

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

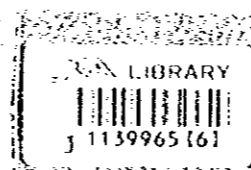
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT  
MINISTRY OF PUBLIC WORKS  
THE REPUBLIC OF INDONESIA

THE STUDY  
ON  
COMPREHENSIVE RIVER WATER MANAGEMENT PLAN  
IN  
JABOTABEK

FINAL REPORT  
VOLUME VIII

DATA BOOK II

(RIVER SURVEY AND TOPOGRAPHIC MAPPING FOR FEASIBILITY STUDY)



NIKKEN CONSULTANTS, INC.  
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT  
MINISTRY OF PUBLIC WORKS  
THE REPUBLIC OF INDONESIA

THE STUDY  
ON  
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FINAL REPORT  
VOLUME VIII

DATA BOOK II  
(RIVER SURVEY AND TOPOGRAPHIC MAPPING FOR FEASIBILITY STUDY)

MARCH, 1997

NIKKEN CONSULTANTS, INC.  
NIPPON KOEI CO., LTD.

**THE STUDY  
ON  
COMPREHENSIVE RIVER WATER MANAGEMENT PLAN  
IN JABOTABEK  
FINAL REPORT**

The Final Report consists of the following:

- VOLUME I : EXECUTIVE SUMMARY**
- VOLUME II : MAIN REPORT (MASTER PLAN)**
- VOLUME III : MAIN REPORT (FEASIBILITY STUDY)**
- VOLUME IV : ANNEXES I**
- |         |                                       |
|---------|---------------------------------------|
| ANNEX 1 | Socio-economy and Economic Evaluation |
| ANNEX 2 | Geology                               |
| ANNEX 3 | River Survey                          |
| ANNEX 4 | Topographic Mapping                   |
| ANNEX 5 | Hydrology                             |
| ANNEX 6 | Flood Control                         |
- VOLUME V : ANNEXES II**
- |          |   |
|----------|---|
| ANNEX 7  | Urban Flooding and Drainage               |
| ANNEX 8  | Design and Cost Estimate                  |
| ANNEX 9  | Water Resources and River Water Quality   |
| ANNEX 10 | Environment                               |
| ANNEX 11 | Comprehensive River Water Management Plan |
| ANNEX 12 | Institutions                              |
- VOLUME VI : SUPPLEMENTAL STUDY**
- VOLUME VII : DATA BOOK I**  
(River Survey and Topographic Mapping for Master Plan)
- VOLUME VIII : DATA BOOK II**  
(River Survey and Topographic Mapping for Feasibility Study)

The costs are estimated based on October 1995 price level and the average exchange rate in October 1995. The average exchange rate in October 1995 is as follows:

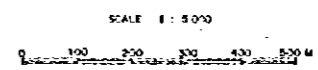
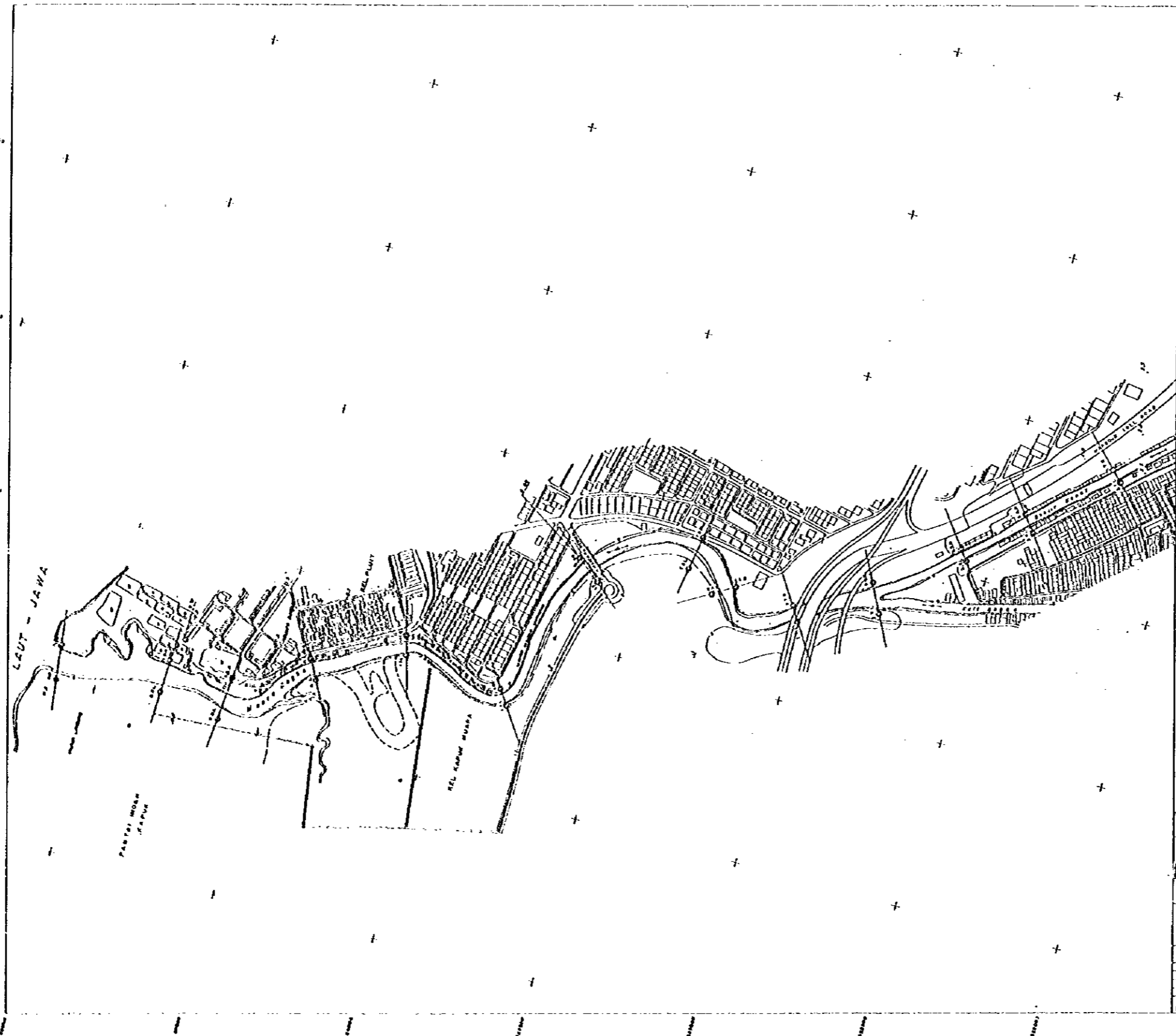
US\$ 1.00 = Rp.2,281  
¥ 1.00 = Rp.22.70

THE STUDY  
ON  
COMPREHENSIVE RIVER WATER MANAGEMENT PLAN  
IN  
JABOTABEK

DATA BOOK II  
RIVER SURVEY AND TOPOGRAPHIC MAPPING  
FOR  
FEASIBILITY STUDY

- 1 River Survey of Western Banjir Canal
- 2 River Survey of Cisadane River
- 3 River Survey of Ciliwung and Cisadane Rivers around Proposed Ciliwung Floodway
- 4 Sounding Survey of Western Banjir Canal and Cisadane River Estuaries
- 5 Topographic Survey along Proposed Ciliwung Floodway
- 6 Topographic Mapping of Cisadane River

# 1 River Survey of Western Banjir Canal

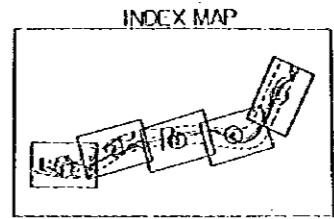


- LEGEND
- |                                |                          |
|--------------------------------|--------------------------|
| ▲ 1:25 Flying Photograph Plate | ⊙ Station                |
| ○ 200 Spot Height              | ⊕ Electric Power Line    |
| ○ 100 Spot Height              | ⊖ Canals and Embankment  |
| ○ 50 Spot Height               | ⊘ Swamp                  |
| ○ 25 Spot Height               | ⊙ Mulch grove            |
| ○ 10 Spot Height               | ⊙ Cultivation area       |
| ○ 5 Spot Height                | ⊙ Chinese grove          |
| ○ 2.5 Spot Height              | ⊙ Paddy Field            |
| ○ 1.25 Spot Height             | ⊙ Boundary of Vegetation |
| □ House                        | ⊙ Field                  |
| ⊙ Mosque                       | ⊙ Forest                 |
| ⊙ Church                       | ⊙ Cliff                  |
| ⊙ Hospital                     | ⊙ Water Side             |
| ⊙ School                       | ⊙ Pond Lake              |
| ⊙ Government Office            | ⊙ Sand                   |
| ⊖ Road                         | ⊙ Land 50%               |
| ⊖ Path                         |                          |
| ⊖ Bridge                       |                          |
| ⊖ Railway                      |                          |

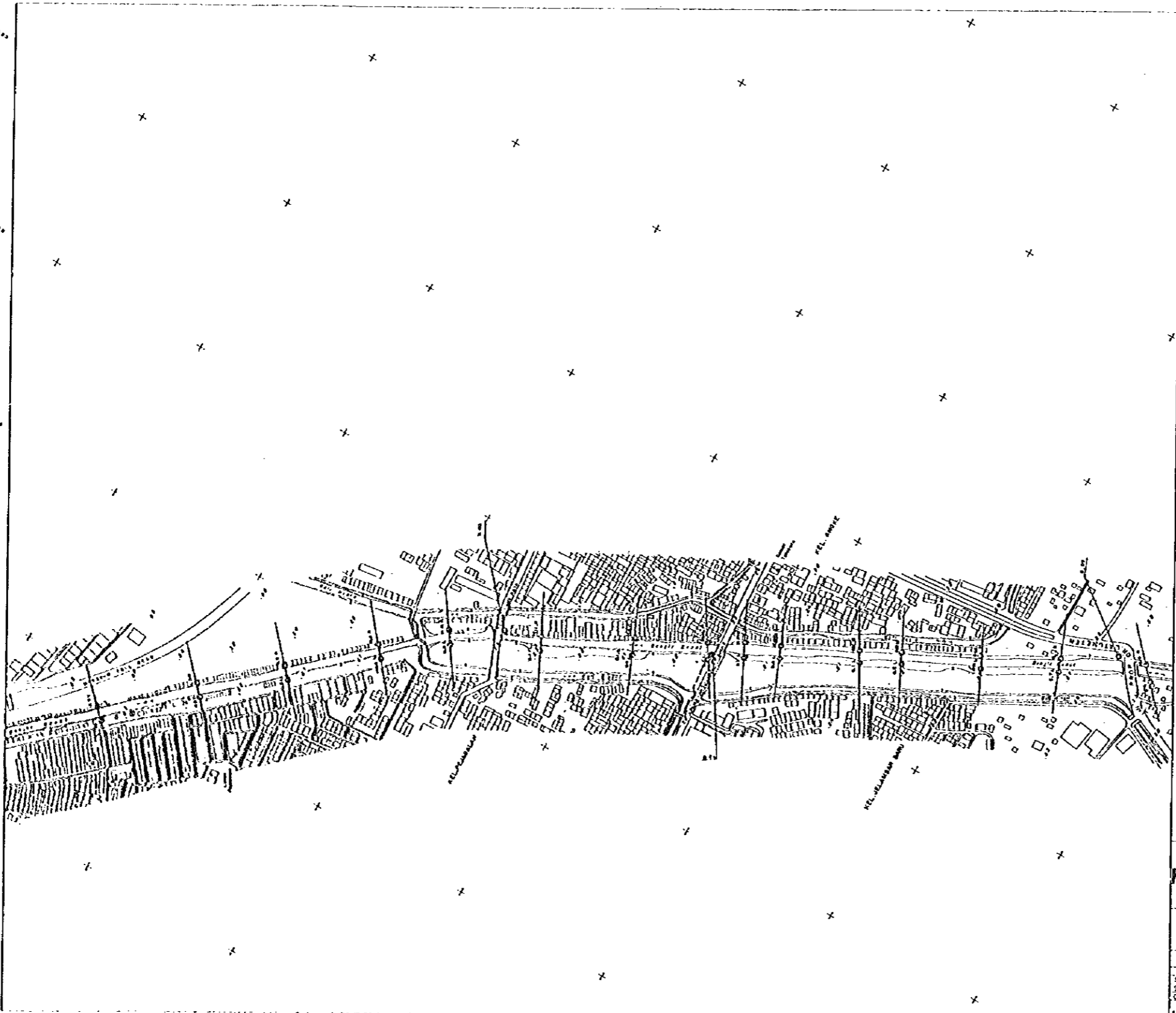
NOTE: X, Y  
M

• Based UTM Zone 48  
• Mean Sea Level (MSL) 170 - 176.25M

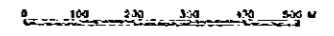
Index Contour : 10 Meter  
Main Contour : 2 meter  
Supplemental Contour : 1 meter  
Aerial Photography : 1:20000  
October 1954



MINISTRY OF PUBLIC WORKS			
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
DIRECTORATE OF RIVERS			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTABEK			
RIVER SURVEY		WESTERN BANJAR CANAL	
		RIDE OF DEANIKS	
		CROSS SECTION -	
		LOCATION	
CONTRACT	PROJECT	SCALE	SHEET No.
2-3-1-10	JICA	1 : 5,000	1/5
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			PT. ATLAS GELTASATYA



SCALE 1:5000

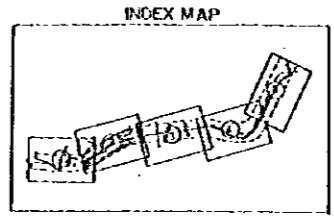


- LEGEND
- ▲ Existing Elevation Point
  - BM Benchmark
  - GPS Point
  - Existing Bank Mark
  - 123 Spot Height
  - 12 Spot Height
  - Concrete Building
  - House
  - Market
  - Church
  - Hospital
  - School
  - Government Office
  - Road
  - Path
  - Bridge
  - Railway
  - Station
  - Cable Power Line
  - Cutting and Embankment
  - Swamp
  - Wetland
  - Chulita cemetery
  - Chinese graves
  - Public Area
  - Boundary of Vegetation
  - Field
  - Forest
  - Canal
  - Water Side
  - Park Side
  - Sand
  - Land Slide

NOTE: 1. X, Y  
2. UTM Zone 48  
3. Mean Sea Level (MSL) 100-110 cm

1:5000 Contour : 10 meter  
1:10000 Contour : 5 meter  
1:20000 Contour : 2 meter  
1:50000 Contour : 1 meter  
1:100000 Contour : 0.5 meter

DATE: October 2008



MINISTRY OF PUBLIC WORKS  
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DIRECTORATE OF RIVERS

THE STUDY ON COMPREHENSIVE RIVER  
WATER MANAGEMENT PLAN IN JABOTABEK

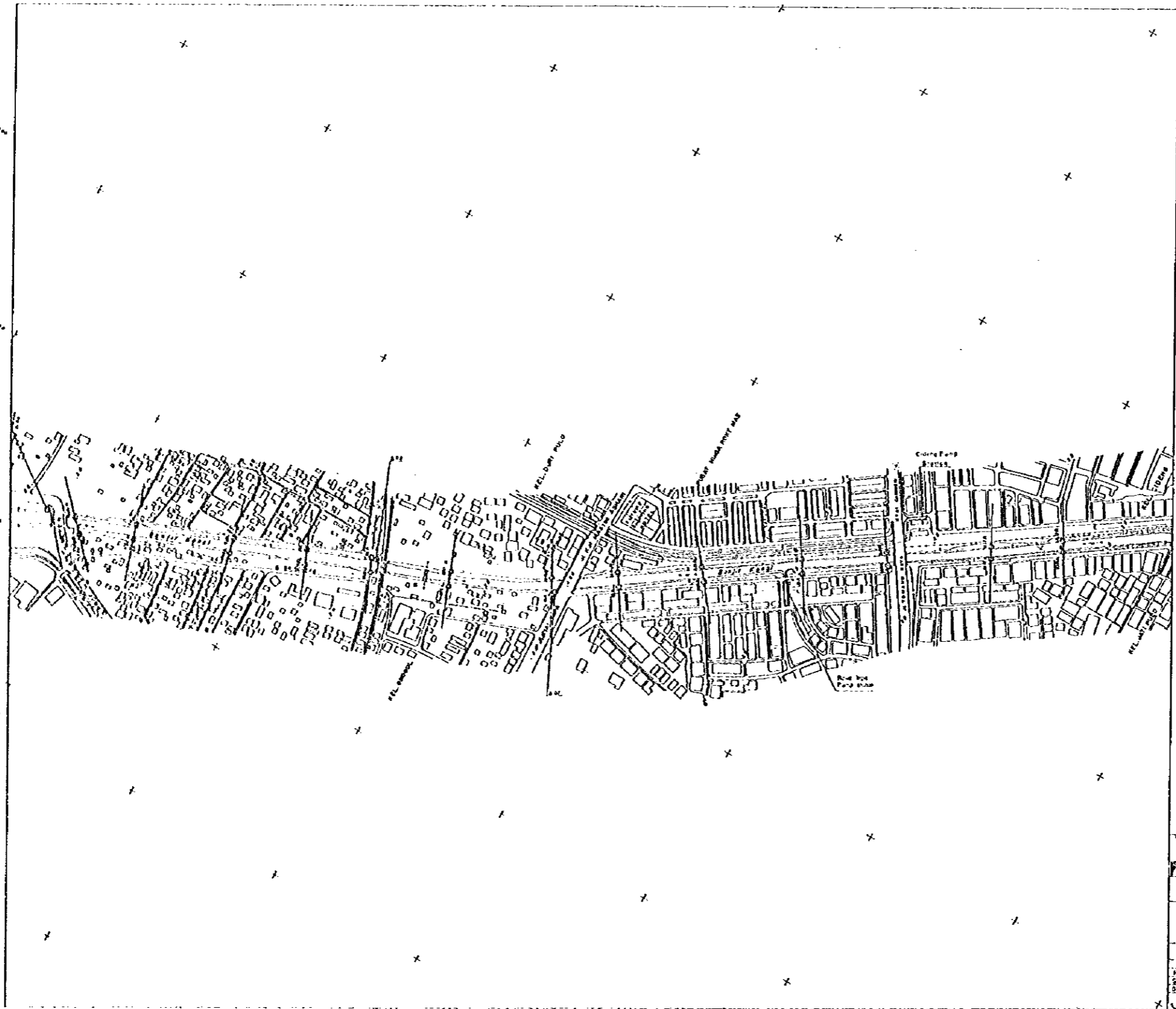
RIVER SURVEY

WESTERN BUNURONAL  
DIRE OF DRAINAGE  
CROSS SECTION -  
LOCATION

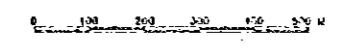
CONTRACT	PROJECT	SCALE	SHEET No.
2008/01/01 - 2008/01/31	2008/01/01 - 2008/01/31	1 : 5,000	2/5

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

PT. ARIAS DELTASATYA



SCALE 1 : 5 000

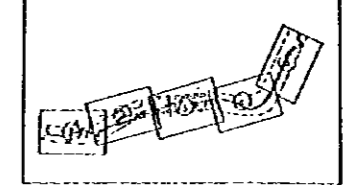


LEGEND

- △ 123 Existing Elevation Point
- 123 Boring Point
- 123 G.P. Point
- 123 Ditch Mark
- 123 Existing Bench Mark
- 123 Check Bench Mark
- 123 Spot Height
- Concrete Building
- House
- Warehouse
- Church
- Hospital
- School
- Government Office
- Road
- - - Path
- Bridge
- Railway
- Foot Path
- Station
- Electric Power Line
- Ditch of Encastment
- Ditch
- Nurture grove
- Orchard grove
- Other grove
- Paddy field
- Boundary of Vegetation
- Field
- Forest
- Grass
- Water hole
- Pond, lake
- Sand
- Land Slope

NOTE: N, V, H  
 1. Actual 1:10,000 Zone 48  
 2. Mean Sea Level (MSL) 170 - 175 251  
 3. 10 meter  
 4. 2 meter  
 5. 1 meter  
 6. 1 : 10000  
 7. October 1954

INDEX MAP



MINISTRY OF PUBLIC WORKS  
 DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT  
 DIRECTORATE OF RIVERS

THE STUDY ON COMPREHENSIVE RIVER  
 WATER MANAGEMENT PLAN IN JABOTABEK

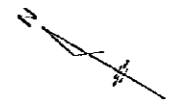
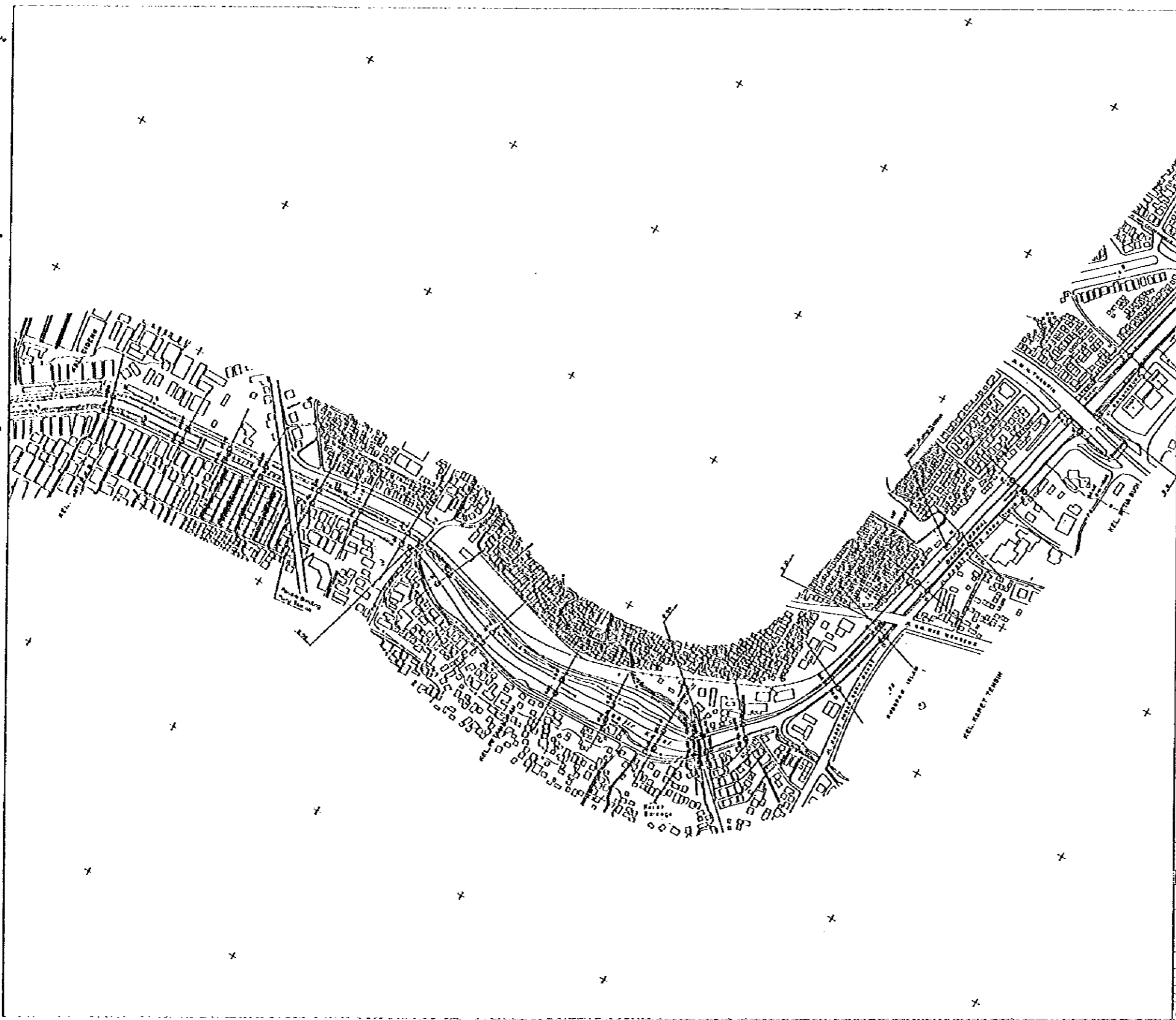
RIVER SURVEY

