

## ***TABLES & FIGURES***



**Table 1 METEOROLOGICAL CONDITION IN THE PROJECT AREA**

ITEM	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Station	: Agriculture Research Station												
Station Index	: ARS												
Latitude	: 6° 10' N.												
Longitude	: 80° 53' E.												
Temperature (°C)													
Mean	25.7	26.2	27.6	28.6	28.9	28.2	28.3	28.0	28.1	28.0	27.2	26.6	27.6
Relative Humidity (%)													
Mean	81.9	79.4	79.6	80.6	78.7	79.0	77.6	77.3	78.8	79.0	82.0	82.1	79.6
Evaporatipon (mm)													
Mean	144.8	146.3	170.2	156.2	160.0	162.5	167.2	164.0	160.3	143.7	129.6	139.4	1799.3
Sunshine Hour (hour)													
Mean	217.8	241.2	242.0	221.2	232.2	212.5	221.8	228.5	213.2	219.8	231.2	188.6	2563.7
Wind Velocity (km/h)													
Mean	4.0	4.2	4.1	3.1	4.9	6.2	5.7	6.1	5.4	4.0	3.4	4.9	4.7
Rainfall (mm)													
Mean	83.3	35.5	79.0	101.5	57.2	86.7	25.7	57.2	92.5	127.8	139.8	70.8	921.8

Table 2 ENVIRONMENTAL CHECK LIST

Check Item		Judgment of Effect			Problem	Action and Countermeasures planned	Remarks
		Major	Small	None			
Pollution	1. Air pollution generated by the operation of facilities			x			
	2. Effect on aquatic organisms, fisheries and other water utilization changes in water system resulting from project construction.			x			
	3. Water pollution and social contamination caused by drainage from facilities and the project sites	x				3. The construction will take note not to block drainage. Turbidity will be minimal and within acceptable limits. 4. Blasting will be done according to regulations and quarry operated accordingly.	2. This will not affect the ecology or the water supply downstream.
	4. Noise and vibration around the facilities	x					
	5. Subsidence, etc. owing to project construction			x			
Natural Environment	1. Effect on construction and operation of the facilities on the ecology			x			1. The road trace of NYS road will be the same as existing non-paved road reservation and no eco-system is newly affected. The E/W road will be having the existing canal road alignment mostly and hence will not affect the ecology.
	2. Effect on landscape			x			1. No cultural and historical sites are affected. 2. The proposed road project will only improve the human environment by better access to vital social infrastructure facilities.
Human Environment	1. Effect on construction and operation of facilities on the historical and cultural heritage			x			
Others	3. Rehabilitation						
	1. Effect on environment during construction period	x				1. Contractor should provide necessary facilities for the workers. 2. Environmental monitoring will be implemented through MASI, to see that they are within accepted limits.	2. An EIA of the Walawe Left Bank Development Project has been carried out and approved.
Environmental monitoring							
<b>(Water Supply Facilities Construction)</b>							
Check Item		Judgment of Effect			Problem	Action and Countermeasures planned	Remarks
Major	Small	None	Not clear				
Pollution	1. Air pollution resulting from chlorination			x			
	2. Soil erosion following the felling of trees, etc. as a result of facility construction and consequent deterioration of water quality downstream.			x			
	3. Noise and vibration around the pumping station and water purification plant	x				3. There will be within acceptable limits and standards.	2. There is no felling of trees. 3. The water will be pumped from the small reservoir within the town area and this will not affect downstream users.
	4. Ground subsidence			x			
	5. Treatment of sludge from water purification plant			x			
Natural Environment	1. Effect on construction and operation of the facilities on the ecology			x			2. It is anticipated that new water supply scheme and access will improve landscape. There will be an improvement in the human environment as the people of the Suriyawewa and its surrounding area will receive quality treated water which will improve health and sanitation.
	2. Effect on landscape			x			2. The water quality of treated and raw waters will be monitored regularly by MASI.
Human Environment	1. Effect on construction and operation of facilities on the historical and cultural heritage			x			
Others	2. Effect on existing infrastructure			x			
	3. Effect on other water users			x			
Environmental monitoring	1. Effect on environment during construction period			x			
	2. Environmental monitoring			x			

**Table 3 BREAKDOWN OF ANNUAL O&M COST**

Item	Unit	Q'ty	Unit cost (Rs/year)	Amount (Rs.)
<b>1 Water Supply Facilities</b>				
1.1 Purification plant				
(1) Man-power cost.				
- Manager	person	1	106,800	106,800
- Accountant	person	1	76,800	76,800
- Operators	person	3	79,200	237,600
- Watchmen	person	2	24,800	74,400
Sub-total (1)				<u>495,600</u>
(2) Office running cost	LS	1	60,000	<u>60,000</u>
(3) Supply of purification chemicals				
- Aluminum sulphate	kg	8,760	8.75	76,650
- Calcium hypochlorite	kg	7,300	12.25	89,425
- Calcium hydroxide	kg	8,760	4.45	38,982
Sub-total (3)				<u>205,057</u>
(4) Electricity cost				
- Demand charge	kVA	60	2,040	122,400
- Fixed charge	connection	1	3,756	3,756
- Unit charge	kwh	236,192	2.90	684,957
Sub-total (4)				<u>811,113</u>
(5) Maintenance cost				
- Painting	m2	52.5	170	8,925
- Power supply equip,etc.	LS	1	10,000	10,000
Sub-total (5)				<u>18,925</u>
(6) Casual labour for maintenance work	m-d	60	170	<u>10,200</u>
Sub-total of 1.1				<u>1,600,895</u>
1.2 Operation of water tankers				
(1) Salary of drivers	persons	5	43,200	216,000
(2) Fuel supply	lit	9,600	11.50	110,400
(3) Maintenance of tankers	LS	1	120,000	120,000
Sub-total of 1.2				<u>446,400</u>
<b>Total of Item 1</b>				<b>2,047,295</b>
<b>2 Roads and Bridge</b>				
(1) Periodic inspection	km	31	6,840	212,040
(2) Routine maintenance work	km	31	15,600	483,600
<b>Total of Item 2</b>				<b>695,640</b>

**Table 4 RESULTS OF WATER QUALITY ANALYSIS (1/3)**

Item	Unit	Results of analysis		Requirement		Judgement
		Sample (1)	Sample (2)	of water quality		
		NO.7054	NO.7058	Standard	Allowable	
Color (Hazen)		< 5	< 5	5	30	○
PH		6.8	7.0	7.0-8.5	6.5-9.0	△
Turbidity	J.T.U	< 10	< 10	2	8	x
Elec. conductivity	umho/cm	525	525	750	3,500	○
Calcium	mg/l	16.00	16.00	100	240	○
Magnesium	mg/l	8.74	8.74	30	140	○
Dissolved ammonia	mg/l	2.65	0.78		0.06	x
Albuminoid ammoniam	g/l	0.10	0.06		0.15	○
Total iron	mg/l	0.48	0.22	0.3	1.0	△
Chlorides	mg/l	13.04	14.35	200	1,200	○
Nitrites	mg/l	0.01	nil		0.01	○
Nitrates	mg/l	0.07	0.04		10	○
Fluorides	mg/l	< 0.1	< 0.1	0.6	1.5	○
Sulphates	mg/l	57.60	57.60	200	400	○
Coliform organisms	MPN/100ml	1,800+	35	<10	JS/1,000	x

[備考]

1. ○ : No need to improve, x : Needs to improve, △ : Prefer to improve

2. JS : Standard applied in Japan

**Table 4 RESULTS OF WATER QUALITY ANALYSIS (2/3)**

Sample No.	<u>7053</u>	<u>7054</u>	<u>7055</u>	<u>7056</u>	<u>7057</u>	<u>7058</u>
Appearance	Clear	Clear	Clear	Clear	Clear	Clear
Colour (Hazen)	<5	<5	<5	<5	<5	<5
Taste	—	—	—	—	—	—
Odour	Odourless	Odourless	Odourless	Odourless	Odourless	Odourless
Settleable matter (ml/l)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
pH	6.3	6.8	7.0	7.0	6.9	7.0
Turbidity (J.T.U.)	<10	<10	<10	<1	<10	<10
Elec. Conductivity (umho/cm)	300	525	325	500	525	525
Total Dissolved solids	202.00	364.00	228.00	348.00	354.00	354.00
Calcium (mg/l)	11.20	16.00	12.80	16.00	17.60	16.00
Magnesium (mg/l)	4.86	8.74	5.83	7.78	7.78	8.74
Sodium (mg/l)	6.00	15.60	6.40	17.20	16.80	17.60
Carbonates (mg/l)	Nil	Nil	Nil	Nil	Nil	Nil
Bicarbonates (mg/l)	42.70	59.78	46.36	59.78	54.90	58.56
Dissolved Ammonia (mg/l)	0.23	2.65	0.21	0.91	0.39	0.78
Albuminoid Ammonia (mg/l)	0.02	0.10	0.02	0.06	0.06	0.06
Total Iron (mg/l)	0.50	0.48	0.98	0.80	0.50	0.22
Chlorides (mg/l)	2.61	13.04	5.22	14.35	14.35	14.35
Nitrites (mg/l)	0.06	0.01	0.07	0.01	Nil	Nil
Nitrates (mg/l)	0.06	0.07	0.05	0.02	0.01	0.04
Fluorides (mg/l)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sulphates (mg/l)	53.76	57.60	49.92	53.76	46.08	57.60
Dissolved Oxygen (mg/l)	4.4	4.5	4.6	5.5	3.2	4.2
BOD at 30°C (mg/l)	48.0	22.0	38.0	27.0	32.0	43.3

Location

7053 : Distribution (1)

7054 : Galwewa (1)

7055 : Left Bank (1)

7056 : Left Bank (2)

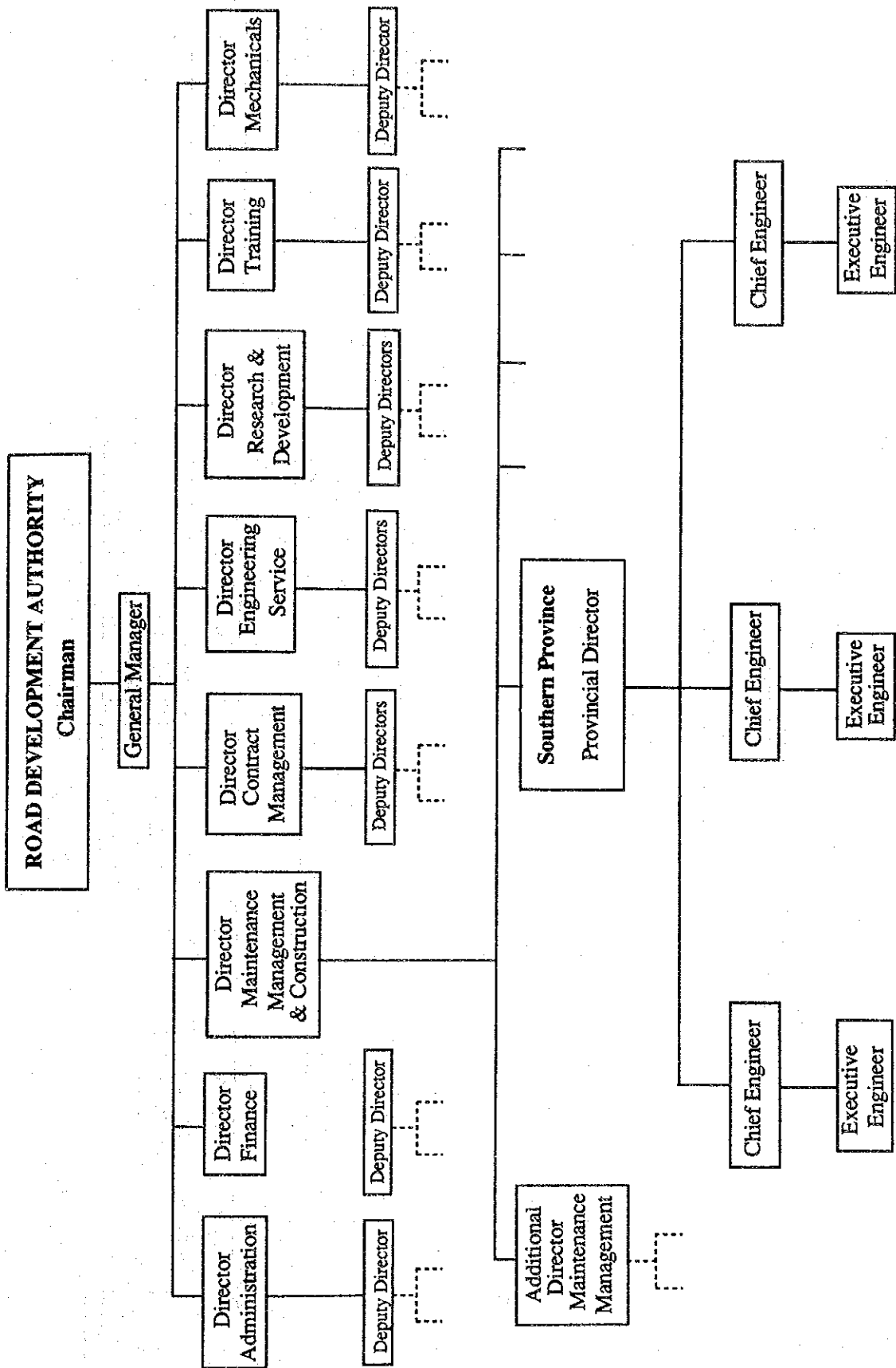
7057 : Distirbution (2)

7058 : Galwewa (2)

**Table 4 RESULTS OF WATER QUALITY ANALYSIS (3/3)**

Sample No.	Distribution		Galwewa		L.B.C.	
	(1)	(2)	(1)	(2)	(1)	(2)
(1) Total bacterial Colony Count per ml (24 hrs at 37°C)	$12 \times 10^2$	$9 \times 10^2$	$36 \times 10^2$	$18 \times 10^2$	$38 \times 10^2$	$34 \times 10^2$
(2) Presumptive Coliform Test : Most Probable number (MPN) of coliform organisms per 100ml	35	17	1,800	35	1,800	1,800
(3) Confirmatory Test (Eijkmann) : Most Probable number (MPN) of E-Coli Type 1 per 100ml	Nil	Nil	Nil	Nil	Nil	Nil





**Fig. 1 ORGANIZATION OF ROAD DEVELOPMENT AUTHORITY**

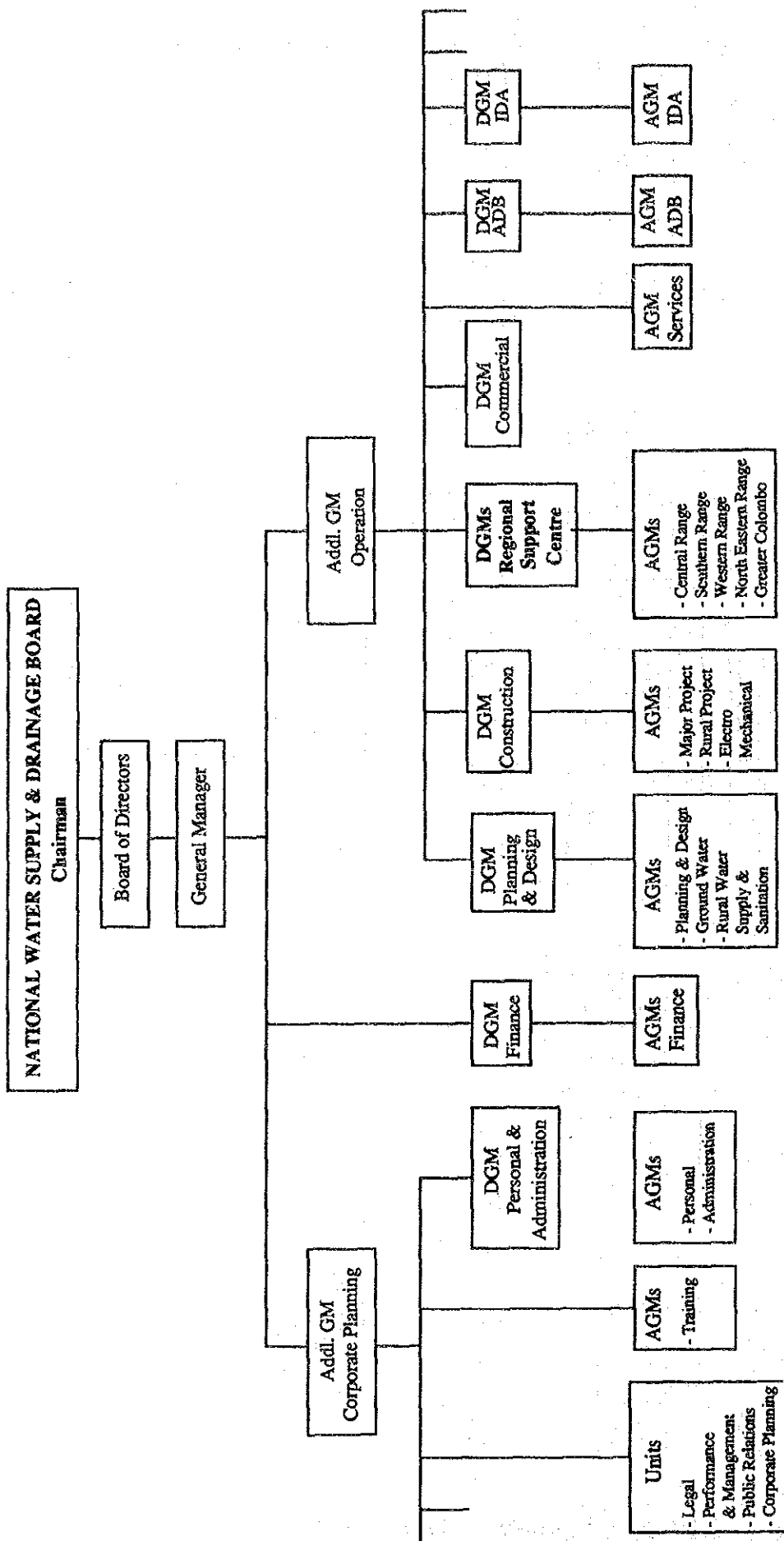
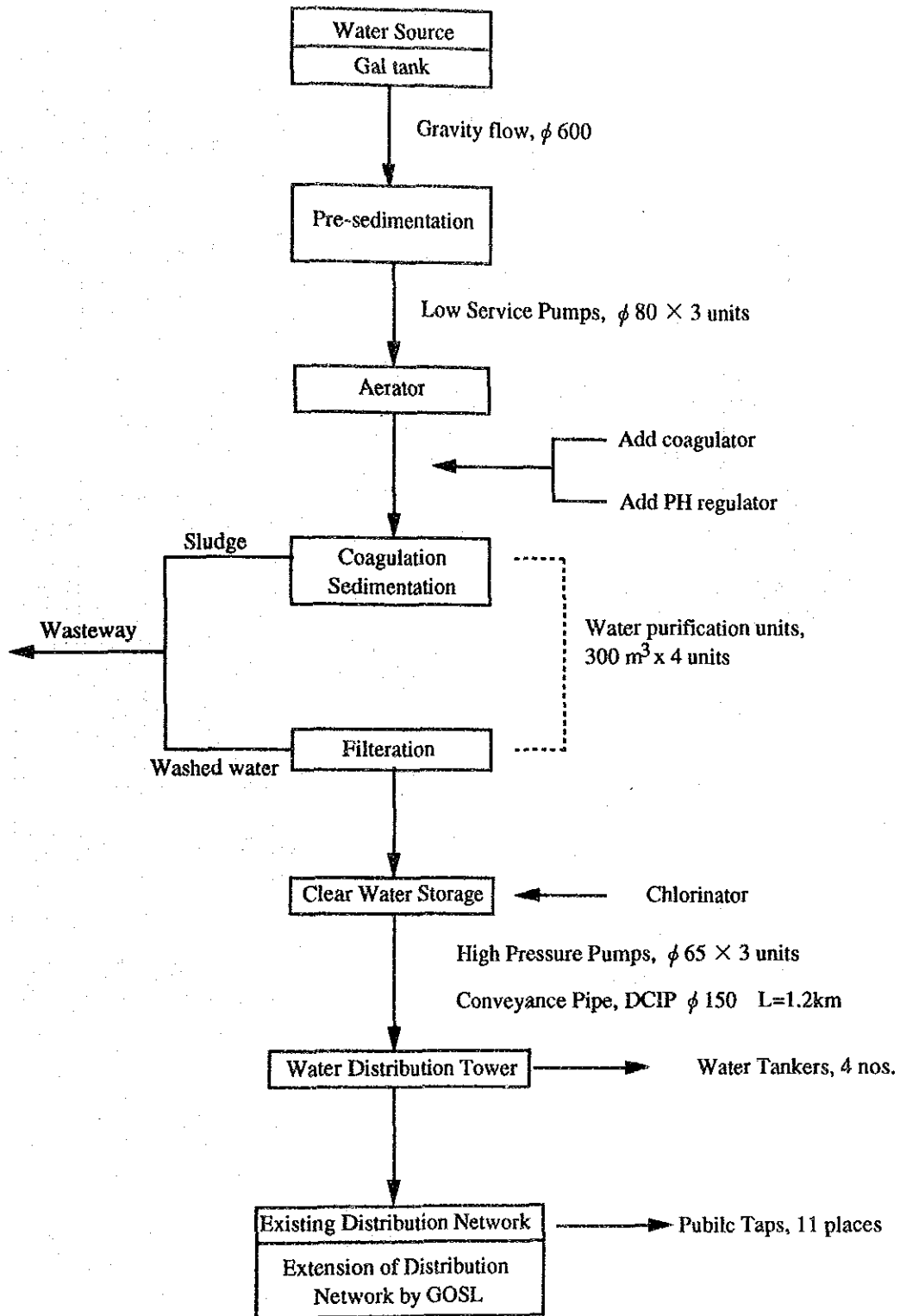


Fig.2 ORGANIZATION OF NATIONAL WATER SUPPLY AND DRAINAGE BOARD



**Fig. -3 SCHEMATIC DIAGRAM OF WATER SUPPLY FACILITIES**

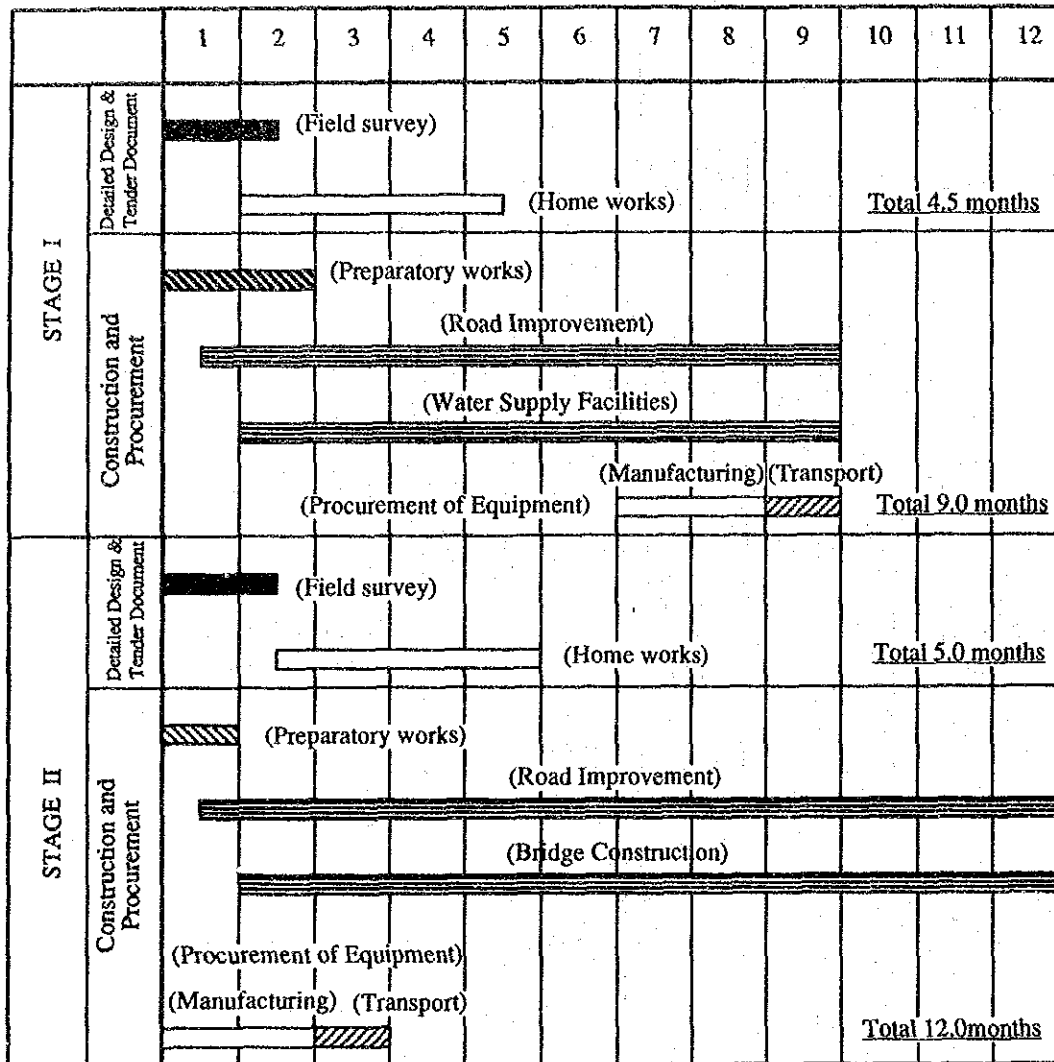


Fig. 4

**TENTATIVE IMPLEMENTATION SCHEDULE OF THE PROJECT**

## ***APPENDIXES***



## MINUTES OF DISCUSSIONS

BASIC DESIGN STUDY  
ON  
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
IN WALAWE LEFT BANK AREA  
OF  
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

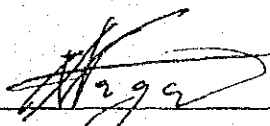
In response to a request from the Government of Democratic Socialist Republic of Sri Lanka, the Government of Japan decided to conduct a Basic Design Study on the Rural Infrastructure Improvement Project in Walawe Left Bank Area (hereinafter referred to as "the Project"), and entrusted the study to the Japan International Cooperation Agency (JICA).

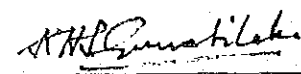
JICA sent to Sri Lanka a study team (the Team), headed by Mr. Narihide Nagayo, Agricultural Development Specialist of JICA from July 22 to August 19, 1993.

The Team held discussions with the officials concerned of the Government of Sri Lanka and conducted a field survey at the study area.

In the course of discussions and field survey, both parties have confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

Colombo, July 28 1993

  
\_\_\_\_\_  
Mr. Narihide Nagayo  
Leader,  
Basic Design Team,  
Japan International Cooperation Agency

  
\_\_\_\_\_  
Mr. K. H. S. Gunatilaka  
Director General,  
Mahaweli Authority of Sri Lanka,  
Ministry of Lands, Irrigation and  
Mahaweli Development

## ATTACHMENT

### 1. Objective of the Project

The objective of the Project is to upgrade the living standard of farmers in the Project area through improvement of basic infrastructures such as rural roads, bridge and water supply facilities.

### 2. The Project Site

The Project area is located on the left bank of the Walawe river in Hambantota District of Southern Province (refer to Annex I).

### 3. Executing Agency

Mahaweli Authority of Sri Lanka (MASL) of the Ministry of Lands, Irrigation and Mahaweli Development, is fully responsible for the administration and execution of the Project (refer to Annex II).

### 4. Items requested by the Government of Sri Lanka

After discussions with the Basic Design Study Team, the following items were finally requested by the Sri Lanka side :

#### (1) Improvement of main rural roads

2 roads (North/South and East/West roads), approx. 30.5 km long in total, effective width of 6 m with asphalt pavement, including one bridge across the Walawe river (approx. 90 m long) and related structures.





(2) Provision of Rural Water Supply

Water supply facilities at Suriyawewa town comprising intake structure, purification plant, overhead tank, conveyance pipe between purification plant and overhead tank, and related structures, with design capacity of approx. 1,000 m<sup>3</sup>/day

(3) Procurement of water tankers, etc

4 water tankers (6,000 lit. each) and miscellaneous items such as spare parts and purification chemicals.

However, the final components of the Project will be decided after further studies.

5. Summary of Discussions

The following issues were discussed and confirmed by both parties :

- (1) The Team has understood the request of the Government of Sri Lanka. MASL understood that the basic design study was carried out at the project formulation and preparation stage. At this stage, no commitment is made by the Japanese side concerning the realization of the Project in the scheme of the Grant Aid program. The results of this study will be used to decide whether or not the Project will be executed. The size and components of the Project will also be decided from the results of the studies.
- (2) The Team has recognized the necessity and background of the improvement of the North/South road through series of discussions and field reconnaissance surveys. Therefore, it has been judged by the Team that the items requested by the Government of Sri Lanka would be the subject of the basic design study.

The stretch of the North/South road where asphalt pavement has been made is excluded from the basic design study. MASL will provide necessary data and information regarding the North/South road for the basic design study.

The Team will convey the strong request of the Government of Sri Lanka to include the North/South road improvement for the Grant Aid Program to the Government of Japan.



- (3) The water supply facilities under the Grant Aid Program will not include extension of distribution system downstream of the overhead tank. Design capacity of the water supply facilities will be decided based on the results of further study.

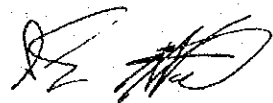
MASL will implement the extension work of the distribution network, under its responsibility and by its own budget, to meet the capacity of the water supply facility within ten (10) years after completion of the program, which will be constructed under the Grant Aid.

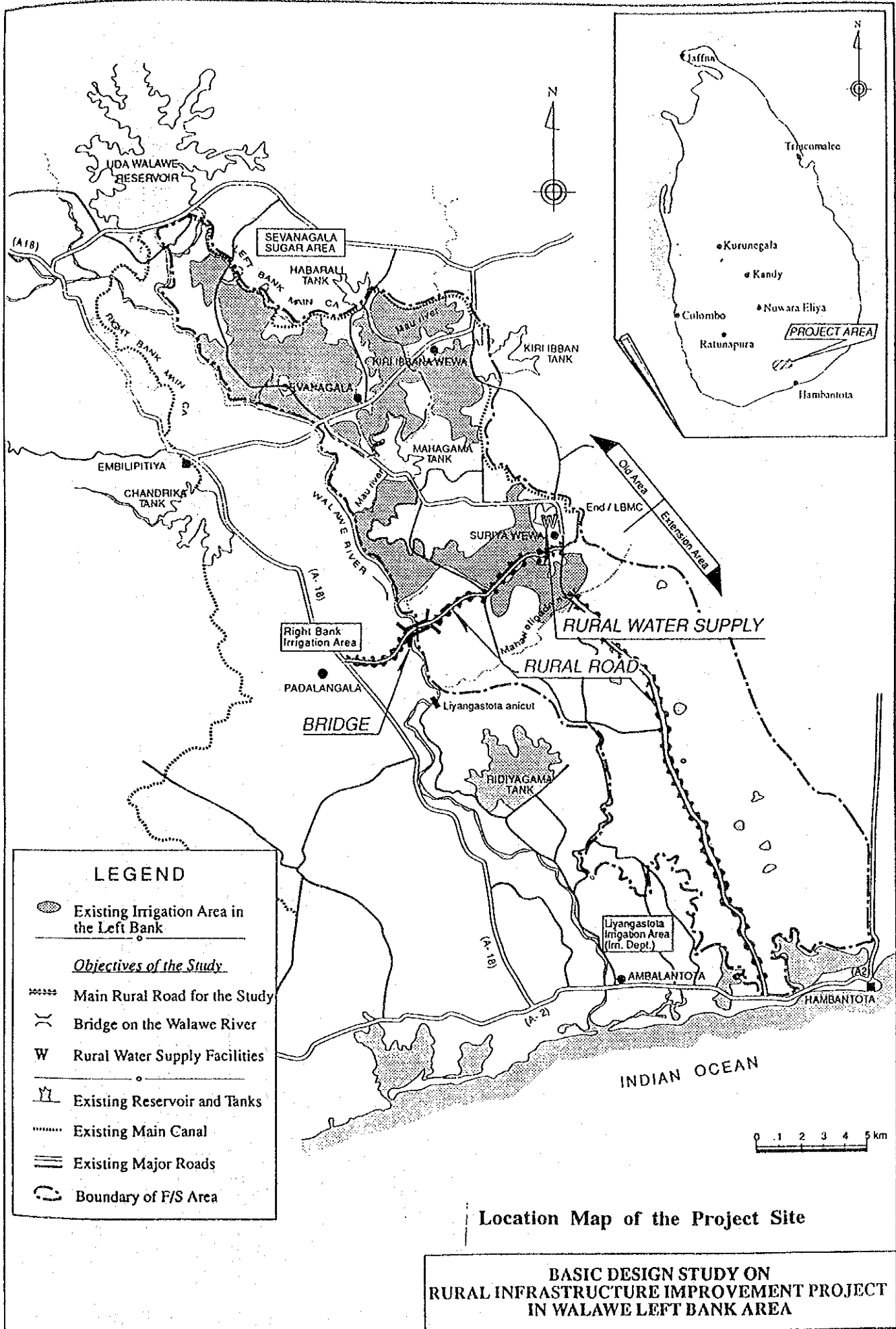
#### 6. Japan's Grant Aid System

- (1) The Government of Sri Lanka has understood the system of Japanese Grant Aid explained by the Team.
- (2) The Government of Sri Lanka will take the necessary measures described in Annex III, for smooth implementation of the Project, on condition that the Grant Aid assistance of Japan is extended to the Project.

#### 7. Schedule of the Study

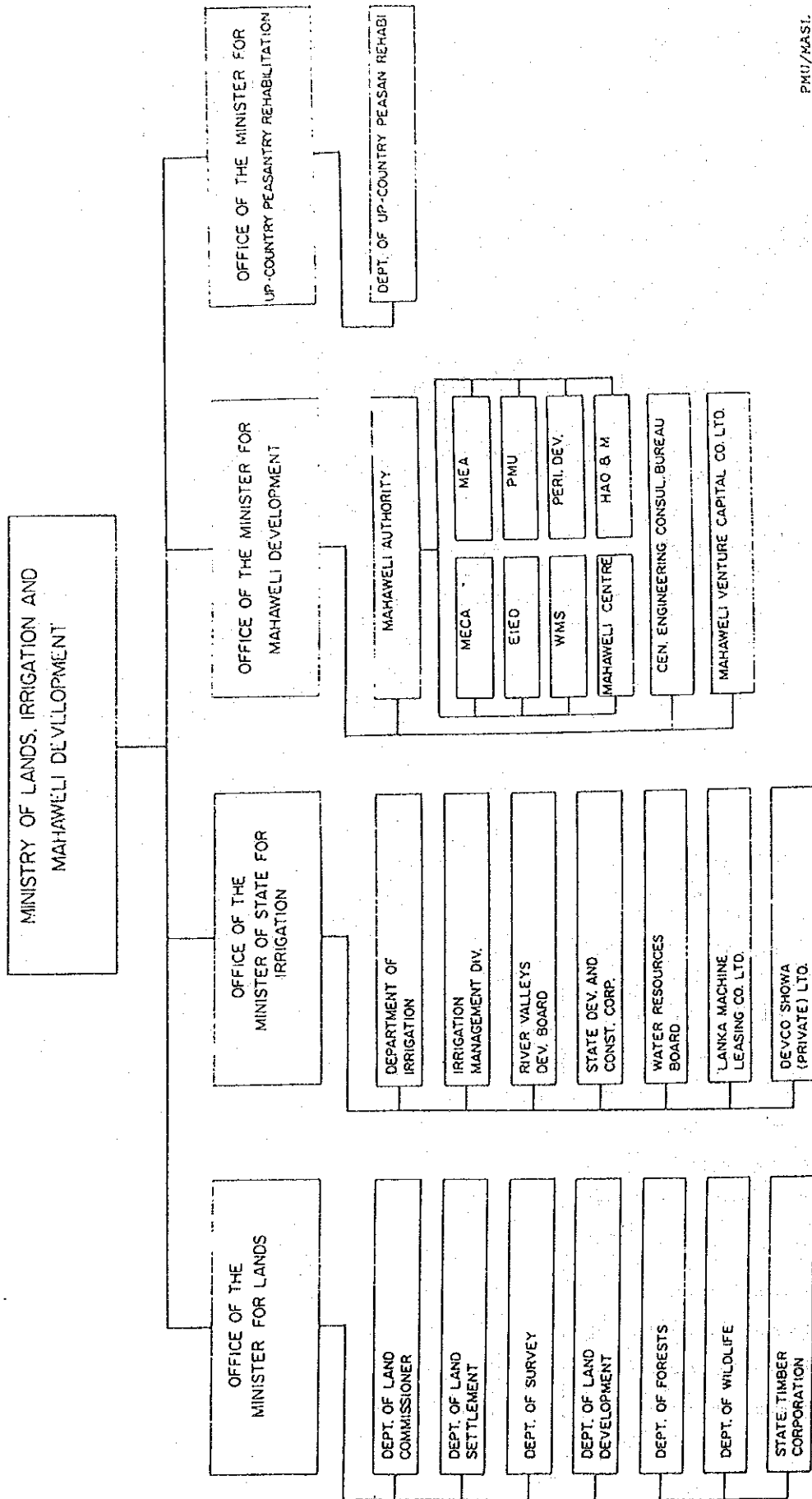
- (1) The consultants will proceed to further studies in Sri Lanka until August 18, 1993.
- (2) JICA will prepare the draft final report in English and dispatch a mission to Sri Lanka in order to explain its contents in or around October 1993.
- (3) In case that the contents of the report is accepted in principle by the Government of Sri Lanka, JICA will complete the final report and send it to the Government of Sri Lanka by the end of December 1993.





*[Handwritten Signature]*

MINISTRY OF LANDS, IRRIGATION AND MAHAWELI DEVELOPMENT

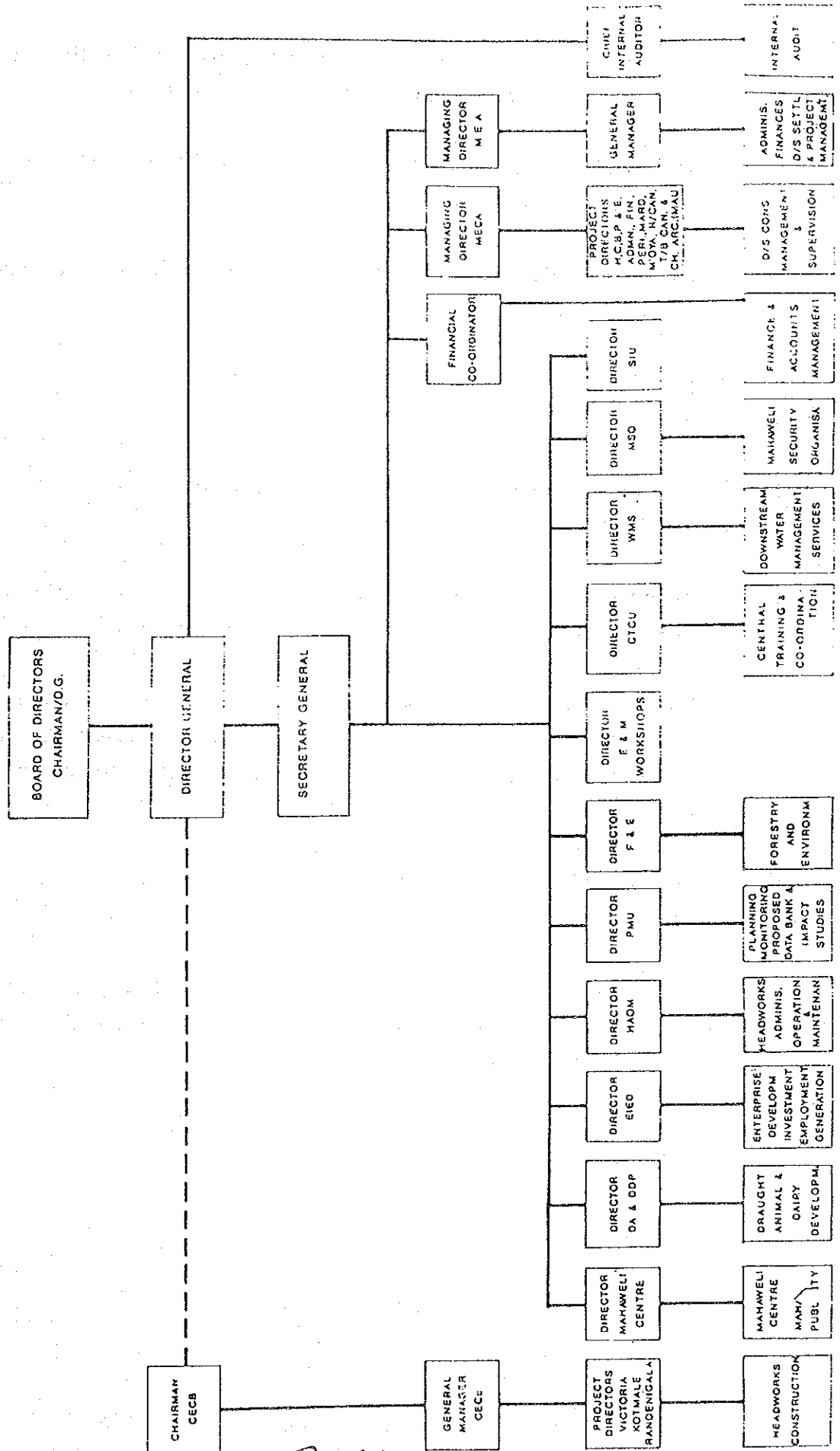


PMU/MASL

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Organization Chart of the Project (1/2)

INSTITUTIONAL ORGANISATION  
MAHAWELI AUTHORITY OF SRI LANKA

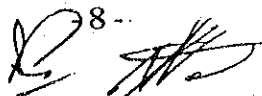


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Organization Chart of the Project (2/2)

**Necessary Measures to be taken by the Government of Sri Lanka  
in case Japan's Grant Aid is Executed**

- (1) To secure and clear the sites necessary for construction of the Project facilities prior to the commencement of the construction.
- (2) To provide the land for a temporary site office, warehouse and stock yard during the implementation of the Project.
- (3) To provide necessary facilities for the Project such as distribution of electricity and other incidental facilities to the Project site.
- (4) To bear the commissions to the Japanese foreign exchange bank for the banking services based upon the Banking Arrangement.
- (5) To exempt taxes and to take necessary measures for custom clearance of the materials and equipment brought for the Project at the port of disembarkation.
- (6) To accord the Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contracts, such facilities as may be necessary, for their entry into Sri Lanka and stay therein for the performance of their works.
- (7) To maintain and use properly and effectively the facilities constructed and equipment purchased under the Grant Aid.
- (8) To bear all expenses other than those to be borne by the Grant, necessary for the Project such as administration expenses for the implementation of the execution agency, and land acquisition / preparation costs.

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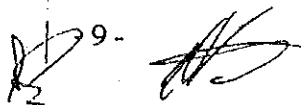
LIST OF PARTICIPANTSMASL

Mr. K. H. S. Gunatilaka	Director-General
Mr. P. T. Senaratne	Secretary-General
Dr. R. D. Wanigaratne	Director, P.M.U
Mr. M. Galpottage	Project Co-ordinator, Walawe
Mr. M. J. S. Amarasinghe	General Manager, MEA
Mr. G. J. P. Gunawardene	Managing Director, MECA
Miss. R. L. Haturusinghe	Deputy Director, MECA
Mr. L. H. S. de Silva	Deputy Resident Project Director, Walawe
Mr. G. W. D. M. Gunaratne	Director Engineering, MASL
Mr. S. M. D. Malalaratne	Asst. Project Co-ordinator, MASL
Mr. N. A. L. Cooray	Principal Engineer, PMU
Mr. T. D. P. Karunatilake	Chief Irrigation Engineer, MEA
Mr. N. P. Jayawardene	Chief Engineer, MECA

JICA

Narihide NAGAYO	Leader Agricultural Development Specialist Japan International Cooperation Agency(JICA)
Akira NAKAMURA	Grant Aid Planner First Basic Design Study Div. Grant Aid Study and Design Dept. Japan International Cooperation Agency(JICA)
Koji OKADA	Chief of Consultant Nippon Koei Co. Ltd.
Tadashi NISHIKAWA	Road/Bridge Designer Nippon Koei Co., Ltd.
Toshiyuki YUMINO	Facility Designer Nippon Koei Co., Ltd.
Kosuke IRIE	Construction Planner Nippon Koei Co., Ltd.
M KAWASAKI	Assistant Resident Representative JICA, Colombo Office

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12








MINUTES OF DISCUSSIONS  
BASIC DESIGN STUDY  
ON  
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
IN WALAWE LEFT BANK AREA  
IN  
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
(CONSULTATION OF DRAFT REPORT)

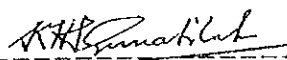
In July 1993, the Japan International Cooperation Agency (JICA) dispatched a Basic Design Study Team on the Rural Infrastructure Improvement Project in Walawe Left Bank Area (hereinafter referred to as "the Project") to Democratic Socialist Republic of Sri Lanka, and through discussions, field survey, and technical examination of the results in Japan, has prepared the draft report of the study.

