

IP-D1  
 X = 464,789.0  
 Y = 389,965.1  
 IA = 140°  
 R = 30.0  
 TL = 83.519  
 SL = 58.744  
 CL = 73.557

IP-D2  
 X = 464,641.5  
 Y = 389,928.0  
 IA = 37° 55' 33"  
 R = 70.0  
 TL = 24.052  
 SL = 4.017  
 CL = 45.395

IP-D4  
 X = 464,602.0  
 Y = 389,709.0  
 IA = 23° 35' 54"  
 R = 130.0  
 TL = 27.176  
 SL = 2.810  
 CL = 53.561

IP-D5  
 X = 464,656.0  
 Y = 389,608.0  
 IA = 78° 54' 48"  
 R = 100.0  
 TL = 81.820  
 SL = 29.207  
 CL = 137.148

IP-D3  
 X = 464,591.4  
 Y = 389,843.2  
 IA = 35° 05' 27"  
 R = 100.0  
 TL = 31.617  
 SL = 4.879  
 CL = 61.245

0.77 PEDESTRIAN AND WATER PPE. (FW38+70M)

X = 464,330.8  
 Y = 390,951.0

STEEL G.W.E

SF 7,071,000  
 FW 38+50

FLOODWAY WEIR

CONCRETE STEPS (TYPE DA AND DB)

ROOFED BENCH

WET MASONRY TYPE REVERENT

TREE PLANTING @ 10m

WALK WAY

SCODDING

BOULDER PITCHING

CONCRETE STEP (TYPE DA AND DB)

ROOFED BENCH

WALK WAY

SCODDING

BOULDER PITCHING

CONCRETE STEP (TYPE DB)

BOULDER PITCHING

DRAINAGE OUTLET

WALK WAY

SCODDING

BOULDER PITCHING

CONCRETE STEP (TYPE DB)

BOULDER PITCHING

DRAINAGE OUTLET

WALK WAY

SCODDING

BOULDER PITCHING

CONCRETE STEP (TYPE DB)

BOULDER PITCHING

DRAINAGE SIDE DITCH 1:1/2000

GG-SER-GAMA BRIDGE

EL. 31.50

WALK WAY

SCODDING

BOULDER PITCHING

CONCRETE STEP (TYPE DB)

BOULDER PITCHING

DRAINAGE OUTLET

WALK WAY

SCODDING

BOULDER PITCHING

CONCRETE STEP (TYPE DB)

BOULDER PITCHING

DRAINAGE OUTLET

WALK WAY

SCODDING

BOULDER PITCHING

CONCRETE STEP (TYPE DB)

BOULDER PITCHING

DRAINAGE OUTLET

WALK WAY

SCODDING

BOULDER PITCHING

CONCRETE STEP (TYPE DB)

BOULDER PITCHING

DRAINAGE OUTLET

DELI RIVER WEIR

X = 464,559.8  
 Y = 390,156.3

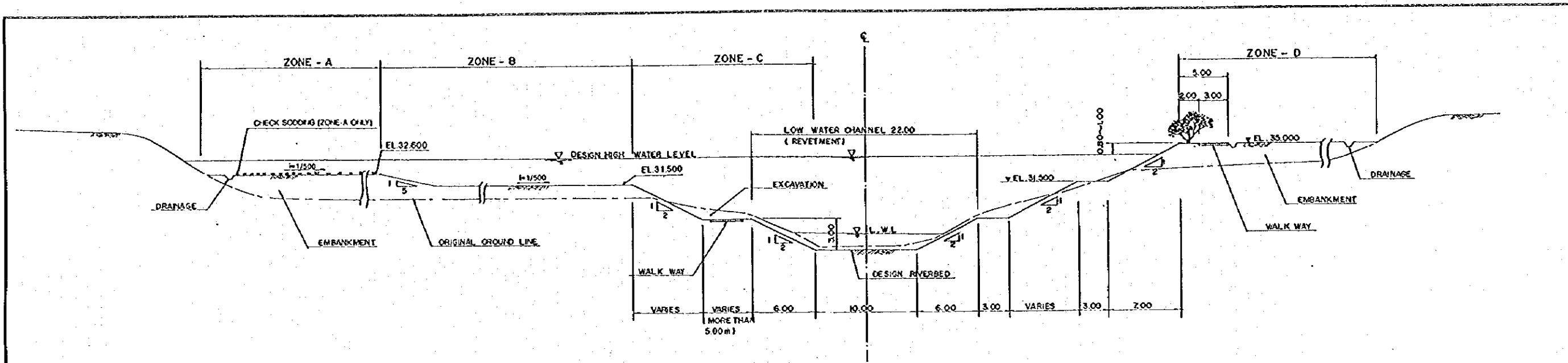
X = 464,537.5  
 Y = 390,067.9

APPROACH ROAD W = 6.0m (1/8 PITCH)

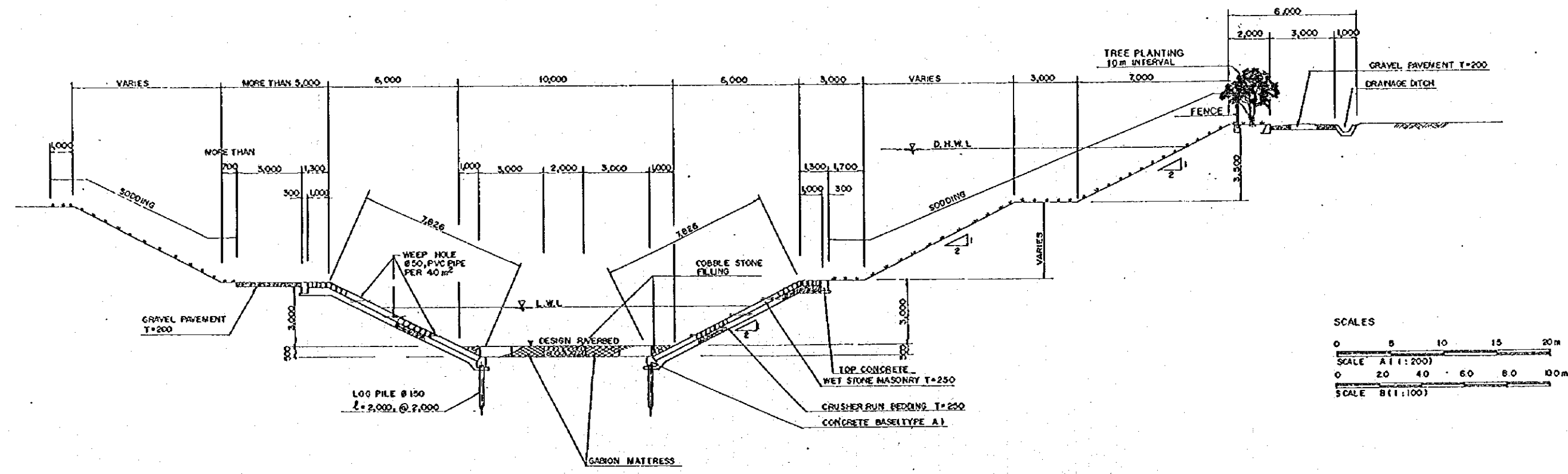
SCALE: 1/2,000



DETAILED DESIGN STUDY ON MEDAN FLOOD CONTROL PROJECT  
 DWG. 6.1.8 PLAN OF DELI RIVER RETARDING CHANNEL  
 JAPAN INTERNATIONAL COOPERATION AGENCY



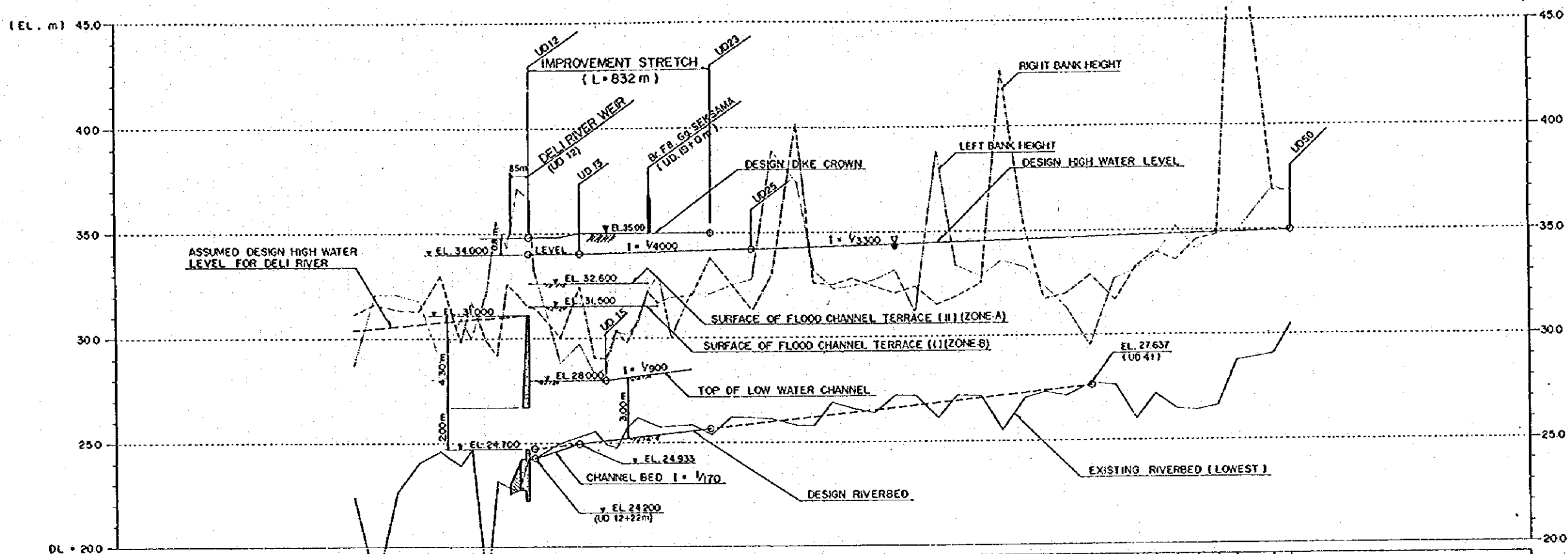
**SCHEMATIC CROSS SECTION OF RETARDING CHANNEL IMPROVEMENT AND UTILIZATION (UNIT : m)**  
SCALE A



**SCALES**  
0 5 10 15 20m  
SCALE A (1:200)  
0 20 40 60 80 100m  
SCALE B (1:100)

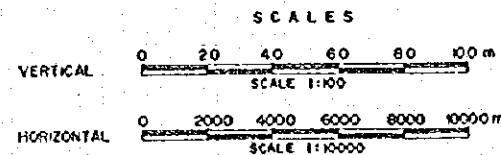
**STANDARD CROSS SECTION OF RETARDING CHANNEL AND SLOPE PROTECTION (UNIT : mm)**  
SCALE B

|   |  |
|---|--|
| <p>DETAILED DESIGN STUDY ON<br/>MEDAN FLOOD CONTROL PROJECT</p> | <p>DWG. 6.1.9<br/>STANDARD CROSS SECTION<br/>OF DELI RIVER RETARDING CHANNEL</p> |
| <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>                   |  |

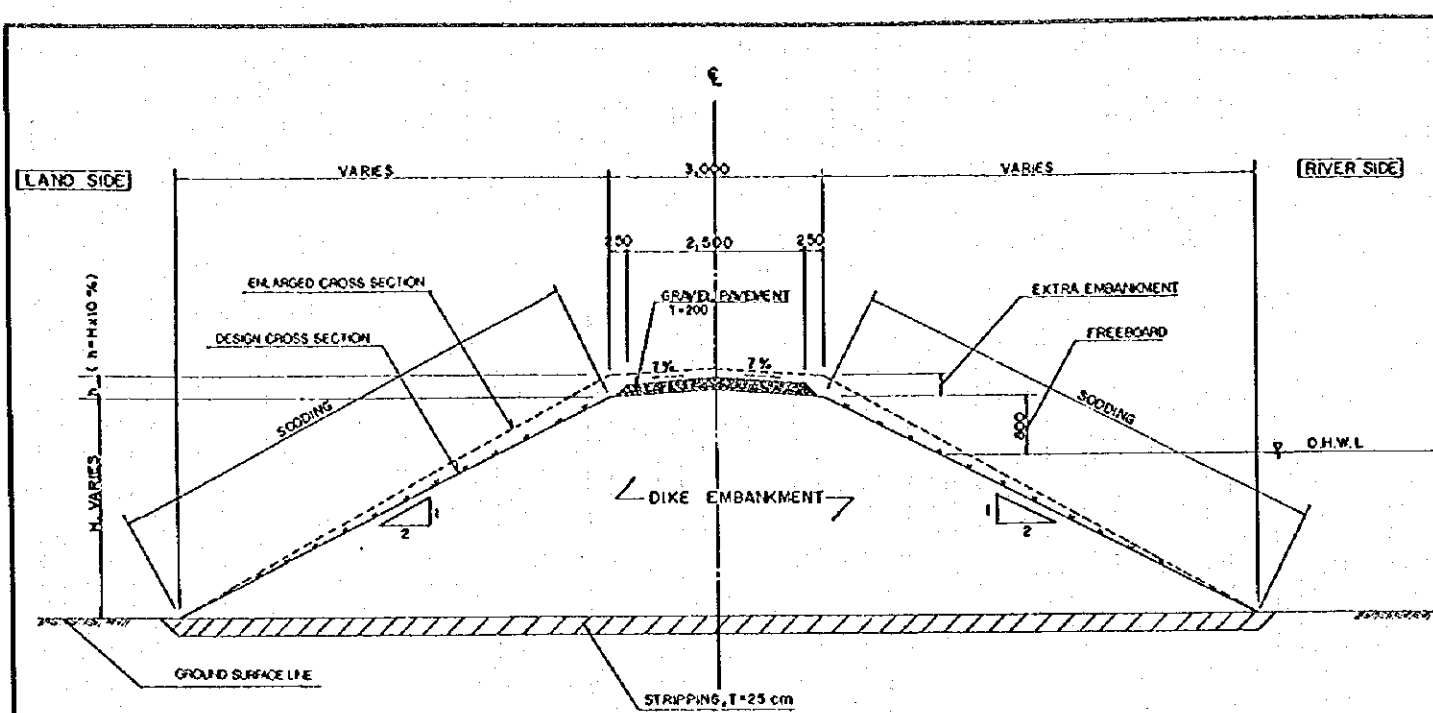


| DESIGN ELEVATION |                  | EXISTING ELEVATION |             | DISTANCE        |             | STATION NO. |
|------------------|------------------|--------------------|-------------|-----------------|-------------|-------------|
| DIKE CROWN       | HIGH WATER LEVEL | RIGHT GROUND       | LEFT GROUND | ACCUMULATED (m) | PARTIAL (m) |             |
| 34.800           | 34.800           | 31.153             |             | 00.0            | 00.0        | UD 1        |
| 34.800           | 34.800           | 31.599             |             | 97.5            | 97.5        | UD 2        |
| 34.800           | 34.800           | 31.394             |             | 201.5           | 201.5       | UD 3        |
| 34.800           | 34.800           | 31.275             |             | 312.5           | 312.5       | UD 4        |
| 34.800           | 34.800           | 33.022             |             | 415.5           | 415.5       | UD 5        |
| 34.800           | 34.800           | 29.967             |             | 518.5           | 518.5       | UD 6        |
| 34.800           | 34.800           | 31.036             |             | 571.5           | 571.5       | UD 7        |
| 34.800           | 34.800           | 29.943             |             | 641.5           | 641.5       | UD 8        |
| 34.800           | 34.800           | 32.214             |             | 690.5           | 690.5       | UD 9        |
| 34.800           | 34.800           | 32.601             |             | 762.5           | 762.5       | UD 10       |
| 34.800           | 34.800           | 32.135             |             | 840.5           | 840.5       | UD 11       |
| 34.800           | 34.800           | 33.151             |             | 867.0           | 867.0       | UD 12       |
| 34.800           | 34.800           | 30.044             |             | 977.0           | 977.0       | UD 13       |
| 34.800           | 34.800           | 32.442             |             | 1077.0          | 1077.0      | UD 14       |
| 34.800           | 34.800           | 29.085             |             | 1142.0          | 1142.0      | UD 15       |
| 34.800           | 34.800           | 29.064             |             | 1196.0          | 1196.0      | UD 16       |
| 34.800           | 34.800           | 30.278             |             | 1248.5          | 1248.5      | UD 17       |
| 34.800           | 34.800           | 29.181             |             | 1300.5          | 1300.5      | UD 18       |
| 34.800           | 34.800           | 30.646             |             | 1347.5          | 1347.5      | UD 19       |
| 34.800           | 34.800           | 29.289             |             | 1397.0          | 1397.0      | UD 20       |
| 34.800           | 34.800           | 32.230             |             | 1451.0          | 1451.0      | UD 21       |
| 34.800           | 34.800           | 33.063             |             | 1503.5          | 1503.5      | UD 22       |
| 34.800           | 34.800           | 30.018             |             | 1565.0          | 1565.0      | UD 23       |
| 34.800           | 34.800           | 32.144             |             | 1625.0          | 1625.0      | UD 24       |
| 34.800           | 34.800           | 32.122             |             | 1699.0          | 1699.0      | UD 25       |
| 34.800           | 34.800           | 29.734             |             | 1797.5          | 1797.5      | UD 26       |
| 34.800           | 34.800           | 32.806             |             | 1887.0          | 1887.0      | UD 27       |
| 34.800           | 34.800           | 31.296             |             | 1988.0          | 1988.0      | UD 28       |
| 34.800           | 34.800           | 33.039             |             | 2010.0          | 2010.0      | UD 29       |
| 34.800           | 34.800           | 34.233             |             | 2104.0          | 2104.0      | UD 30       |
| 34.800           | 34.800           | 26.074             |             | 2184.0          | 2184.0      | UD 31       |
| 34.800           | 34.800           | 32.656             |             | 2283.0          | 2283.0      | UD 32       |
| 34.800           | 34.800           | 26.162             |             | 2378.0          | 2378.0      | UD 33       |
| 34.800           | 34.800           | 32.462             |             | 2472.0          | 2472.0      | UD 34       |
| 34.800           | 34.800           | 26.261             |             | 2577.0          | 2577.0      | UD 35       |
| 34.800           | 34.800           | 32.371             |             | 2684.0          | 2684.0      | UD 36       |
| 34.800           | 34.800           | 26.489             |             | 2777.0          | 2777.0      | UD 37       |
| 34.800           | 34.800           | 32.371             |             | 2874.0          | 2874.0      | UD 38       |
| 34.800           | 34.800           | 26.598             |             | 2975.0          | 2975.0      | UD 39       |
| 34.800           | 34.800           | 32.402             |             | 3071.0          | 3071.0      | UD 40       |
| 34.800           | 34.800           | 26.704             |             | 3169.0          | 3169.0      | UD 41       |
| 34.800           | 34.800           | 32.813             |             | 3269.0          | 3269.0      | UD 42       |
| 34.800           | 34.800           | 26.813             |             | 3371.0          | 3371.0      | UD 43       |
| 34.800           | 34.800           | 32.503             |             | 3476.0          | 3476.0      | UD 44       |
| 34.800           | 34.800           | 26.916             |             | 3583.0          | 3583.0      | UD 45       |
| 34.800           | 34.800           | 32.015             |             | 3692.0          | 3692.0      | UD 46       |
| 34.800           | 34.800           | 27.637             |             | 3804.0          | 3804.0      | UD 47       |
| 34.800           | 34.800           | 26.692             |             | 3919.0          | 3919.0      | UD 48       |
| 34.800           | 34.800           | 32.744             |             | 4037.0          | 4037.0      | UD 49       |
| 34.800           | 34.800           | 26.744             |             | 4158.0          | 4158.0      | UD 50       |
| 34.800           | 34.800           | 33.240             |             | 4282.0          | 4282.0      | UD 51       |
| 34.800           | 34.800           | 26.814             |             | 4409.0          | 4409.0      | UD 52       |
| 34.800           | 34.800           | 32.614             |             | 4539.0          | 4539.0      | UD 53       |
| 34.800           | 34.800           | 26.924             |             | 4672.0          | 4672.0      | UD 54       |
| 34.800           | 34.800           | 32.614             |             | 4808.0          | 4808.0      | UD 55       |
| 34.800           | 34.800           | 26.988             |             | 4947.0          | 4947.0      | UD 56       |
| 34.800           | 34.800           | 32.614             |             | 5089.0          | 5089.0      | UD 57       |
| 34.800           | 34.800           | 26.988             |             | 5234.0          | 5234.0      | UD 58       |
| 34.800           | 34.800           | 32.614             |             | 5382.0          | 5382.0      | UD 59       |
| 34.800           | 34.800           | 26.988             |             | 5533.0          | 5533.0      | UD 60       |
| 34.800           | 34.800           | 32.614             |             | 5687.0          | 5687.0      | UD 61       |
| 34.800           | 34.800           | 26.988             |             | 5844.0          | 5844.0      | UD 62       |
| 34.800           | 34.800           | 32.614             |             | 6004.0          | 6004.0      | UD 63       |
| 34.800           | 34.800           | 26.988             |             | 6167.0          | 6167.0      | UD 64       |
| 34.800           | 34.800           | 32.614             |             | 6333.0          | 6333.0      | UD 65       |
| 34.800           | 34.800           | 26.988             |             | 6502.0          | 6502.0      | UD 66       |
| 34.800           | 34.800           | 32.614             |             | 6674.0          | 6674.0      | UD 67       |
| 34.800           | 34.800           | 26.988             |             | 6849.0          | 6849.0      | UD 68       |
| 34.800           | 34.800           | 32.614             |             | 7027.0          | 7027.0      | UD 69       |
| 34.800           | 34.800           | 26.988             |             | 7208.0          | 7208.0      | UD 70       |
| 34.800           | 34.800           | 32.614             |             | 7392.0          | 7392.0      | UD 71       |
| 34.800           | 34.800           | 26.988             |             | 7579.0          | 7579.0      | UD 72       |
| 34.800           | 34.800           | 32.614             |             | 7769.0          | 7769.0      | UD 73       |
| 34.800           | 34.800           | 26.988             |             | 7962.0          | 7962.0      | UD 74       |
| 34.800           | 34.800           | 32.614             |             | 8158.0          | 8158.0      | UD 75       |
| 34.800           | 34.800           | 26.988             |             | 8357.0          | 8357.0      | UD 76       |
| 34.800           | 34.800           | 32.614             |             | 8559.0          | 8559.0      | UD 77       |
| 34.800           | 34.800           | 26.988             |             | 8764.0          | 8764.0      | UD 78       |
| 34.800           | 34.800           | 32.614             |             | 8972.0          | 8972.0      | UD 79       |
| 34.800           | 34.800           | 26.988             |             | 9183.0          | 9183.0      | UD 80       |
| 34.800           | 34.800           | 32.614             |             | 9397.0          | 9397.0      | UD 81       |
| 34.800           | 34.800           | 26.988             |             | 9614.0          | 9614.0      | UD 82       |
| 34.800           | 34.800           | 32.614             |             | 9834.0          | 9834.0      | UD 83       |
| 34.800           | 34.800           | 26.988             |             | 10057.0         | 10057.0     | UD 84       |
| 34.800           | 34.800           | 32.614             |             | 10283.0         | 10283.0     | UD 85       |
| 34.800           | 34.800           | 26.988             |             | 10512.0         | 10512.0     | UD 86       |
| 34.800           | 34.800           | 32.614             |             | 10744.0         | 10744.0     | UD 87       |
| 34.800           | 34.800           | 26.988             |             | 10979.0         | 10979.0     | UD 88       |
| 34.800           | 34.800           | 32.614             |             | 11217.0         | 11217.0     | UD 89       |
| 34.800           | 34.800           | 26.988             |             | 11458.0         | 11458.0     | UD 90       |
| 34.800           | 34.800           | 32.614             |             | 11702.0         | 11702.0     | UD 91       |
| 34.800           | 34.800           | 26.988             |             | 11949.0         | 11949.0     | UD 92       |
| 34.800           | 34.800           | 32.614             |             | 12199.0         | 12199.0     | UD 93       |
| 34.800           | 34.800           | 26.988             |             | 12452.0         | 12452.0     | UD 94       |
| 34.800           | 34.800           | 32.614             |             | 12708.0         | 12708.0     | UD 95       |
| 34.800           | 34.800           | 26.988             |             | 12967.0         | 12967.0     | UD 96       |
| 34.800           | 34.800           | 32.614             |             | 13229.0         | 13229.0     | UD 97       |
| 34.800           | 34.800           | 26.988             |             | 13494.0         | 13494.0     | UD 98       |
| 34.800           | 34.800           | 32.614             |             | 13762.0         | 13762.0     | UD 99       |
| 34.800           | 34.800           | 26.988             |             | 14033.0         | 14033.0     | UD 100      |

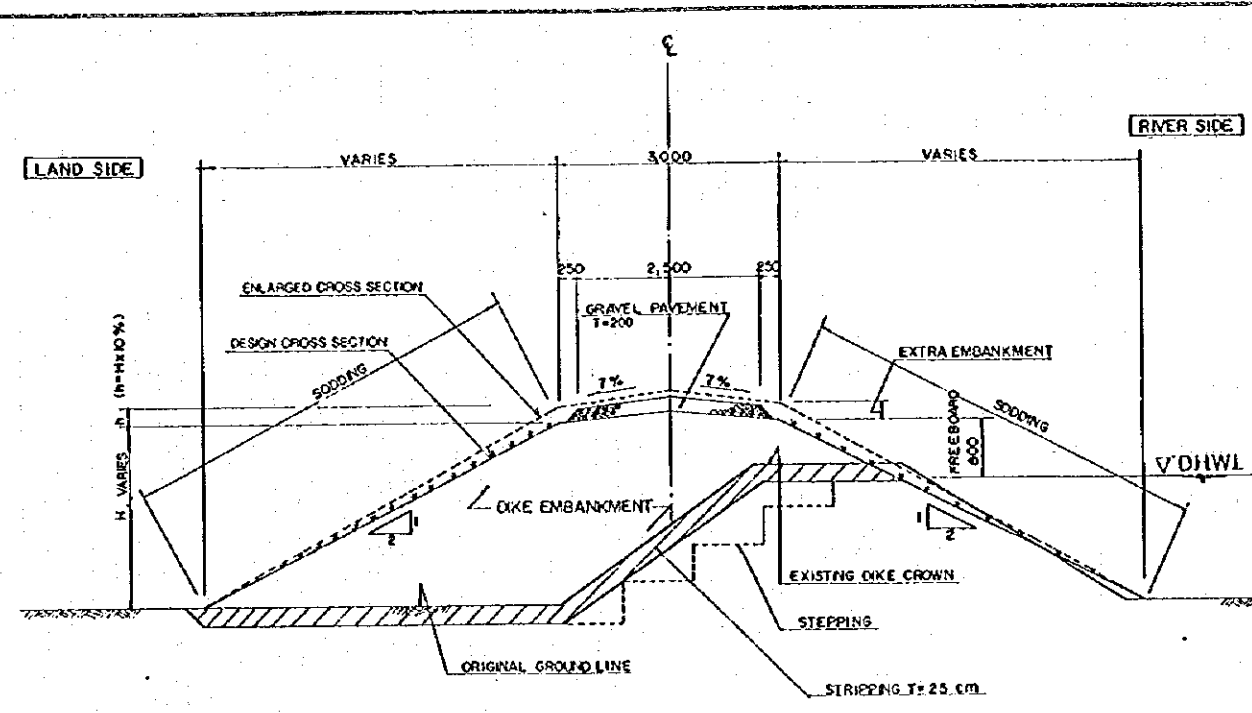
LONGITUDINAL PROFILE OF DELI RIVER RETARDING CHANNEL



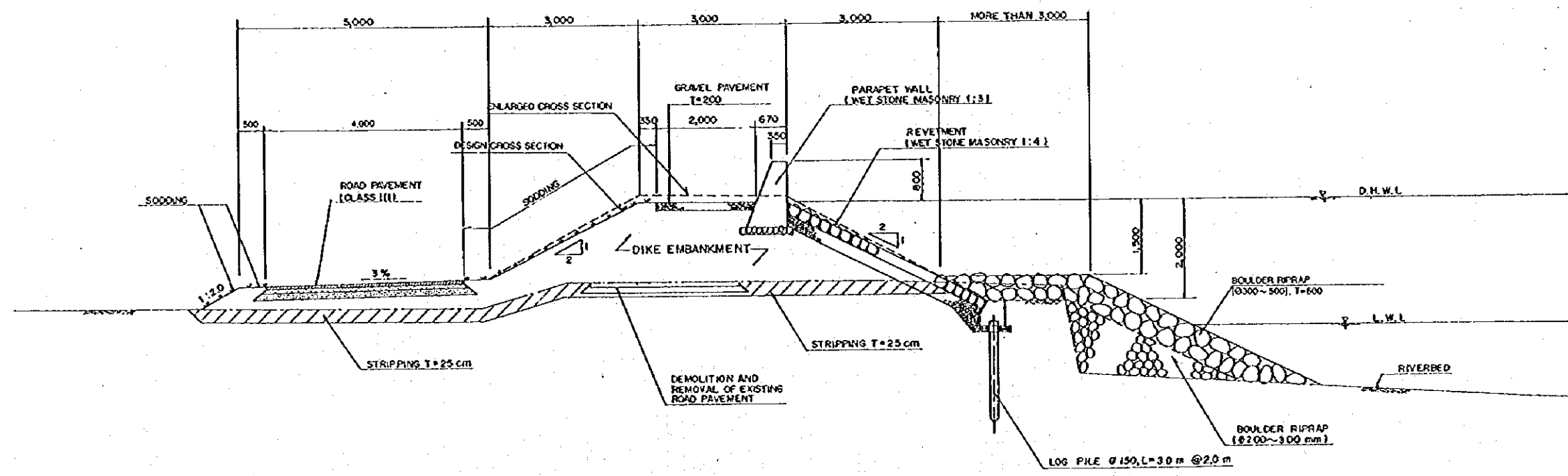
|   |  |
|---|--|
| DETAILED DESIGN STUDY ON<br>MEDAN FLOOD CONTROL PROJECT<br>JAPAN INTERNATIONAL COOPERATION AGENCY | DWG. 6.1.10<br>LONGITUDINAL PROFILE<br>OF DELI RIVER RETARDING CHANNEL |
|---|--|



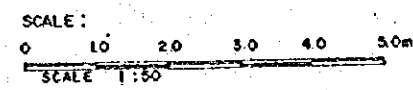
TYPICAL CROSS SECTION OF NEW DIKE  
SCALE 1:50



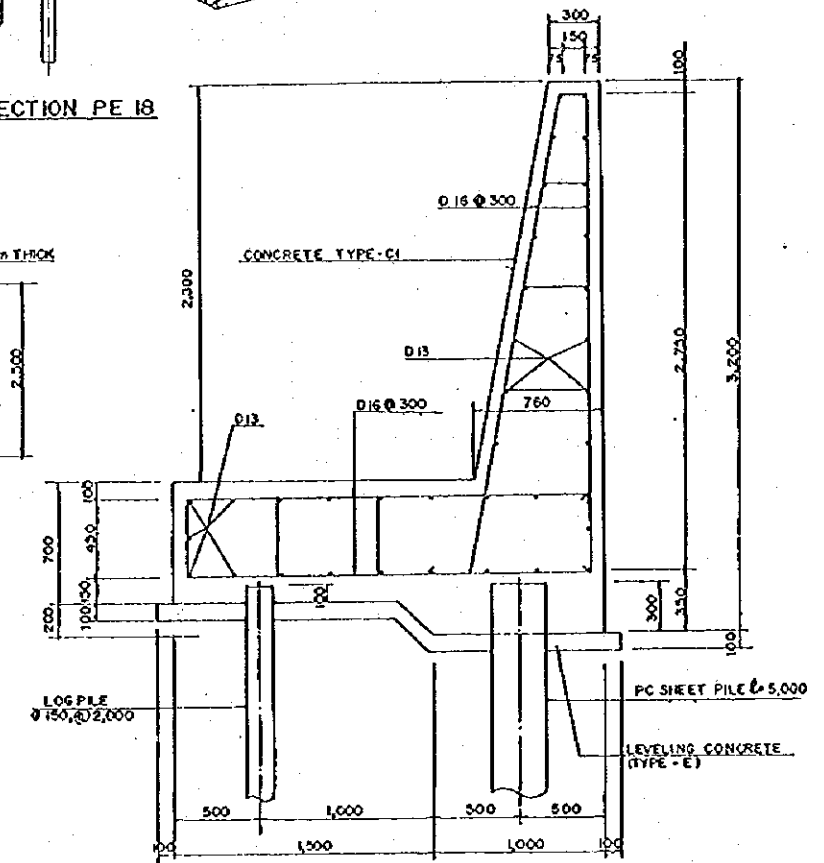
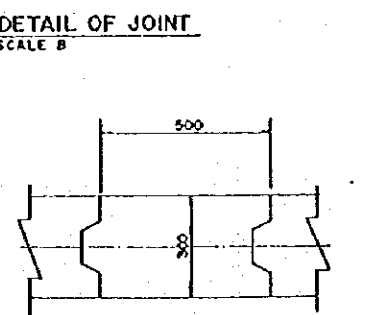
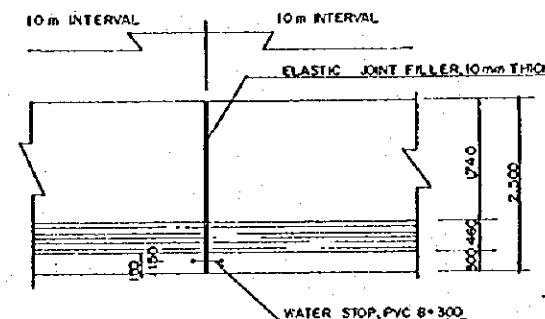
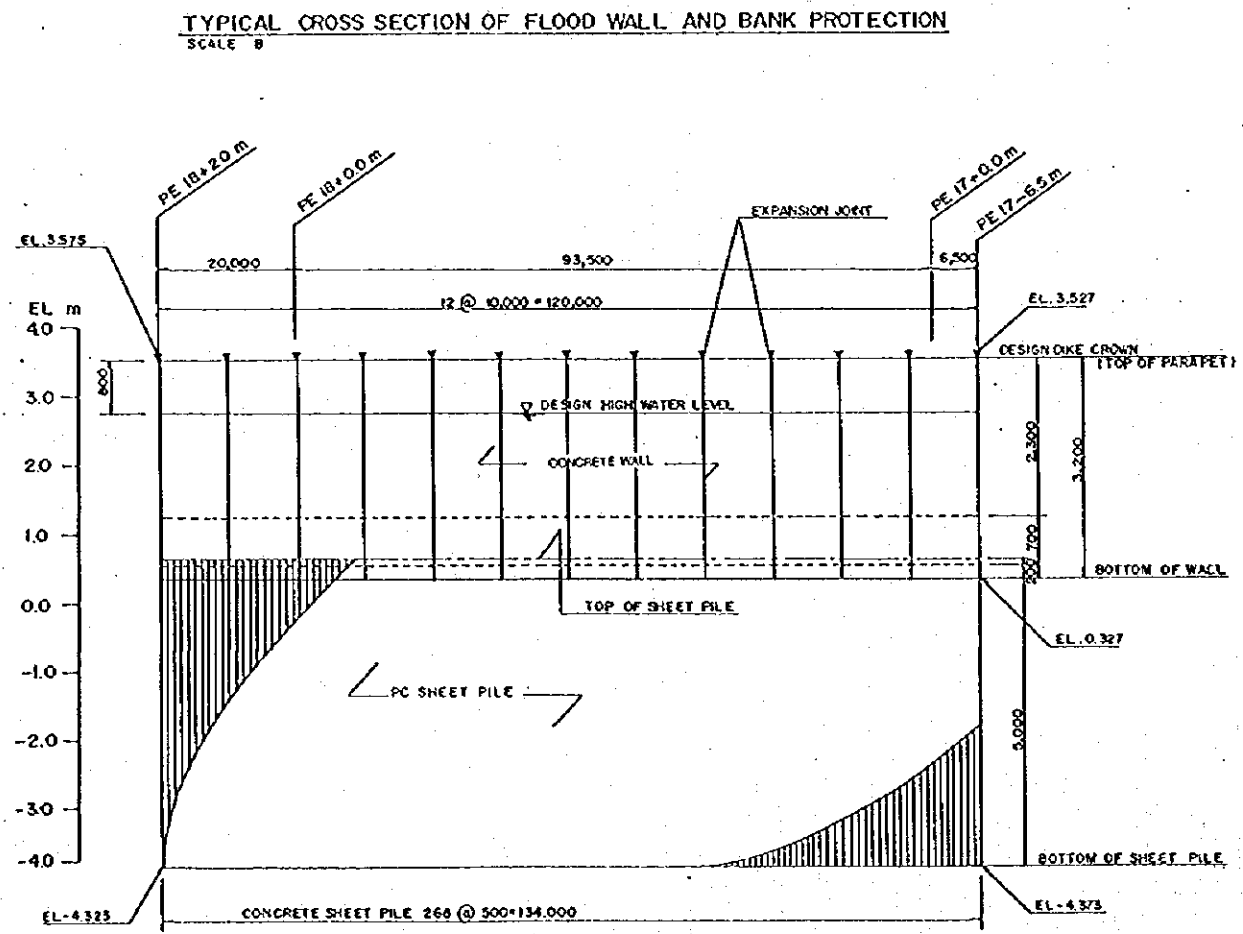
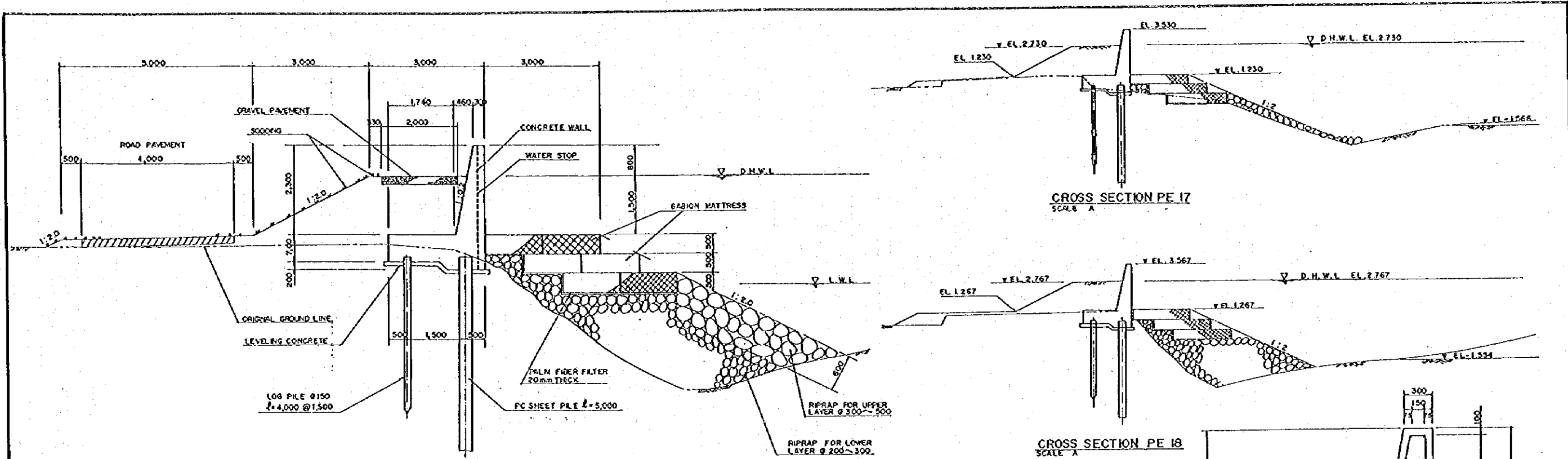
TYPICAL SECTION OF DIKE RAISED ON EXISTING DIKE  
SCALE 1:50