CONTRACT NO.	PROJECT NO.	SCALE	SHEET NO.
		1 : 5,000	3/5

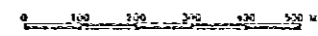
WESTERN BORNEO CANAL  
 LINE OF DRAGON'S  
 CROSS SECTION -  
 LOCATION

JICA JAPAN INTERNATIONAL COOPERATION AGENCY PT. AIRAS DELTASATYA





SCALE : 1 : 5000



LEGEND

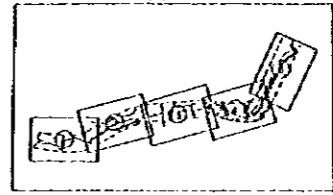
- ▲ 125 Existing Elevation Point
- 123 Bench Mark
- 123 GPS Point
- 123 Existing Bench Mark
- 123 Dead Bench
- 12 Spot Height
- Concrete Building
- House
- Mosque
- Church
- Hospital
- School
- Government Office
- Road
- Park
- Bridge
- Railway
- Four Post Bridge
- Station
- Public Power Line
- Cutting and Embankment
- Swamp
- Urban green
- Urban cemetery
- Urban green
- Paddy field
- Boundary of Vegetation
- Field
- Forest
- Grass
- Water side
- Pond, lake
- Sand
- Land Slope

NOTE : N.T.M  
M

Base UTM Zone 48  
Main Grid Label (170-178 253)

Water Contour : 10 meter  
Main Contour : 5 meter  
Supplemental Contour : 1 meter  
Aerial Photography : 1 : 10000  
October 1994

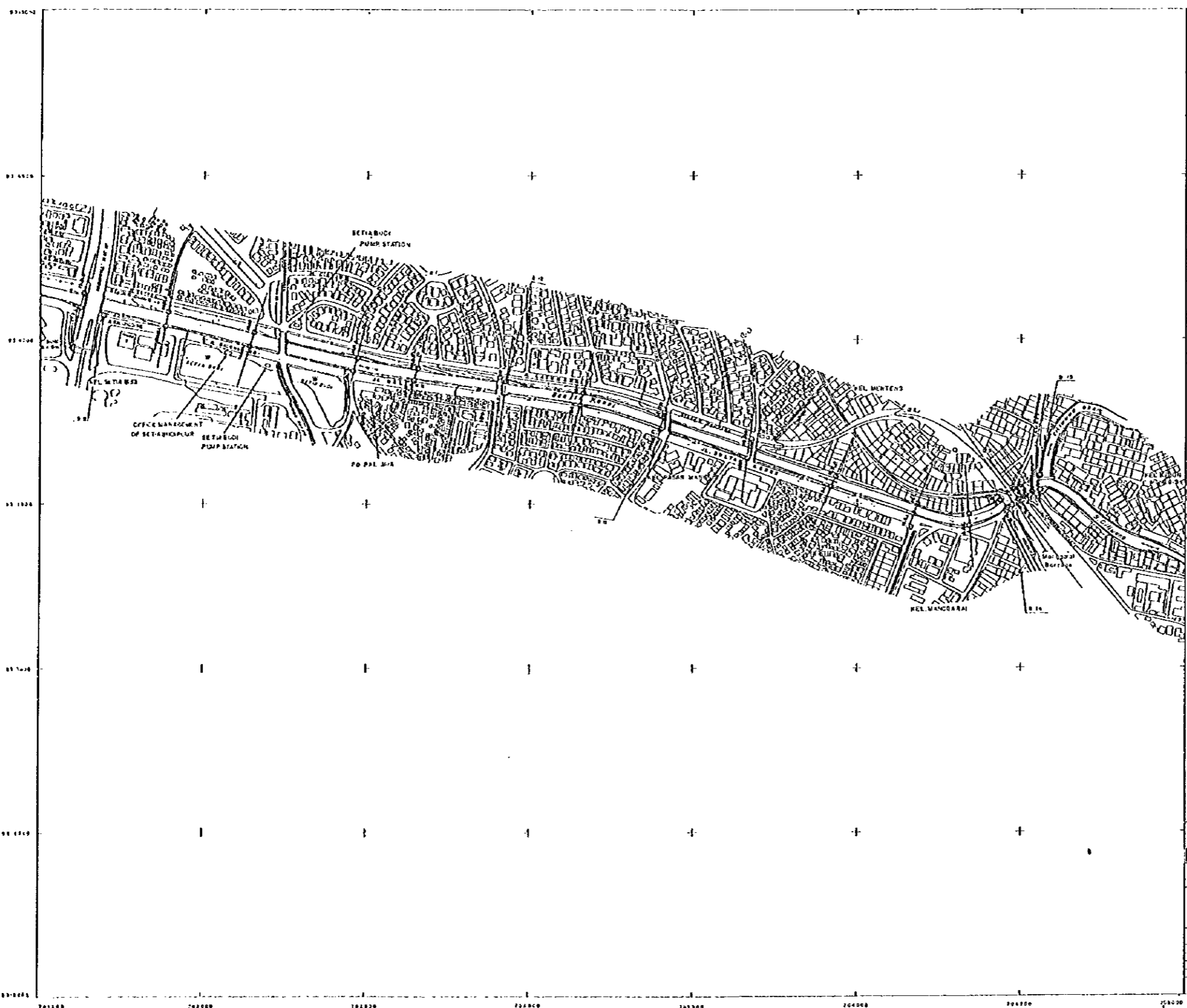
INDEX MAP



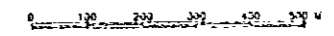
MINISTRY OF PUBLIC WORKS  
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT  
DIRECTORATE OF RIVERS

THE STUDY ON COMPREHENSIVE RIVER  
WATER MANAGEMENT PLAN IN JABOTABEK

RIVER SURVEY		WESTERN BUNIR CANAL	
		LINE OF DRAWING	
		CROSS SECTION --	
		LOCATION	
COMPANY	PROJECT	SCALE	SHEET NO.
JICA	WESTERN BUNIR CANAL	1 : 5,000	4/5
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ARIAS DELTASATIA	



SCALE 1 : 5 000



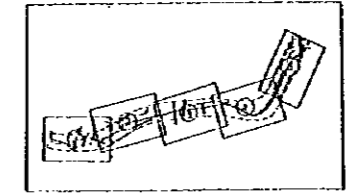
SYMBOLS

- ▲ 103 Existing Inter-plant Pipe
- 500 B-W Pipe
- 100 G.P. Pipe
- 450 Drainage Mark
- 254 Existing Branch Mark
- 125 Drain Mark
- 12 Spot Light
- Concrete Building
- House
- ⊕ Mosque
- ⊕ Church
- ⊕ Hospital
- ⊕ School
- ⊕ Government Office
- Road
- - - Path
- ≡ Bridge
- ≡ Railway
- ⊕ Station
- Electric Power Line
- ⊕ Cutting and Embankment
- ⊕ Slump
- ⊕ Water gate
- ⊕ Chinese cemetery
- ⊕ Chinese graves
- ⊕ Paddy field
- ⊕ Boundary of Vegetation
- ⊕ Field
- ⊕ Factory
- ⊕ Grass
- ⊕ Water hole
- ⊕ Pond, Lake
- ⊕ Sand
- ⊕ Land Sale

NOTE : X, Y : Spher. UTM Zone 48  
 H : Mean Sea Level (110 170-170 225)

- Index Contour : 10 msw
- Main Contour : 2 msw
- Supplemental Contour : 1 meter
- Aerial Photography : 1 : 10 000  
 October 1954

INDEX MAP



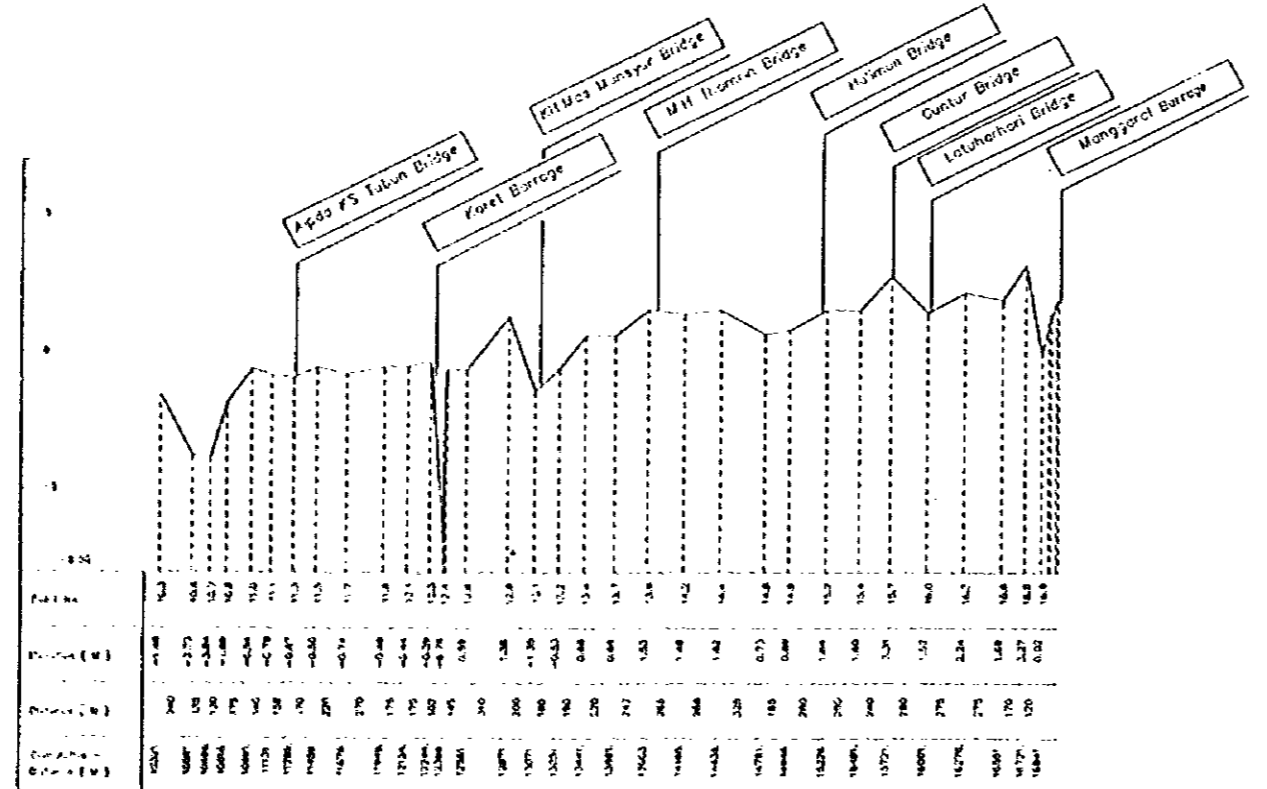
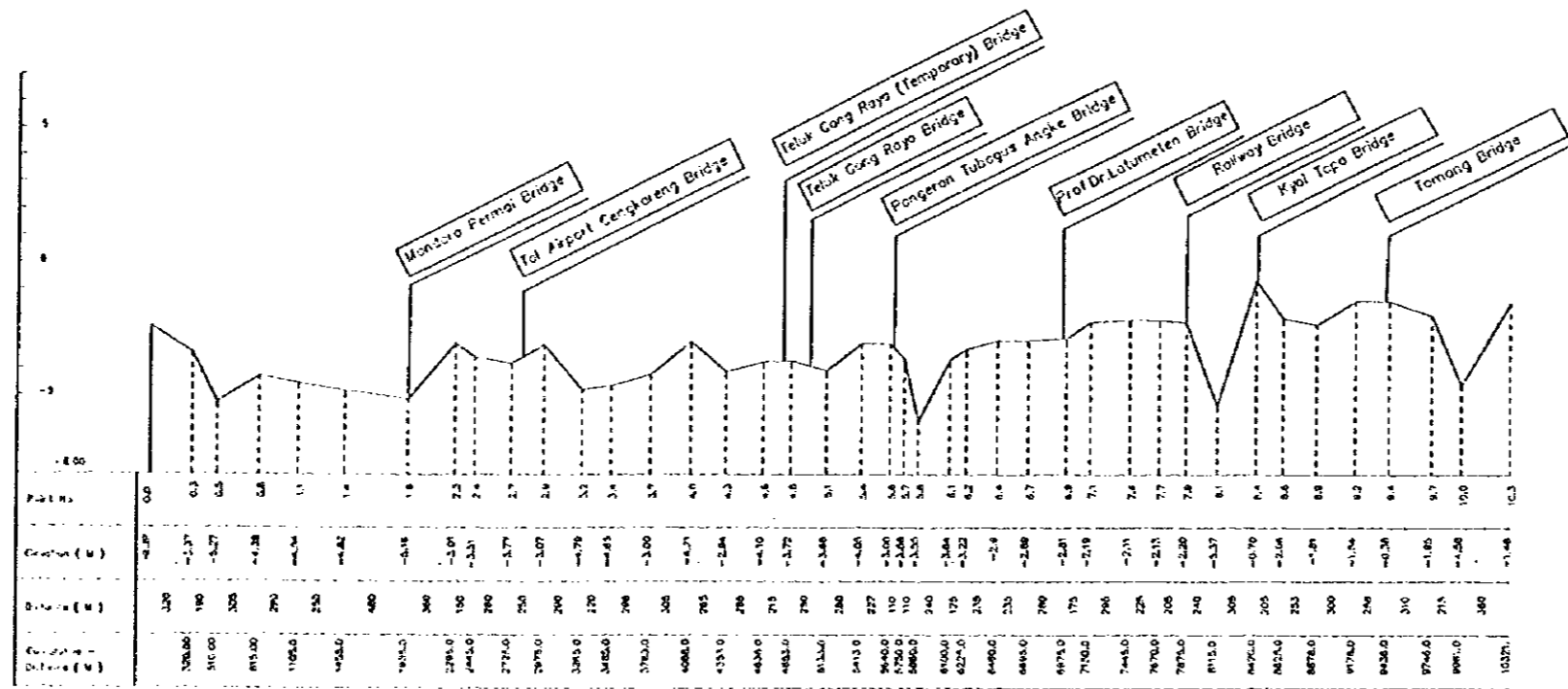
MINISTRY OF PUBLIC WORKS  
 DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT  
 DIRECTORATE OF RIVERS

**THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK**

**RIVER SURVEY**      WESTERN BANK CANAL  
 DUNE OF DRAGONS  
 CROSS SECTION - LOCATION

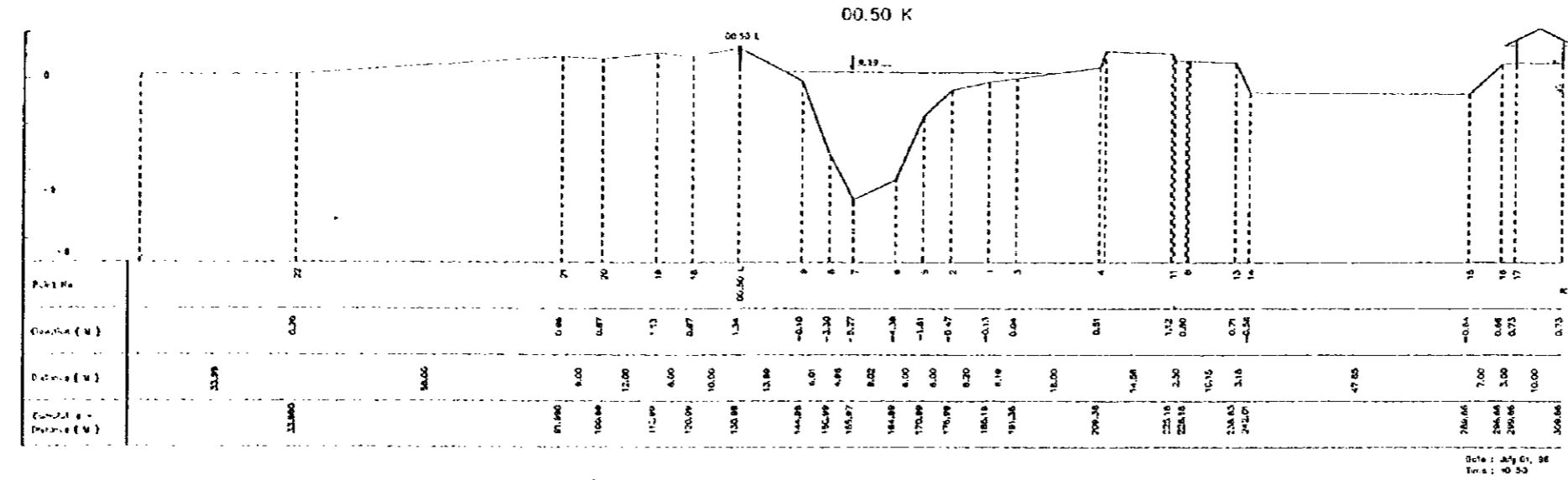
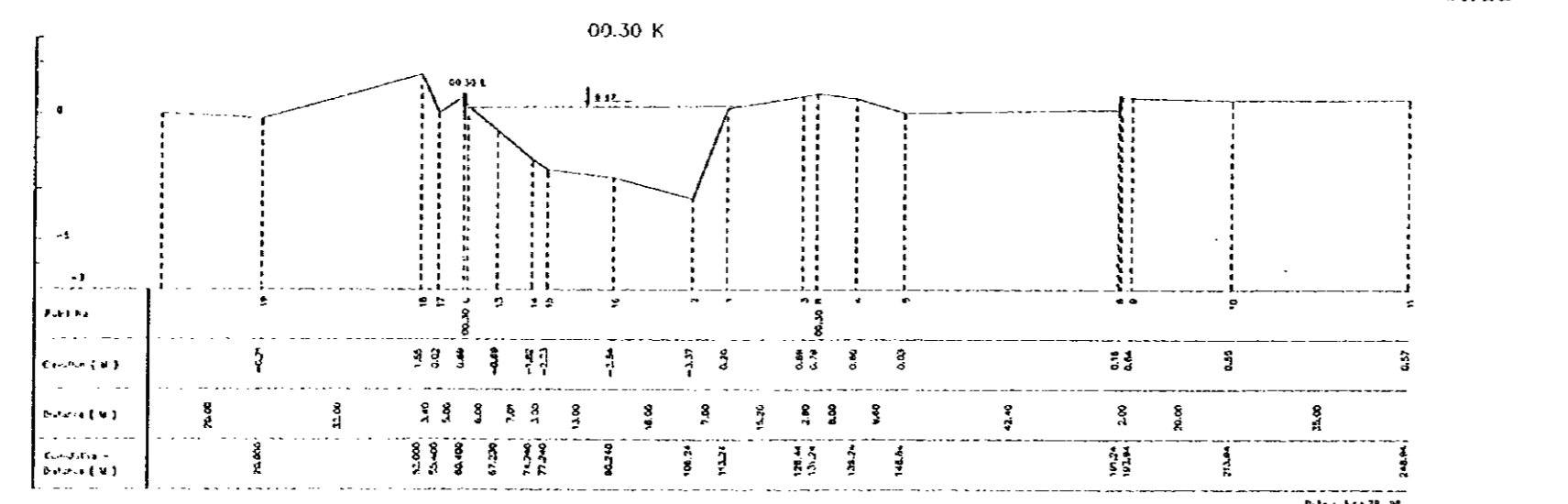
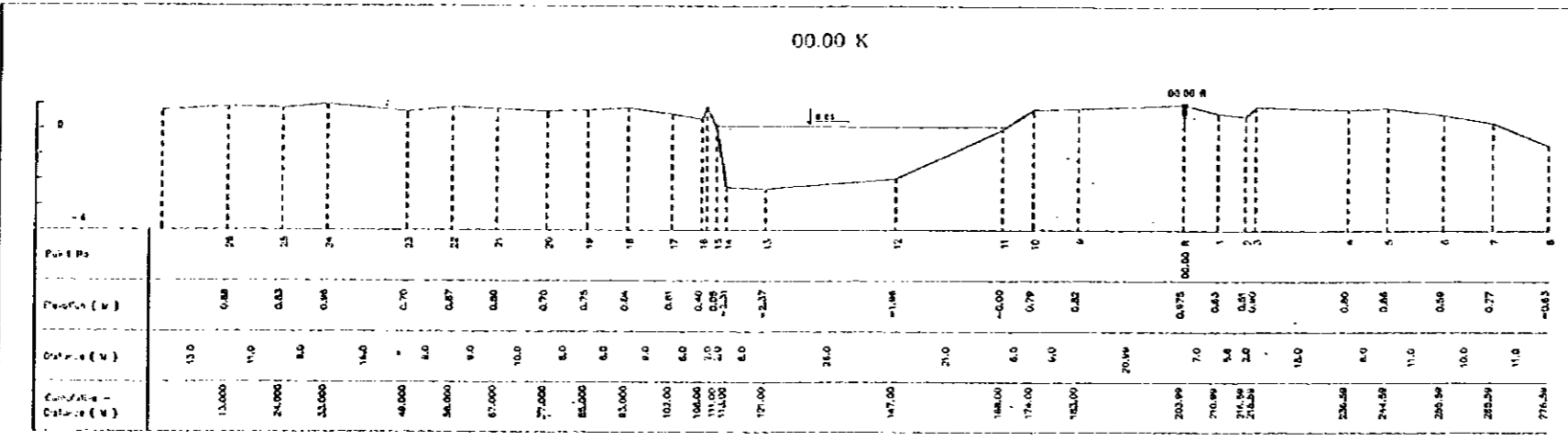
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Pt. ATLAS DELTASATYA