In order to explain and to consult the Sri Lanka side on the components of the draft report, JICA sent to Sri Lanka a study team, which is headed by Mr. Masashi Kono, Assistant Director of Grant Aid Division, Economic Cooperation Bureau, Ministry of Foreign Affairs, and is scheduled to stay in Sri Lanka from November 15 to November 20, 1993.

As a result of discussions, both parties confirmed the main items described in the attached sheets.

Colombo, November 19, 1993

  
-----  
Mr. Masashi Kono  
Leader,  
Draft Report Explanation  
Team, JICA

  
-----  
Mr. K.H.S. Gunatilaka  
Director General,  
Mahaweli Authority of Sri Lanka  
of Ministry of Forestry, Irrigation  
and Mahaweli Development

## ATTACHMENT

### 1. Components of Draft Report

The Government of Sri Lanka has agreed and accepted in principle the components of the Draft Report proposed by the Team.

### 2. Japan's Grant Aid System

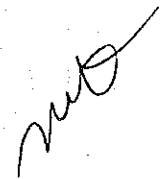
- (1) Mahaweli Authority of Sri Lanka (MASL) has understood the system of Japanese Grant Aid explained by the Team.
- (2) MASL will take the necessary measures described in Annex-I for smooth implementation of the Project on condition that the Grant Aid by the Government of Japan is extended to the Project.

### 3. Others

- (1) MASL will complete the extension work of water distribution network, under its responsibility and its own budget, within ten (10) years after the completion of the water supply facilities which will be constructed under the Grant Aid.
- (2) MASL agreed to employ the Japanese Standard for design and construction of the Walawe bridge under the Project.

### 4. Further Schedule

The Team will make the final report in accordance with the confirmed items, and send it to the Government of Sri Lanka by the end of December 1993.



Necessary Measures to be taken by the Government of Sri Lanka  
in case Japan's Grant Aid is Extended

- (1) To secure and clear the sites necessary for construction of the Project facilities prior to the commencement of the construction.
- (2) To provide the land for a temporary site office, warehouse and stock yard during the implementation of the Project.
- (3) To provide necessary facilities for the Project sites such as a distribution of electricity and other incidental facilities.
- (4) To bear the commissions to the Japanese foreign exchange bank for the banking services based upon the Banking Arrangement.
- (5) To exempt Japanese nationals from custom duties, internal taxes and other fiscal levies which may be imposed in Sri Lanka with respect to the supply of the products and services under the verified contracts.
- (6) To accord the Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contracts such facilities as may be necessary for their entry into Sri Lanka and stay therein for the performance of their works.
- (7) To maintain and use properly and effectively the facilities constructed and equipment purchased under the Grant Aid.
- (8) To bear all expenses, other than those to be borne by the Grant, necessary for the execution of the Project.



WALAWE L/B RURAL INFRASTRUCTURE PROJECT

16.11.1993

<u>Name</u>	<u>Designation</u>
1. Mr.K.H.S. Gunatilake	Director General
2. Mr. P.T. Senaratne	Secretary General
3. Mr. N.G.R. de Silva	Managing Director / MEA
4. Mr. G.W.D.M.Goonaratne	Director Engineering II/MASL
5. Mr. A. Cooray	Principal Engineer/EP, PMU
6. Mr. H.A. Wickremaratne	Chief Irrigation Engineer/MEA
7. Mr. T.D.P.Karunatilake	Chief Irrigation Engineer/MEA
8. Mr. Dharmasiri de Alwis	Director (Walawe)/MECA
9. Mr. M. Galpottage	Project Coordinator (Walawe)/Project Director(WIIP)
10. Mr. S.M.D. Malalaratne	Asst. Project Coordinator/MASL (MEA)
11. Mr. Masashi Kono	Leader, Draft Report Explanation Team , JICA
12. Mr. Koji Okada	Chief of Consultant , JICA
13. Mr. Tadasi Nishikawa	Road/Bridge Designer of Consultant, JICA
14. Mr. Jiro Iida	Assistant Resident Representative, JICA, Sri Lanka Office.



## Activities of the Study Team In the Field

No.	Date	Itinerary	Description
1	Jul. 22 (Thr.)	Tokyo - Colombo	Depart Tokyo to Colombo (M/S Nagayo, Nakamura, Okada, Nishikawa, Yumino, Irie)
2	23 (Fri.)	Colombia	Courtesy call to MASL and Explanation of Inception Report and survey schedule
3	24 (Sat.)	Colombia - Hambantota	Field inspection and discussion with MASL's site office
4	25 (Sun.)	Hambantota	Field inspection and discussion with MASL's site office
5	26 (Mon.)	Hambantota - Colombia Embilipitiya	Discussion with MASL Field survey (M/S Nishikawa, Yumino, Irie)
6	27 (Tue.)	Colombia Embilipitiya	Discussion with MASL and internal meeting Field survey (M/S Nishikawa, Yumino, Irie)
7	28 (Wed.)	Colombia Embilipitiya	Signing of Minutes of Meeting Field survey (M/S Nishikawa, Yumino, Irie)
8	29 (Thr.)	Colombia Embilipitiya	Meeting with MASL (Mr. Okada) Field survey (M/S Nishikawa, Yumino, Irie)
9	30 (Fri.)	Colombia Embilipitiya	Data collection and analysis Field survey (M/S Nishikawa, Yumino, Irie)
10	31 (Sat.)	Colombia E'pitiya - Colombia Embilipitiya	Data analysis (Mr. Okada) Field survey and move to Colombia (Mr. Yumino) Field survey (M/S Nishikawa, Irie)
11	Aug. 1 (Sun.)	Colombia E'pitiya - Colombia Embilipitiya	Data analysis (M/S Okada, Yumino) Field survey and move to Colombia (Mr. Nishikawa) Field survey (Mr. Irie)
12	2 (Mon.)	Colombia Embilipitiya	Meeting with counterpart and data collection (M/S Okada, Nishikawa, Yumino, Irie) Field survey (Mr. Irie)
13	3 (Tue.)	Colombia - E'pitiya Embilipitiya	Meeting with MASL's site office and move to Colombia (M/S. Okada, Nishikawa, Yumino) Field survey (Mr. Irie)
14	4 (Wed.)	Embilipitiya	Field survey (M/S Okada, Nishikawa, Yumino, Irie)
15	5 (Thr.)	Colombia - Tokyo Embilipitiya	Leave Colombia to Tokyo (M/S Nagayo and Nakamura) Field survey (M/S Okada, Nishikawa, Yumino, Irie)
16	6 (Fri.)	Embilipitiya E'pitiya - Colombo	Field survey (M/S Nishikawa, Yumino, Irie) Meeting with MASL's site office and move to Colombo (Mr. Okada)
17	7 (Sat.)	Embilipitiya Colombo	Field survey (M/S Nishikawa, Yumino, Irie) Data collection and analysis
18	8 (Sun.)	E'pitiya - Colombo Colombo	Move to Colombo (M/S Nishikawa, Yumino, Irie) Internal meeting
19	9 (Mon.)	Colombo	Meeting with counterpart and data collection
20	10 (Tue.)	Colombo	Data collection and analysis
21	11 (Wed.)	Colombo Colombo - Tokyo	Meeting with MASL Leave Colombo to Tokyo (M/S Nishikawa, Yumino, Irie)
22	12 (Thr.)	Colombo - E'pitiya	Data collection and move to the site (Mr. Okada)
23	13 (Fri.)	E'pitiya - Colombo	Data collection
24	14 (Sat.)	Colombo	Data analysis
25	15 (Sun.)	Colombo	Data analysis
26	16 (Mon.)	Colombo	Data collection and analysis
27	17 (Tue.)	Colombo	Data collection and analysis
28	18 (Wed.)	Colombo - Tokyo	Leave Colombo to Tokyo (Mr. Okada)
29	19 (Thr.)	Colombo - Tokyo	Arriving at Tokyo (Mr. Okada)



### Members List of Basic Design Study Team

Position	Name	Home Post
Team Leader	Mr. Narihide NAGAYO	Japan International Cooperation Agency
Grant Aid Planner	Akira NAKAMURA	Japan International Cooperation Agency
Chief of Consultant	Koji OKADA	Nippon Koei Co., Ltd.
Road/ Bridge Designer	Tadashi NISHIKAWA	Nippon Koei Co., Ltd.
Road Designer	Akinori YUASA	Nippon Koei Co., Ltd.
Facility Designer	Toshiyuki YUMINO	Nippon Koei Co., Ltd.
Construction Planner	Kosuke IRIE	Nippon Koei Co., Ltd.

### Members List of Draft Final Report Explanation Mission

Position	Name	Home Post
Team Leader	Mr. Masasi KONO	Assistant Director, Grant Aid Division, Economic Cooperation Bureau, Ministry of Foreign Affairs
Chief of Consultant	Koji OKADA	Nippon Koei Co., Ltd.
Road/ Bridge Designer	Tadashi NISHIKAWA	Nippon Koei Co., Ltd.





## List of Officials Concerned

No.	Organization	Name	Position
1.	Mahaweli Authority of Sri Lanka (MASL), Ministry of Forestry, Irrigation and Mahaweli Development	(1) Mr. K.H.S. Gunatilaka	Director General
		(2) Mr. P.T. Senaratne	Secretary General
		(3) Dr. R.D. Wanigaratne	Director,
		(4) Mr. N.G.R. de Silva	Managing Director/MEA
		(5) Mr. D.J.P. Gunawardena	Managing Director/MECA
		(6) Mr. M.J.S. Amarasinghe	General Manager/ MEA
		(7) Mr. M. Galpottage	Project Coordinator, Walawe Area
		(8) Mr. T.D.P. Karnatilake	Chief Irrigation Engineer/MEA
		(9) Mr. U.K. Sumanadasa	Resident Project Manager, Walawe Area
		(10) Mr. A. Cooray	Principal Engineer/ PMU
		(11) Mr. N.P. Jayawardena	Chief Engineer/ MECA
		(12) Mr. L.H.S. de Silva	Dy. Resident Project Director, Walawe
		(13) Ms. R.L. Haturusinghe	Dy. Director/ MECA
		(14) Mr. G.W.D.M. Gunaratne	Director Engineering?/ MECA
		(15) Mr. S.M.D. Malalaratne	Asst. Project Coordinator/ MASL
		(16) Mr. R. Gunawardena	Resident Project Director, Walawe
		(17) Mr. O. Peris	DRPM (Engineering), MEA-Uda Walawe
		(18) Mr. A. Wijetunga	Irrigation Eng'r, MEA-Uda Walawe
		(19) Mr. K. Sampala	Physical Planner, MECA
		(20) Mr. Dayaratne Perera	Physical Planner, MECA
		(21) Mr. P. A. G. Paranamanna	Irrigation Engineer, Irrigation Dept.
		(22) Mr. Osman Peiris	Sr. Irrigation Eng'r, MEA-Uda Walawe
		(23) Mr. Anura Wijetunga	Irrigation Eng'r, MEA-Uda Walawe
		(24) T.A. Sirisena	Agricultural officer, MEA-Uda Walawe
2.	Department of External Resources, Ministry of Finance	(1) Ms. D.D.J. Kudaligama	Director
3.	Department of National Planning, Ministry of Policy Planning and Implementation	(1) M.F. Mohideen	Director, Agriculture
4.	Road Development Authority, Ministry of Transport and Highways	(1) Dr. G.L. Asoka J. de Silva	Director Engineering Services
		(2) Mr. M.G. E. Perera	Dy. Director (Highway Design)
		(3) Ms. H.Y. Fernando	Senior Engineer
		(4) Mr. B.V.D.M. Chandrasiri	Senior Design Engineer
5.	National Water Supply and Drainage Board Ministry of Housing and Construction	(1) Mr. Janaka De Silva	Resident Engineer, Ratnapura Regional Office
		(2) Mr. K.A. A. Kumara	Chief Operation Eng'r, Embilipitiya Water Supply Scheme, Treatment Plant
		(3) Mr. S.G. Sugathadasa	Chief Operation Eng'r, Ambalantota Water Supply Scheme, Treatment Plant
		(4) Mr. R.M. Amarasekara	Chief Engineer of Hambantota Regional Office
6.	Integrated Rural Development Program, Hambantota District-Southern Provincial Council	(1) Mr. D.P. Dayananda	Project Engineer, HIRDP
7.	Suriyawewa Divisional Secretariat, Ministry of Public Administration and Provincial Councils	(1) C. N. Withnachchi	Suriyawewa Divisional Secretary
8.	Embassy of Japan	(1) Mr. Doi	First Secretary, EOJ
9.	JICA's Sri Lanka Office	(1) Mr. Sakamaki	Director, JICA - Sri Lanka Office
		(2) Mr. Kuno	Dy. Director, JICA - Sri Lanka Office
		(3) Mr. Suzuki	Dy. Director, JICA - Sri Lanka Office
		(4) Mr. Kawasaki	Assistant Resident Representative
		(5) Mr. J. Iida	Assistant Resident Representative

## Note:

PMU: Planning and Monitoring Unit

MECA: Mahaweli Engineering and Construction Agency

: Counterpart personnels



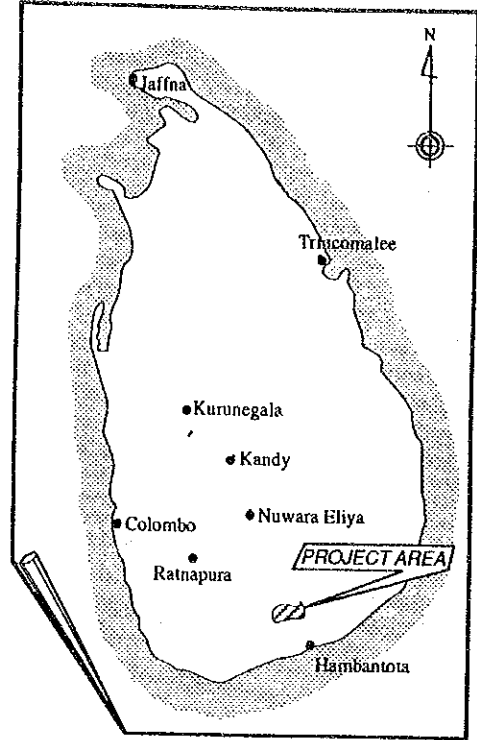
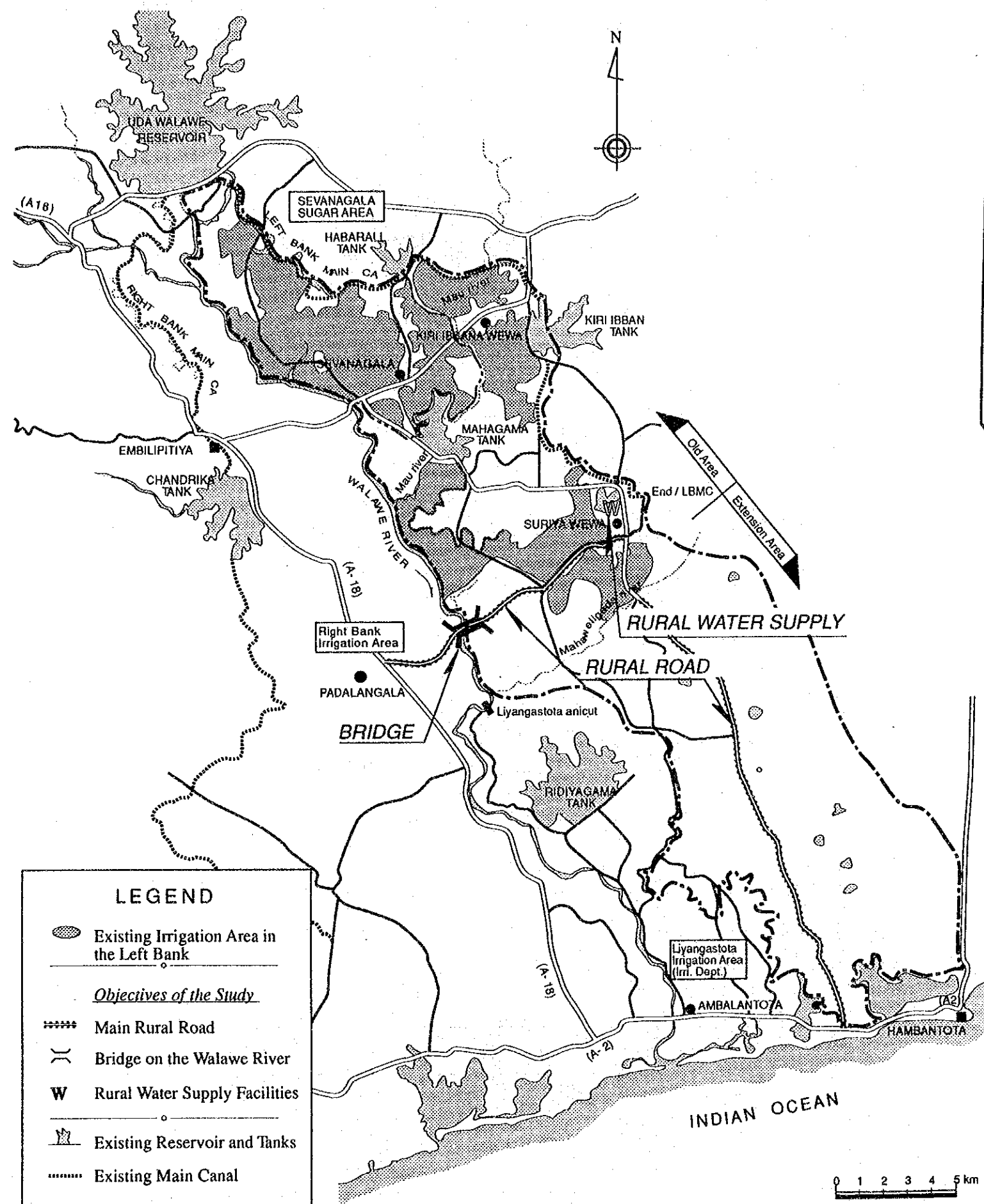
## ***DRAWINGS***



## LIST OF DRAWINGS

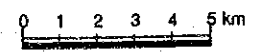
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GENERAL	GENERAL PLAN 1
MAIN RURAL ROADS	N - S ROAD / PLAN & PROFILE 2-17
	E - W ROAD / PLAN & PROFILE 18-28
	TYPICAL CROSS SECTIONS 29
	RELATED STRUCTURES / PIPE CULVERT 30-32
	RELATED STRUCTURES / BOX CULVERT 33
	RELATED STRUCTURES / BRIDGE 34
	RELATED STRUCTURES / PASSAGE 35
WALAWE BRIDGE	PLAN & PROFILE 36
	SUPERSTRUCTURE 37
	ABUTMENTS 38
	PIERS 39
RURAL WATER SUPPLY	GENERAL PLAN 40
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	PURIFICATION PLANT / INTAKE FACILITIES 42
	PURIFICATION PLANT / RECEIVING PIT & AERATION TOWER 43
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	PURIFICATION PLANT / OPERATION & ADMINISTRATION HOUSE 46-47
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	PIPELINE / RELATED STRUCTURES 50
	WATER DISTRIBUTION TOWER 51-52
	WATER DISTRIBUTION TOWER / HYDRANT STAND 53
	PUBLIC STAND PIPES 54



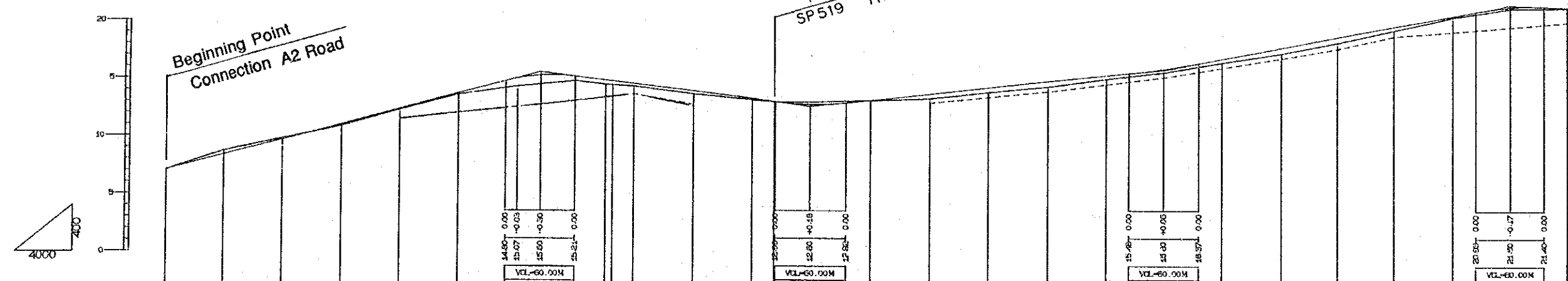
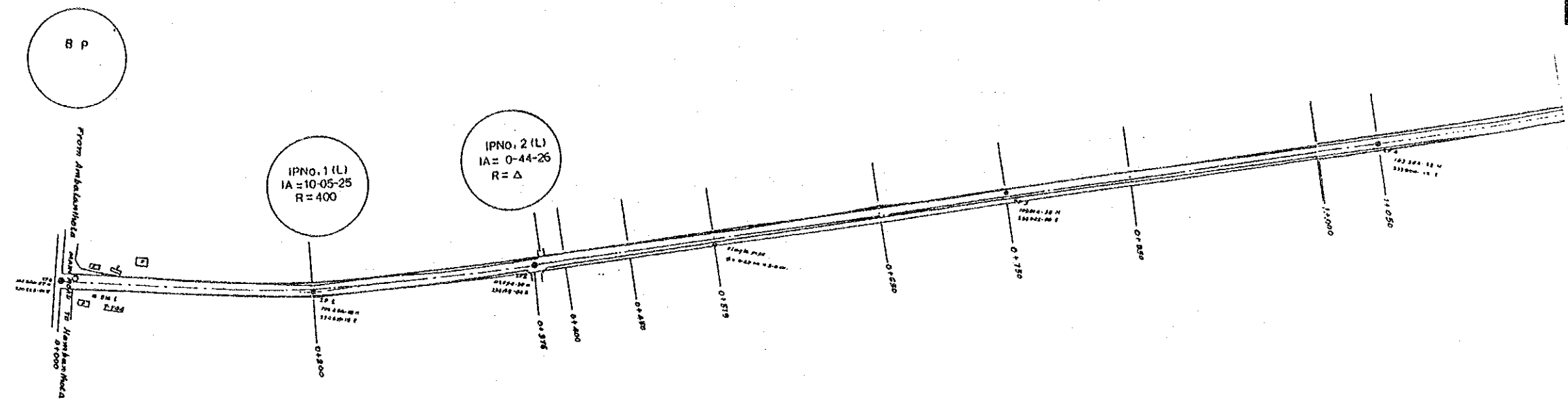


**LEGEND**

- Existing Irrigation Area in the Left Bank
- Objectives of the Study**
- Main Rural Road
- Bridge on the Walawe River
- Rural Water Supply Facilities
- Existing Reservoir and Tanks
- Existing Main Canal
- Existing Major Roads
- Boundary of F/S Area



DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING	
GENERAL PLAN	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



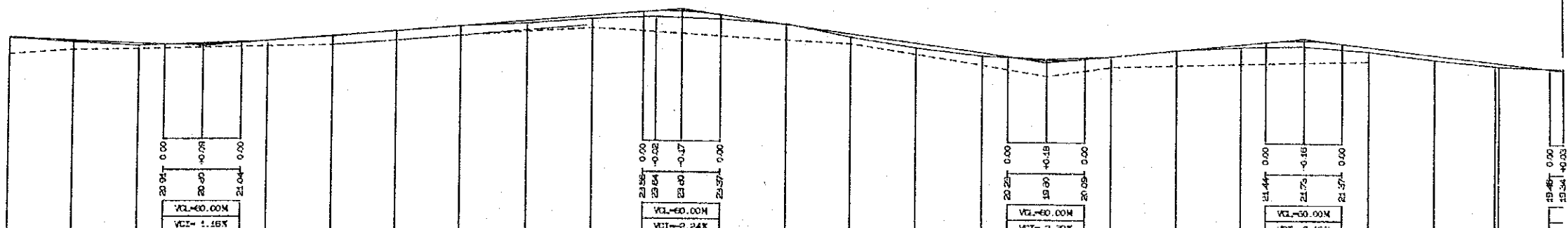
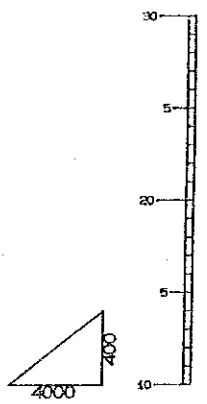
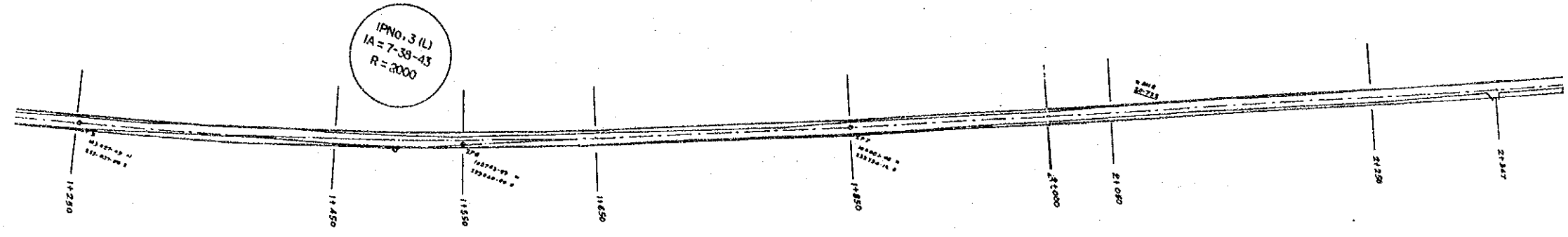
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EMBANKMENT		0.13	0.09	0.12	0.70	0.36	0.38	0.24	0.27	0.12	0.04	0.39	0.40	0.46	0.30	0.28	0.32	0.48	0.49	0.32	0.10	0.10	0.05					
EXCAVATION		0.32	0.11						0.20																			
PA. SUR. EL.	7.04	8.38	9.72	11.05	12.39	13.73	15.04	15.21	14.87	14.46	14.56	13.90	13.25	13.00	12.78	13.13	13.57	14.20	14.73	15.27	15.86	16.75	17.70	18.55	19.60	20.55	21.33	21.33
GROUND. EL.	7.04	8.70	9.83	10.92	12.30	13.61	14.34	14.83	14.48	14.26	14.56	13.63	13.13	12.96	12.56	13.13	13.28	13.80	14.27	14.97	15.58	16.43	17.22	18.16	19.28	20.45	21.25	21.33
RE. DISTANCA	0.00	50.00	100.00	150.00	200.00	250.00	300.00	350.00	375.00	400.00	450.00	500.00	519.00	550.00	600.00	660.00	700.00	750.00	800.00	850.00	900.00	950.00	1000.00	1050.00	1100.00	1150.00	1200.00	
STATION	No.0		No.1		No.2		No.3		No.4		No.5		No.6		No.7		No.8		No.9		No.10		No.11		No.12			
CURVE	IP1 (L) IA=10-05-25 R=400 L=35.31 CI=70.44 PI=1.56												IP2 (L) IA=00-44-26															

**LEGEND**

PASUR.EL	Pavement Surface Elevation
RE.DISTANCE	Reduced Distance
-----	Drain Base (Left Side)
-----	Drain Base (Right Side)

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING	
RURAL ROAD N - S ROAD / PLAN & PROFILE (1/16)	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	





Pipe Culvert  
SP 2400 TYPE-A

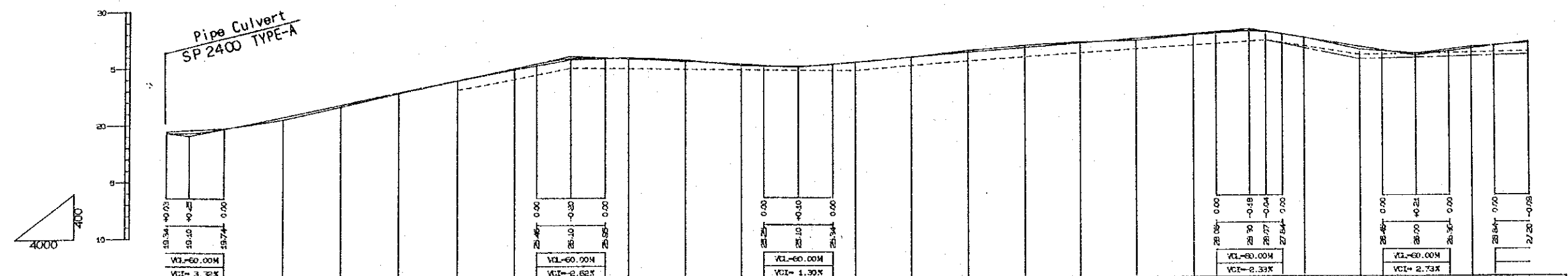
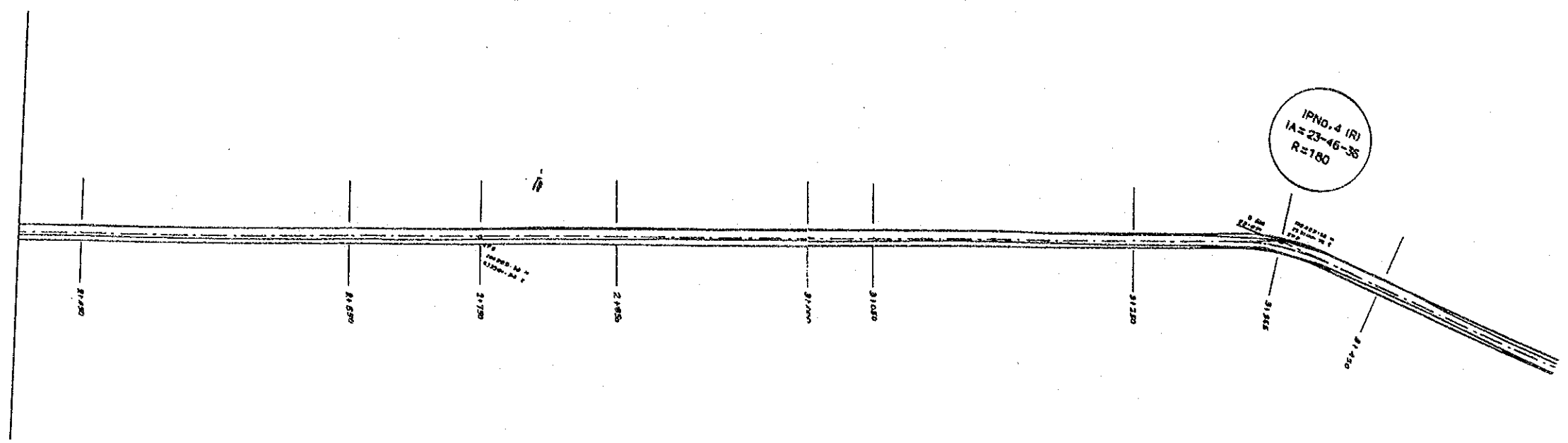
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EMBANKMENT	0.05	0.13	0.17	0.02	0.05	0.20	0.22	0.43	0.32	0.34	0.37	0.25	0.01	0.22	0.44	0.34	0.35	0.27										
EXCAVATION				0.10		0.02	0.02			0.05			0.09	0.03				0.09										
PA. SUR. EL.	21.33	21.15	20.96	20.89	21.21	21.51	22.02	22.42	22.83	23.23	23.62	23.97	22.56	21.94	21.23	20.51	19.98	20.28	20.77	21.25	21.57	21.13	20.53	19.84	19.37			
GROUND. EL.	21.28	21.02	20.81	20.99	21.19	21.56	22.04	22.44	22.63	23.01	23.19	23.37	22.71	21.70	20.86	20.26	20.07	20.27	20.80	21.03	21.13	20.75	20.18	19.67	19.46			
RE. DISTANCA	1200.00	1250.00	1300.00	1350.00	1400.00	1450.00	1500.00	1550.00	1600.00	1650.00	1700.00	1750.00	1800.00	1850.00	1900.00	1950.00	2000.00	2050.00	2100.00	2150.00	2200.00	2250.00	2300.00	2357.00	2400.00			
STATION	No.12		No.13		No.14	74.95	No.15		No.16		No.17		No.18		No.19		No.20		No.21		No.22		No.23		No.24			
CURVE	IP3 (L) IA-07-33-43 R=2000 IL=133.63 CL=266.87 SL=-4.46																											

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAVE LEFT BANK AREA

TITLE OF DRAWING  
 RURAL ROAD  
 N - S ROAD / PLAN & PROFILE ( 2 / 16 )

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY



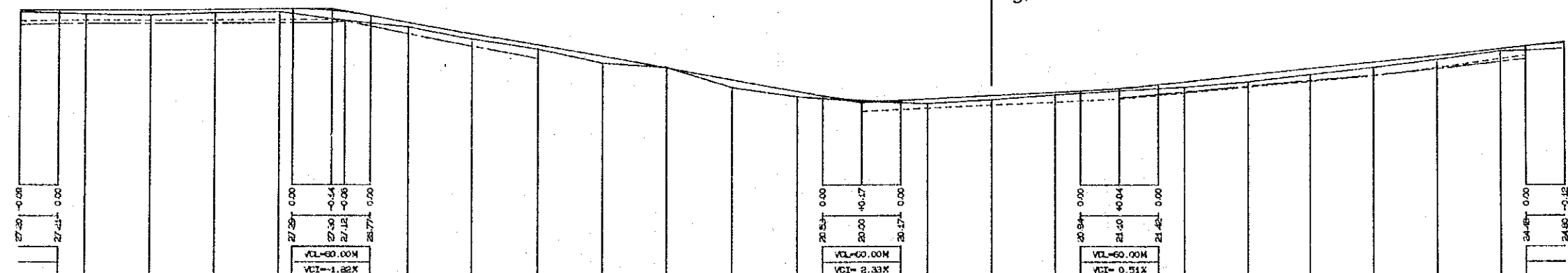
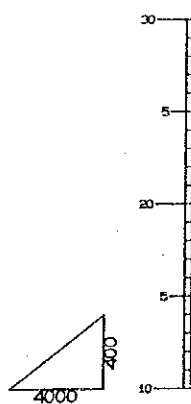
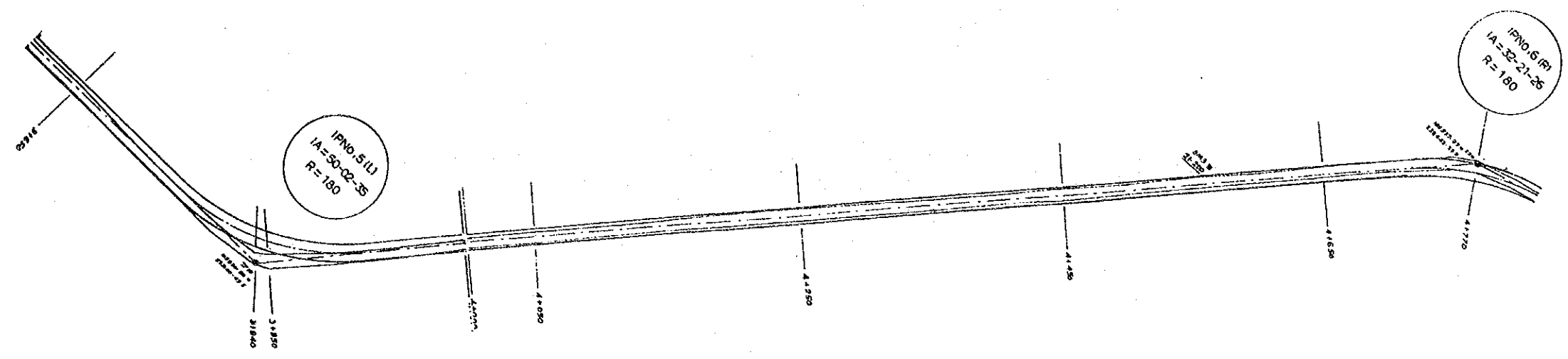
GRADIENT	2.1212% L=330.00		-0.5000% L=200.00		0.8000% L=400.00		-1.5333% L=150.00		1.2000% L=100.00																
EMBANKMENT		0.26	0.19	0.11	0.06	0.14	0.13	0.16	0.11	0.01	0.02	0.19	0.10	0.01	0.26	0.06	0.06								
EXCAVATION	0.09	0.01					0.05	0.07			0.12	0.16	0.07				0.15								
PA. SUR. EL.	19.37	19.74	20.80	21.86	22.92	23.98	25.04	25.90	26.30	26.70	27.10	27.50	27.90	28.12	28.03	27.53	26.77	26.21	26.60	27.11					
GROUND. EL.	19.46	19.75	20.54	21.67	22.81	23.92	24.90	25.77	26.09	26.42	26.71	27.31	27.50	28.11	28.08	27.54	26.51	26.15	26.75	27.05					
RE. DISTANCA	2400.00	2450.00	2500.00	2550.00	2600.00	2650.00	2700.00	2750.00	2800.00	2850.00	2900.00	2950.00	3000.00	3050.00	3100.00	3150.00	3200.00	3250.00	3300.00	3350.00	3400.00	3450.00	3500.00	3550.00	3600.00
STATION	No.24		No.25		No.26		No.27		No.28		No.29		No.30		No.31		No.32		No.33	6537	No.34		No.35		No.36
CURVE	IP4 (R) IA=23-46-36 R=180. TL=37.89 CL=74.70. SL=3.95																								

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA

TITLE OF DRAWING  
 RURAL ROAD  
 N - S ROAD / PLAN & PROFILE (3/16)

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY



GRADIENT	0.0417% L=240.00				-1.7805% L=440.00				0.5500% L=200.00				1.0571% L=350.00														
EMBANKMENT	0.06	0.30	0.38	0.26	0.22	0.65	0.67	0.34	0.40	0.33	0.55	0.60	0.41	0.07	0.37	0.32	0.20	0.20	0.41	0.53	0.48	0.40	0.29	0.17	0.33	0.40	
EXCAVATION											0.04																
PA. SUR. EL.	27.11	27.22	27.24	27.26	27.28	27.15	27.06	26.23	25.34	24.45	23.56	21.79	20.89	20.17	20.28	20.55	20.83	21.14	21.63	22.16	22.69	23.21	23.74	24.27	24.48	24.68	
GROUND. EL.	27.05	26.92	26.86	27.00	27.06	26.51	26.39	25.89	24.94	24.12	23.01	21.18	20.46	20.10	19.91	20.23	20.63	20.94	21.22	21.63	21.63	22.21	23.45	24.10	24.15	24.28	
RE. DISTANCA	3600.00	3650.00	3700.00	3750.00	3800.00	3840.00	3850.00	3900.00	3950.00	4000.00	4050.00	4100.00	4150.00	4200.00	4250.00	4300.00	4350.00	4400.00	4450.00	4500.00	4550.00	4600.00	4650.00	4700.00	4750.00	4770.00	4800.00
STATION	No.36		No.37		No.38	59.51		No.39		No.40		No.41		No.42		No.43		No.44		No.45		No.46		No.47	58.50		No.48
CURVE	IP5 (L) IA=50-02-35 R=180 TL=64.02 CL=157.21 SL=16.64																										

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA

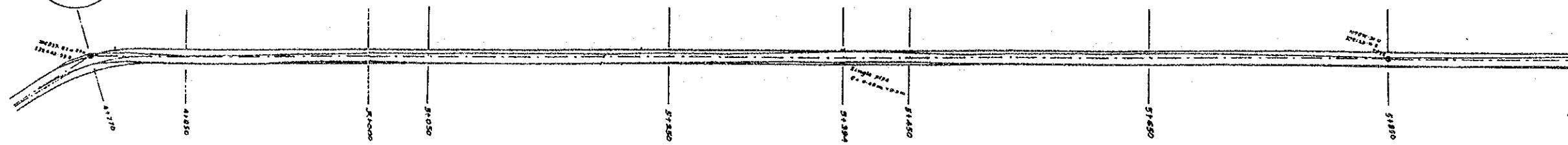
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 N - S ROAD / PLAN & PROFILE (4/16)

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

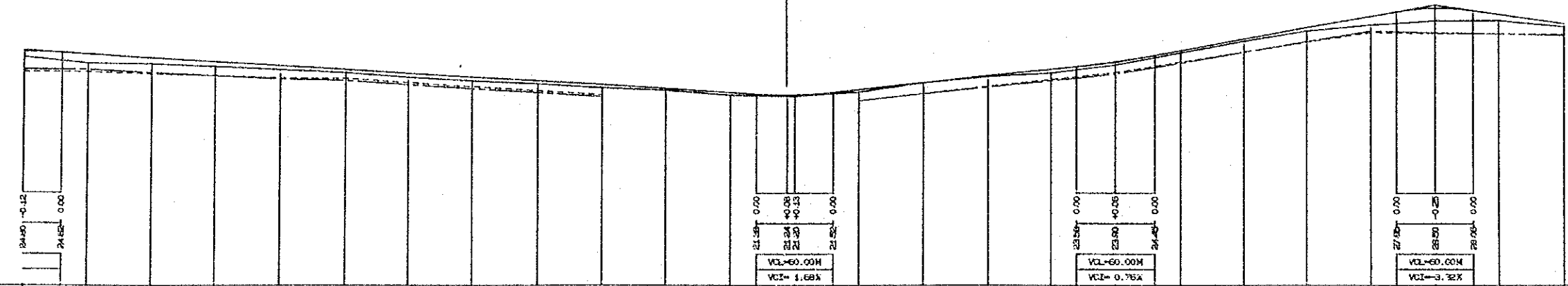
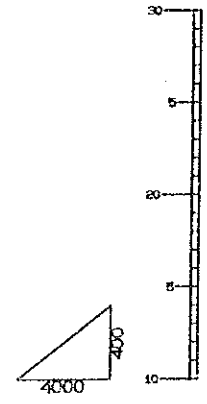
JAPAN INTERNATIONAL COOPERATION AGENCY