TYPICAL CROSS SECTION OF COMBINATION DIKE OF EMBANKMENT AND PARAPET WALL  
PERCUT RIVER (PE 14+70m TO PE 33±0m, LEFT BANK)  
SCALE 1:50



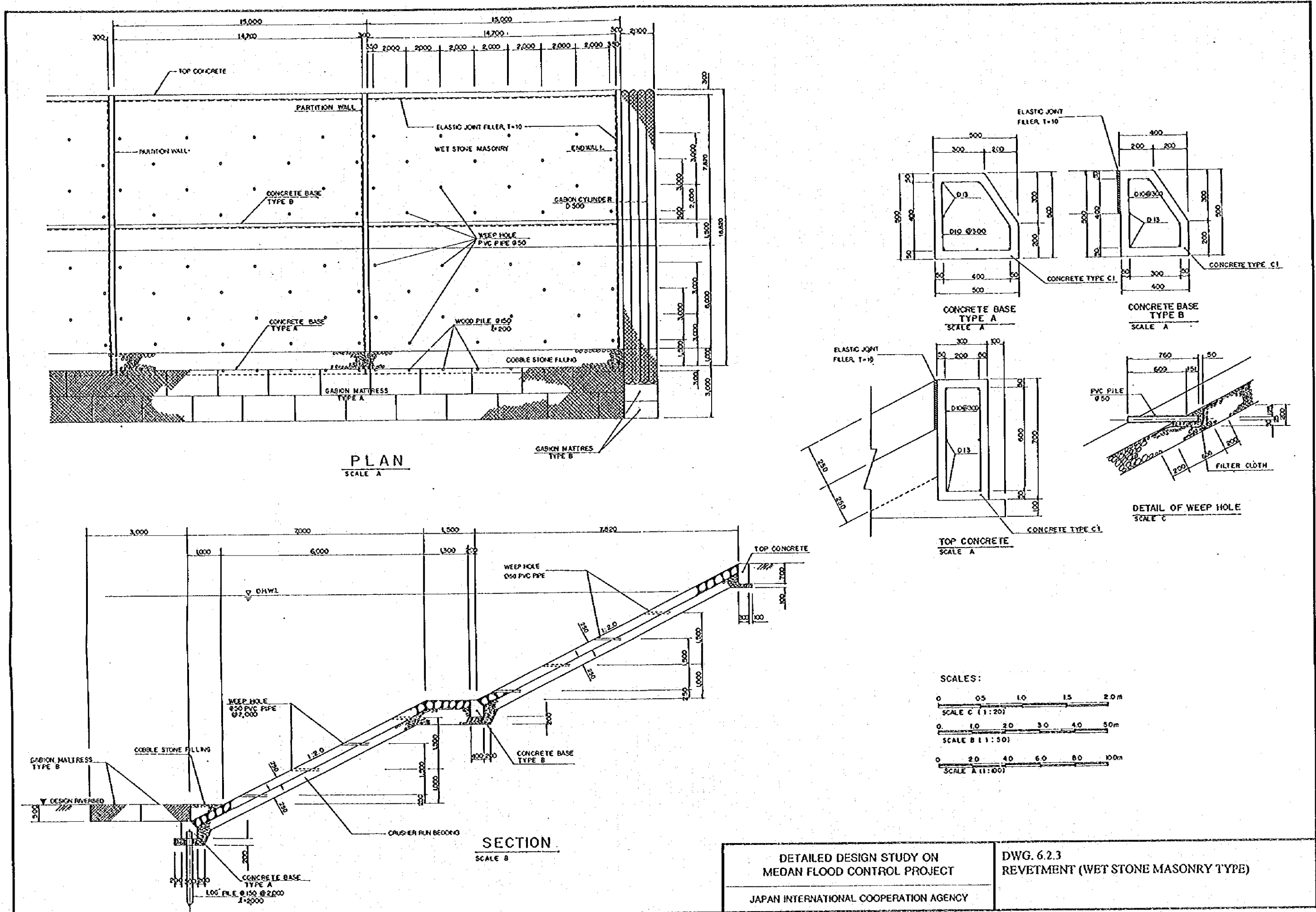
|   |   |
|---|---|
| DETAILED DESIGN STUDY ON<br>MEDAN FLOOD CONTROL PROJECT<br>JAPAN INTERNATIONAL COOPERATION AGENCY | DWG. 6.2.1<br>TYPICAL CROSS SECTION OF DIKE |
|---|---|



SCALE  
0 2.0 4.0 6.0 8.0 10.0 m  
SCALE A 1:100  
SCALE B 1:50

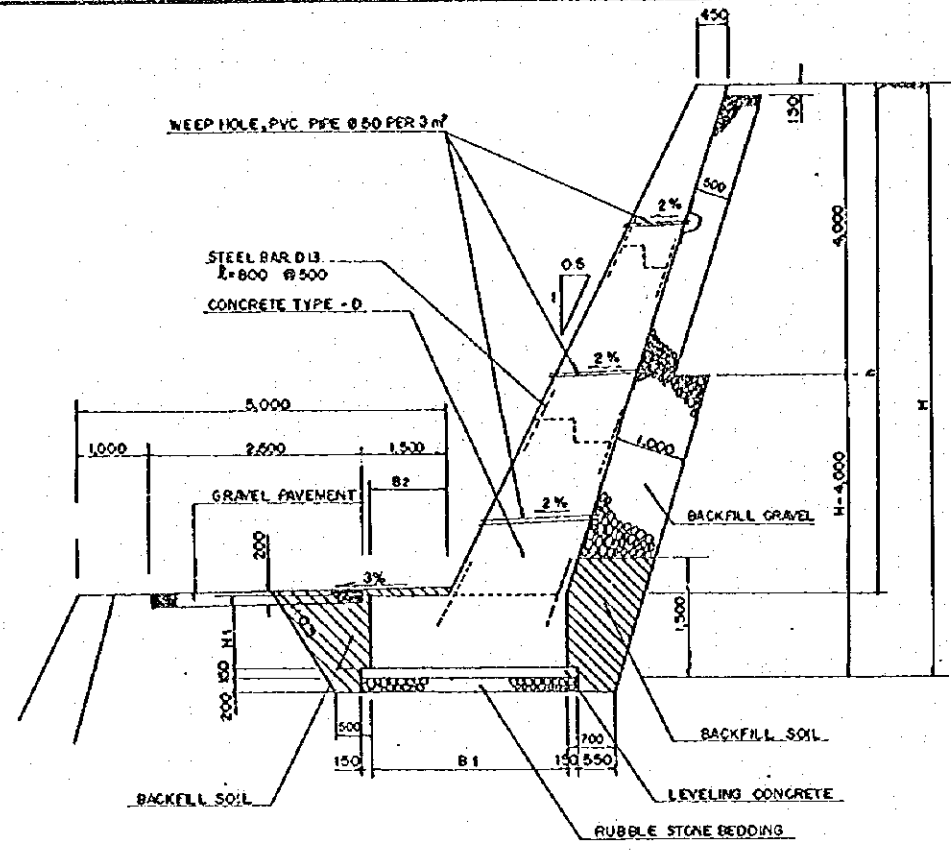
DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

DWG. 6.2.2  
FLOOD RETAINING WALL OF PERCUT RIVER

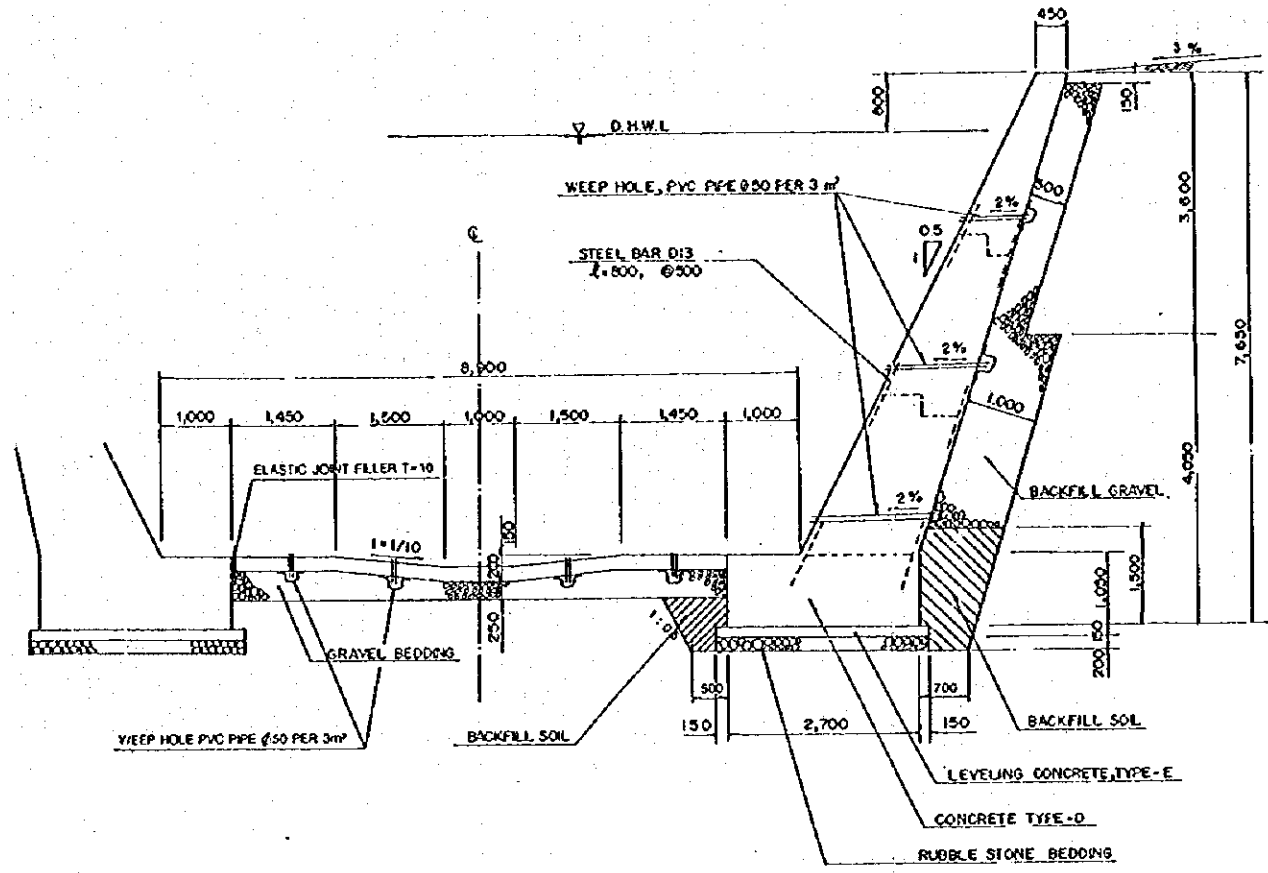


DETAILED DESIGN STUDY ON  
 MEDAN FLOOD CONTROL PROJECT  
 JAPAN INTERNATIONAL COOPERATION AGENCY

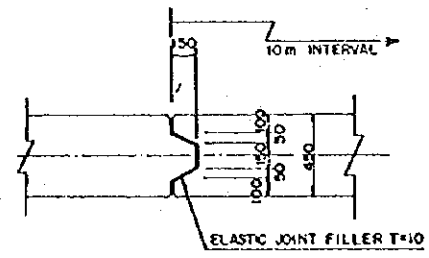
DWG. 6.2.3  
 REVETMENT (WET STONE MASONRY TYPE)



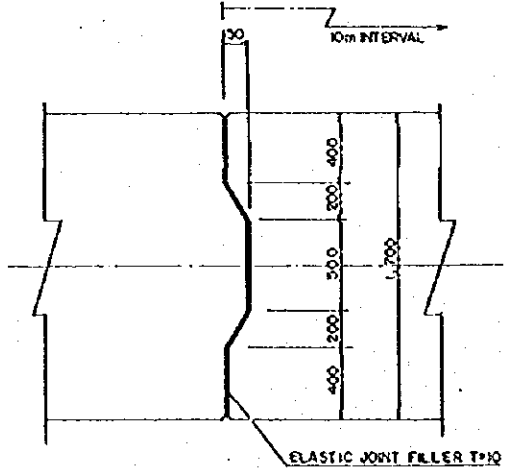
CROSS SECTION OF UPPER WALL  
SCALE 1:50



CROSS SECTION OF LOWER WALL  
SCALE 1:50



TOP OF WALL  
SCALE 1:20

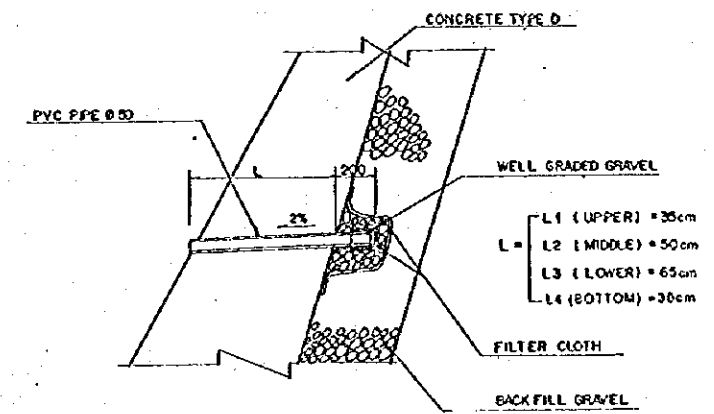


BOTTOM OF WALL  
SCALE 1:20

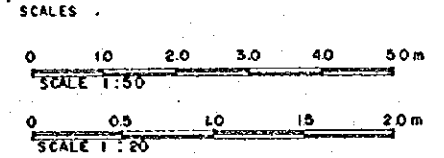
DETAIL OF EXPANSION JOINT

DIMENSIONS OF UPPER WALL

| NO. | h (m) | H1 (m) | B1 (m) | B2 (m) | NO. | h (m) | H1 (m) | B1 (m) | B2 (m) |
|-----|-------|--------|--------|--------|-----|-------|--------|--------|--------|
| 1   | 2.00  | 0.55   | 1.30   | 0.46   | 26  | 4.00  | 0.85   | 2.15   | 0.77   |
| 2   | 2.10  | 0.55   | 1.30   | 0.46   | 27  | 4.90  | 0.85   | 2.15   | 0.77   |
| 3   | 2.30  | 0.55   | 1.30   | 0.46   | 28  | 5.00  | 0.90   | 2.30   | 0.83   |
| 4   | 2.40  | 0.60   | 1.45   | 0.52   | 29  | 5.10  | 0.90   | 2.30   | 0.83   |
| 5   | 2.50  | 0.60   | 1.46   | 0.52   | 30  | 5.20  | 0.90   | 2.30   | 0.83   |
| 6   | 2.60  | 0.60   | 1.45   | 0.52   | 31  | 5.30  | 0.90   | 2.30   | 0.83   |
| 7   | 2.70  | 0.60   | 1.45   | 0.52   | 32  | 5.40  | 0.90   | 2.30   | 0.83   |
| 8   | 2.90  | 0.65   | 1.60   | 0.58   | 33  | 5.50  | 0.95   | 2.45   | 0.89   |
| 9   | 3.00  | 0.65   | 1.60   | 0.58   | 34  | 5.60  | 0.95   | 2.45   | 0.89   |
| 10  | 3.10  | 0.65   | 1.60   | 0.58   | 35  | 5.70  | 0.95   | 2.45   | 0.89   |
| 11  | 3.20  | 0.70   | 1.75   | 0.64   | 36  | 5.80  | 1.00   | 2.55   | 0.90   |
| 12  | 3.30  | 0.70   | 1.75   | 0.64   | 37  | 5.90  | 1.00   | 2.55   | 0.90   |
| 13  | 3.40  | 0.70   | 1.75   | 0.64   | 38  | 6.00  | 1.00   | 2.65   | 0.90   |
| 14  | 3.50  | 0.70   | 1.75   | 0.64   | 39  | 6.10  | 1.00   | 2.55   | 0.90   |
| 15  | 3.60  | 0.75   | 1.85   | 0.65   | 40  | 6.20  | 1.00   | 2.55   | 0.90   |
| 16  | 3.80  | 0.75   | 1.85   | 0.65   | 41  | 6.30  | 1.05   | 2.70   | 0.96   |
| 17  | 3.90  | 0.75   | 1.85   | 0.65   | 42  | 6.40  | 1.05   | 2.70   | 0.96   |
| 18  | 4.00  | 0.75   | 1.85   | 0.65   | 43  | 6.50  | 1.05   | 2.70   | 0.96   |
| 19  | 4.10  | 0.80   | 2.00   | 0.71   | 44  | 6.60  | 1.05   | 2.70   | 0.96   |
| 20  | 4.20  | 0.80   | 2.00   | 0.71   | 45  | 6.70  | 1.10   | 2.85   | 1.02   |
| 21  | 4.30  | 0.80   | 2.00   | 0.71   | 46  | 6.80  | 1.10   | 2.85   | 1.02   |
| 22  | 4.40  | 0.80   | 2.00   | 0.71   | 47  | 6.90  | 1.10   | 2.85   | 1.02   |
| 23  | 4.50  | 0.80   | 2.00   | 0.71   | 48  | 7.00  | 1.10   | 2.85   | 1.02   |
| 24  | 4.60  | 0.85   | 2.15   | 0.77   | 49  | 7.10  | 1.10   | 2.85   | 1.02   |
| 25  | 4.70  | 0.85   | 2.15   | 0.77   |     |       |        |        |        |

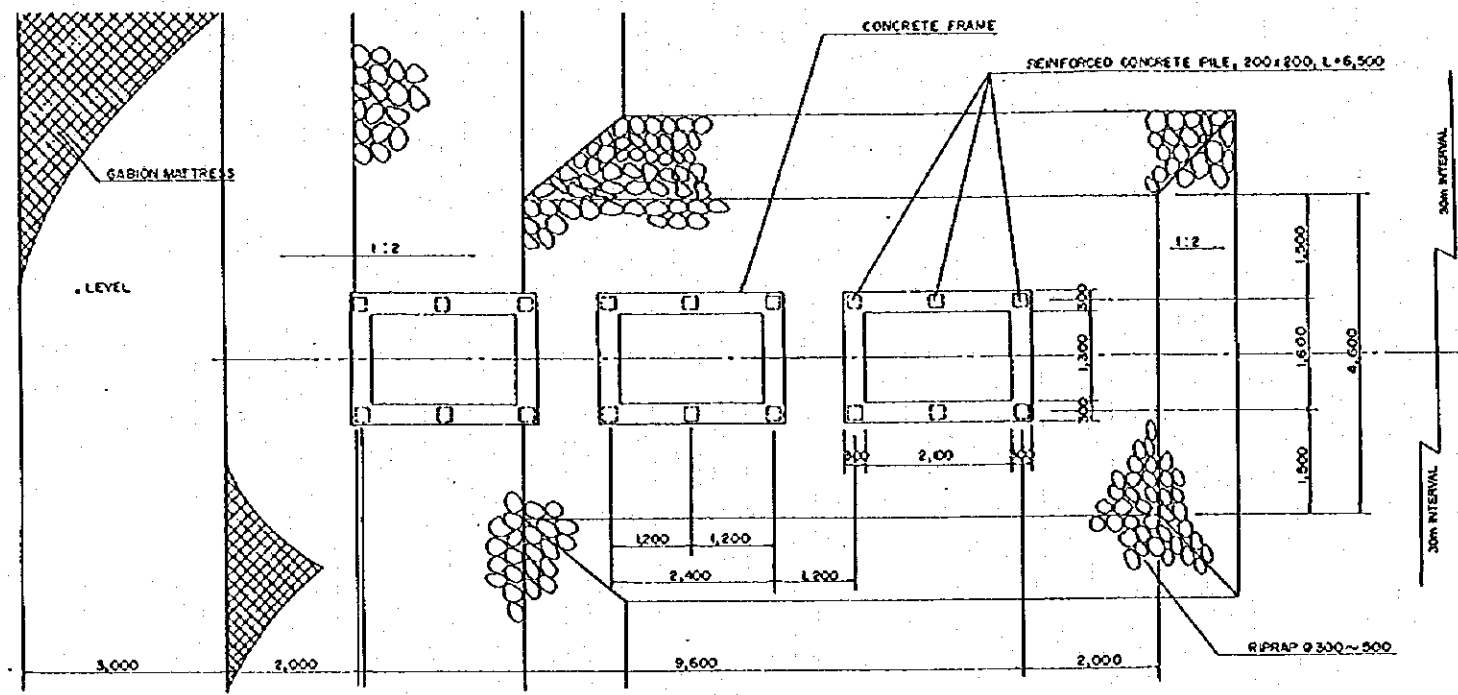


DETAIL OF WEEP HOLE  
SCALE 1:20

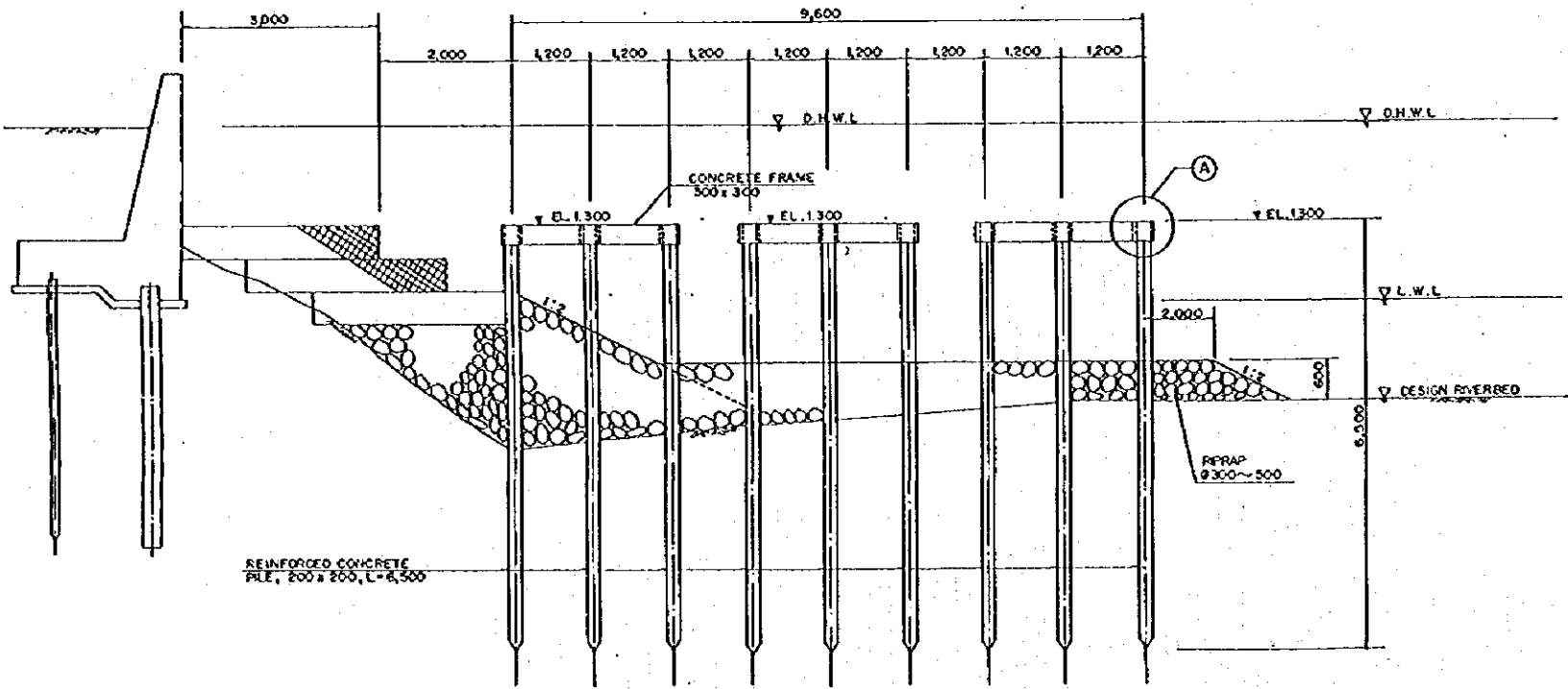


DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

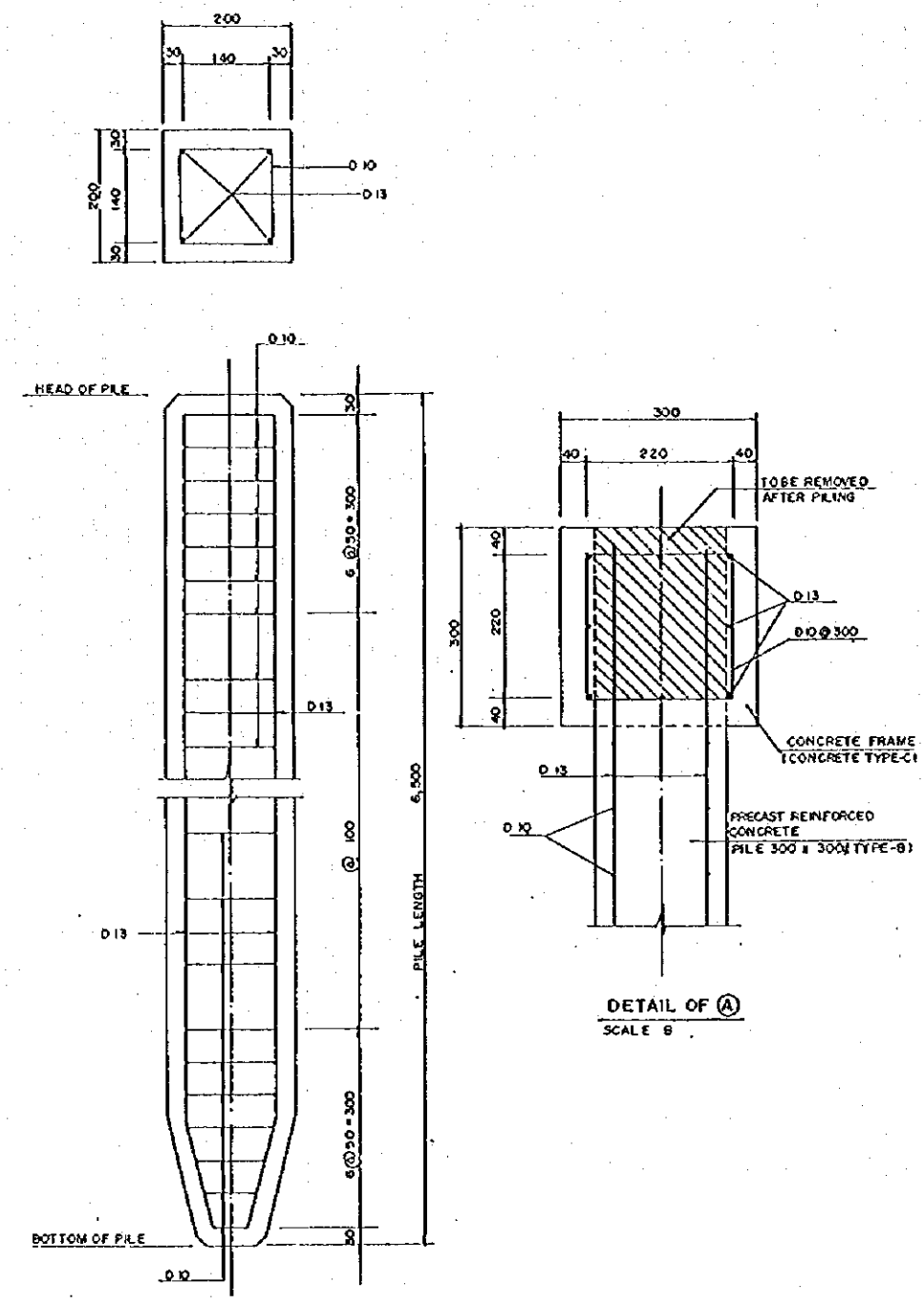
DWG. 6.2.4  
LEANING WALL FOR FLOODWAY



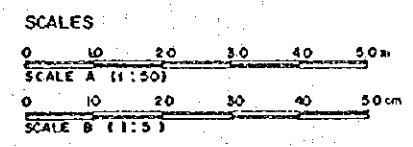
PLAN (UNIT mm)  
SCALE A



PROFILE OF GROIN AND BANK PROTECTION (UNIT mm)  
SCALE A

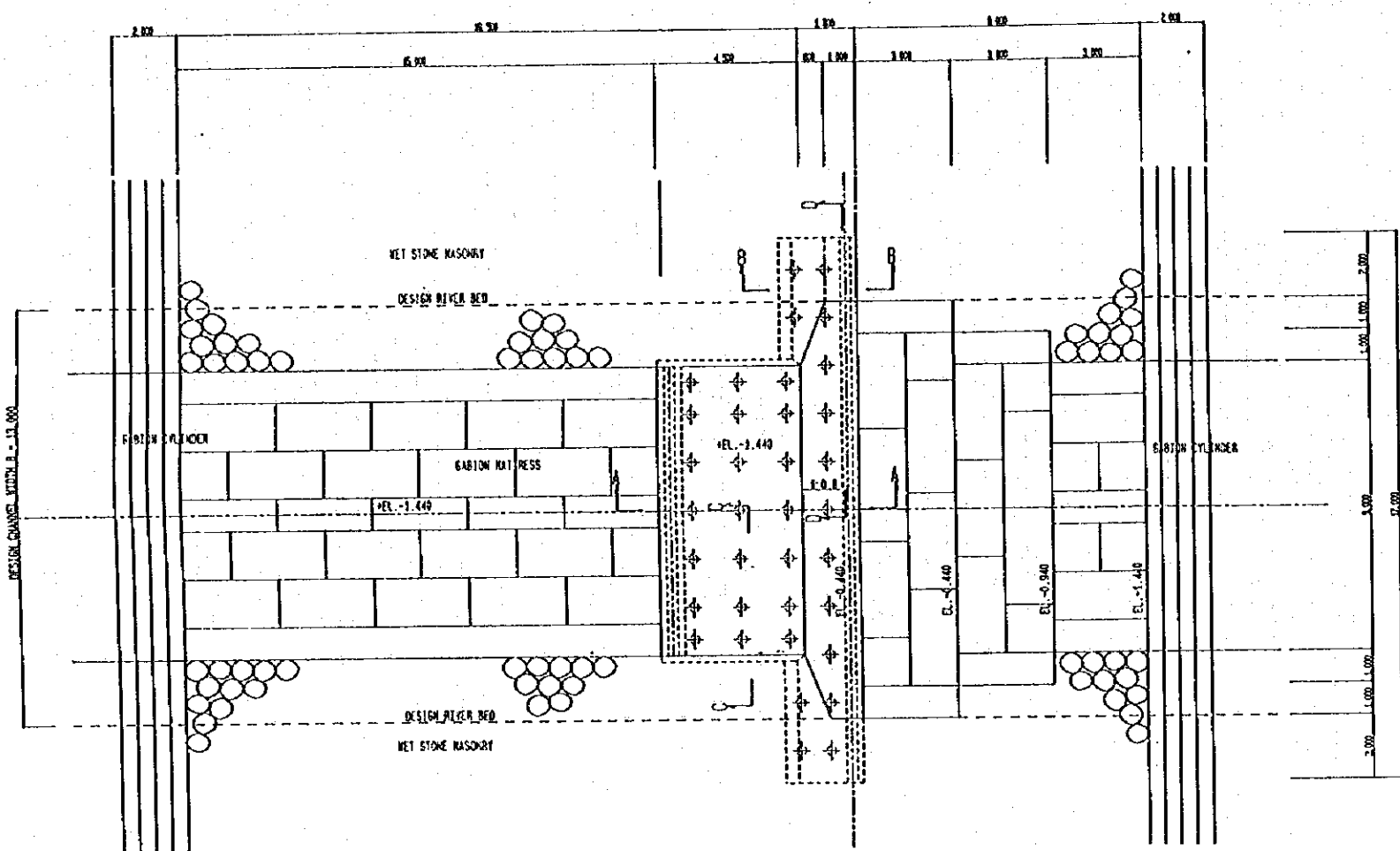


PILE ELEVATION AND CROSS SECTION (UNIT mm)  
SCALE B

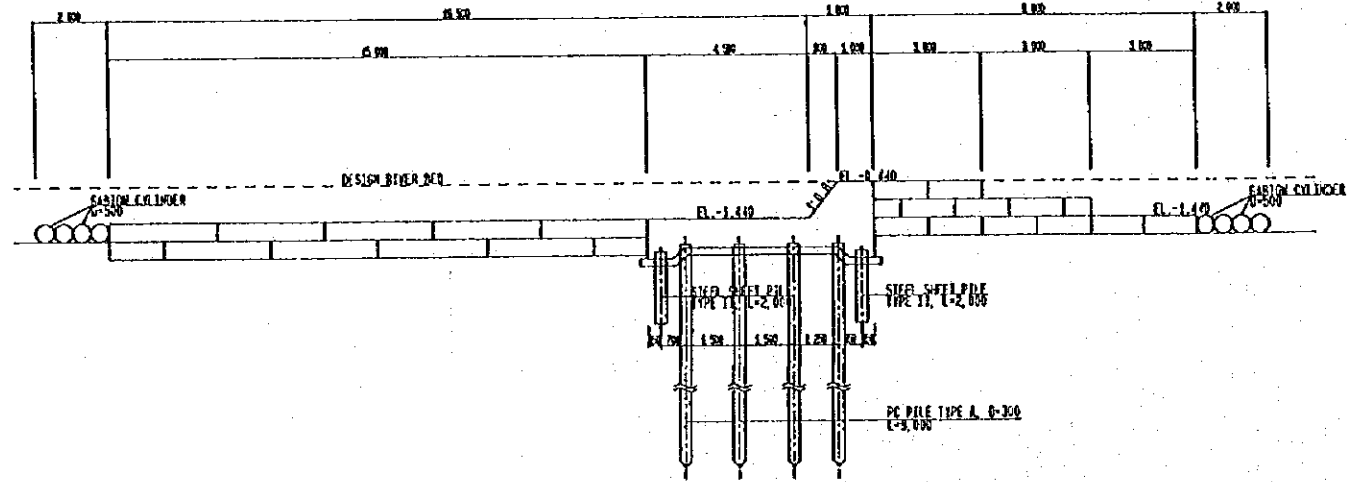


|   |   |
|---|---|
| <p>DETAILED DESIGN STUDY ON<br/>MEDAN FLOOD CONTROL PROJECT</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> | <p>DWG. 6.2.5<br/>GROIN IN PERCUT RIVER</p> |
|---|---|