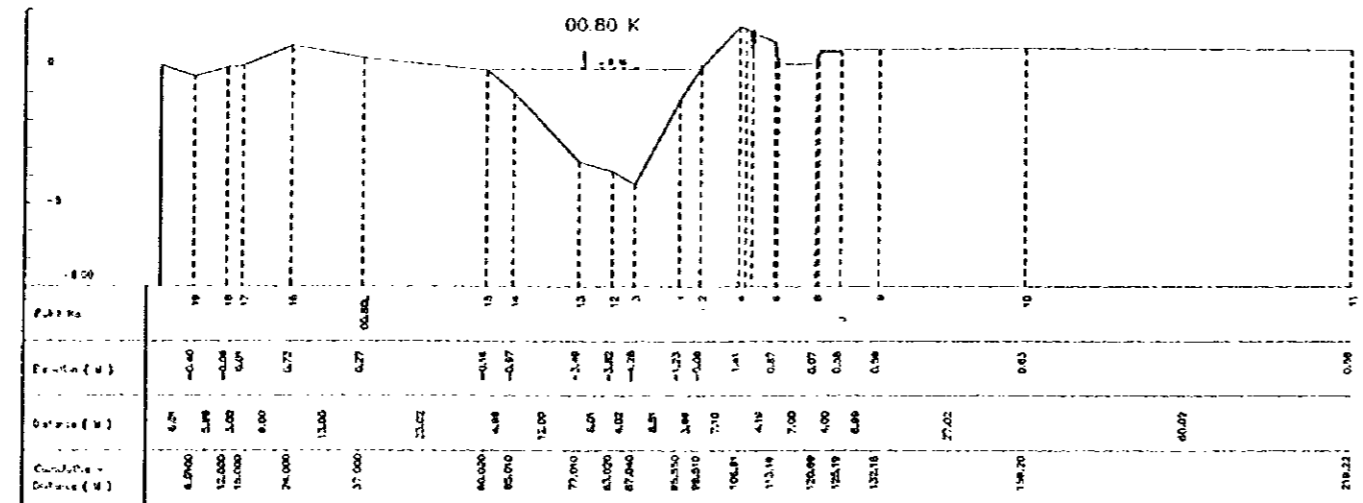
Note: Elevation is based on Mean Sea Level ( TIG )

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT DIRECTORATE OF RIVERS			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BAITAK CANAL	
		LINE OF GRAPHIC	
		LONGITUDINAL PROFILE	
NAME	CHECKED	APPROVED	SCALE
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DATE			V = 1:100
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ARAS DELTASATYA	

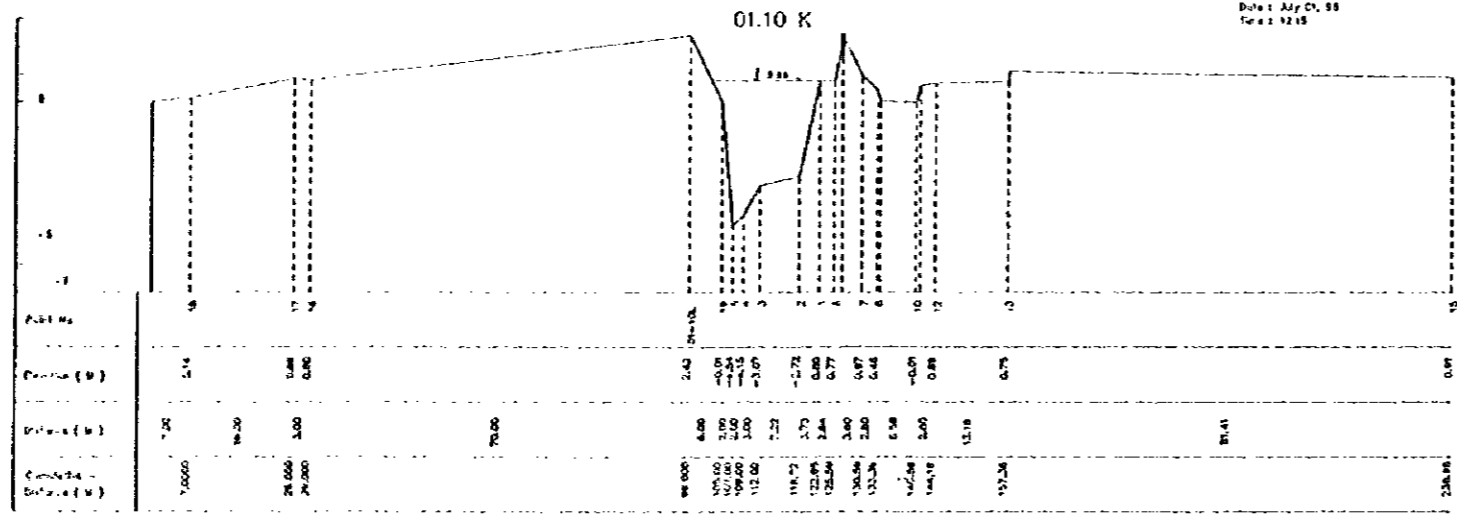


Scale: Elevation based on Mean Sea Level (100)

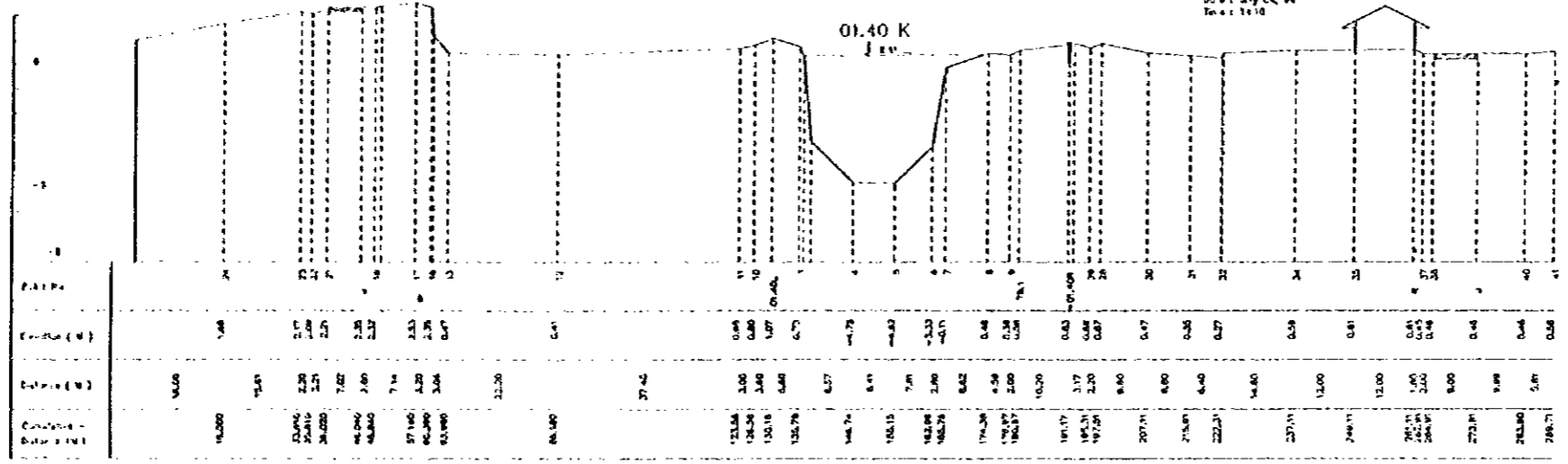
MINISTRY OF PUBLIC WORKS		DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BANJUR CANAL	
CROSS SECTION		CROSS SECTION	
Checked	Approved	Scale	Sheet No.
Y. S. S.	Y. S. S.	H = 1 : 500	1 / 38
JICA		PT. ATLAS DELTASATYA	



Date: July 01, 98  
Time: 12:15



Date: July 04, 98  
Time: 13:10



Date: July 01, 98  
Time: 11:05

Note: Elevation is based on Mean Sea Level (MSL)

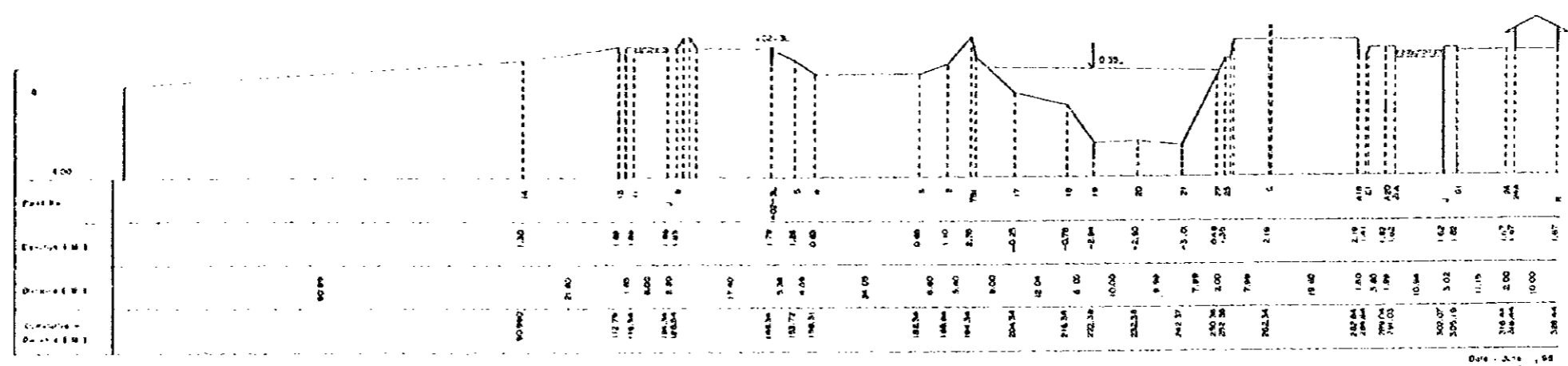
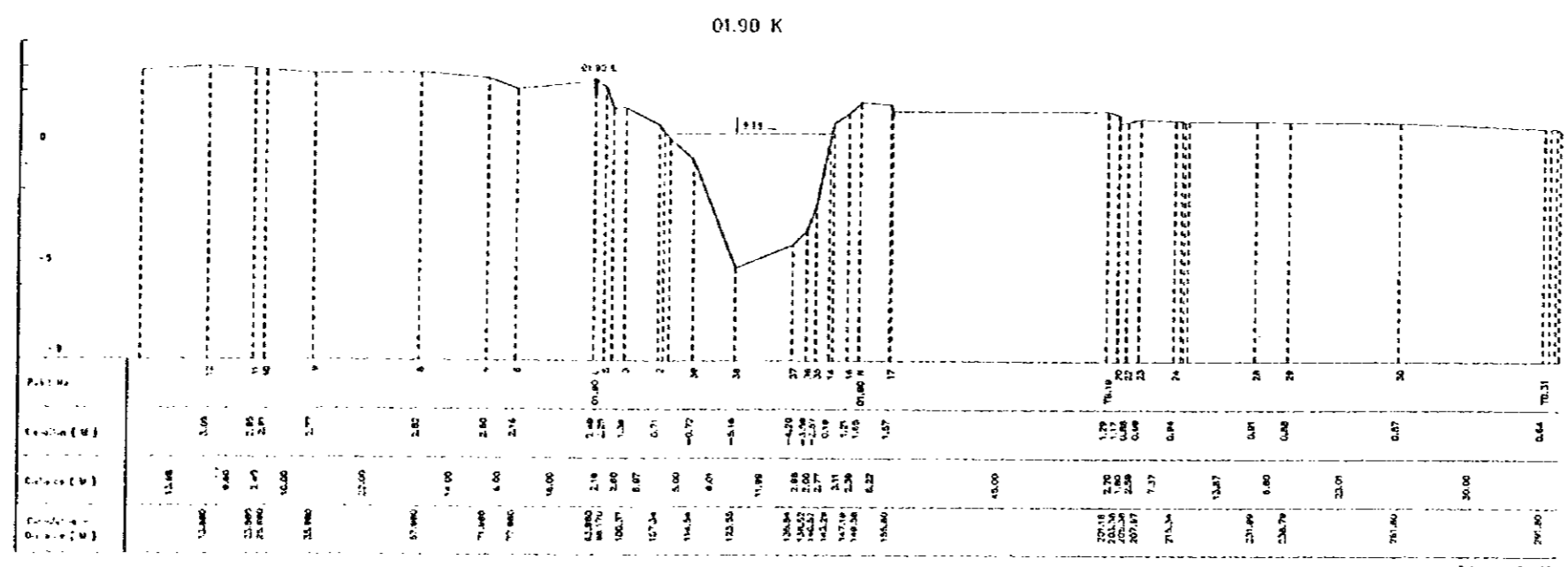
MINISTRY OF PUBLIC WORKS  
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT

THE STUDY ON COMPREHENSIVE RIVER  
WATER MANAGEMENT PLAN IN JABOTABEK

RIVER SURVEY WESTERN BANJAR CANAL  
SITE OF DRAWING

Scale	Horizontal	Vertical	Sheet No.
H = 1 : 500	V = 1 : 100		2 / 38

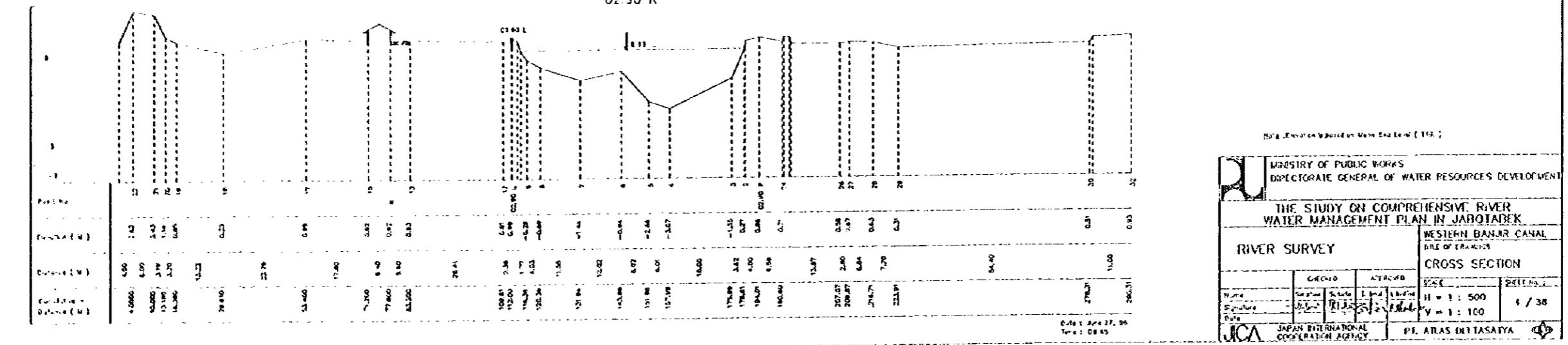
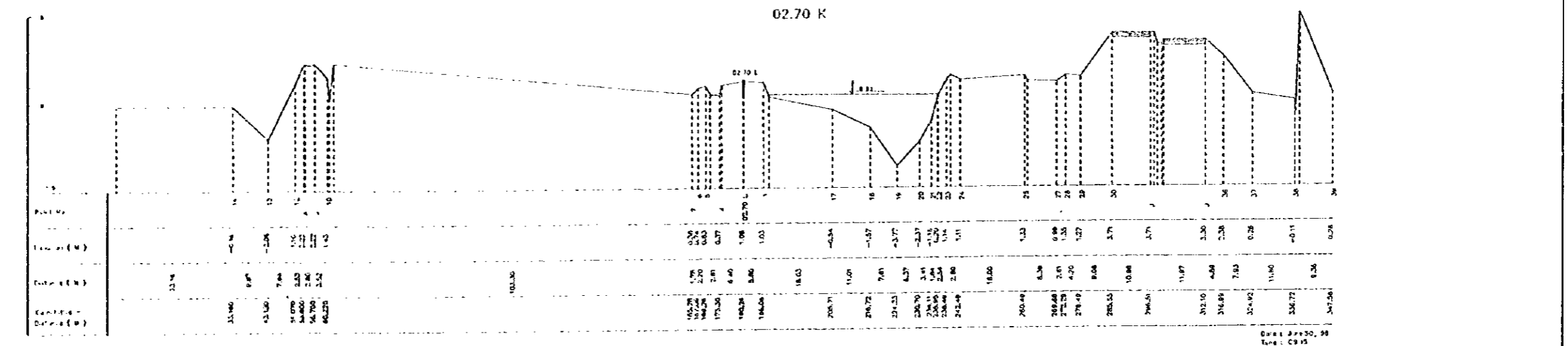
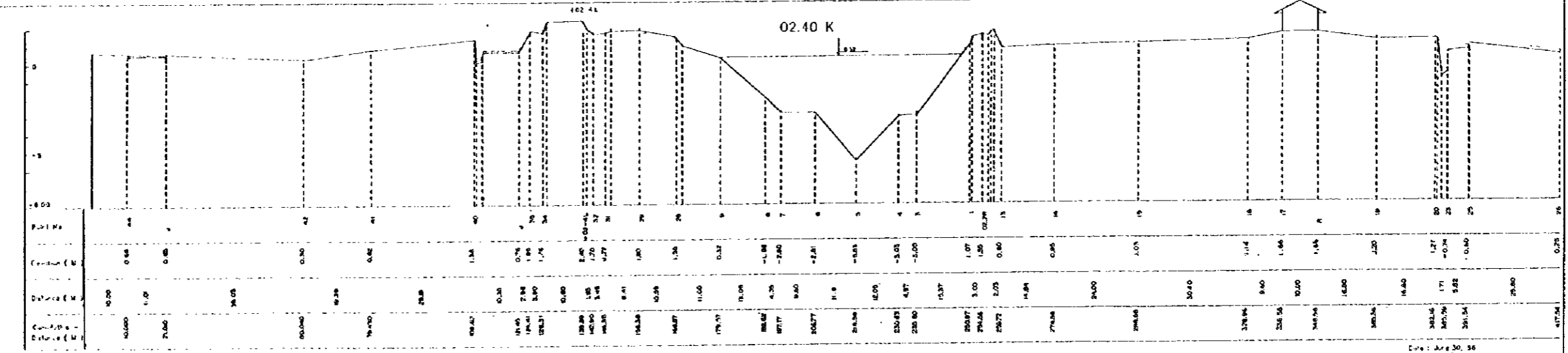
JICA JAPAN INTERNATIONAL COOPERATION AGENCY  
PI. ATLAS ECL TJA



Date: 2-14-64  
Time: 11:00

Date Checked based on M.M. Scale (1:10)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BAWIR CANAL TRAFFIC BRIDGE	
		CROSS SECTION	
Checked	Approved	Scale	Sheet No.
None	None	11 = 1 : 500	3 / 38
Signature	Signature	12 = 1 : 100	
Date	Date		
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ATLAS DELTASATA	



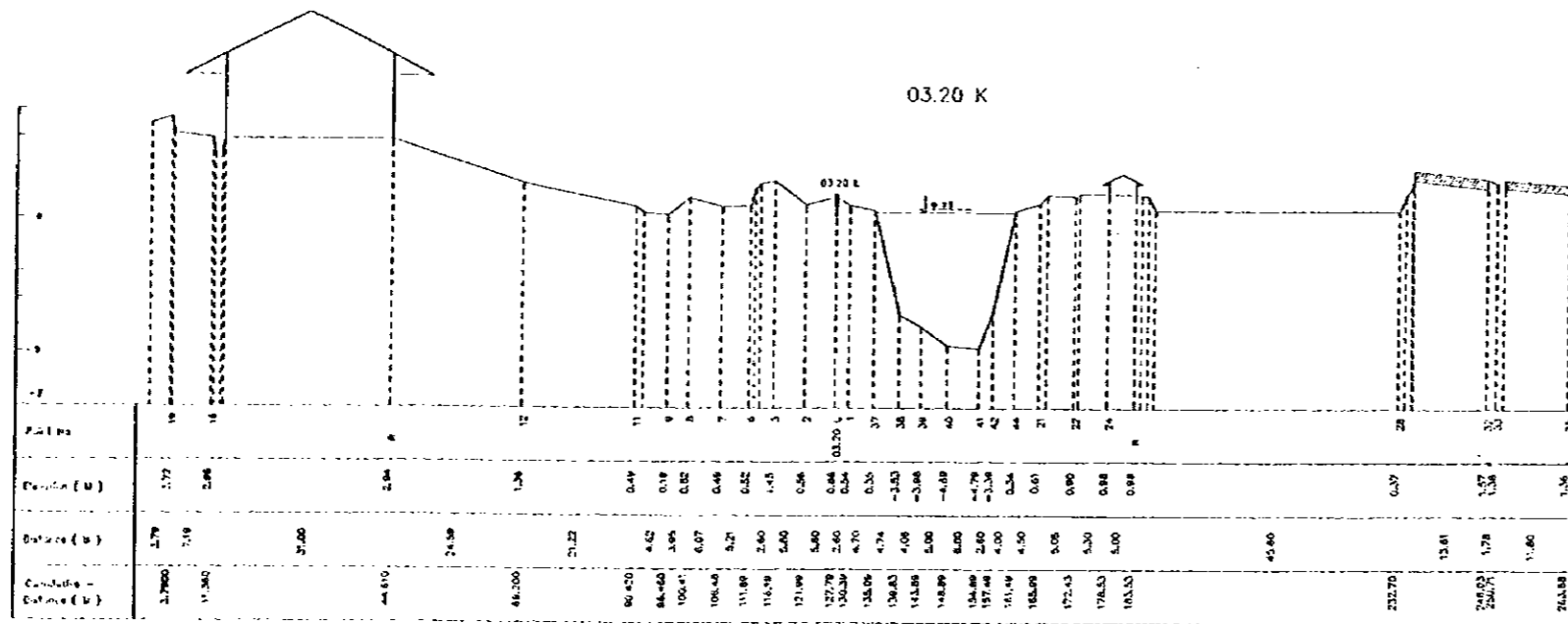
No. Revision 001 on New Title (1/1)

MINISTRY OF PUBLIC WORKS  
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT

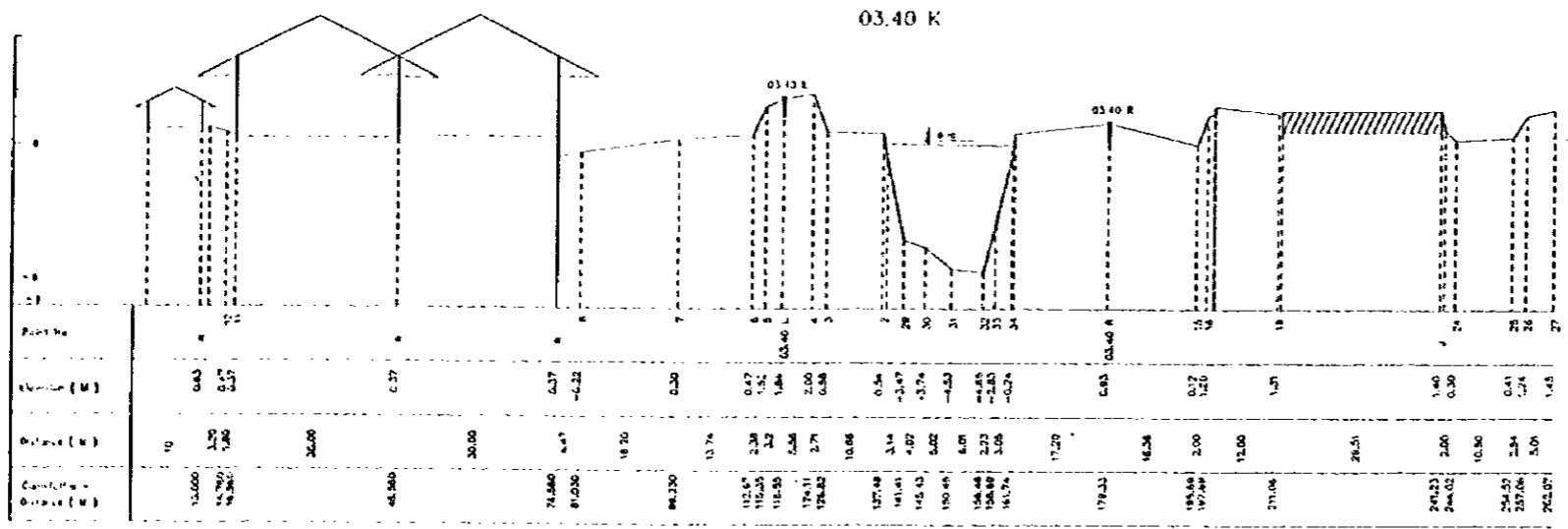
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK  
WESTERN BANJAR CANAL  
SITE OF FRANKS  
CROSS SECTION

Scale	H = 1 : 500 V = 1 : 100	Sheet No.	4 / 38
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JICA JAPAN INTERNATIONAL COOPERATION AGENCY PT. ATLAS BINTASATYA



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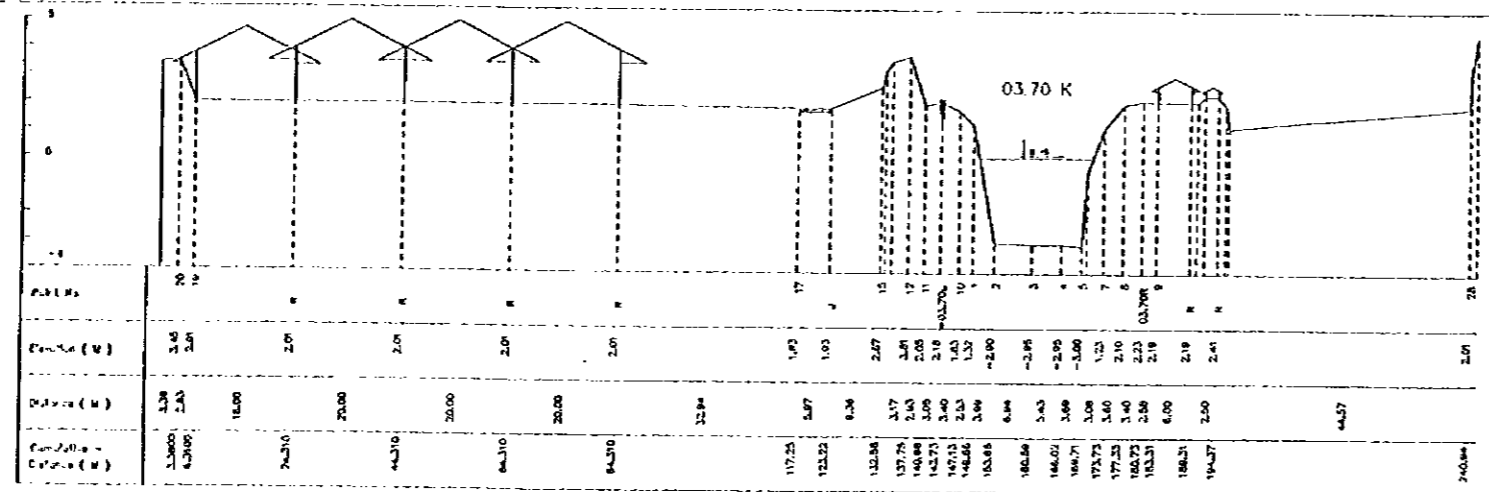


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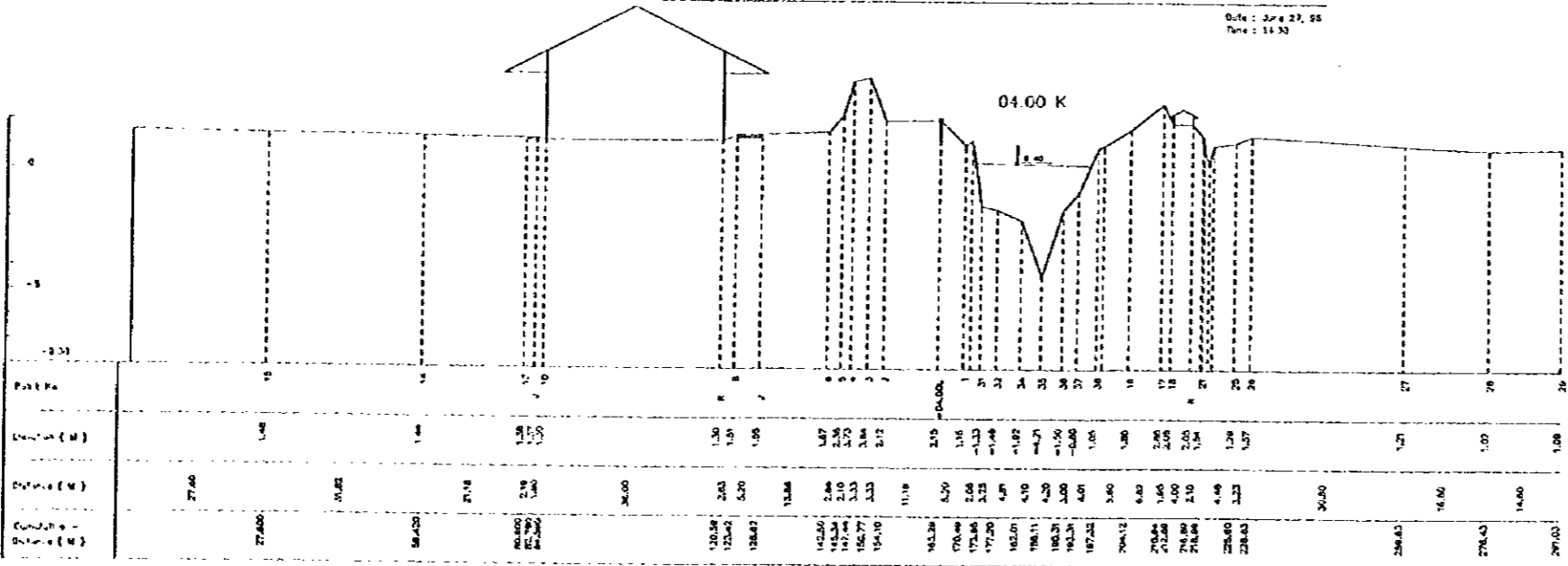
Note: Elevation based on Mean Sea Level (MSL)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT		WESTERN BANJIR CANAL KURE OF BANJIR-05	
RIVER SURVEY		CROSS SECTION	
NO. 0000	APPROVED	SCALE	SHEET 2 / 1
Name: [Signature]	Name: [Signature]	11 to 1 : 500	5 / 38
Signature: [Signature]	Signature: [Signature]	V = 1 : 100	
Date: [Date]	Date: [Date]	P. ATLAS DELTASATYA	
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			

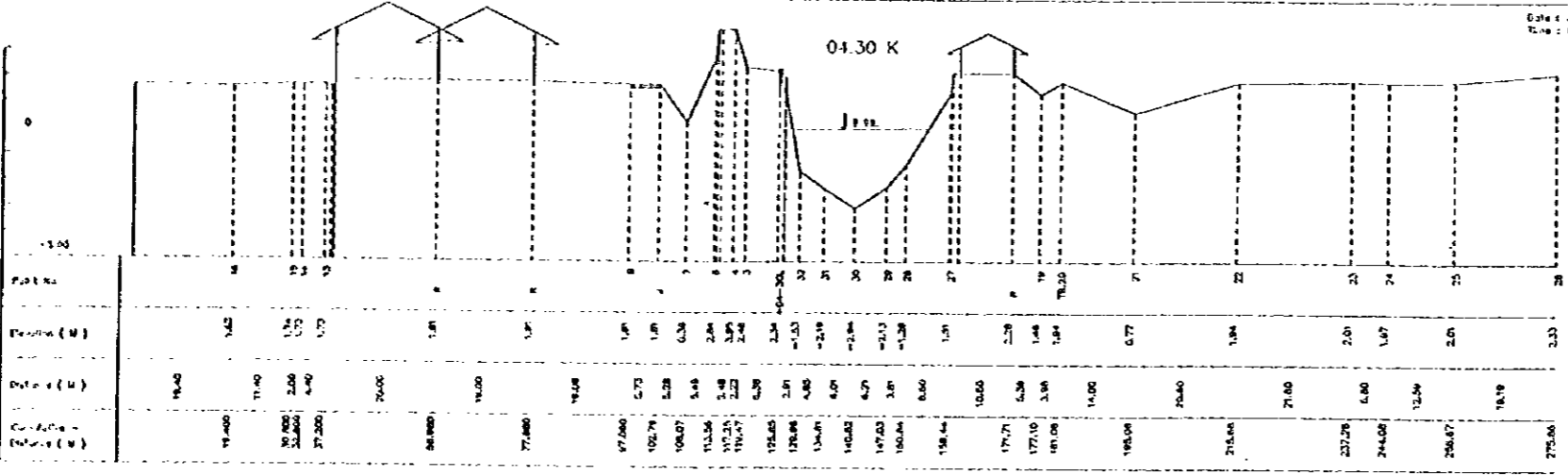




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Time: 14:30



Date: June 27, 98  
Time: 09:30

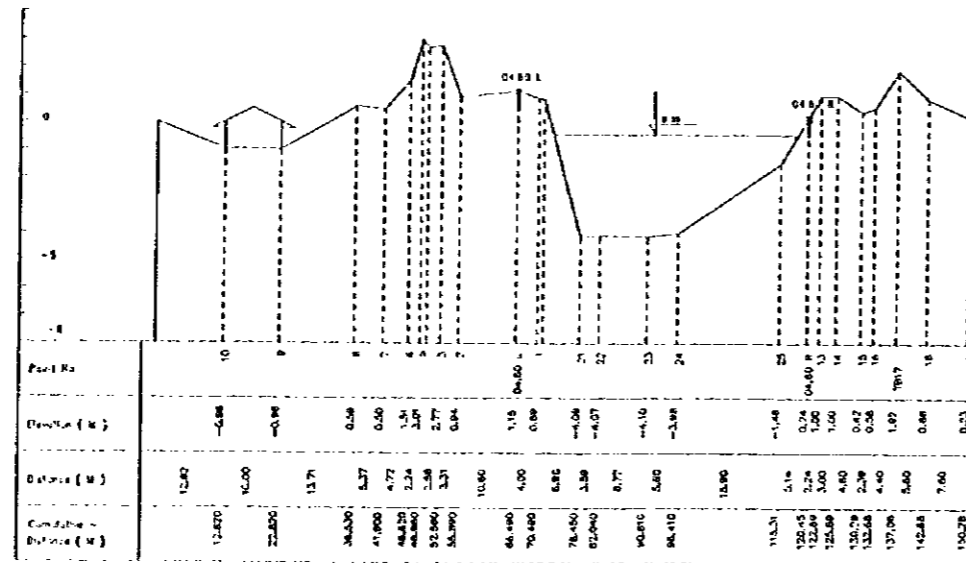


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Note: Elevation is based on Mean Sea Level (MSL)

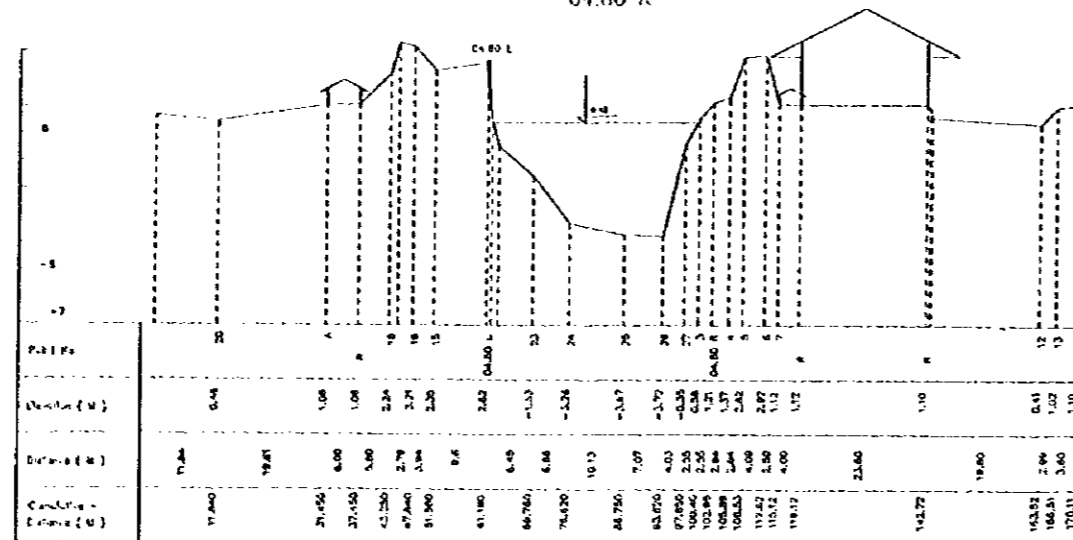
MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BANJAR CANAL SITE OF DRAWINGS	
CROSS SECTION		SCALE	
Name: _____		H = 1 : 500	
Signature: _____		V = 1 : 100	
Date: _____		6 / 38	
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		P.T. ATLAS DELTASATYA	

04.60 K



Scale: 1:500  
Date: 12/15

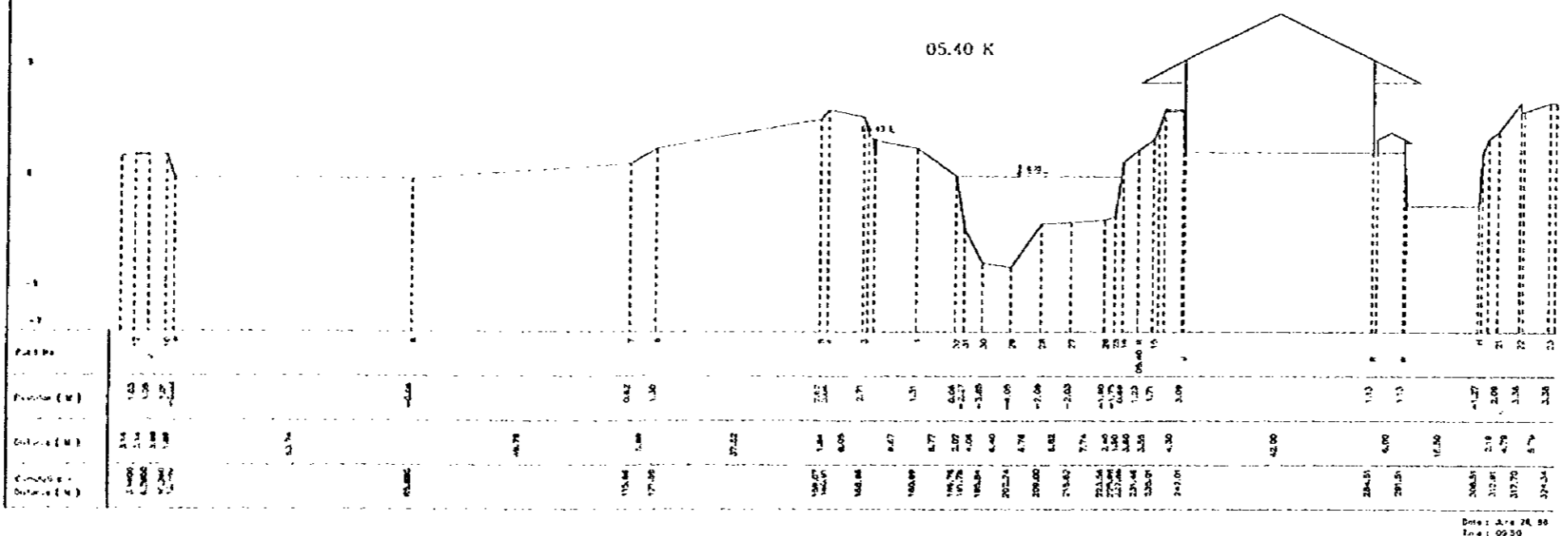
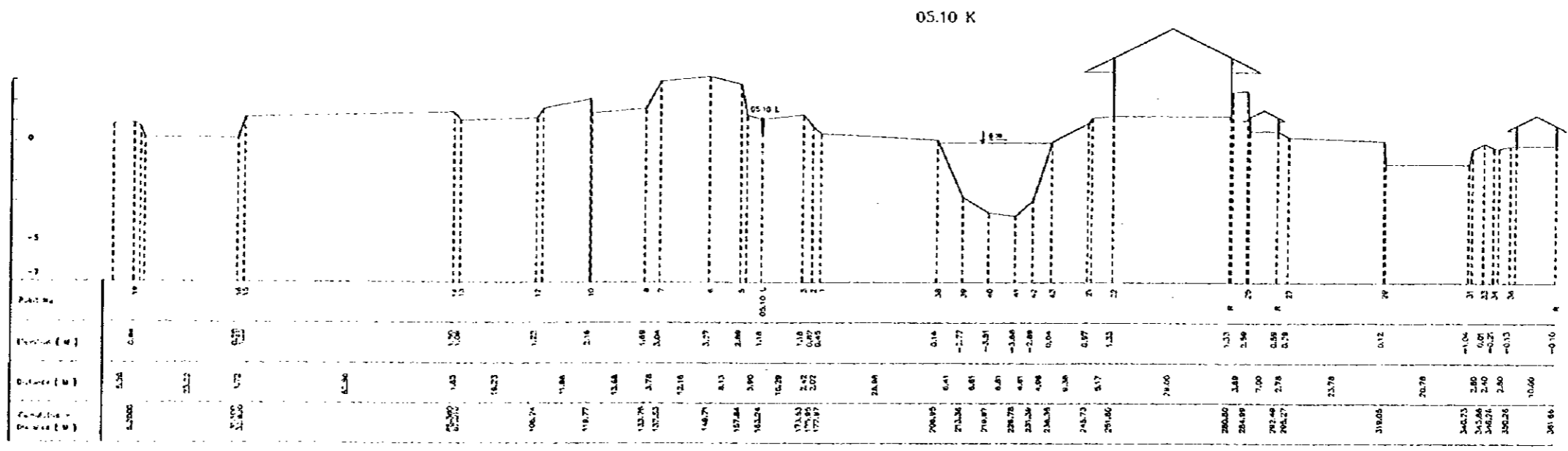
04.80 K



Scale: 1:500  
Date: 12/20

Note: Elevation Based on Mean Sea Level (MSL)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT		WESTERN BANJUR CANAL	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTABEK		DATE OF DRAWING	
RIVER SURVEY		CROSS SECTION	
DESIGNED	APPROVED	SCALE	SHEET No.
Name	Signature	H = 1 : 500 V = 1 : 100	7 / 38
Date			
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		P.T. ATLAS OCELTASATYA	



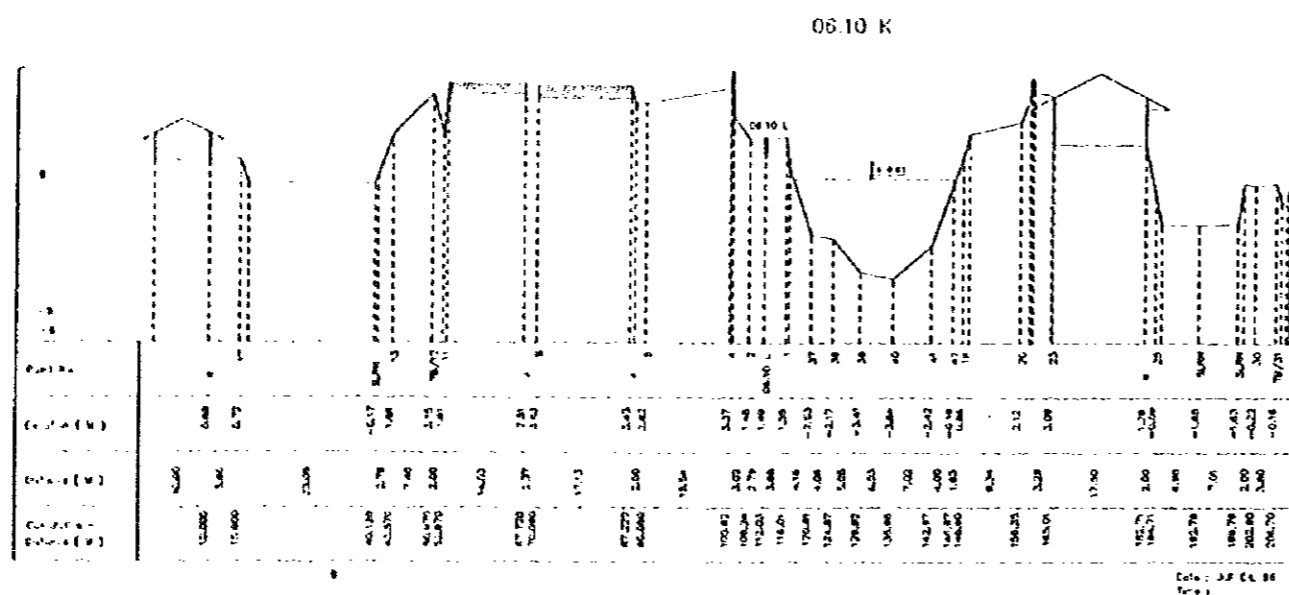
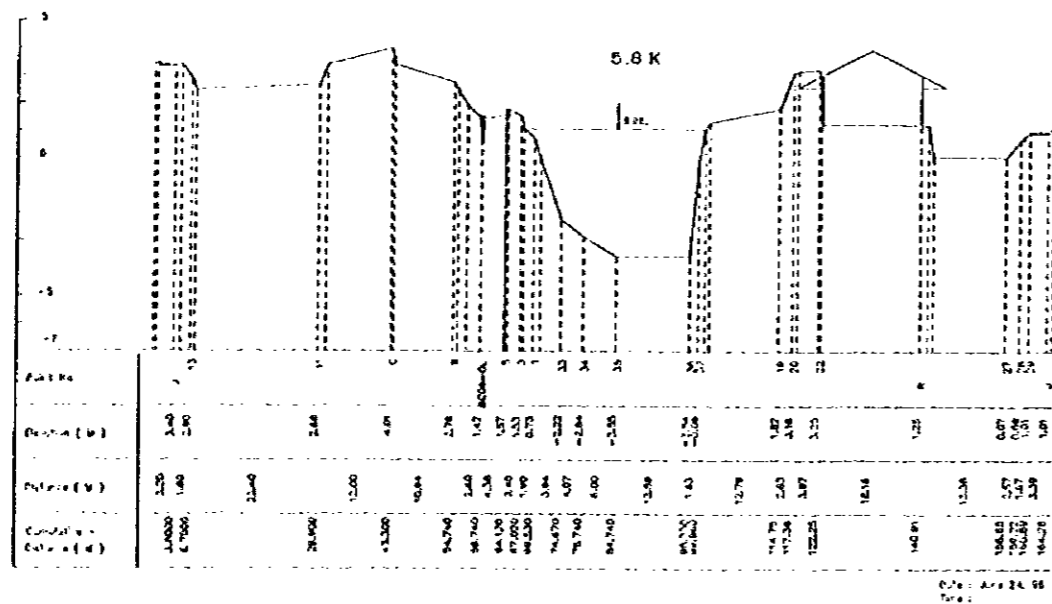
Date: Apr 28, 98  
Time: 09:50