IP No. 6 (R)  
IA = 32-21-26  
R = 180

IP No. 7 (R)  
IA = 0-28-15  
R = Δ



Pipe Culvert  
SP 5394 TYPE-A



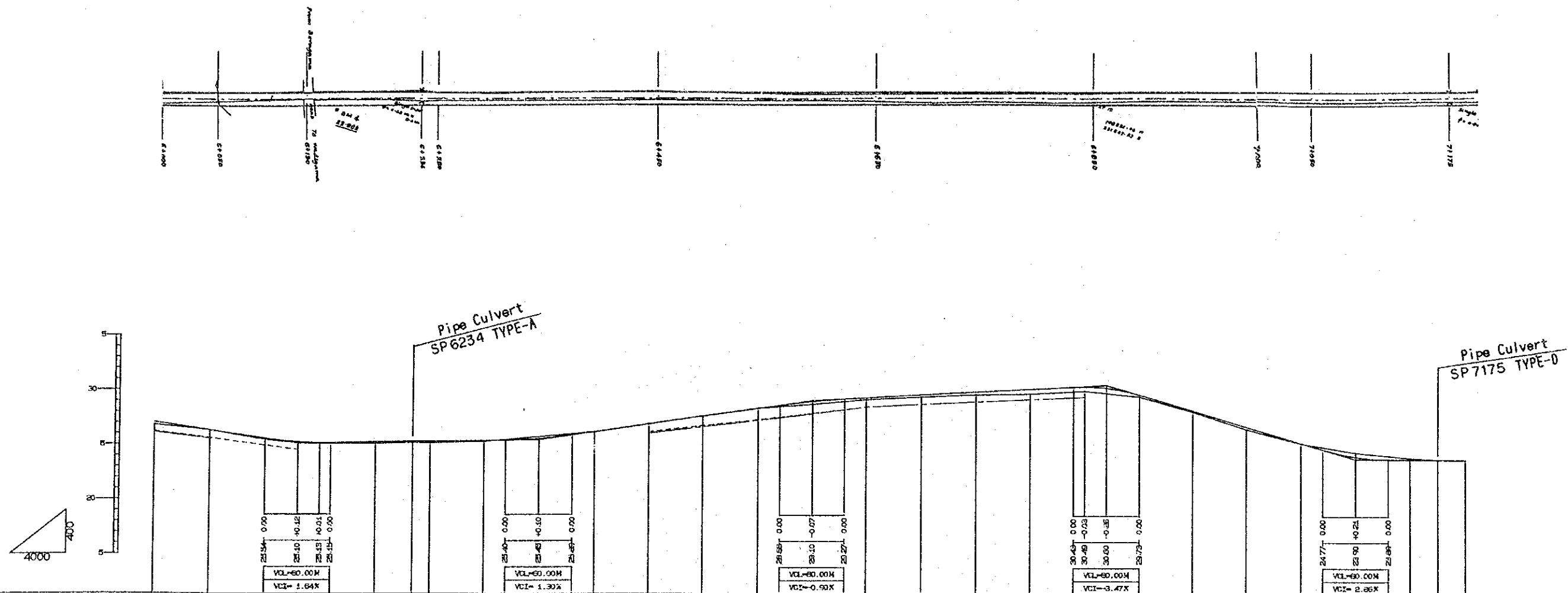
GRADIENT	$-0.6000\%$ L=600.00 $1.0500\%$ L=200.00 $1.2400\%$ L=250.00 $-1.4763\%$ L=230.00																											
EMBANKMENT	0.40	0.70	0.45	0.36	0.31	0.25	0.30	0.28	0.23	0.25	0.13	0.19	0.07	0.17	0.05	0.28	0.24	0.15	0.15	0.26	0.67	0.98	0.48	0.23				
EXCAVATION																												
PA. SUR. EL.	24.58	24.50	24.20	23.90	23.60	23.30	23.00	22.70	22.40	22.10	21.80	21.50	21.33	21.74	22.28	22.82	23.36	23.95	24.82	25.74	26.56	27.58	28.25	27.75	27.02			
GROUND. EL.	24.28	23.60	23.75	23.54	23.29	23.05	22.70	22.42	22.17	21.86	21.67	21.31	21.25	21.57	22.28	22.77	23.08	23.72	24.57	25.58	26.40	26.91	27.27	27.28	26.79			
RE. DISTANCA	4800.00	4850.00	4900.00	4950.00	5000.00	5050.00	5100.00	5150.00	5200.00	5250.00	5300.00	5350.00	5394.00	5450.00	5500.00	5550.00	5600.00	5650.00	5700.00	5750.00	5800.00	5850.00	5900.00	5950.00	6000.00			
STATION	No. 48	No. 49			No. 50			No. 51			No. 52			No. 53		No. 54		No. 55		No. 56		No. 57		No. 58		No. 59		No. 60
CURVE	IP7 (R) IA-00-28-15																											

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA

TITLE OF DRAWING  
 RURAL ROAD  
 N - S ROAD / PLAN & PROFILE ( 5 / 16 )

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY



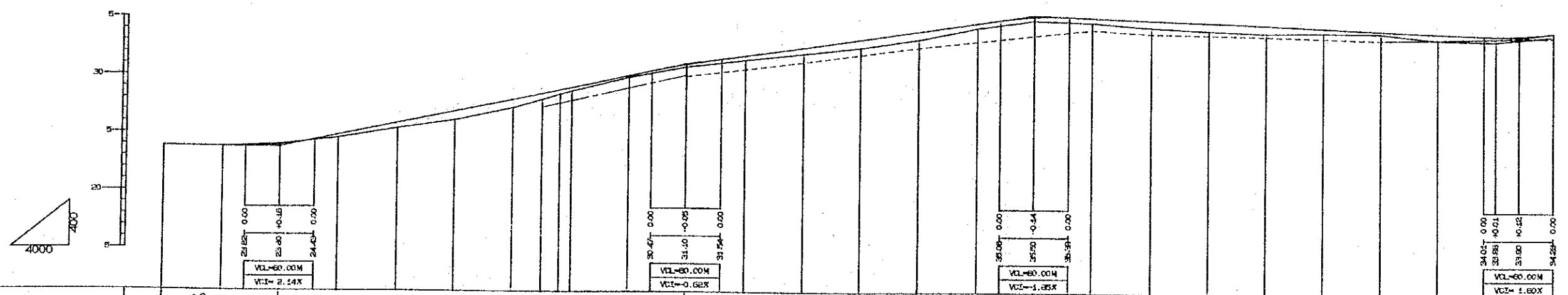
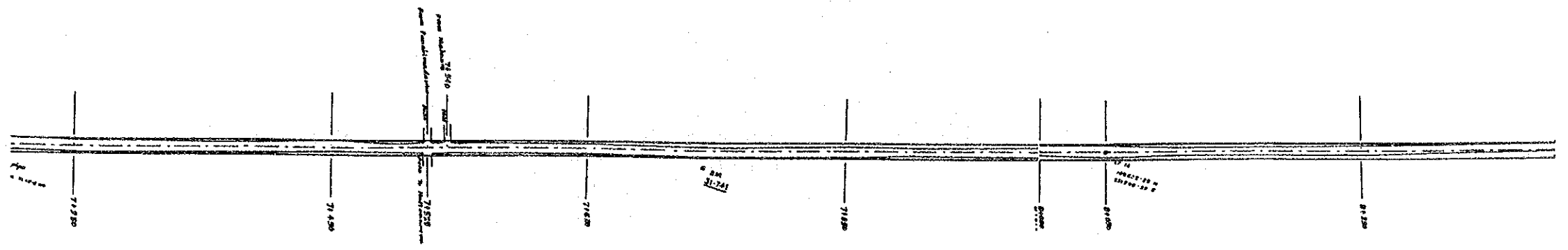
GRADIENT	-1.4783% L=230.00		0.1591% L=220.00		1.4600% L=250.00		0.5766% L=270.00		-2.9130% L=230.00		-0.0500% L=200.00																			
EMBANKMENT	0.23	0.09	0.09	0.05	0.13	0.10	0.14	0.06	0.01	0.01	0.24	0.15	0.20	0.25	0.41	0.38	0.16	0.08	0.19	0.02	0.03									
EXCAVATION		0.03					0.19				0.02	0.04								0.41	0.15									
PA. SUR. EL.	27.02	26.28	25.54	25.22	25.14	25.21	25.27	25.29	25.37	25.55	25.16	26.91	27.54	28.37	29.03	29.38	29.55	29.93	30.21	30.46	29.73	28.27	26.81	25.36	24.11	23.66	23.66	23.66	23.65	
GROUND. EL.	25.79	26.31	25.45	25.13	25.09	25.08	25.17	25.15	25.31	25.74	25.17	26.90	27.56	28.41	28.79	29.23	29.46	29.66	29.80	30.08	30.08	29.57	28.19	26.52	25.34	24.52	24.03	23.86	23.66	23.65
RE. DISTANCA	6000.00	6050.00	6100.00	6130.00	6150.00	6200.00	6234.00	6250.00	6300.00	6350.00	6400.00	6450.00	6500.00	6550.00	6600.00	6700.00	6750.00	6800.00	6850.00	6900.00	6950.00	7000.00	7050.00	7100.00	7150.00	7175.00	7200.00			
STATION	No.60	No.61		No.62		No.63		No.64		No.65		No.66		No.67		No.68		No.69		No.70		No.71								
CURVE																														

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA

TITLE OF DRAWING  
 RURAL ROAD  
 N - S ROAD / PLAN & PROFILE (6 / 16)

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY



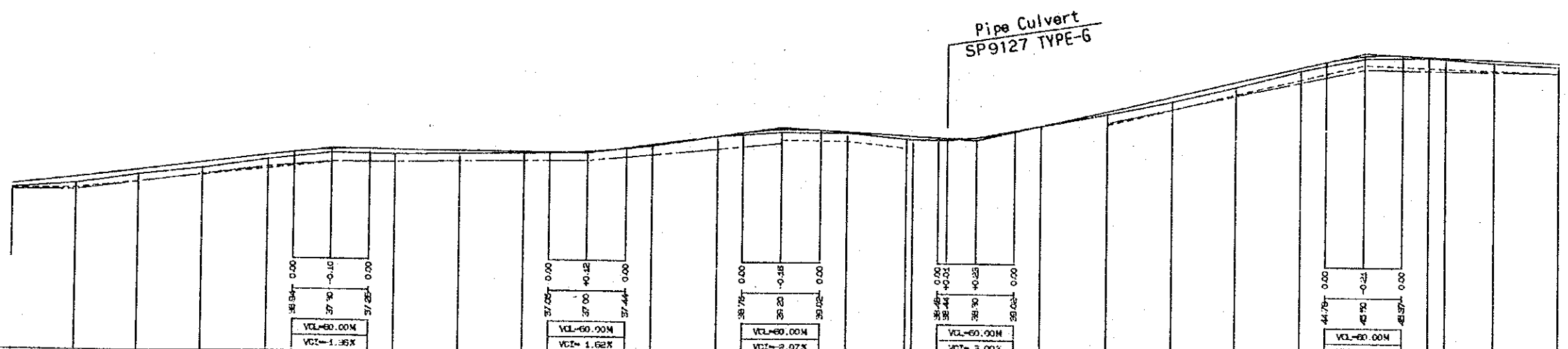
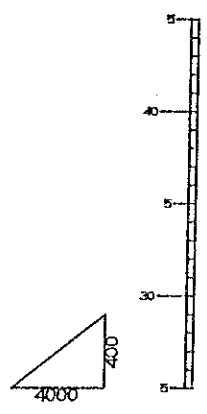
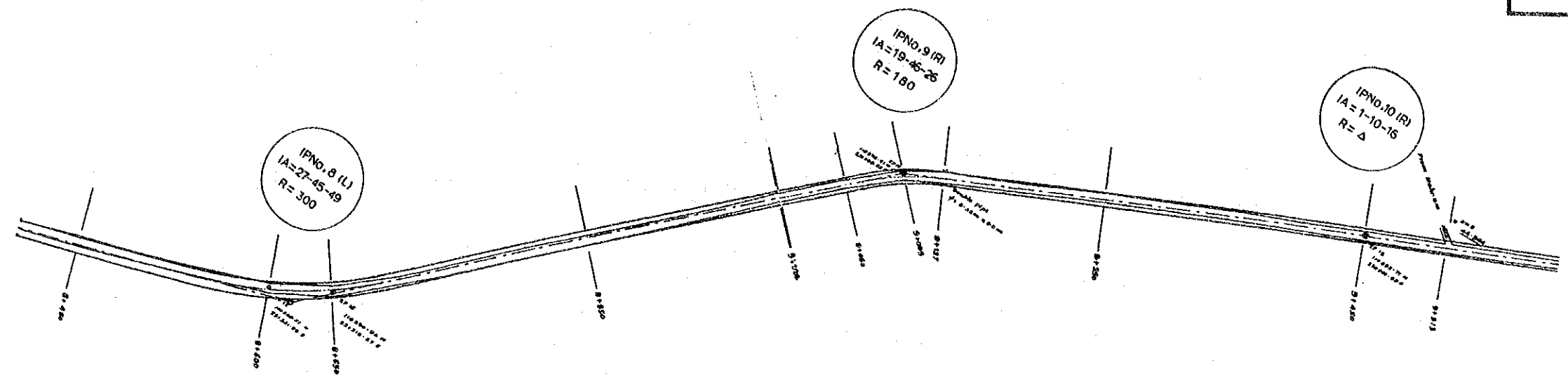
GRADIENT	-0.0500% L=200.00		2.0857% L=350.00					1.4657% L=300.00				-0.3610% L=430.00																
EMBANKMENT	0.03	0.01		0.25	0.45	0.76	0.70	0.51	0.36	0.29	0.15	0.23	0.36	0.52	0.70	0.69	0.40	0.32	0.41	0.61	0.69	0.69	0.40	0.21	0.54	0.46	0.28	
EXCAVATION			0.05																									
PA.SUR.EL.	23.85	23.83	23.96	24.84	25.69	26.93	27.97	28.49	28.81	29.01	30.06	31.05	31.83	32.57	33.30	34.03	34.77	35.36	35.31	35.12	34.93	34.74	34.55	34.36	34.17	33.99	34.26	
GROUND.EL.	23.82	23.82	24.02	24.58	25.43	26.17	27.27	27.98	28.45	28.72	29.94	30.82	31.47	32.05	32.60	33.34	34.37	35.04	34.90	34.74	34.51	34.35	34.15	34.06	33.83	33.51	33.98	
RE.DISTANCA	7200.00	7250.00	7300.00	7350.00	7400.00	7450.00	7500.00	7525.00	7540.00	7550.00	7600.00	7650.00	7700.00	7750.00	7800.00	7850.00	7900.00	7950.00	8000.00	8050.00	8100.00	8150.00	8200.00	8250.00	8300.00	8350.00	8400.00	
STATION	No.72		No.73		No.74		No.75				No.76		No.77		No.78		No.79		No.80		No.81		No.82		No.83		No.84	
CURVE	-----																											

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
IN WALAWE LEFT BANK AREA

TITLE OF DRAWING  
RURAL ROAD  
N - S ROAD / PLAN & PROFILE (7 / 16)

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY



GRADIENT	+1.2143% L=200.00				-0.1500% L=200.00				+1.4667% L=150.00				-0.6000% L=150.00				+2.4000% L=300.00				-0.4500% L=200.00							
EMBANKMENT	0.28	0.47	0.36	0.45	0.33	0.27	0.36	0.23	0.12	0.07	0.09	0.21	0.07	0.26	0.14	0.01	0.21	0.36	0.40	0.24	0.19	0.06	0.09	0.22	0.27			
EXCAVATION																												
PA. SUR. EL.	34.26	34.87	35.48	36.09	36.69	37.20	37.23	37.15	37.06	37.12	37.73	38.47	39.04	39.90	39.53	38.45	38.53	39.50	40.70	41.90	43.10	44.30	45.29	45.28	45.22	45.05	44.83	44.83
GROUND. EL.	33.98	34.40	35.12	35.64	36.36	36.93	37.23	37.15	37.06	37.12	37.65	38.47	39.04	39.90	39.53	38.45	38.53	39.50	40.70	41.90	43.10	44.30	45.29	45.28	45.22	45.05	44.83	44.83
RE. DISTANCA	8400.00	8450.00	8500.00	8550.00	8600.00	8650.00	8700.00	8750.00	8800.00	8850.00	8900.00	8950.00	9000.00	9050.00	9100.00	9150.00	9200.00	9250.00	9300.00	9350.00	9400.00	9450.00	9500.00	9513.00	9513.00	9550.00	9600.00	9600.00
STATION	No.84		No.85		No.86		No.87		No.88		No.89		No.90		No.91		No.92		No.93		No.94		No.95		No.96		No.96	
CURVE	IP8 (L) IA=27-45-49 R=300 TL=74.14 CL=145.37 SL=9.03												IP9 (R) IA=19-46-26 R=180. TL=31.37. CL=62.12. SL=2.71				IP10 (R) IA=01-10-16											

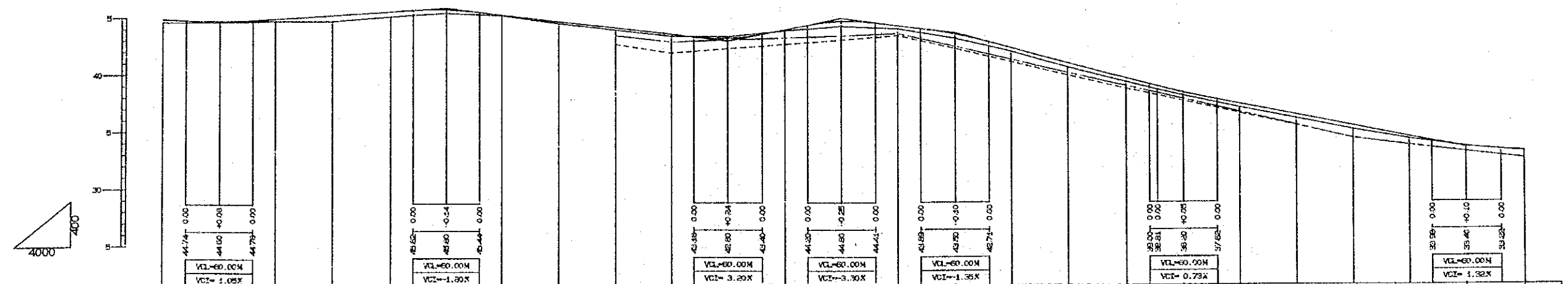
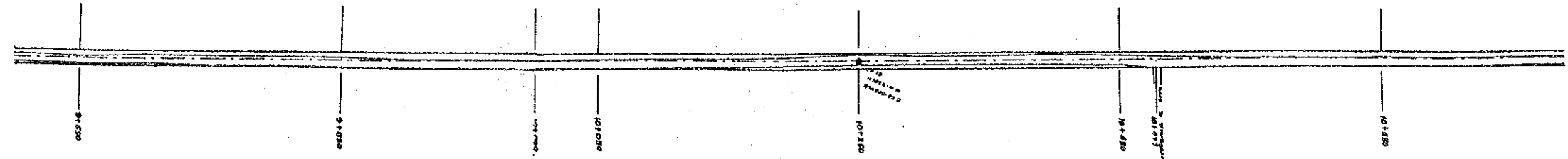
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA

TITLE OF DRAWING  
 RURAL ROAD  
 N - S ROAD / PLAN & PROFILE ( 8 / 16 )

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY

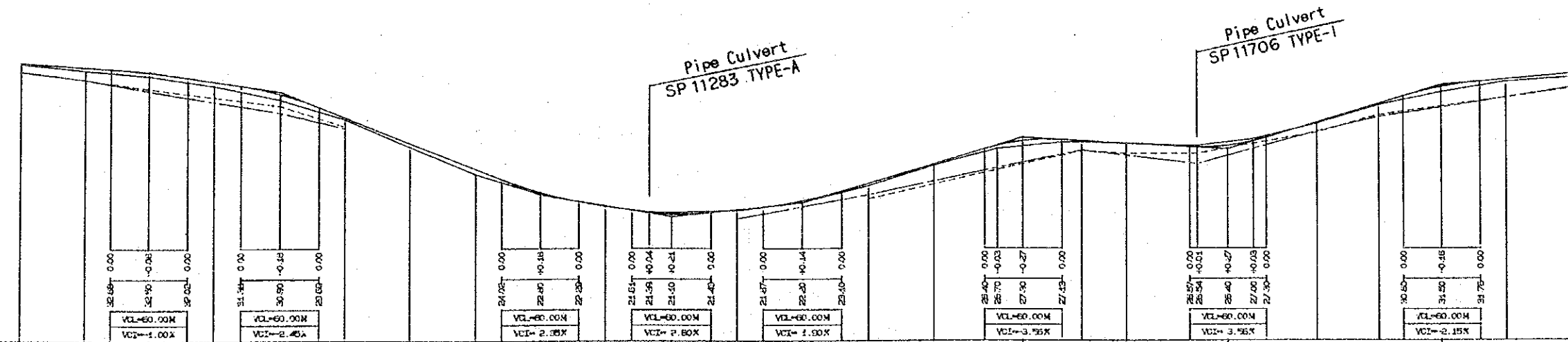
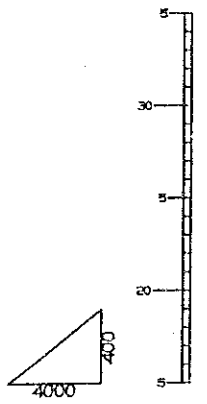
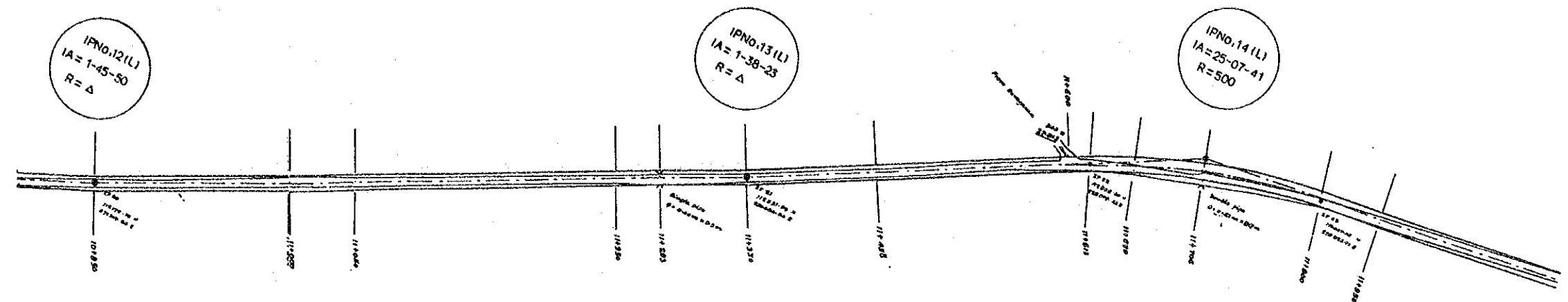
IP No. 11(L)  
IA = 0-12-46  
R = Δ



GRADIENT	0.6000% L=200.00		-1.2000% L=250.00		2.0000% L=100.00		-1.3000% L=100.00		-0.6500% L=200.00		-1.9200% L=250.00																	
EMBANKMENT	0.27	0.09	0.18	0.51	0.43	0.29	0.04	0.15	0.19	0.17	0.07	0.43	0.25	0.36	0.30	0.35	0.32	0.29	0.26	0.31	0.32	0.33	0.19	0.02	0.05			
EXCAVATION																												
PA. SUR. EL.	44.23	44.58	44.90	45.20	45.50	45.66	45.20	44.60	44.00	43.40	43.04	44.55	44.15	43.40	42.18	40.25	39.53	38.21	36.25	37.24	35.28	35.32	34.36	33.50	33.10			
GROUND. EL.	44.56	44.58	44.72	44.69	45.07	45.37	45.15	44.45	43.81	43.23	43.20	43.80	43.90	43.04	41.28	40.50	39.21	38.52	37.98	36.93	35.96	34.95	34.17	33.48	33.04			
RE. DISTANCA	9600.00	9650.00	9700.00	9750.00	9800.00	9850.00	9900.00	9950.00	10000.00	10050.00	10100.00	10150.00	10200.00	10250.00	10300.00	10350.00	10400.00	10450.00	10500.00	10550.00	10600.00	10650.00	10700.00	10750.00	10800.00			
STATION	No. 96		No. 97		No. 98		No. 99		No. 100		No. 101		No. 102	3773	No. 103		No. 104		No. 105		No. 106		No. 107		No. 108			
CURVE	IP 11(L) IA=0-12-46																											

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA  
 TITLE OF DRAWING  
 RURAL ROAD  
 N - S ROAD / PLAN & PROFILE (9 / 16)  
 DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_  
 JAPAN INTERNATIONAL COOPERATION AGENCY





GRADIENT	-0.6000% L=150.00		-1.6000% L=100.00		-4.0500% L=200.00		-1.7000% L=100.00		1.1000% L=100.00		3.0000% L=170.00		-0.5625% L=160.00		3.0000% L=170.00		0.8500% L=200.00							
EMBANKMENT	0.06	0.24	0.27	0.32	0.44	0.13	0.27	0.41	0.13	0.04	0.05	0.10	0.17	0.07	0.24	0.19	0.08	0.07	0.09	0.36	0.18	0.26		
EXCAVATION																								
PA.SUR.EL.																								
GROUND.EL.																								
RE.DISTANCA																								
STATION	No. 108	37.82	No. 109		No. 110		No. 111		No. 112		No. 113	37.68	No. 114		No. 115		No. 116		No. 117		No. 118	35.17	No. 119	No. 120
CURVE	IP12(L) IA-01-45-50										IP13(L) IA-01-38-23										IP14(R) IA-25-07-41 R=500 TL=111.43 CL=219.28 SL=12.27			

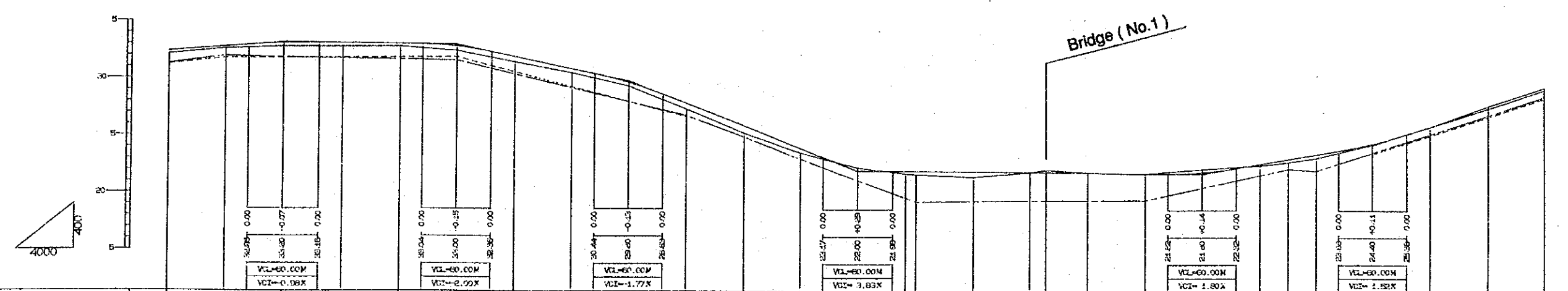
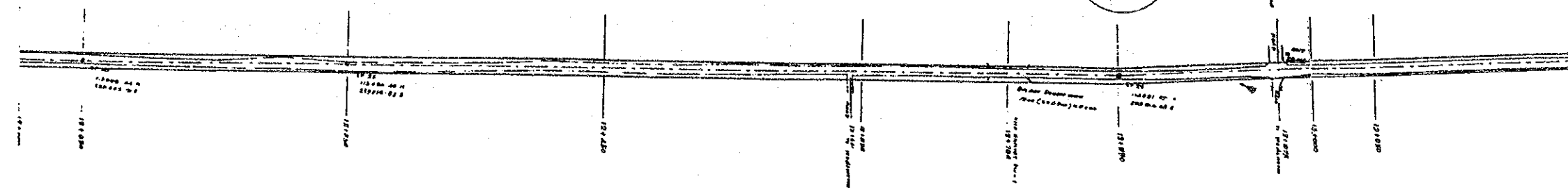
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA

TITLE OF DRAWING  
 RURAL ROAD  
 N - S ROAD / PLAN & PROFILE ( 10 / 16 )

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY

IPNO.15 (L)  
IA=7-59-17  
R=200



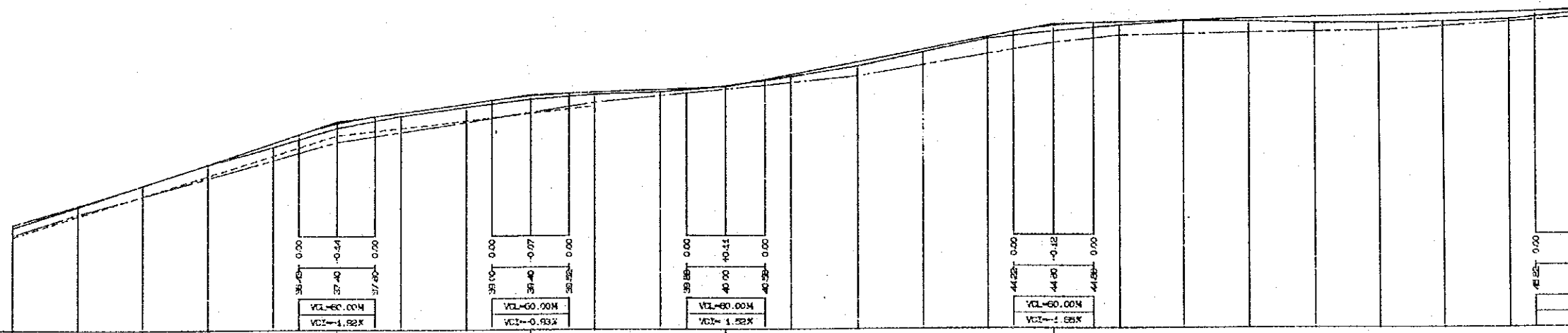
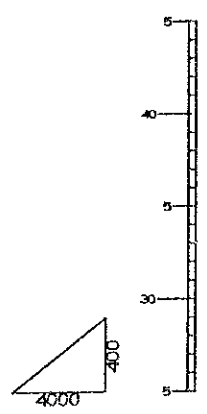
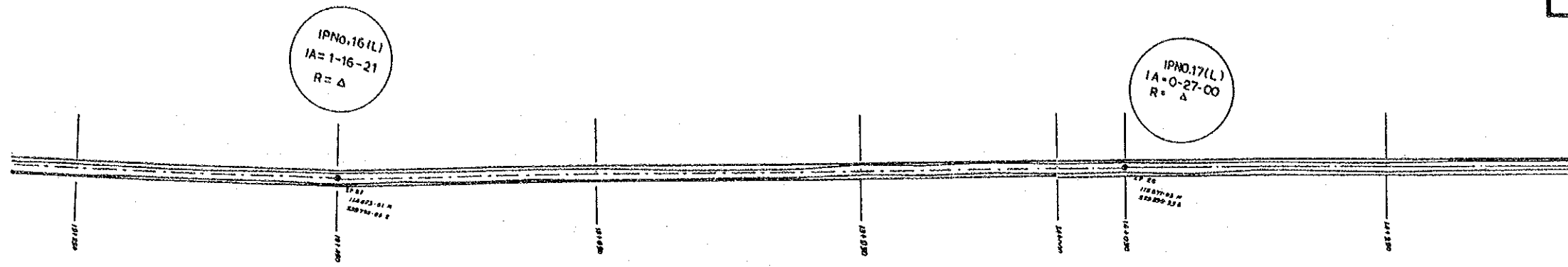
GRADIENT	$0.8500\%$ L=200.00 $-0.4333\%$ L=150.00 $-0.4333\%$ L=150.00 $-3.9000\%$ L=200.00 $-0.0667\%$ L=300.00 $1.7333\%$ L=150.00 $3.2500\%$ L=400.00																											
EMBANKMENT	0.36	0.17	0.32	0.31	0.25	0.40	0.46	0.35	0.32	0.50	0.65	0.38	0.01	0.21	0.28	0.47	0.02	0.02	0.13	0.27	0.31	0.07	0.01					
EXCAVATION															0.21	0.02			0.28			0.22	0.20					
PA. SUR. EL.	32.35	32.78	33.13	33.13	33.07	32.35	31.93	30.87	29.57	27.85	25.90	23.95	22.29	21.97	21.97	21.93	21.83	21.94	22.67	23.10	23.53	24.51	26.03	27.65	29.28			
GROUND. EL.	32.09	32.61	32.81	32.82	32.82	32.45	31.47	30.52	29.35	27.35	25.25	23.57	22.28	21.75	21.69	21.46	21.21	22.22	22.54	22.83	23.22	24.44	26.02	27.67	29.48			
RE. DISTANCA	12000.00	12050.00	12100.00	12150.00	12200.00	12250.00	12300.00	12350.00	12400.00	12450.00	12500.00	12550.00	12600.00	12641.00	12650.00	12700.00	12750.00	12764.00	12800.00	12850.00	12900.00	12950.00	12975.00	13000.00	13050.00	13100.00	13150.00	13200.00
STATION	No. 120		No. 121		No. 122		No. 123		No. 124		No. 125		No. 126		No. 127		No. 128		No. 129		No. 130		No. 131		No. 132			
CURVE	IP15(L) IA=7-59-17 R=200, TL=13.96, CL=27.68, SL=0.49																											

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA

TITLE OF DRAWING  
 RURAL ROAD  
 N - S ROAD / PLAN & PROFILE ( 11 / 16 )

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY



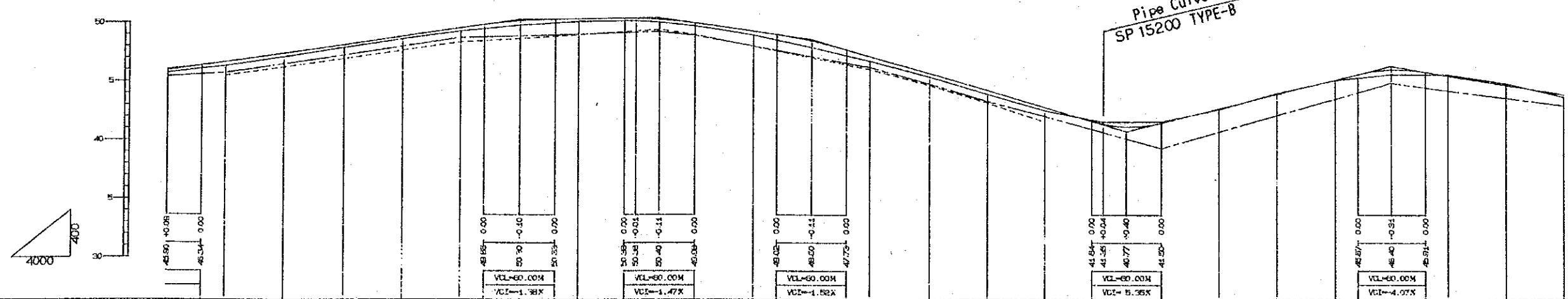
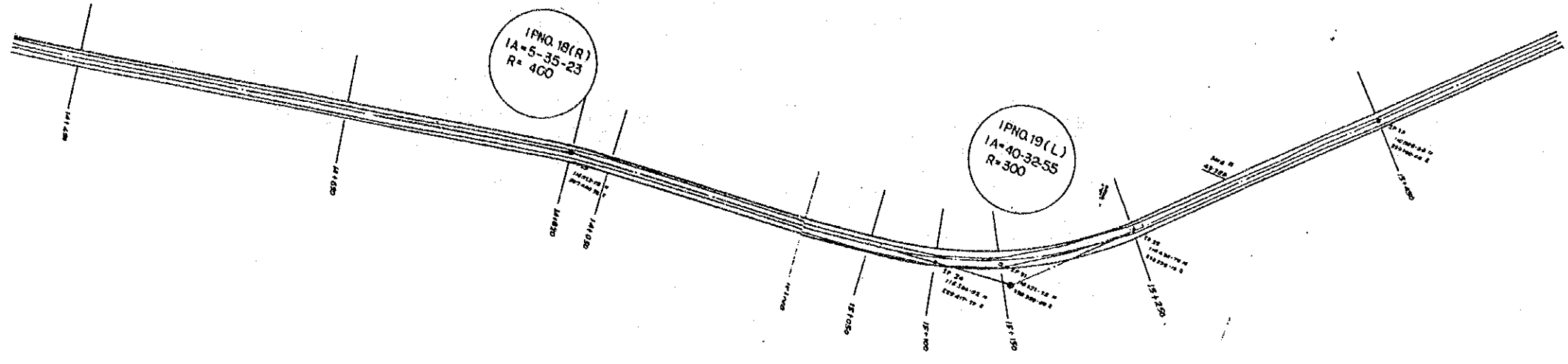
GRADIENT	3.2500% L=400.00		4.3333% L=150.00		0.4000% L=150.00		1.9200% L=250.00		0.2750% L=400.00																
EMBANKMENT		0.02	0.32	0.35	0.25	0.24	0.26	0.17	0.19	0.07	0.16	0.31	0.21	0.15	0.43	0.25	0.07	0.21	0.49	0.57	0.60	0.55	0.30		
EXCAVATION	0.20		0.07	0.01																					
PA. SUR. EL.	29.48	29.26																							
GROUND. EL.	29.48	30.90	30.90	32.53	34.15	35.46	35.75	37.26	38.49	38.73	39.33	39.60	40.11	40.80	41.92	42.68	43.84	44.68	44.94	45.08	45.21	45.49	45.63	45.76	45.99
RE. DISTANCA	13200.00	13250.00	13300.00	13350.00	13400.00	13450.00	13500.00	13550.00	13600.00	13650.00	13700.00	13750.00	13800.00	13850.00	13900.00	13950.00	14000.00	14050.00	14100.00	14150.00	14200.00	14250.00	14300.00	14350.00	14400.00
STATION	No. 132		No. 133		No. 134 +9.01		No. 135		No. 136		No. 137		No. 138		No. 139		No. 140	5329	No. 141		No. 142		No. 143		No. 144
CURVE	IP16 (L) IA=01-16-21												IP17 (L) IA=00-27-00												

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA

TITLE OF DRAWING  
 RURAL ROAD  
 N - S ROAD / PLAN & PROFILE ( 12 / 16 )

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY



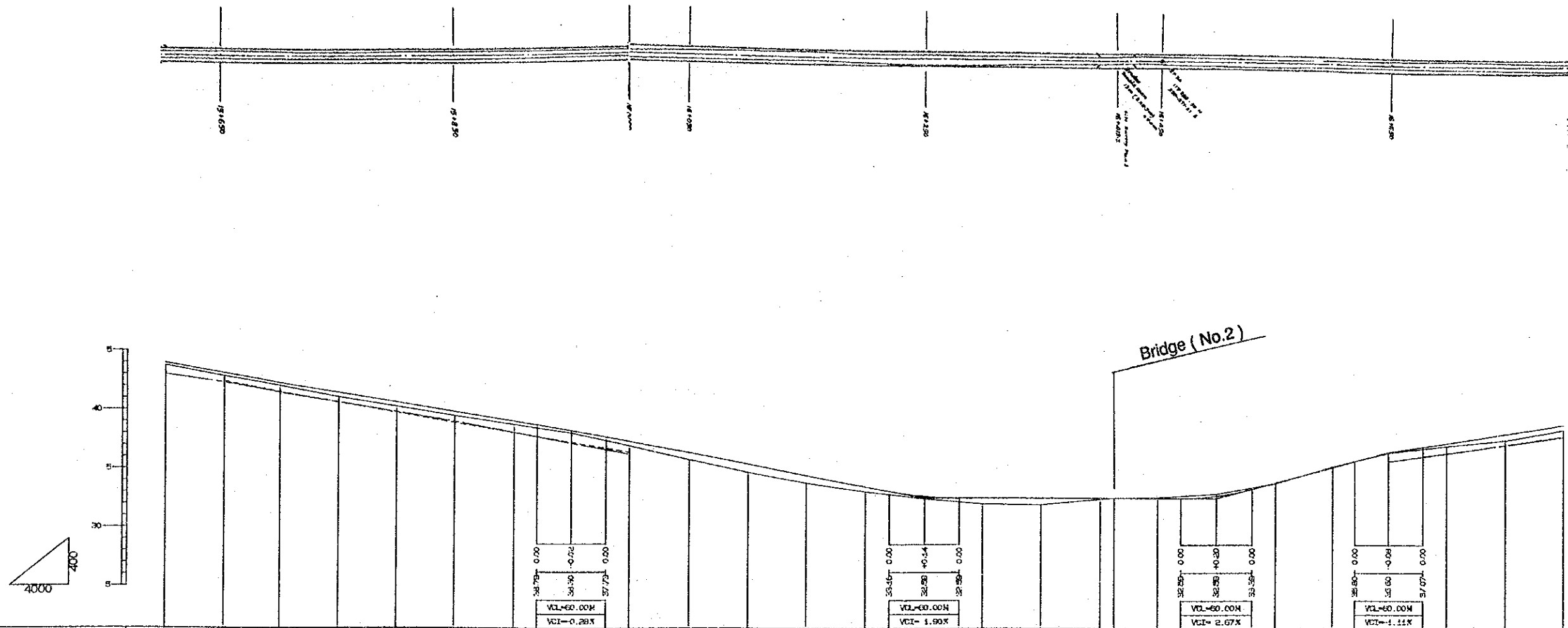
GRADIENT	1.4557% L=300.00			0.0833% L=120.00			-1.3846% L=130.00			-2.9000% L=270.00			2.4478% L=250.00			-1.6200% L=500.00										
EMBANKMENT	0.30	0.33	0.30	0.23	0.22	0.29	0.38	0.22	0.21	0.24	0.25	0.33	0.57	0.38	0.30	0.34	0.28	0.08	0.03	0.40	0.21					
EXCAVATION																										
PA.SUR.EL.	45.99	46.63	47.37	48.10	48.83	49.57	50.20	50.34	50.37	50.29	50.11	49.83	49.49	47.15	45.70	42.80	41.35	41.50	42.73	43.95	45.18	46.39	45.59	44.78	43.97	
GROUND.EL.	45.69	46.30	47.07	47.87	48.61	49.28	49.82	50.12	50.16	50.05	49.73	49.56	47.92	46.77	45.40	42.52	41.57	41.62	42.65	44.02	45.69	46.09	45.70	44.92	43.75	
RE.DISTANCA	14400.00	14450.00	14500.00	14550.00	14600.00	14650.00	14700.00	14750.00	14800.00	14820.00	14850.00	14900.00	14950.00	15000.00	15050.00	15100.00	15150.00	15200.00	15250.00	15300.00	15350.00	15400.00	15450.00	15500.00	15550.00	15600.00
STATION	No. 144	No. 145		No. 146		No. 147		No. 148		No. 149		No. 150		No. 151		No. 152		No. 153		No. 154		No. 155		No. 156		
CURVE	IP18(R) IA=5-35-23 R=400 IL=19.53 CL=39.02 SL=0.48												IP19(L) IA=40-32-55 R=300 IL=110.82 CL=212.31 SL=19.81													

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA

TITLE OF DRAWING  
 RURAL ROAD  
 N - S ROAD / PLAN & PROFILE ( 13 / 16 )