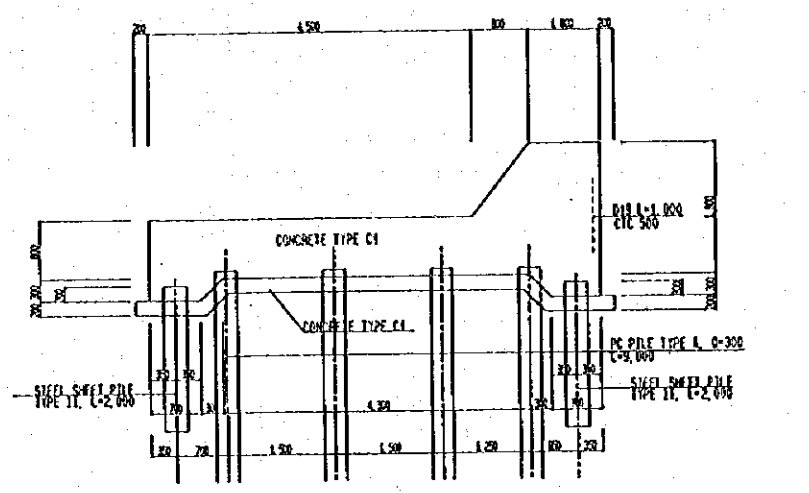




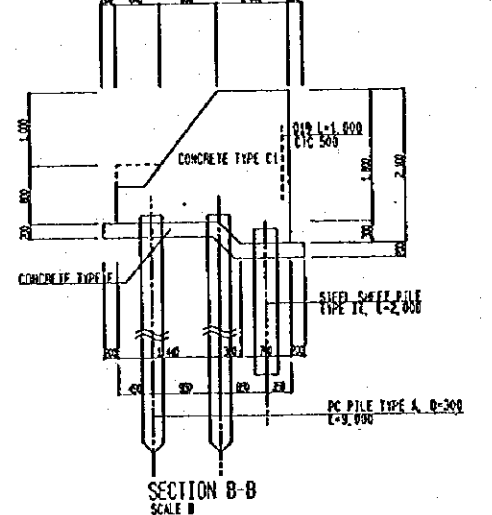
PLAN  
SCALE A



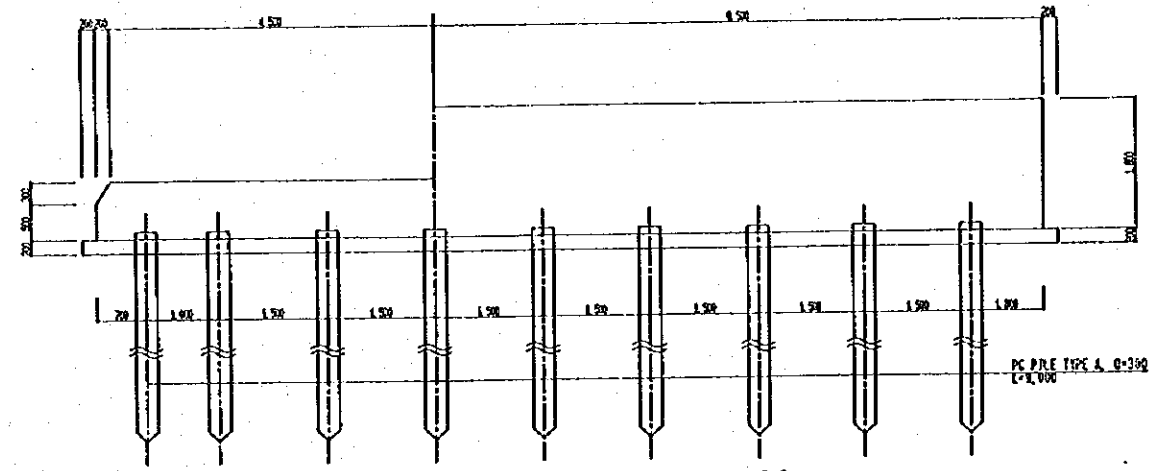
PROFILE  
SCALE A



SECTION A-A  
SCALE B

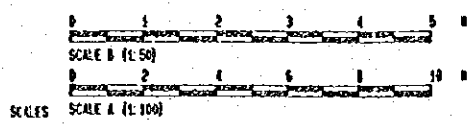


SECTION B-B  
SCALE B

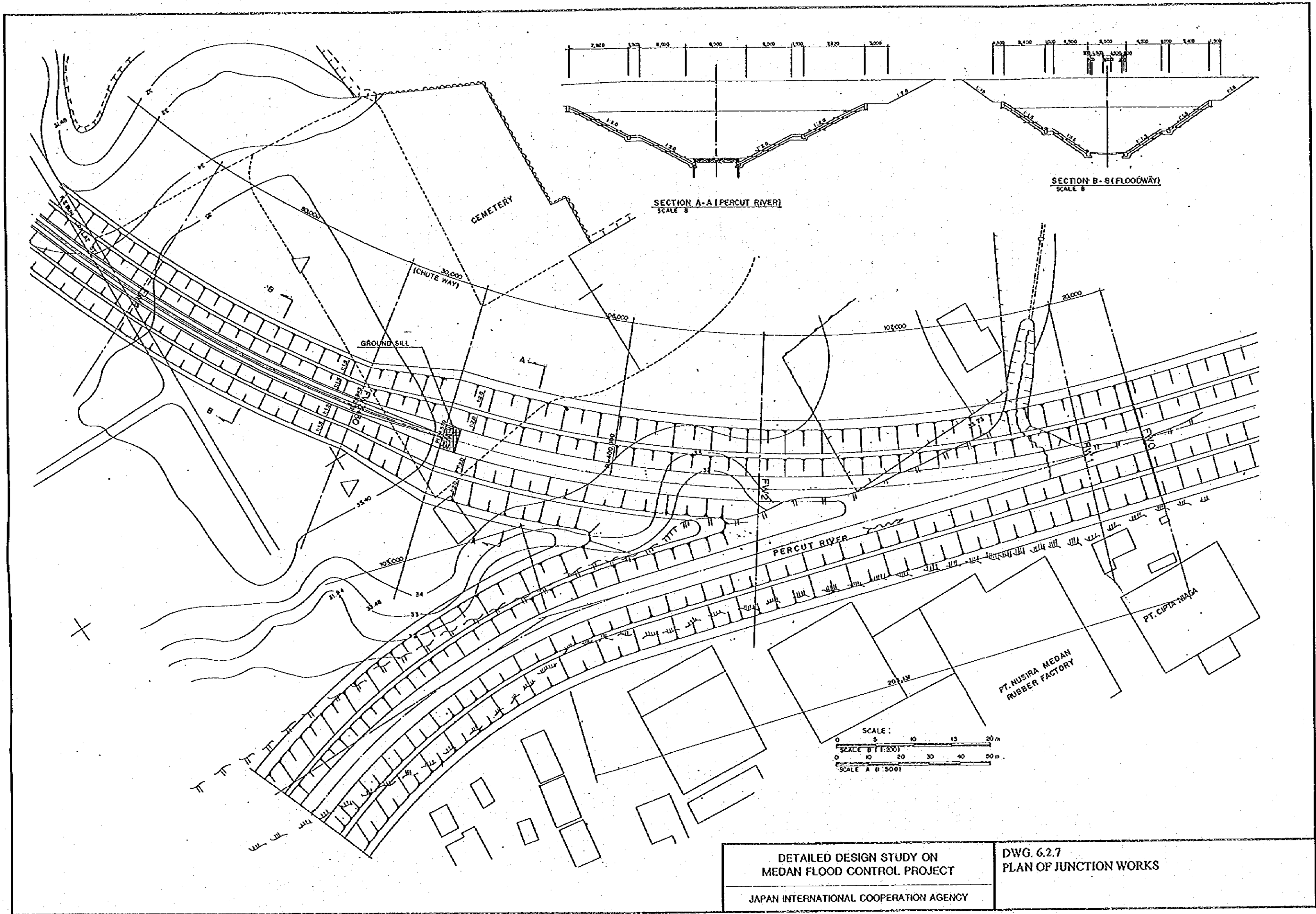


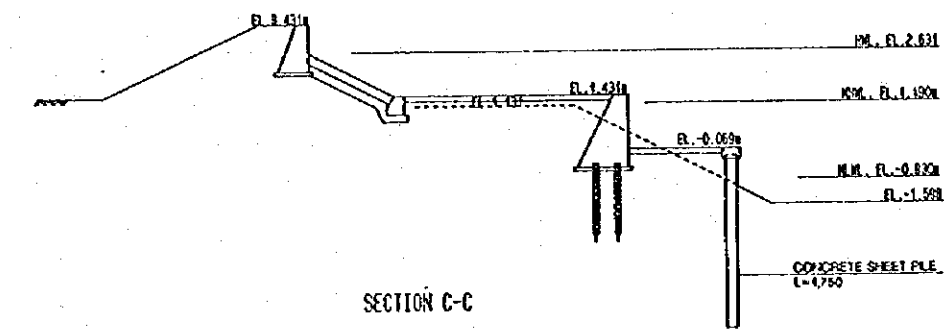
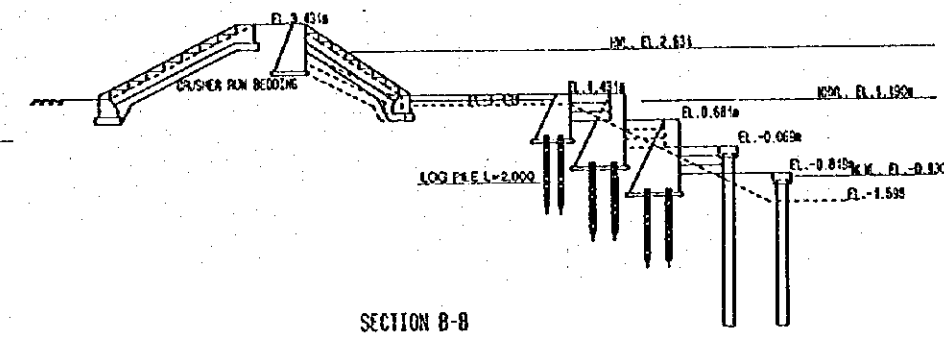
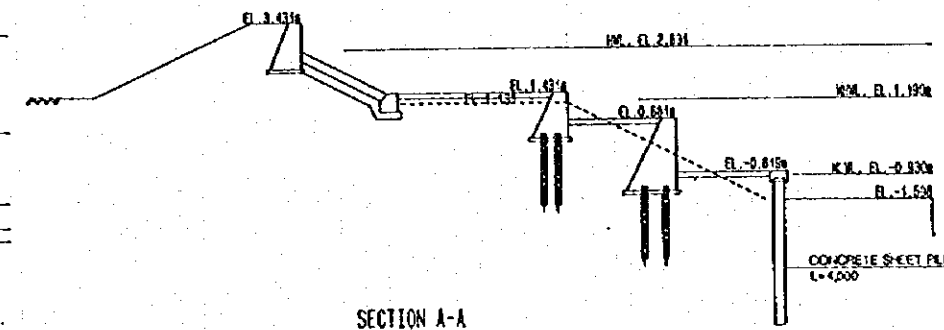
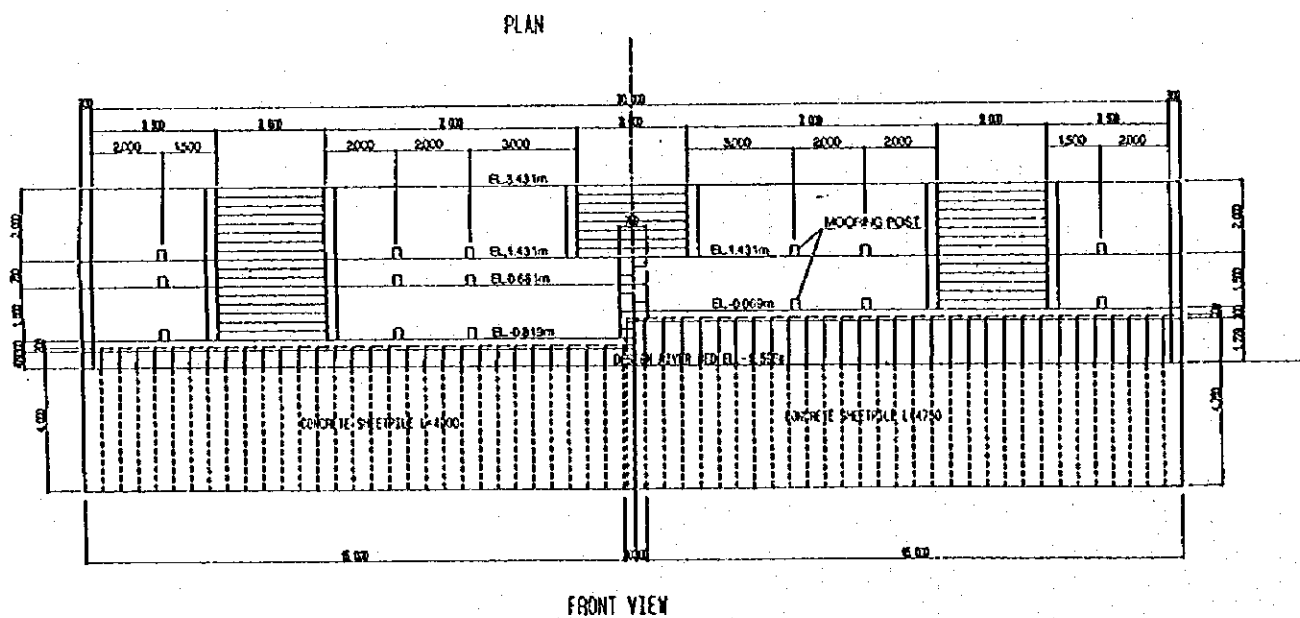
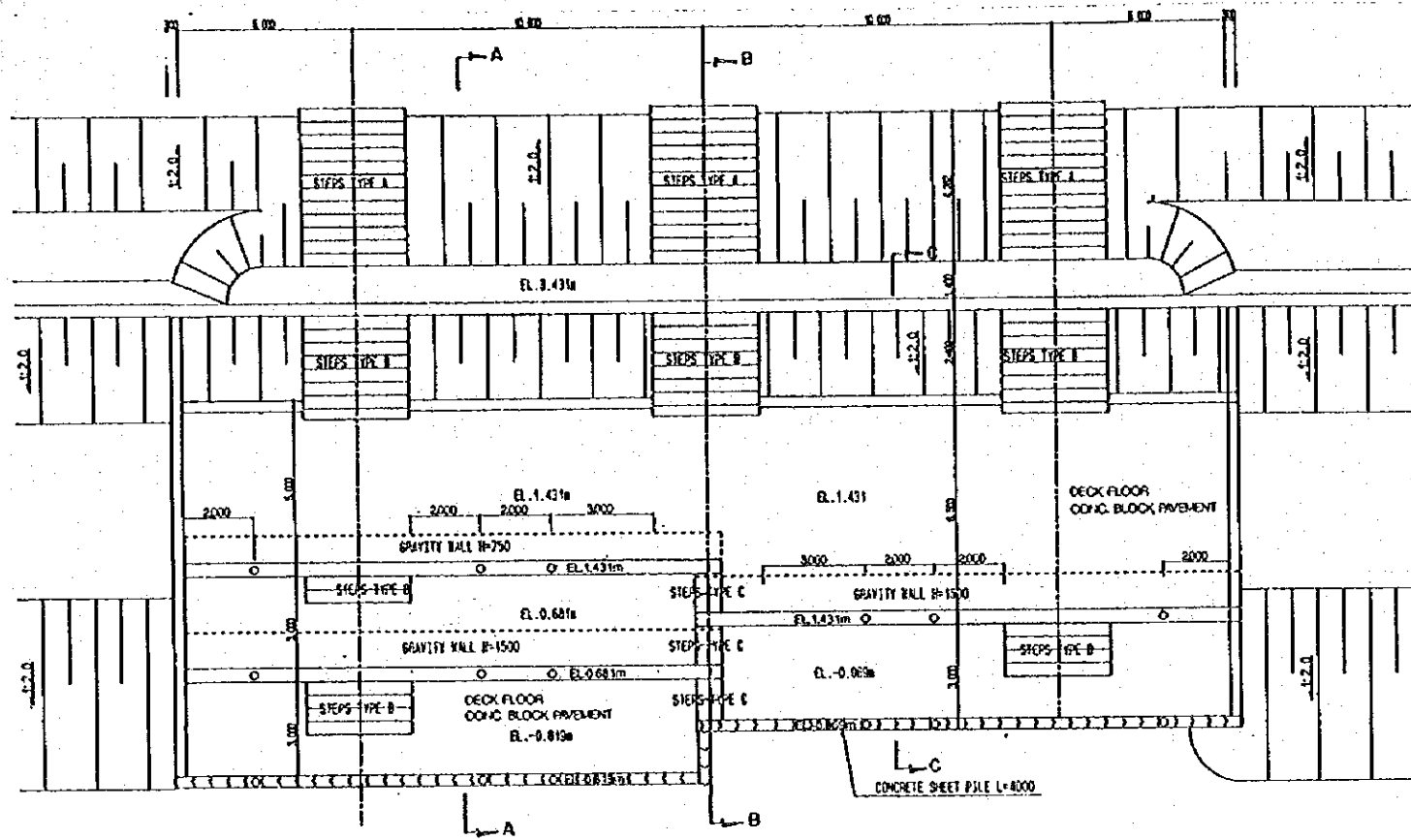
SECTION C-C  
SCALE B

SECTION D-D  
SCALE B



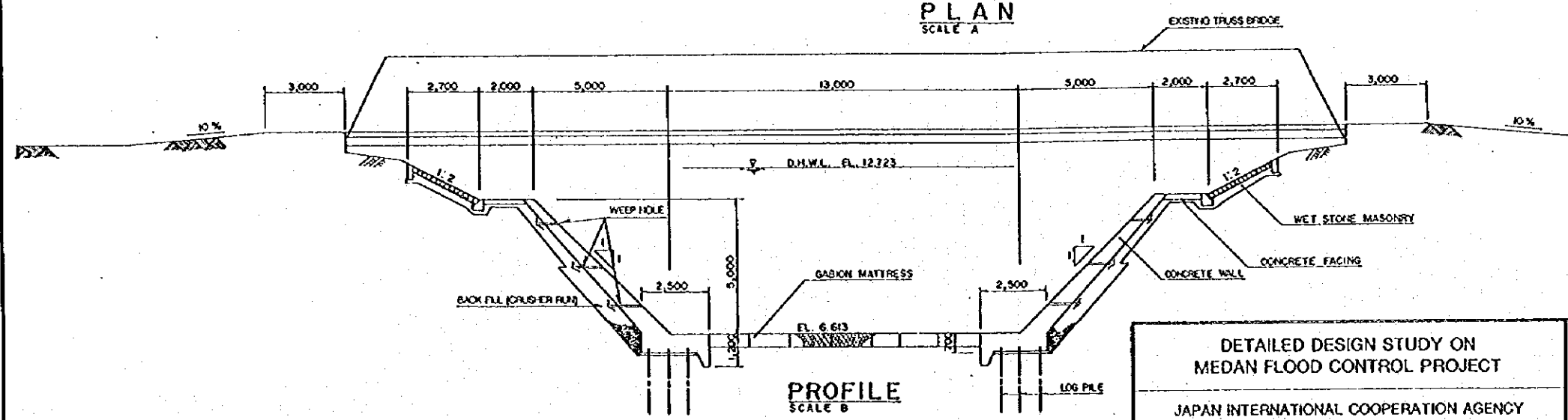
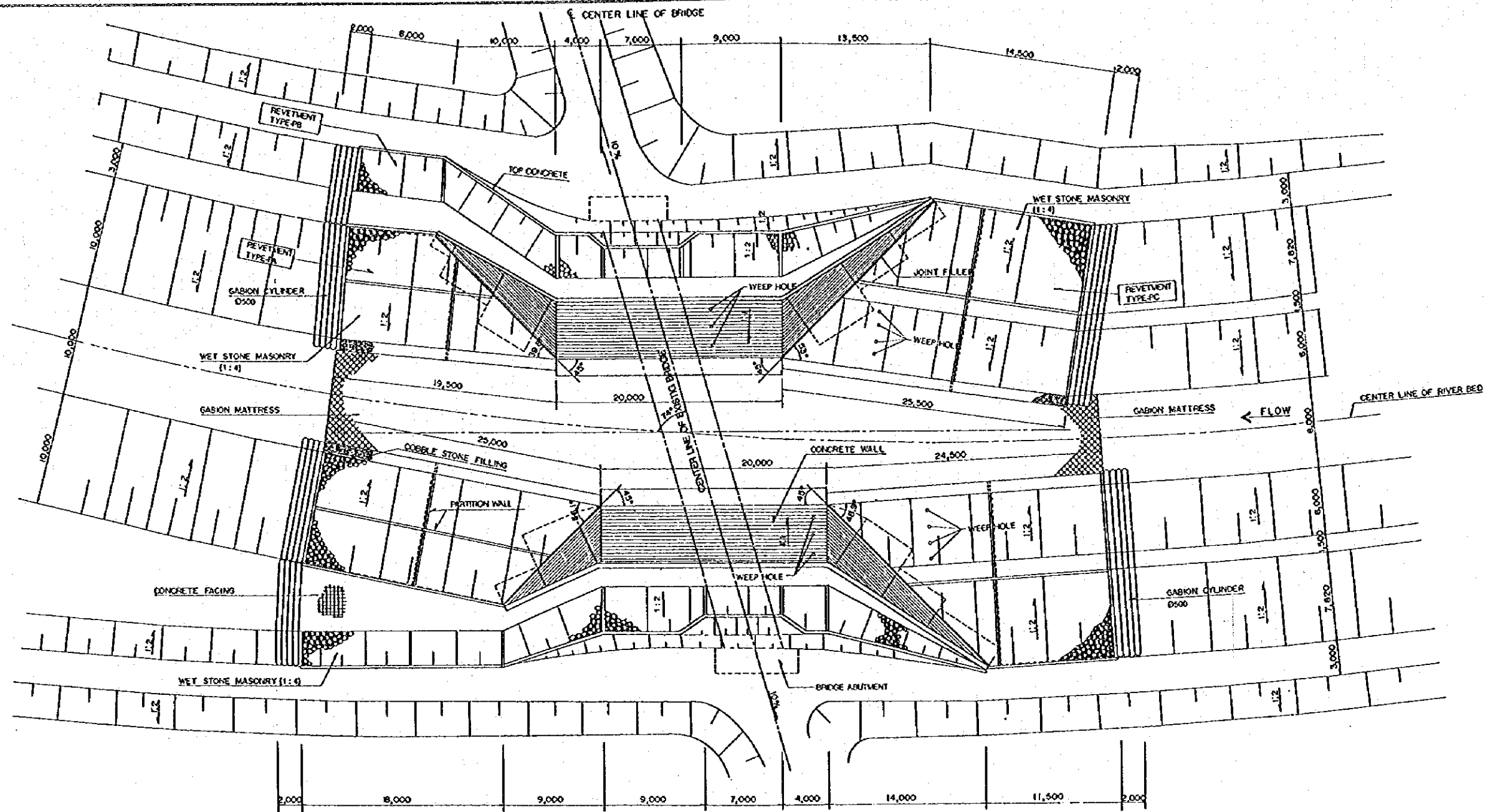
|   |  |
|---|--|
| <p>DETAILED DESIGN STUDY ON<br/>MEDAN FLOOD CONTROL PROJECT</p> | <p>DWG. 6.2.6<br/>GROUNDSILL IN PERCUT RIVER</p> |
| <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>                   |  |





SCALE  
0 20 40 60 80 100m  
SCALE 1/100

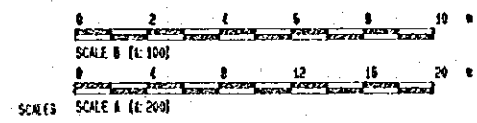
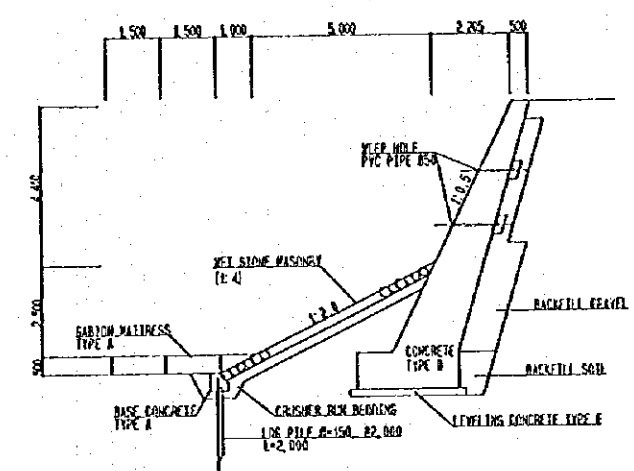
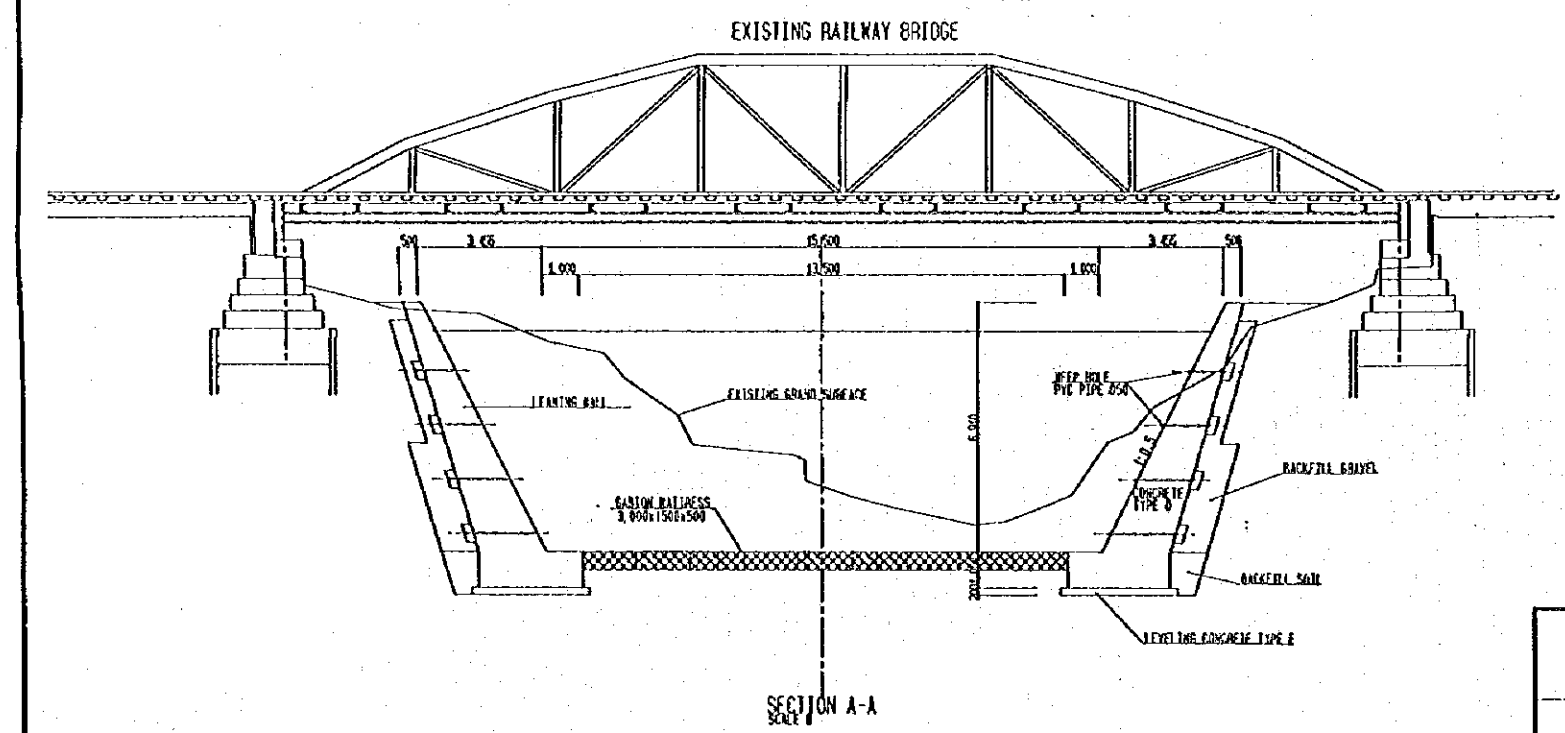
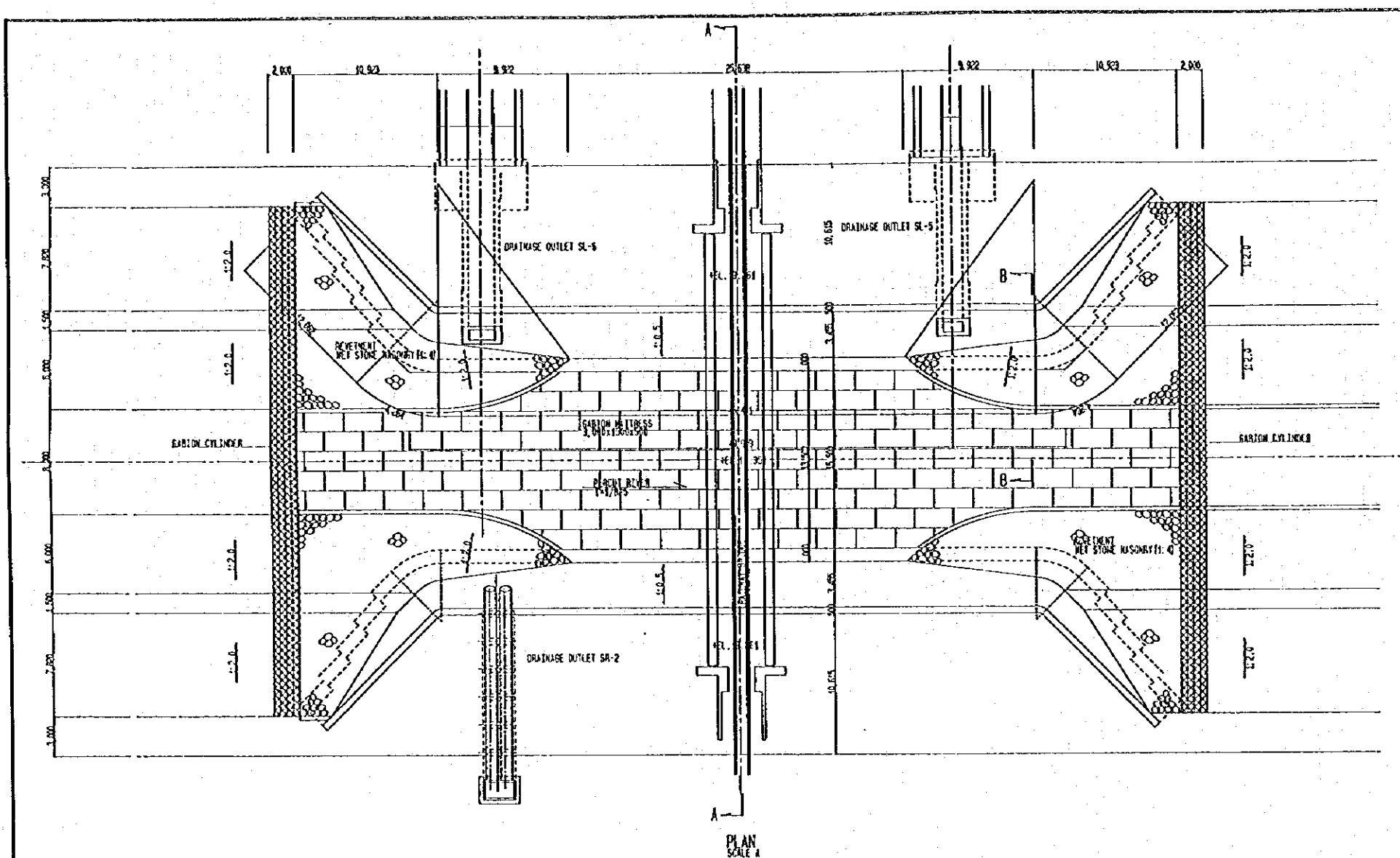
|   |                                   |
|---|-----------------------------------|
| DETAILED DESIGN STUDY ON<br>MEDAN FLOOD CONTROL PROJECT | DWG. 6.2.8<br>JETTY-LANDING STAGE |
| JAPAN INTERNATIONAL COOPERATION AGENCY                  |                                   |



SCALE :  
 0 2.0 4.0 6.0 8.0 10 m.  
 SCALE B (1:100)  
 0 5.0 10.0 15.0 20.0 m.  
 SCALE A (1:200)

DETAILED DESIGN STUDY ON  
 MEDAN FLOOD CONTROL PROJECT  
 JAPAN INTERNATIONAL COOPERATION AGENCY

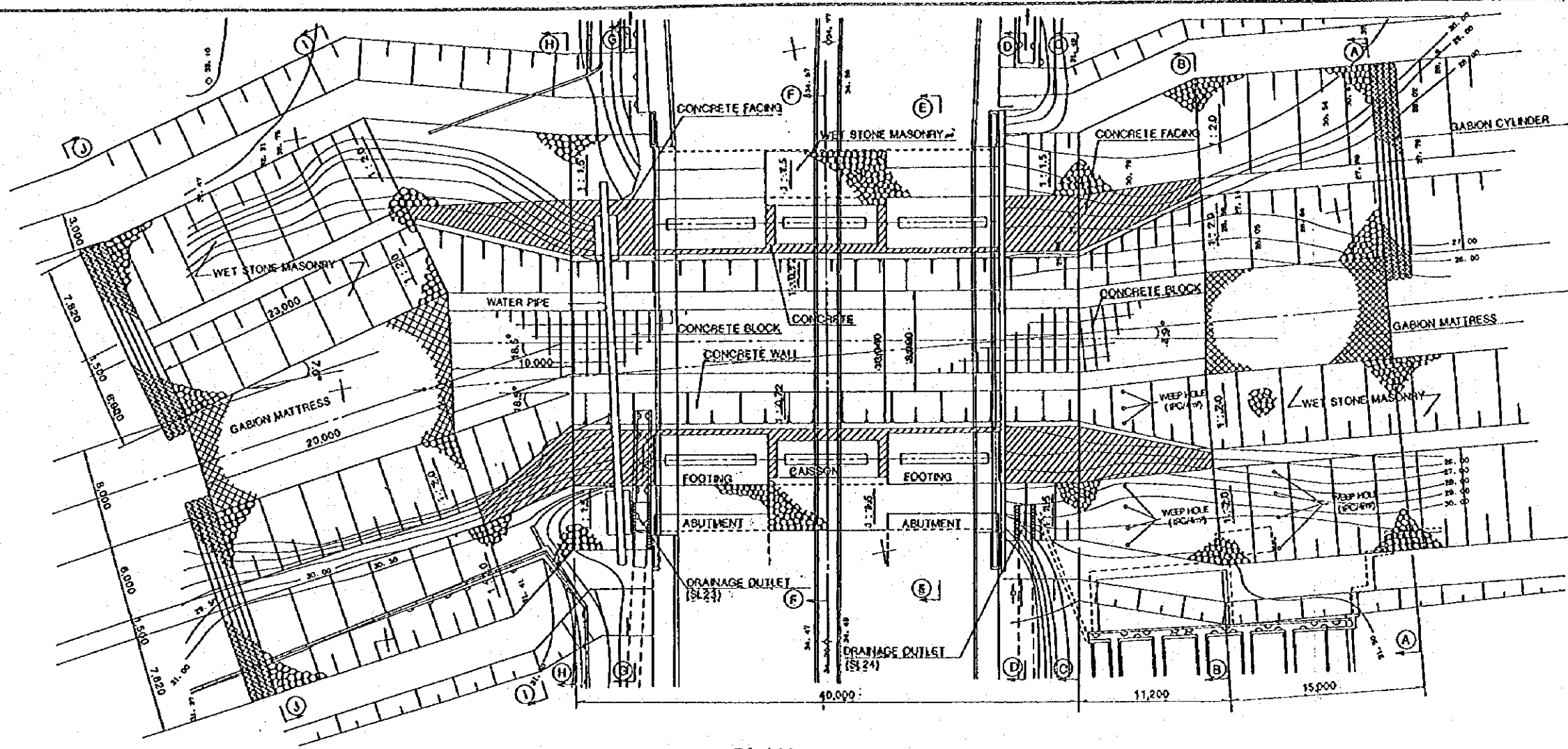
DWG. 6.2.9  
 BRIDGE PROTECTION WORKS  
 FOR TITI RUNTUH BRIDGE



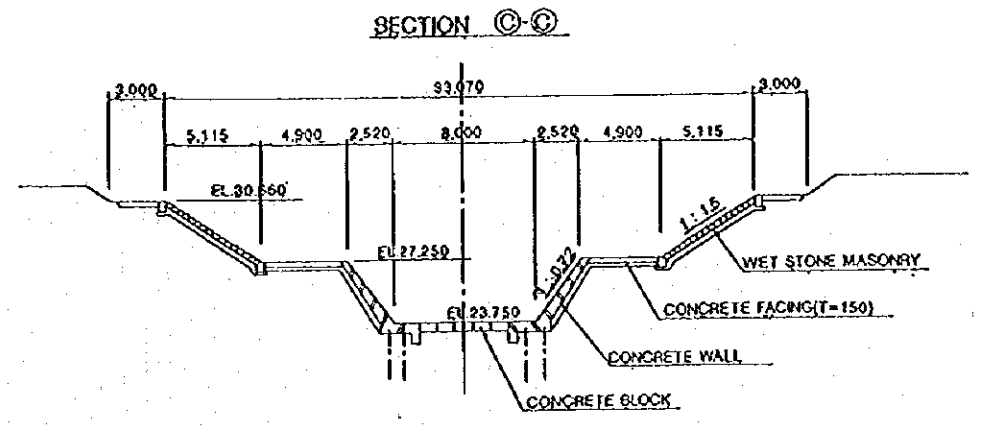
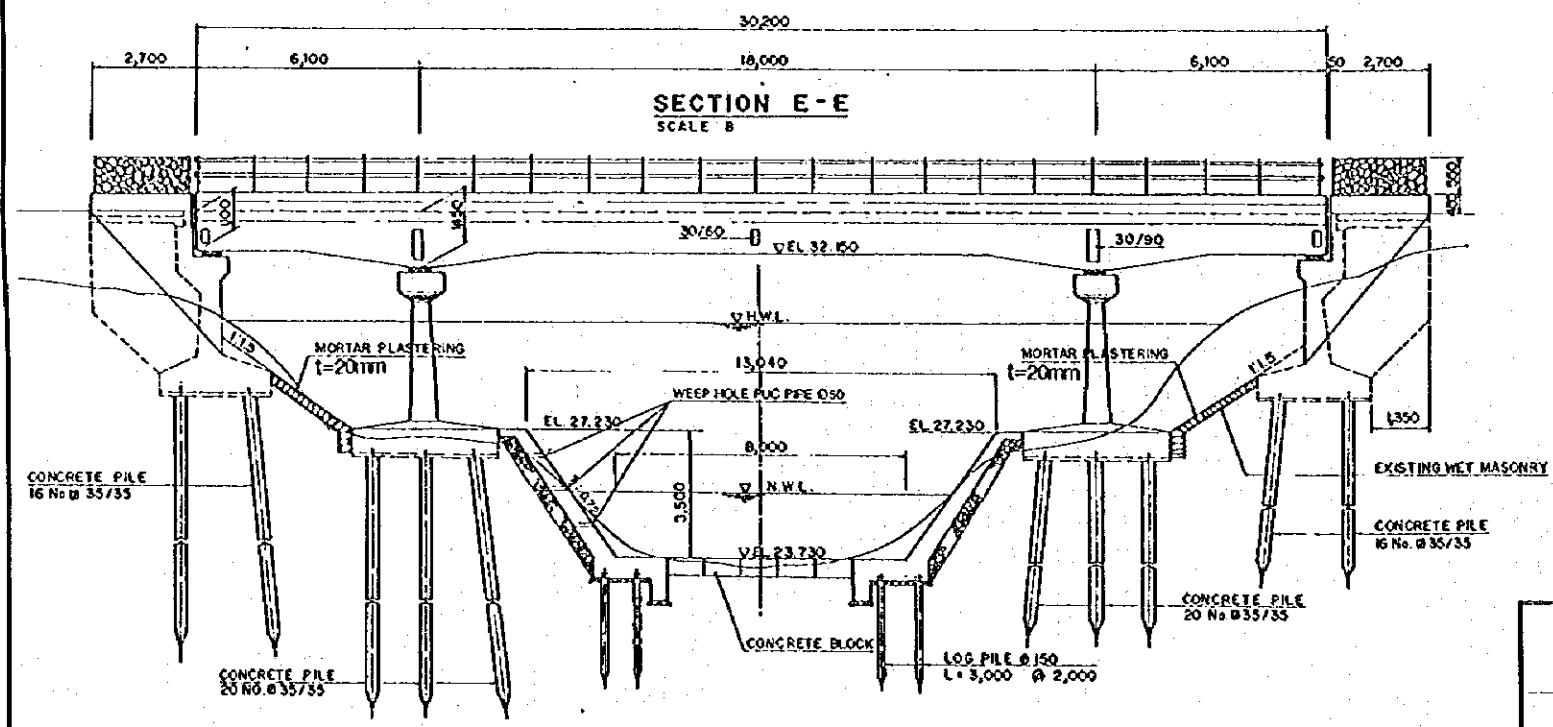
DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT

DWG. 6.2.10  
BRIDGE PROTECTION WORKS  
FOR RAILWAY BRIDGE

JAPAN INTERNATIONAL COOPERATION AGENCY



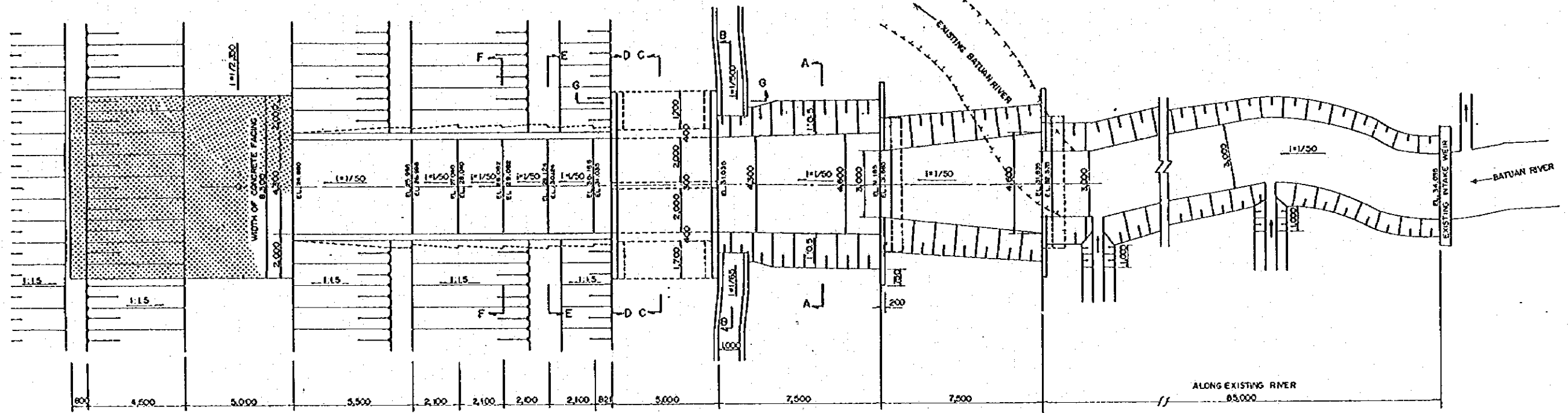
PLAN  
SCALE 1 : 200



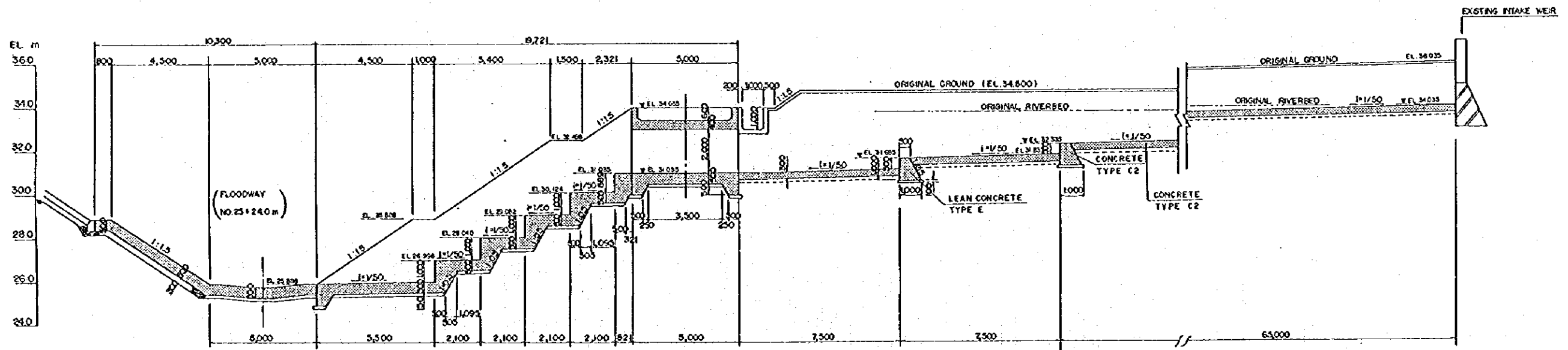
SCALE  
0 5 10 15 20m  
SCALE 1 : 400

|   |   |
|---|---|
| <p>DETAILED DESIGN STUDY ON<br/>MEDAN FLOOD CONTROL PROJECT</p> | <p>DWG. 6.2.11<br/>BRIDGE PROTECTION WORKS<br/>FOR NATIONAL ROAD BRIDGE</p> |
| <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>                   |   |

DRAINAGE SF5 (BATUAN RIVER) AT RIGHT BANK OF FLOODWAY(1/2)



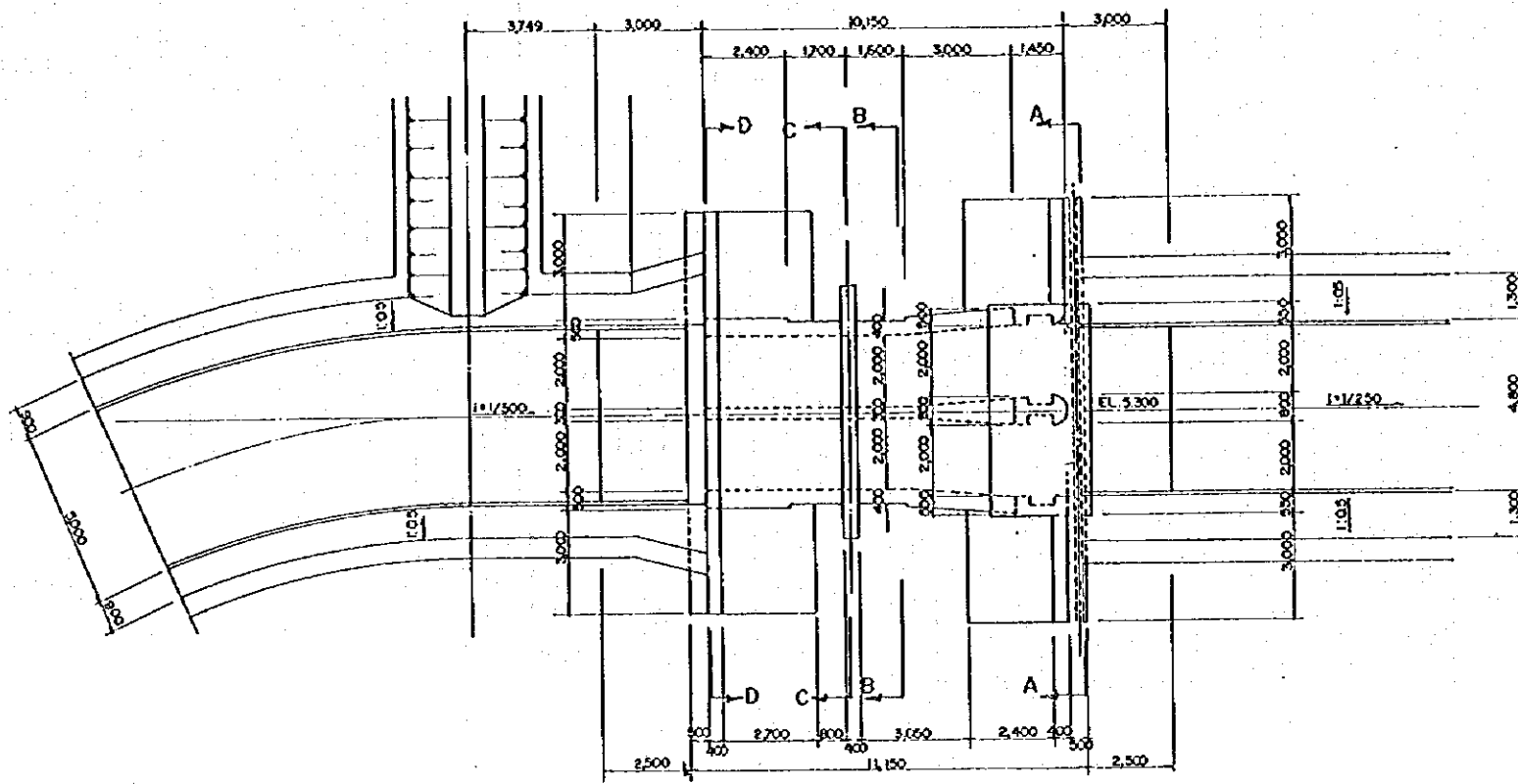
PLAN



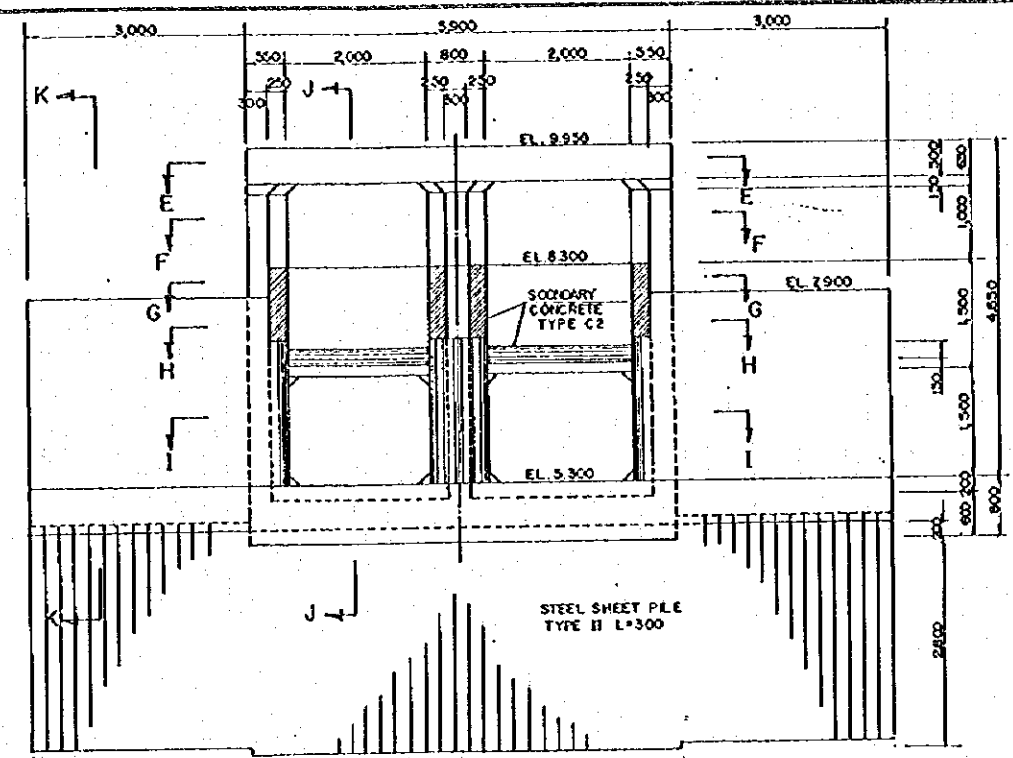
PROFILE

SCALE  
0 20 40 60 80 100m  
SCALE 1:200

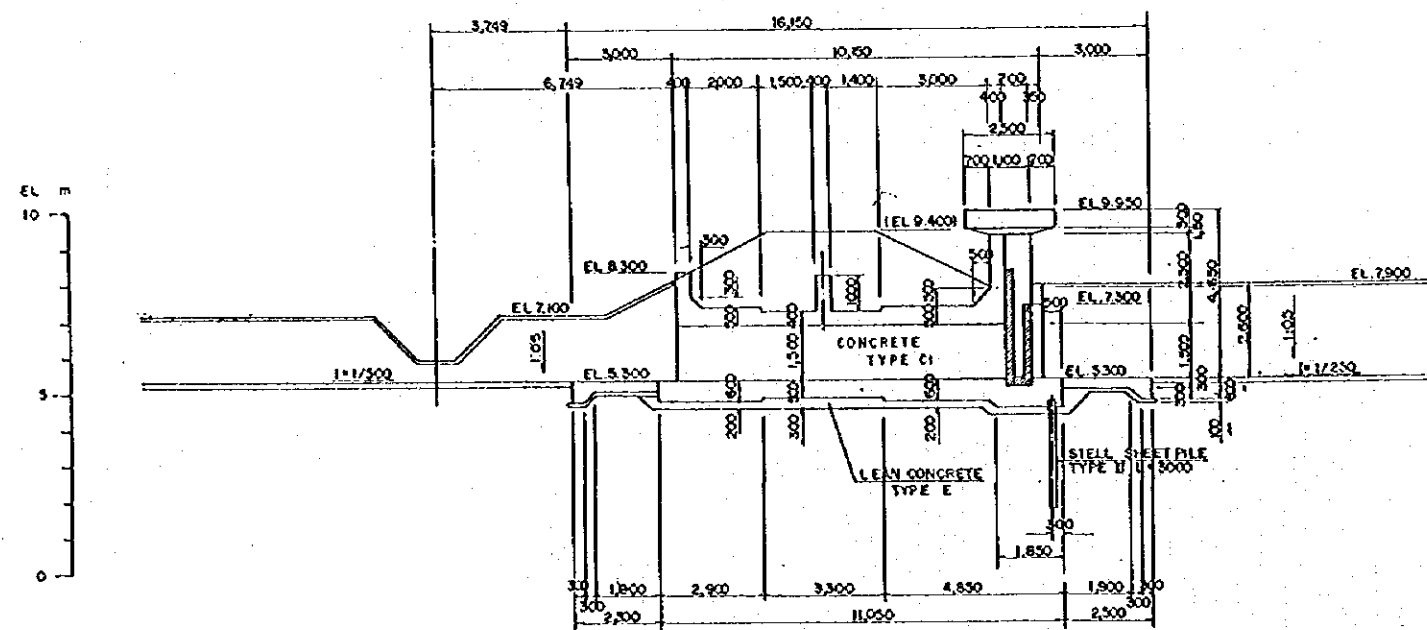
|   |   |
|---|---|
| DETAILED DESIGN STUDY ON<br>MEDAN FLOOD CONTROL PROJECT<br>JAPAN INTERNATIONAL COOPERATION AGENCY | DWG. 6.2.12<br>CONFLUENCE TREATMENT OF BATUAN RIVER |
|---|---|



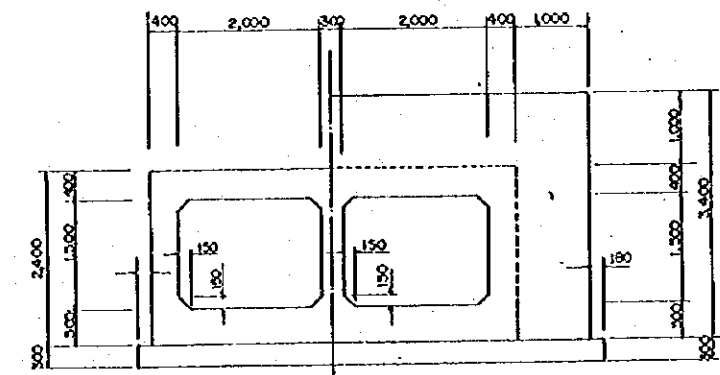
PLAN  
SCALE A



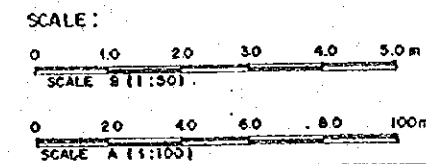
SECTION A-A  
SCALE B



PROFILE  
SCALE A



SECTION B-B SECTION C-C  
SCALE B

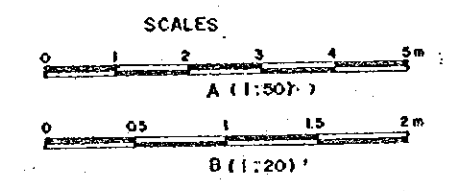
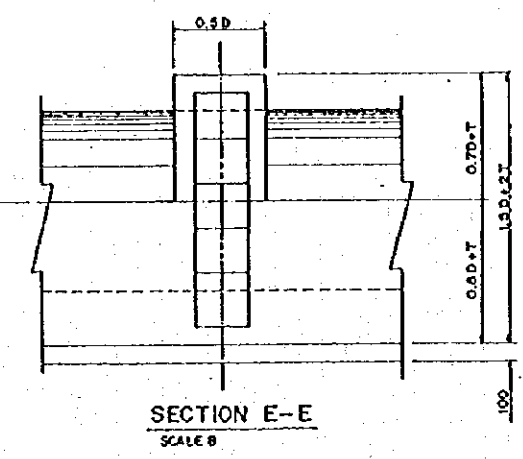
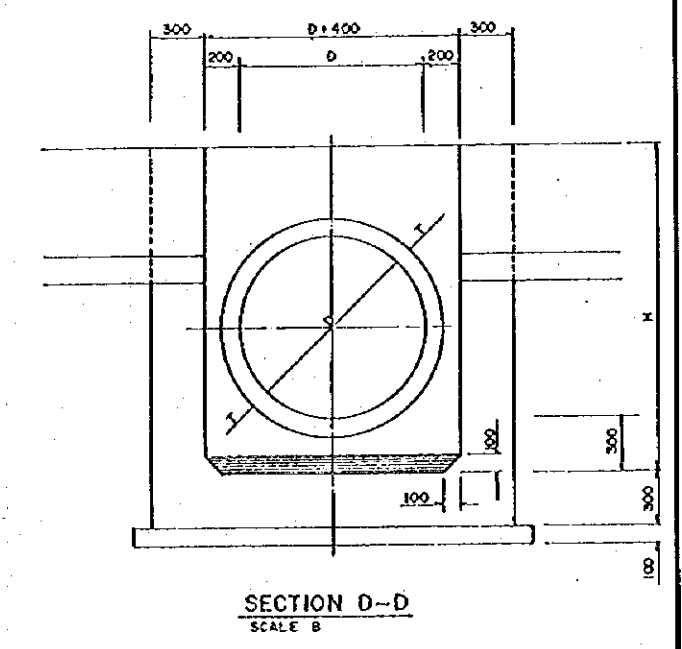
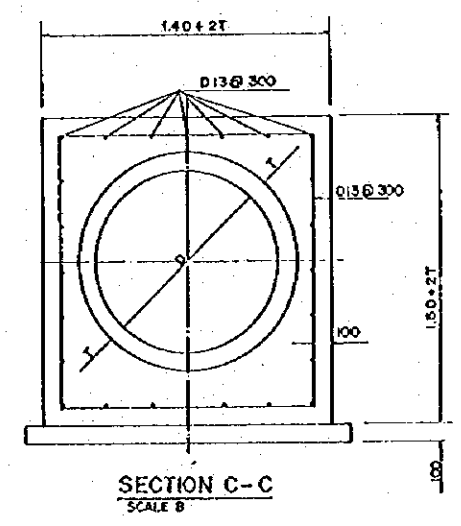
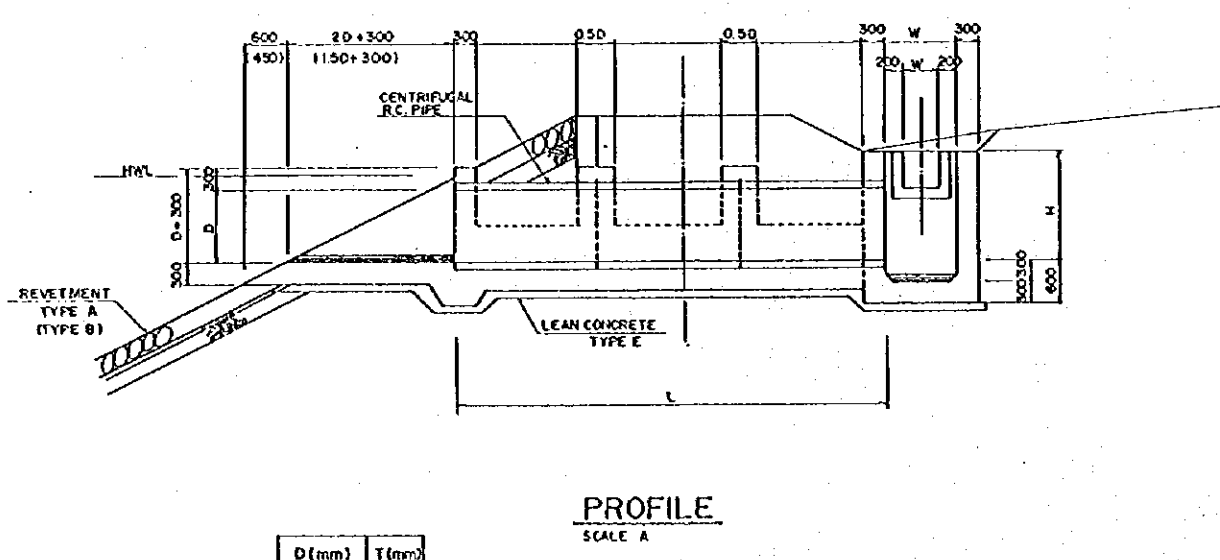
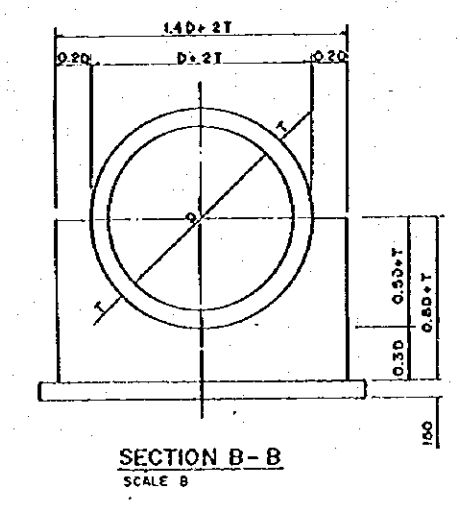
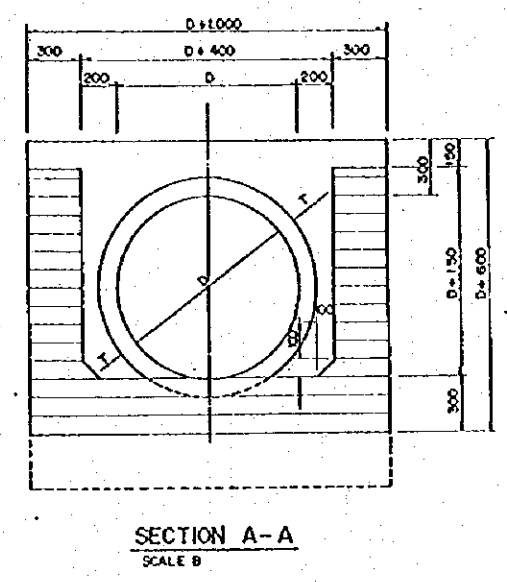
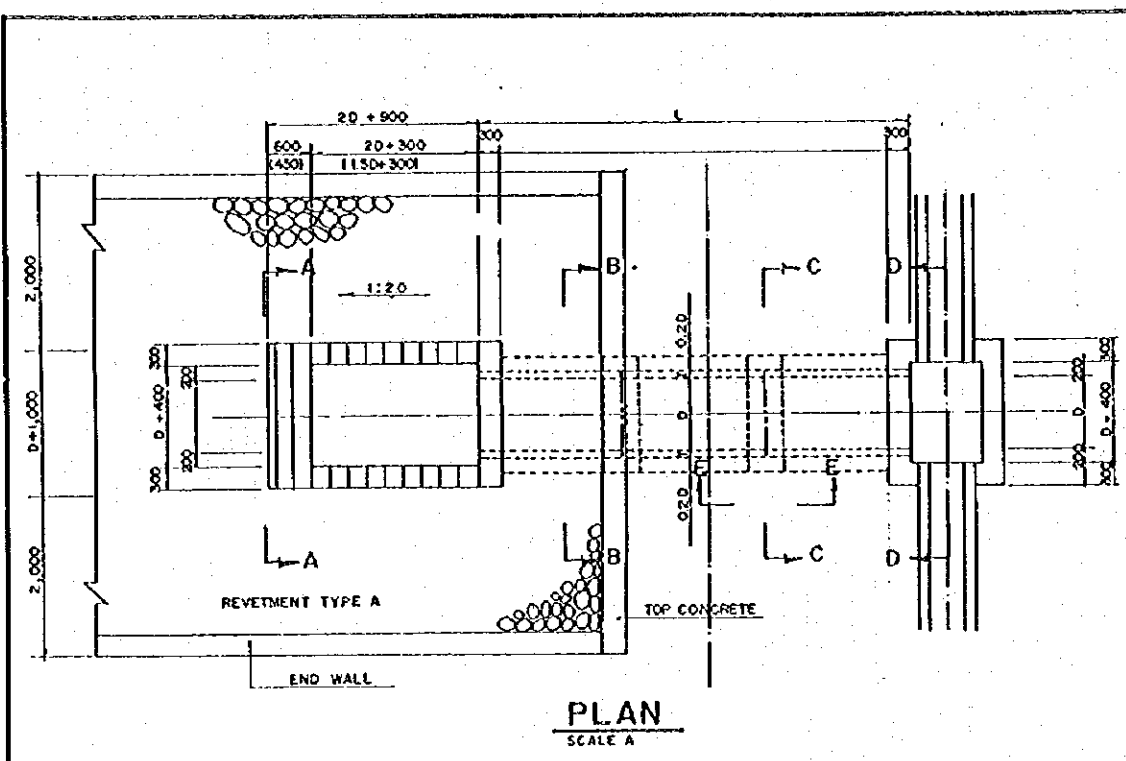


DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY

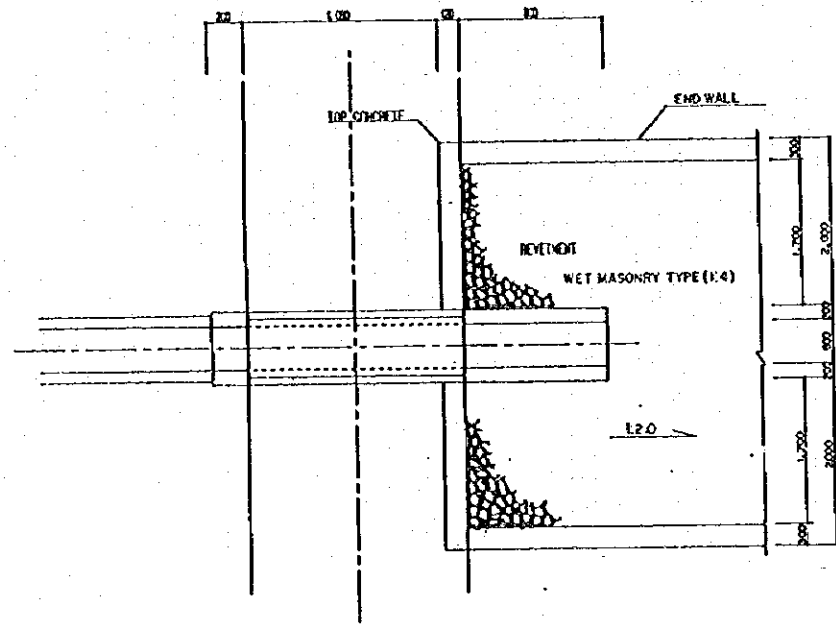
DWG. 6.2.13  
BOX CULVERT WITH GATES, (SL-2), PLAN



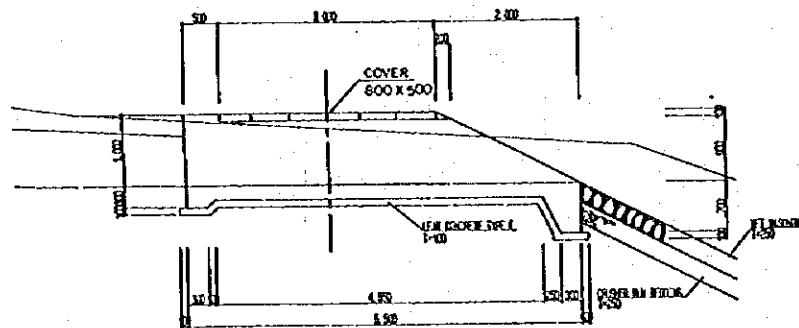


DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

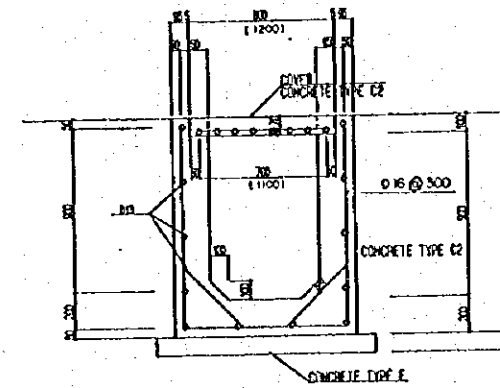
DWG. 6.2.14  
STANDARD DESIGN OF PIPE CULVERT,  
SINGLE PIPE CULVERT



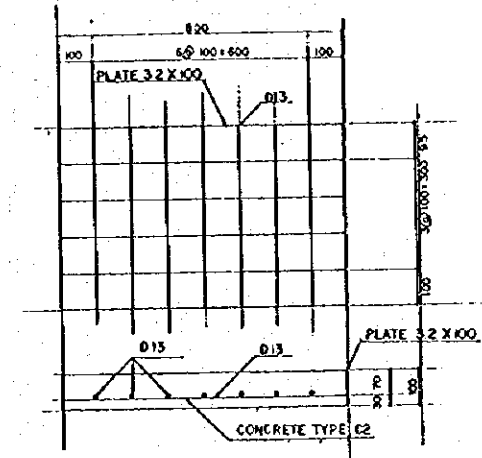
PLAN  
SCALE A



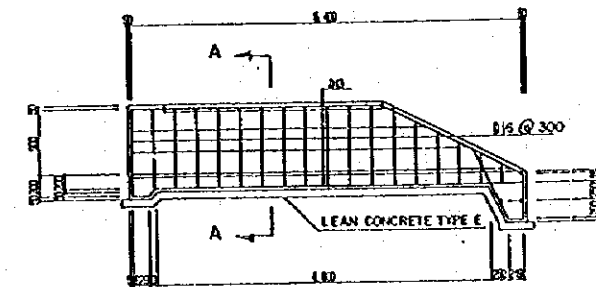
PROFILE  
SCALE A



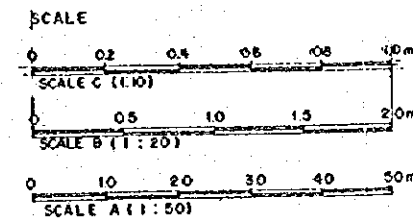
SECTION A-A  
SCALE B



DETAIL OF COVER  
SCALE C

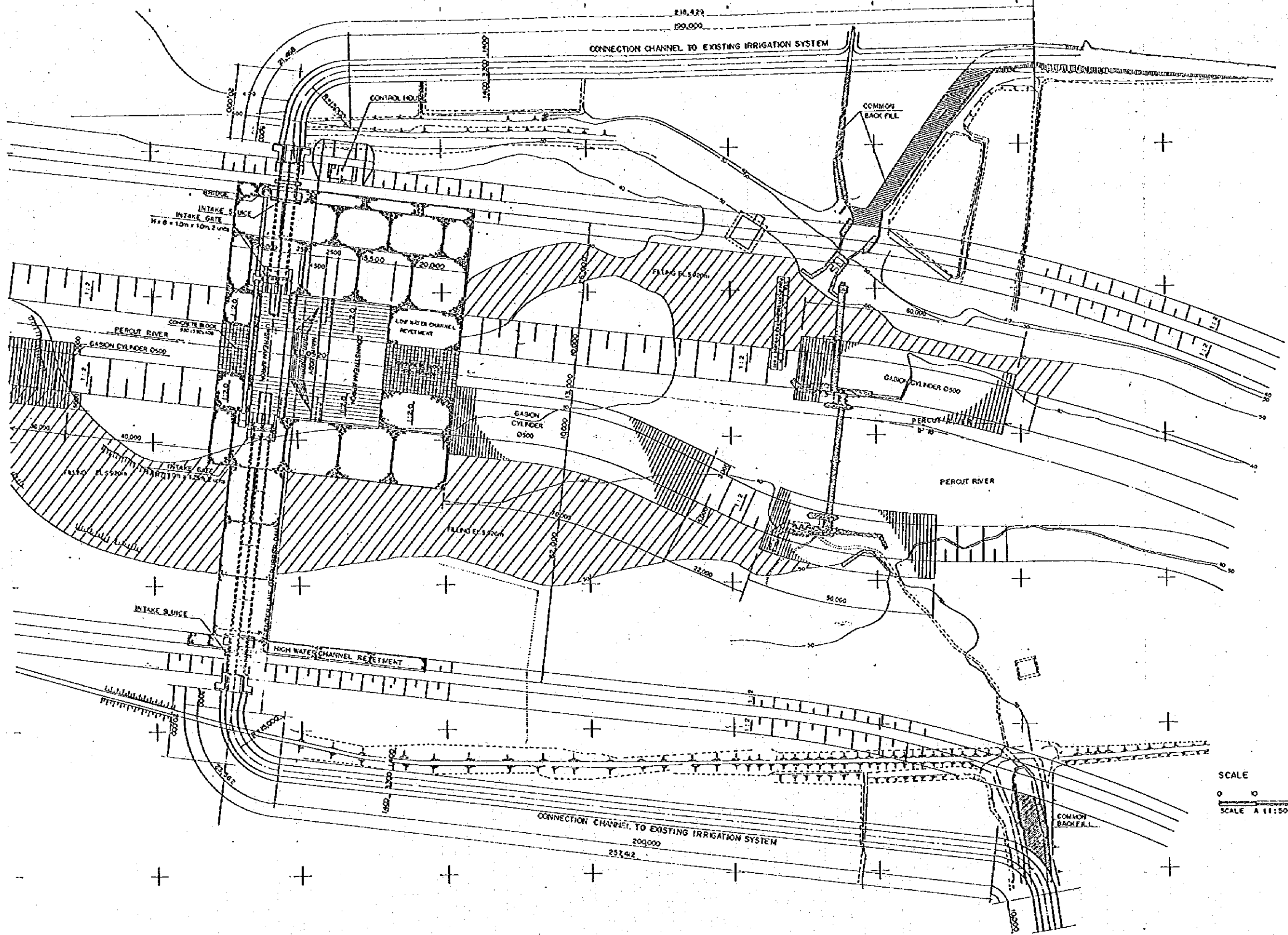


REINFORCEMENT BARS ARRANGEMENT  
SCALE A



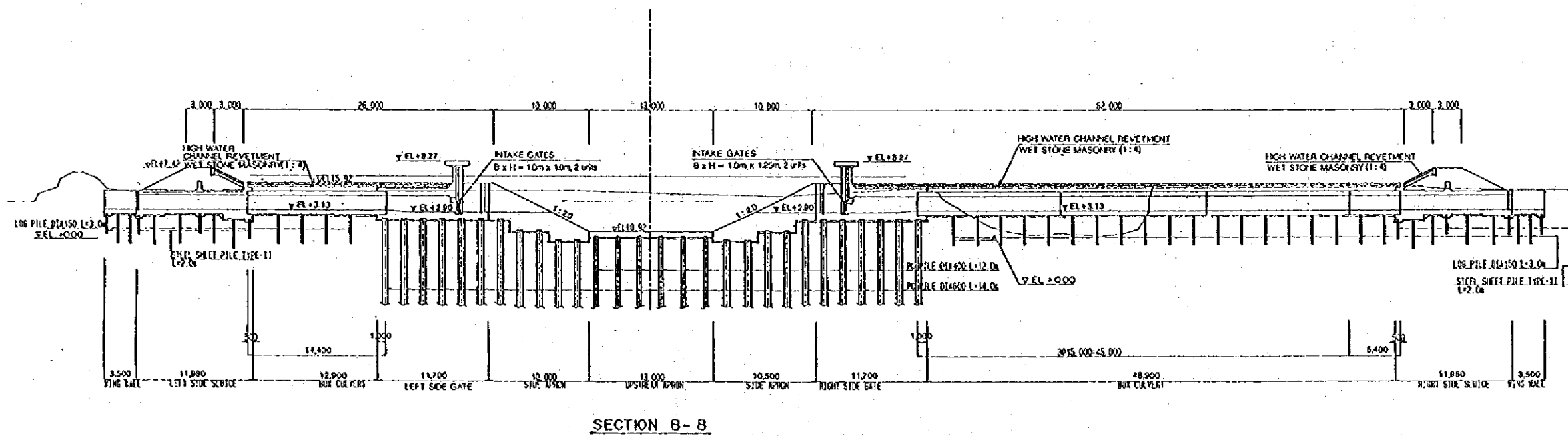
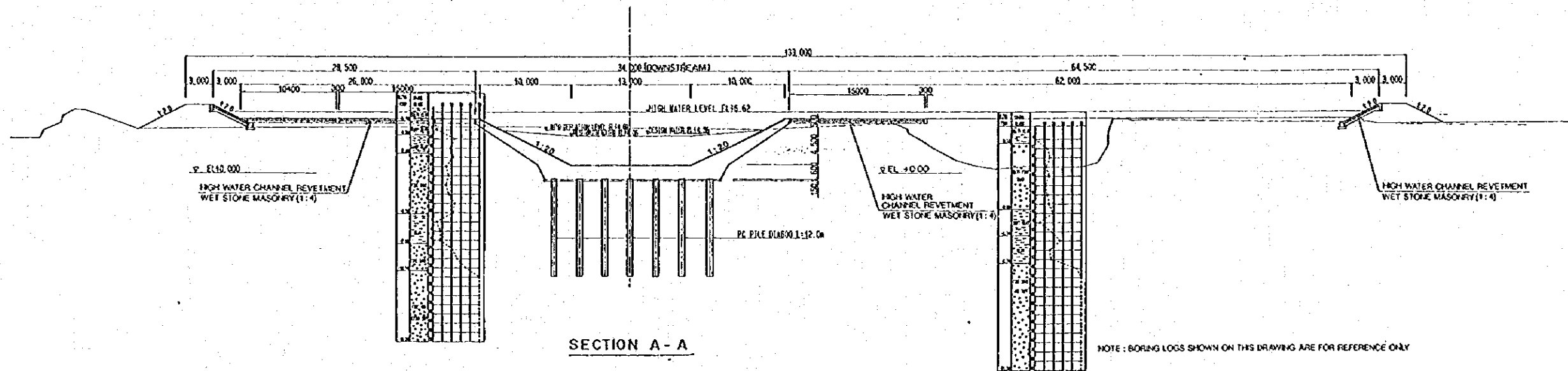
DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

DWG. 6.2.15  
STANDARD DESIGN OF OPEN DITCH TYPE  
SLUICE

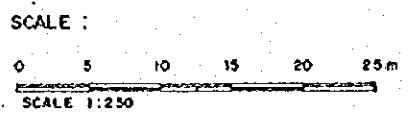


SCALE  
 0 10 20 30 40 50 m  
 SCALE A (1:500)