Date: Apr 28, 98  
Time: 09:50

Note: Elevation based on Mean Sea Level (+1.4)

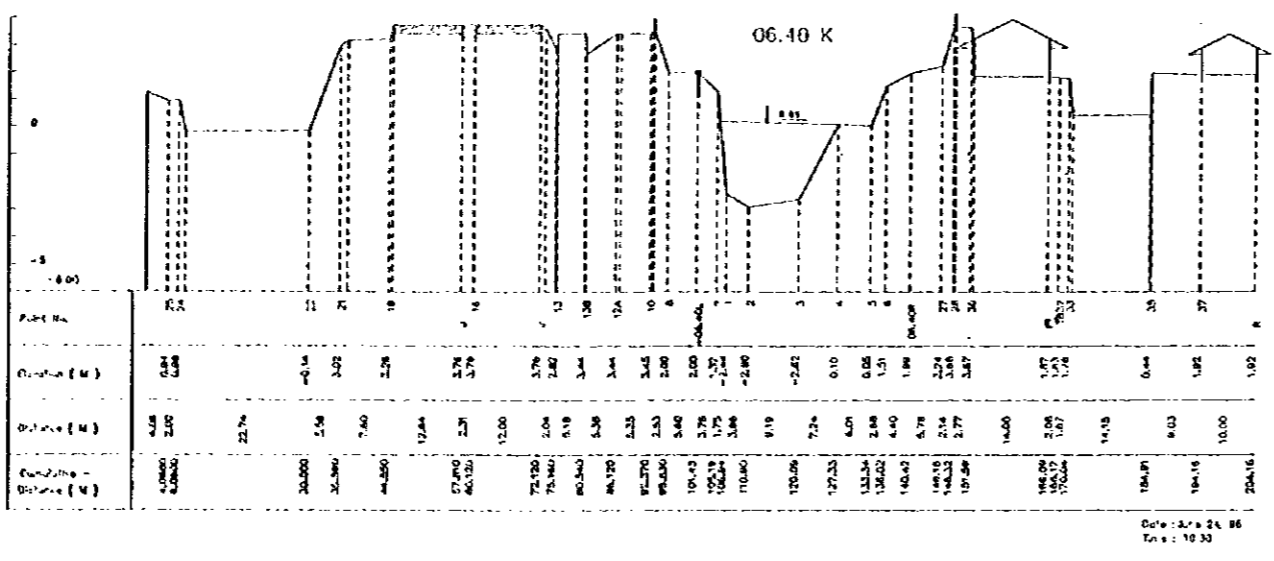
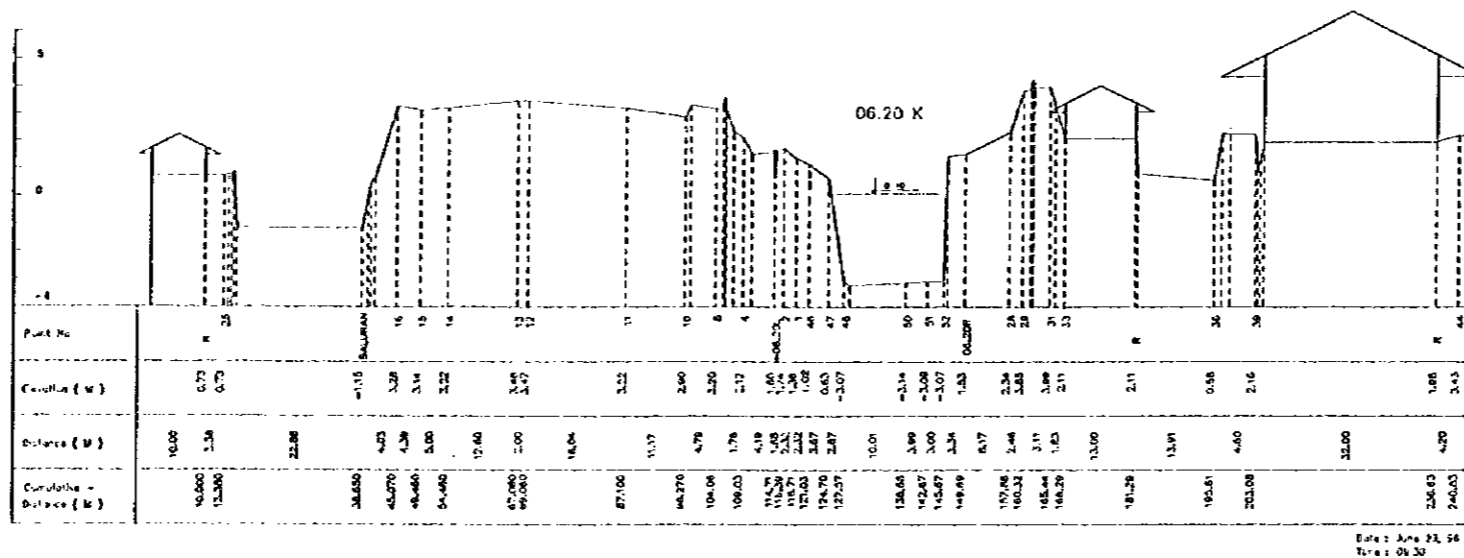
MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BANJAR CANAL	
		CROSS SECTION	
CHECKED	APPROVED	SCALE	SHEET NO.
Name: _____ Position: _____ Date: _____	Name: _____ Position: _____ Date: _____	H = 1 : 500 V = 1 : 100	8/25
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ARIAS DELTASALTA	





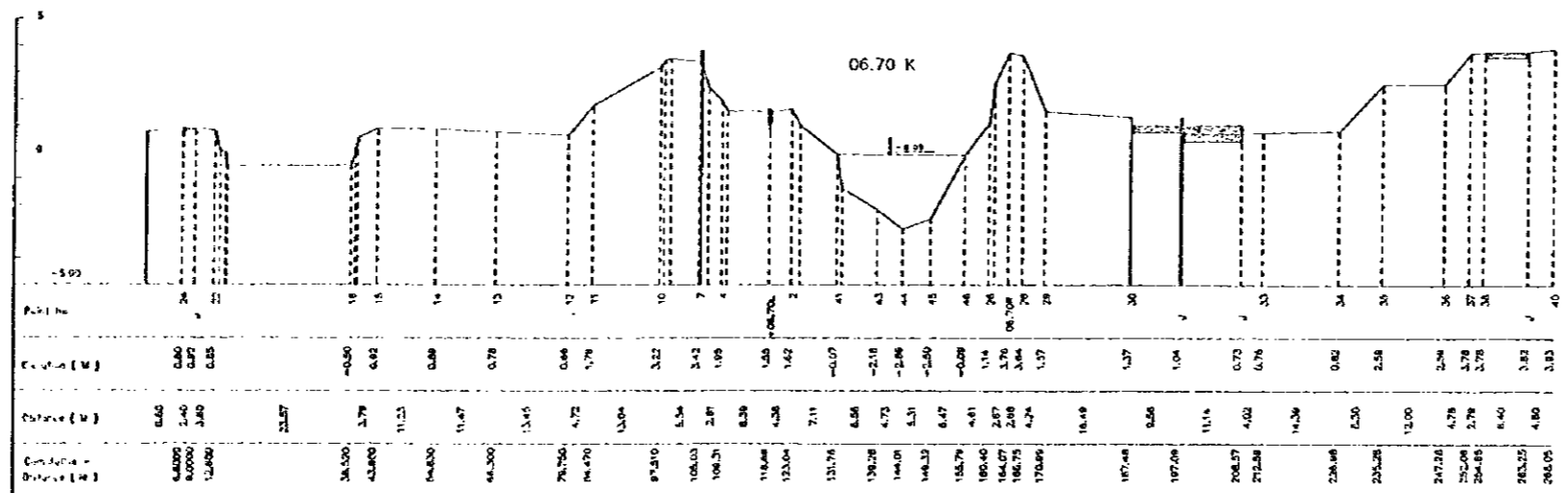
Date: Revision based on Main Scale 4 (1/10)

MINISTRY OF PUBLIC WORKS			
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
DIRECTORATE OF RIVERS			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BANJIR CANAL	
		FILE OF DRAWINGS	
		CROSS SECTION	
	DATE	APPROVED	SCALE
None	Signature	Signature	H = 1 : 500
	Date		V = 1 : 100
JICA	JAPAN INTERNATIONAL COOPERATION AGENCY		PT. AHAS DELTASATYA

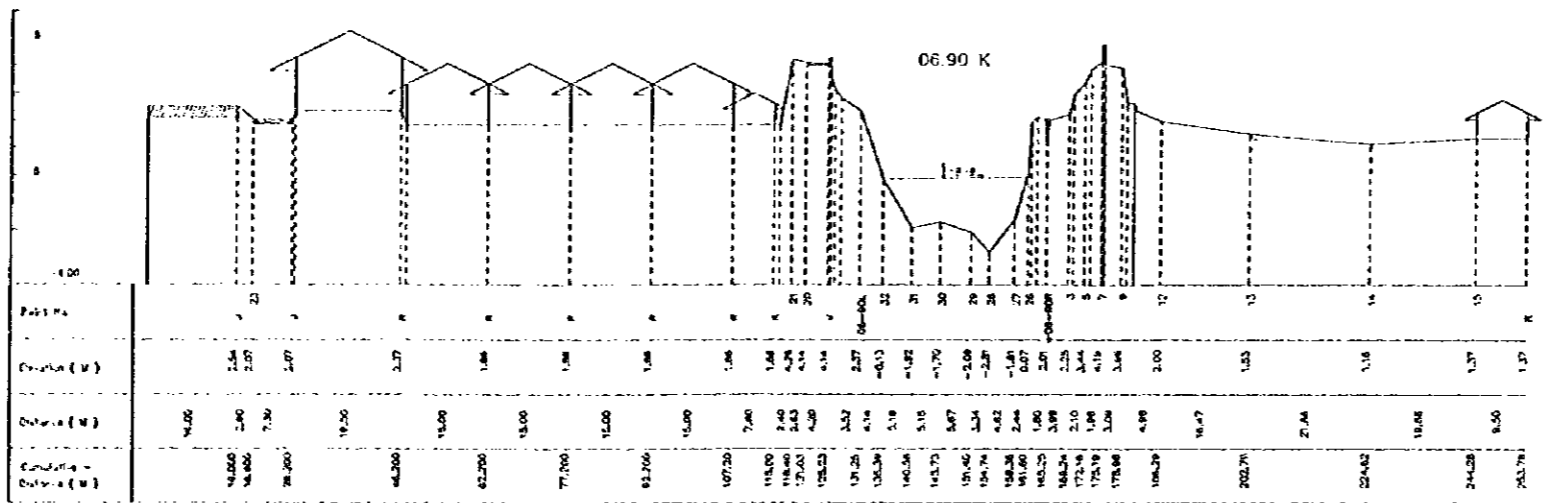


Note: Elevation is based on Mean Sea Level ( 110 )

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BANAR CANAL DIREC OF DRAINAGE	
CROSS SECTION		SHEET No. 1	
Drawn	Checked	Approved	Scale
Signature	Signature	Signature	H = 1 : 500 V = 1 : 100
Date	Date	Date	11 / 38
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			PT. ARAS DELTASATYA



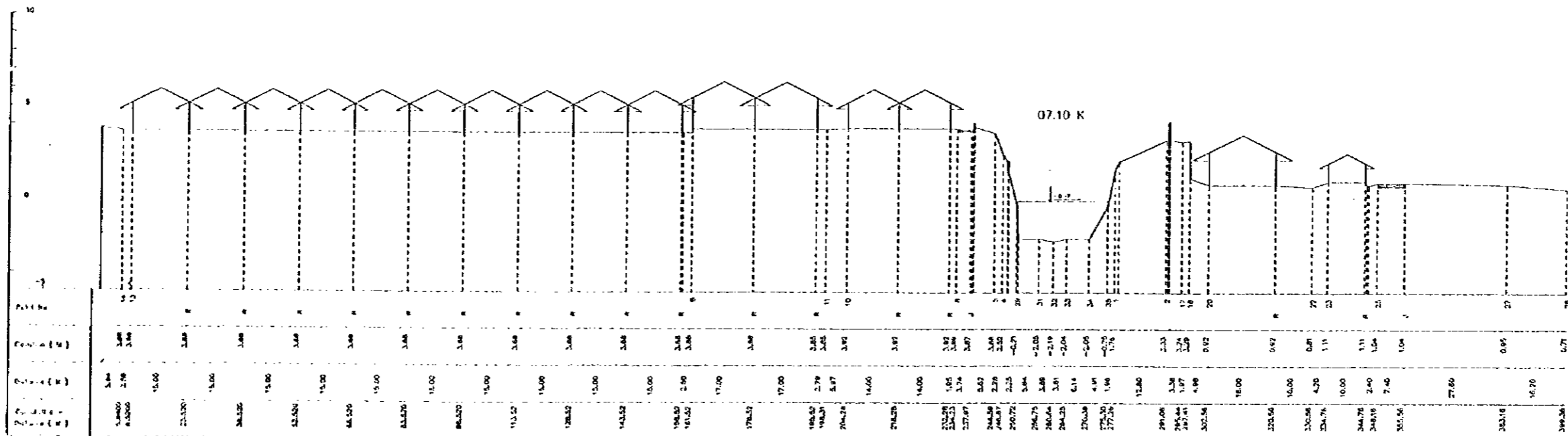
Date: June 25, 85  
Time: 0:15



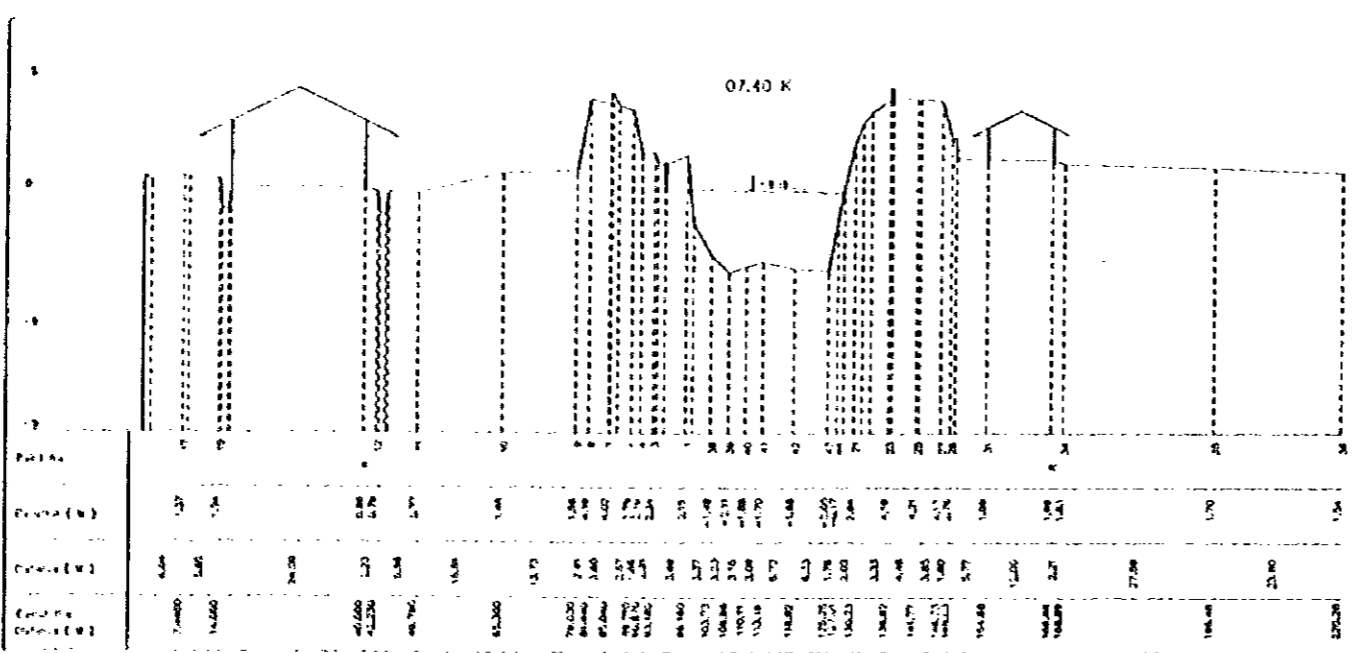
Date: June 25, 85  
Time: 0:19

Note: Elevation is based on Mean Sea Level (TIC)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BANJAR CANAL TITLE OF DRAWINGS	
CROSS SECTION		SCALE	SHEET No.
Drawn	Checked	Approved	H = 1 : 500 V = 1 : 100
Signature	Signature	Signature	12 / 38
Date	Date	Date	
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			PT. ATLAS DELTASATYA



Date: July 25, 96  
Time: 14:00

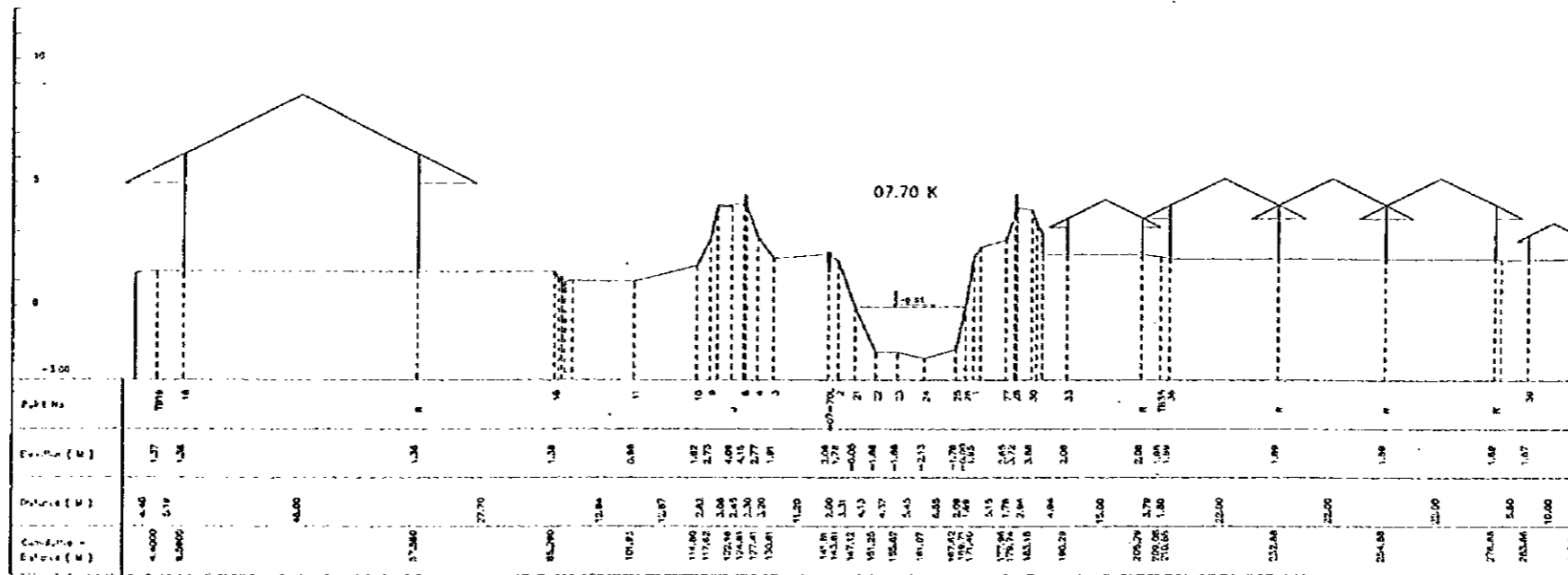


Date: July 27, 96  
Time: 04:30

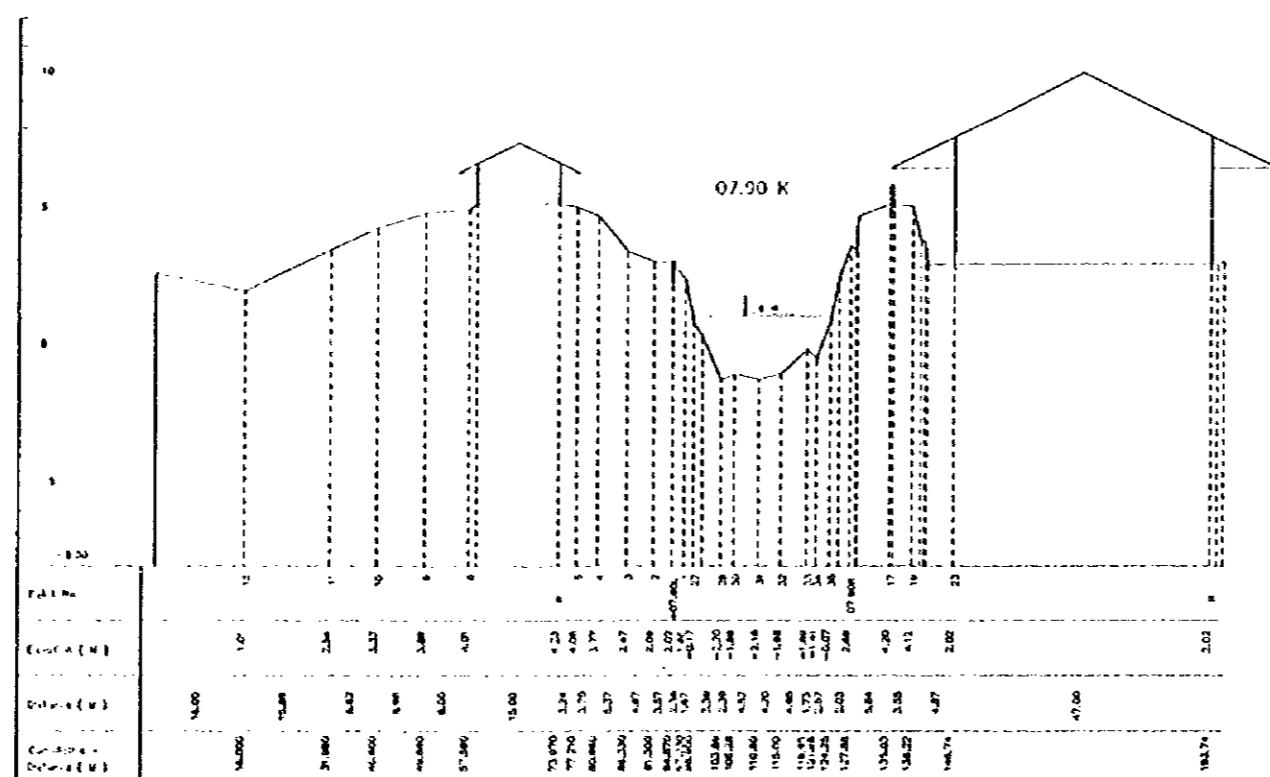
Note: Elevation is based on Mean Sea Level (+100)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTADEK	
WESTERN BANJAR CANAL RIVER SURVEY	
RIVER SURVEY	
CROSS SECTION	
NO. OF PAGES	NO. OF SHEETS
1	1
Scale	Sheet No.
H = 1 : 500	13 / 38
V = 1 : 100	
JICA	PT. ATAS DELTASATYA