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY



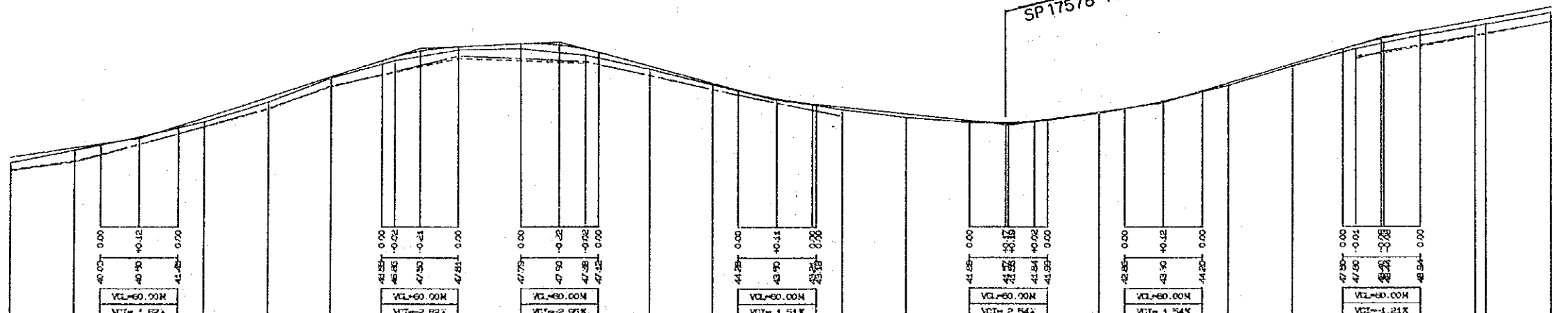
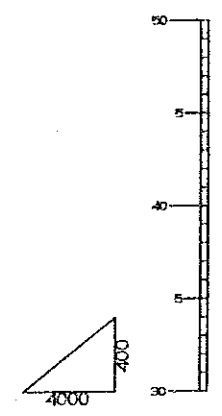
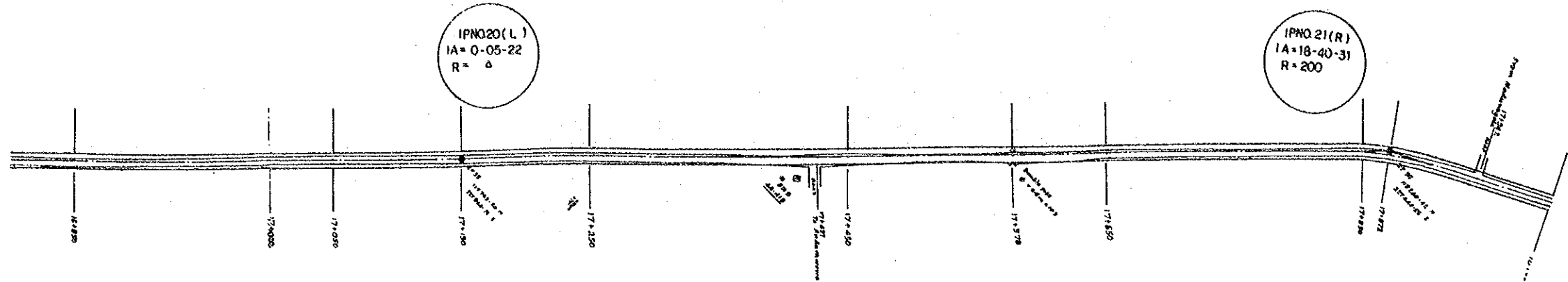
GRADIENT	-1.6200% L=500.00										-1.9033% L=300.00					LEVEL L=250.00			2.6733% L=150.00		1.5600% L=250.00				
EMBANKMENT	0.21	0.27	0.25	0.38	0.37	0.35	0.30	0.20	0.38	0.51	0.73	0.54	0.41	0.21	0.50	0.57	0.08	0.06	0.24	0.53	0.43				
EXCAVATION																									
PA. SUR. EL.	43.97	43.16	42.35	41.54	40.73	39.92	39.11	38.28	37.35	36.40	35.45	34.49	33.54	32.73	32.59	32.59	32.59	32.79	33.93	35.26	36.52	37.38	38.15	38.94	
GROUND. EL.	43.76	42.89	42.12	41.16	40.35	39.57	38.81	38.09	36.97	35.79	34.72	33.65	33.43	32.52	32.09	32.02	32.02	32.97	33.87	35.33	36.54	37.14	37.63	38.51	38.94
RE. DISTANCA	15600.00	15650.00	15700.00	15750.00	15800.00	15850.00	15900.00	15950.00	16000.00	16050.00	16100.00	16150.00	16200.00	16250.00	16300.00	16350.00	16400.00	16412.00	16450.00	16500.00	16550.00	16600.00	16700.00	16750.00	16800.00
STATION	No. 156	No. 157		No. 158		No. 159		No. 160		No. 161		No. 162		No. 163		No. 164		No. 165		No. 166		No. 167		No. 168	
CURVE																									

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWÉ LEFT BANK AREA

TITLE OF DRAWING  
 RURAL ROAD  
 N - S ROAD / PLAN & PROFILE ( 14 / 16 )

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY



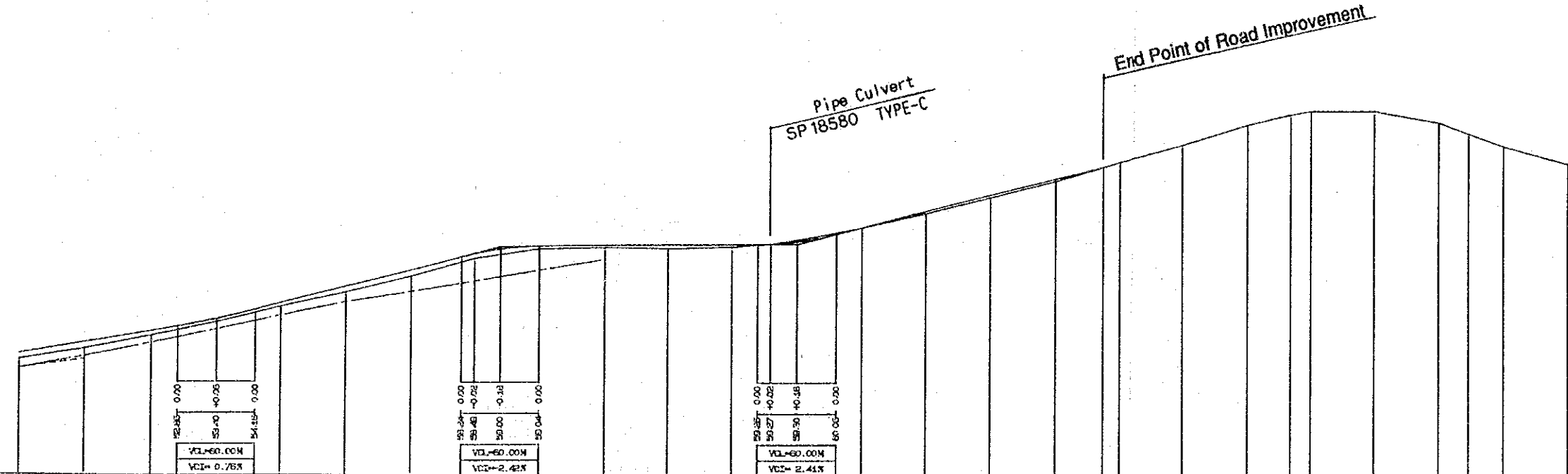
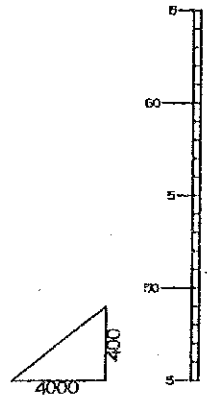
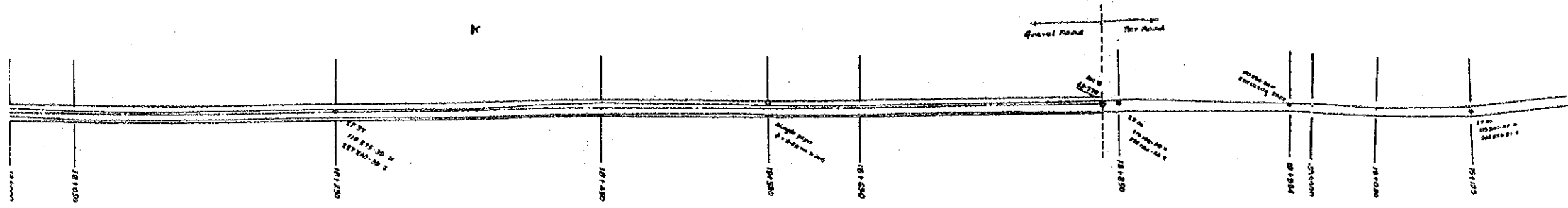
GRADIENT	1.5600% L=250.00		3.4818% L=220.00		0.3636% L=110.00		-2.5682% L=170.00		-1.0833% L=180.00		1.4593% L=120.00		3.0000% L=170.00		1.7857% L=280.00															
EMBANKMENT	0.43	0.19	0.02	0.30	0.37	0.10	0.29	0.25	0.11	0.09	0.07	0.20	0.25	0.13	0.07	0.05	0.18	0.17	0.28	0.38	0.38	0.42	0.44							
EXCAVATION																														
PA. SUR. EL.	38.94	39.72	40.62	42.09	43.58	45.27	46.54	47.51	47.79	47.36	46.09	44.79	43.51	43.21	42.96	42.42	41.88	41.74	41.67	41.80	41.86	42.57	43.42	44.80	46.30	47.79	48.36	48.94	49.69	50.72
GROUND. EL.	38.51	39.53	40.60	41.79	43.31	45.17	46.55	47.36	47.40	46.28	45.24	44.58	43.52	43.14	42.76	42.13	41.75	41.67	41.80	41.80	41.86	42.50	43.37	44.62	46.13	47.51	47.98	48.56	49.27	50.26
RE. DISTANCA	16800.00	16850.00	16900.00	16950.00	17000.00	17050.00	17100.00	17150.00	17200.00	17250.00	17300.00	17350.00	17400.00	17427.00	17450.00	17500.00	17550.00	17578.00	17600.00	17650.00	17700.00	17750.00	17800.00	17850.00	17900.00	17942.00	17950.00	18000.00		
STATION	No. 168		No. 169		No. 170		No. 171	+53.02	No. 172		No. 173		No. 174		No. 175		No. 176		No. 177		No. 178		No. 179		No. 180					
CURVE	IP20(L) IA=00-05-22										IP21(R) IA=18-40-31 R=200, TL=32.89, CL=65.19, SL=269																			

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA

TITLE OF DRAWING  
 RURAL ROAD  
 N - S ROAD / PLAN & PROFILE ( 15 / 16 )

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY



GRADIENT	1.7557% L=290.00				2.5453% L=220.00				0.1304% L=230.00				2.5359% L=237.00				
EMBANKMENT	0.44	0.48	0.35	0.28	0.29	0.45	0.47	0.35	0.22	0.18	0.29	0.17	0.02	0.18	0.20	0.17	
EXCAVATION													0.02	0.13			
PA.SUR.EL.	15000.00	15028	150.72	151.61	152.51	153.46	154.57	155.95	157.22	158.47	159.04	159.10	159.23	159.29	159.31	159.48	
GROUND.EL.	15028	151.13	151.61	152.16	152.51	153.20	153.46	154.38	154.67	155.50	155.95	156.52	157.10	157.66	158.24	158.84	
RE.DISTANCA	18000.00	18050.00	18100.00	18150.00	18200.00	18250.00	18300.00	18350.00	18400.00	18450.00	18500.00	18550.00	18600.00	18650.00	18700.00	18750.00	
STATION	No. 180	No. 181		No. 182		No. 183		No. 184		No. 185		No. 186		No. 187		No. 188	
CURVE	IP22 (J) IA-00-06-24 IP23 (S) IA-03-03-99 IP24 (J) IP25 (J)																

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA

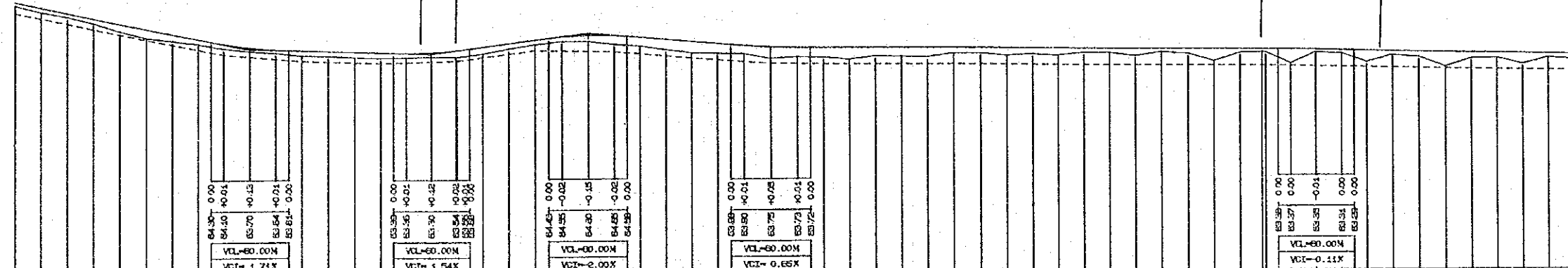
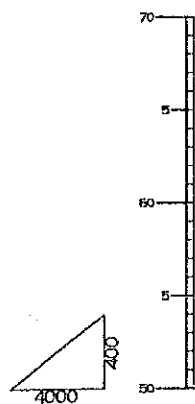
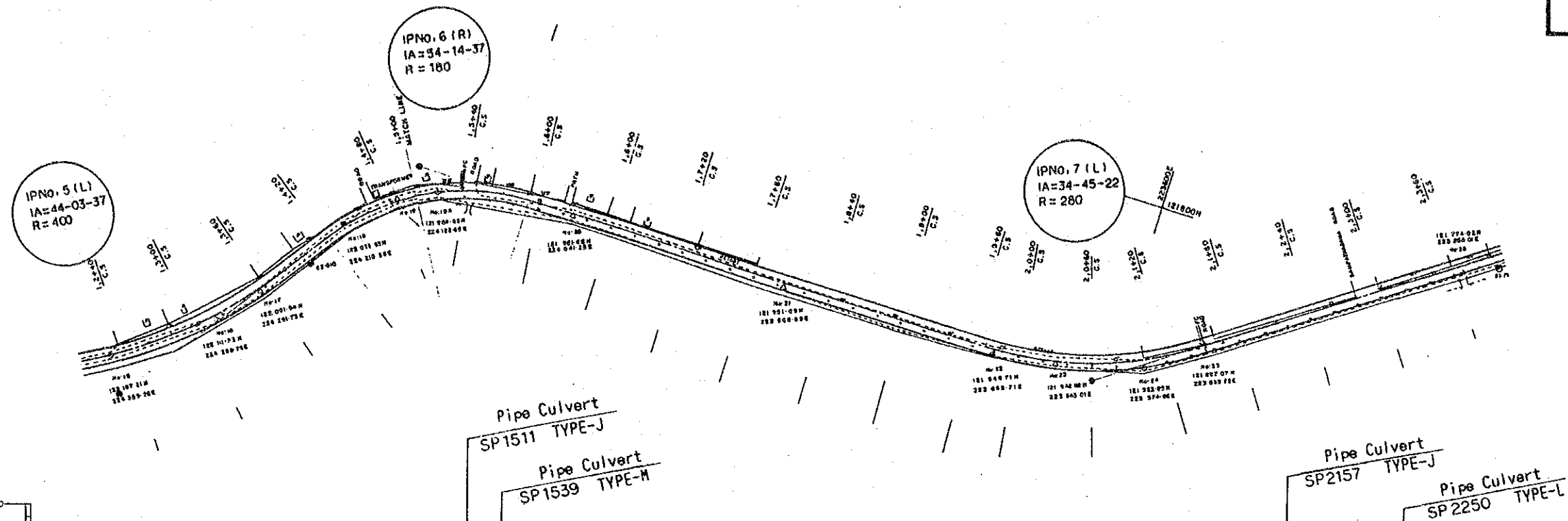
TITLE OF DRAWING  
 RURAL ROAD  
 N - S ROAD / PLAN & PROFILE ( 16 / 16 )

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY







GRADIENT	-2.0000% L=220.00												-0.2657% L=140.00						1.2500% L=120.00						-0.7500% L=140.00						-0.0952% L=420.00						+0.2014% L=720.00																																																		
EMBANKMENT	0.25	0.32	0.26	0.32	0.54	0.65	0.48	0.34	0.32	0.25	0.22	0.37	0.35	0.39	0.39	0.32	0.33	0.46	0.56	0.66	0.77	0.85	0.73	0.62	0.88	0.70	0.72	0.86	0.63	0.56	0.70	0.41	0.39	0.55	0.44	0.52	0.30	0.29	0.53	0.22	0.39	0.92	0.27	0.23	1.05	0.18	0.23	0.85	0.28	0.39	1.11	0.44	0.38	0.83	0.29	0.41																															
EXCAVATION																																																																																							
PA. SUR. EL.	67.30	66.90	66.50	66.10	65.70	65.30	64.90	64.50	64.11	63.83	63.55	63.27	63.03	62.79	62.55	62.31	62.07	61.83	61.59	61.35	61.11	60.87	60.63	60.39	60.15	59.91	59.67	59.43	59.19	58.95	58.71	58.47	58.23	57.99	57.75	57.51	57.27	57.03	56.79	56.55	56.31	56.07	55.83	55.59	55.35	55.11	54.87	54.63	54.39	54.15	53.91																																				
GROUND. EL.	67.05	66.59	66.24	65.78	65.16	64.65	64.02	63.41	62.83	62.26	61.64	61.03	60.45	59.86	59.28	58.69	58.11	57.53	56.95	56.37	55.79	55.21	54.63	54.05	53.47	52.89	52.31	51.73	51.15	50.57	49.99	49.41	48.83	48.25	47.67	47.09	46.51	45.93	45.35	44.77	44.19	43.61	43.03	42.45	41.87	41.29	40.71	40.13	39.55	38.97	38.39	37.81	37.23	36.65																																	
RE. DISTANCA	1200.00	1220.00	1240.00	1260.00	1280.00	1300.00	1320.00	1340.00	1360.00	1380.00	1400.00	1420.00	1440.00	1460.00	1480.00	1500.00	1520.00	1540.00	1560.00	1580.00	1600.00	1620.00	1640.00	1660.00	1680.00	1700.00	1720.00	1740.00	1760.00	1780.00	1800.00	1820.00	1840.00	1860.00	1880.00	1900.00	1920.00	1940.00	1960.00	1980.00	2000.00	2020.00	2040.00	2060.00	2080.00	2100.00	2120.00	2140.00	2160.00	2180.00	2200.00	2220.00	2240.00	2260.00	2280.00	2300.00	2320.00	2340.00	2360.00	2380.00	2400.00																										
STATION	No.12											No.13					No.14							No.15							No.16							No.17							No.18							No.19							No.20							No.21							No.22							No.23							No.24
CURVE	IP6 L IA=44-03-37 R=400 TL=161.65 CL=307.60 SL=31.51												IP6 R IA=54-14-37 R=180 TL=92.20 CL=170.41 SL=22.24												IP7 L IA=34-45-22 R=280 TL=67.63 CL=169.65 SL=13.33																																																														

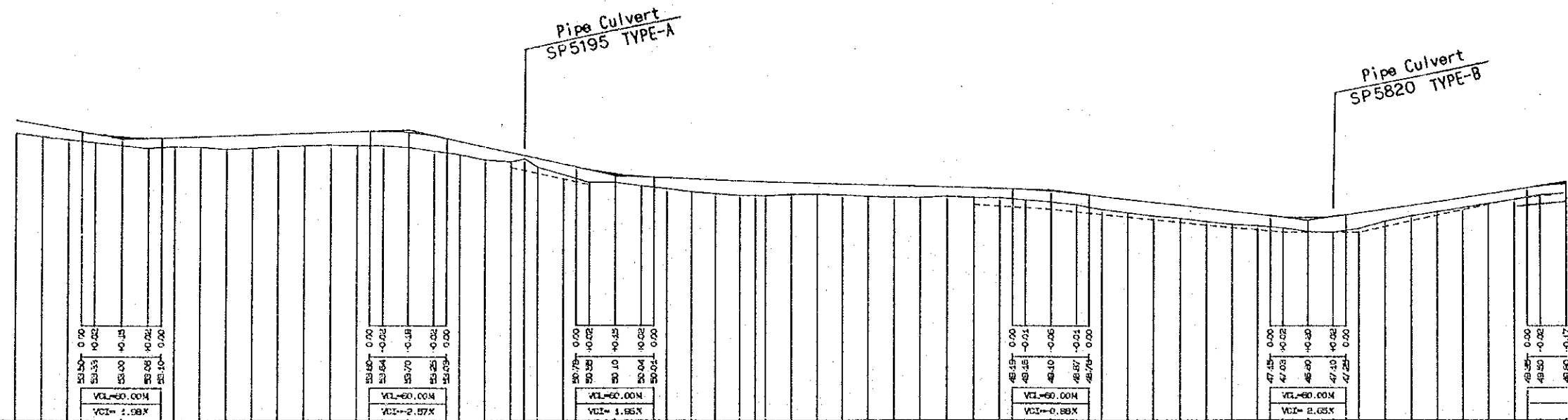
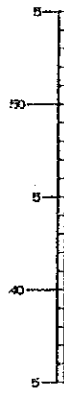
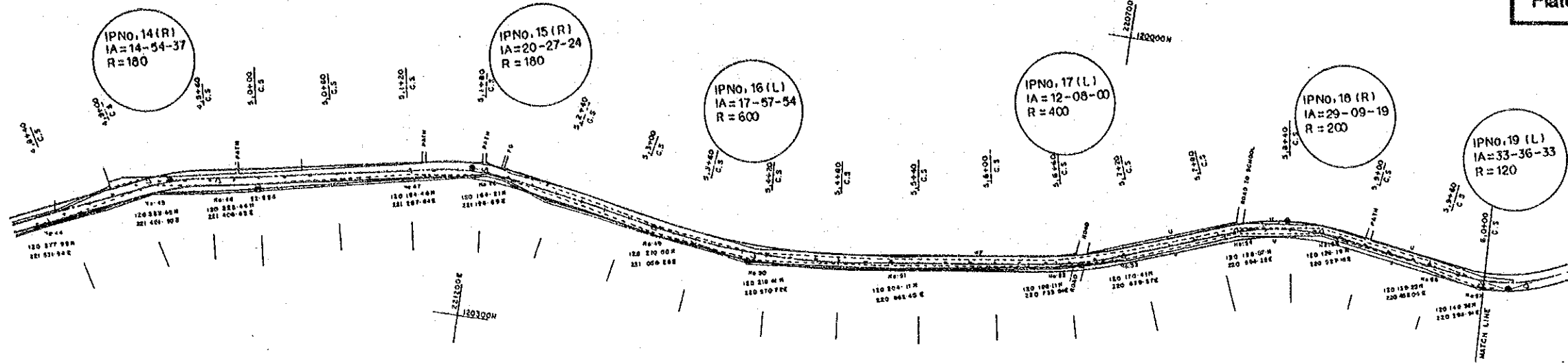
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAVE LEFT BANK AREA

TITLE OF DRAWING  
 RURAL ROAD  
 E - W ROAD / PLAN & PROFILE (2/11)

DATE: \_\_\_\_\_ DRAWING No.: \_\_\_\_\_  
 JAPAN INTERNATIONAL COOPERATION AGENCY

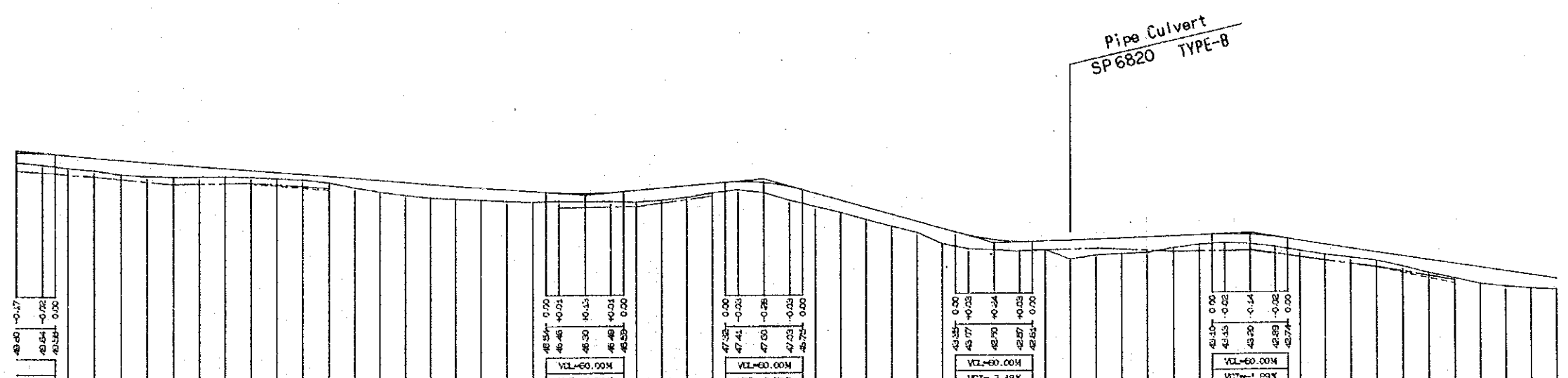
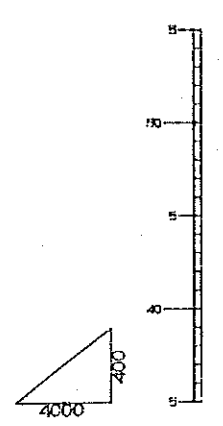
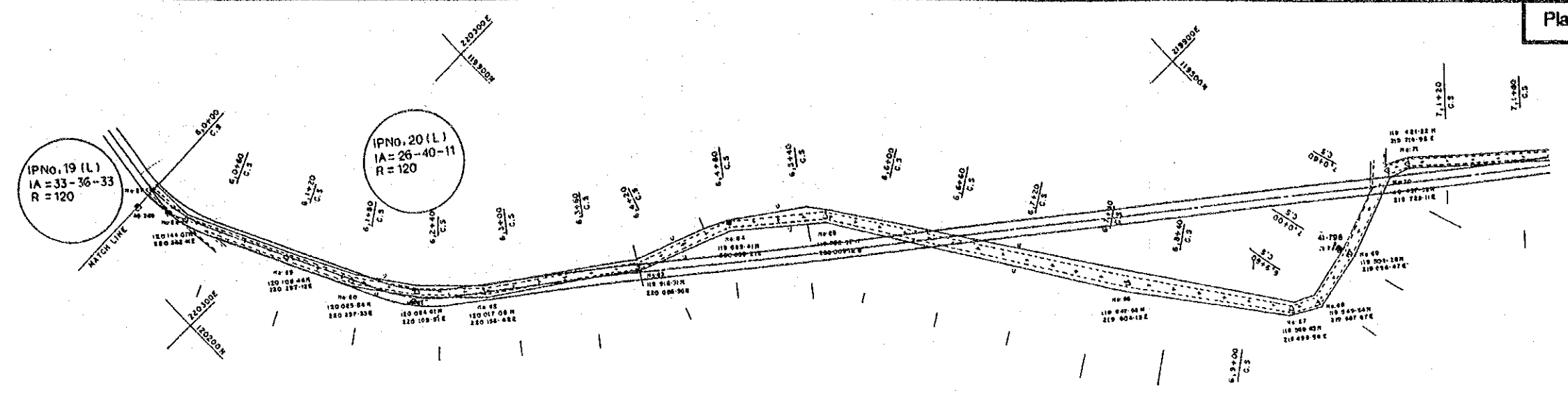






GRADIENT	$-1.6579\%$ $L=380.00$	$0.3182\%$ $L=220.00$	$2.2300\%$ $L=160.00$	$-0.2941\%$ $L=340.00$	$-1.1500\%$ $L=200.00$	$1.5000\%$ $L=200.00$						
EMBANKMENT	0.98, 0.89, 0.77, 0.65, 0.76, 0.68, 0.78, 1.01, 0.99, 0.93, 0.96, 0.96, 1.07, 1.12, 1.14, 1.16, 1.01, 0.97, 0.80, 0.97, 0.64, 0.70, 0.22, 0.98, 1.05, 1.11, 1.07, 0.91, 0.24, 0.81, 0.68, 0.87, 0.85, 0.70, 0.74, 0.69, 0.80, 0.83, 0.87, 0.99, 1.01, 1.04, 0.99, 1.01, 1.00, 0.88, 0.84, 1.06, 1.23, 1.20, 0.92, 0.80, 0.77, 0.75, 0.74, 0.73, 0.68, 0.70											
EXCAVATION												
PA. SUR. EL.	54.33, 53.99, 53.66, 53.35, 53.15, 53.08, 53.13, 53.19, 53.25, 53.32, 53.36, 53.45, 53.51, 53.57, 53.62, 53.51, 53.23, 52.80, 52.35, 51.90, 51.68, 51.45, 51.00, 50.57, 49.81, 49.77, 48.77, 48.69, 48.59, 48.53, 49.04, 48.96, 47.95, 47.95, 48.54, 48.26, 47.95, 47.00, 47.12, 47.40, 47.40, 47.70, 48.00, 48.30, 48.50, 48.50, 48.50, 48.48, 48.48, 48.53											
GROUND. EL.	55.95, 53.10, 52.68, 52.70, 52.50, 52.32, 52.45, 52.41, 52.24, 52.33, 52.45, 52.49, 52.55, 52.50, 52.50, 52.67, 52.08, 51.79, 51.58, 51.21, 51.43, 50.78, 50.20, 49.60, 48.61, 48.81, 48.70, 48.79, 48.76, 48.63, 48.59, 48.54, 48.64, 48.54, 48.54, 48.53, 48.35, 48.21, 47.99, 47.95, 47.95, 46.38, 46.21, 45.94, 45.89, 46.20, 46.78, 47.20, 47.20, 47.48, 47.26, 47.05, 47.00, 45.69, 47.12, 46.20, 46.70, 46.78, 47.70, 47.20, 47.53, 47.35, 47.35, 48.15, 48.15, 48.47, 48.20, 48.48, 48.93, 48.53											
RE. DISTANCA	4800.00, 4820.00, 4840.00, 4860.00, 4880.00, 4900.00, 4920.00, 4940.00, 4960.00, 5000.00, 5020.00, 5040.00, 5060.00, 5080.00, 5100.00, 5120.00, 5140.00, 5160.00, 5180.00, 5190.00, 5200.00, 5220.00, 5240.00, 5260.00, 5280.00, 5300.00, 5320.00, 5340.00, 5360.00, 5380.00, 5400.00, 5420.00, 5440.00, 5460.00, 5480.00, 5500.00, 5520.00, 5540.00, 5560.00, 5580.00, 5600.00, 5620.00, 5640.00, 5660.00, 5680.00, 5700.00, 5720.00, 5740.00, 5760.00, 5780.00, 5800.00, 5820.00, 5840.00, 5860.00, 5880.00, 5900.00, 5920.00, 5940.00, 5960.00, 5980.00, 6000.00											
STATION	NO.48, NO.49, NO.50, NO.51, NO.52, NO.53, NO.54, NO.55, NO.56, NO.57, NO.58, NO.59, NO.60											
CURVE	IPNO.14 (R) IA=14-54-37 R=180 ST=12.75 CL=46.84		IPNO.15 (R) IA=20-27-24 R=180 ST=10.48 CL=64.27		IPNO.16 (L) IA=17-57-54 R=600 ST=91.84 CL=189.13 SL=7.48		IPNO.17 (L) IA=12-08-00 R=400 ST=131.77 CL=60.00 SL=3.51		IPNO.18 (R) IA=29-09-19 R=200 ST=183.39 CL=31.25		IPNO.19 (L) IA=33-36-33 R=120 ST=14.00 CL=1.00	

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL ROAD E - W ROAD / PLAN & PROFILE ( 5 / 11 )	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

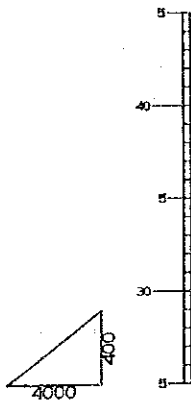
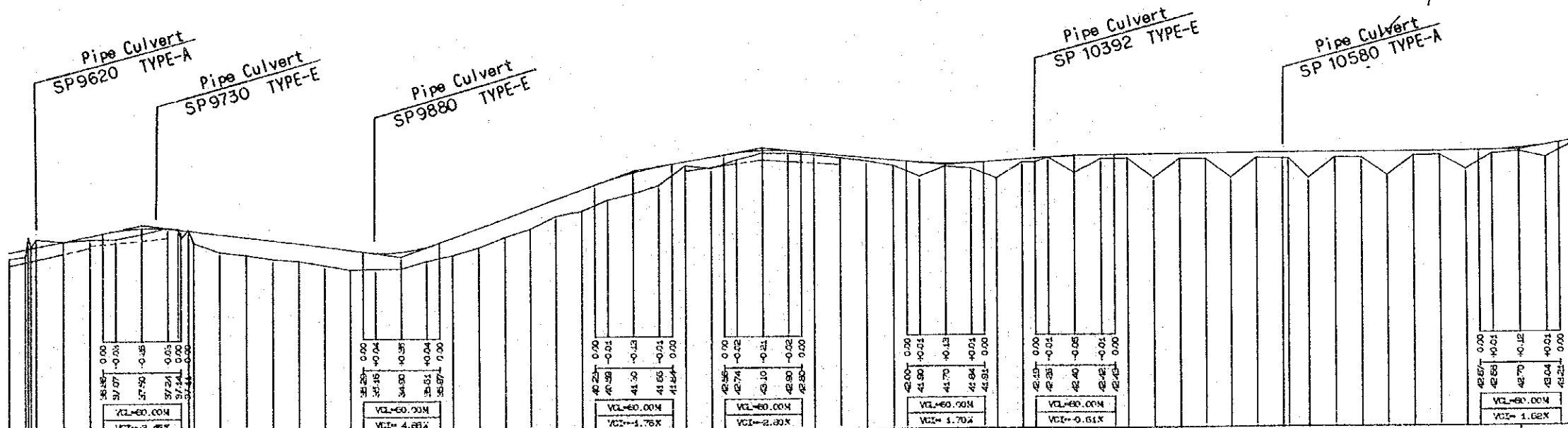
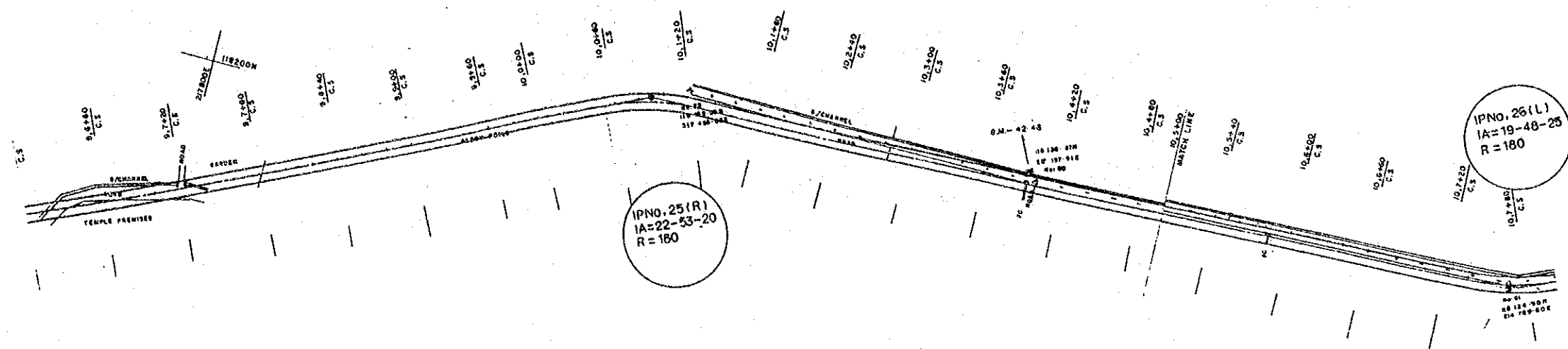


GRADIENT	-0.7955% L=440.00																				0.9268% L=140.00					2.8333% L=160.00					0.3500% L=200.00					-1.5385% L=240.00																														
EMBANKMENT	0.70	0.88	0.96	0.96	1.08	1.04	0.96	0.80	0.82	0.91	0.47	0.41	0.48	0.72	0.89	0.98	1.03	0.98	0.92	0.88	0.70	0.61	0.62	0.68	0.90	0.93	0.88	0.70	0.61	0.77	1.05	1.02	0.95	0.94	0.92	0.86	1.17	1.05	0.77	0.74	0.68	1.46	1.21	1.20	1.19	0.90	0.73	0.66	0.70	0.76	0.78	0.79	0.71	0.64	0.79	1.02	1.13	1.28	1.20	1.07	0.86					
EXCAVATION																																																																		
PA. SUR. EL.	48.53	48.53	48.53	48.53	49.16	49.00	48.85	48.69	48.53	48.37	48.21	48.05	47.89	47.73	47.57	47.41	47.25	47.10	46.94	46.78	46.62	46.47	46.31	46.15	45.99	45.83	45.67	45.51	45.35	45.19	45.03	44.87	44.71	44.55	44.39	44.23	44.07	43.91	43.75	43.59	43.43	43.27	43.11	42.95	42.79	42.63	42.47	42.31	42.15	41.99	41.83	41.67	41.51	41.35	41.19	41.03	40.87	40.71	40.55	40.39	40.23	40.07	39.91	39.75	39.59	39.43
GROUND. EL.	48.93	48.74	48.52	48.35	48.08	47.95	47.85	47.69	47.59	47.41	47.21	47.05	46.85	46.69	46.53	46.37	46.22	46.10	45.94	45.78	45.62	45.47	45.31	45.15	44.99	44.83	44.67	44.51	44.35	44.19	44.03	43.87	43.71	43.55	43.39	43.23	43.07	42.91	42.75	42.59	42.43	42.27	42.11	41.95	41.79	41.63	41.47	41.31	41.15	40.99	40.83	40.67	40.51	40.35	40.19	40.03	39.87	39.71	39.55	39.39	39.23	39.07	38.91	38.75	38.59	38.43
RE. DISTANCA	6000.00	6020.00	6040.00	6060.00	6080.00	6100.00	6120.00	6140.00	6160.00	6180.00	6200.00	6220.00	6240.00	6260.00	6280.00	6300.00	6320.00	6340.00	6360.00	6380.00	6400.00	6420.00	6440.00	6460.00	6480.00	6500.00	6520.00	6540.00	6560.00	6580.00	6600.00	6620.00	6640.00	6660.00	6680.00	6700.00	6720.00	6740.00	6760.00	6780.00	6800.00	6820.00	6840.00	6860.00	6880.00	6900.00	6920.00	6940.00	6960.00	6980.00	7000.00	7020.00	7040.00	7060.00	7080.00	7100.00	7120.00	7140.00	7160.00	7180.00	7200.00					
STATION	No. 60 to No. 72																																																																	
CURVE	IPNo. 19 (L) IA=33-36-33 R=120 CL=70.39												IPNo. 20 (L) IA=26-40-11 R=120 CL=55.86																																																					

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA  
 TITLE OF DRAWING  
 RURAL ROAD  
 E - W ROAD / PLAN & PROFILE (6 / 11)  
 DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_  
 JAPAN INTERNATIONAL COOPERATION AGENCY







GRADIENT	2.1500% L=200.00		-1.3000% L=200.00		3.5726% L=180.00		1.8000% L=100.00		-1.0000% L=140.00		0.7000% L=100.00		0.0882% L=340.00	
EMBANKMENT	0.47	0.59	0.25	0.02	0.43	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
EXCAVATION														
PA.SUR.EL.	35.35	35.64	35.64	37.04	37.24	37.21	37.11	37.08	36.98	36.72	36.46	36.20	35.94	35.68
GROUND.EL.	34.88	35.03	35.64	36.42	36.81	37.21	37.11	37.08	36.98	36.72	36.46	36.20	35.94	35.68
RE.DISTANCA	9600.00	9612.00	9624.00	9636.00	9648.00	9660.00	9672.00	9684.00	9696.00	9708.00	9720.00	9732.00	9744.00	9756.00
STATION	No. 96				No. 97					No. 98				
CURVE	R=180 IPNO. 25 (R) IA=22-53-20 CL=71.91 IPNO. 26 (L) IA=19-48-25 R=180 CL=62.23 SL=2.72													

**DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA**  
**RURAL INFRASTRUCTURE IMPROVEMENT PROJECT**  
**IN WALAWE LEFT BANK AREA**

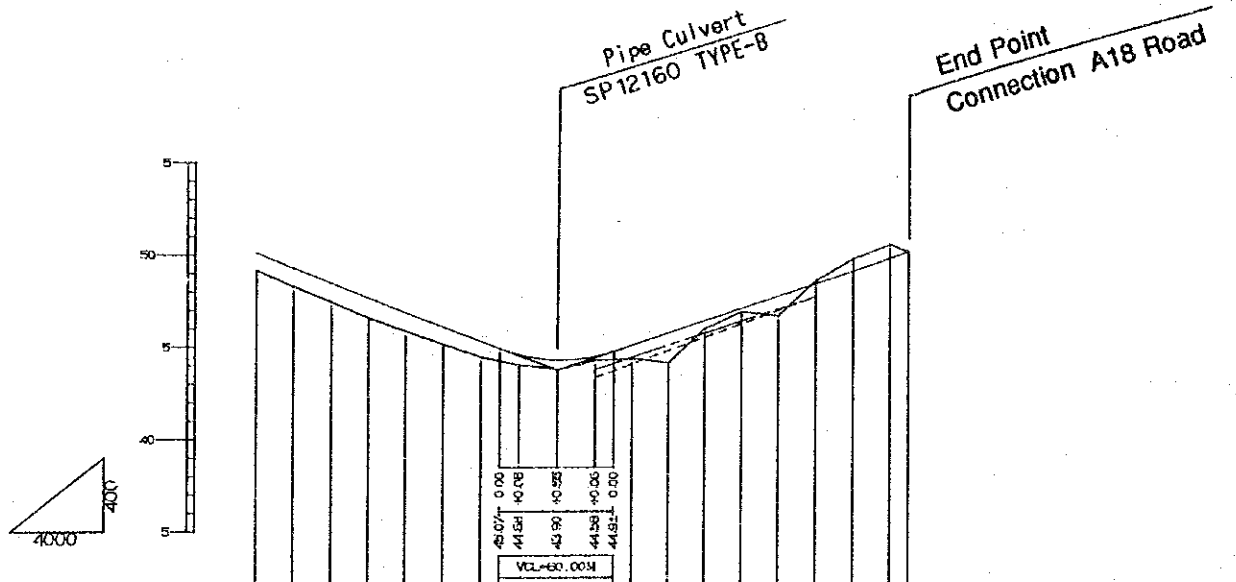
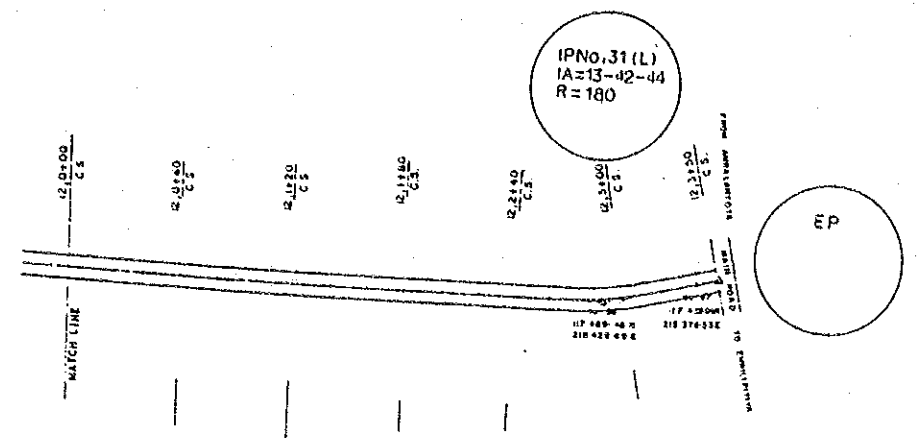
**TITLE OF DRAWING**  
**RURAL ROAD**  
**E - W ROAD / PLAN & PROFILE (9/11)**

DATE: \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY







GRADIENT	$\frac{0.8929}{L=260.00}$ $\frac{3.3789}{L=190.00}$																							
EMBANKMENT	0.93	0.99	1.02	1.08	1.00	0.94	0.86	0.87	0.92	0.21	0.75	1.54	0.44	0.19	1.07									
EXCAVATION																								
PA. SUR. EL.	49.20	49.35	48.57	47.79	46.01	45.24	45.46	44.17	44.74	43.93	44.45	44.54	44.50	45.25	45.93	46.50	47.09	47.28	46.88	47.95	48.53	49.31	49.98	50.32
GROUND. EL.	48.20	48.35	47.55	46.71	45.01	44.24	44.50	44.17	44.74	43.93	44.45	44.54	44.50	45.25	45.93	46.50	47.09	47.28	46.88	47.95	48.53	49.31	49.98	50.32
RE. DISTANCA	12000.00	12020.00	12040.00	12060.00	12080.00	12100.00	12120.00	12140.00	12160.00	12180.00	12200.00	12220.00	12240.00	12260.00	12280.00	12300.00	12320.00	12340.00	12350.00					
STATION	No. 120				No. 121				No. 122				No. 123											
CURVE	IP31(L) IA=13-42-44 R=180 CL=43.08																							