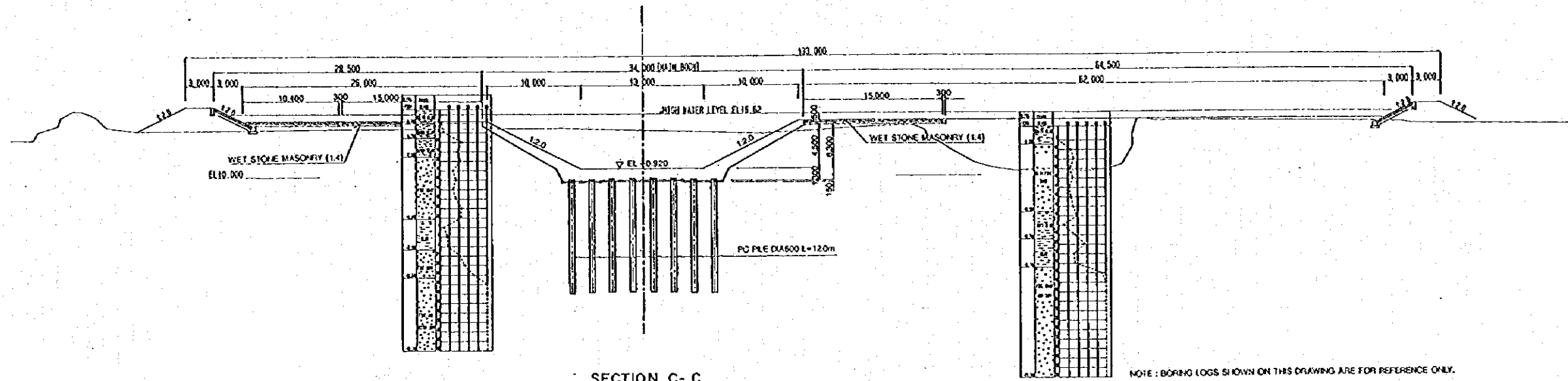
|  |  |
|--|--|
| <p>DETAILED DESIGN STUDY ON<br/>         MEDAN FLOOD CONTROL PROJECT</p> | <p>DWG. 6.2.16 (1/3)<br/>         BANDAR SIDORAS INTAKE WEIR, PLAN</p> |
| <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>                            |  |



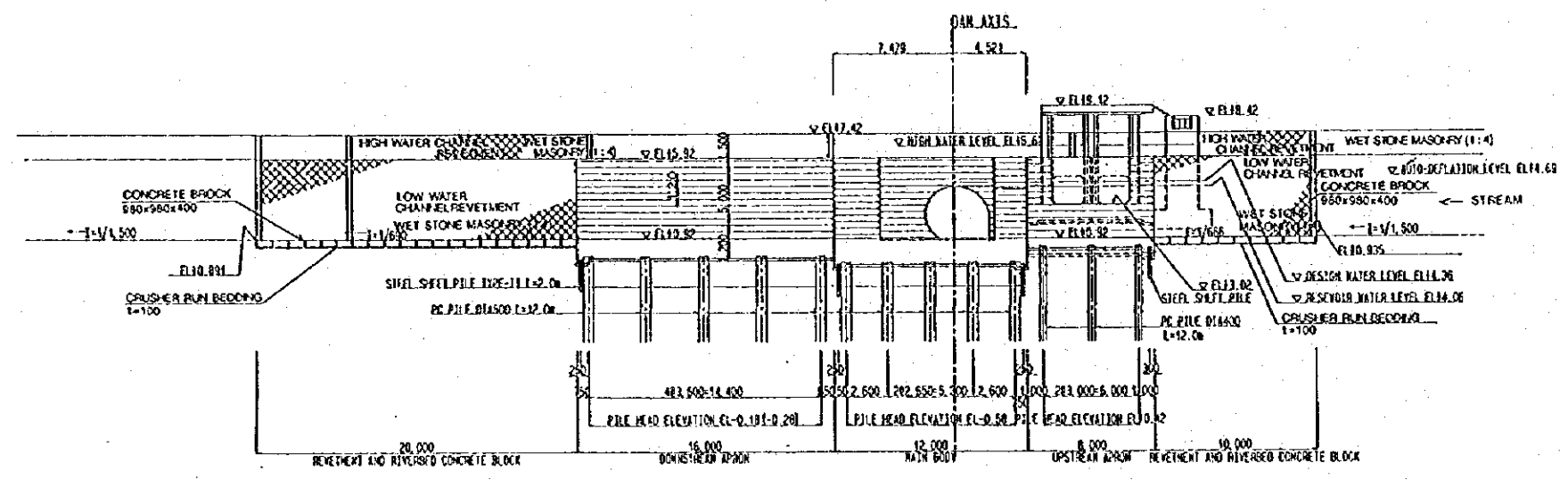
RUBBER DAM PROFILE AND SECTIONS(1/2)



|   |   |
|---|---|
| <p>DETAILED DESIGN STUDY ON<br/>MEDAN FLOOD CONTROL PROJECT</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> | <p>DWG. 6.2.16 (2/3)<br/>BANDAR SIDORAS INTAKE WEIR, SECTIONS</p> |
|---|---|

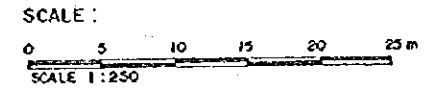


SECTION C-C

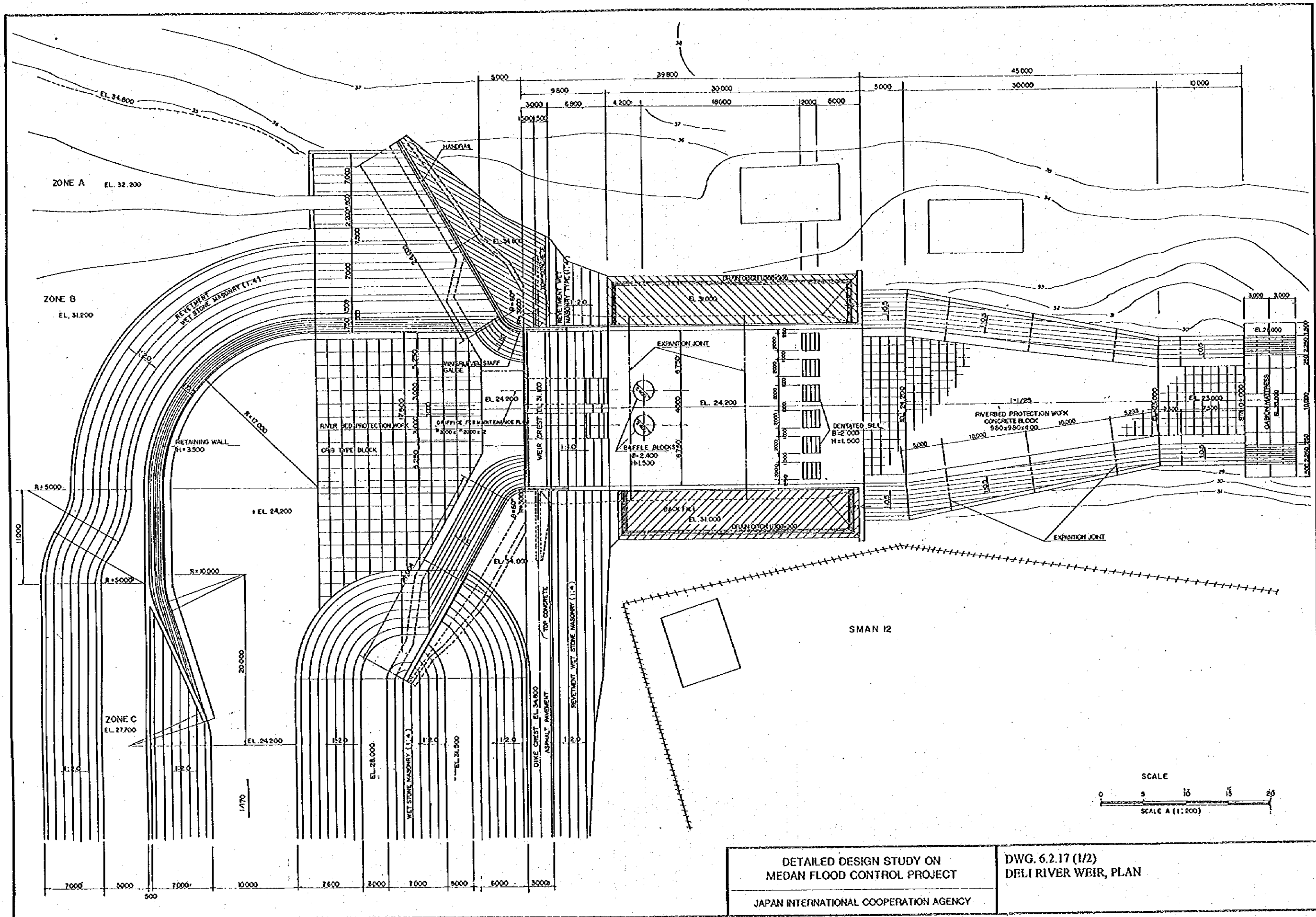


SECTION D-D

RUBBER DAM PROFILE AND SECTIONS(2/2)

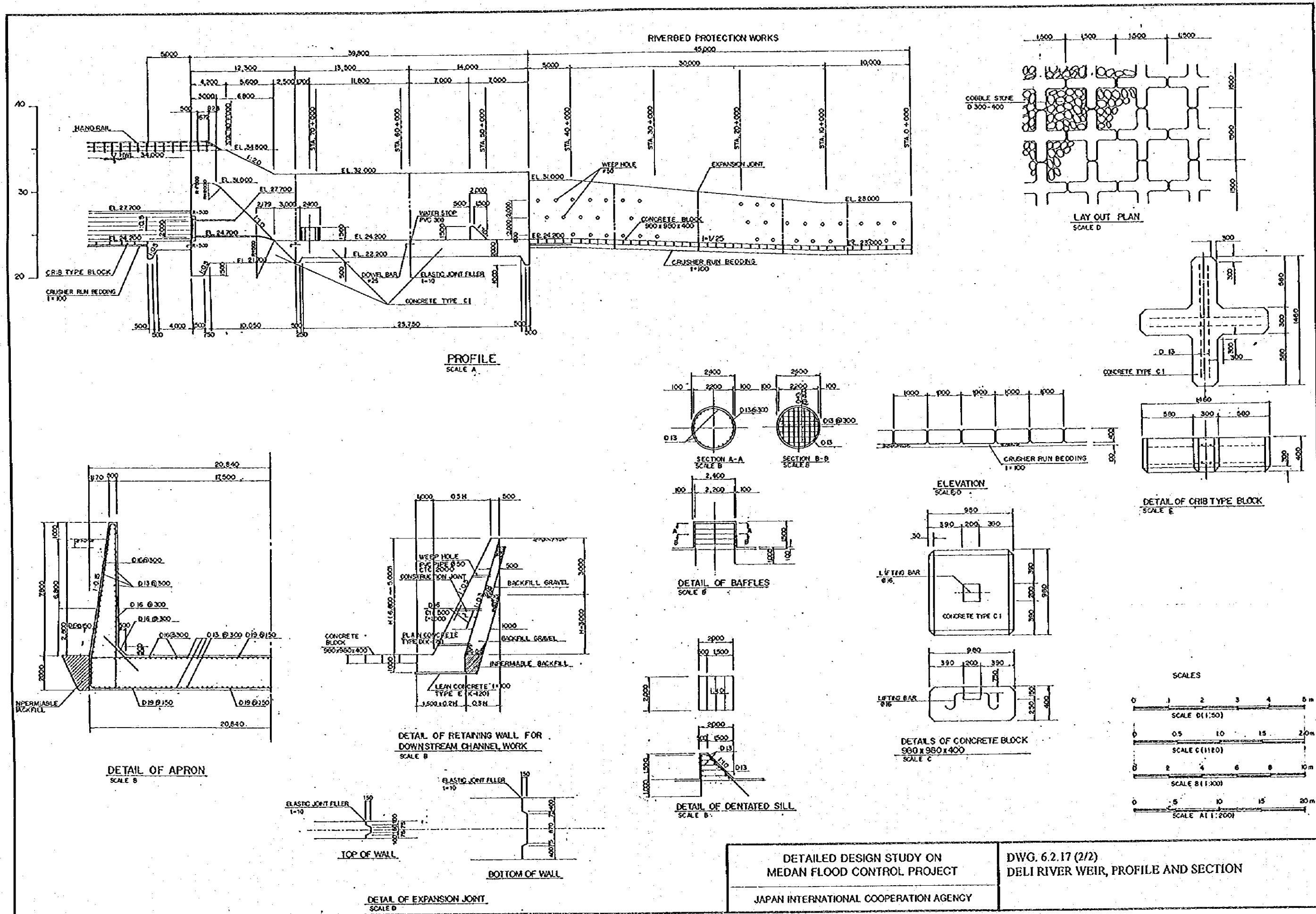


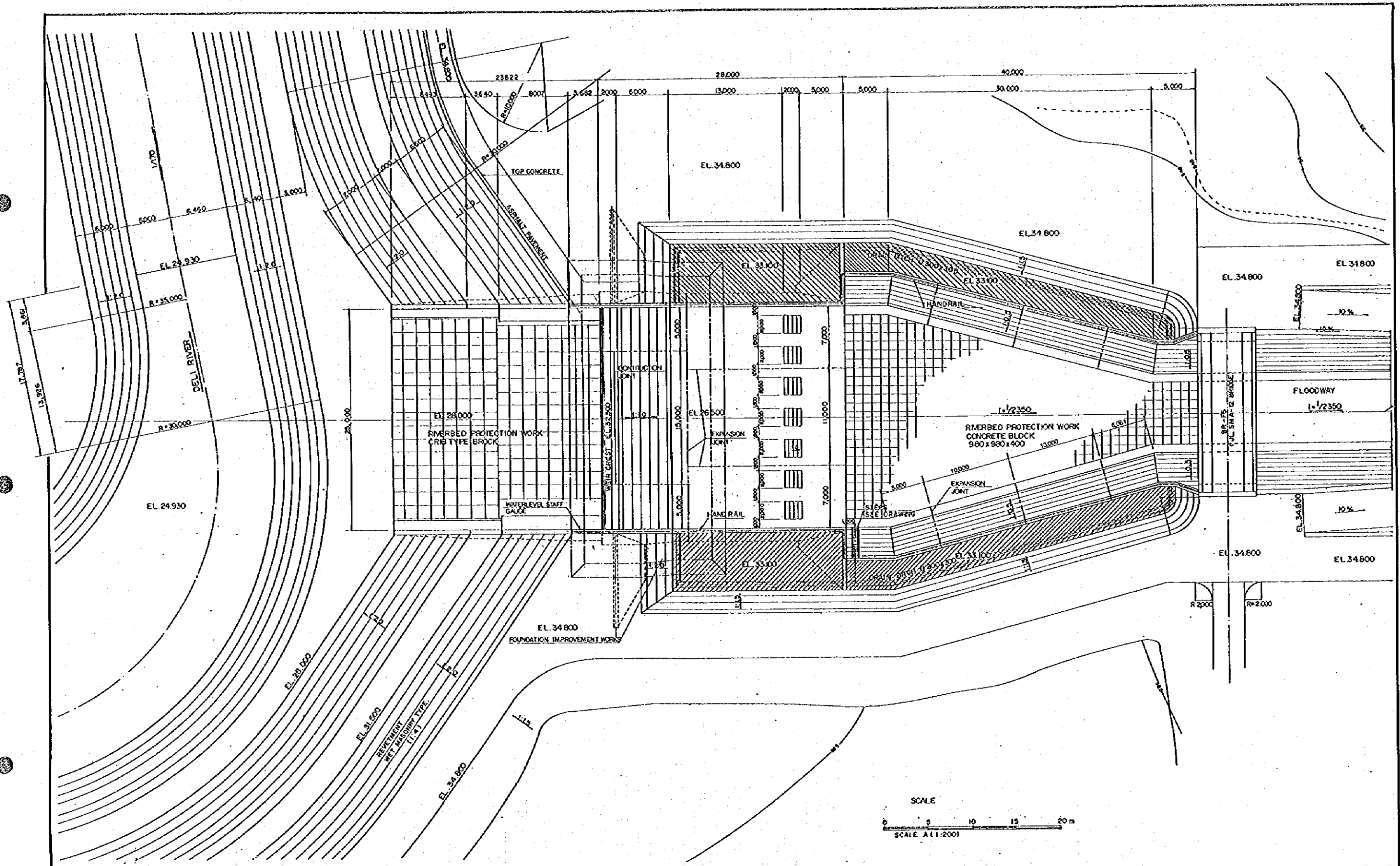
|   |  |
|---|--|
| <p>DETAILED DESIGN STUDY ON<br/>MEDAN FLOOD CONTROL PROJECT</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> | <p>DWG. 6.2.16 (3/3)<br/>BANDAR SIDORAS INTAKE WEIR, PROFILE</p> |
|---|--|



DETAILED DESIGN STUDY ON  
 MEDAN FLOOD CONTROL PROJECT  
 JAPAN INTERNATIONAL COOPERATION AGENCY

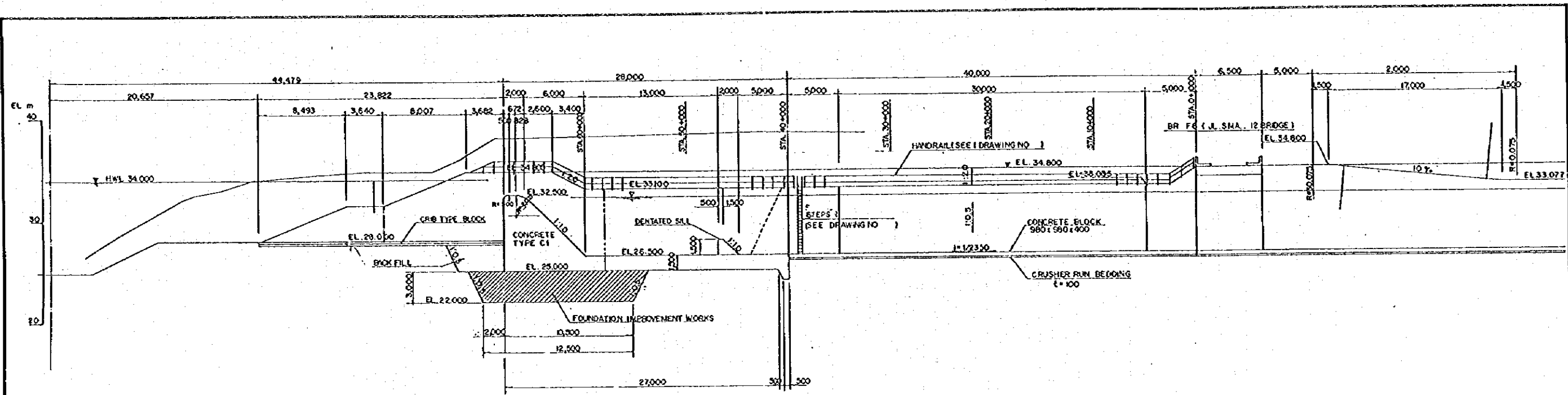
DWG. 6.2.17 (1/2)  
 DELI RIVER WEIR, PLAN



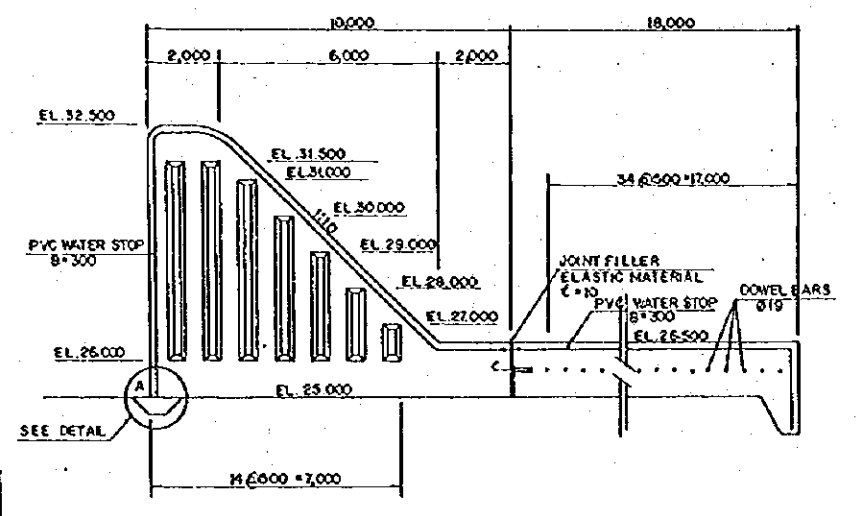


|   |  |
|---|--|
| <p>DETAILED DESIGN STUDY ON<br/>MEDAN FLOOD CONTROL PROJECT</p> | <p>DWG. 6.2.18 (1/2)<br/>FLOODWAY WBIR, PLAN</p> |
| <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>                   |  |

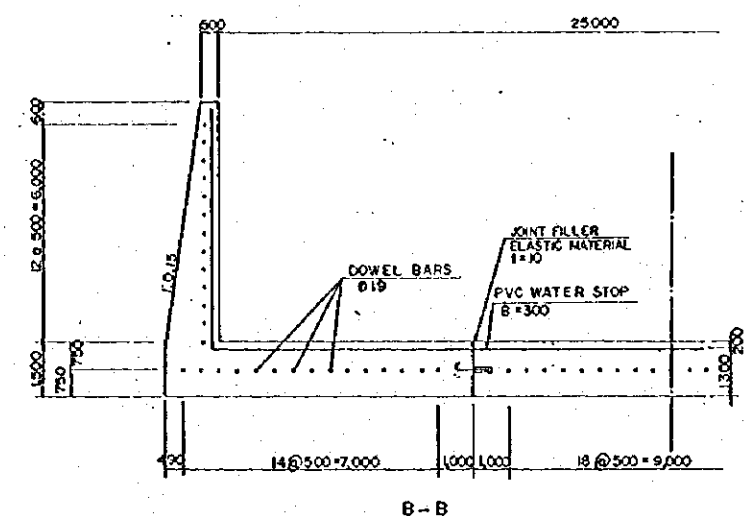




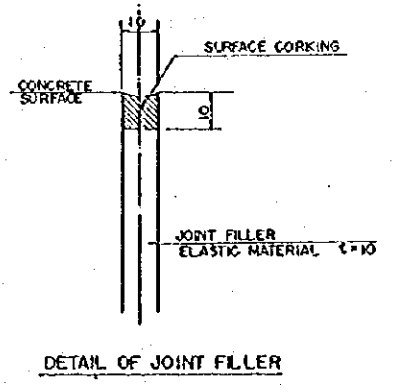
PLAN  
SCALE A



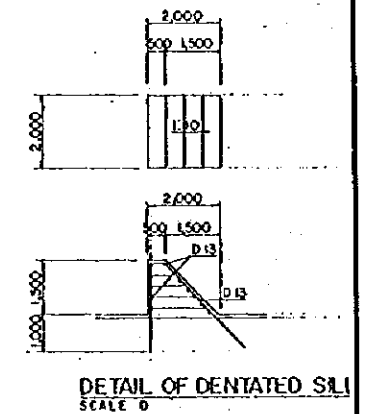
A-A  
KEY CONTRACTION JOINT & EXPANSION JOINT FOR APRON  
SCALE B



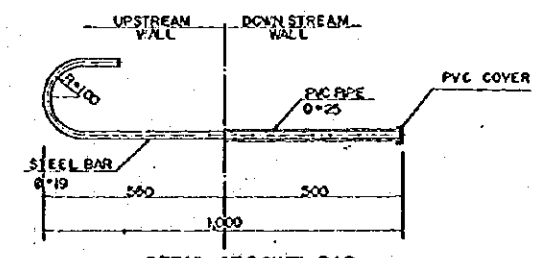
B-B  
EXPANSION JOINT FOR APRON  
SCALE B



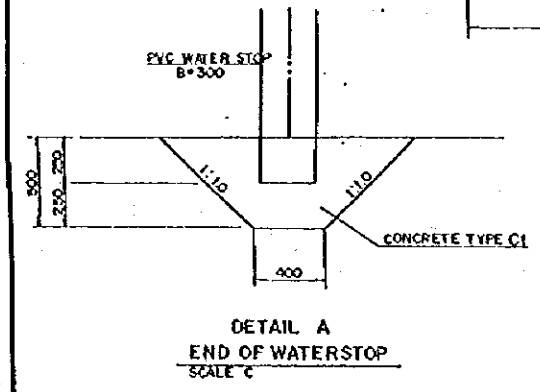
DETAIL OF JOINT FILLER  
SCALE B



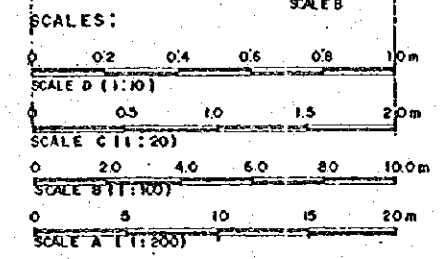
DETAIL OF DENTATED SILL  
SCALE D



DETAIL OF DOWEL BAR  
SCALE B



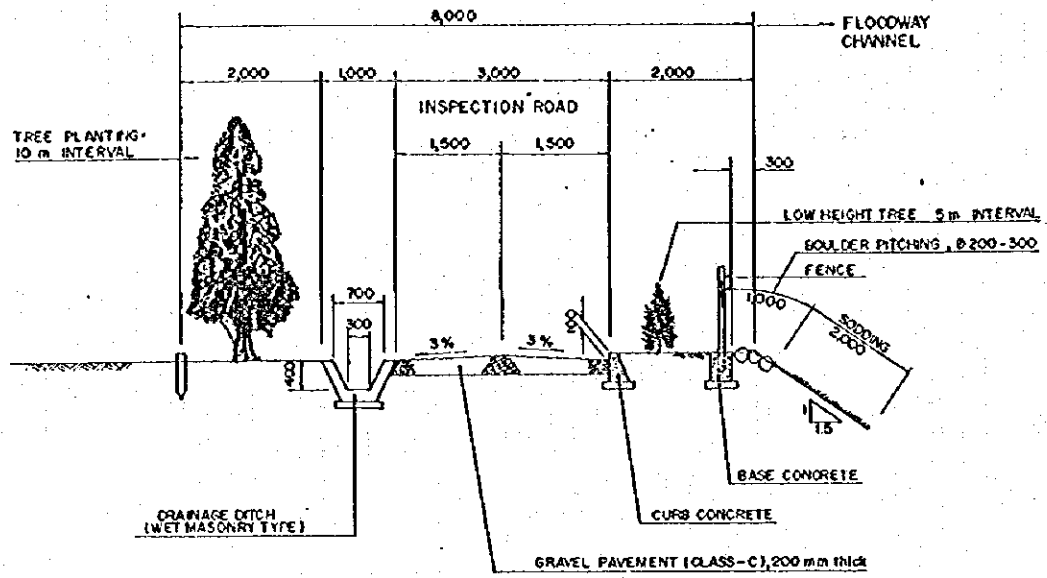
DETAIL A  
END OF WATERSTOP  
SCALE C



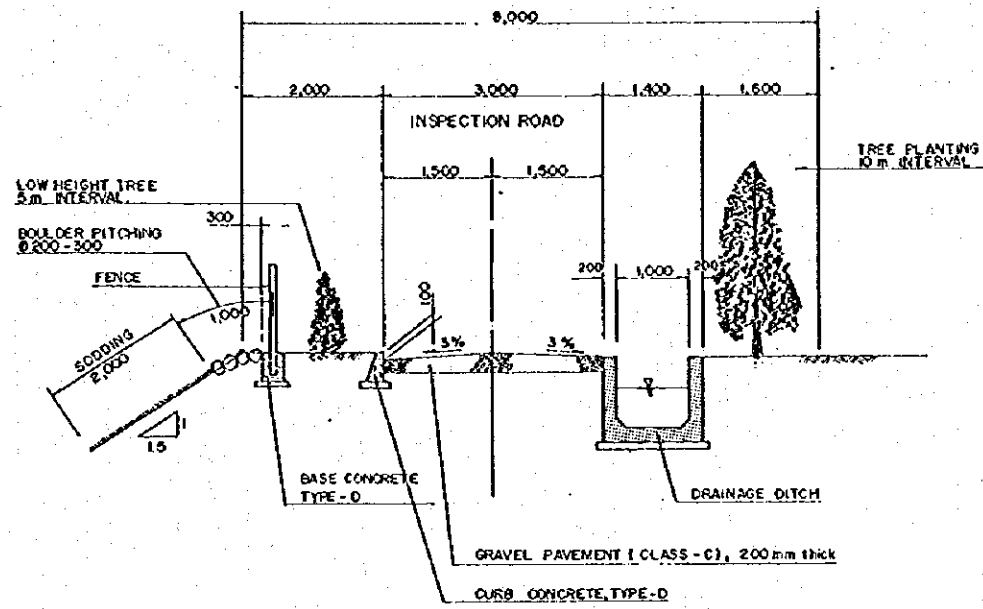
DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT

DWG. 6.2.18 (2/2)  
FLOODWAY WEIR, PROFILE AND SECTION

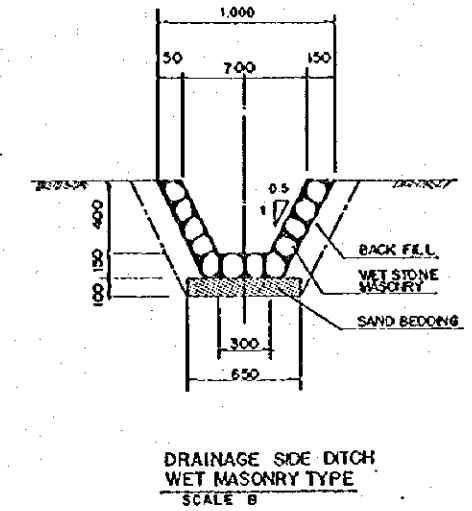
JAPAN INTERNATIONAL COOPERATION AGENCY



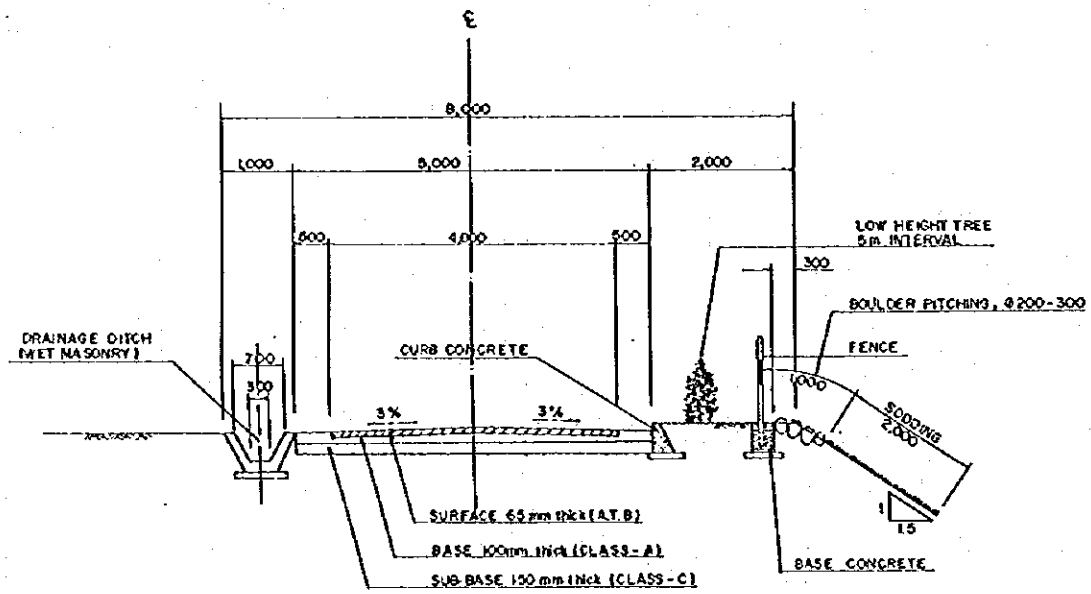
TYPICAL CROSS SECTION OF FLOODWAY INSPECTION ROAD (LEFT BANK)  
SCALE A



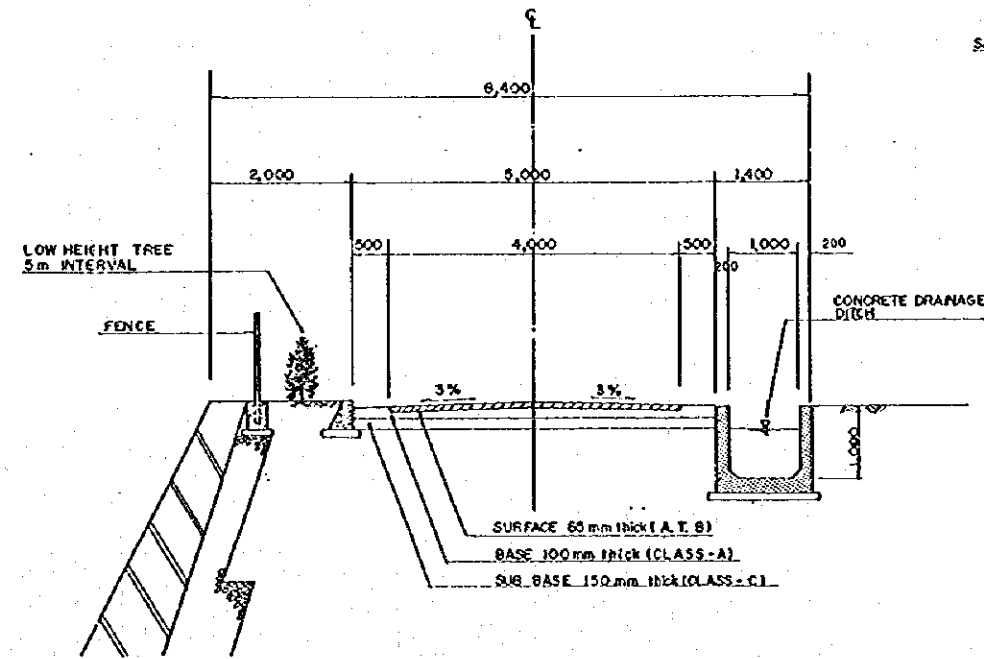
TYPICAL CROSS SECTION OF FLOODWAY INSPECTION ROAD (RIGHT BANK)  
SCALE A



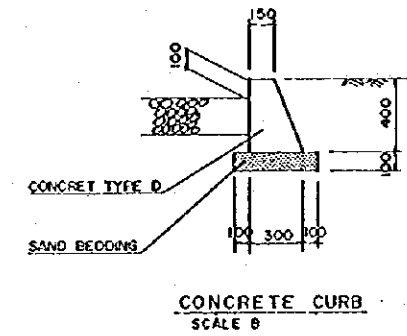
DRAINAGE SIDE DITCH  
WET MASONRY TYPE  
SCALE B



ROAD CROSS SECTION OF JL. SUMBER UTAMA  
FLOODWAY (FW 20+47 m TO FW 28+18m) LEFT BANK  
SCALE A

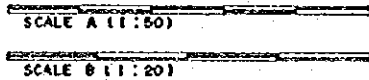


ROAD CROSS SECTION  
FLOODWAY (FW 28+18 m TO FW 33+33m) RIGHT BANK  
SCALE A



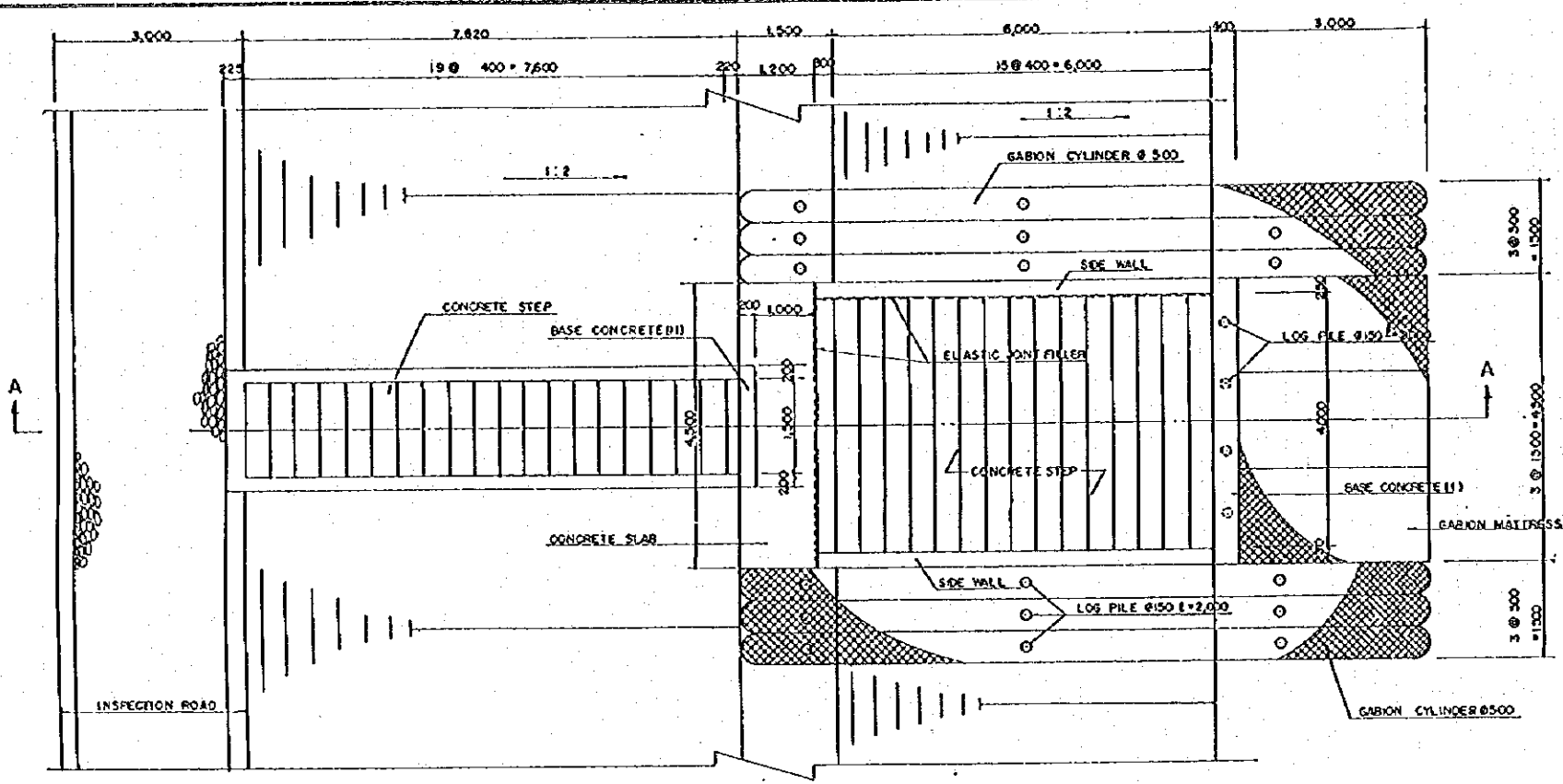
CONCRETE CURB  
SCALE B

SCALES

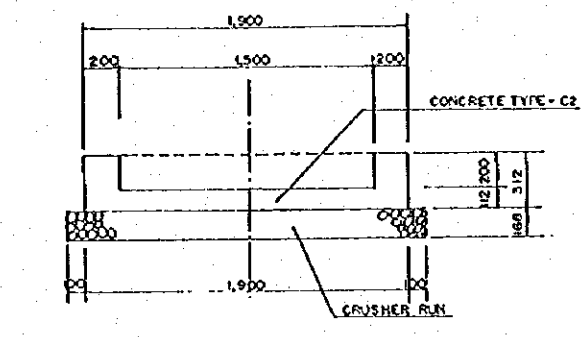


DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

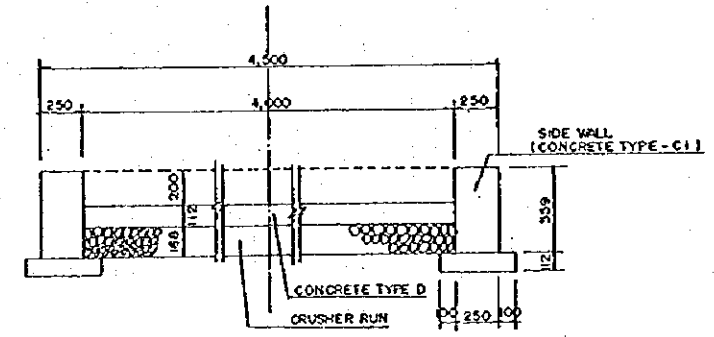
DWG. 6.2.19  
INSPECTION ROAD AND TREE PLANTING