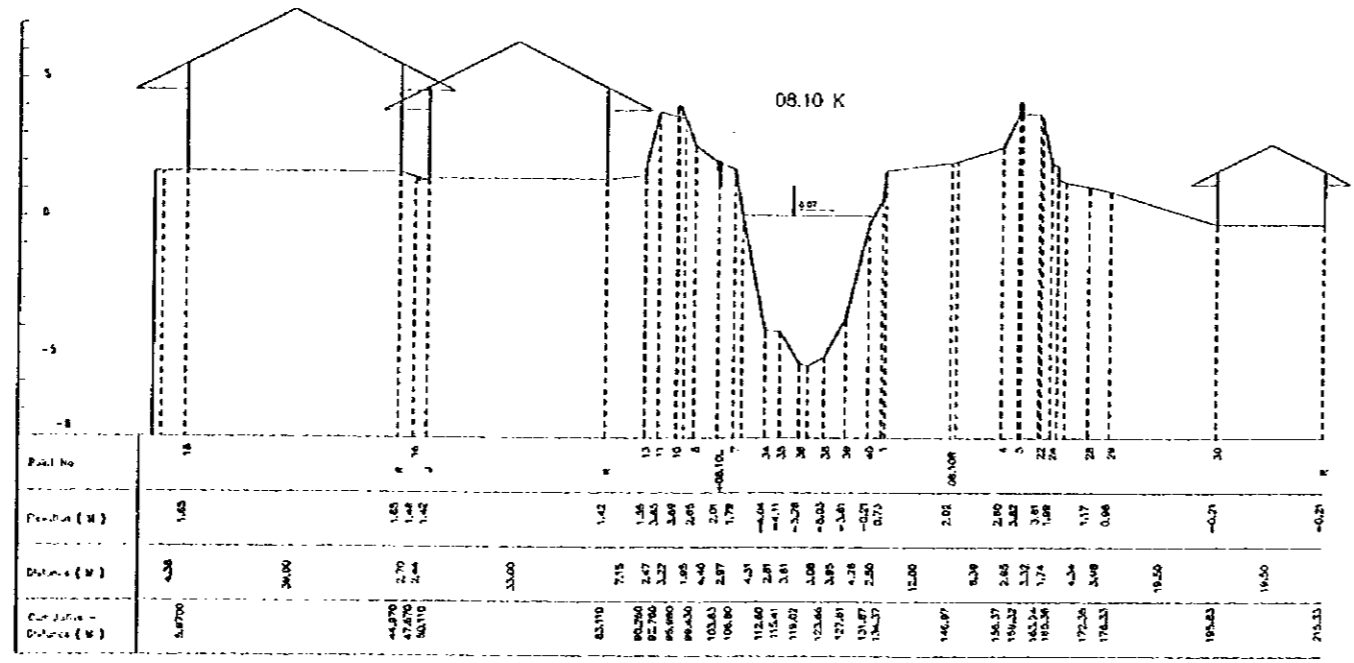
Date: June 27, 66  
Time: 08:10



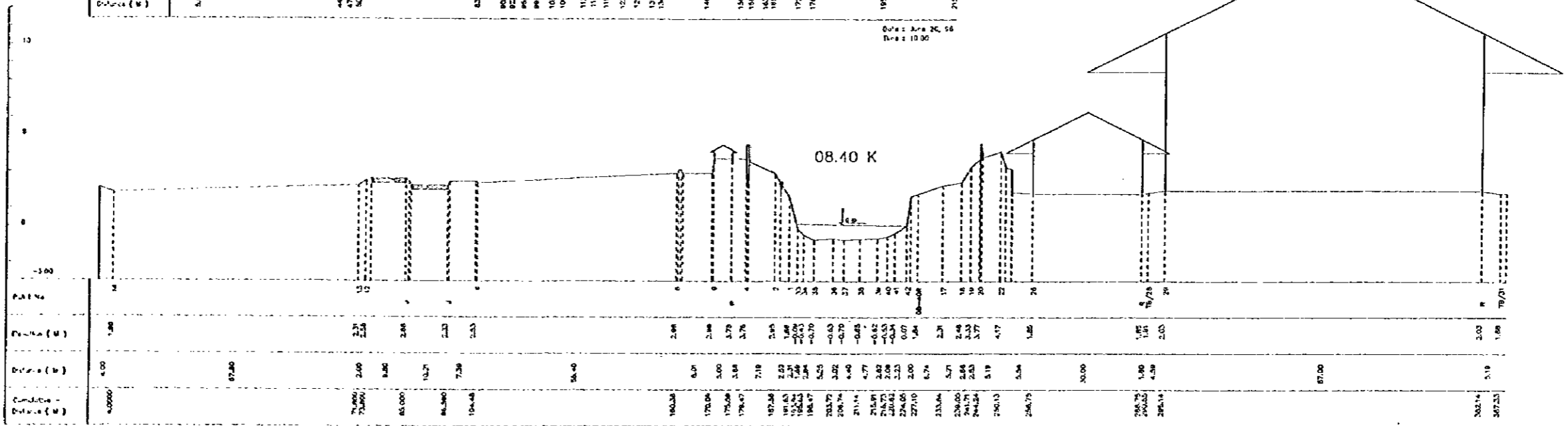
Date: June 26, 66  
Time: 08:30

Note: Elevation is based on Mean Sea Level (T.D.)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BAHAR CANAL	
		LINE OF CANALS	
CROSS SECTION			
DATE	CREATED	APPROVED	SHEET No.
Signature	Signature	Signature	14 / 38
Date			
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			PI. ATLAS DELTASATYA



Date: Aug 24, 86  
 P: 10 30



Date: Aug 23, 86  
 Note: Elevation is based on Mean Sea Level (MSL)

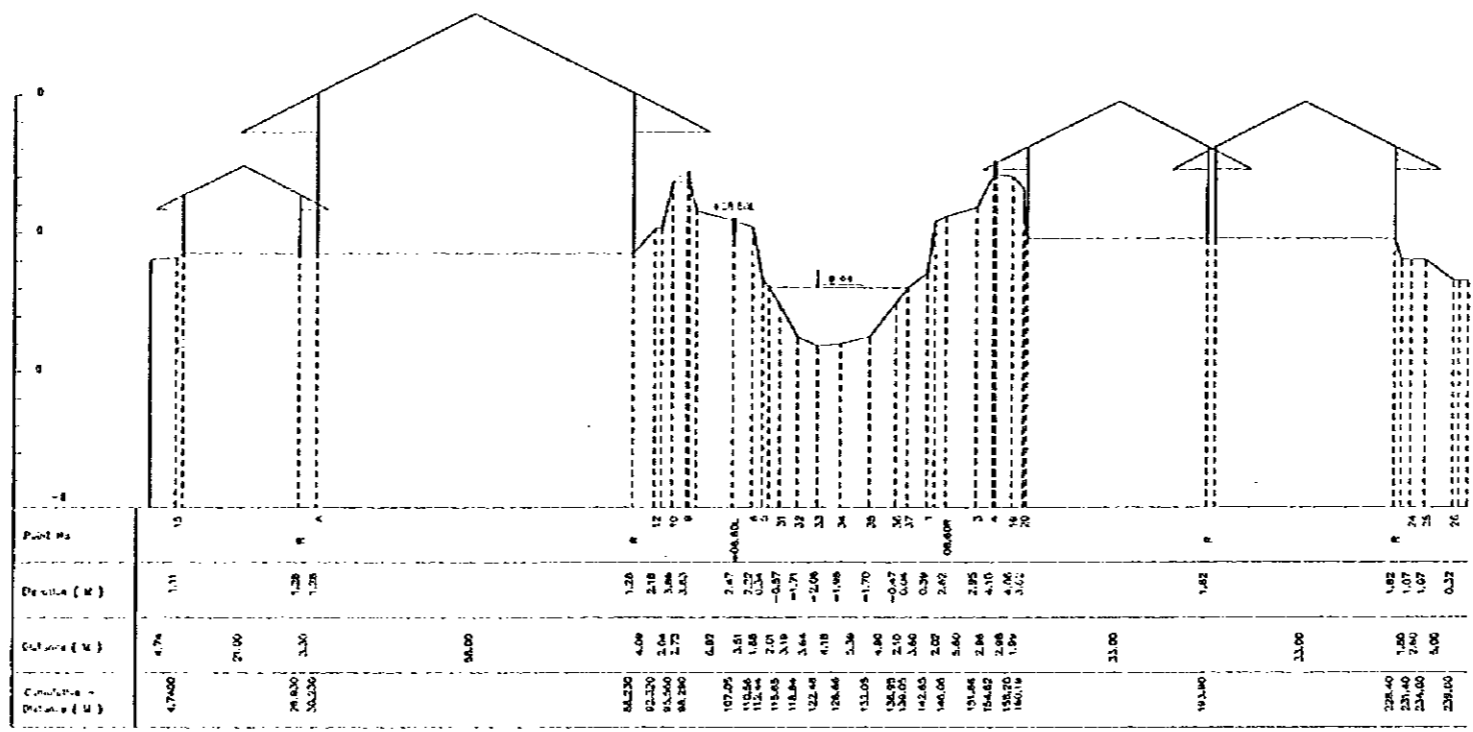
MINISTRY OF PUBLIC WORKS  
 DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT

THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTABEK

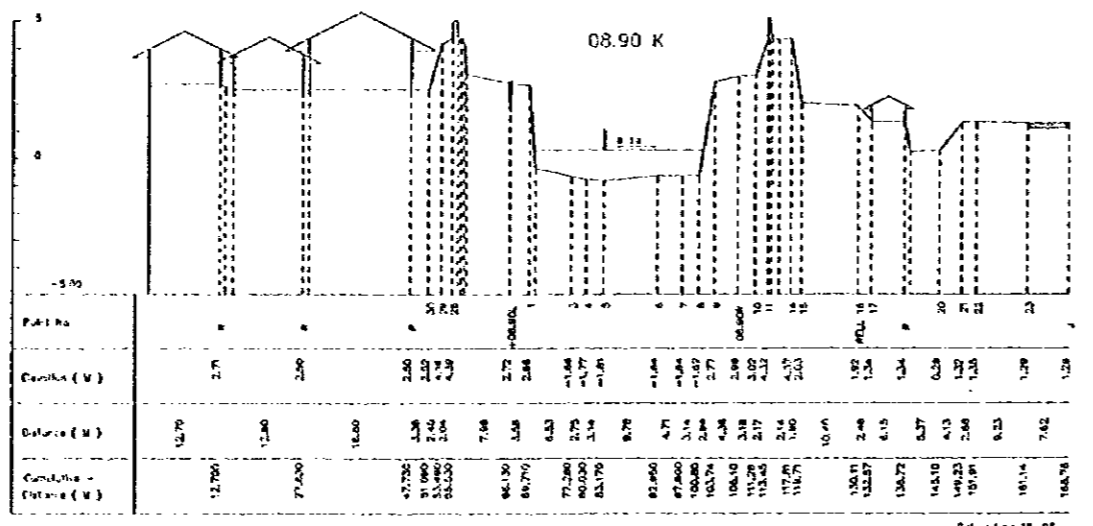
WESTERN BANJAR CANAL  
 RIVER SURVEY  
 CROSS SECTION

Checked	Approved	Scale	Sheet No.
Name	Name	H = 1 : 500	15 / 38
Signature	Signature	V = 1 : 100	
Date	Date		

JICA JAPAN INTERNATIONAL COOPERATION AGENCY  
 PI. ATLAS DELIASATYA



Date: 12/18/98  
Page: 10/45



Date: 12/18/98  
Page: 10/45

Note: Elevation is based on Mean Sea Level (T.M.)

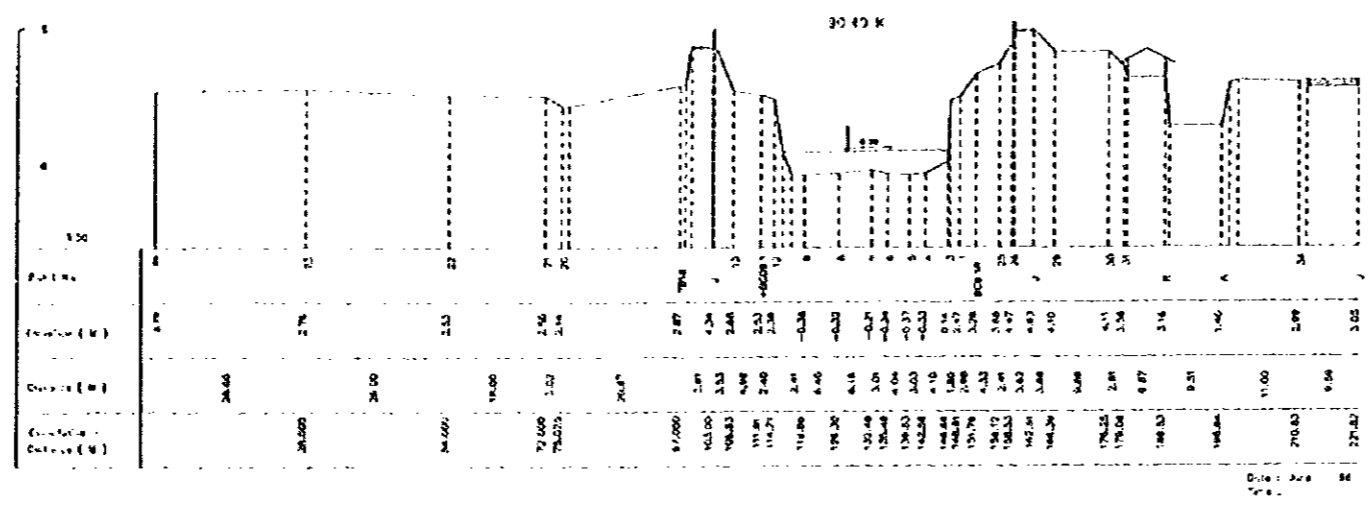
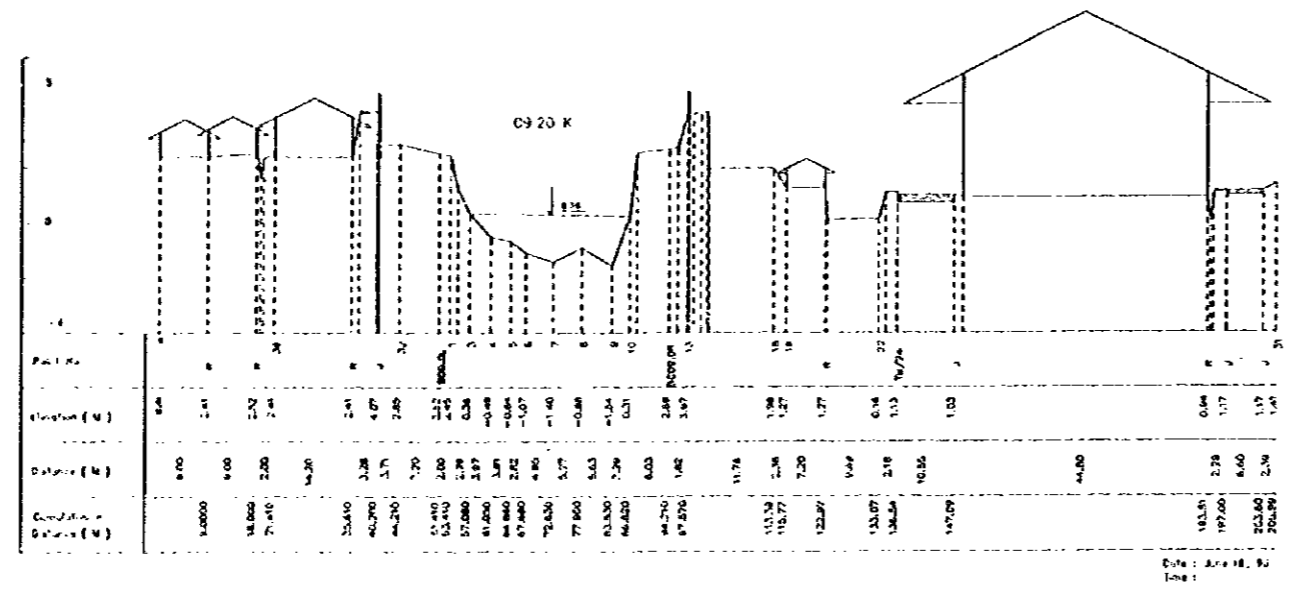
MINISTRY OF PUBLIC WORKS  
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT

THE STUDY ON COMPREHENSIVE RIVER  
WATER MANAGEMENT PLAN IN JABOTABEK

WESTERN BANJAR CANAL  
REACH OF DRAINAGE  
CROSS SECTION

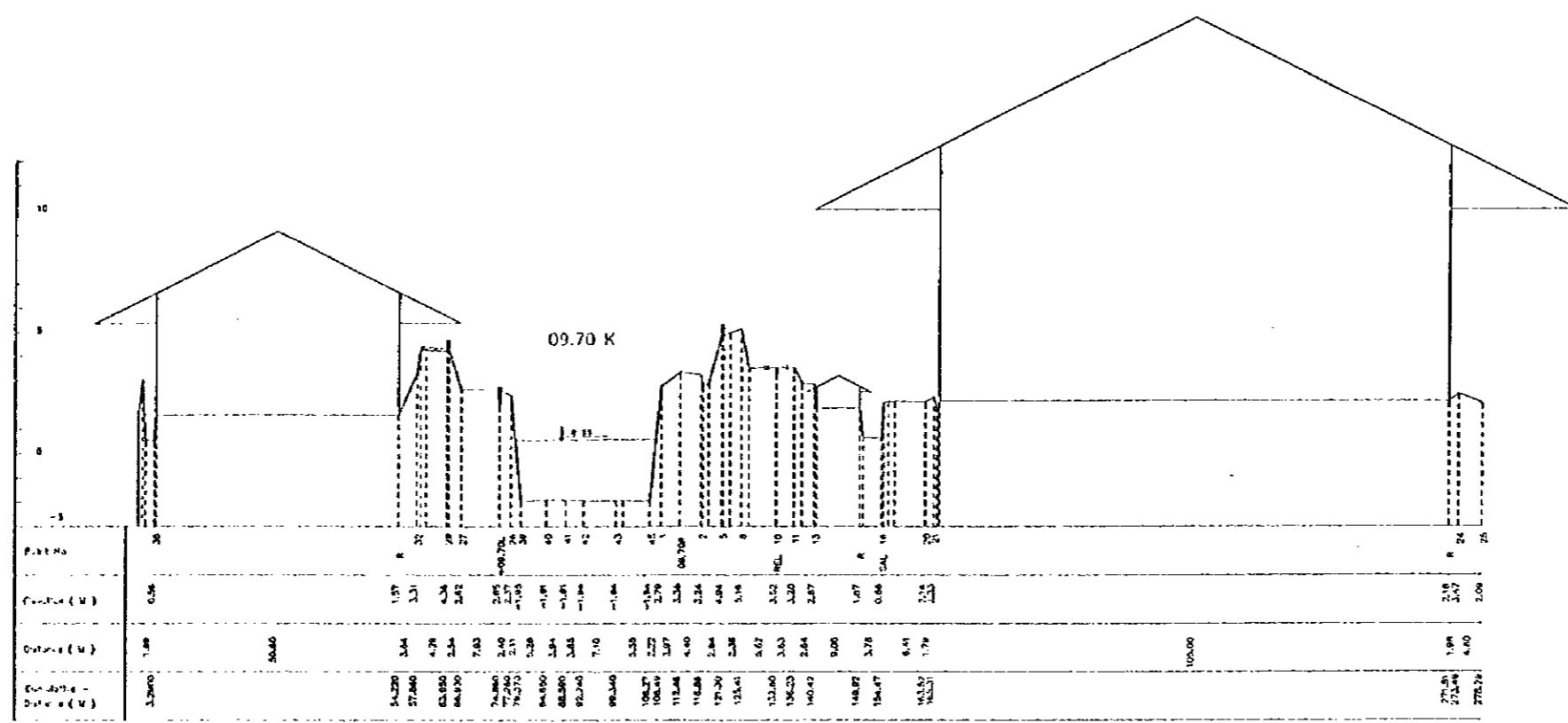
Checked	Approved	Scale	Sheet No.
Signature	Signature	H = 1 : 500 V = 1 : 100	16 / 38