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA

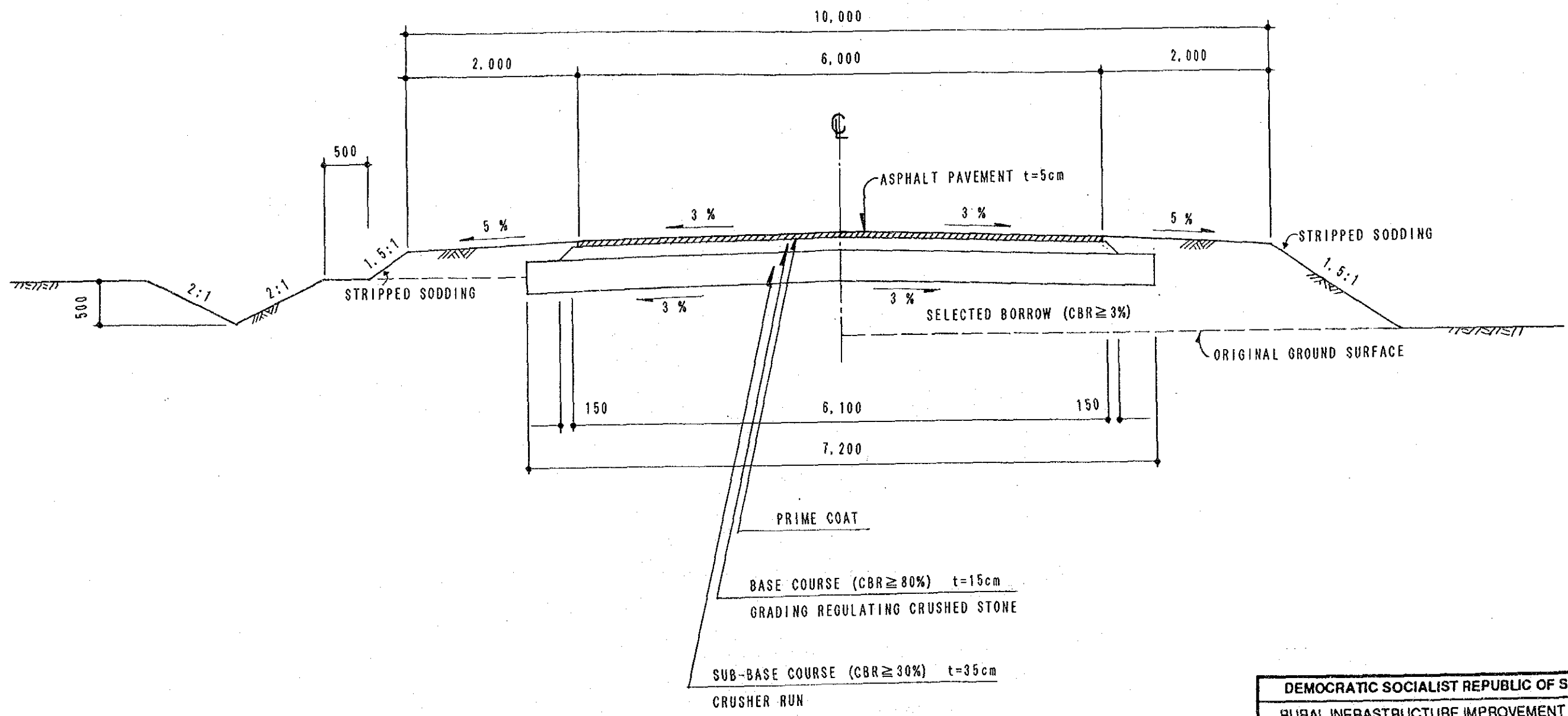
TITLE OF DRAWING  
 RURAL ROAD  
 E - W ROAD / PLAN & PROFILE ( 11 / 11 )

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY

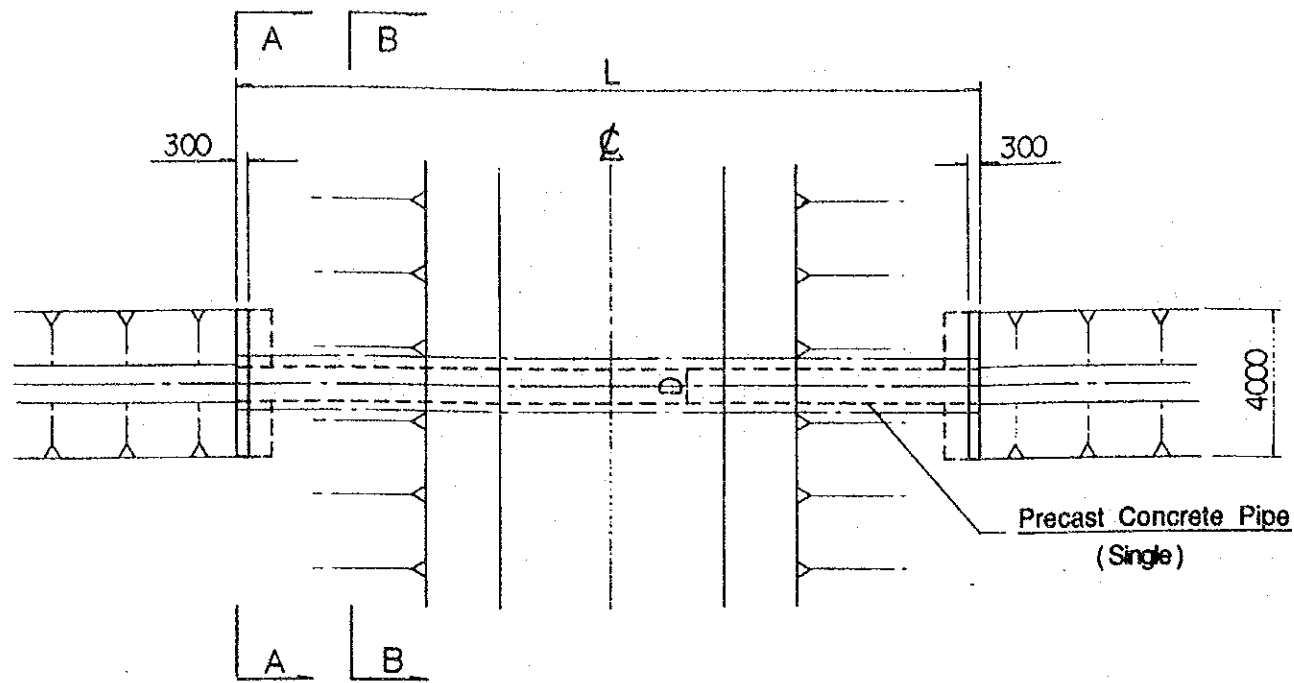
### TYPICAL CROSS SECTION

SCALE 1 : 50



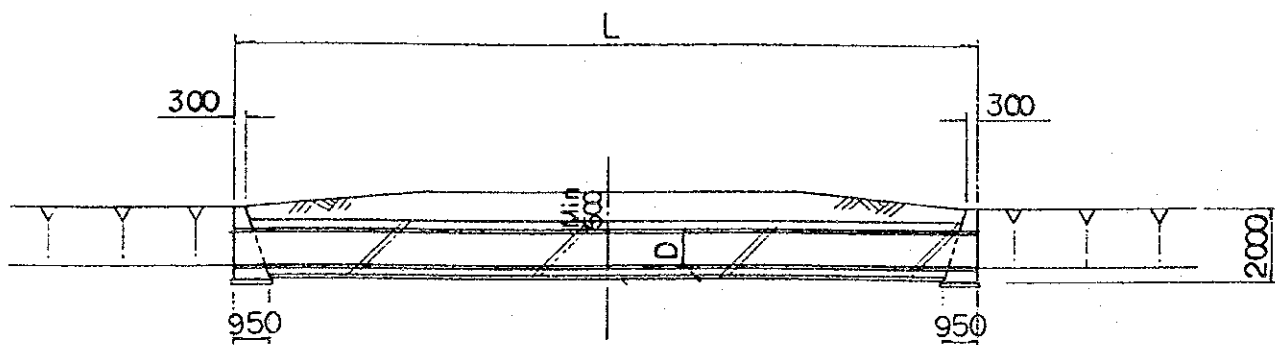
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL ROAD TYPICAL CROSS SECTION	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

**PLAN OF SINGLE CULVERT**  
TYPE A ~ F 1:200

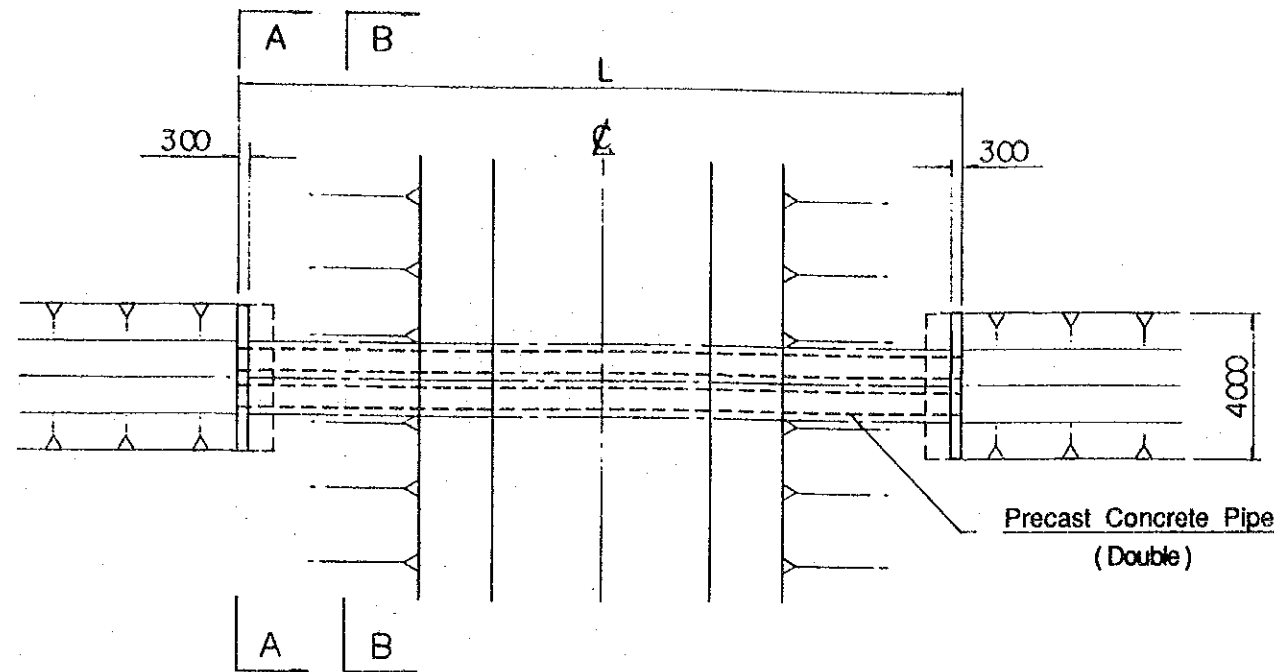


**PROFILE**

1:200

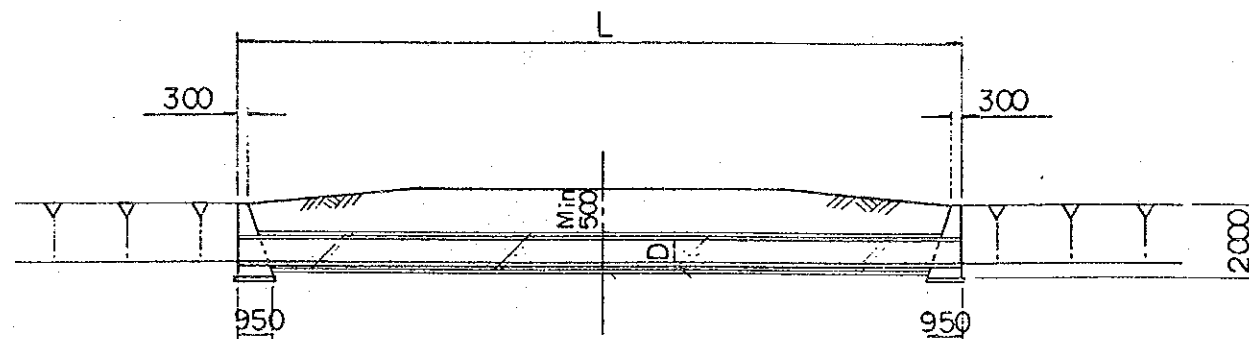


**PLAN OF TWIN CULVERT**  
TYPE G ~ I 1:200



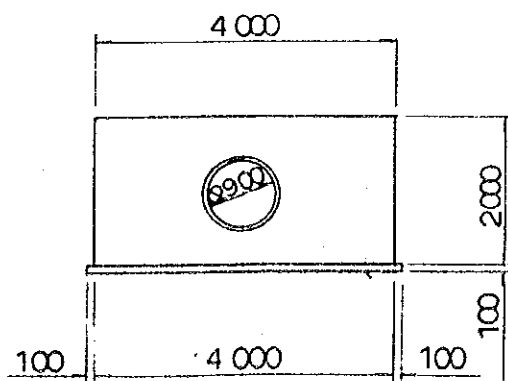
**PROFILE**

1:200



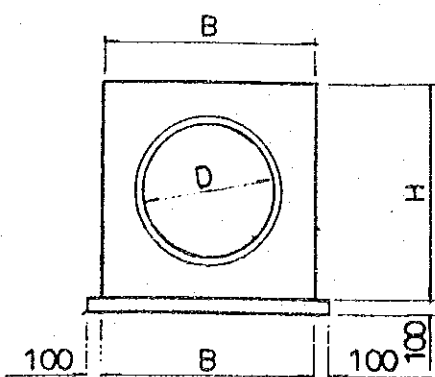
**SECTION A - A**

1:100



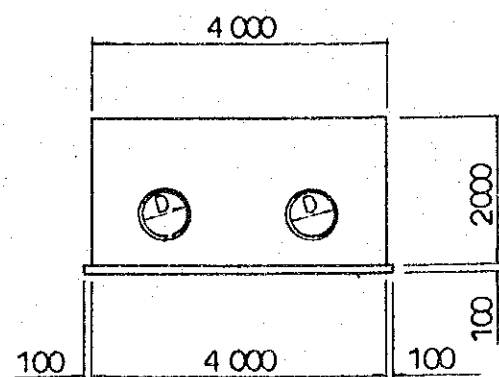
**SECTION B - B**

1:50



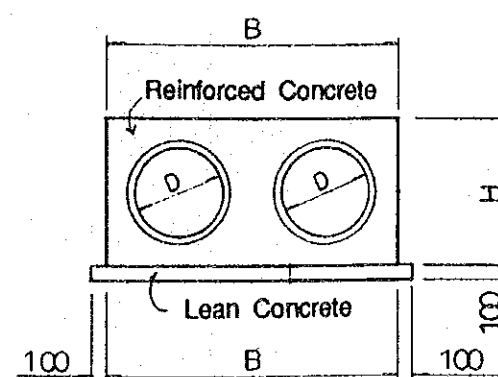
**SECTION A - A**

1:100



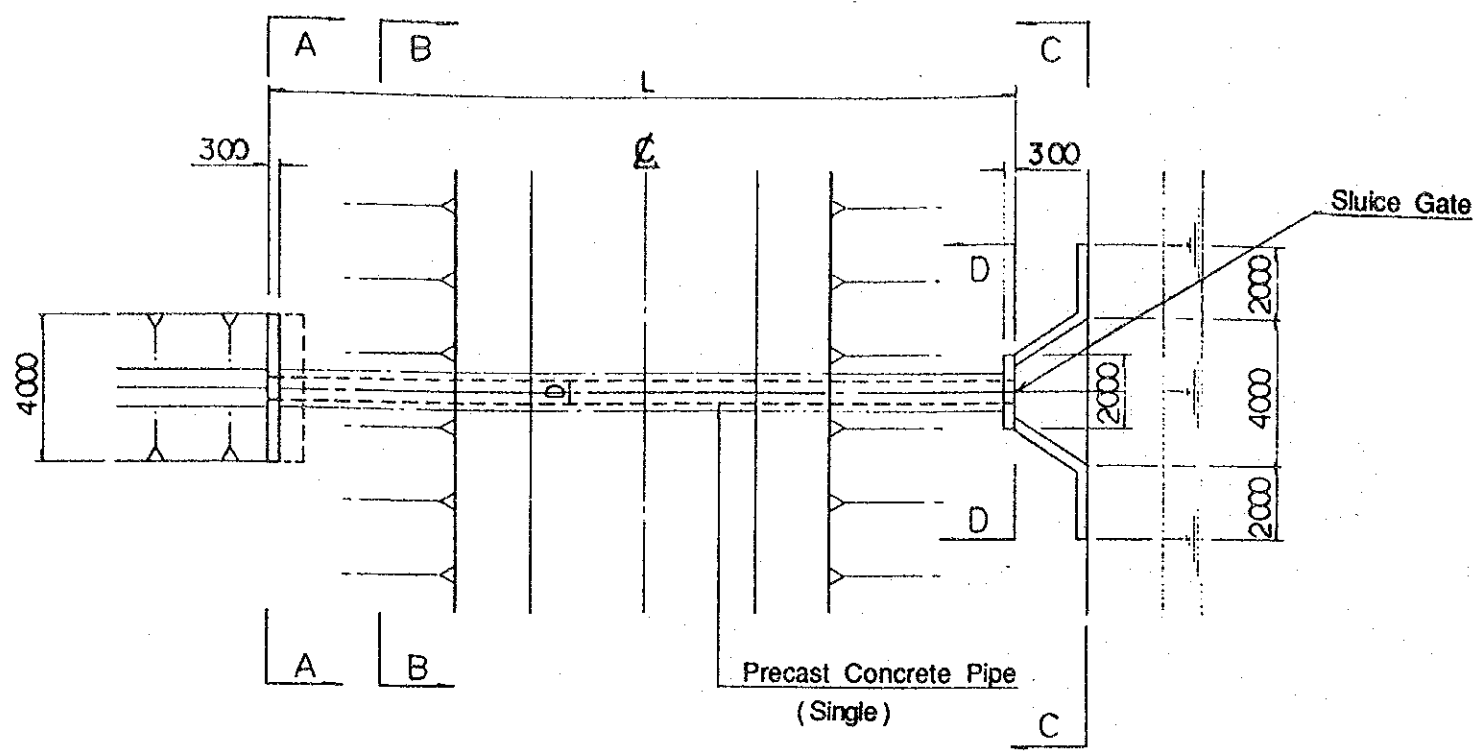
**SECTION B - B**

1:50

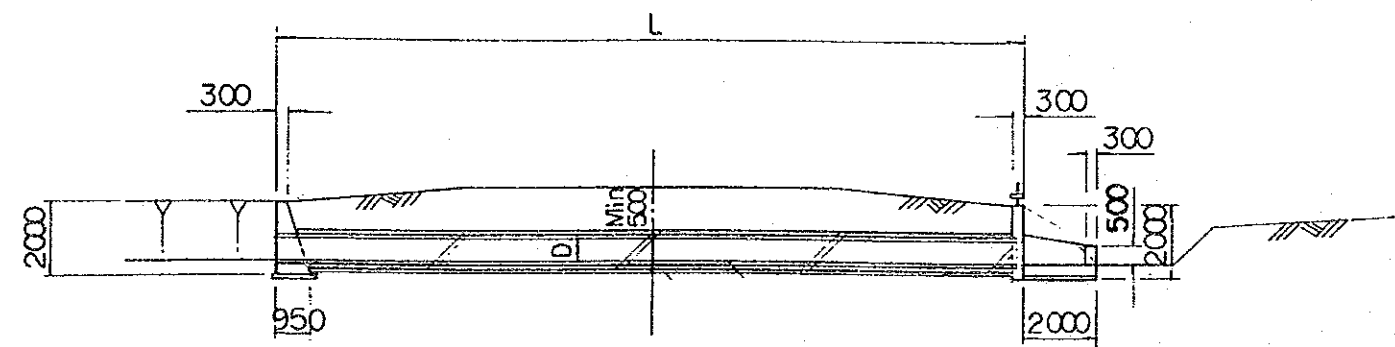


DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL ROAD RELATED STRUCTURES / PIPE CULVERT(1/3)	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

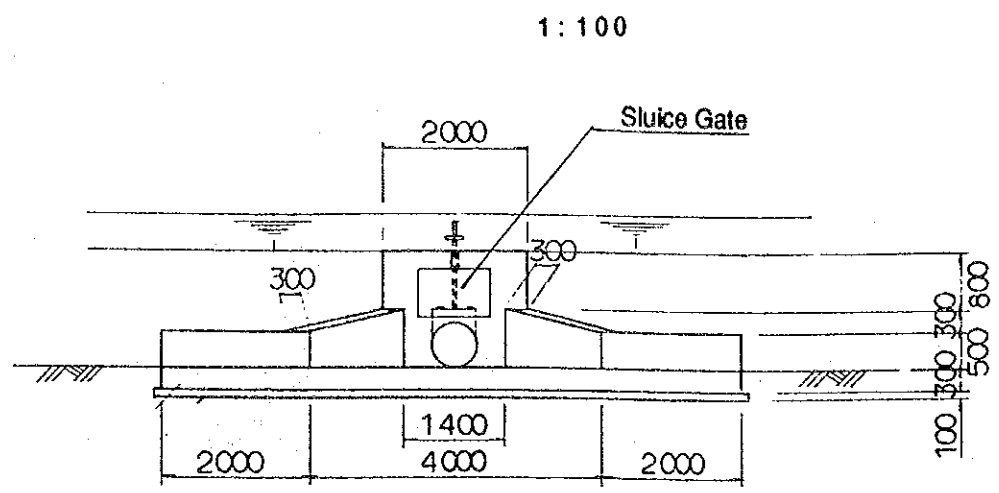
**PLAN**  
TYPE J-P 1:200



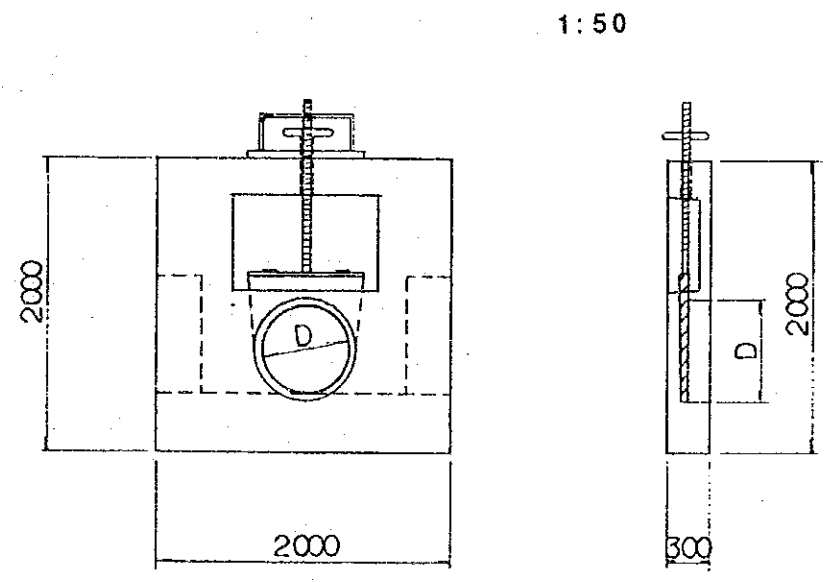
**PROFILE**  
1:200



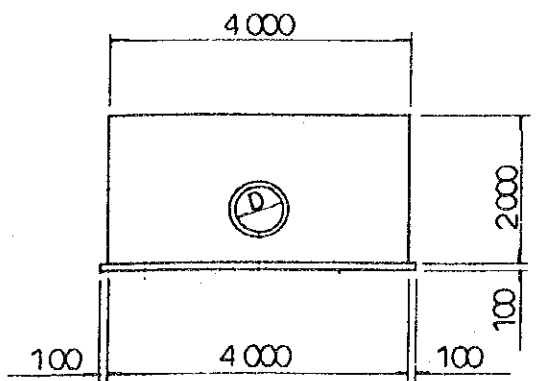
**SECTION C - C**



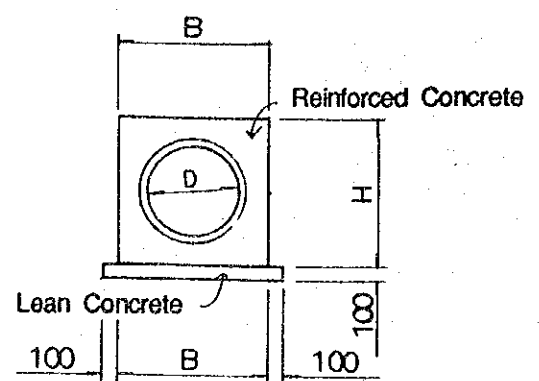
**SECTION D - D**



**SECTION A - A**  
1:100

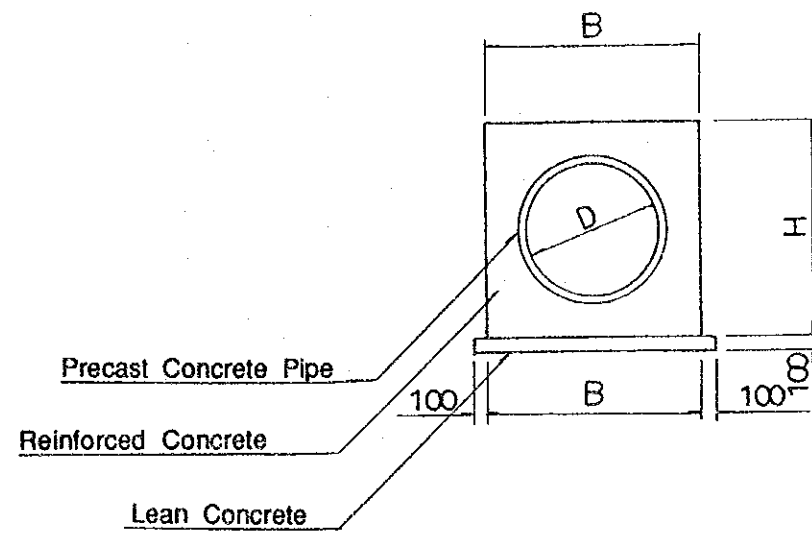


**SECTION B - B**  
1:50

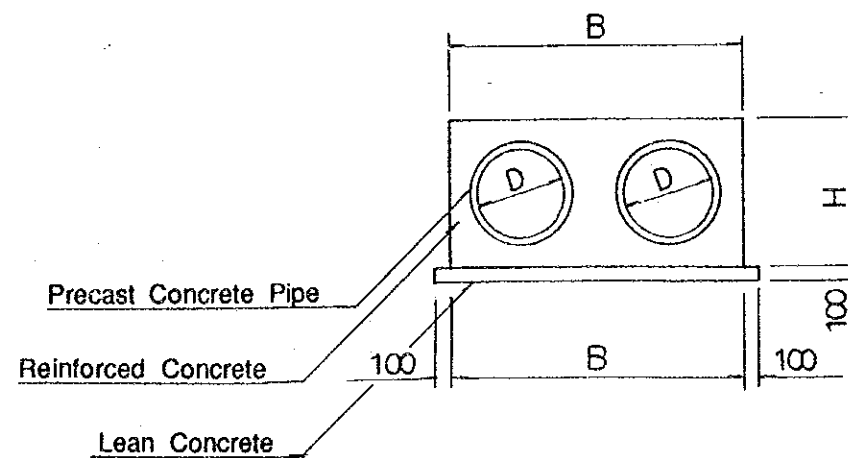


DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL ROAD RELATED STRUCTURES / PIPE CULVERT(2/3)	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

SINGLE CULVERT



TWIN CULVERT



DIMENSION TABLE

TYPE	D	Single Double	Gate	B	H
TYPE-A	φ 500	Single	—	880	880
TYPE-B	φ 600	"	—	1000	1000
TYPE-C	φ 700	"	—	1220	1200
TYPE-D	φ 900	"	—	1460	1460
TYPE-E	φ 1000	"	—	1560	1560
TYPE-F	φ 1200	"	—	1800	1800
TYPE-G	φ 500	Double	—	1760	880
TYPE-H	φ 600	"	—	2000	1000
TYPE-I	φ 900	"	—	2920	1460
TYPE-J	φ 300	Single	O	560	560
TYPE-K	φ 500	"	O	880	880
TYPE-L	φ 600	"	O	1000	1000
TYPE-M	φ 700	"	O	1220	1220
TYPE-N	φ 800	"	O	1340	1340
TYPE-O	φ 900	"	O	1460	1460
TYPE-P	φ 1100	"	O	1800	1800

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
IN WALAWE LEFT BANK AREA

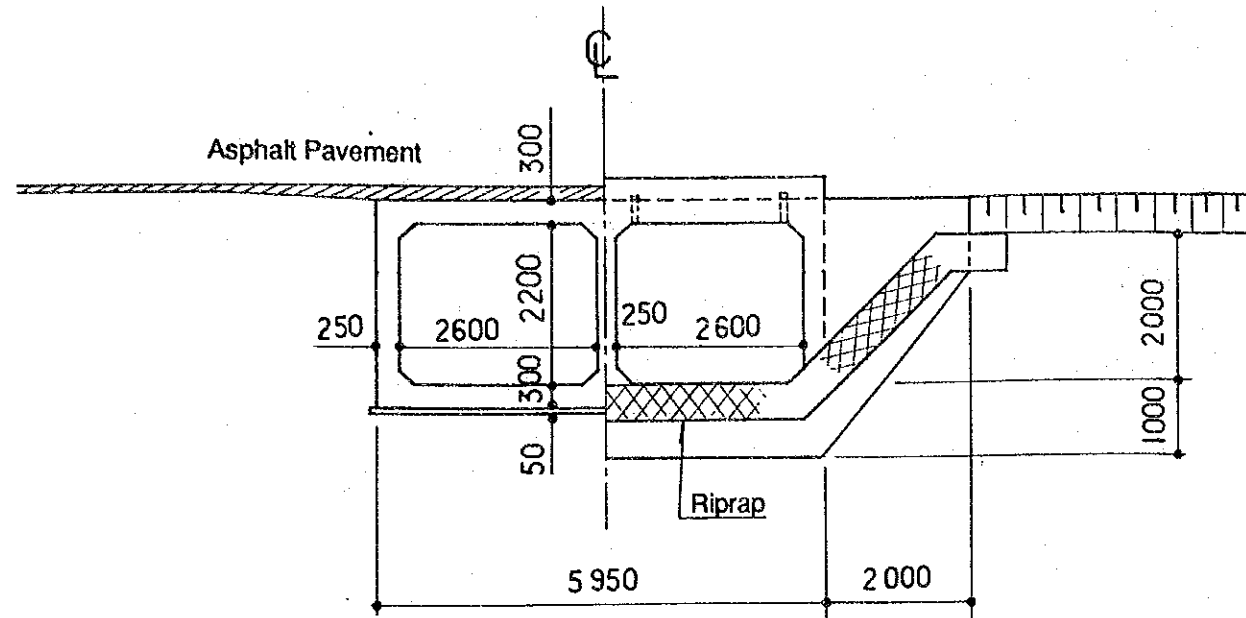
TITLE OF DRAWING  
RURAL ROAD  
RELATED STRUCTURES / PIPE CULVERT(3/3)

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY

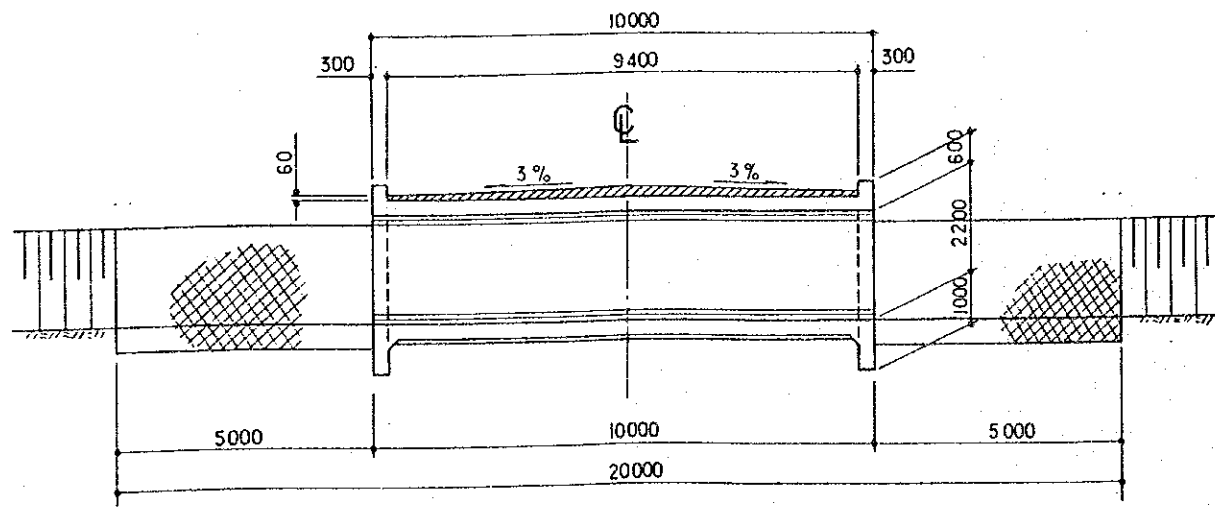
**TWIN CULVERT**

1:100



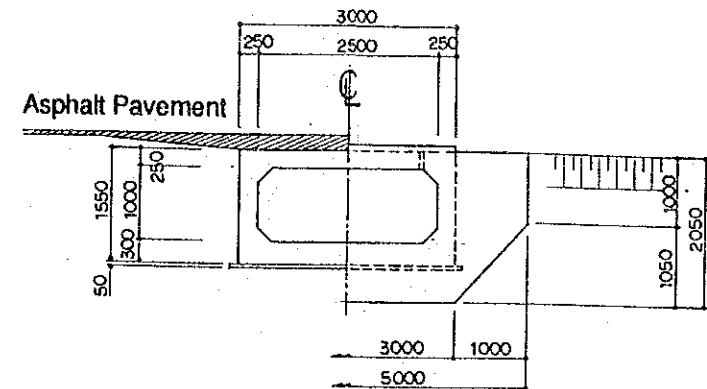
**PROFILE**

1:150



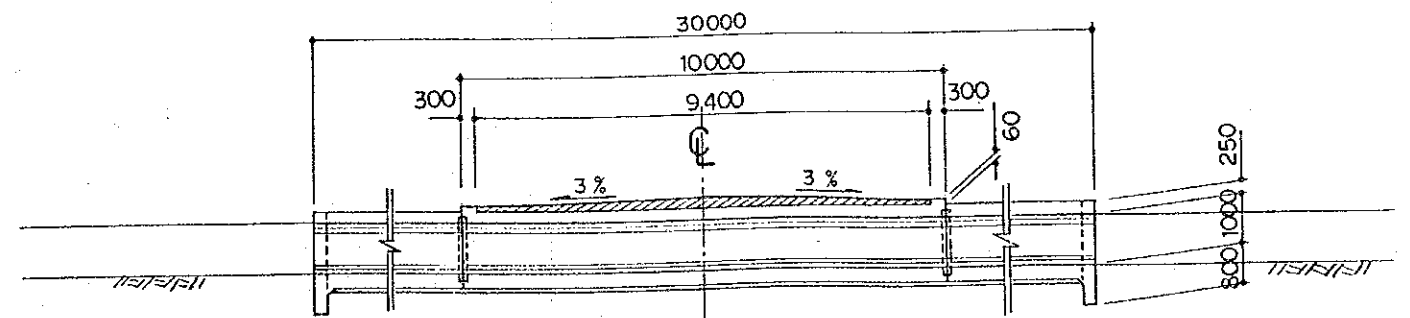
**SINGLE CULVERT**

1:100



**PROFILE**

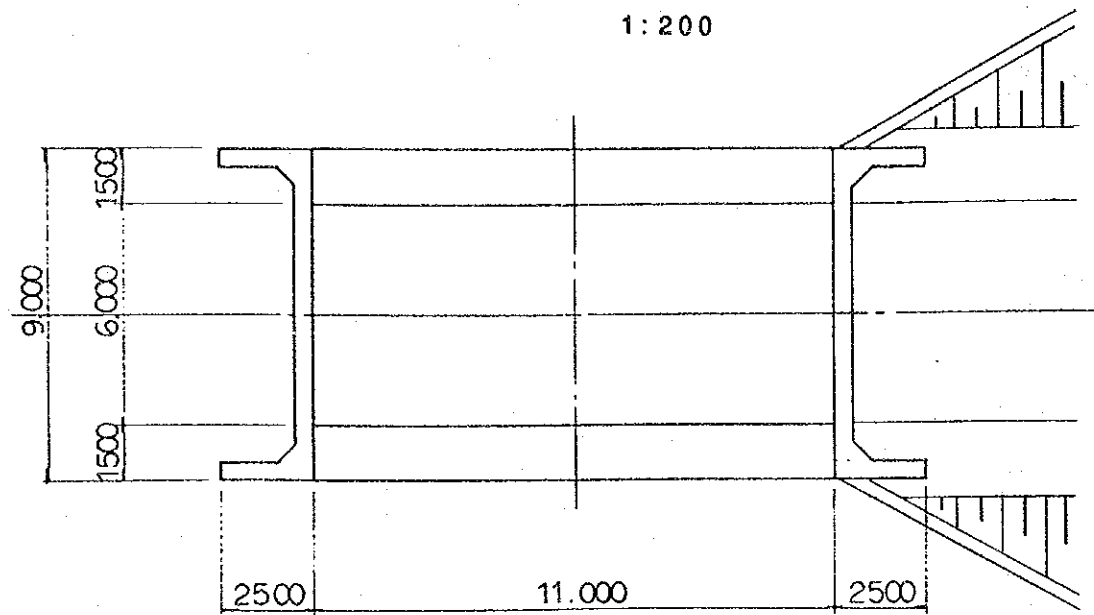
1:150



DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL ROAD RELATED STRUCTURES / BOX CULVERT	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

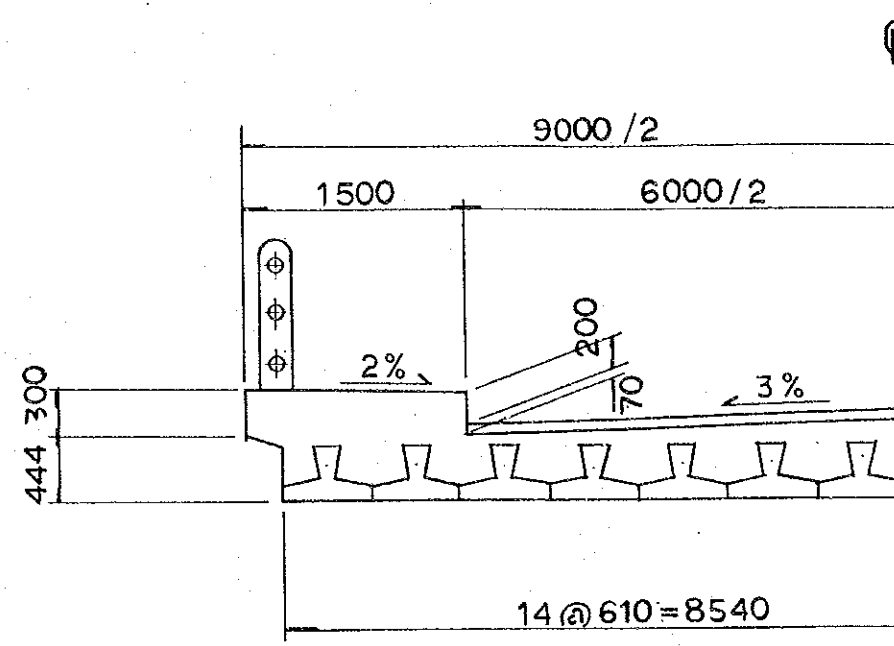
PLAN

1:200



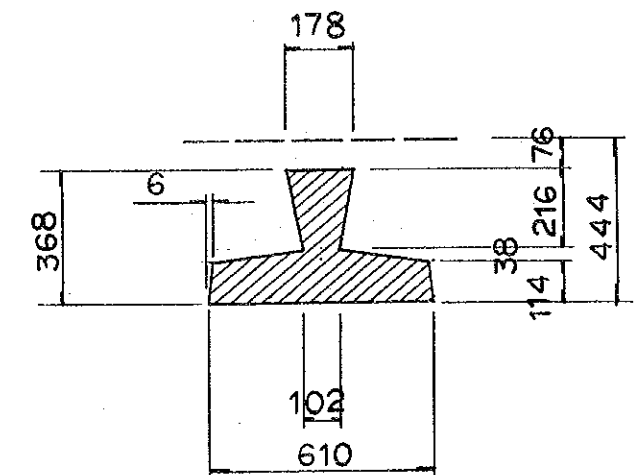
CROSS SECTION OF SUPER STRUCTURE

1:50



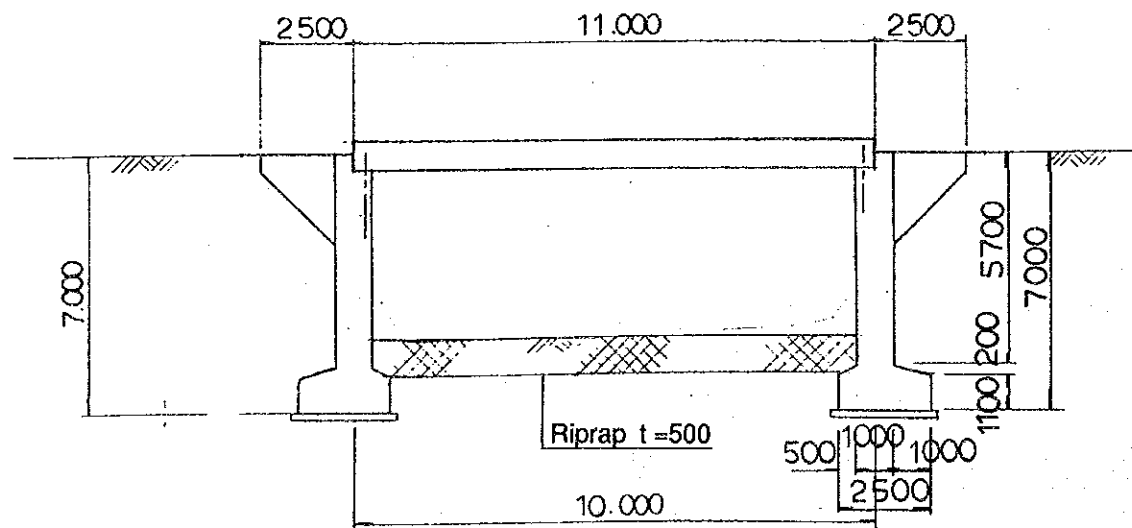
BEAM

1:30



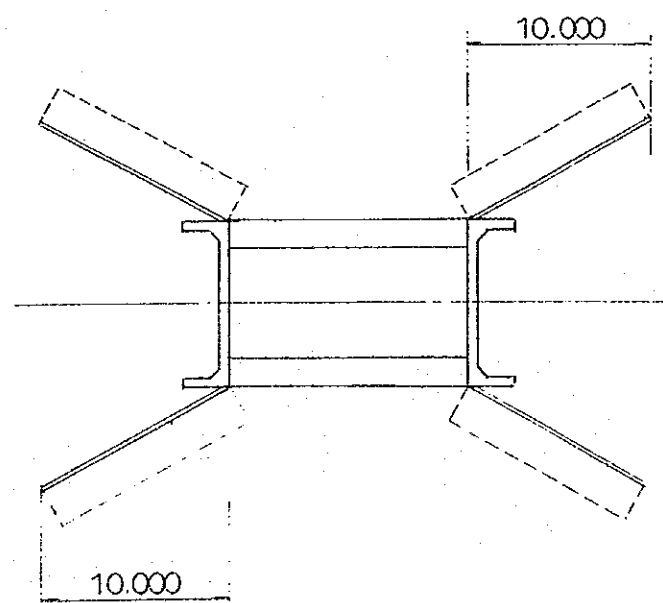
PROFILE

1:200



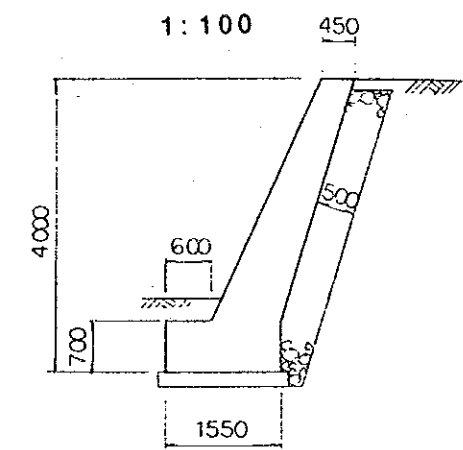
PLAN OF SIDE WALL

1:400



SIDE WALL

1:100

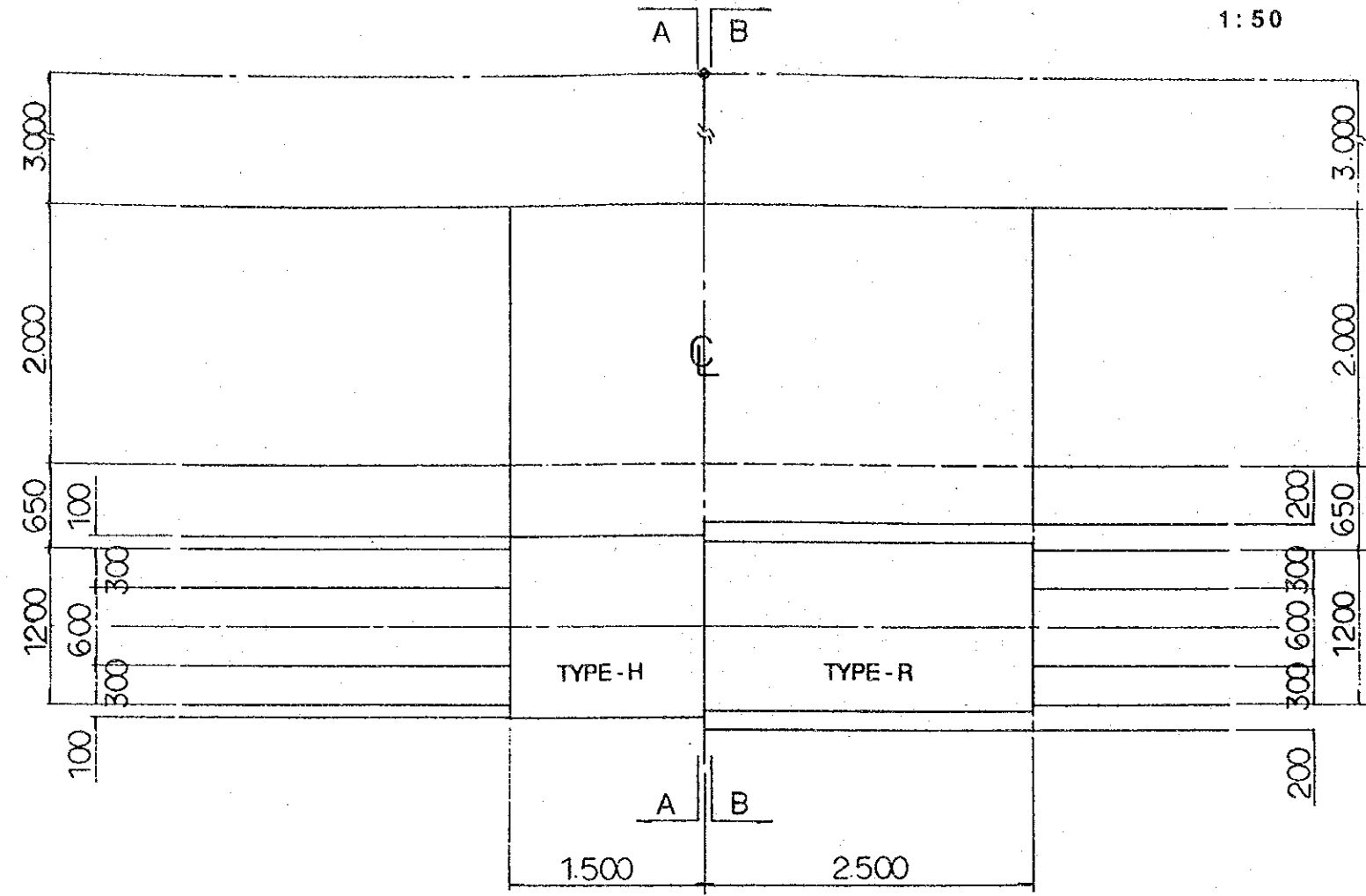


DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL ROAD RELATED STRUCTURES / BRIDGE	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



