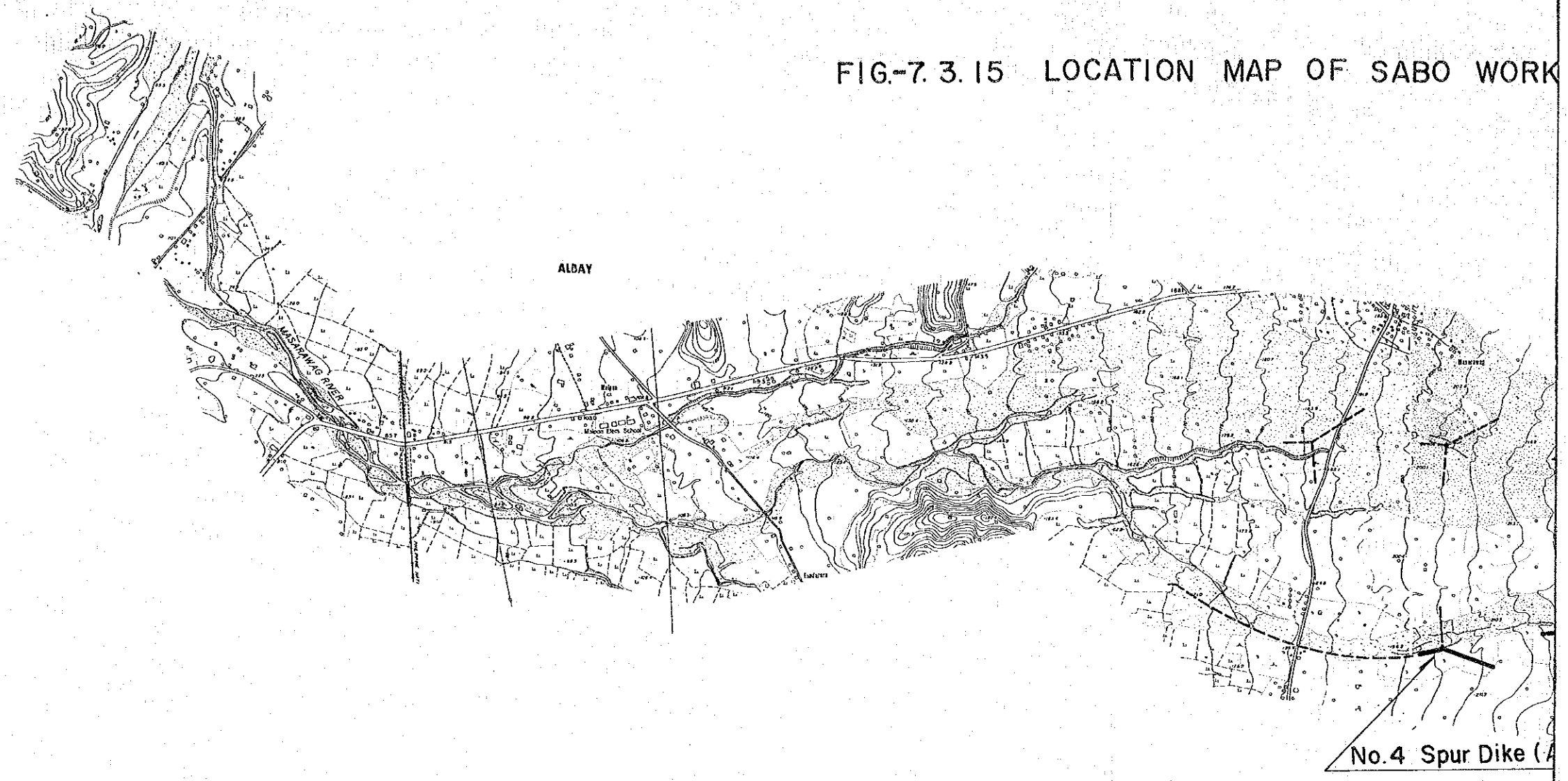


FIG.-7. 3. 15 LOCATION MAP OF SABO WORK





MAP OF SABO WORKS IN THE MASARAWAG RIVER

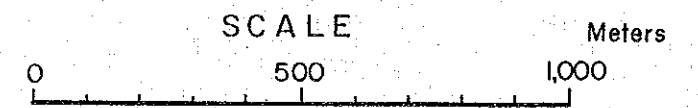