JICA JAPAN INTERNATIONAL COOPERATION AGENCY PT. ATLAS DELTASATYA

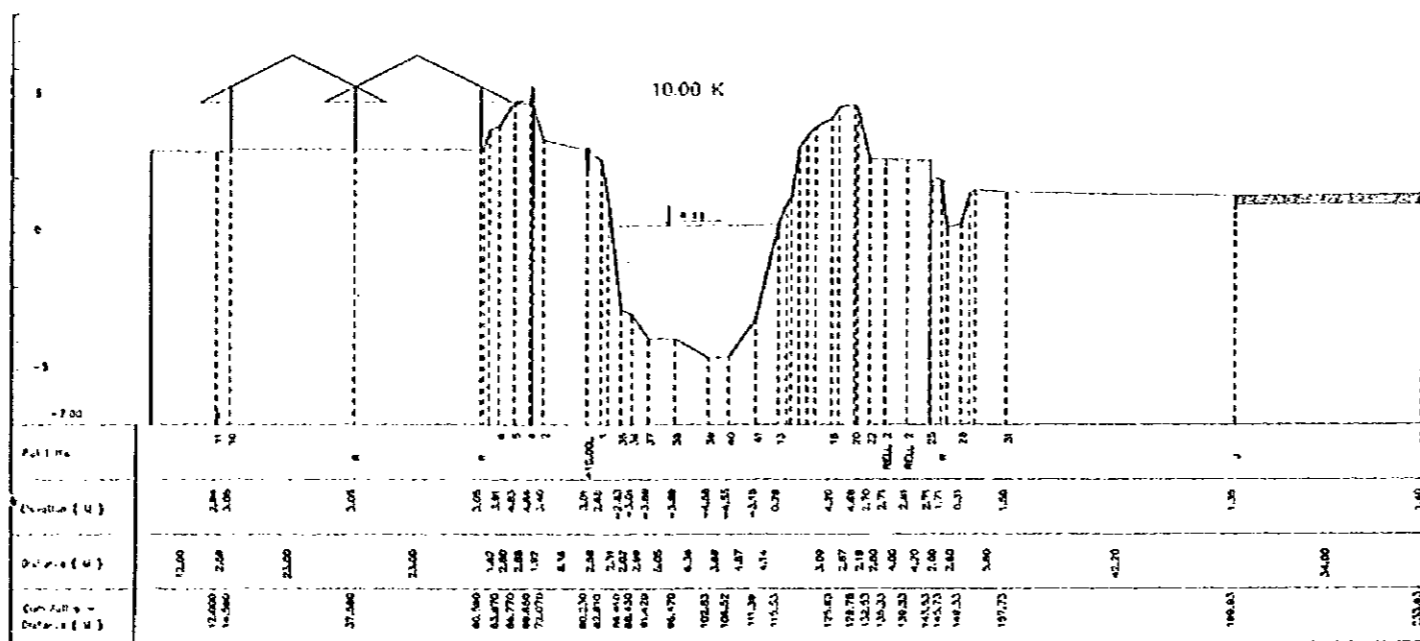


Note: Elevation is based on Mean Sea Level (110)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTAREK			
RIVER SURVEY		WESTERN BANIR CANAL	
RIVER OF DRAGONS		CROSS SECTION	
Name	Checked	Appr'd	Scale
Signature	Signature	Signature	H = 1 : 500
Date	Date	Date	V = 1 : 100
JICA		PT. ATLAS DELTASATYA	
JAPAN INTERNATIONAL COOPERATION AGENCY		SHEET NO. 17 / 38	



Date: July 02, 68  
Time: 11:30



Date: July 02, 68  
Time: 11:45

Note: Elevation is based on Mean Sea Level (+110)

MINISTRY OF PUBLIC WORKS  
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT

THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK

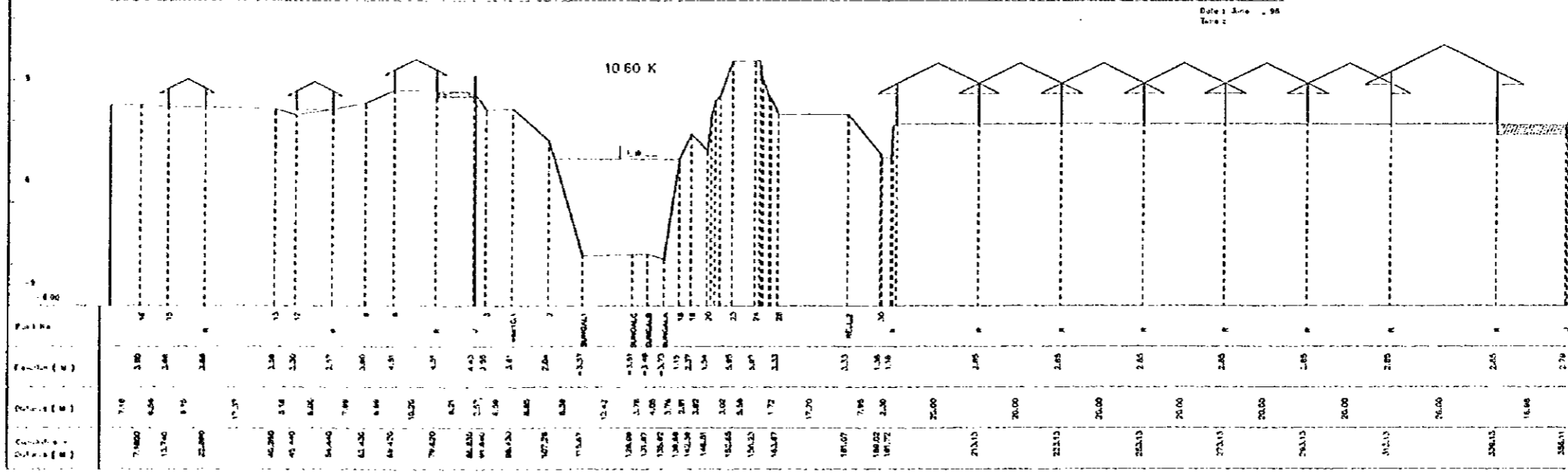
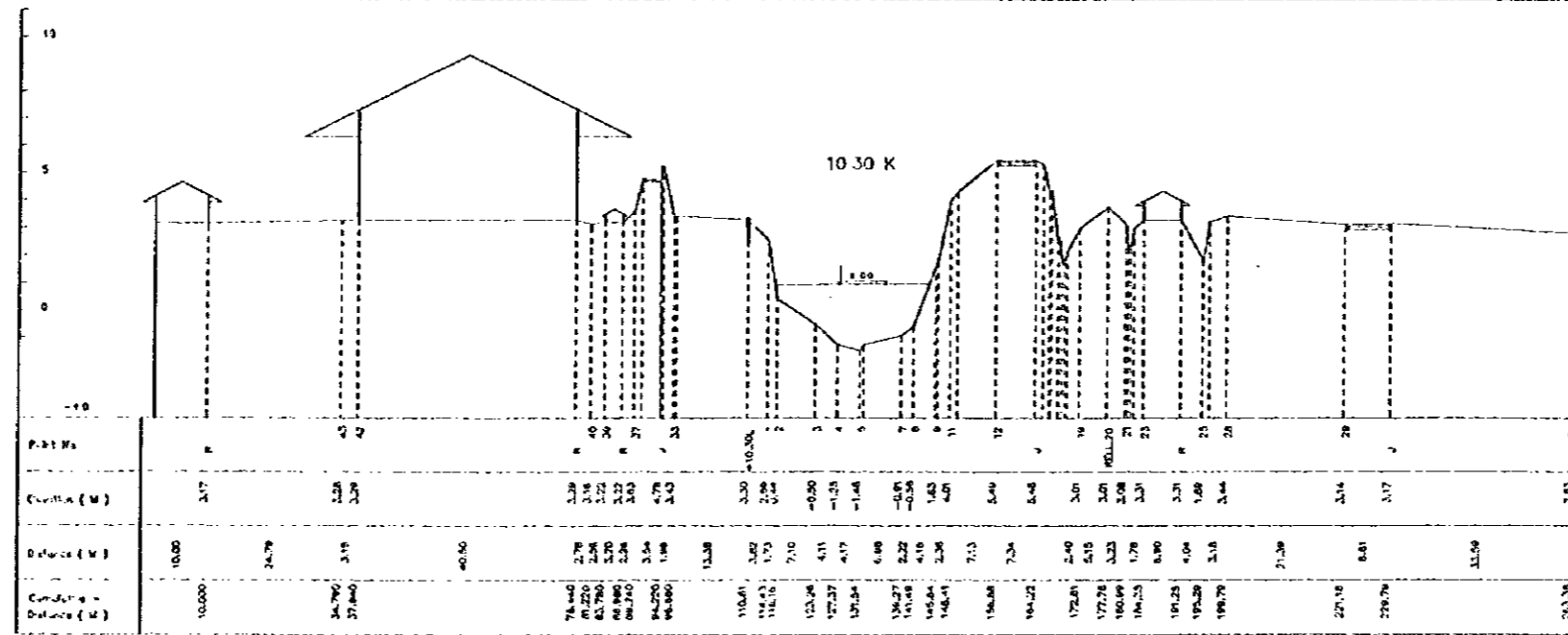
WESTERN BANAR CANAL  
TITLE OF DRAWING  
CROSS SECTION

RIVER SURVEY

Name	DRAWN		APPROVED		SCALE	SHEET No. 1
	Surveyor	Station	L. Insp.	I. Insp.		
Signature	<i>[Signature]</i>				H = 1 : 500 V = 1 : 100	18 / 38
Date						

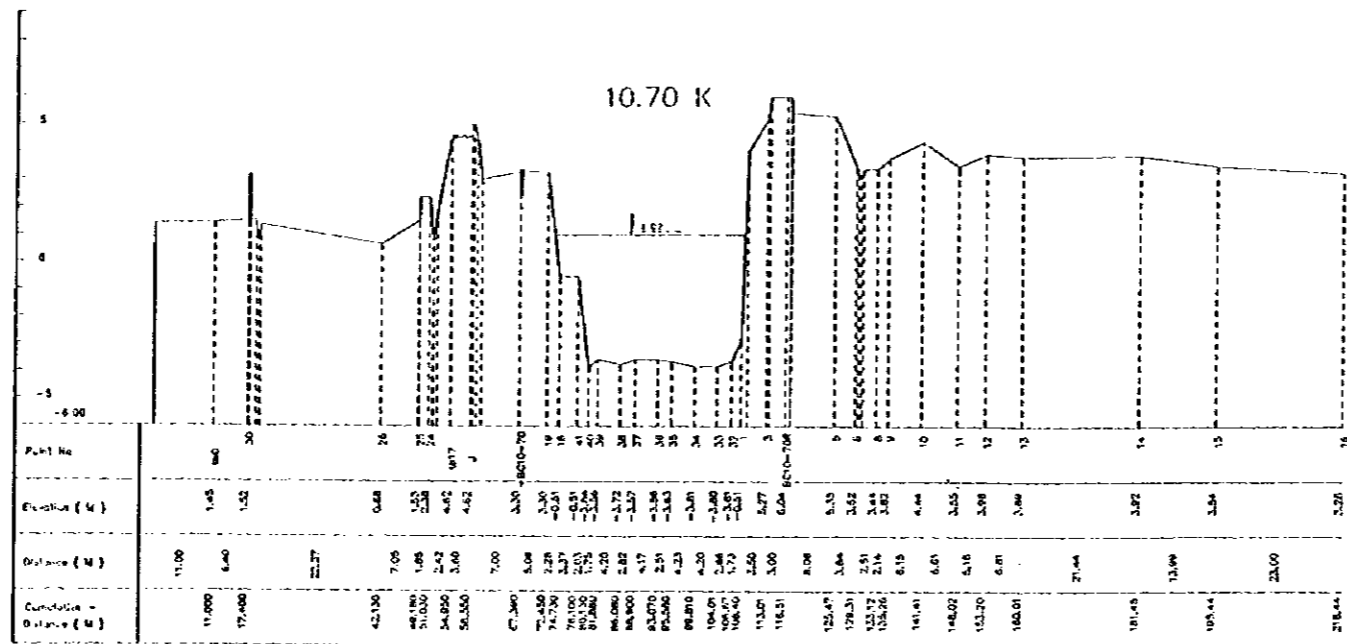
JICA JAPAN INTERNATIONAL COOPERATION AGENCY

PT. AILAS DELTASATYA

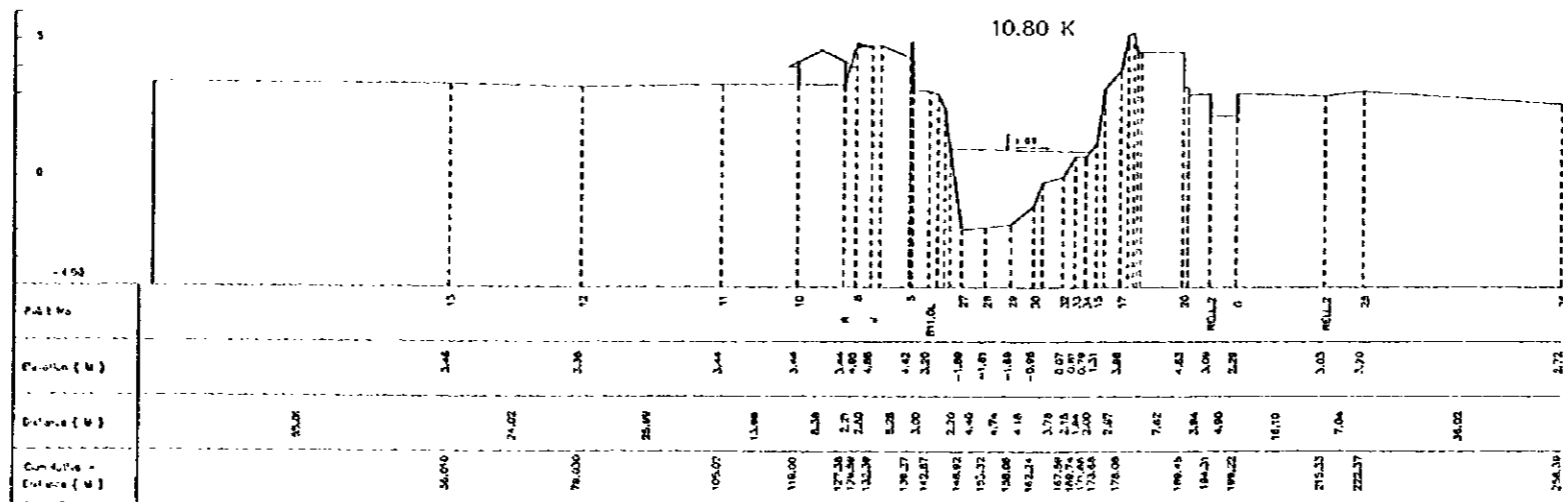


Note: Elevation is based on Mean Sea Level (MSL)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BANJAR CAHAL	
		SHEET NO. 19 / 38	
Name: _____ Scale: _____ Date: _____	CHECKED: _____ DRAWN: _____ DATE: _____	APPROVED: _____ DATE: _____	SCALE: H = 1 : 500 V = 1 : 100
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		P.E. ATLAS KELTASATYA	



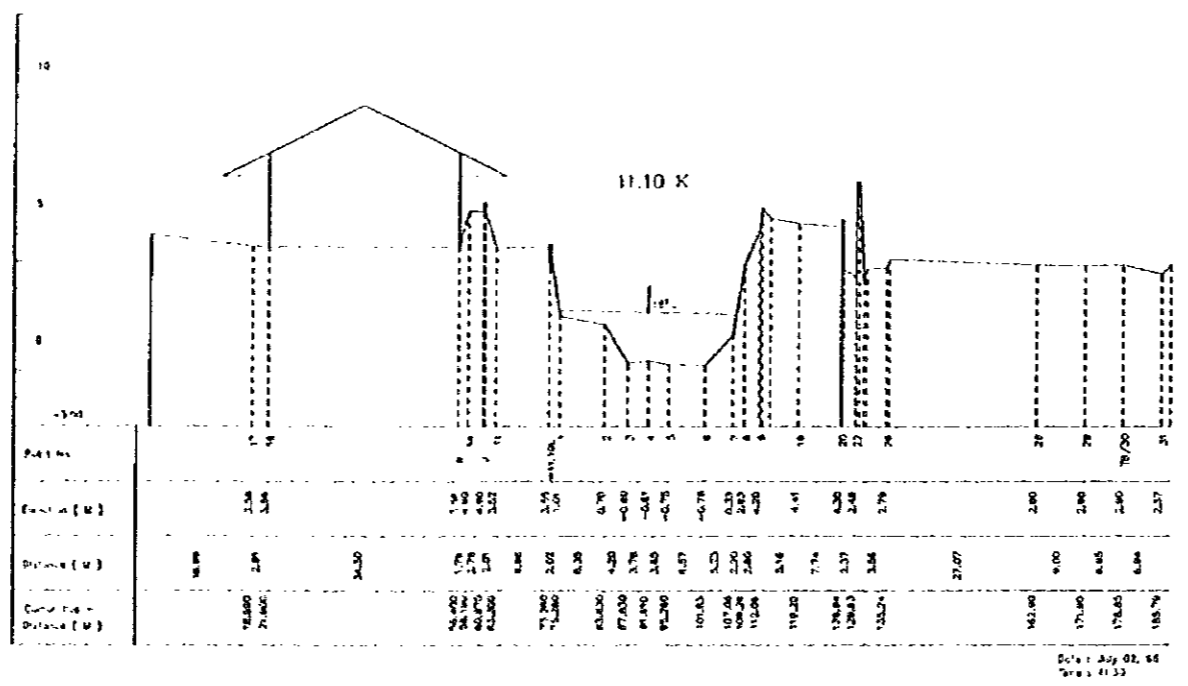
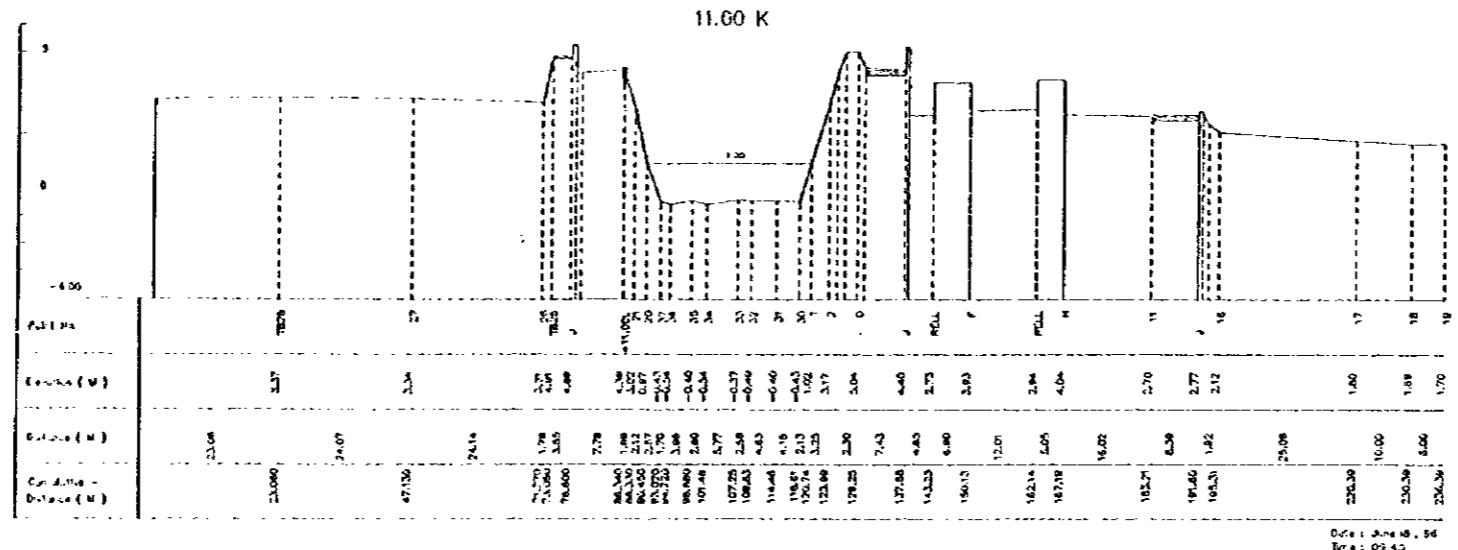
Date : 2.11.88  
Time :



Date : 2.11.88  
Time : 12.30

Note : Elevation is based on Mean Sea Level ( 110 )