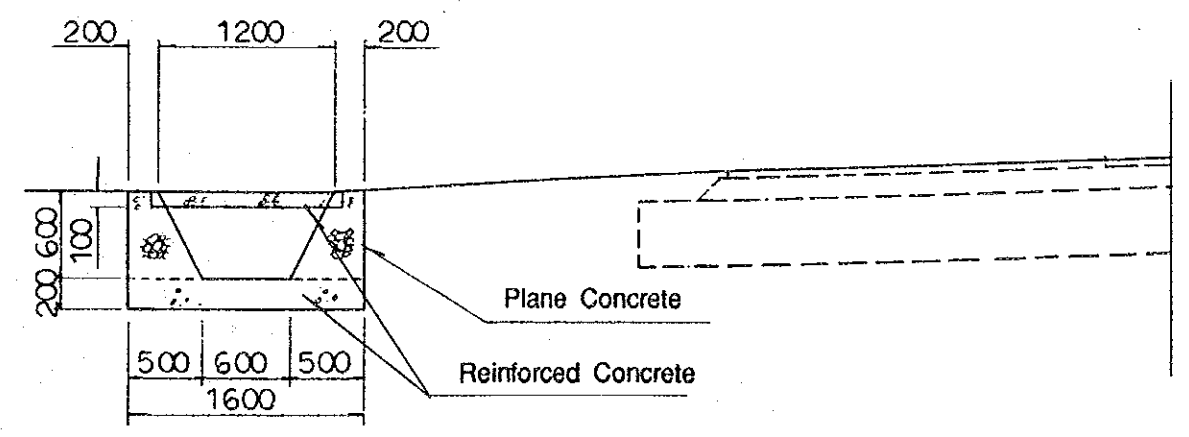
PLAN

1:50



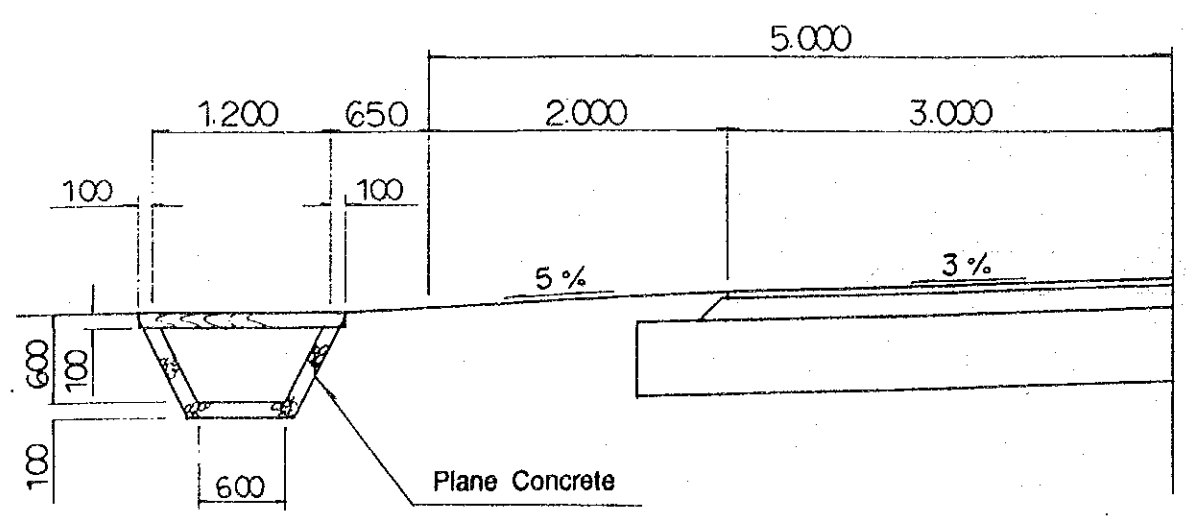
CROSS SECTION OF TYPE - R

1:50



CROSS SECTION OF TYPE - H

1:50

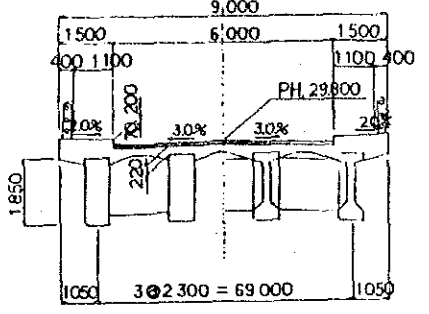
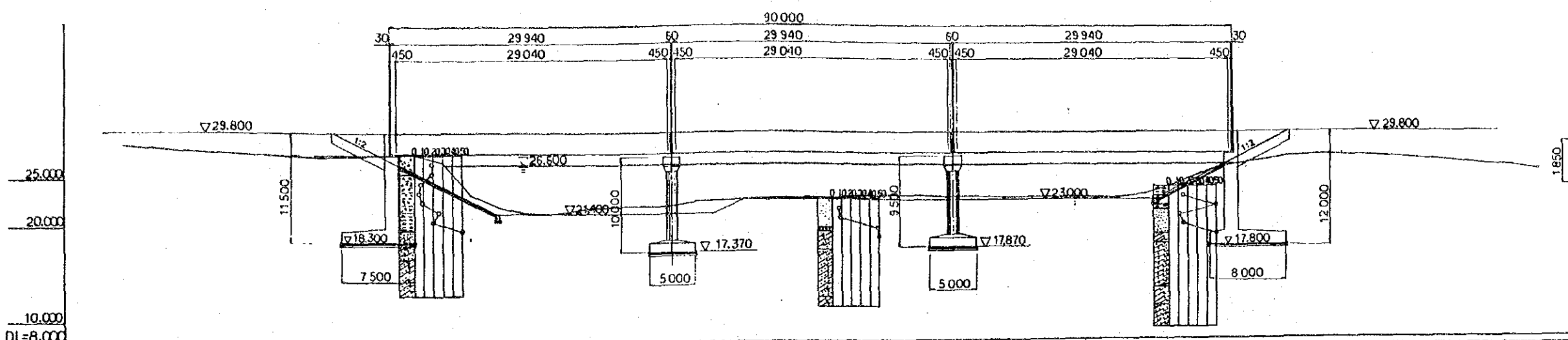


TYPE - H : Passage to House  
 TYPE - R : Passage to Village Road

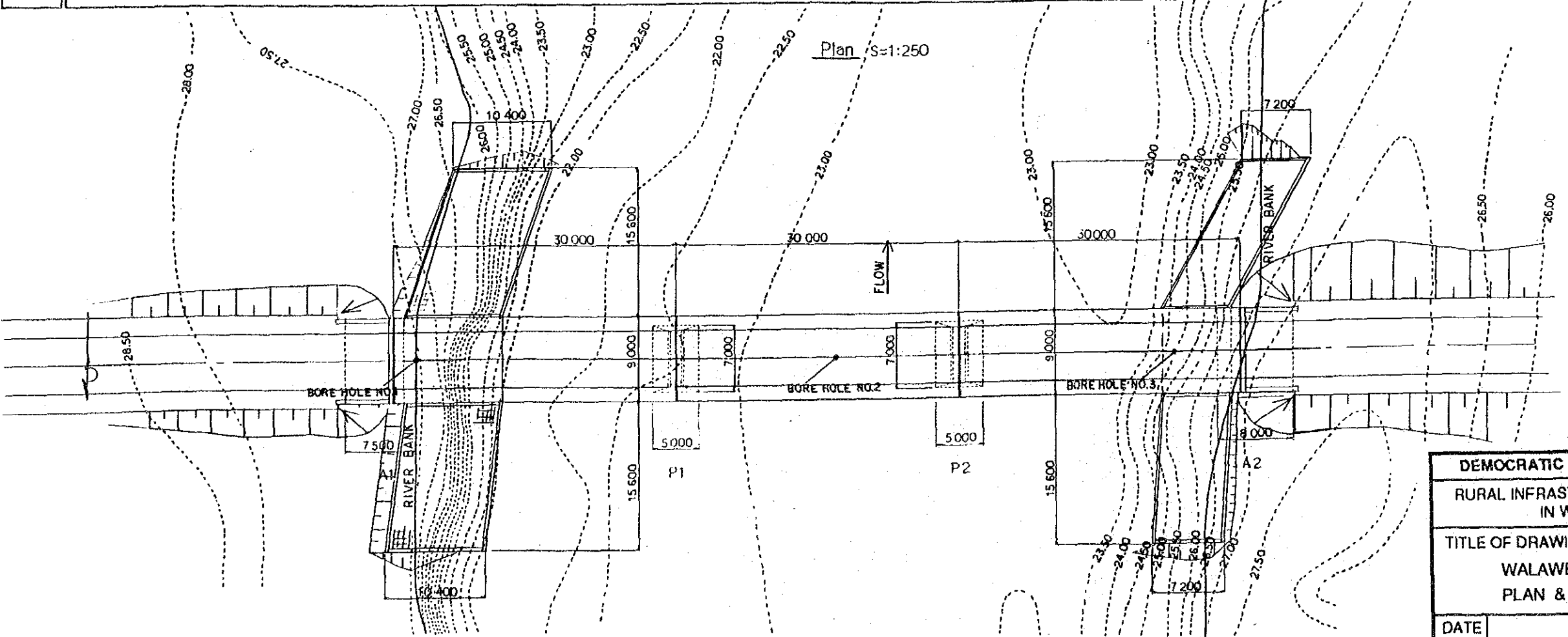
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL ROAD RELATED STRUCTURES / PASSAGE	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

Profile S = 1:250

Cross Section S = 1:100



PROPOSAL EL.	29.80																												29.80																								
GROUND EL.	28.54	28.34	28.15	27.91	27.76	27.67	27.50	27.44	27.54	27.68	27.69	26.87	23.38	22.08	21.48	21.42	21.83	22.18	22.23	22.25	22.75	22.90	23.04	23.10	23.15	23.186	23.19	23.34	23.40	23.39	23.29	23.31	23.10	23.09	23.05	23.08	23.06	23.38	24.284	24.40	25.54	26.45	26.72	27.32	27.52	27.43	27.40	27.20	26.99	26.76	26.44	26.31	25.87
ACCLDIS	8.4+21	8.4+24	8.4+27	8.4+30	8.4+33	8.4+36	8.4+39	8.4+42	8.4+45	8.4+48	8.4+51	8.4+54	8.4+57	8.4+60	8.4+63	8.4+66	8.4+69	8.4+72	8.4+75	8.4+78	8.4+81	8.4+84	8.4+87	8.4+90	8.4+93	8.4+96	8.4+99	8.5+02	8.5+05	8.5+08	8.5+11	8.5+14	8.5+17	8.5+20	8.5+23	8.5+26	8.5+29	8.5+32	8.5+35	8.5+38	8.5+41	8.5+44	8.5+47	8.5+50	8.5+53	8.5+56	8.5+59	8.5+62	8.5+65	8.5+68	8.5+71		
DISTANCE	A1										P1										P2										A2																						

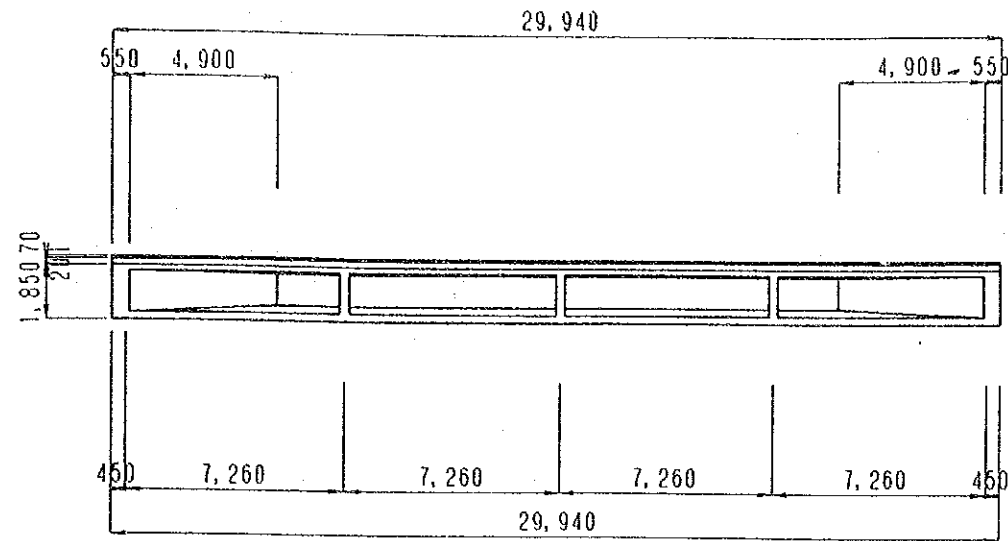


DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
 RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
 IN WALAWE LEFT BANK AREA

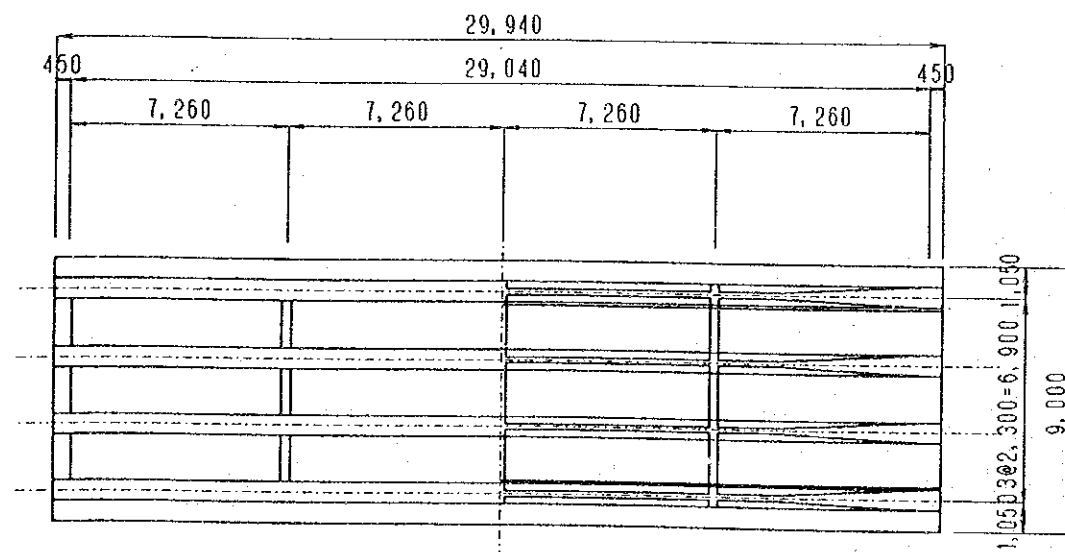
TITLE OF DRAWING  
 WALAWE BRIDGE  
 PLAN & PROFILE

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_  
 JAPAN INTERNATIONAL COOPERATION AGENCY

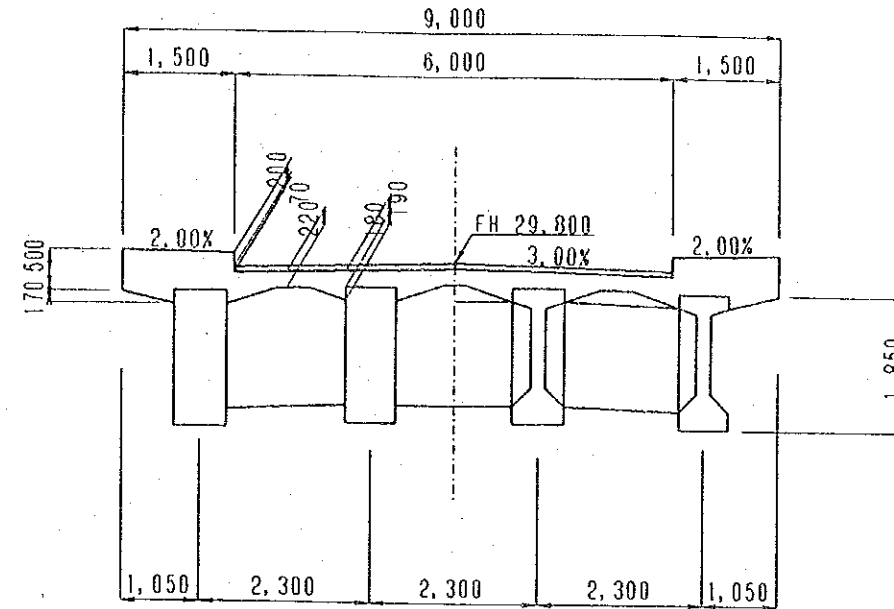
ELEVATION



PLAN

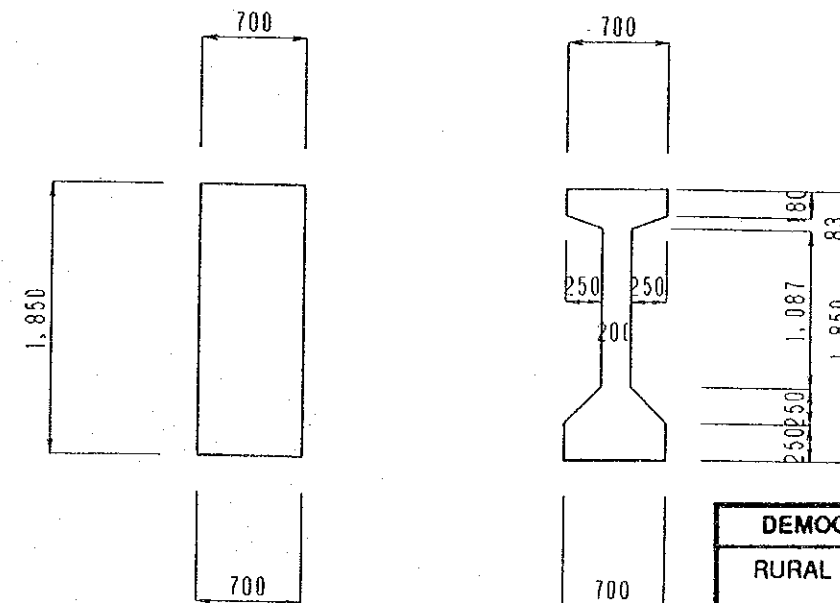


CROSS SECTION SCALE 1:100



MAIN GIRDER SCALE 1:50

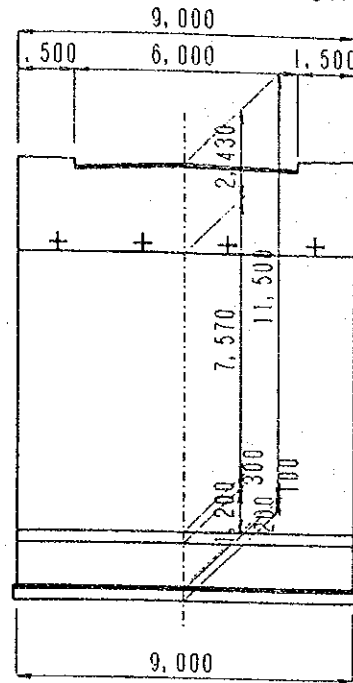
SUPPORT SECTION INTERMEDIATE SECTION



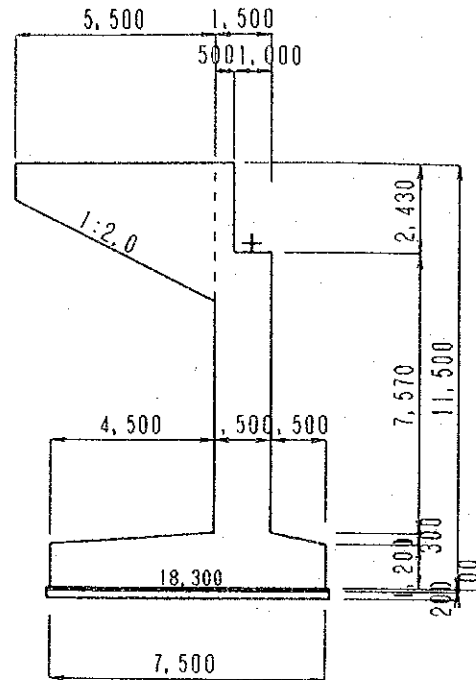
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING WALAWE BRIDGE SUPER STRUCTURE	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

A1 ABUTMENT SCALE 1:200

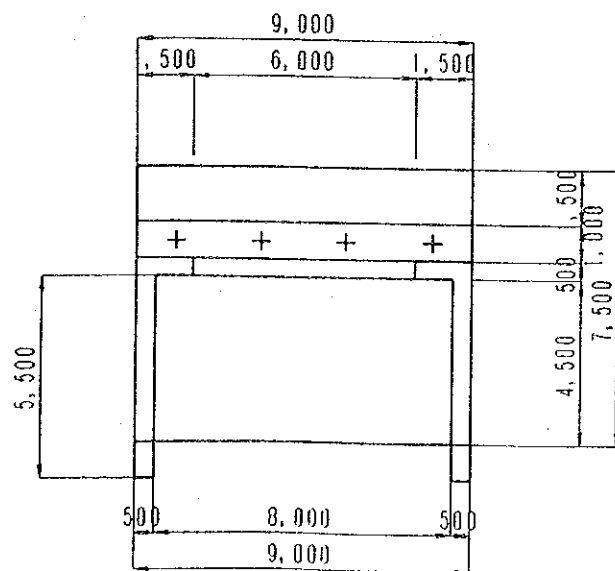
FRONT ELEVATION



SIDE ELEVATION

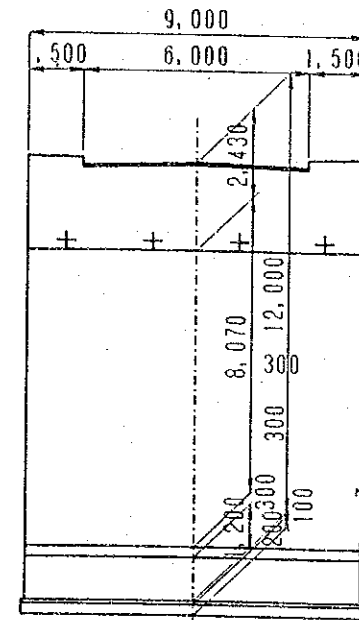


PLAN

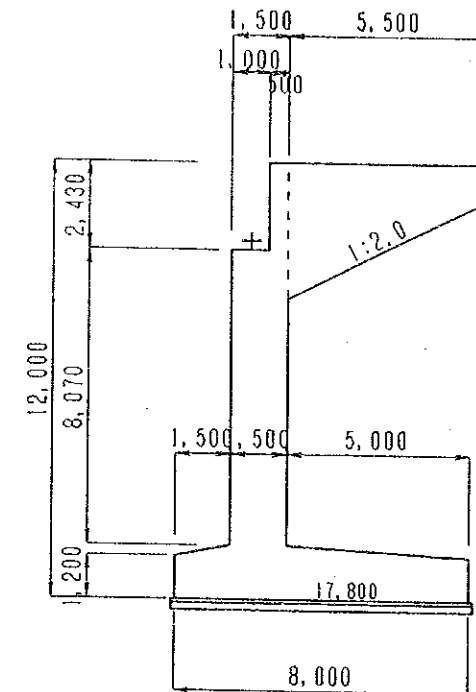


A2 ABUTMENT SCALE 1:200

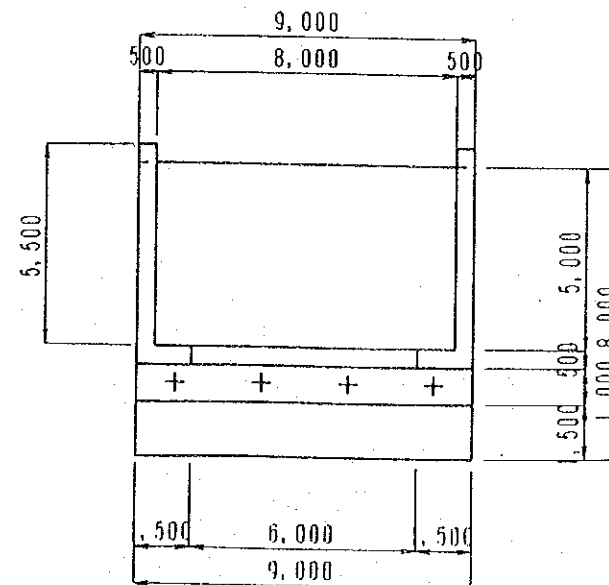
FRONT ELEVATION



SIDE ELEVATION

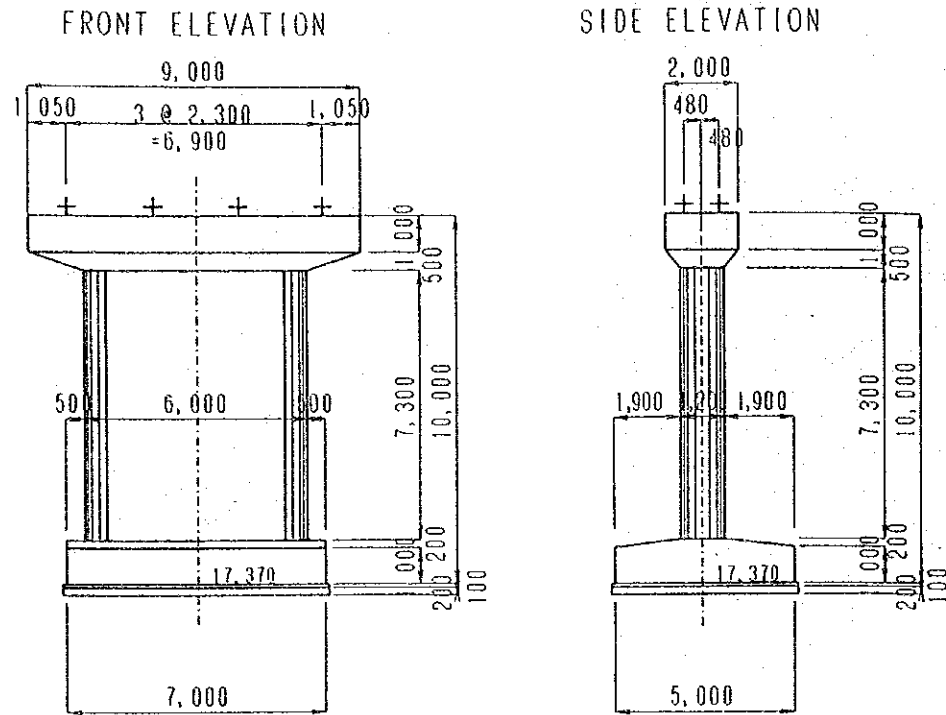


PLAN

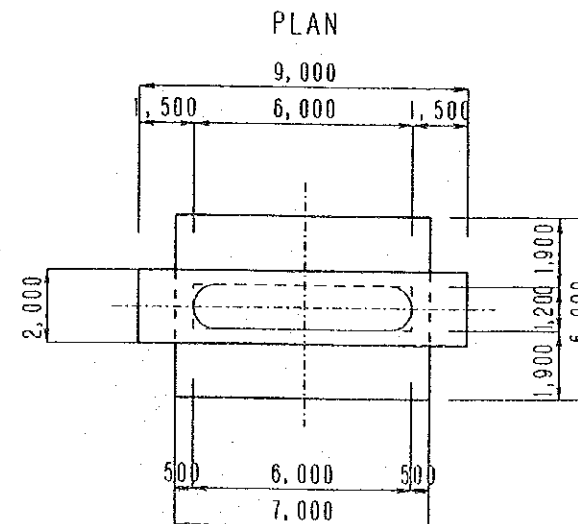
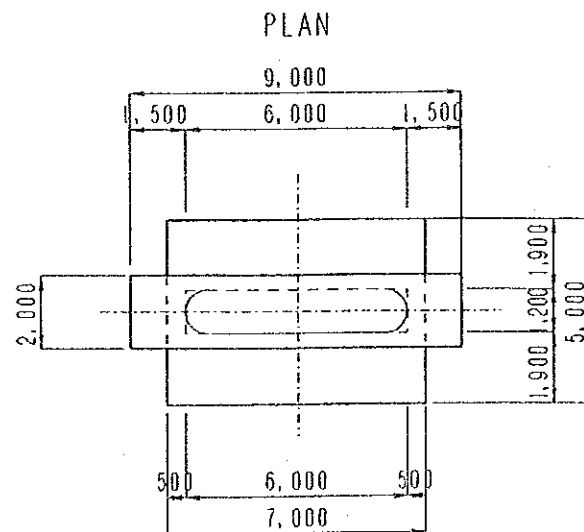
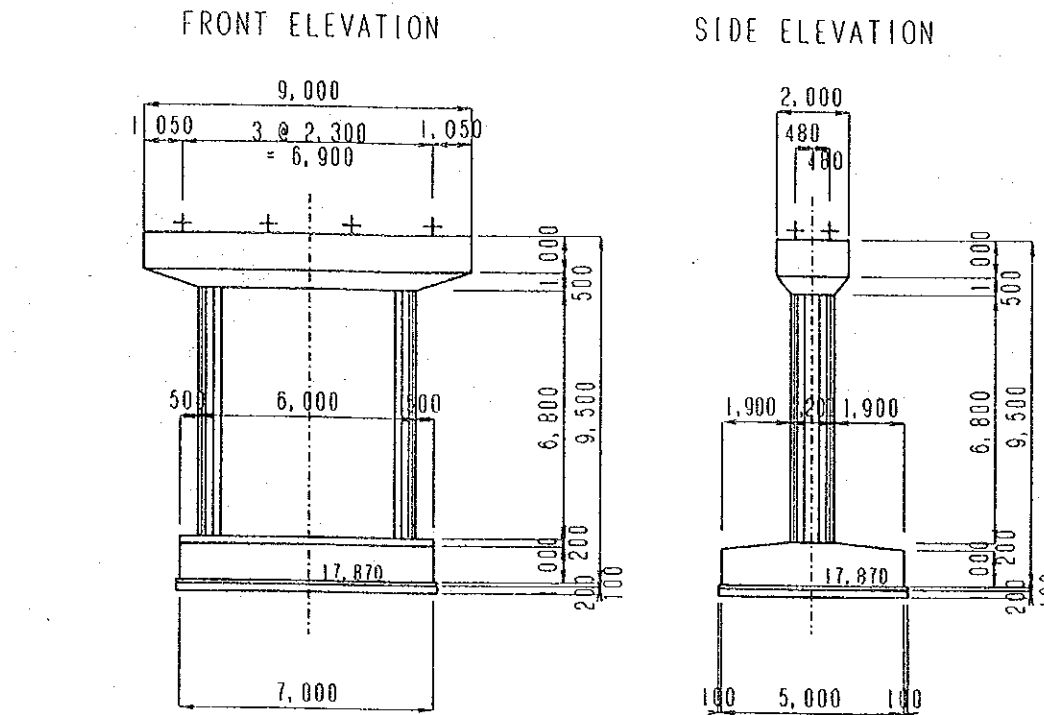


DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING WALAWE BRIDGE ABUTMENT	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

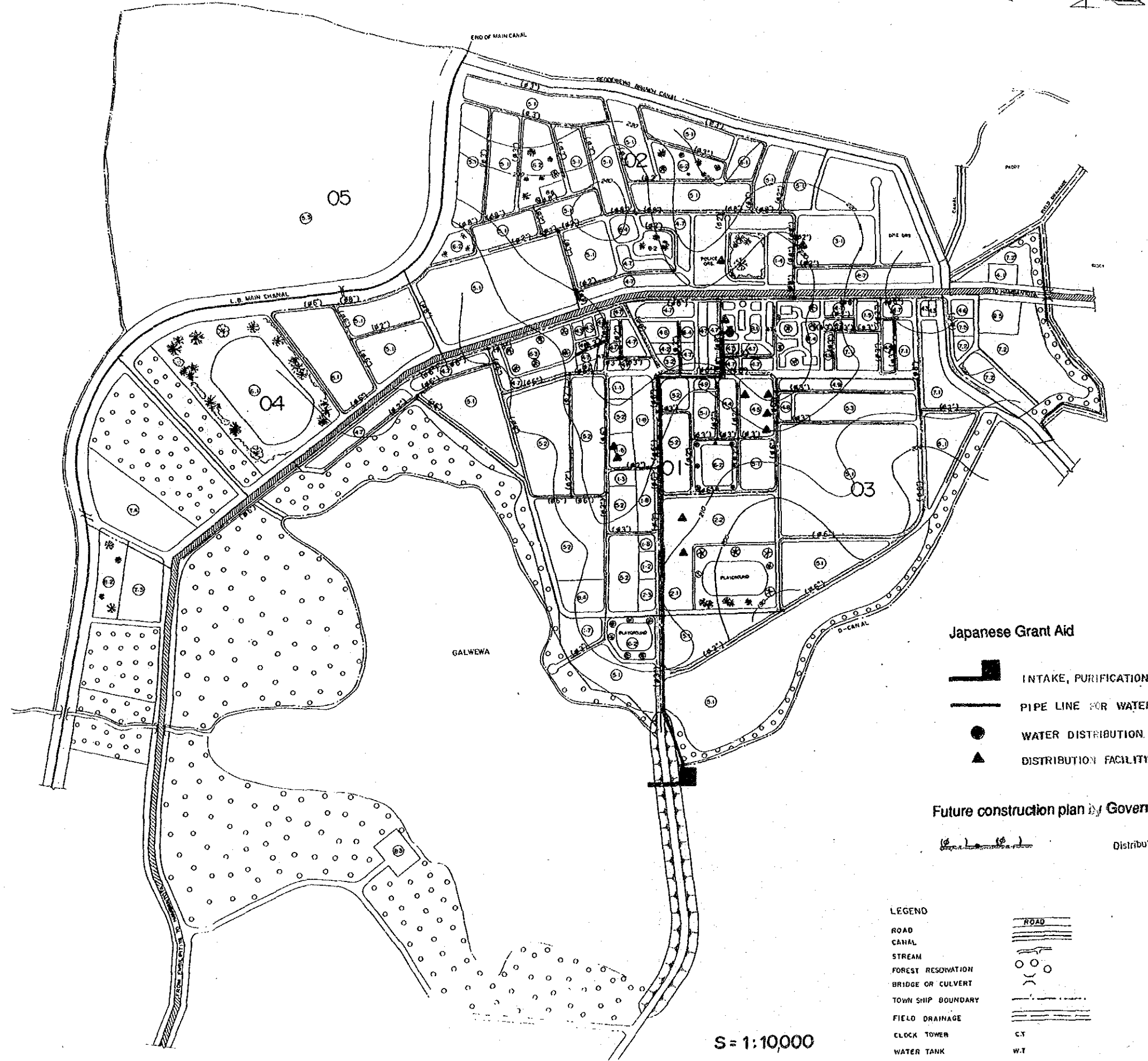
P1 PIER SCALE 1:200



P2 PIER SCALE 1:200



DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING WALAWE BRIDGE PIER	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



**Japanese Grant Aid**

- INTAKE, PURIFICATION AND PUMP FACILITY
- PIPE LINE FOR WATER SUPPLY
- WATER DISTRIBUTION TOWER
- DISTRIBUTION FACILITIES (STANDPIPE)

**Future construction plan by Government of Sri Lanka**

**LEGEND**

- ROAD
- CANAL
- STREAM
- FOREST RESERVATION
- BRIDGE OR CULVERT
- TOWN SHIP BOUNDARY
- FIELD DRAINAGE
- CLOCK TOWER
- WATER TANK

S = 1:10,000

**FUTURE LAND USE PLAN**

ITEM	DESCRIPTION	EXTENT IN hectares
1-0	<b>CENTER FACILITIES</b>	
1-1	DIVISIONAL SECRETARIAT COMPLEX	0.3
1-2	PRADHAN SABA OFFICE	0.3
1-3	GRAMA SEVAKA OFFICE	0.2
1-4	POLICE COMPLEX	3.9
1-5	POST OFFICE COMPLEX	0.4
1-6	BLOCK MANAGER'S OFFICE	0.5
1-7	DEVELOPMENT CENTRE/AGRICULTURE TRAINING CENTRES	0.5
1-8	FUTURE OFFICES	1.8
2-0	<b>EDUCATIONAL FACILITIES</b>	
2-1	SENIOR SECONDARY SCHOOL COMPLEX	7.6
2-2	PRIMARY SCHOOL COMPLEX	
2-3	DAY CARE CENTRE	0.3
3-0	<b>HEALTH FACILITIES</b>	
3-1	DISTRICT HOSPITAL WITH DIVISIONAL HEALTH CENTRE COMPLEX	5.8
3-2	AYURVEDA DISPENSARY	0.2
4-0	<b>COMMERCIAL FACILITIES</b>	
4-1	BRANCH CO-OP COMPLEX	0.3
4-2	CO-OP RETAIL SHOPS	0.2
4-3	BANKS	0.6
4-4	PUBLIC MARKET & PARKING	0.6
4-5	POLA	1.0
4-6	FILLING STATION	0.7
4-7	SHOPS	10.1
4-8	C.W.E. RETAIL SHOP	0.1
4-9	FUTURE COMMERCIAL	1.5
5-0	<b>RESIDENTIAL FACILITIES</b>	
5-1	URBAN HOUSING AREA	52.1
5-2	STAFF HOUSING AREA	11.0
5-3	FUTURE HOUSING	50.1
6-0	<b>SPORTS &amp; RECREATIONAL FACILITIES</b>	
6-1	SPORTS COMPLEX	9.2
6-2	PLAYING FIELDS & OPEN AREAS	6.5
6-3	CHILDRENS PARK	1.3
6-4	CINEMA	0.5
7-0	<b>INDUSTRIAL AND STORES FACILITIES</b>	
7-1	SMALL SCALE INDUSTRIES	3.0
7-2	LARGE SCALE INDUSTRIES	4.7
7-3	GARMENT FACTORIES	1.5
7-4	FUTURE GARMENT FACTORIES	2.7
7-5	PADDY STORES	0.2
8-0	<b>OTHER FACILITIES</b>	
8-1	BUS STAND COMPLEX	0.9
8-2	PARKING AREA	1.6
8-3	CIRCUIT BUNGALOW	1.2
8-4	BUDDHIST TEMPLES	2.6
8-5	CEMETERY	0.8
8-6	COMPANY CENTRE	0.3
8-7	FOREST, ROADS, TANKS, LANDSCAPING, RESERVATION etc.	103.7
	<b>TOTAL</b>	<b>291.2</b>

**DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA**

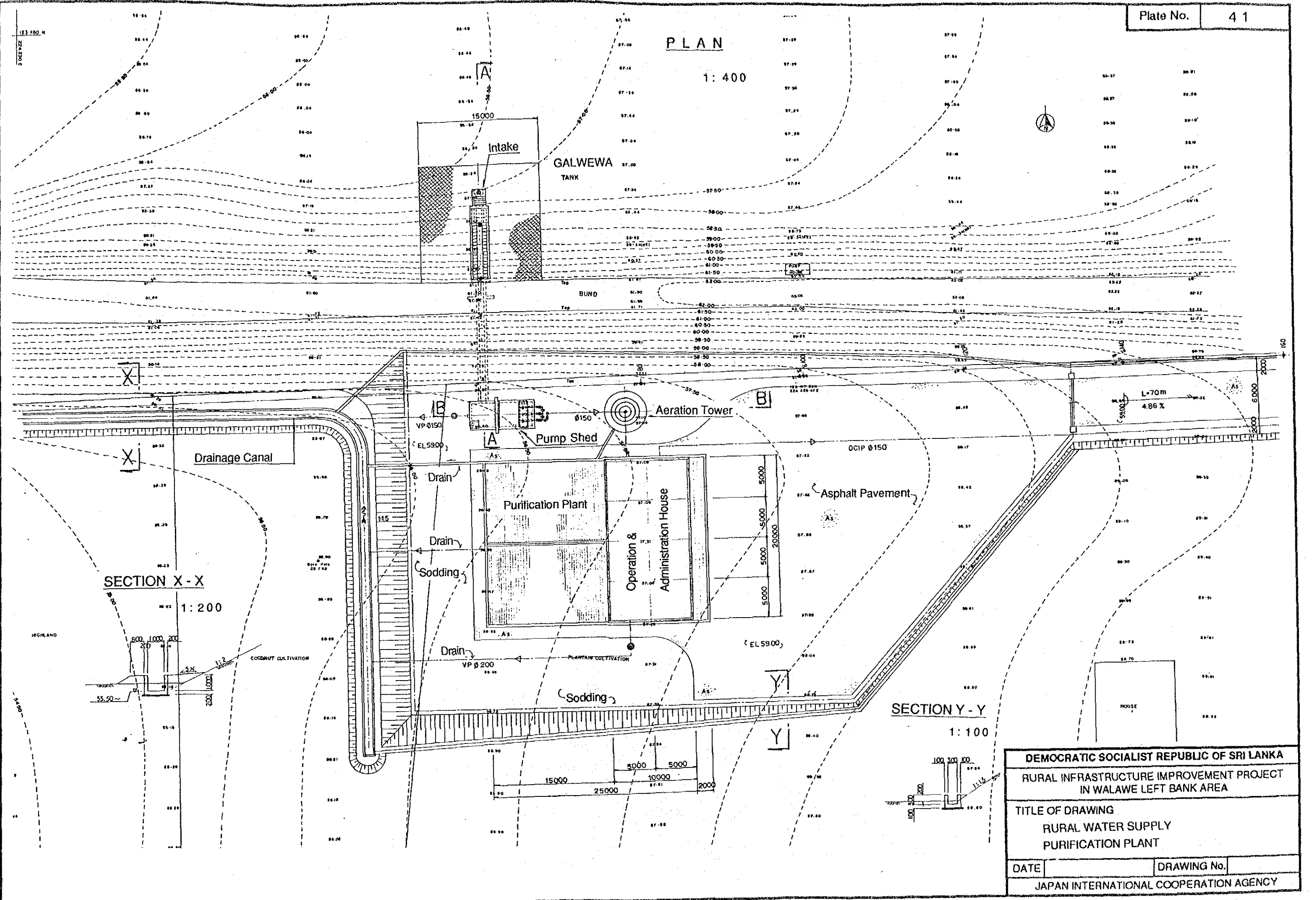
**RURAL INFRASTRUCTURE IMPROVEMENT PROJECT**  
**IN WALAWE LEFT BANK AREA**

**TITLE OF DRAWING**  
**RURAL WATER SUPPLY**  
**GENERAL PLAN**

DATE	DRAWING No.
------	-------------

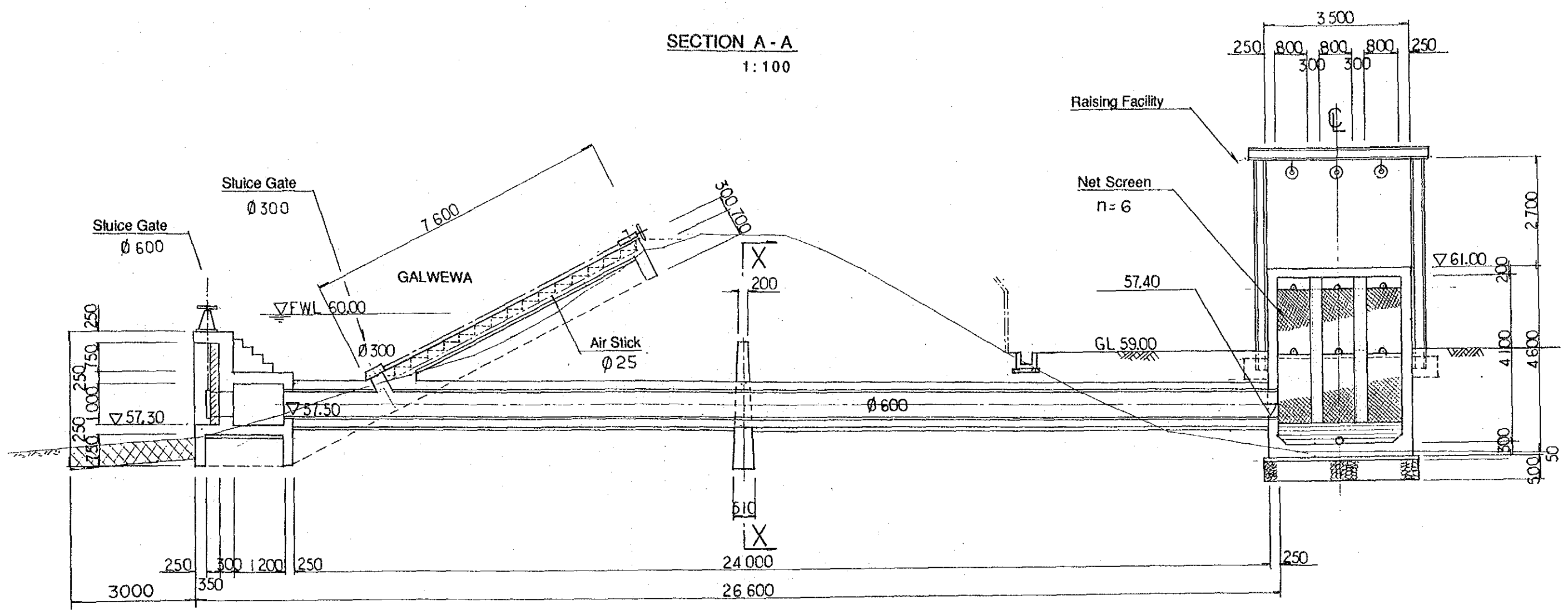
**JAPAN INTERNATIONAL COOPERATION AGENCY**

PLAN  
1:400

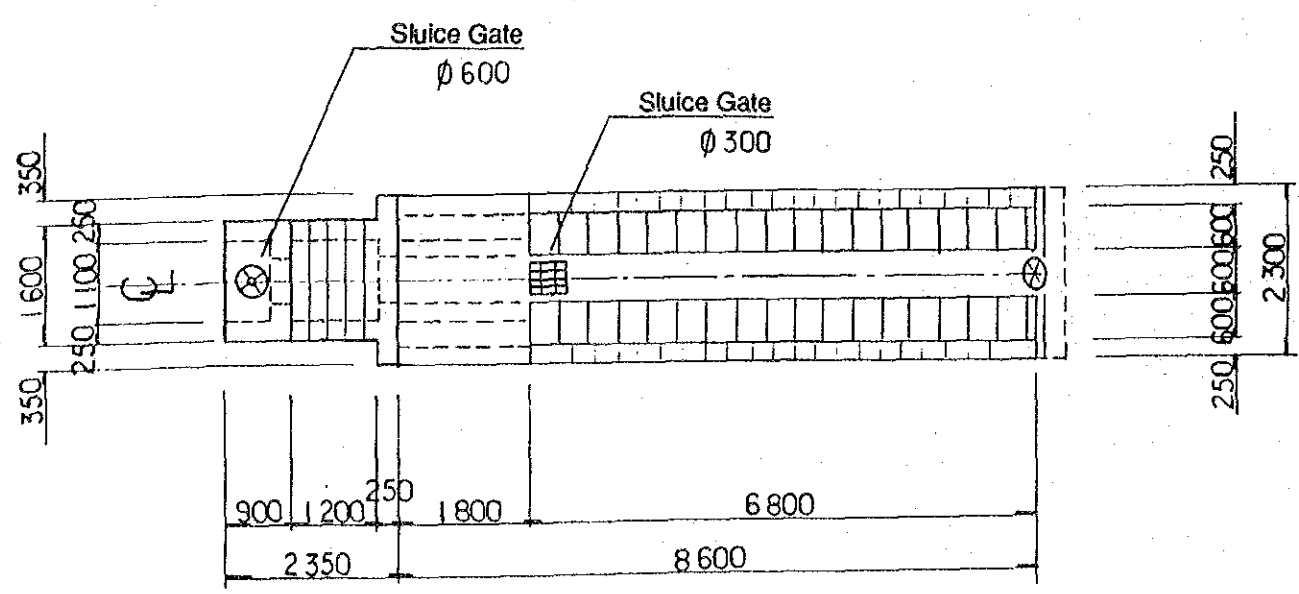


DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL WATER SUPPLY PURIFICATION PLANT	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

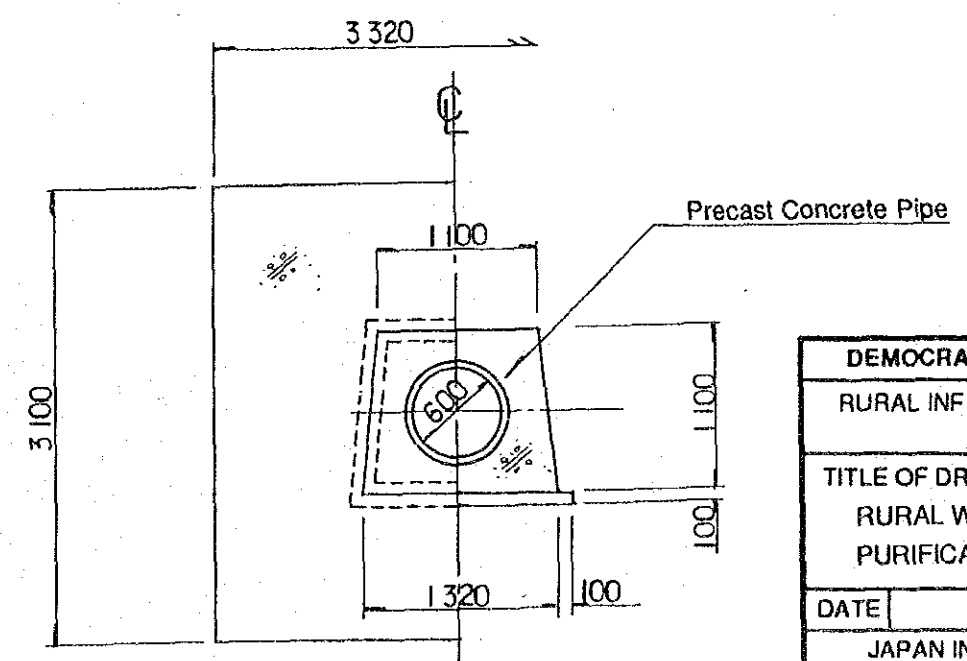
SECTION A - A  
1:100



PLAN OF INTAKE  
1:100



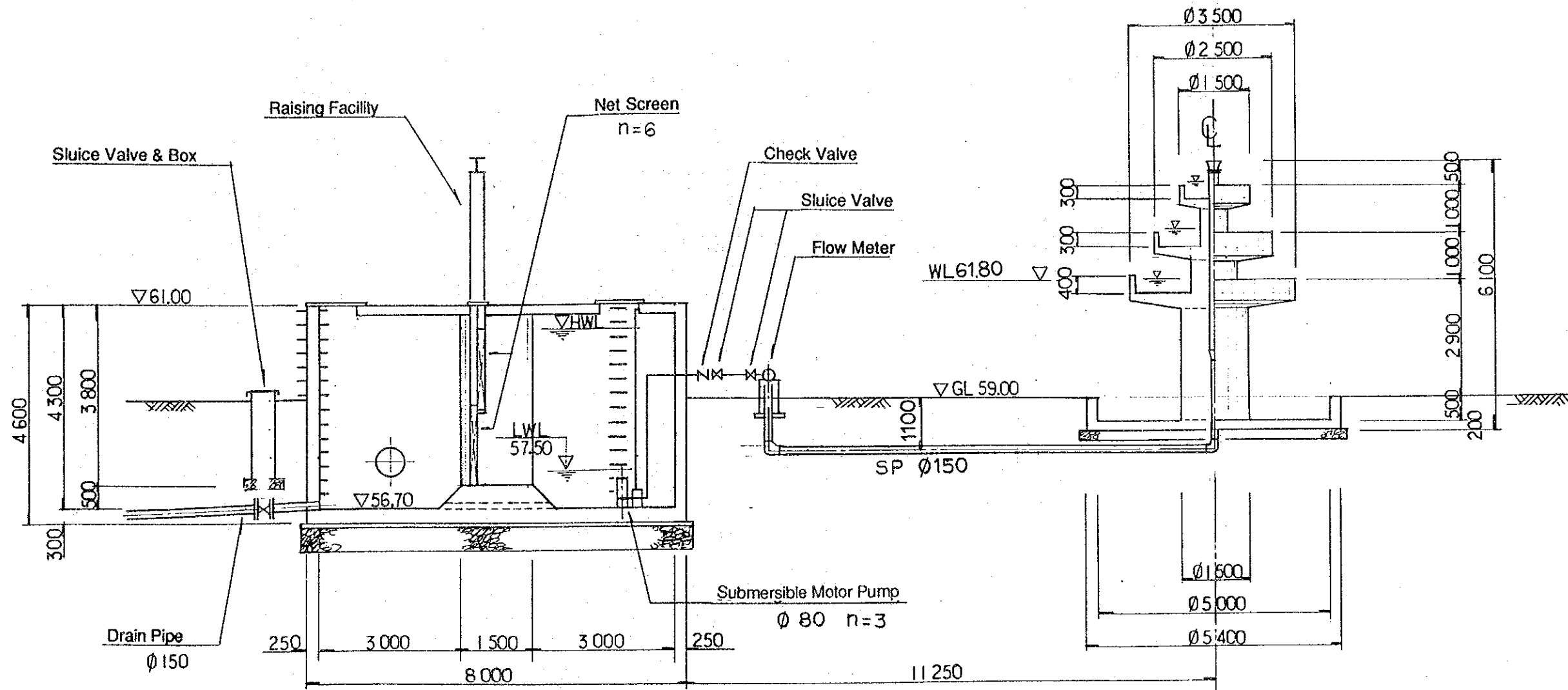
SECTION X - X  
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DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL WATER SUPPLY PURIFICATION PLANT / INTAKE FACILITIES	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



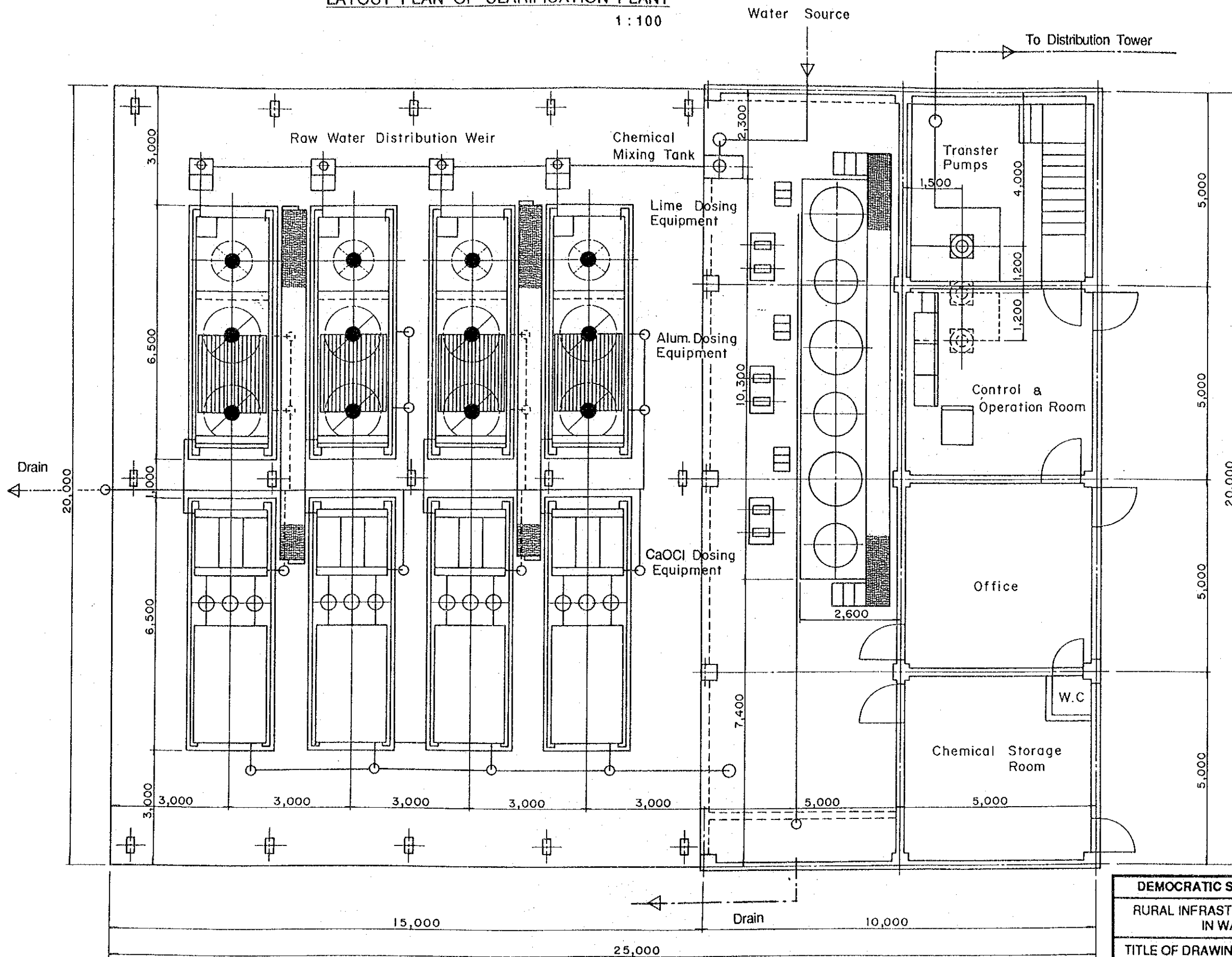
SECTION B - B  
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DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL WATER SUPPLY PURIFICATION PLANT / RECEIVING PIT & AERATION TOWER	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

LAYOUT PLAN OF CLARIFICATION PLANT

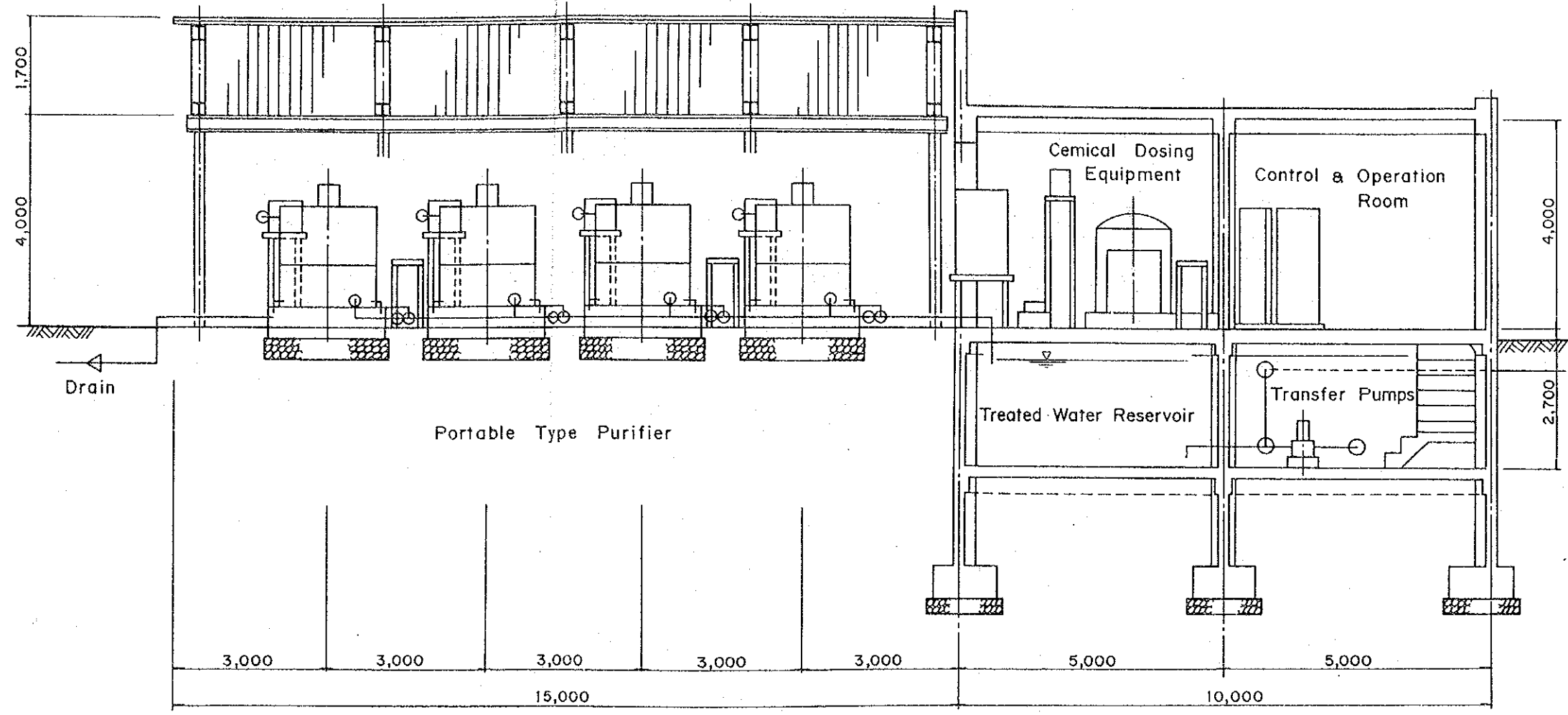
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DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL WATER SUPPLY PURIFICATION PLANT / PURIFICATION FACILITIES(1/2)	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

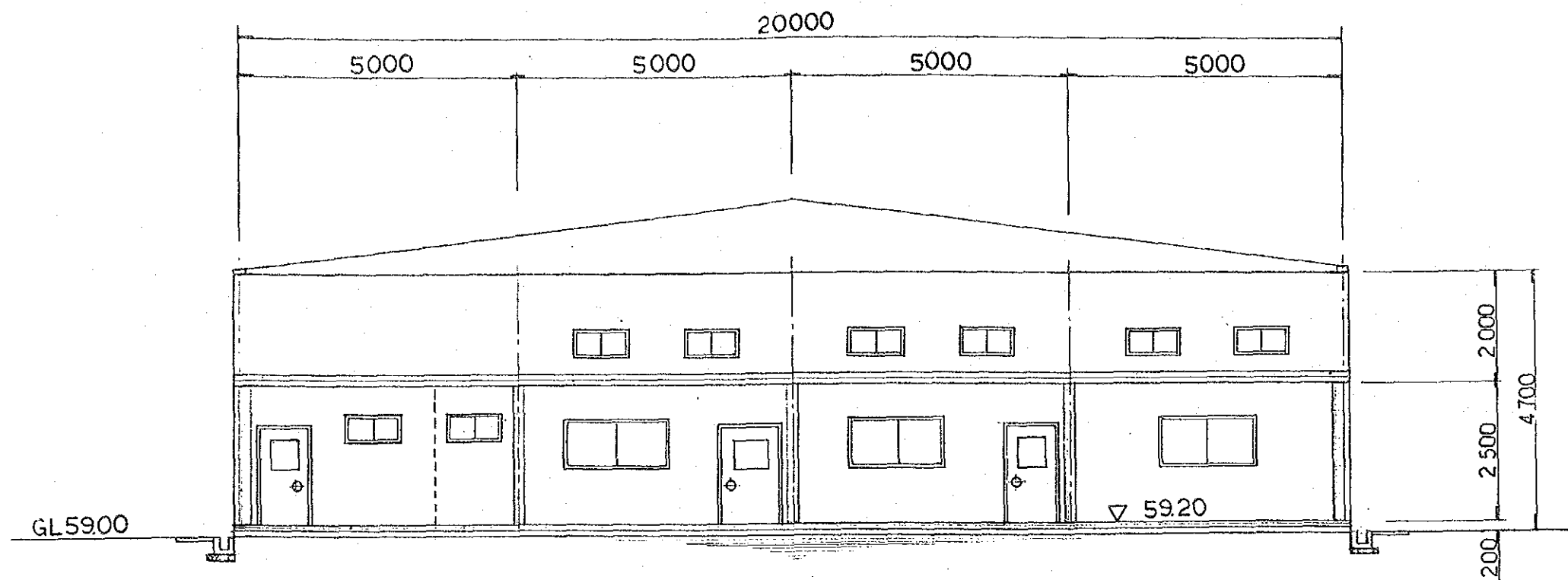
PROFILE

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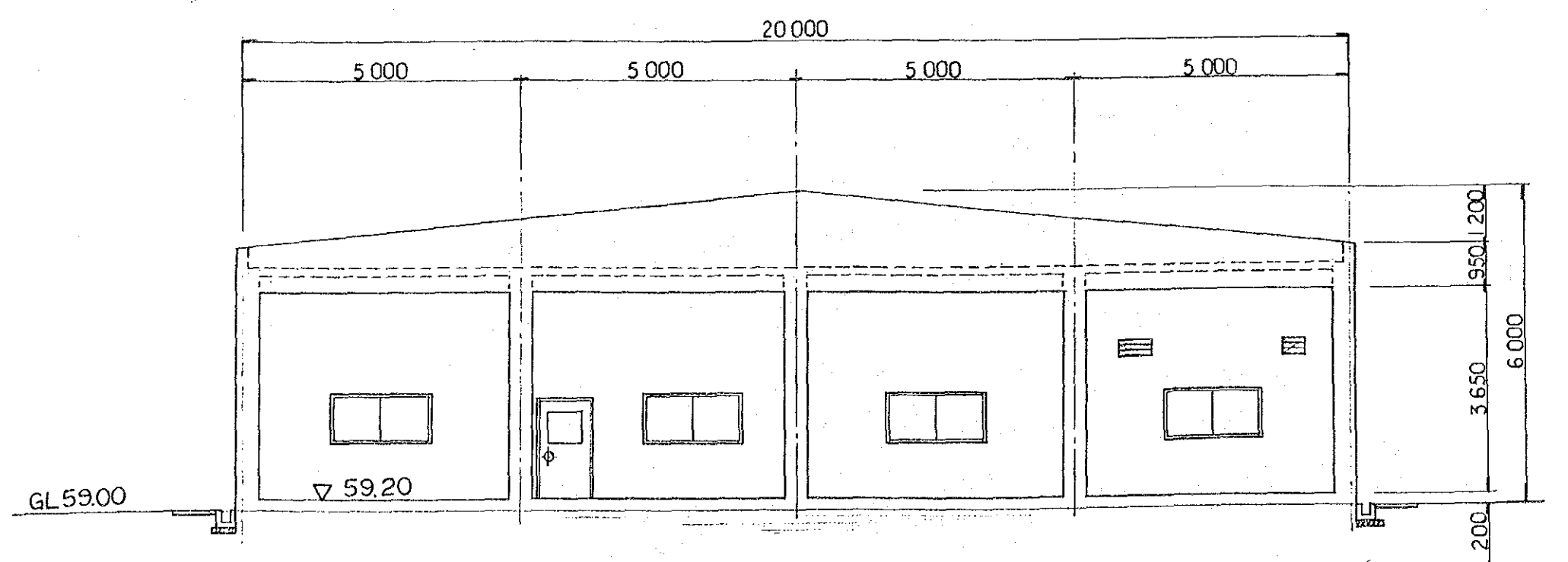


DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL WATER SUPPLY PURIFICATION PLANT / CLARIFICATION FACILITIES(2/2)	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

**EAST(FRONT) SIDE VIEW**  
1:100

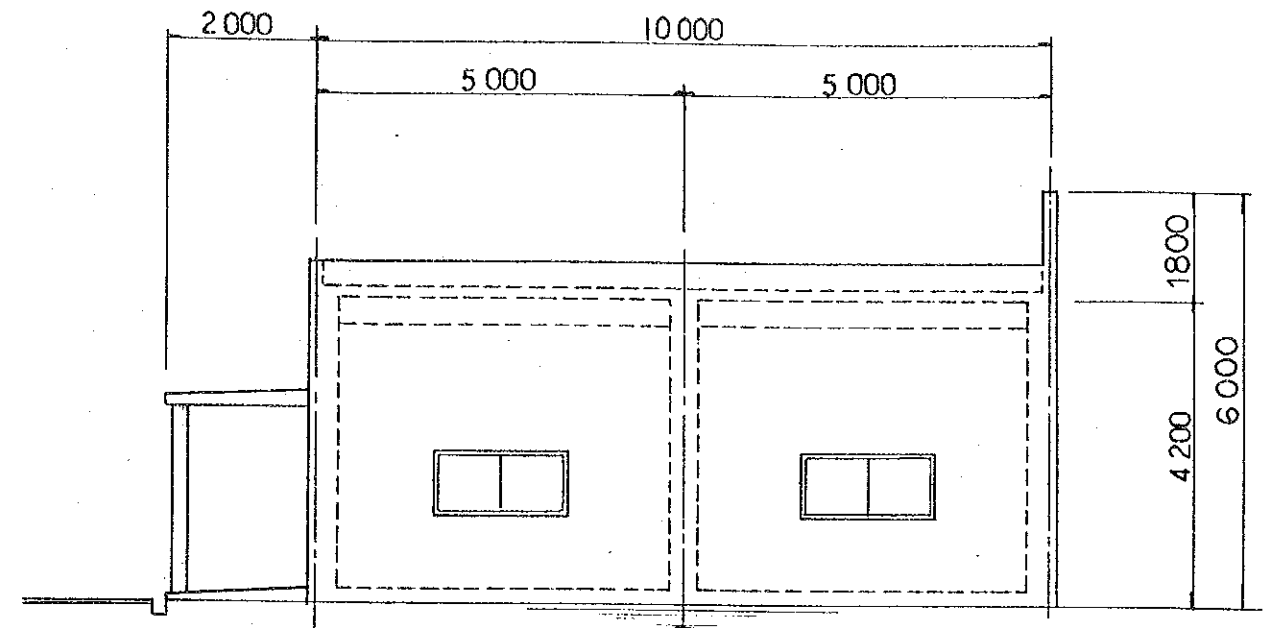


**WEST SIDE VIEW**  
1:100

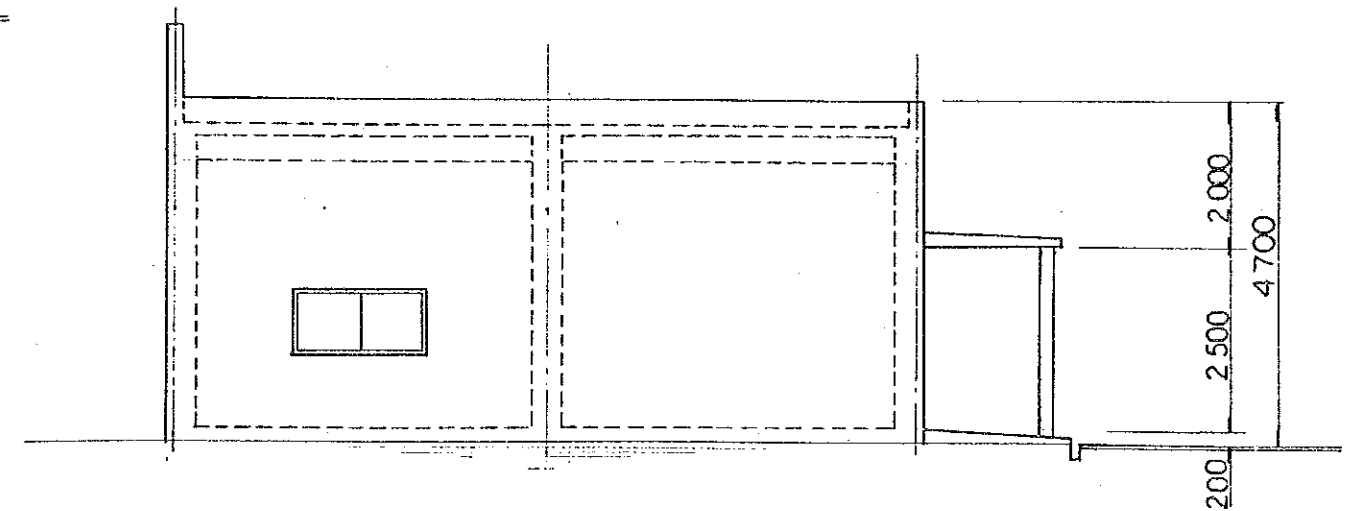


DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL WATER SUPPLY PURIFICATION PLANT / OPERATION & ADMINISTRATION HOUSE (1/2)	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

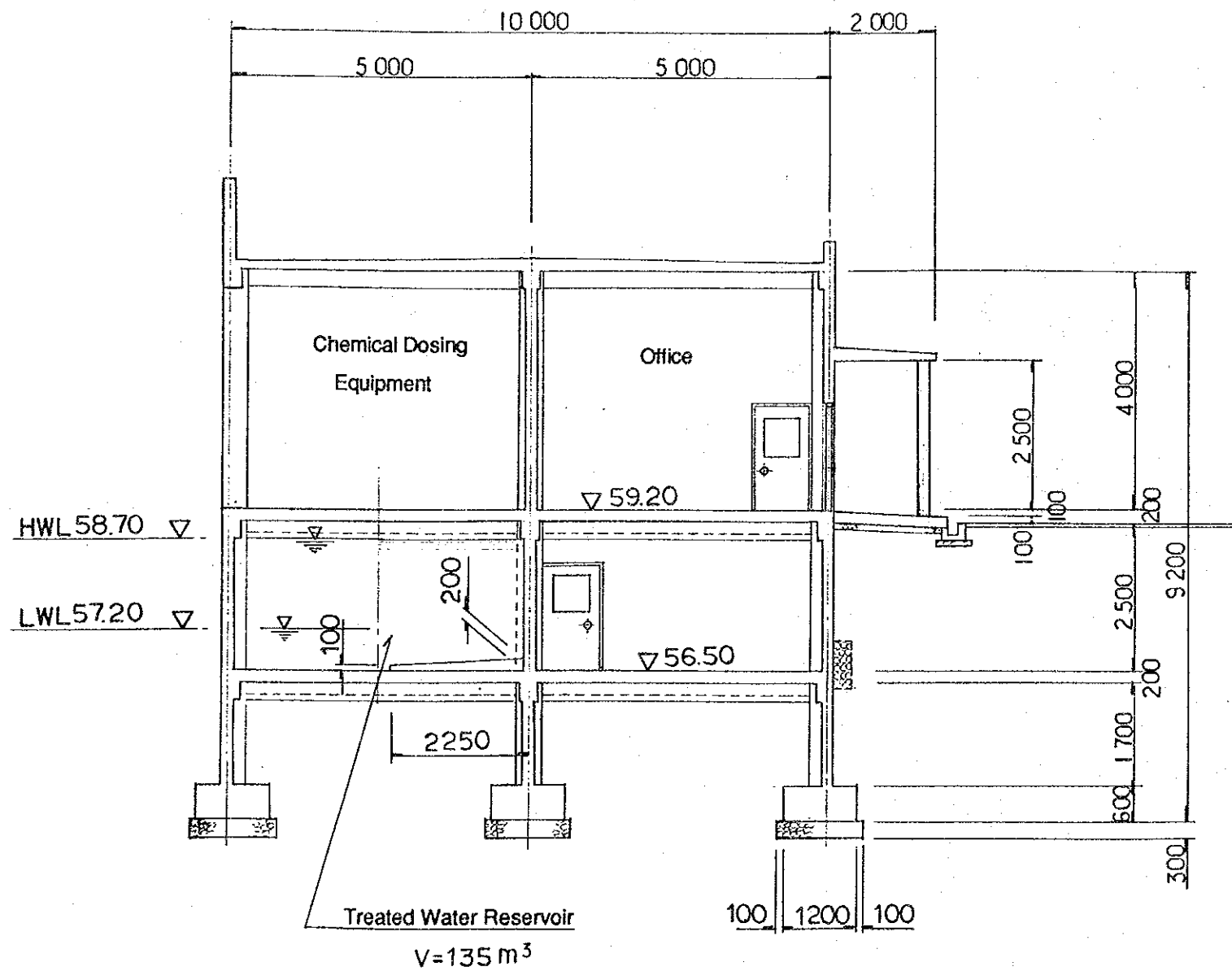
NORTH SIDE VIEW  
1:100



SOUTH SIDE VIEW  
1:100



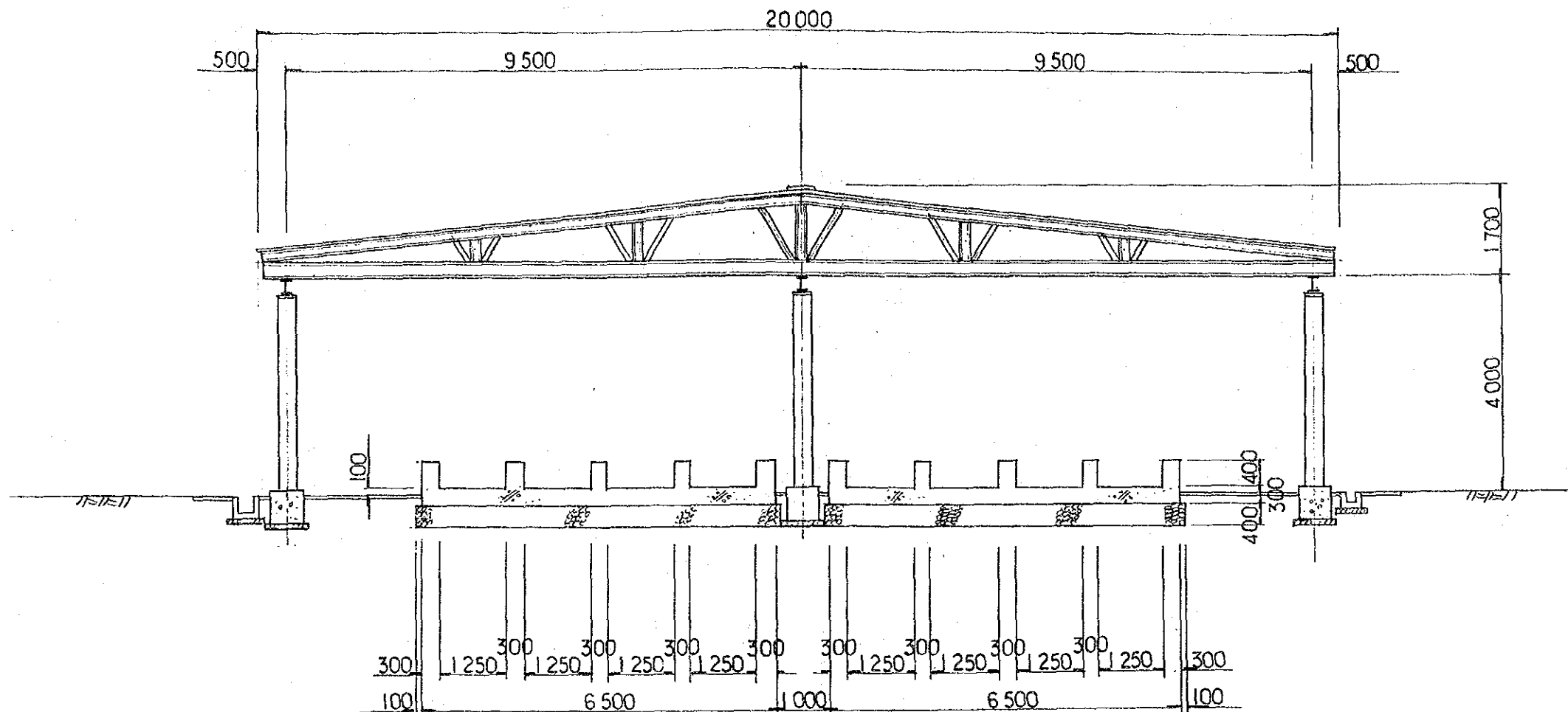
CROSS SECTION OF HOUSE  
1:100



DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL WATER SUPPLY PURIFICATION PLANT / OPERATION & ADMINISTRATION HOUSE (2/2)	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

CROSS SECTION

1:100

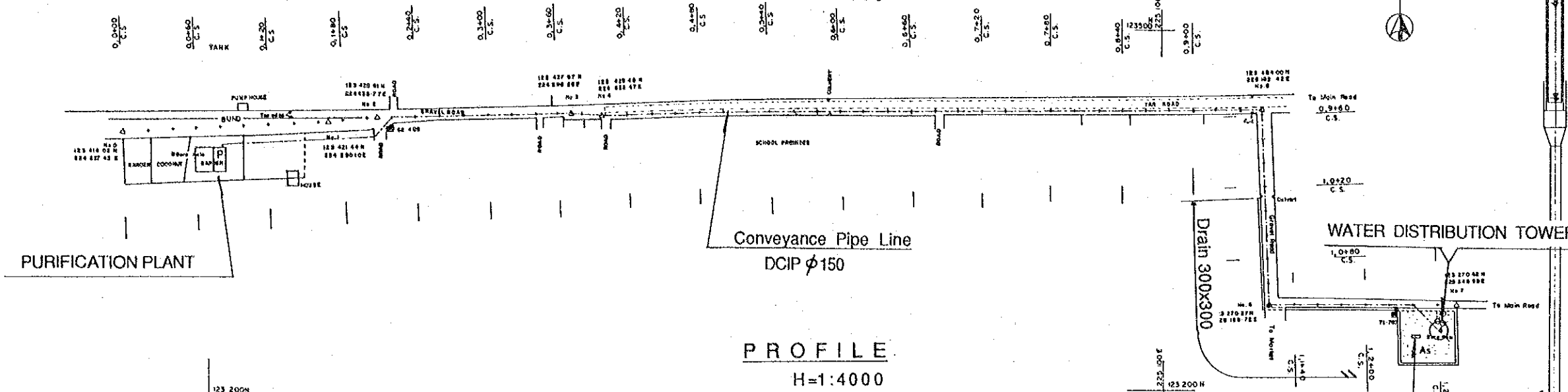


DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL WATER SUPPLY	
PURIFICATION PLANT / ROOF & FOUNDATION for PURIFICATION EQUIPMENT	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

PLAN

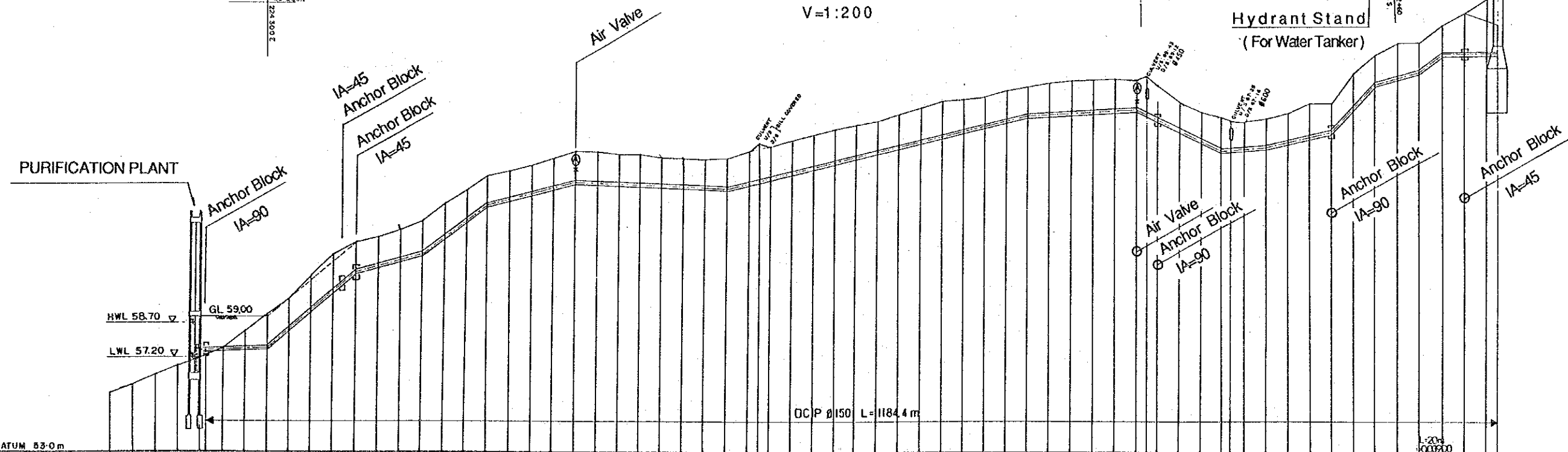
1:4000

Plate No. 49



PROFILE

H=1:4000  
V=1:200



PIPE LINE GRADIENT	PIPE CENTER ELEVATION	EXCAVATION DEPTH	GROUND LEVELS	DISTANCE
0.0000	57.60	1.58	59.18	0.0000
0.0020	57.64	1.54	59.18	0.0020
0.0040	57.64	1.54	59.18	0.0040
0.0060	57.70	1.69	59.39	0.0060
0.0080	57.70	1.52	59.22	0.0080
0.0100	59.44	1.66	61.10	0.0100
0.0120	60.30	1.86	62.16	0.0120
0.0140	61.17	1.48	62.65	0.0140
0.0160	61.45	1.43	62.88	0.0160
0.0180	61.72	1.48	63.20	0.0180
0.0200	62.00	1.66	63.66	0.0200
0.0220	62.70	1.70	64.40	0.0220
0.0240	63.41	1.64	65.05	0.0240
0.0260	64.11	1.48	65.59	0.0260
0.0280	64.37	1.50	65.87	0.0280
0.0300	64.62	1.48	66.10	0.0300
0.0320	64.88	1.50	66.38	0.0320
0.0340	65.13	1.59	66.72	0.0340
0.0360	65.09	1.61	66.70	0.0360
0.0380	65.05	1.52	66.57	0.0380
0.0400	65.01	1.55	66.56	0.0400
0.0420	64.97	1.50	66.47	0.0420
0.0440	64.93	1.47	66.40	0.0440
0.0460	64.89	1.48	66.37	0.0460
0.0480	64.85	1.55	66.40	0.0480
0.0500	65.09	1.66	66.75	0.0500
0.0520	65.22	1.88	67.10	0.0520
0.0540	65.34	1.81	67.15	0.0540
0.0560	65.58	1.65	67.23	0.0560
0.0580	65.93	1.68	67.61	0.0580
0.0600	66.07	1.70	67.77	0.0600
0.0620	66.32	1.64	67.96	0.0620
0.0640	66.56	1.58	68.14	0.0640
0.0660	66.80	1.65	68.45	0.0660
0.0680	67.05	1.66	68.71	0.0680
0.0700	67.29	1.71	69.00	0.0700
0.0720	67.54	1.71	69.25	0.0720
0.0740	67.78	1.52	69.30	0.0740
0.0760	68.02	1.56	69.58	0.0760
0.0780	68.27	1.48	69.75	0.0780
0.0800	68.54	1.56	70.00	0.0800
0.0820	68.81	1.63	70.18	0.0820
0.0840	69.07	1.60	70.47	0.0840
0.0860	69.34	1.56	70.70	0.0860
0.0880	69.61	1.48	70.99	0.0880
0.0900	69.88	1.96	71.84	0.0900
0.0920	70.15	1.71	71.86	0.0920
0.0940	70.42	1.48	71.90	0.0940
0.0960	70.69	1.51	72.20	0.0960
0.0980	70.96	1.51	72.47	0.0980
0.1000	71.11	1.72	72.83	0.1000
0.1020	71.36	1.48	73.11	0.1020
0.1040	71.61	1.76	73.37	0.1040
0.1060	71.86	1.48	73.38	0.1060
0.1080	72.11	1.48	73.59	0.1080
0.1100	72.36	2.02	74.38	0.1100
0.1120	72.61	2.63	75.01	0.1120
0.1140	72.86	2.63	75.64	0.1140
0.1160	73.11	1.48	76.12	0.1160