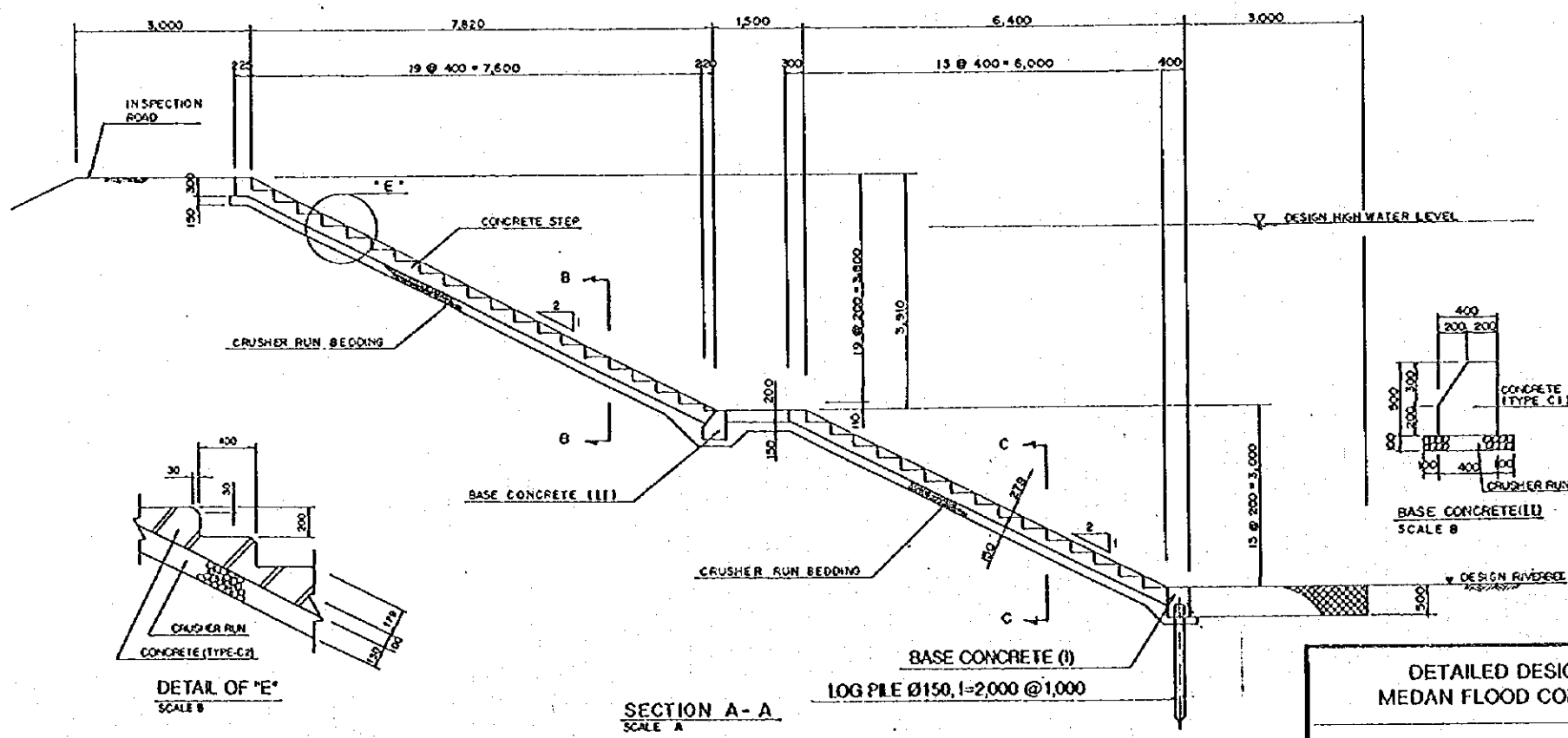
PLAN OF APPROACH STEP  
SCALE A



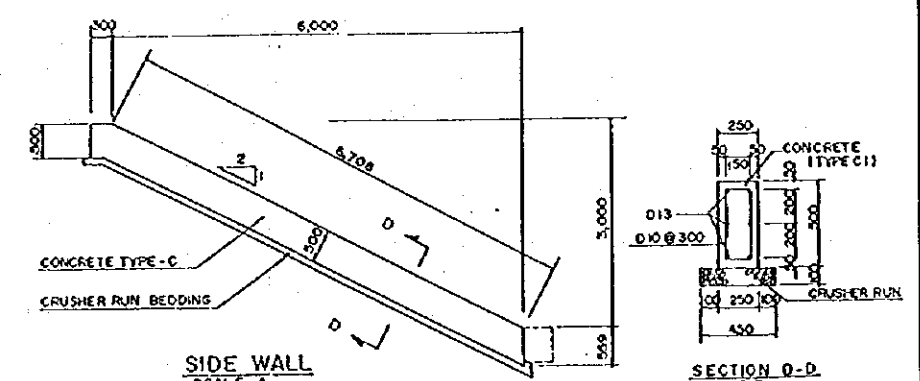
SECTION B-B  
SCALE B



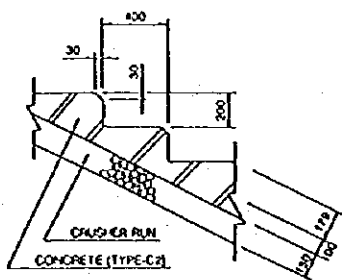
SECTION C-C  
SCALE B



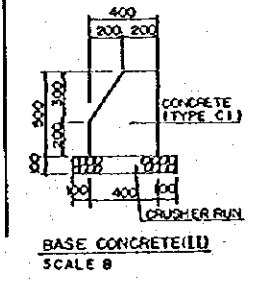
SECTION A-A  
SCALE A



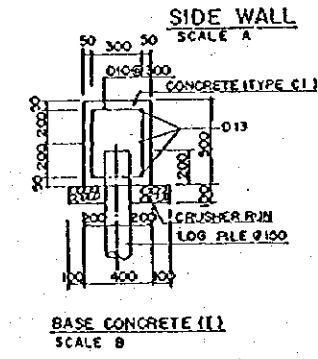
SECTION D-D  
SCALE B



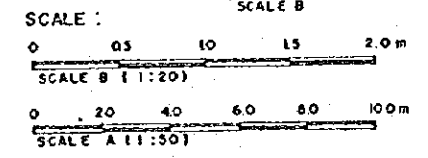
DETAIL OF 'E'  
SCALE B



BASE CONCRETE (II)  
SCALE B

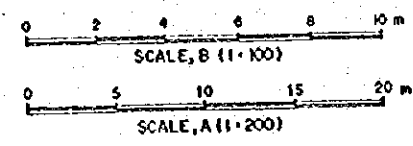
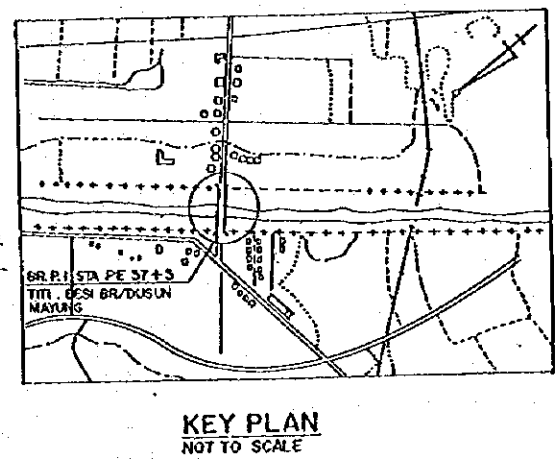
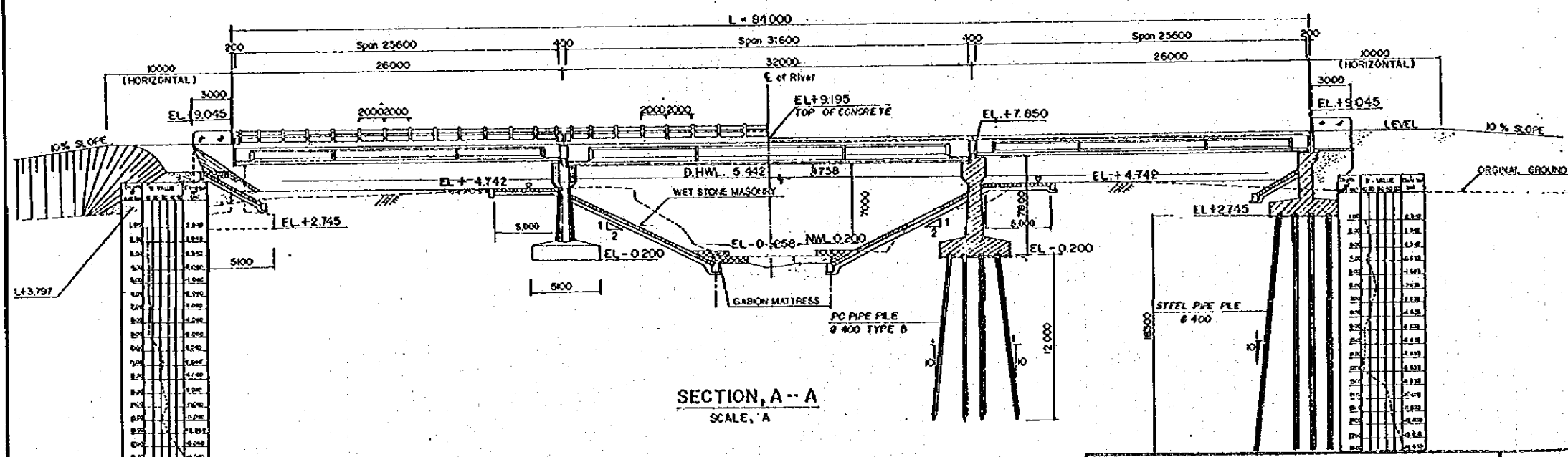
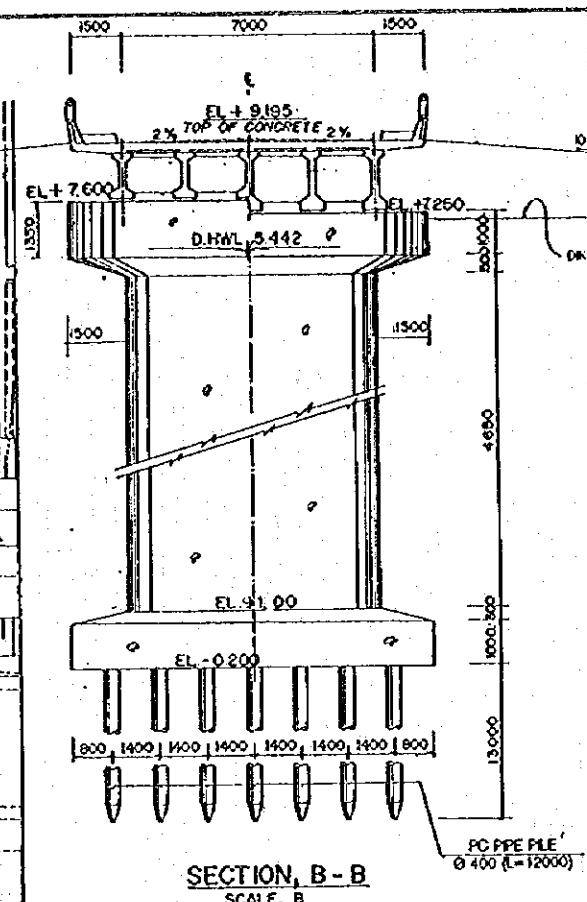
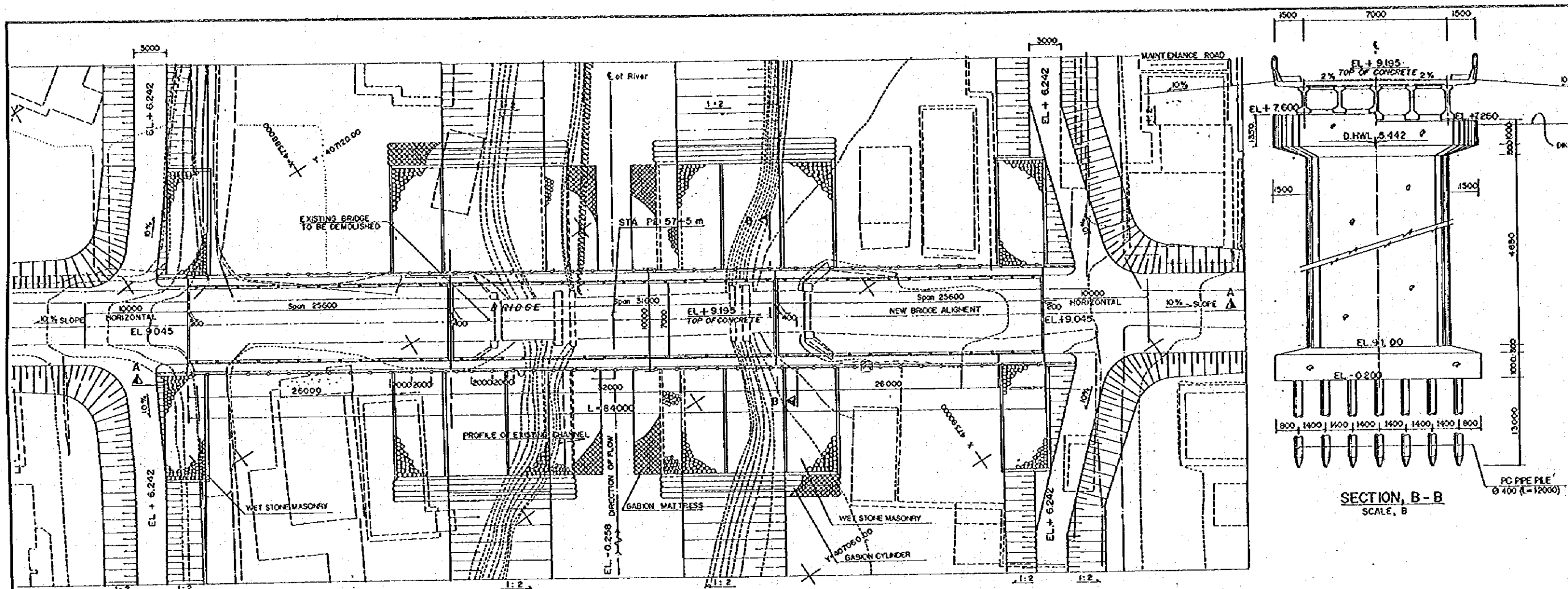


SIDE WALL  
SCALE B



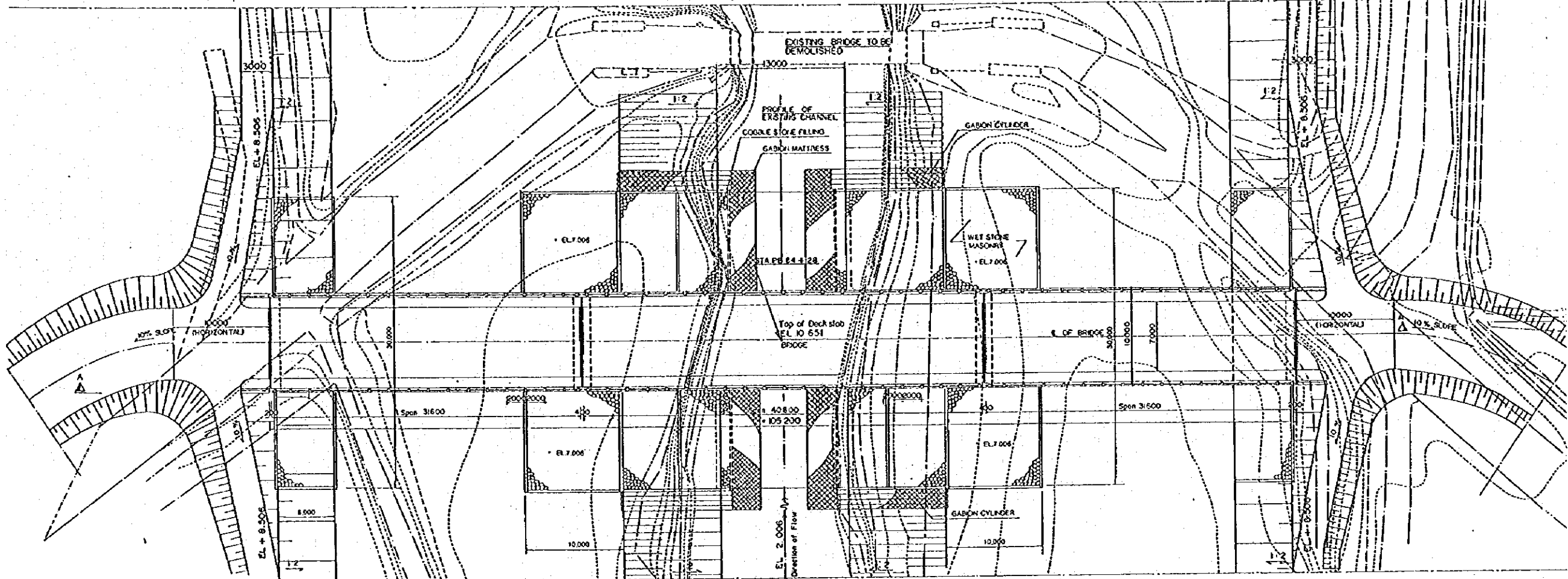
DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

DWG. 6.2.20  
WATERFRONT STEPS

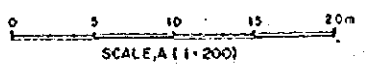
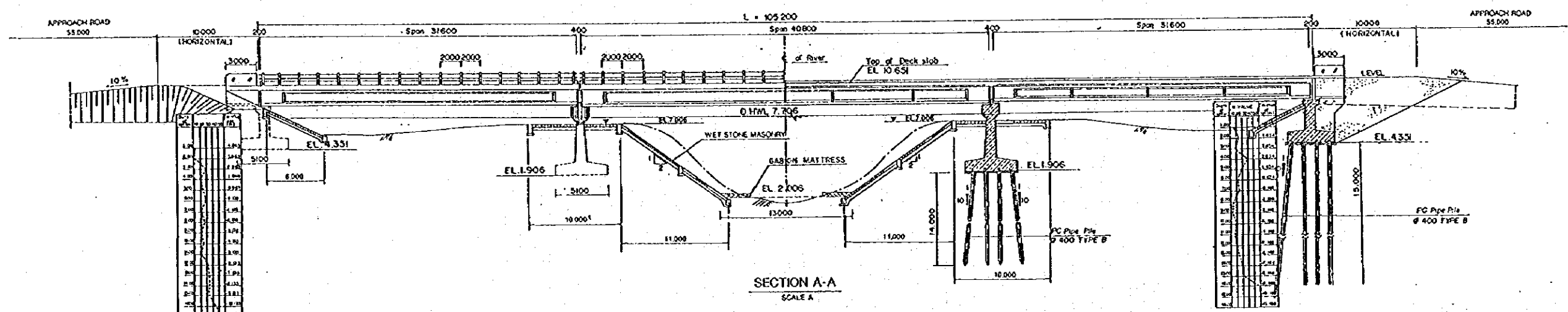


DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

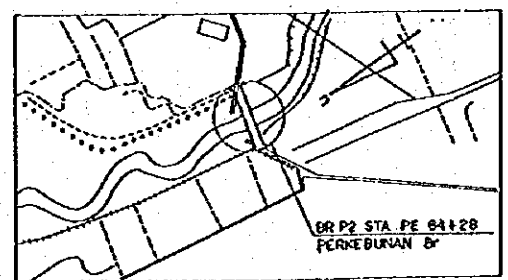
DWG. 6.3.1  
GENERAL PLAN OF TITI BESI BRIDGE (P1)



PLAN  
SCALE, A



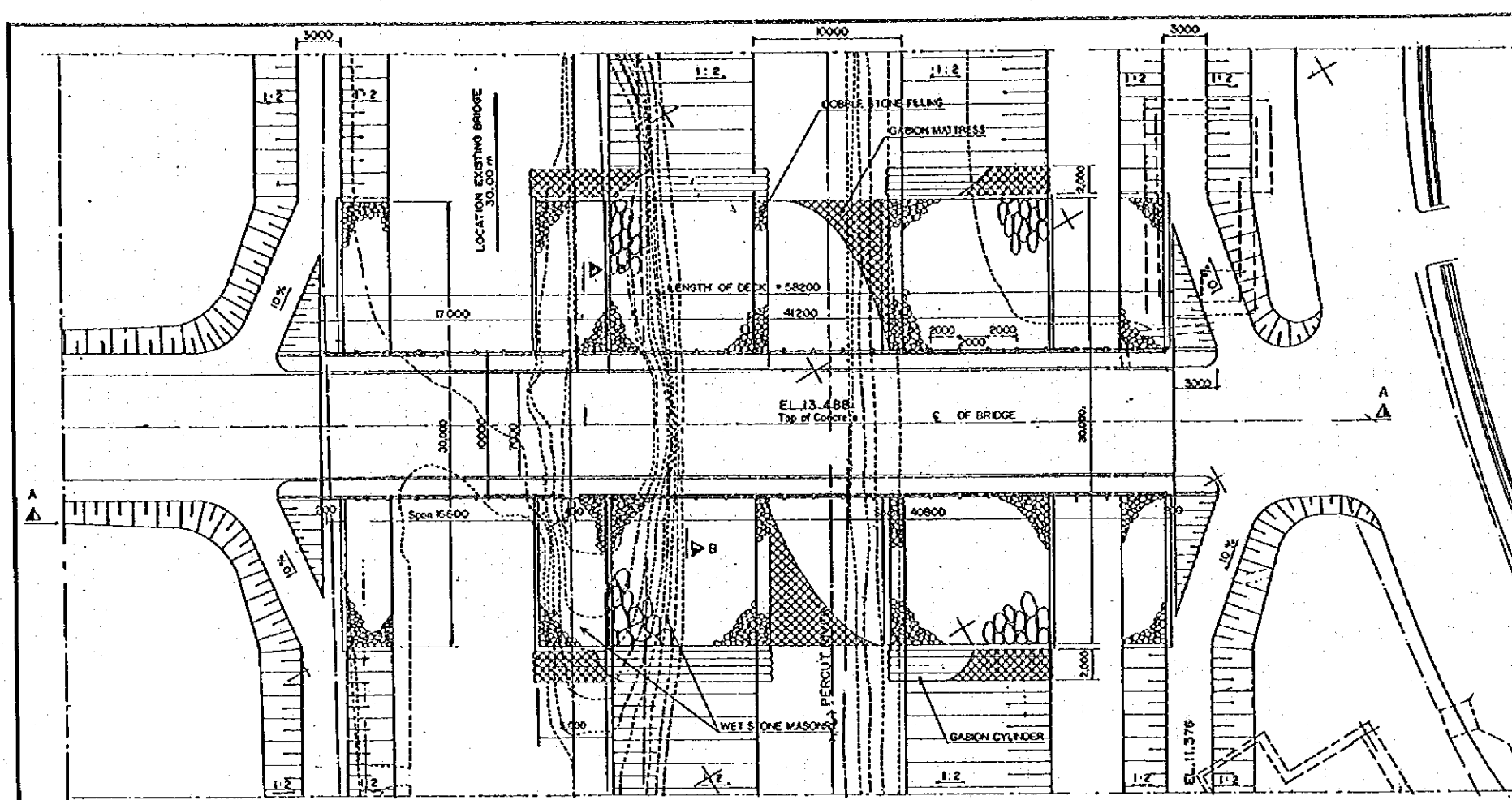
NOTE:  
BORING LOGS SHOWN ON THIS DRAWING ARE FOR REFERENCE ONLY.



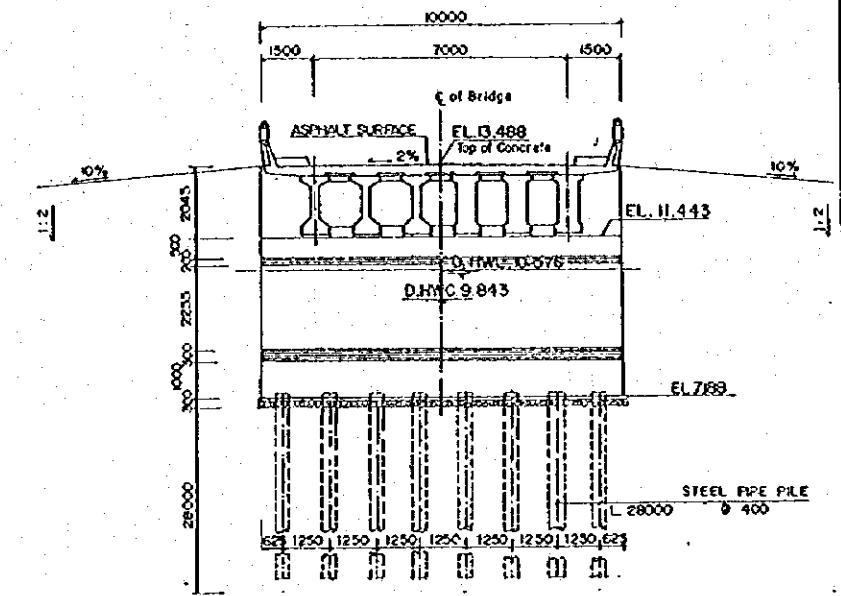
DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY

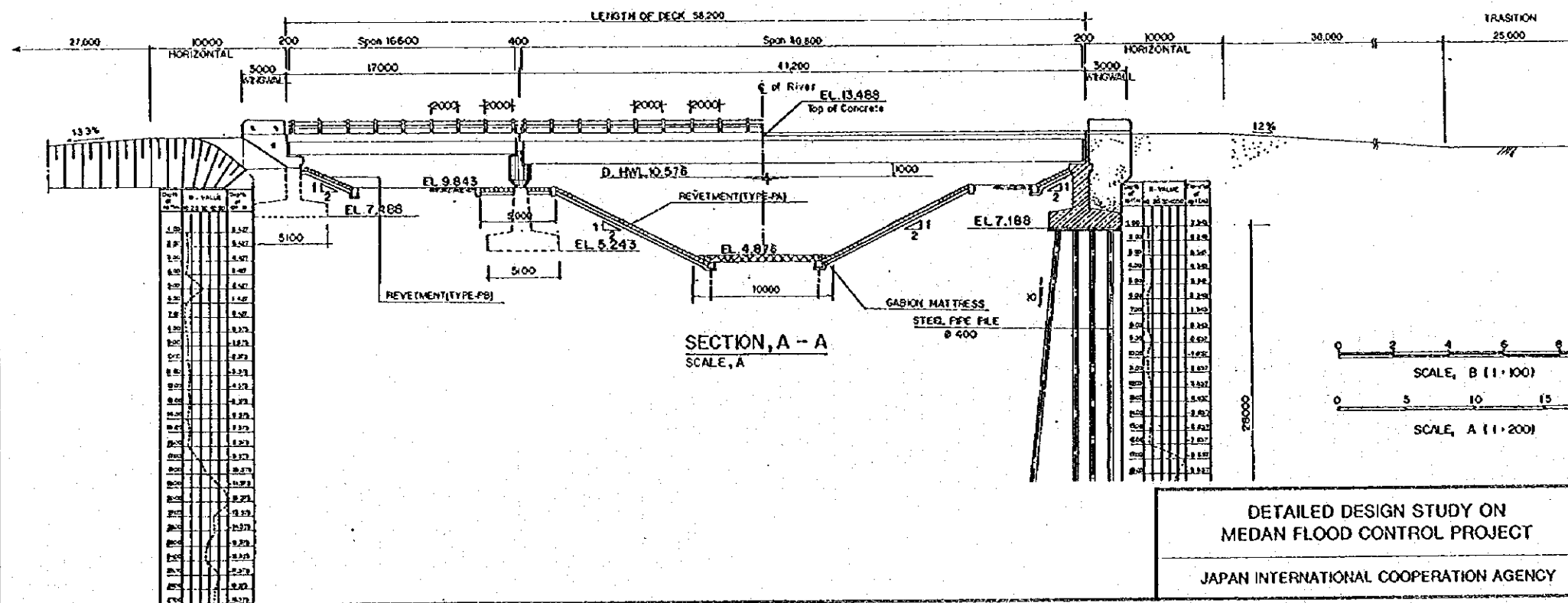
DWG. 6.3.2  
GENERAL PLAN OF PERKEBUNAN BRIDGE (P2)



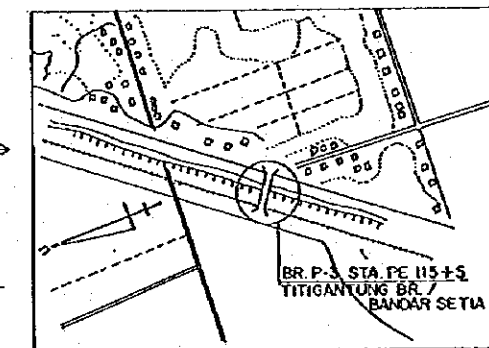
PLAN  
SCALE, A



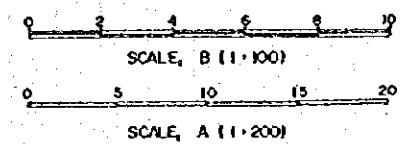
SECTION, B - B  
SCALE, B



SECTION, A - A  
SCALE, A

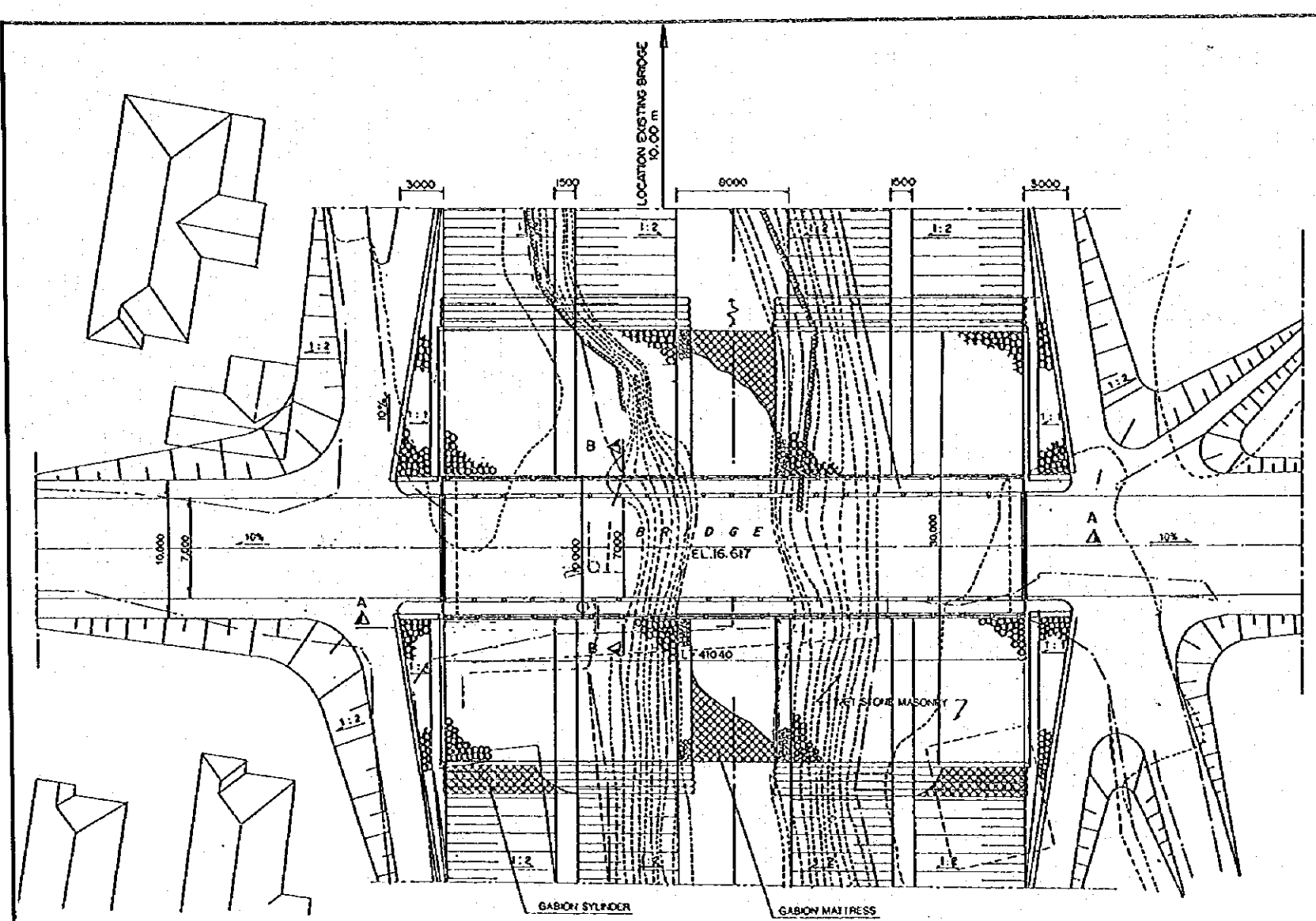


KEY PLAN  
NOT TO SCALE

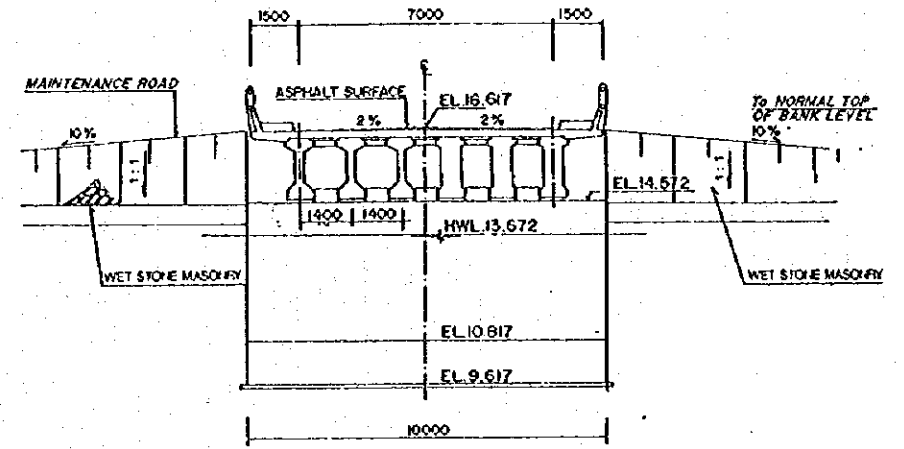


DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

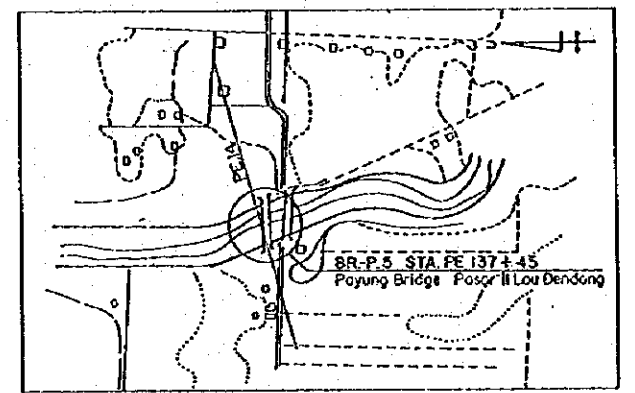
DWG. 6.3.3  
GENERAL PLAN OF TITI GANTUNG BRIDGE (P3)