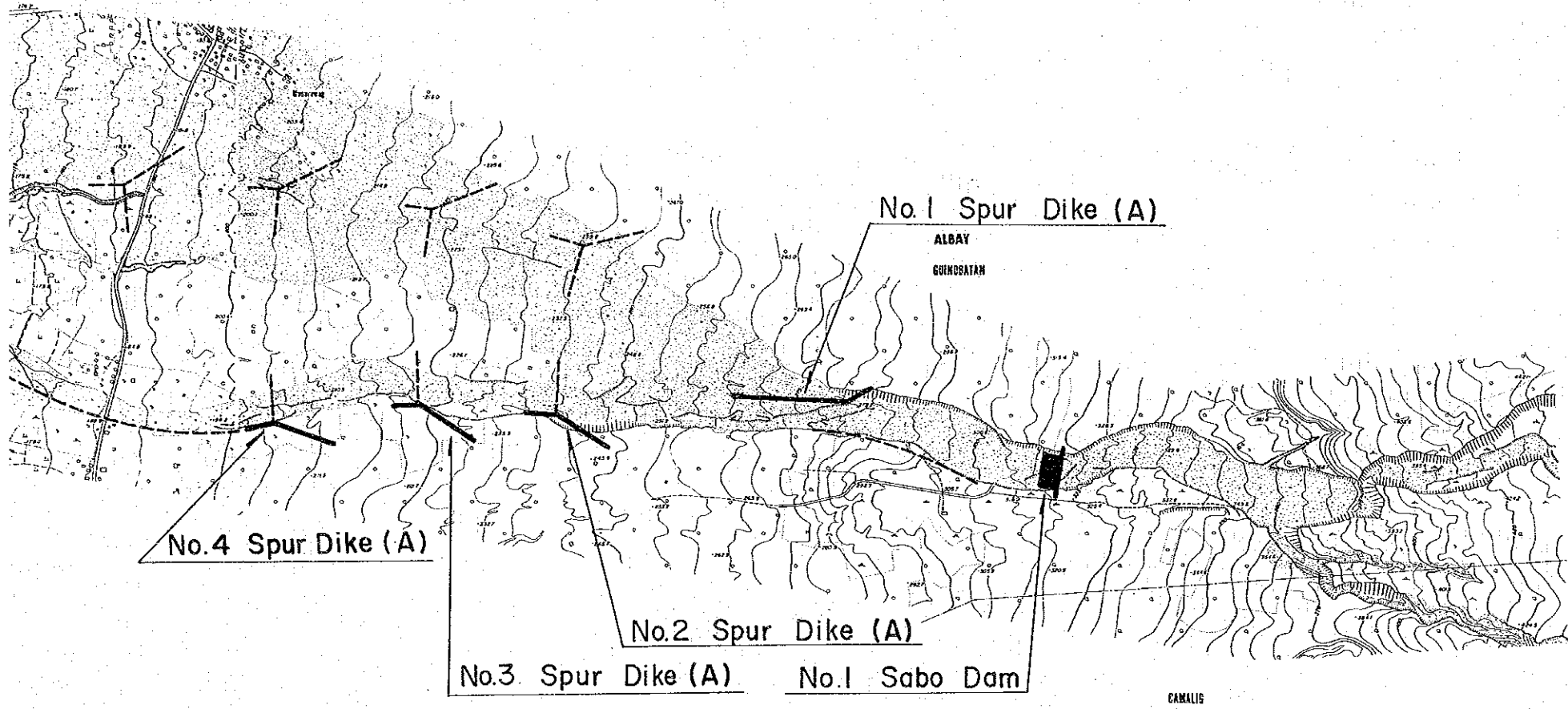
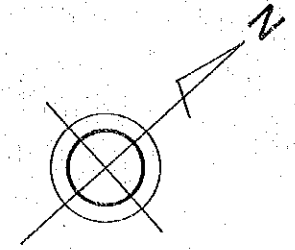


FIG-7.3.16 LOCATION MAP OF SABO WORKS IN THE OGSONG RIV