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

RURAL INFRASTRUCTURE IMPROVEMENT PROJECT  
IN WALAWE LEFT BANK AREA

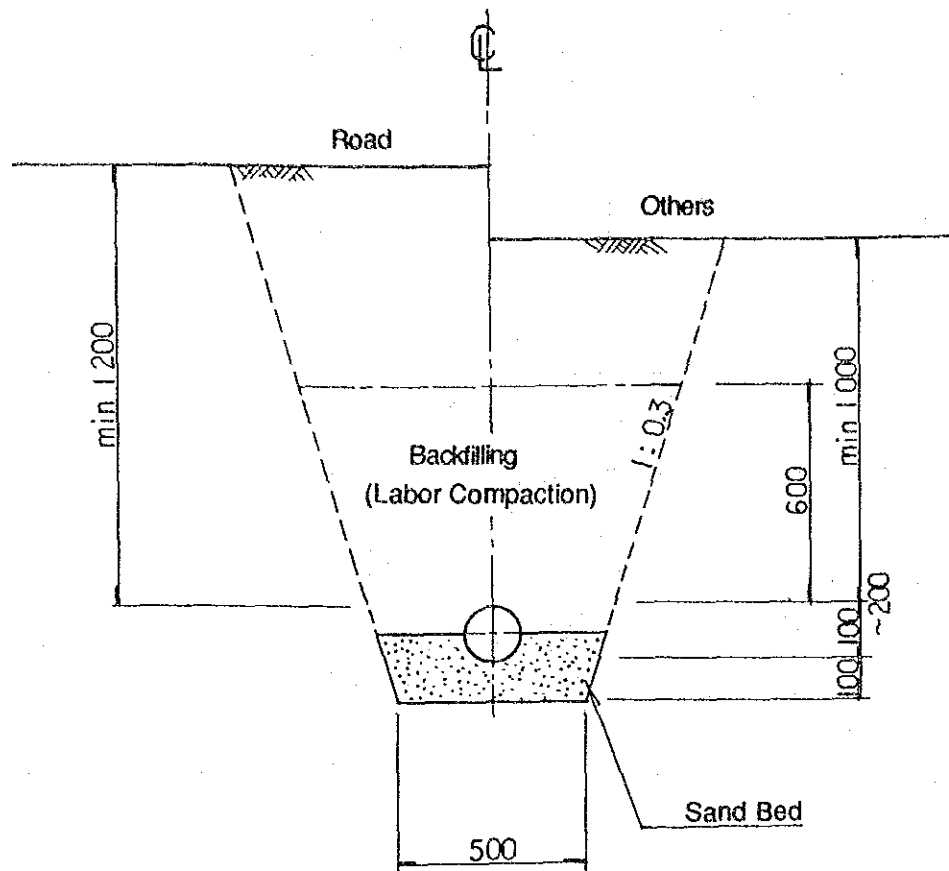
TITLE OF DRAWING  
RURAL WATER SUPPLY  
PIPE LINE / PLAN & PROFILE

DATE \_\_\_\_\_ DRAWING No. \_\_\_\_\_

JAPAN INTERNATIONAL COOPERATION AGENCY

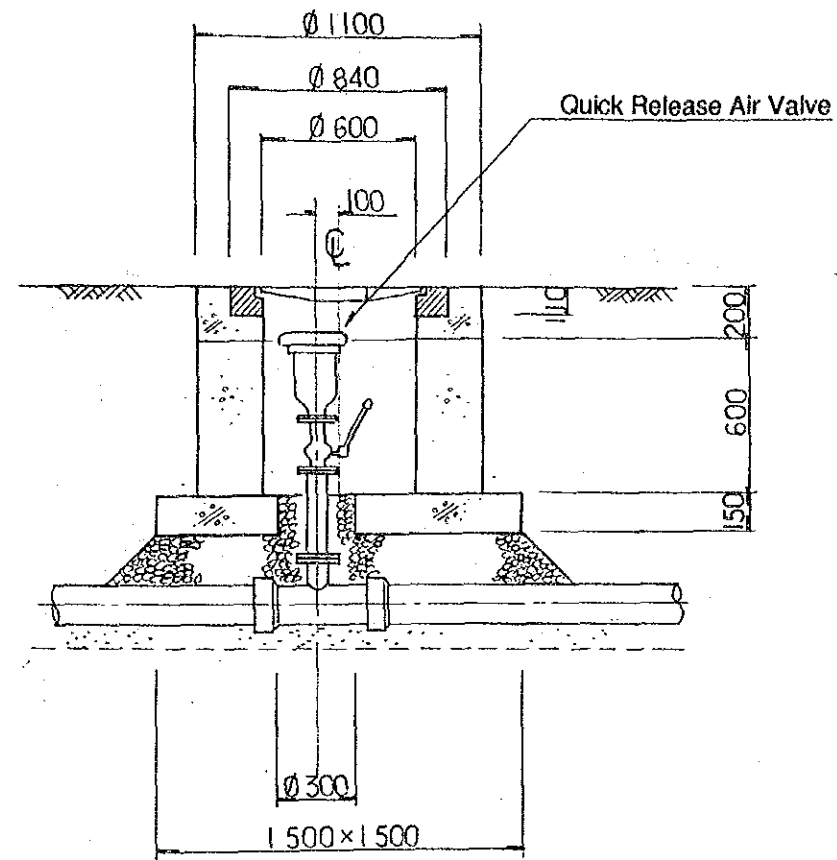
CROSS SECTION OF PIPE LINE

1:20



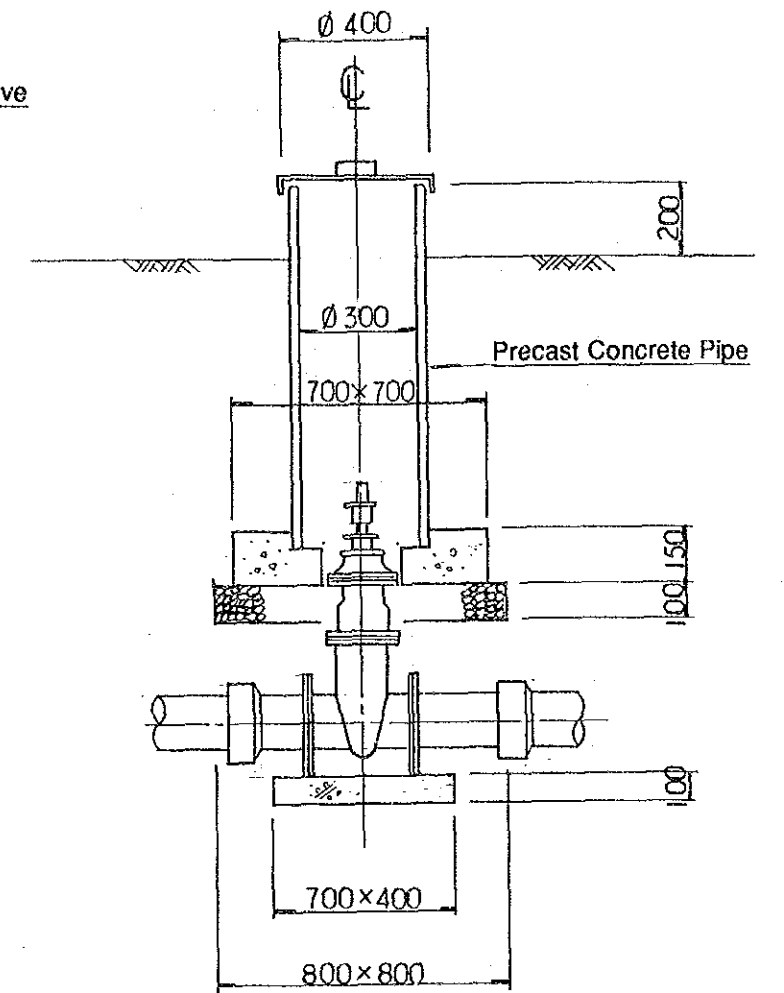
AIR VALVE BOX

1:30



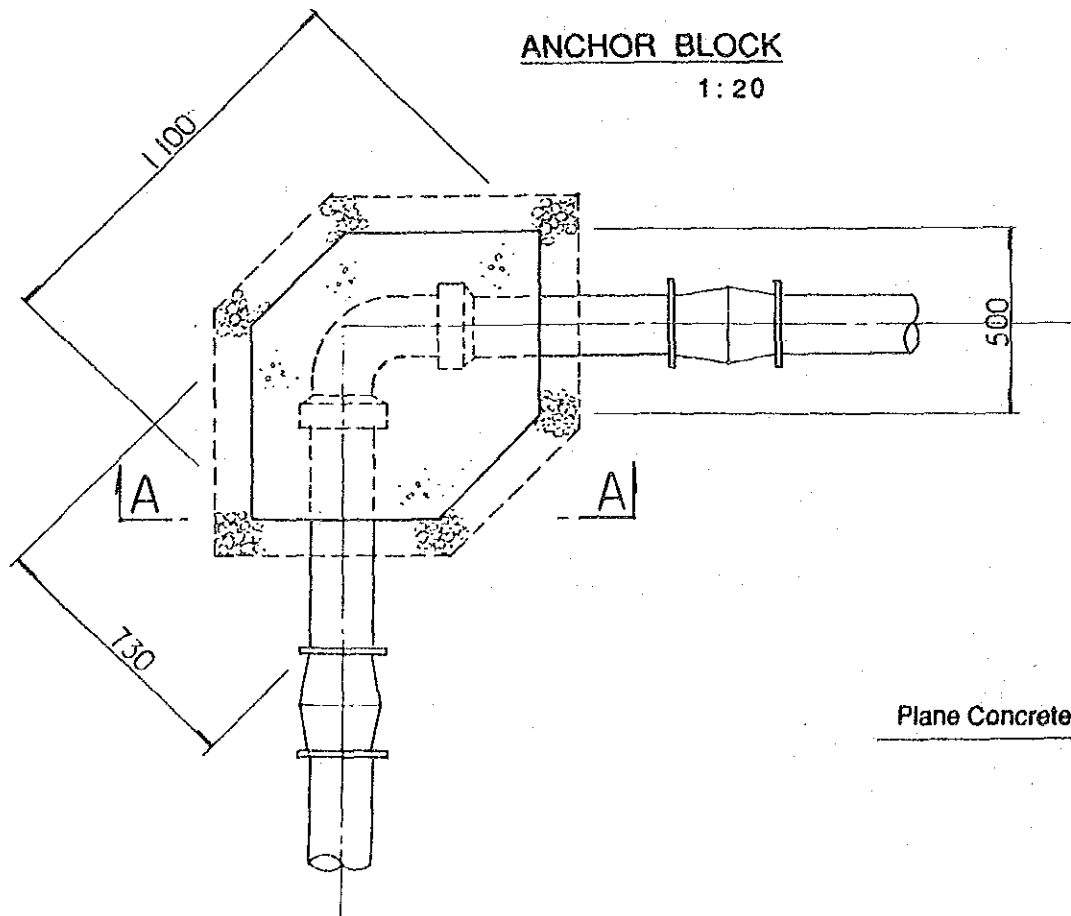
SLUICE VALVE BOX

1:20



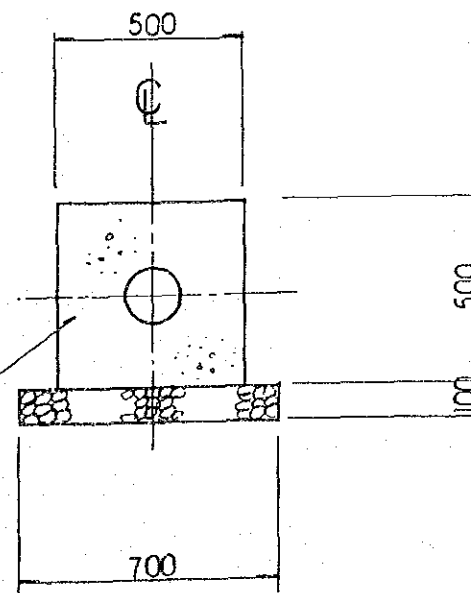
ANCHOR BLOCK

1:20



SECTION A-A

1:20

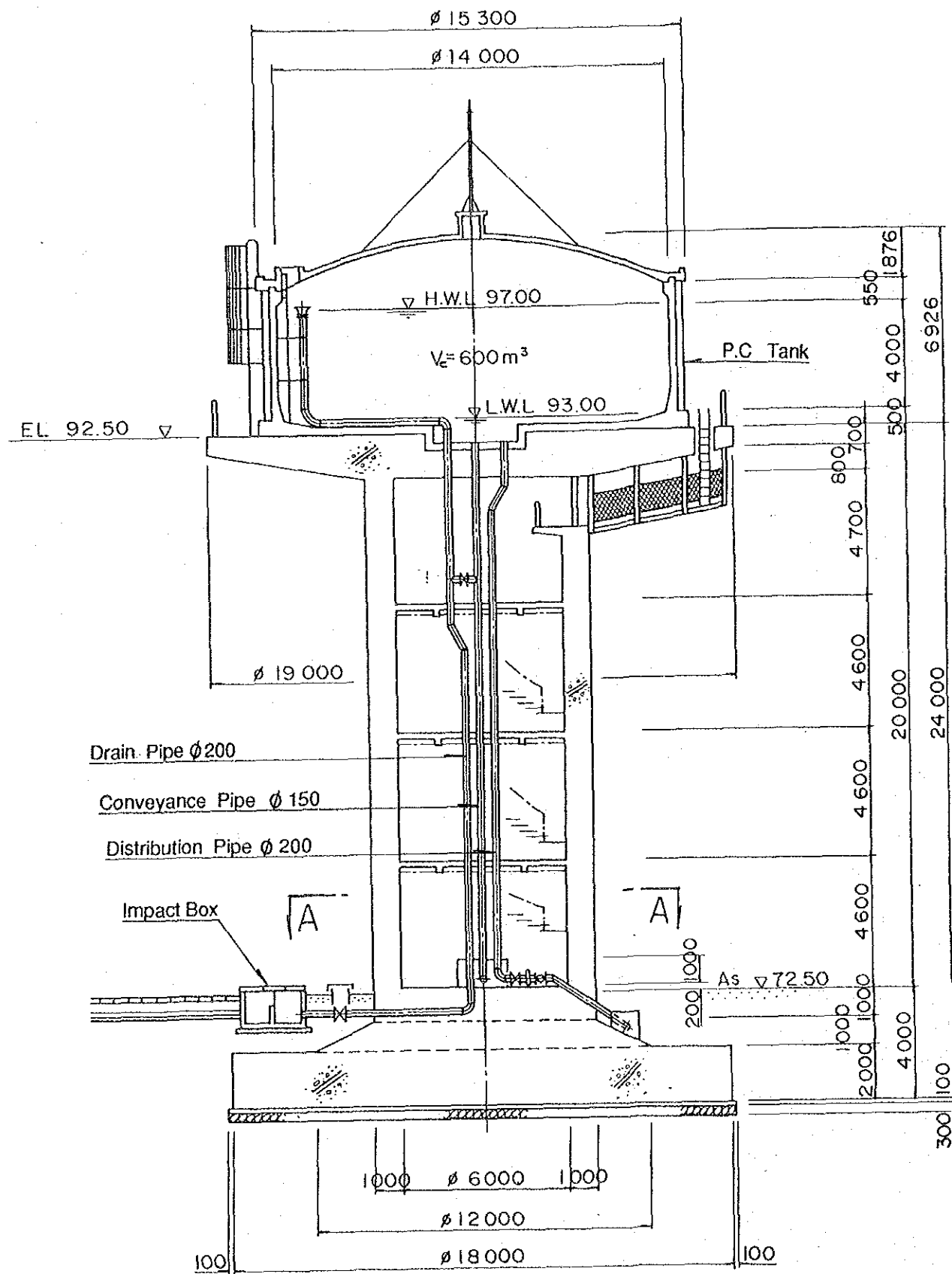


Plane Concrete

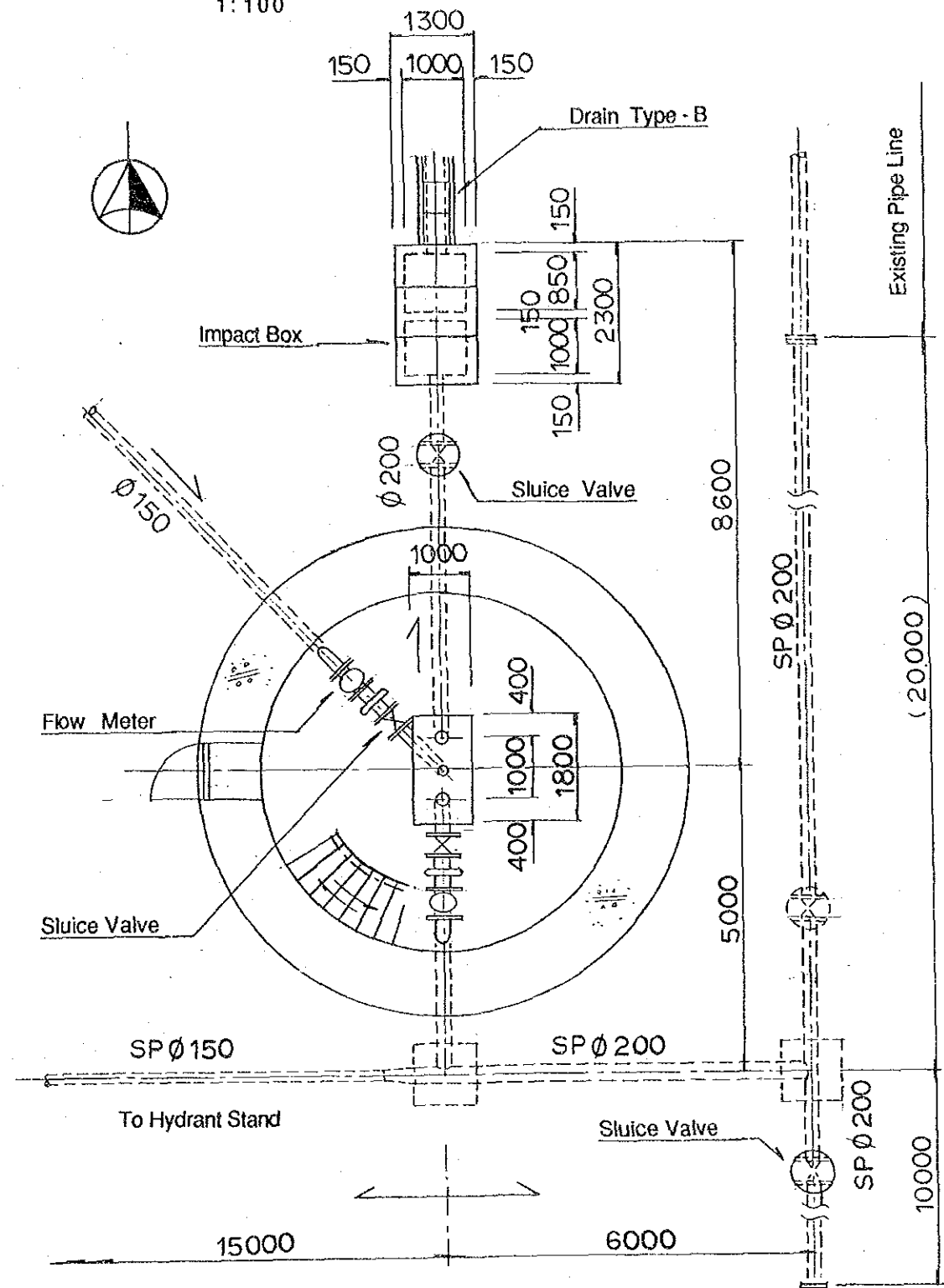
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL WATER SUPPLY PIPE LINE / RELATED STRUCTURES	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



**WATER DISTRIBUTION TOWER**  
1:200



**SECTION A - A**  
1:100

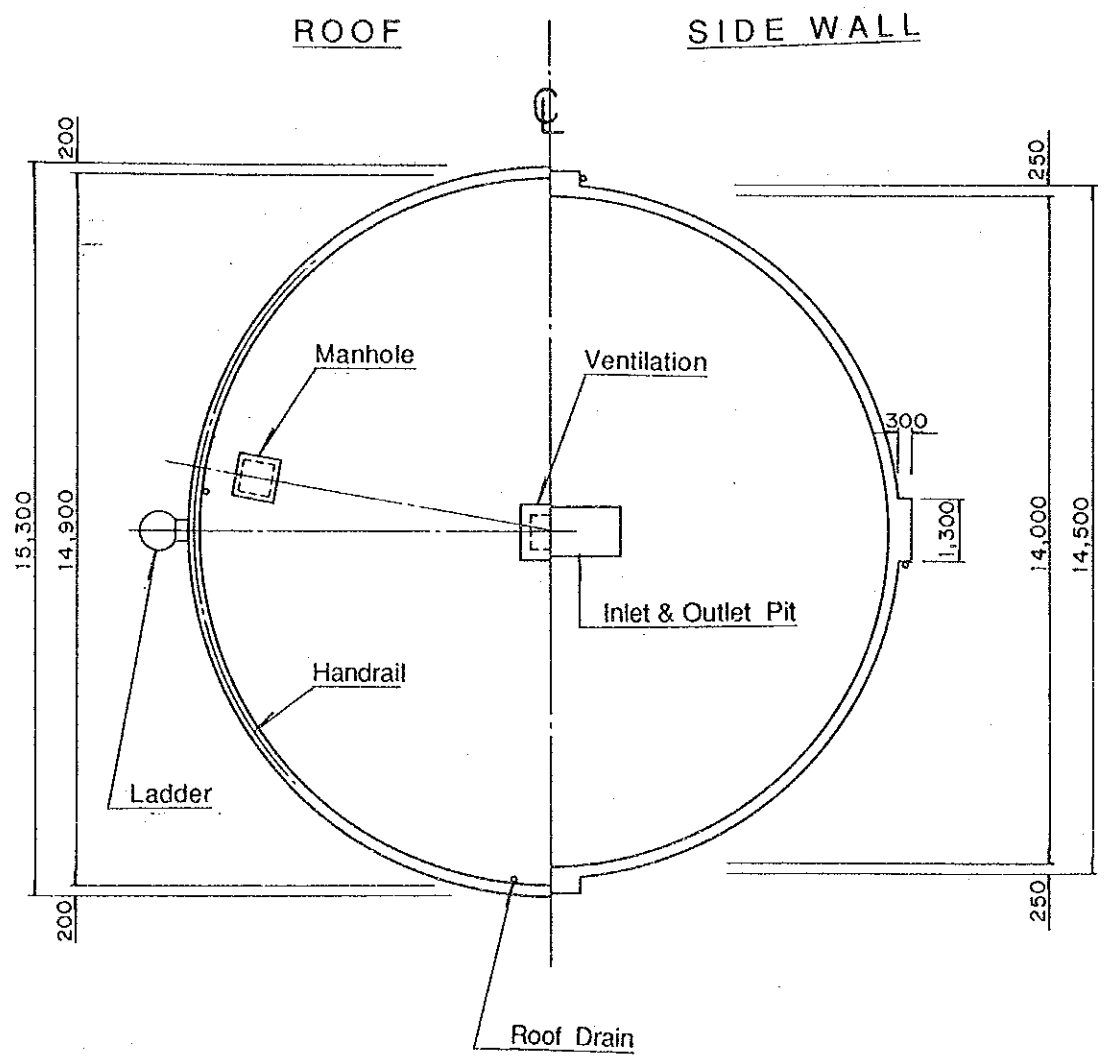
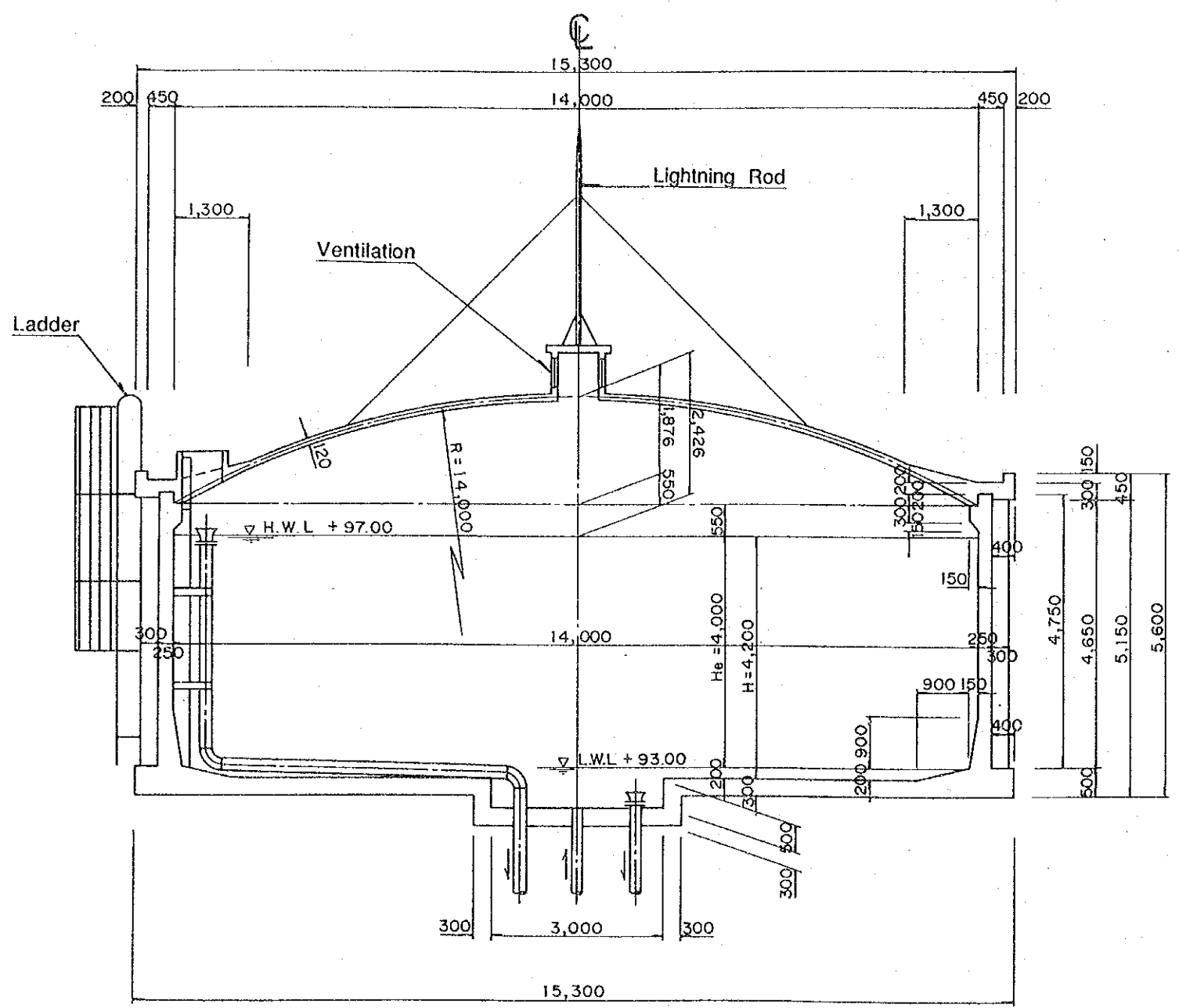


DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL WATER SUPPLY WATER DISTRIBUTION TOWER (1/2)	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

DISTRIBUTION TANK  
1:100

PLAN

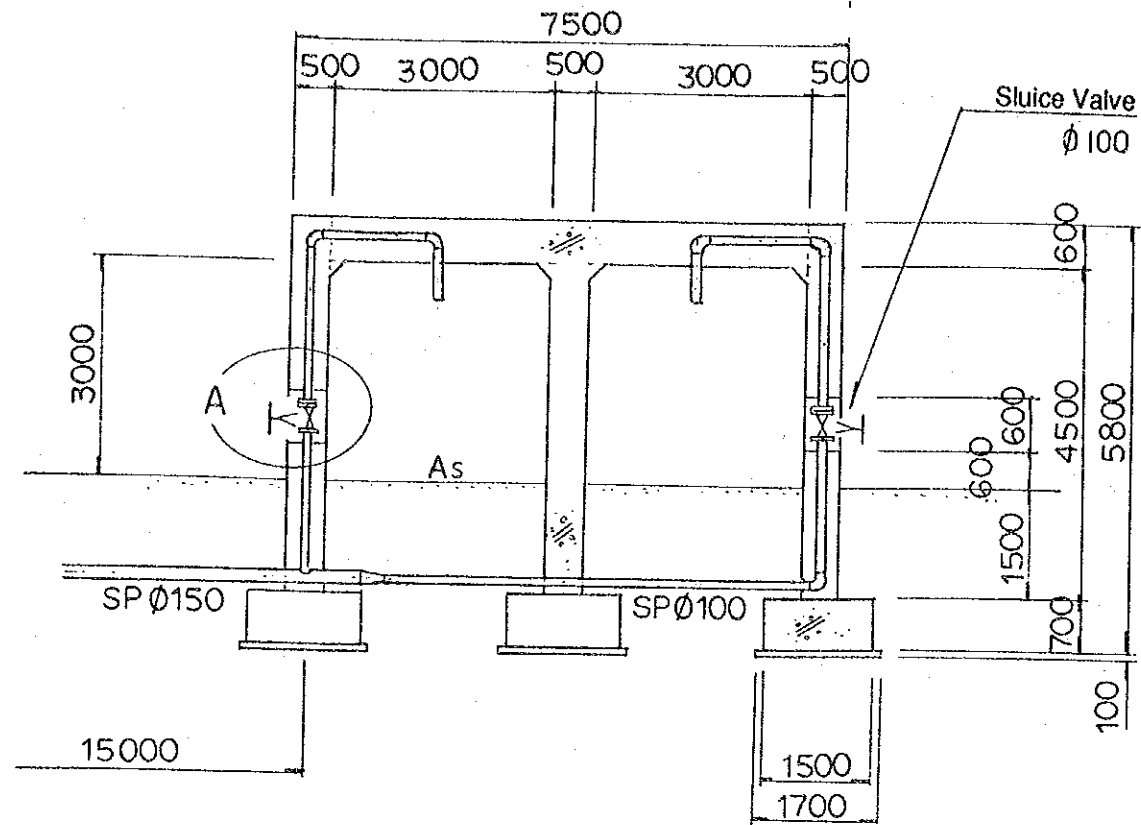
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DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL WATER SUPPLY WATER DISTRIBUTION TOWER (2/2)	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	

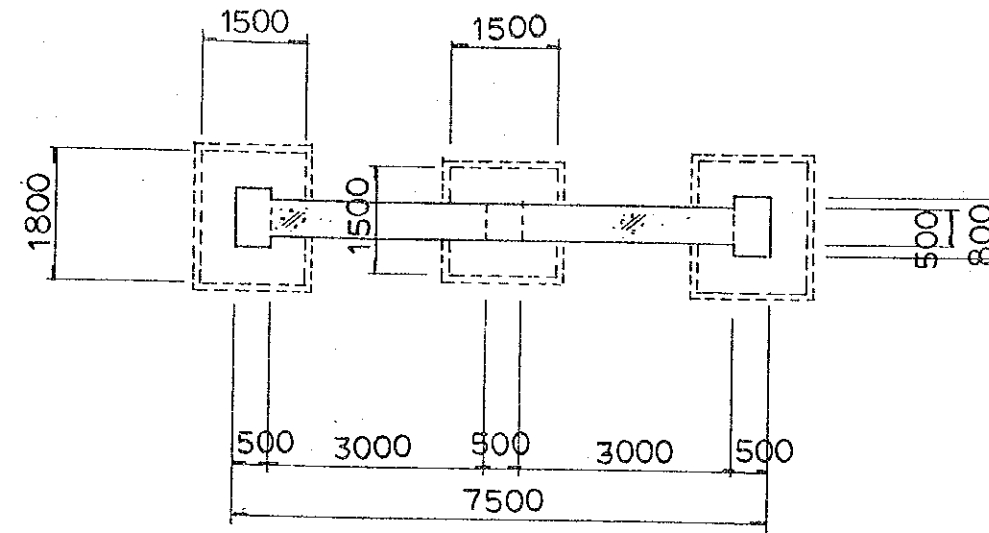
**CROSS SECTION OF HYDRANT STAND**

1:100



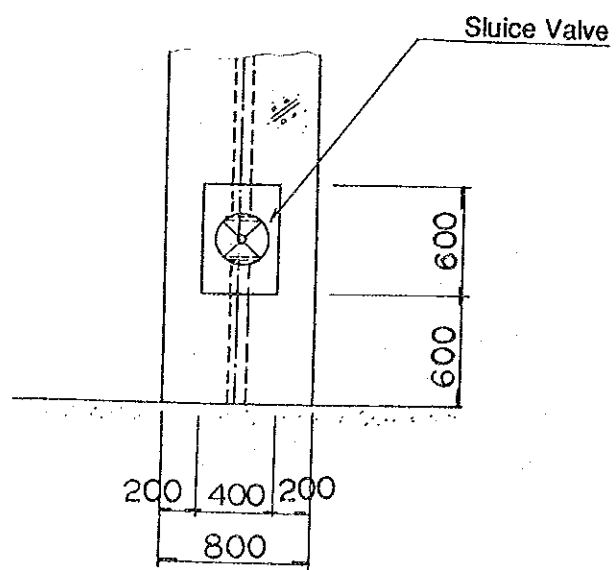
**P L A N**

1:100



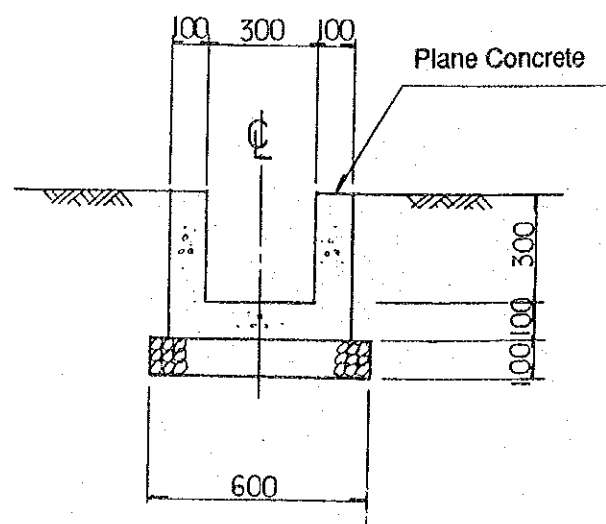
**DETAIL A**

1:40



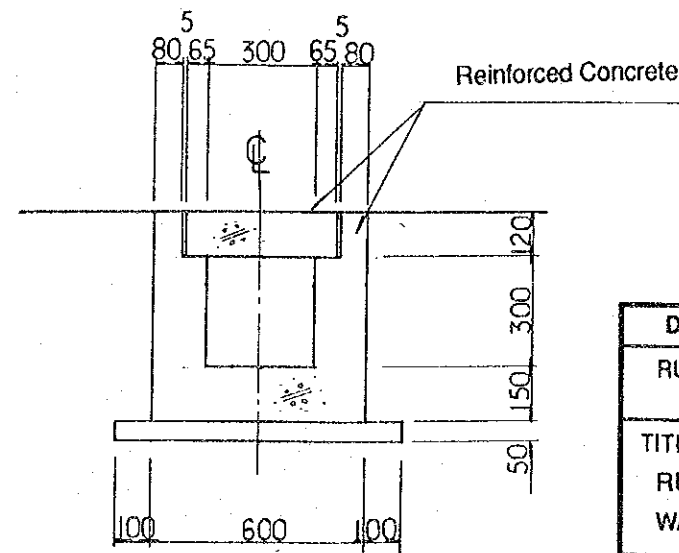
**DRAIN TYPE - A**

1:30

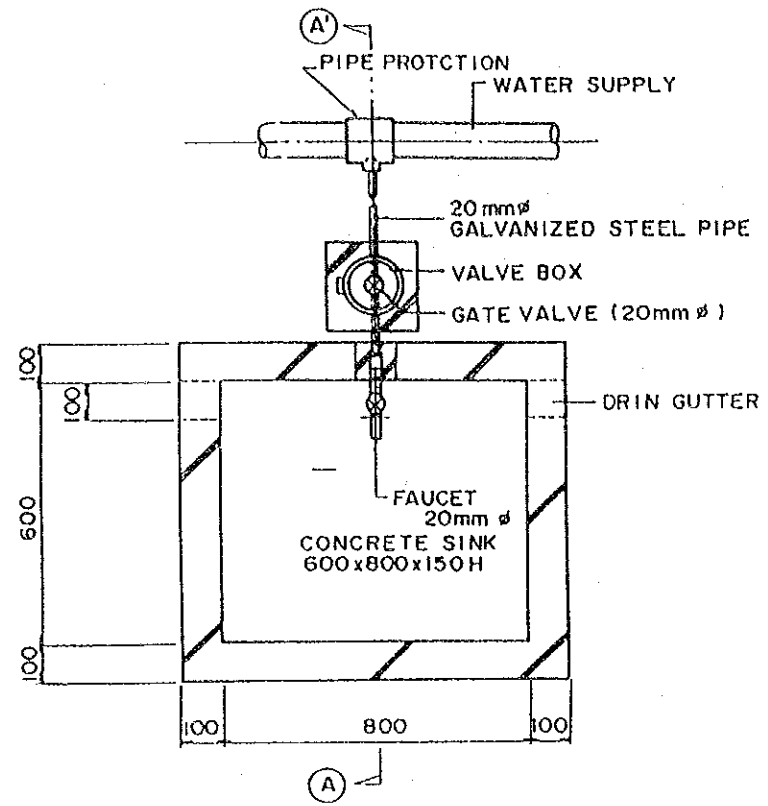


**DRAIN TYPE - B**

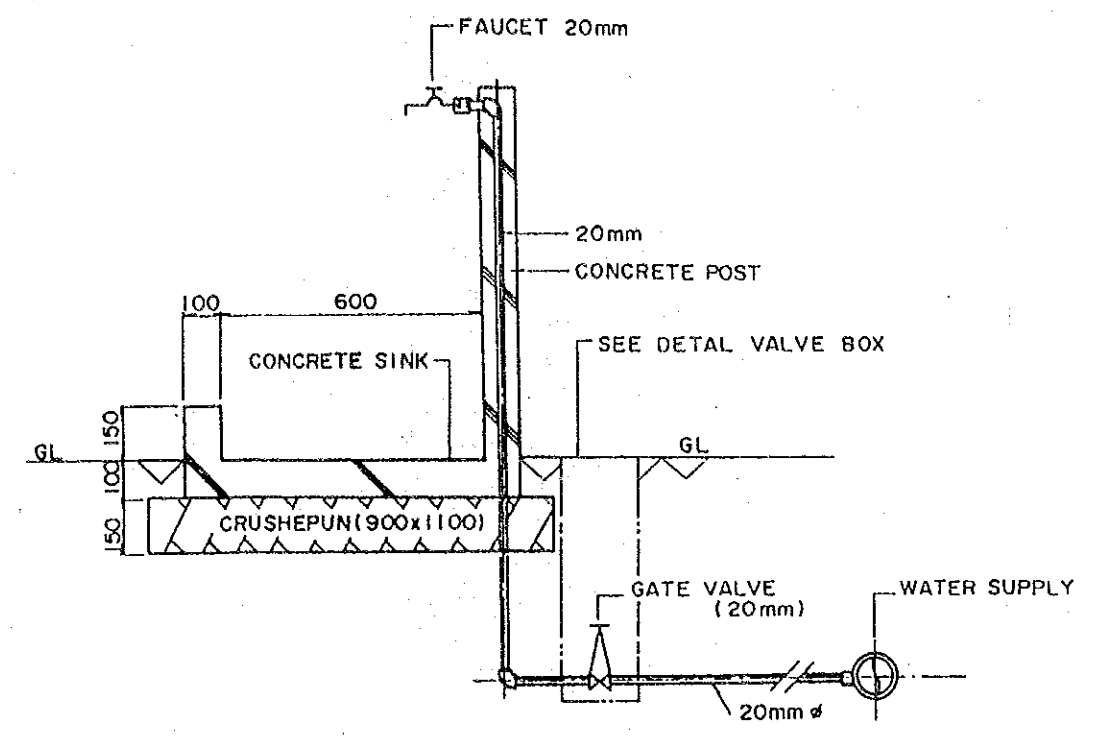
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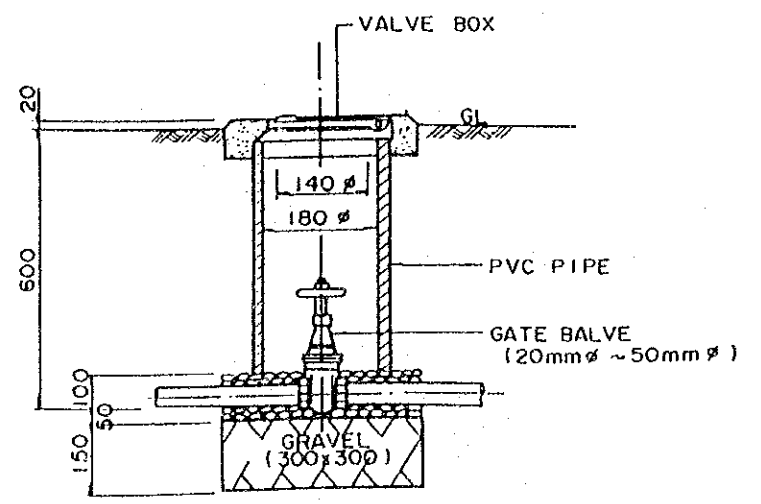
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAVE LEFT BANK AREA	
TITLE OF DRAWING RURAL WATER SUPPLY WATER DISTRIBUTION TOWER / HYDRANT STAND	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	



DETAIL OF FAUCET & SINK  
NO SCALE



A - A SECTION  
NO SCALE



DETAIL OF VALVE BOX  
NO SCALE

DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	
RURAL INFRASTRUCTURE IMPROVEMENT PROJECT IN WALAWE LEFT BANK AREA	
TITLE OF DRAWING RURAL WATER SUPPLY PUBLIC STANDPIPE	
DATE	DRAWING No.
JAPAN INTERNATIONAL COOPERATION AGENCY	





JICA