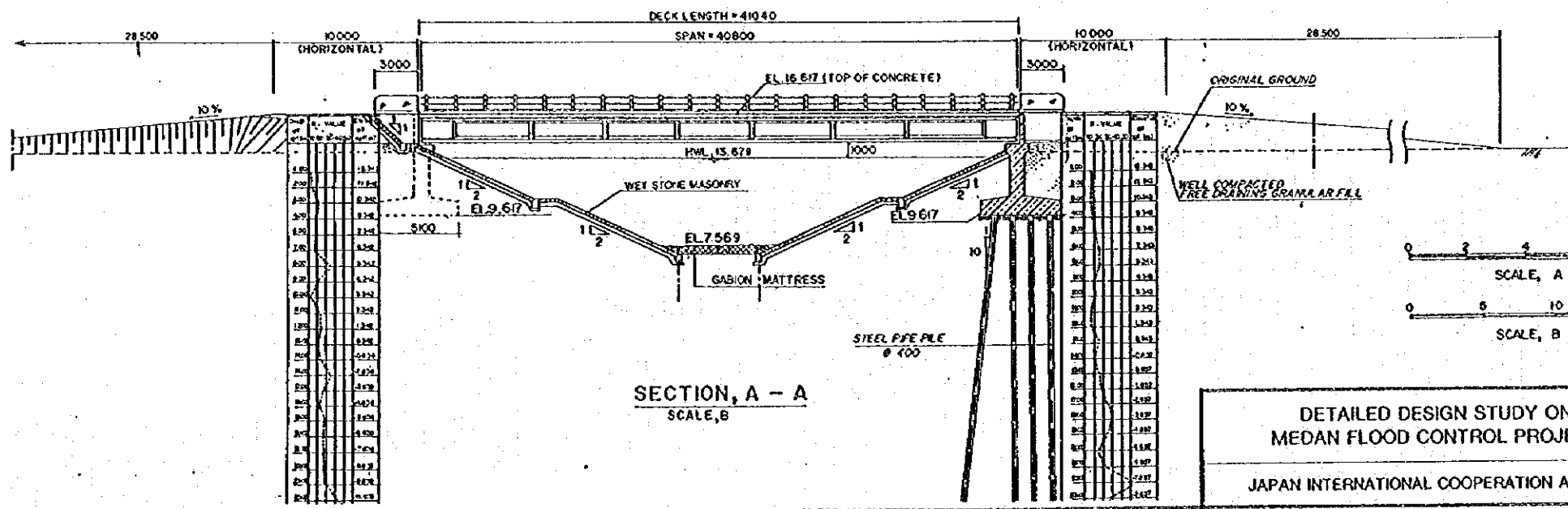
PLAN  
SCALE, B



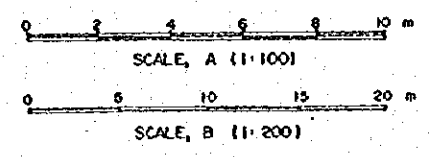
SECTION, B - B  
SCALE, A



KEY PLAN  
NOT TO SCALE



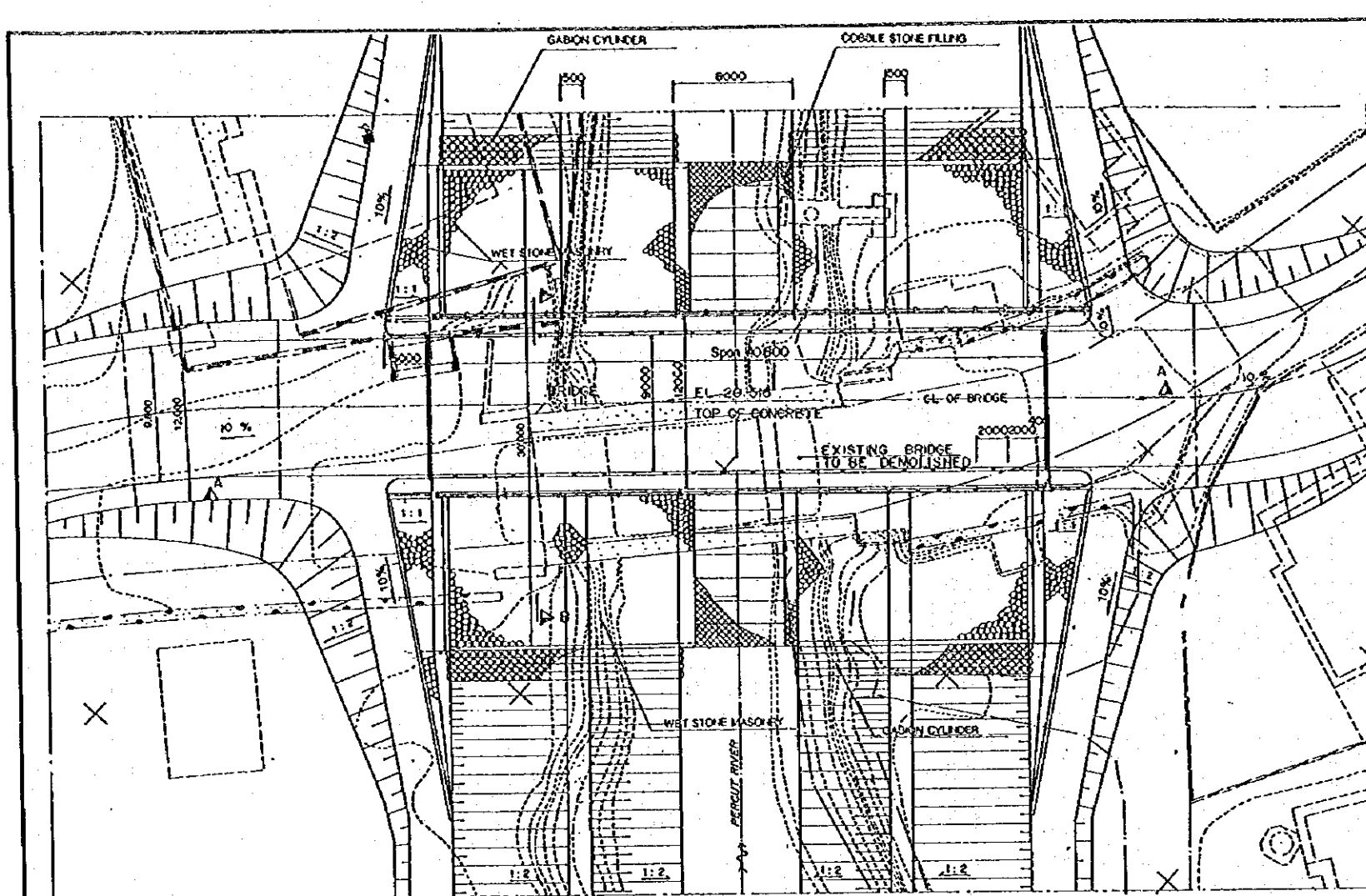
SECTION, A - A  
SCALE, B



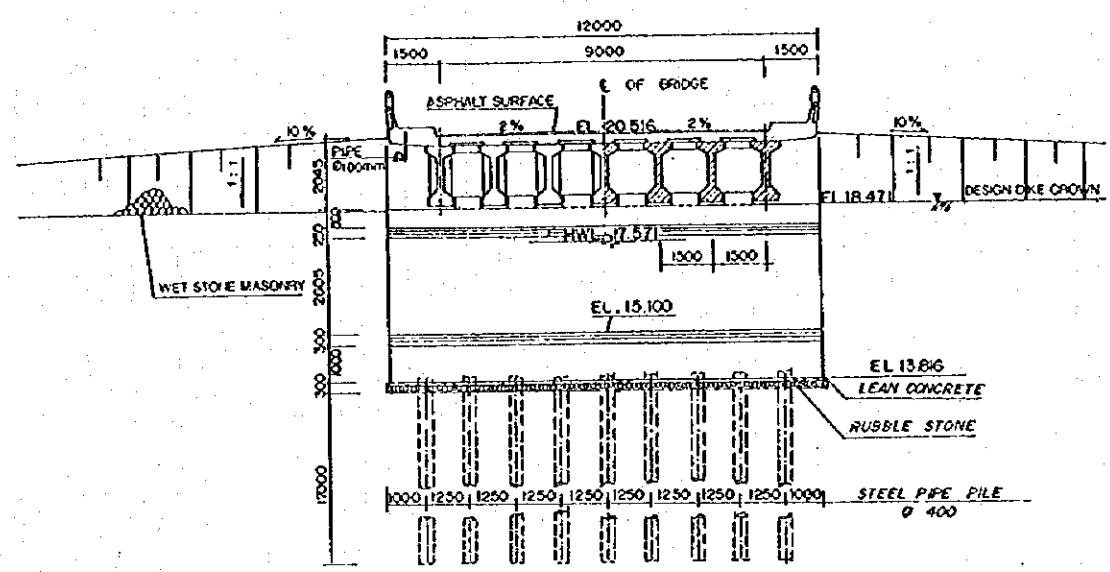
DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT

DWG. 6.3.4  
GENERAL PLAN OF PAYUNG BRIDGE (P5)

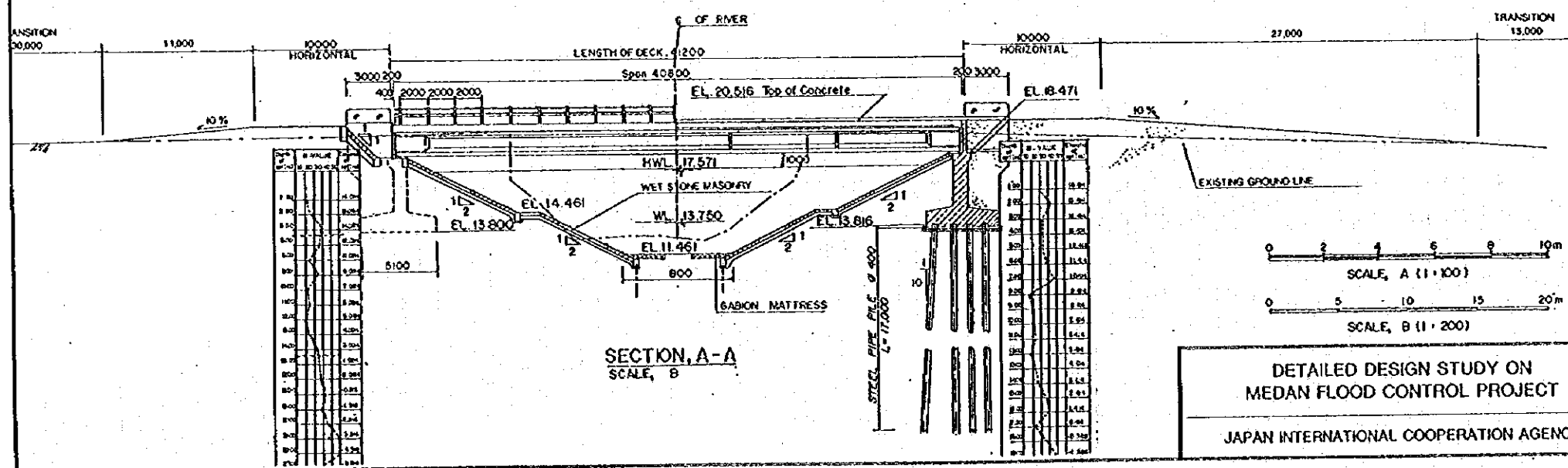
JAPAN INTERNATIONAL COOPERATION AGENCY



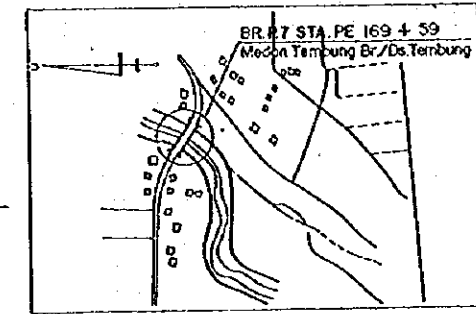
PLAN  
SCALE, B



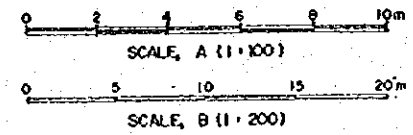
SECTION, B-B  
SCALE, A



SECTION, A-A  
SCALE, B



KEY PLAN  
NOT TO SCALE

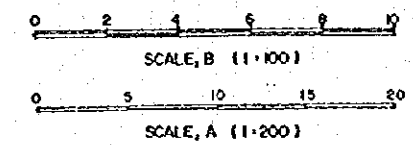
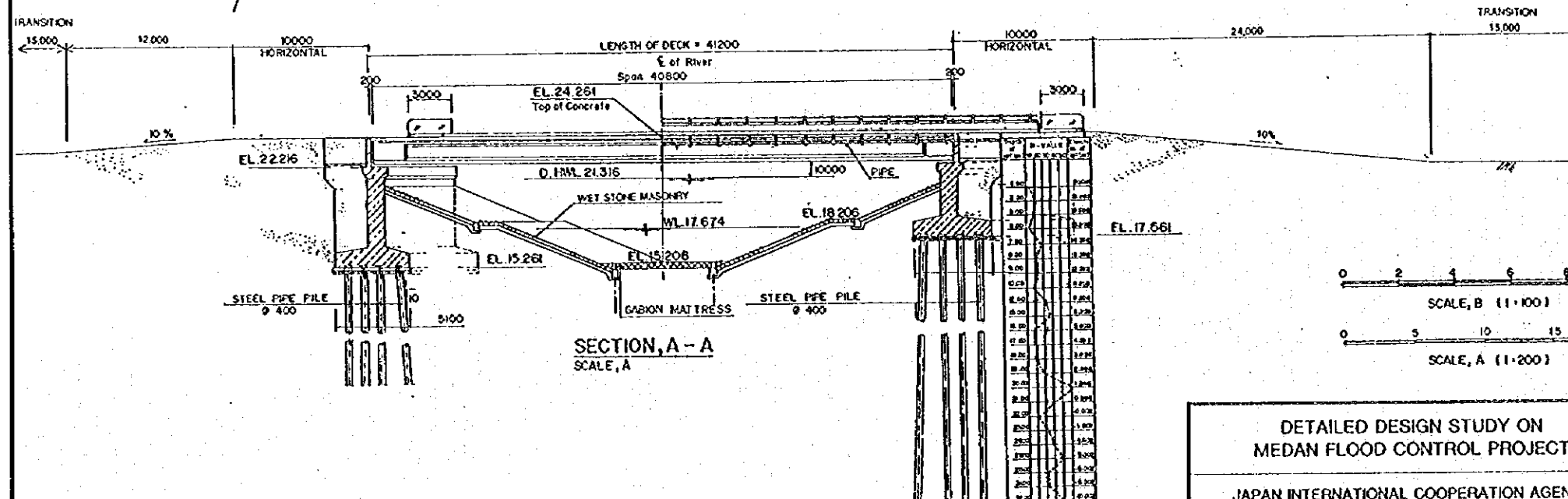
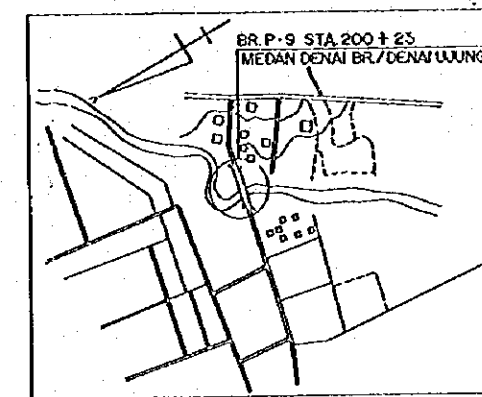
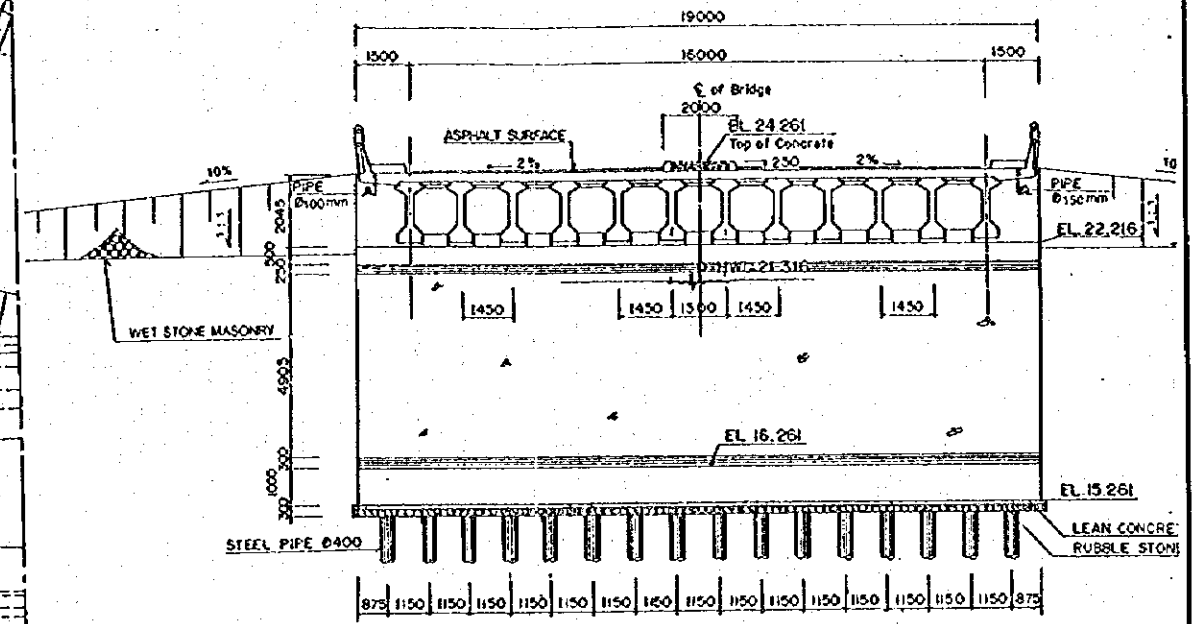
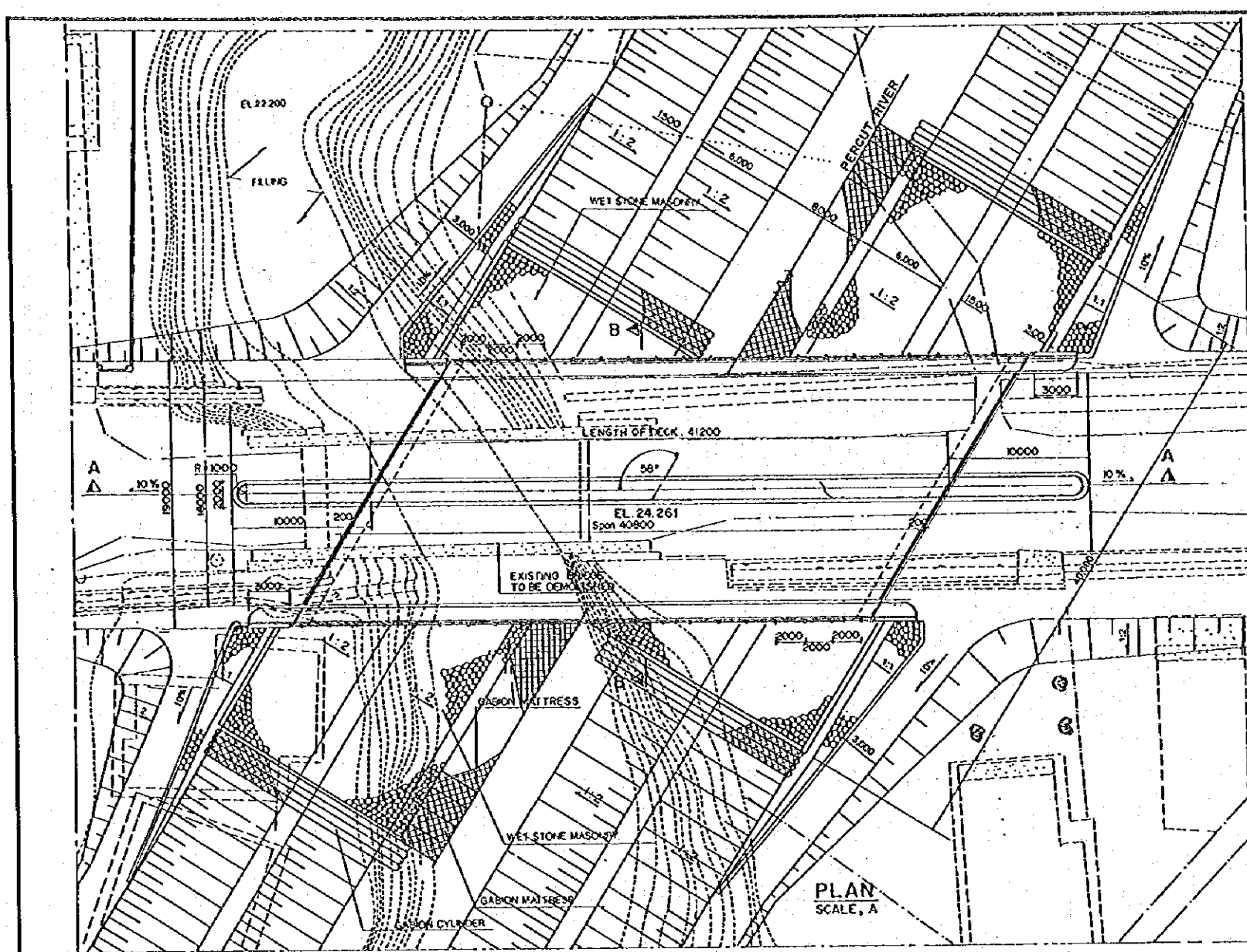


DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY

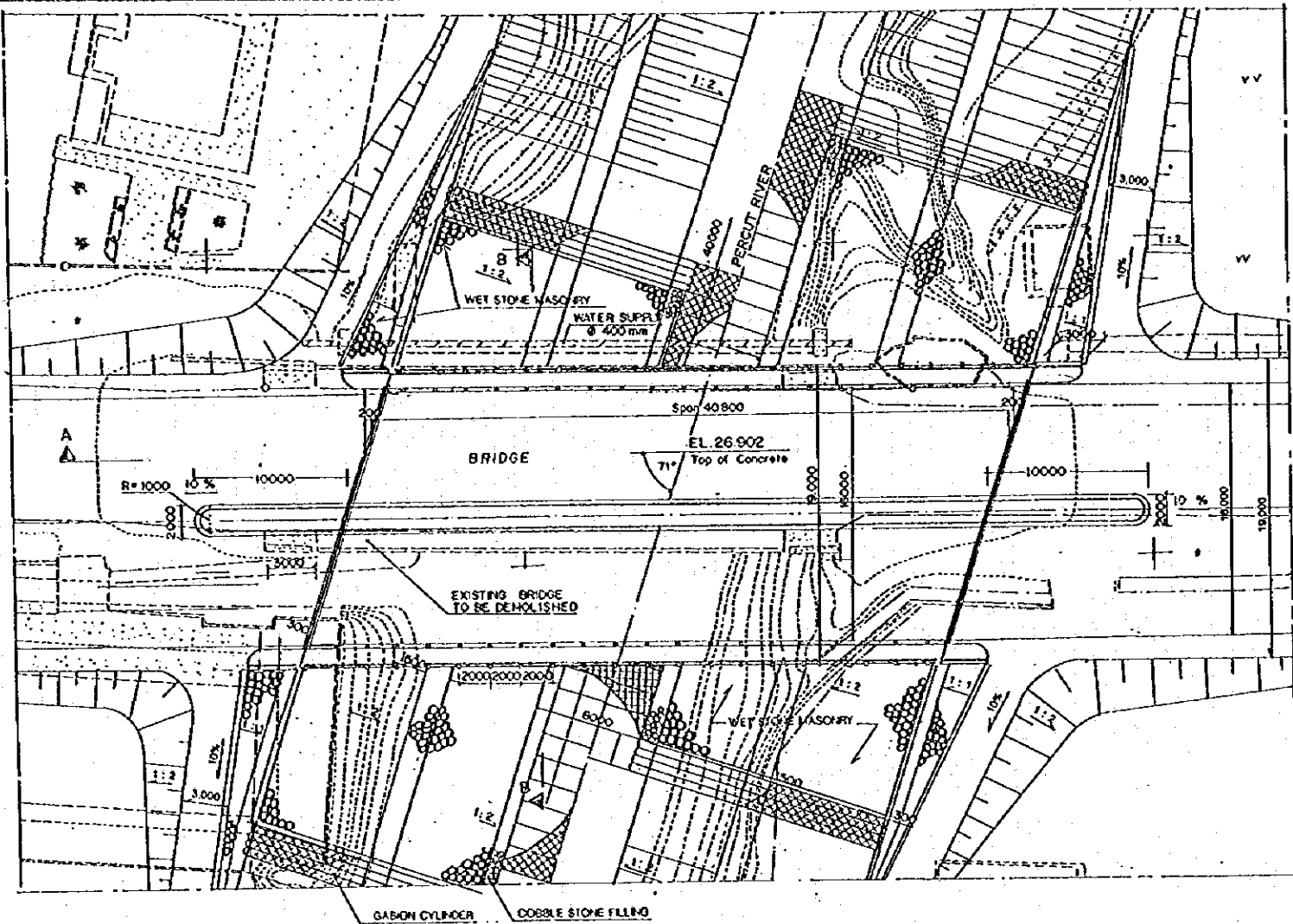
DWG. 6.3.5  
GENERAL PLAN OF MEDAN-TEMBUNG BRIDGE (P7)



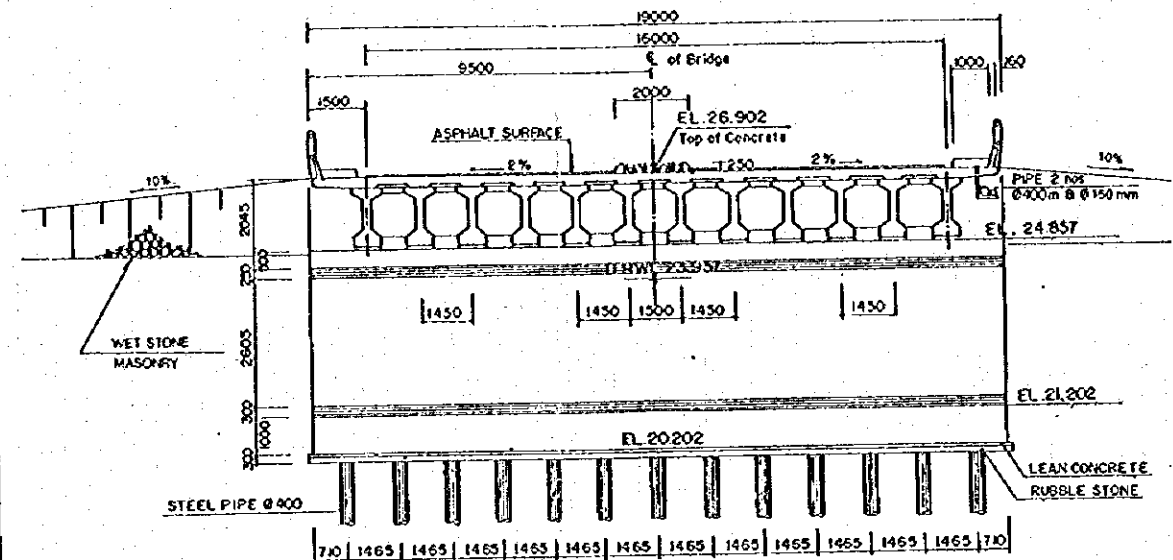


DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

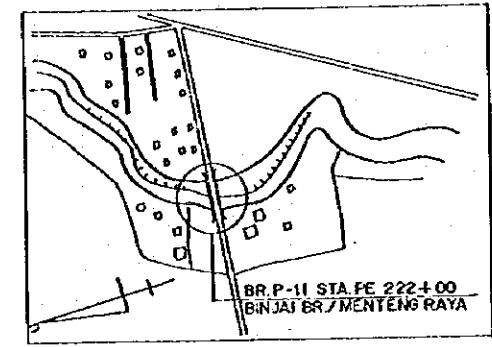
DWG. 6.3.6  
GENERAL PLAN OF MEDAN-DENAI BRIDGE (P9)



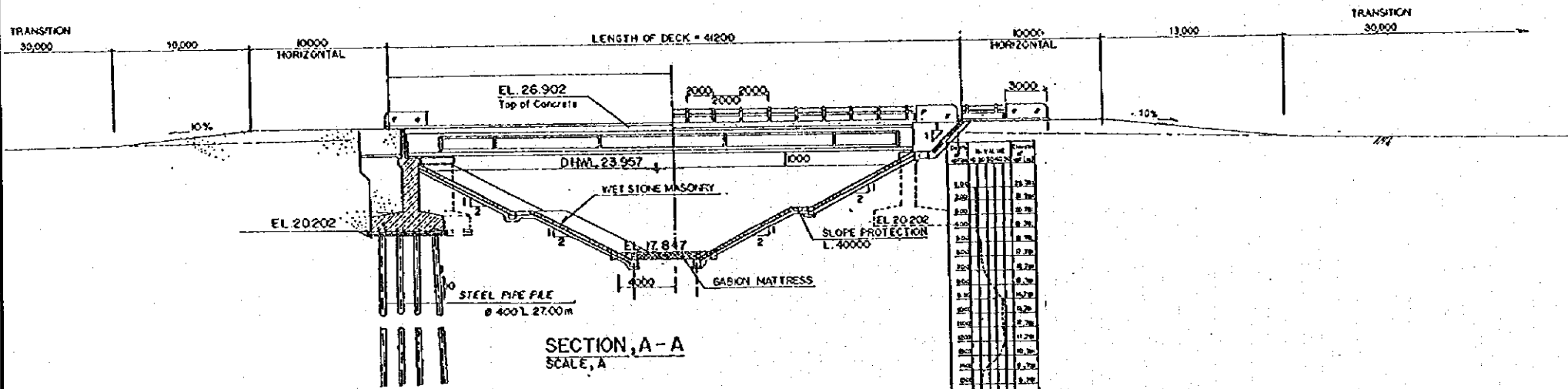
PLAN  
SCALE, A



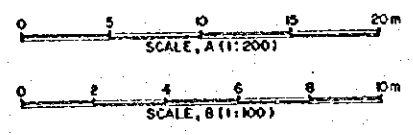
SECTION, B-B  
SCALE, B



KEY PLAN  
NOT TO SCALE

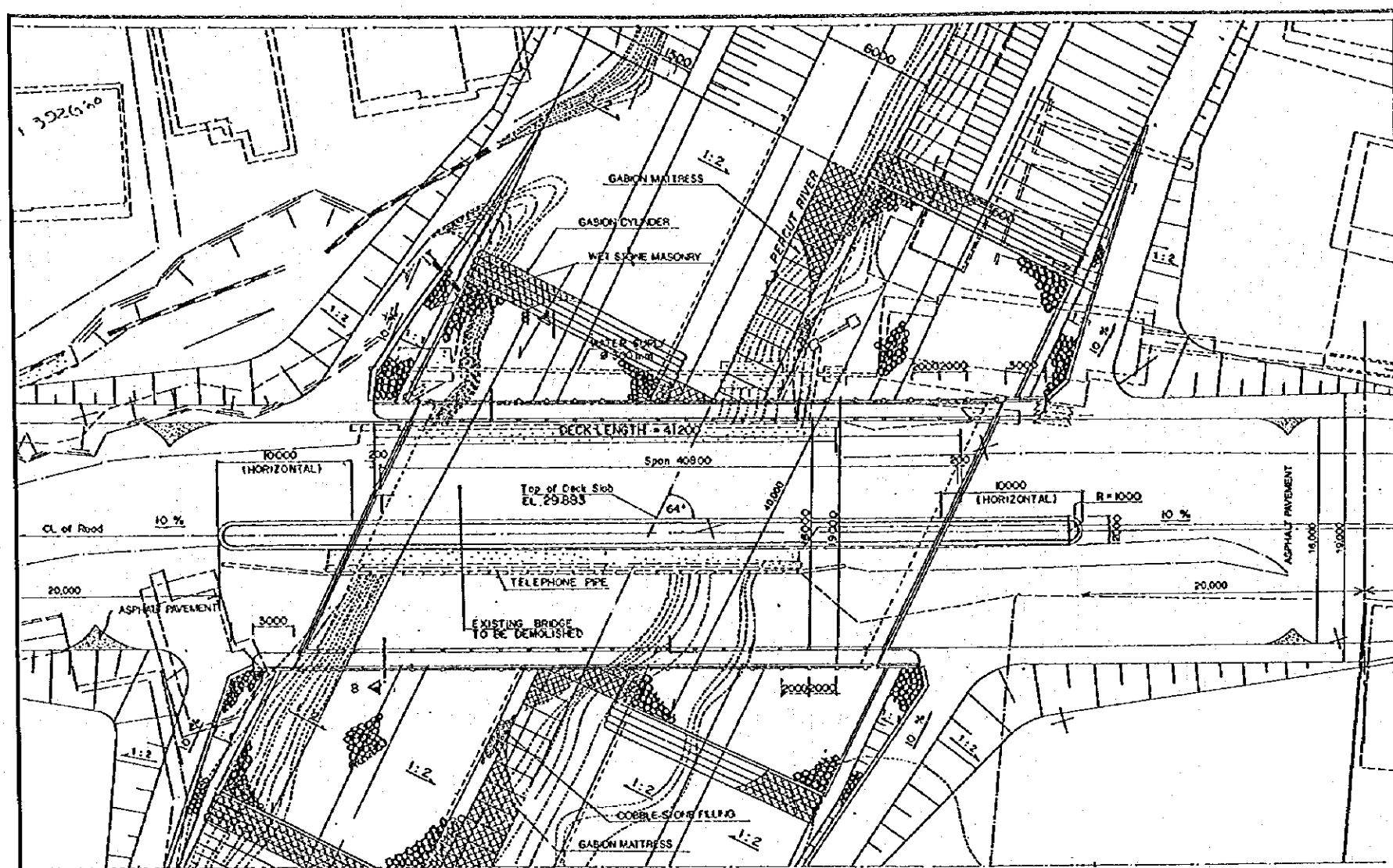


SECTION, A-A  
SCALE, A

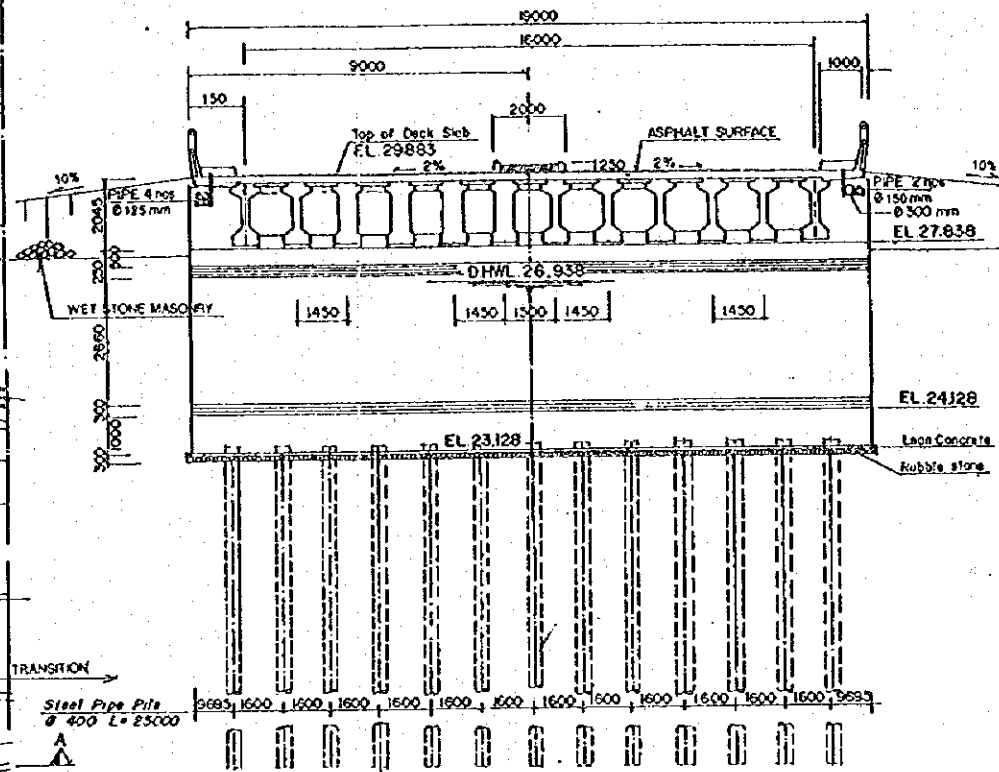


DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

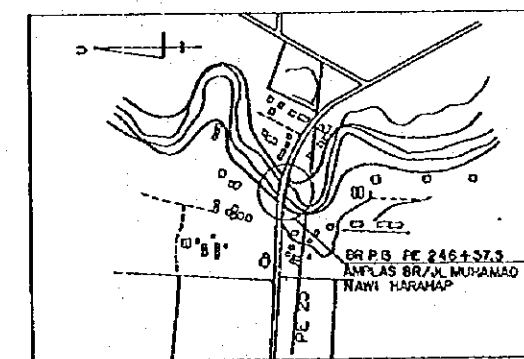
DWG. 6.3.7  
GENERAL PLAN OF BINJAI BRIDGE (P11)



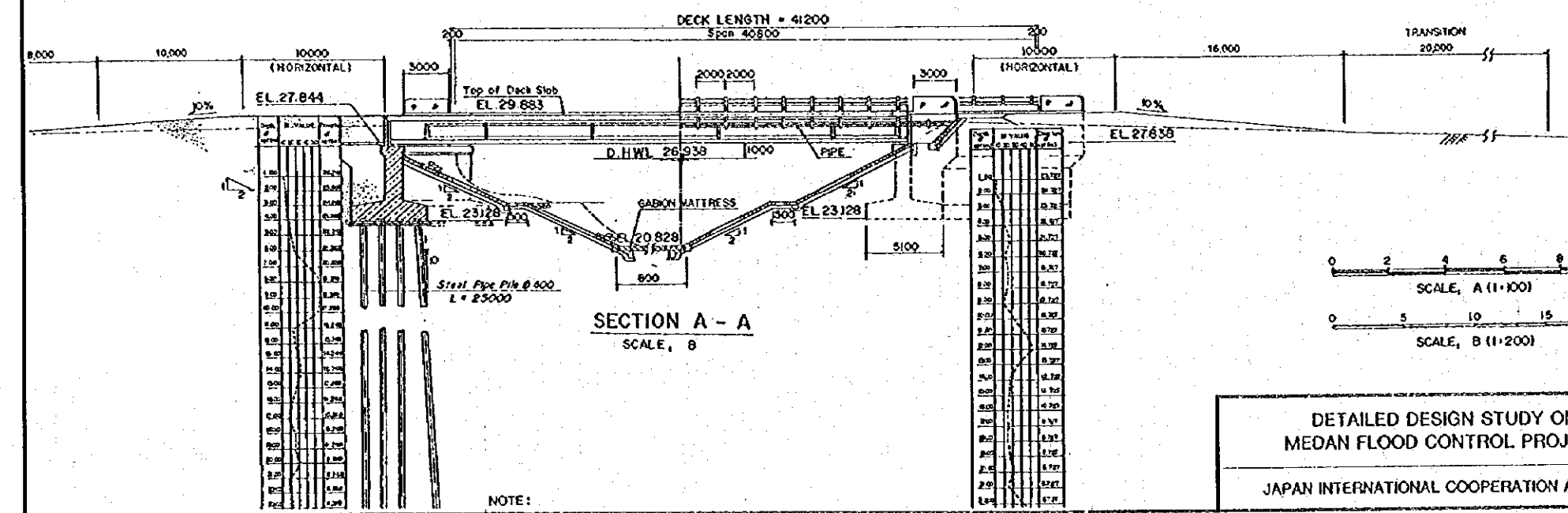
PLAN  
SCALE, B



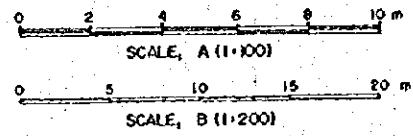
SECTION B - B  
SCALE, A



KEY PLAN  
NOT TO SCALE

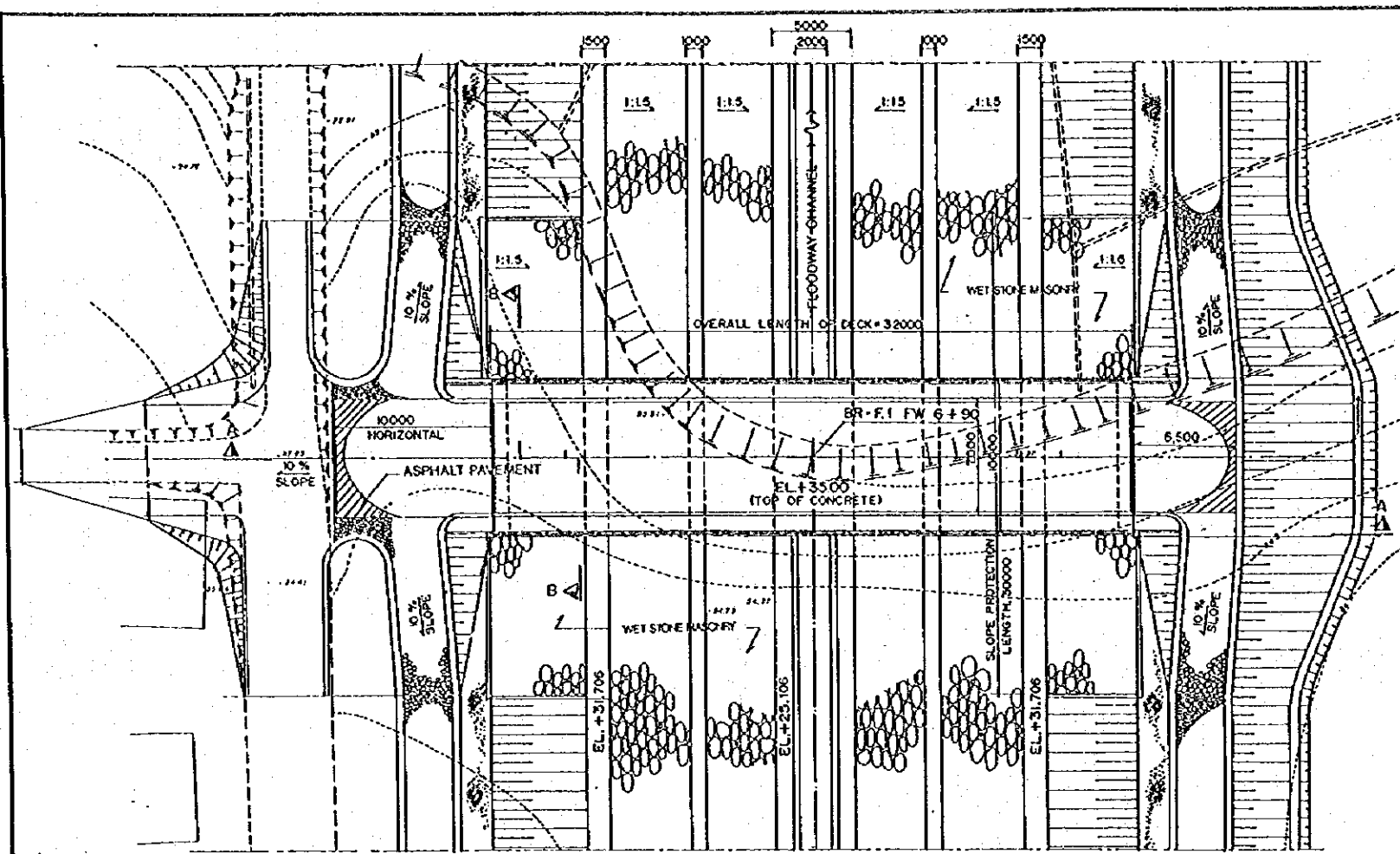


SECTION A - A  
SCALE, B

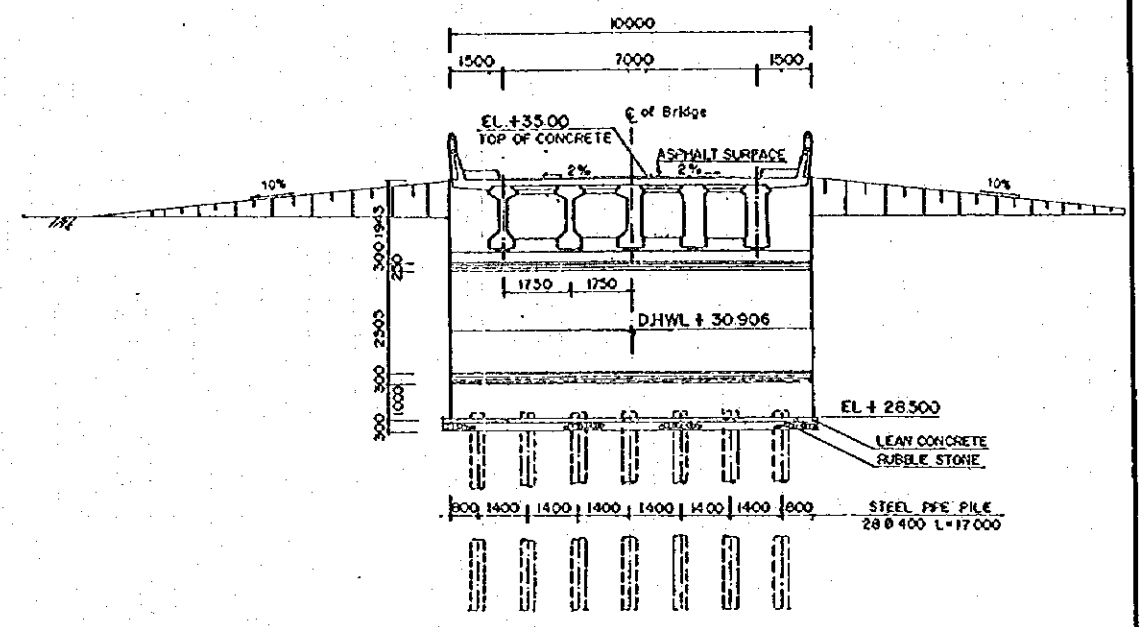


DETAILED DESIGN STUDY ON  
MEDAN FLOOD CONTROL PROJECT  
JAPAN INTERNATIONAL COOPERATION AGENCY

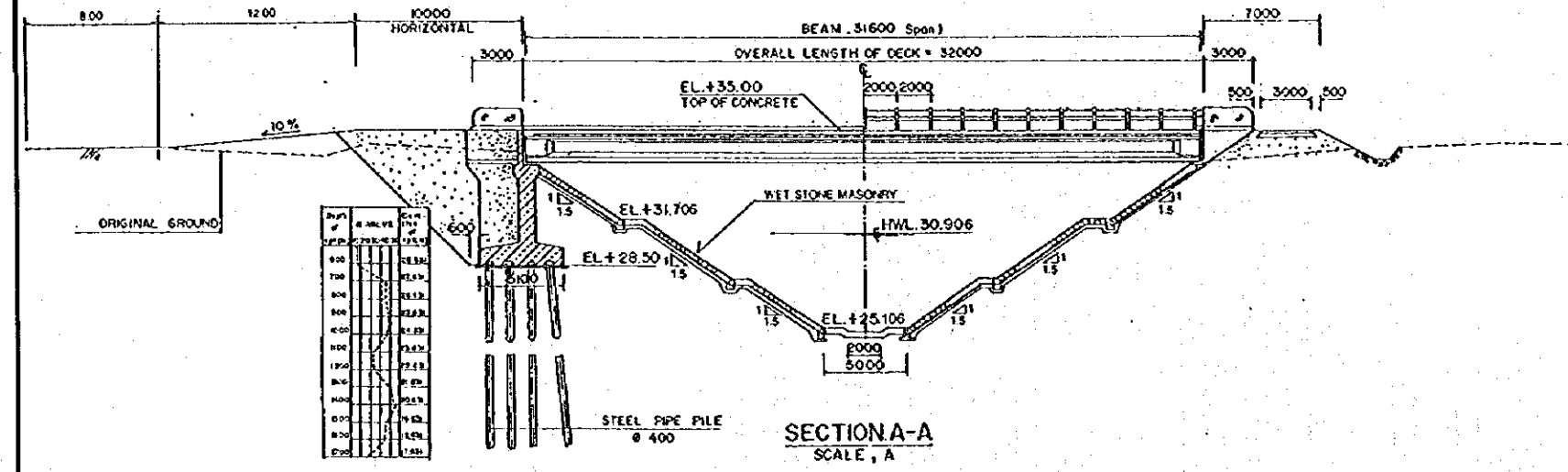
DWG. 6.3.8  
GENERAL PLAN OF AMPLAS BRIDGE (P13)



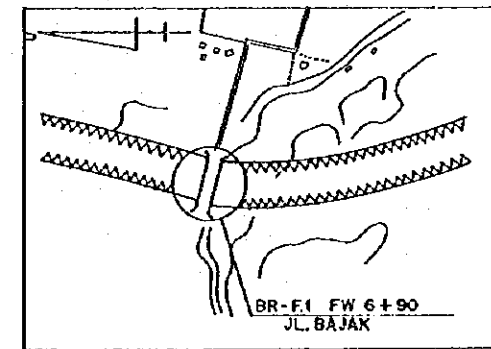
PLAN  
SCALE, A



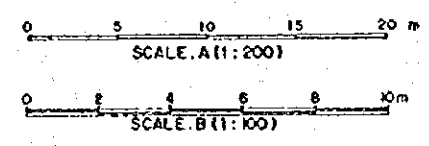
SECTION B-B  
SCALE, B



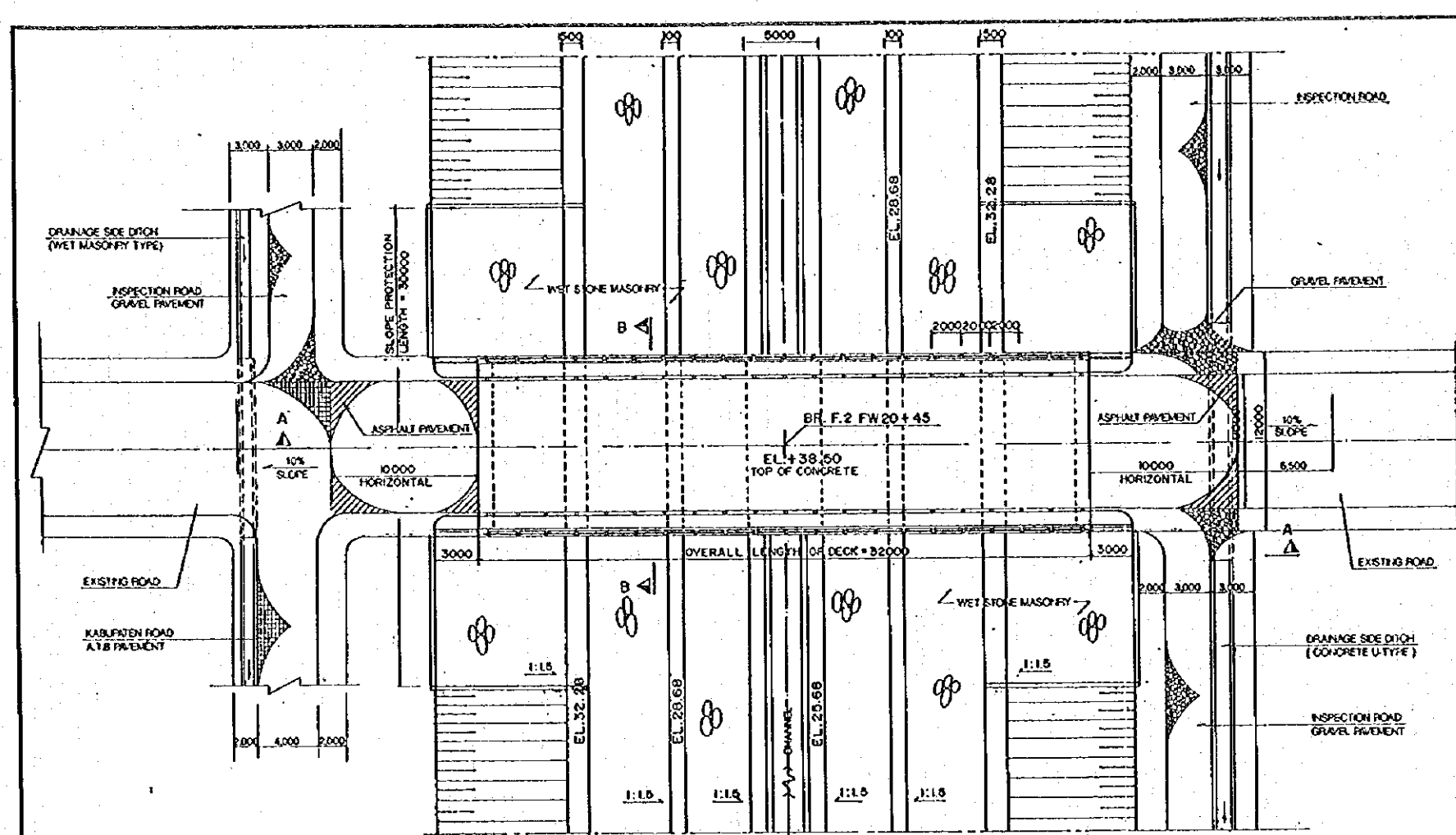
SECTION A-A  
SCALE, A



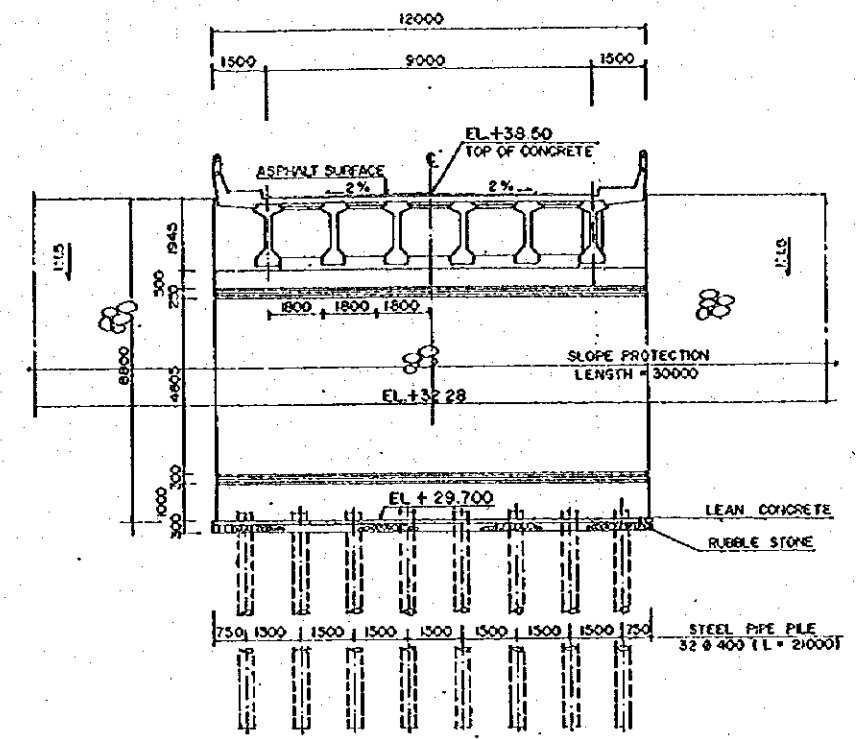
KEY PLAN  
NOT TO SCALE



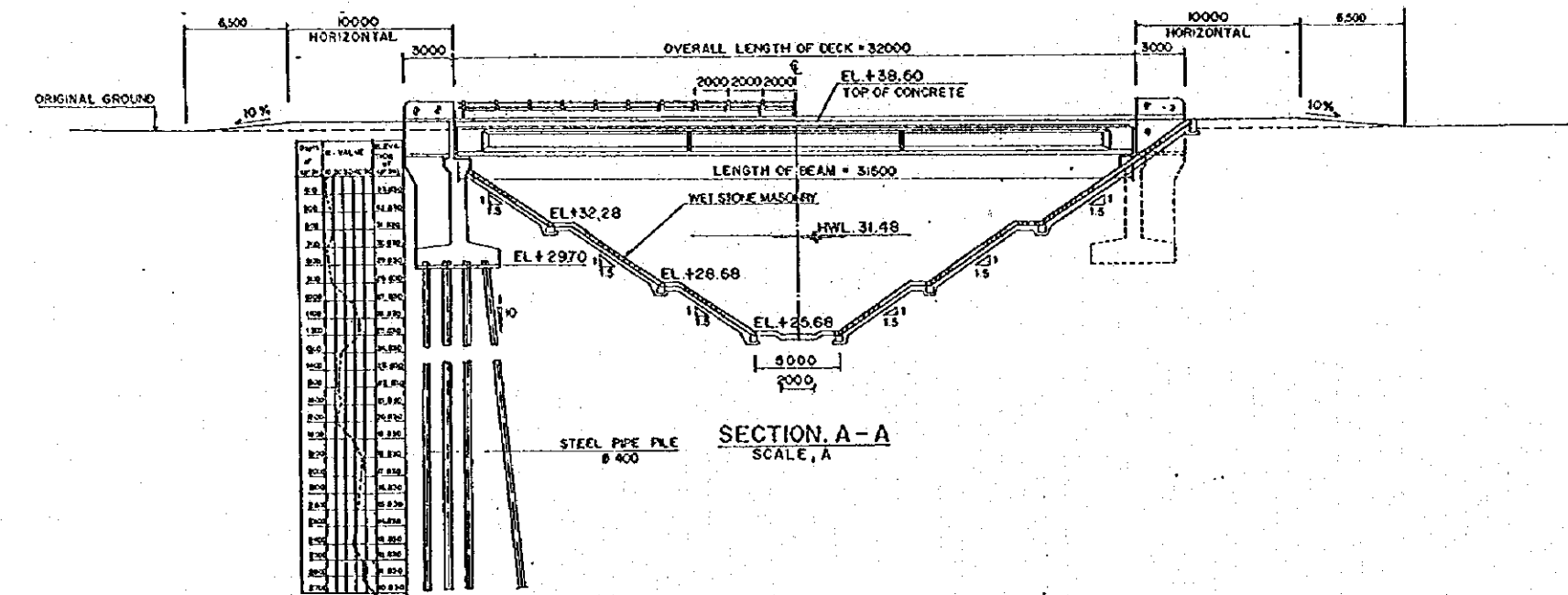
|   |   |
|---|---|
| <p>DETAILED DESIGN STUDY ON<br/>MEDAN FLOOD CONTROL PROJECT</p> | <p>DWG. 6.3.9<br/>GENERAL PLAN OF JL. BAJAK BRIDGE (F1)</p> |
| <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>                   |   |



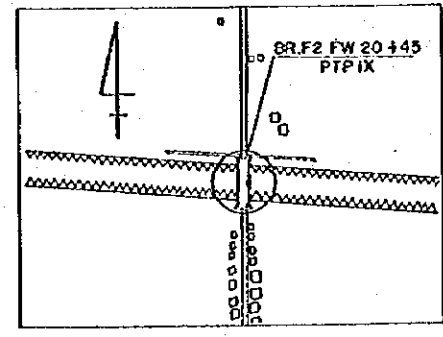
PLAN  
SCALE, A



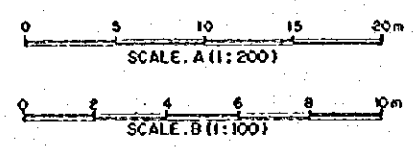
SECTION B - B  
SCALE, B



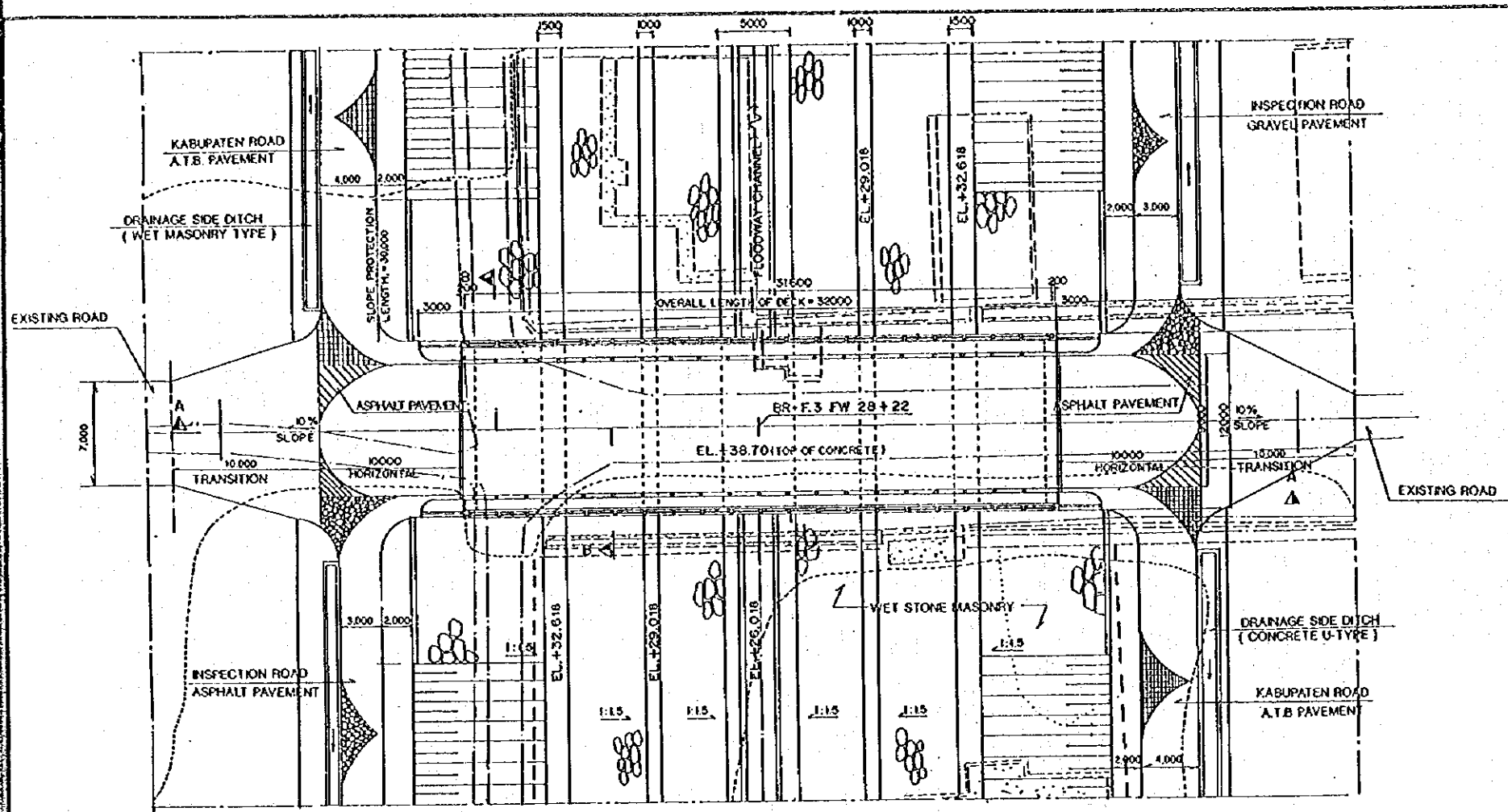
SECTION A - A  
SCALE, A



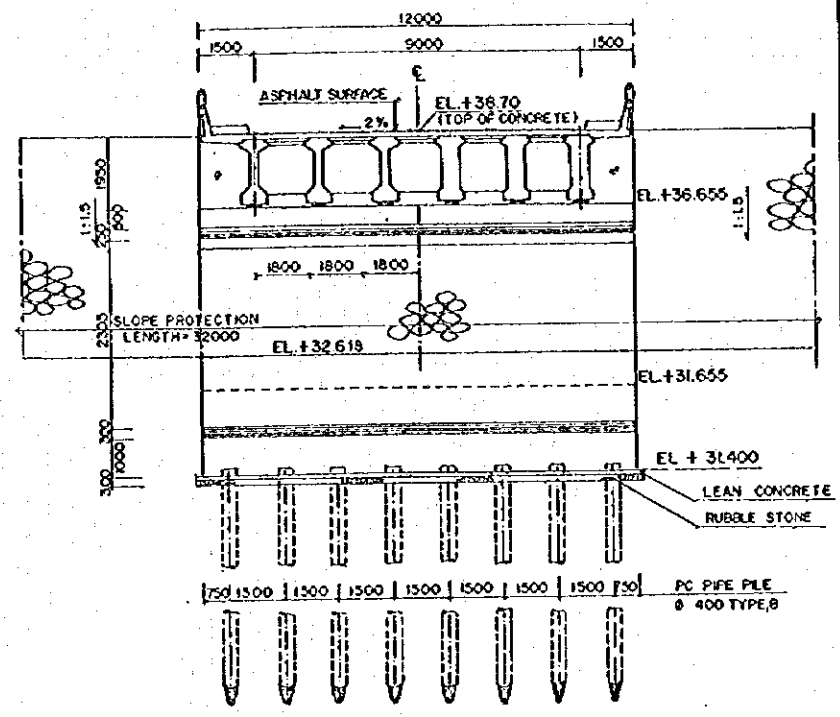
KEY PLAN  
NOT TO SCALE



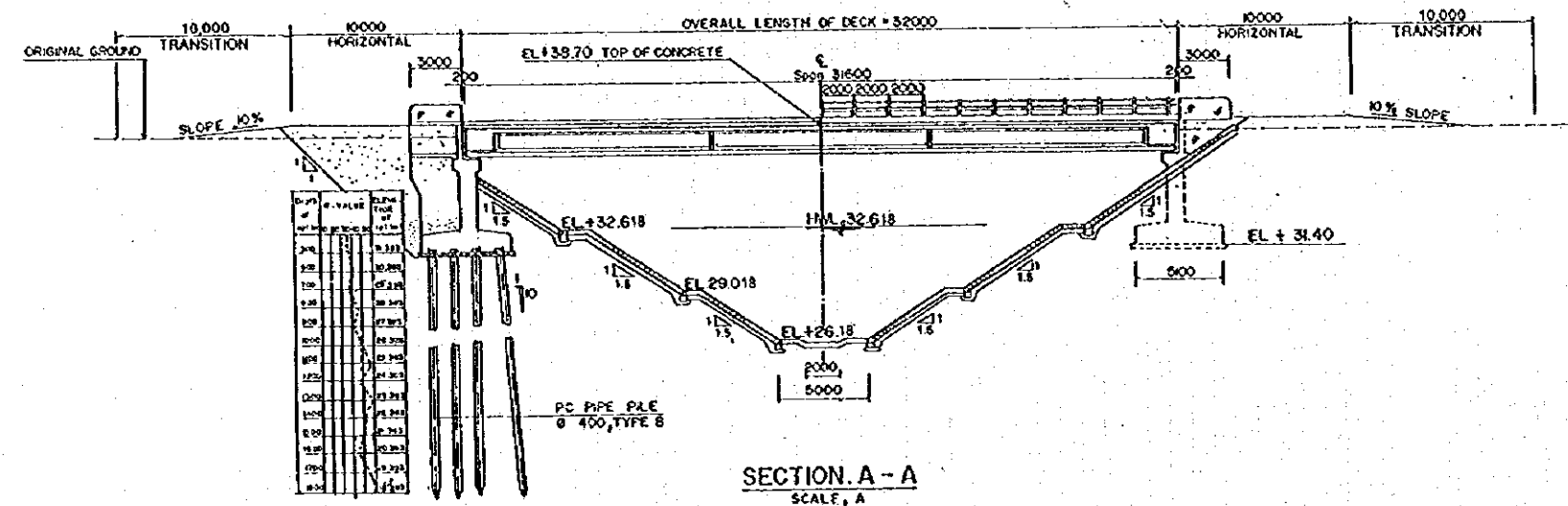
|   |   |
|---|---|
| DETAILED DESIGN STUDY ON<br>MEDAN FLOOD CONTROL PROJECT<br><br>JAPAN INTERNATIONAL COOPERATION AGENCY | DWG. 6.3.10<br>GENERAL PLAN OF PTP IX BRIDGE (F2) |
|---|---|



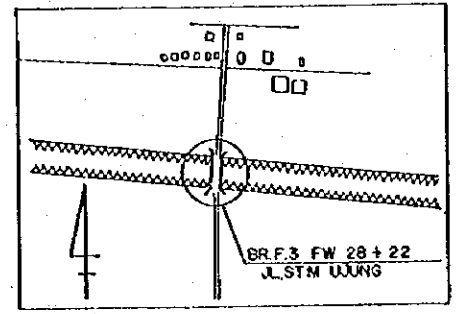
PLAN  
SCALE, A



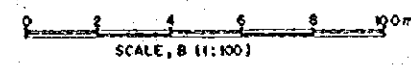
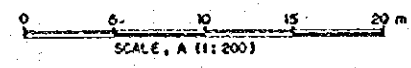
SECTION B-B  
SCALE, B



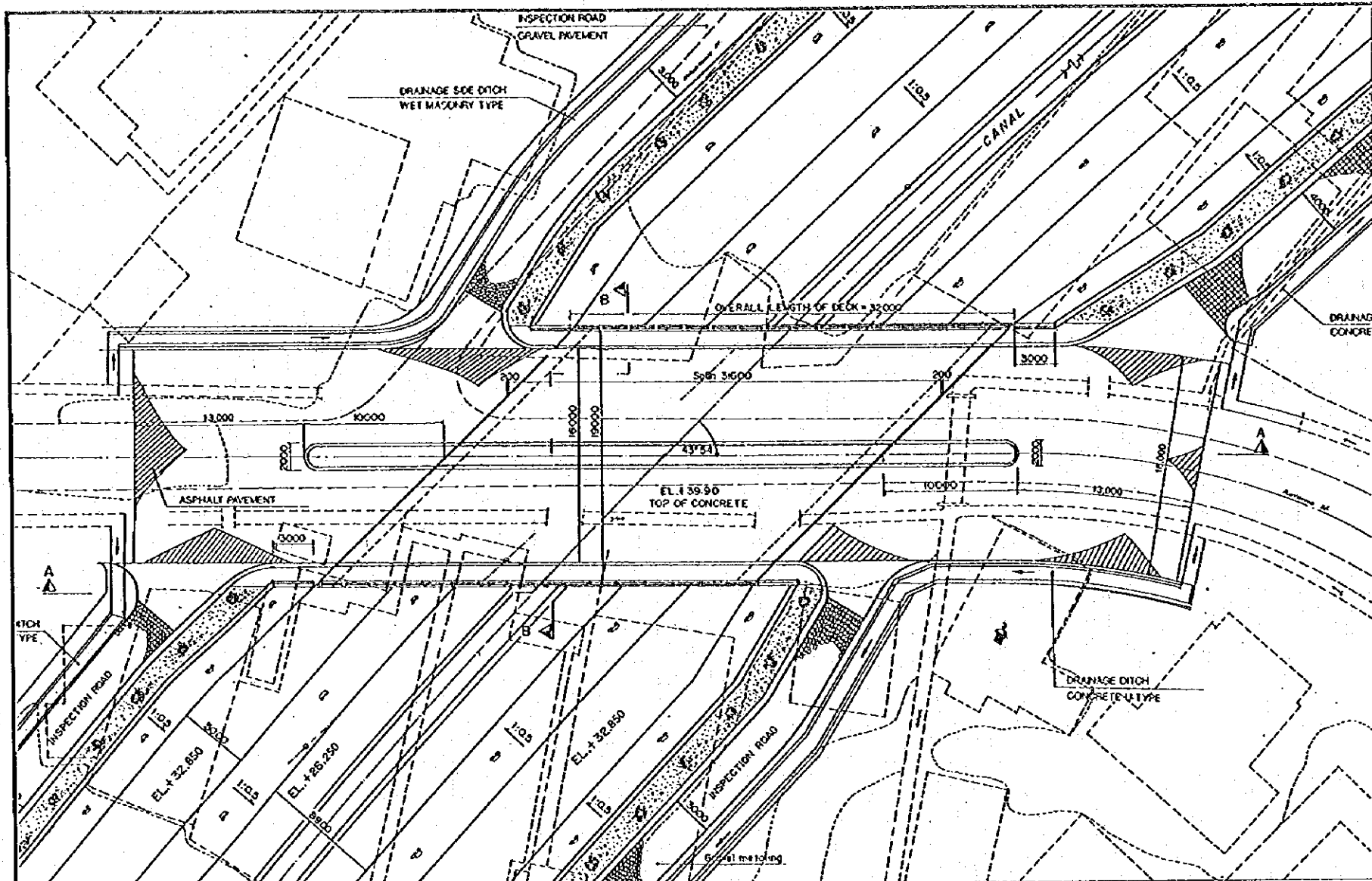
SECTION A-A  
SCALE, A



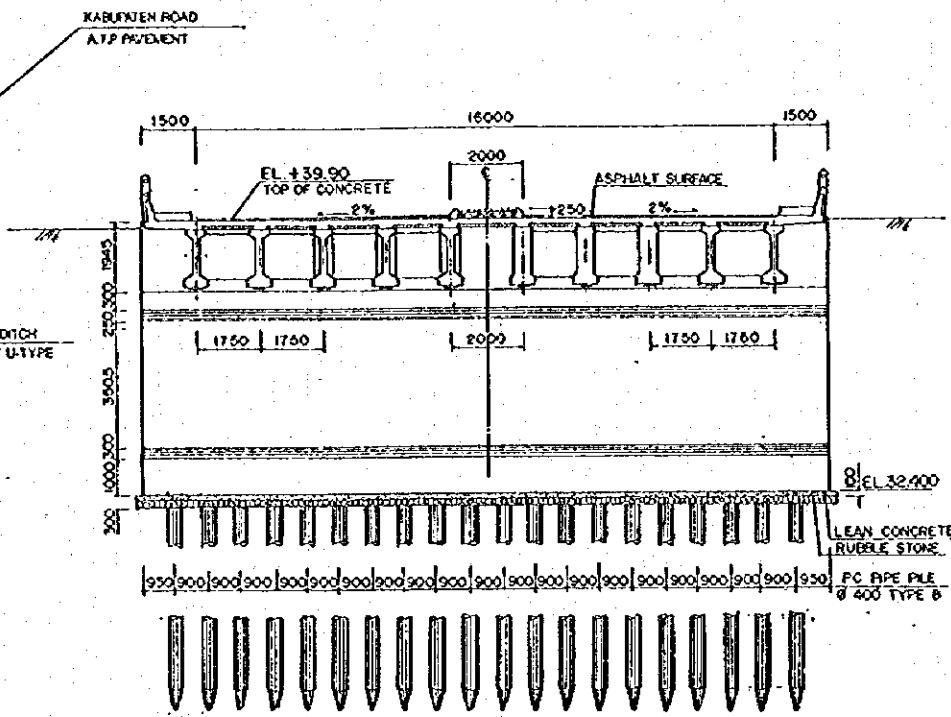
KEY PLAN  
NOT TO SCALE



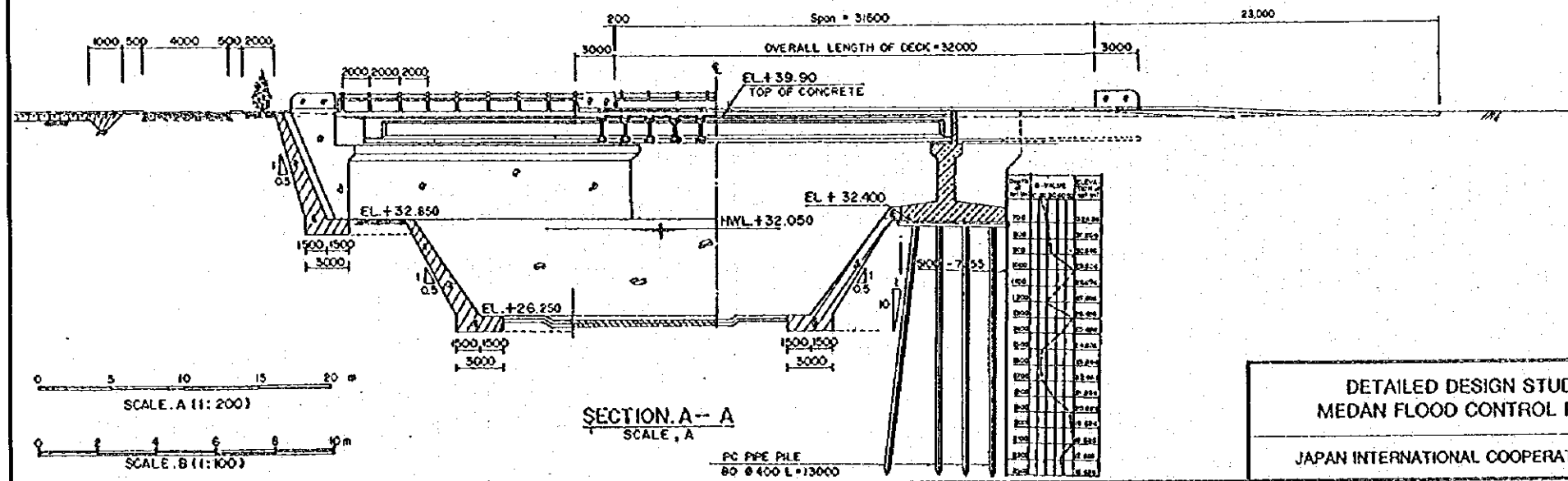
|   |  |
|---|--|
| <p>DETAILED DESIGN STUDY ON<br/>MEDAN FLOOD CONTROL PROJECT</p> | <p>DWG. 6.3.11<br/>GENERAL PLAN OF JL. STM UJUNG BRIDGE (F3)</p> |
| <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>                   |  |



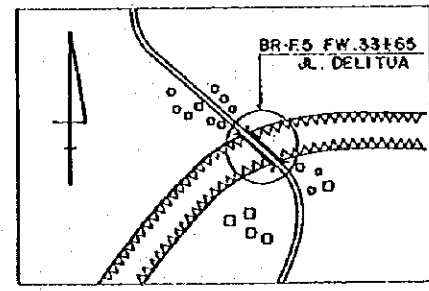
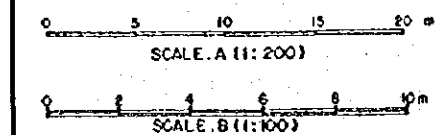
PLAN  
SCALE, A



SECTION B-B  
SCALE, B



SECTION A-A  
SCALE, A



KEY PLAN  
NOT TO SCALE

|   |  |
|---|--|
| <p>DETAILED DESIGN STUDY ON<br/>MEDAN FLOOD CONTROL PROJECT</p> <p>JAPAN INTERNATIONAL COOPERATION AGENCY</p> | <p>DWG. 6.3.12<br/>GENERAL PLAN OF JL. DELITUA BRIDGE (F5)</p> |
|---|--|