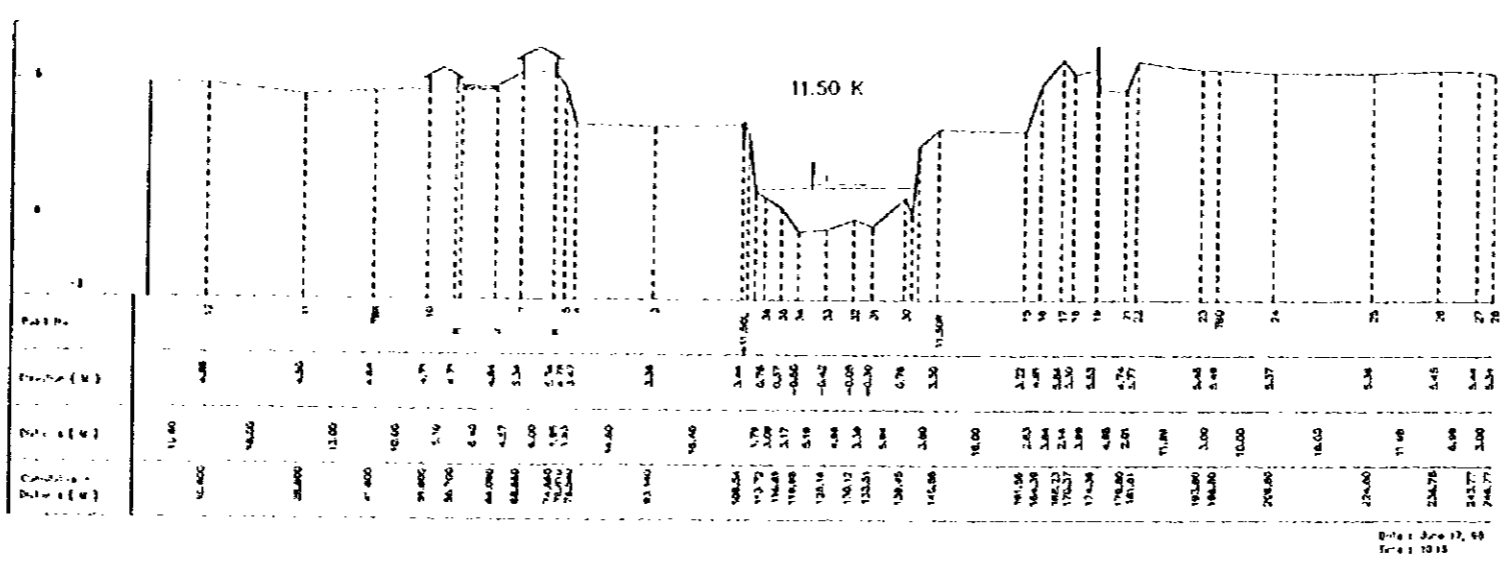
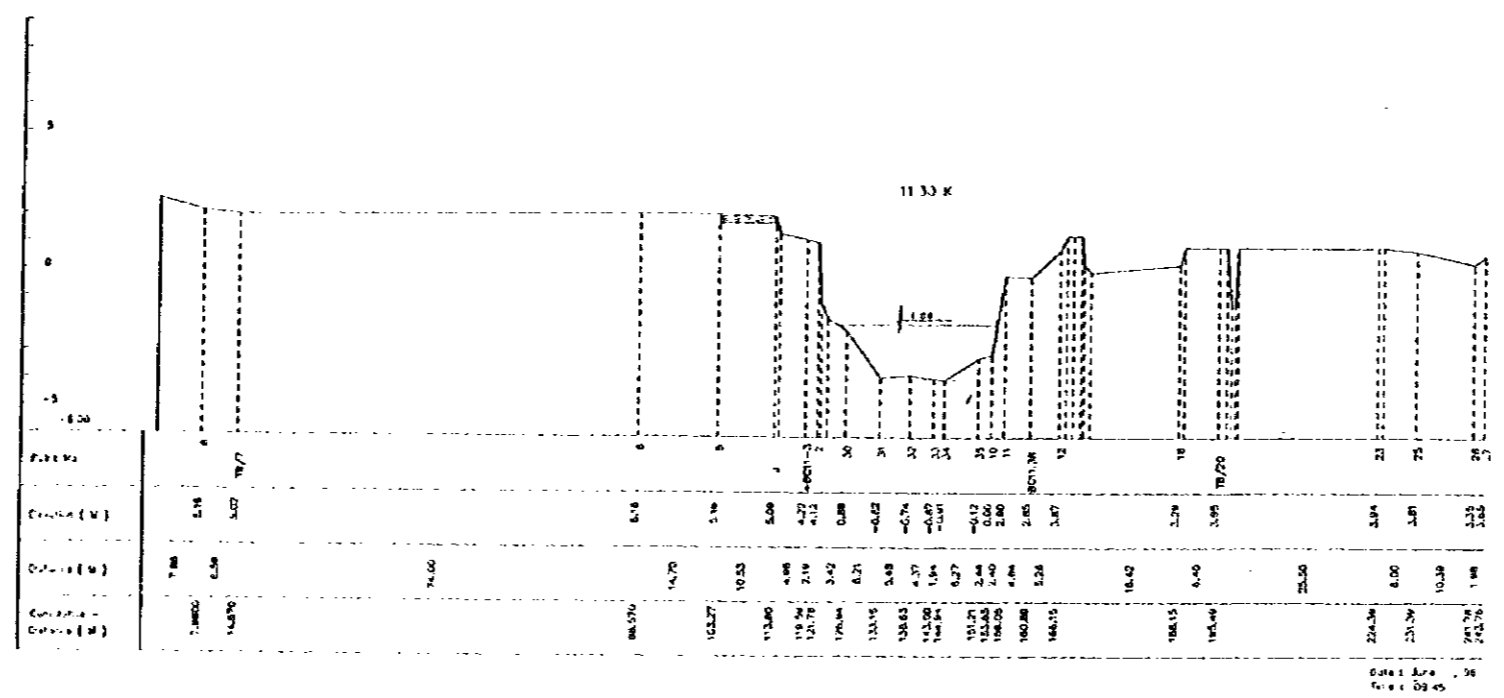
MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BANJAR CANAL BUREAU OF GRADINGS CROSS SECTION	
Checked	Approved	Scale	Sheet No.
Name	Name	H = 1 : 500	20 / 30
Signature	Signature	V = 1 : 100	
Date	Date	PT. ARIAS DELIASATYA	
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			



(Note: Elevation is based on Mean Sea Level (170))

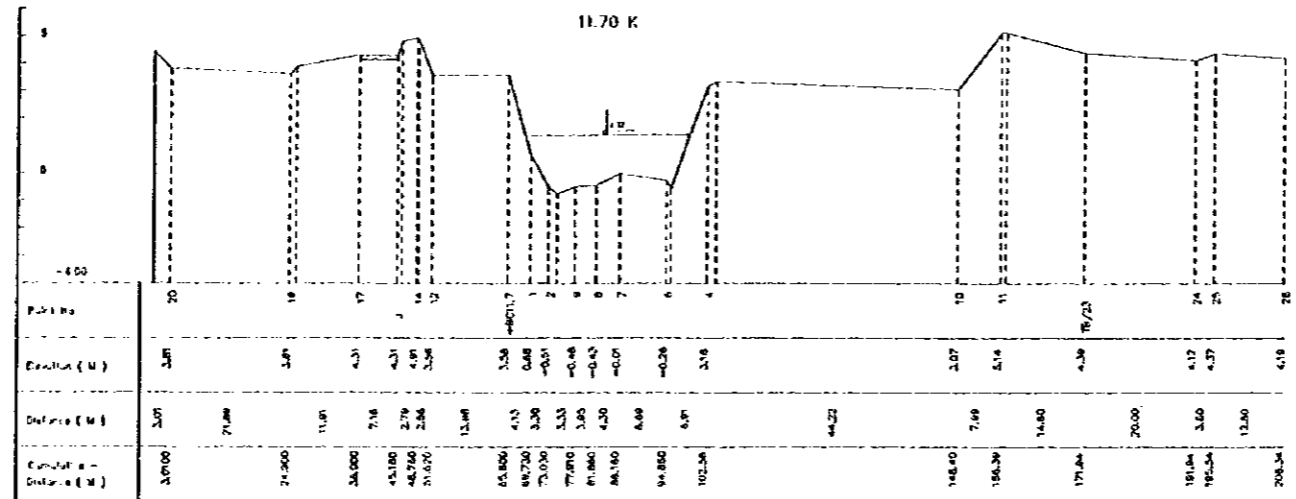
MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BANIR CANAL RALE OF DRAINAGE	
CROSS SECTION			
Drawn	Checked	Appraised	Scale
Signature	Signature	Signature	1:500
Date	Date	Date	1:100
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			PI. ATLAS DELTASATYA



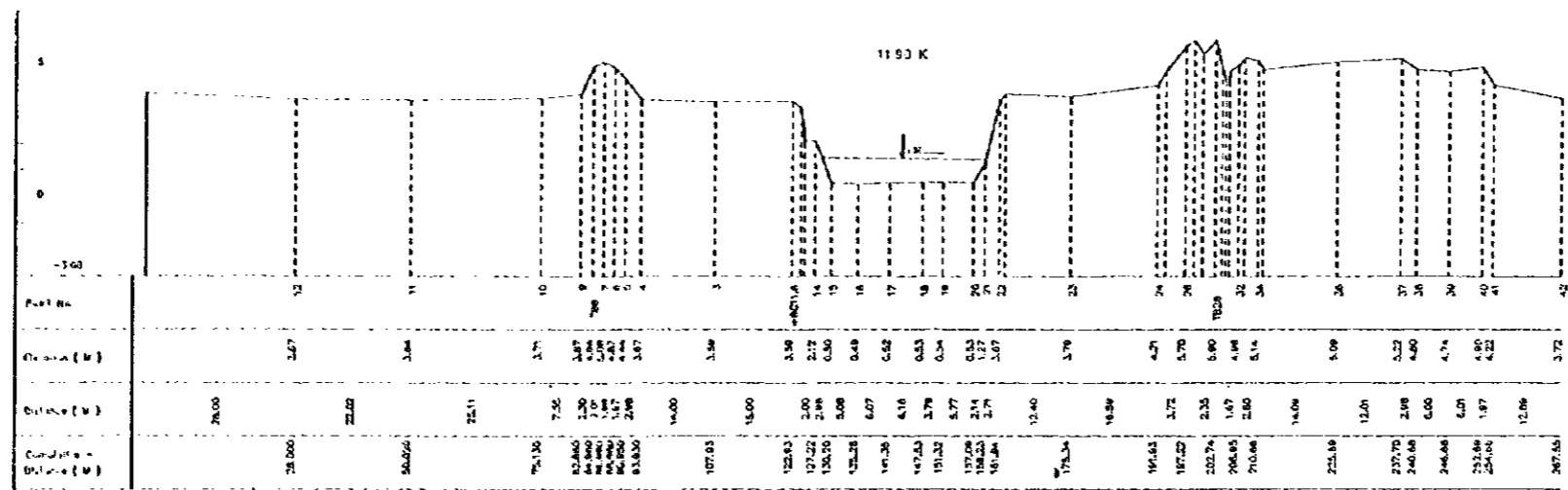


Notes: Elevation is based on Mean Sea Level (110)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT		THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK	
RIVER SURVEY		WESTERN BANJUR CANAL	
		TYPE OF CHANNELS	
		CROSS SECTION	
DATE	CREATED	APPROVED	SCALE
1985	1985	1985	1:500
1985	1985	1985	1:100
JICA		PT. ADAS DELTASATYA	



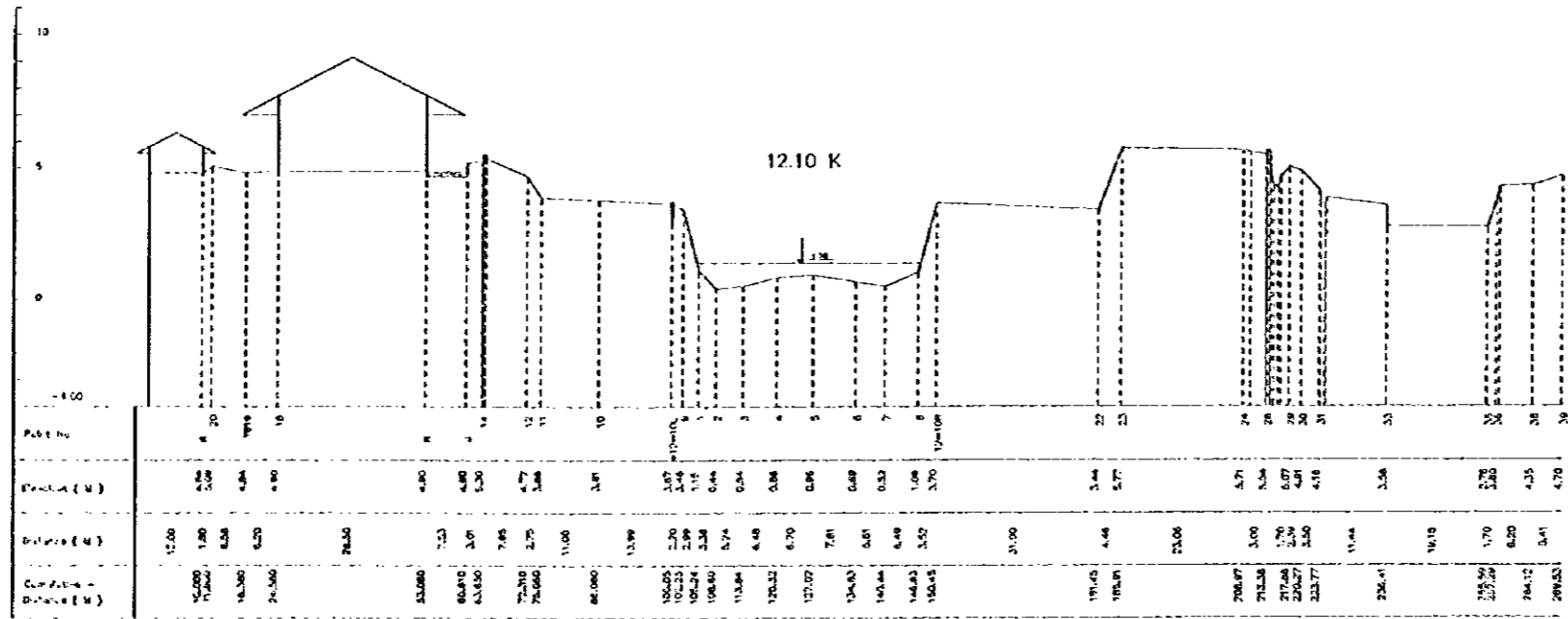
Date: Apr 03, 98  
Time: 11:00



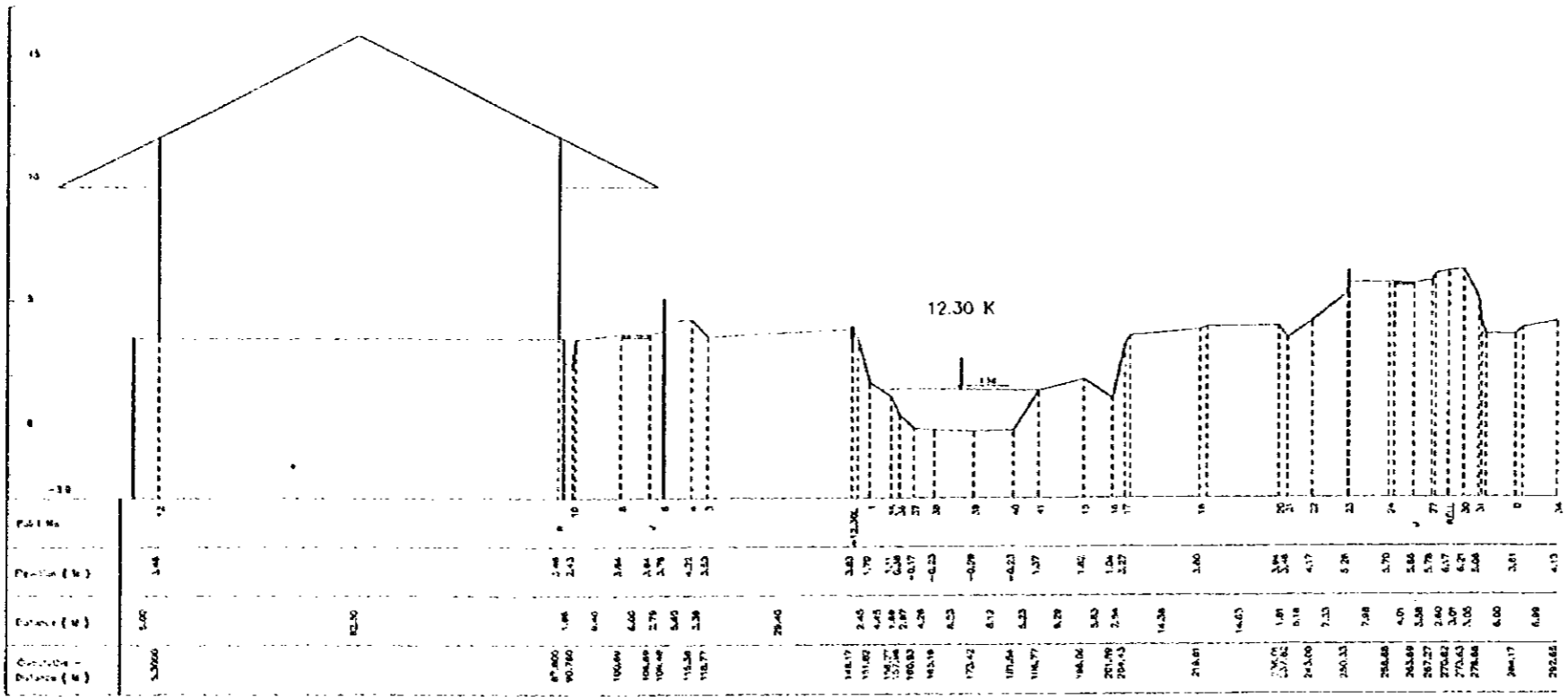
Date: Apr 15, 98  
Time: 08:30

Note: Elevation is based on Mean Sea Level (+100)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTAJEK			
RIVER SURVEY		WESTERN BANJAR CANAL RUE OF CHANNELS	
CROSS SECTION		SHEET NO. 1	
NAME	SCALE	DATE	SHEET NO.
Signature	H = 1 : 500 V = 1 : 100	23 / 33	
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PI. ATLAS DELTASATYA	



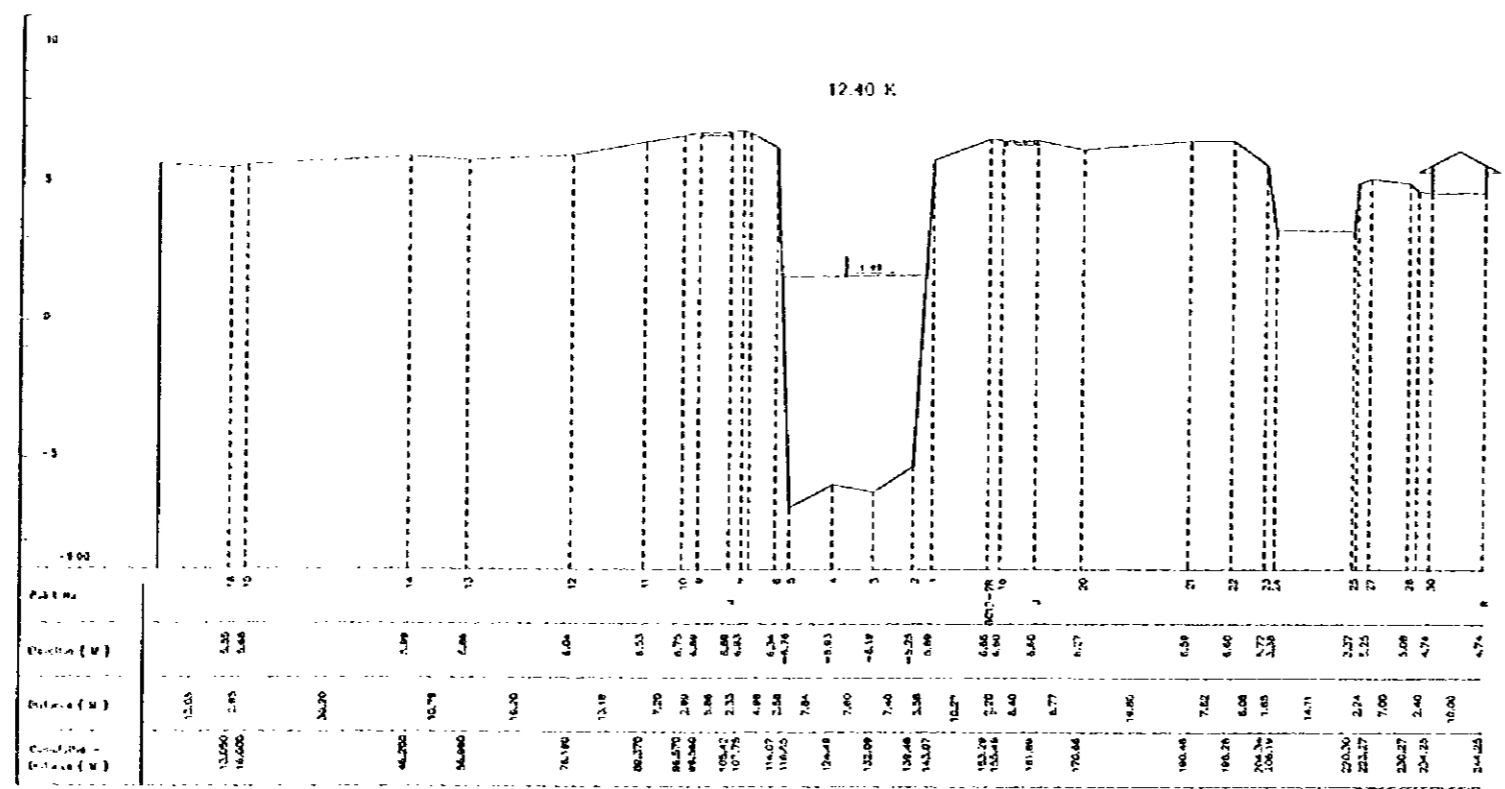
Date: April 28, 99  
 Scale: 1:500



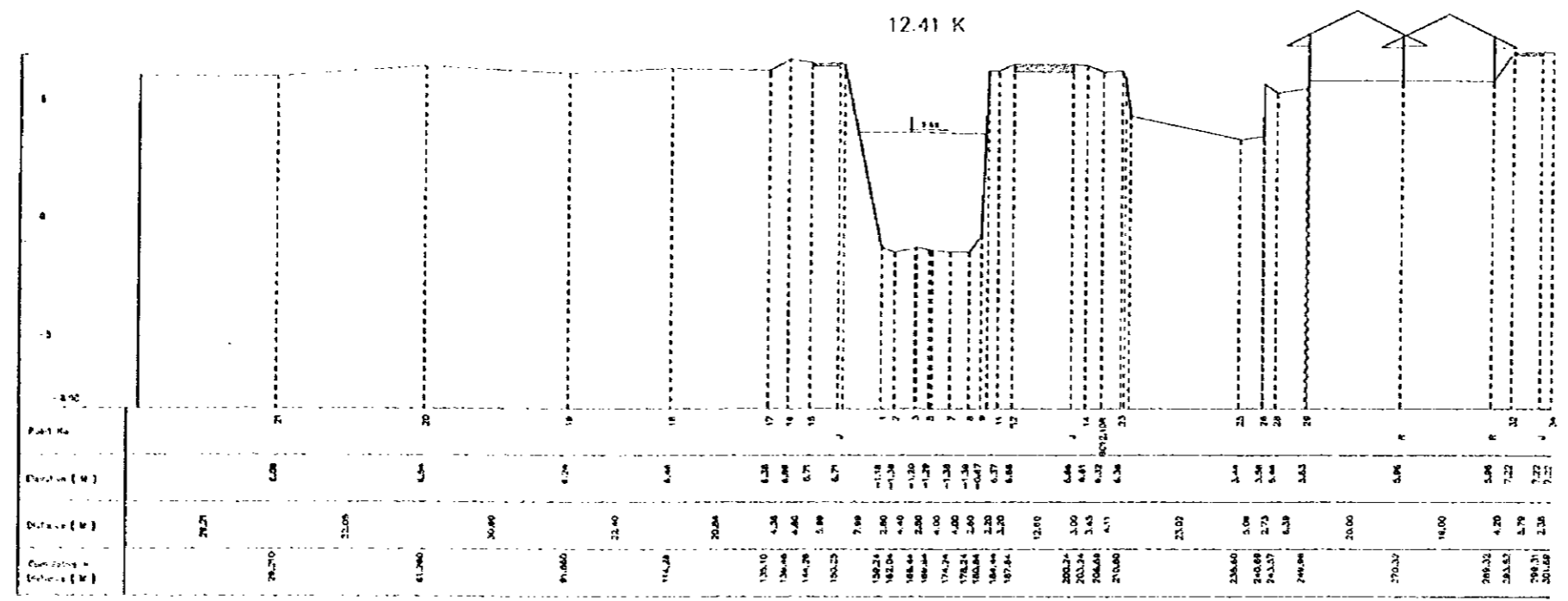
Date: April 28, 99  
 Scale: 1:500

Note: Elevation is based on Mean Sea Level (TIG.)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JAOOTANEK			
RIVER SURVEY		WESTERN BANIR CANAL DIRE OF SPARKES	
CHECKED		APPROVED	
Name	Signature	Name	Signature
Date	Date	Date	Date
SCALE		SHEET No.	
H = 1 : 500		24 / 38	
V = 1 : 100			
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ATLAS DELTASATYA	



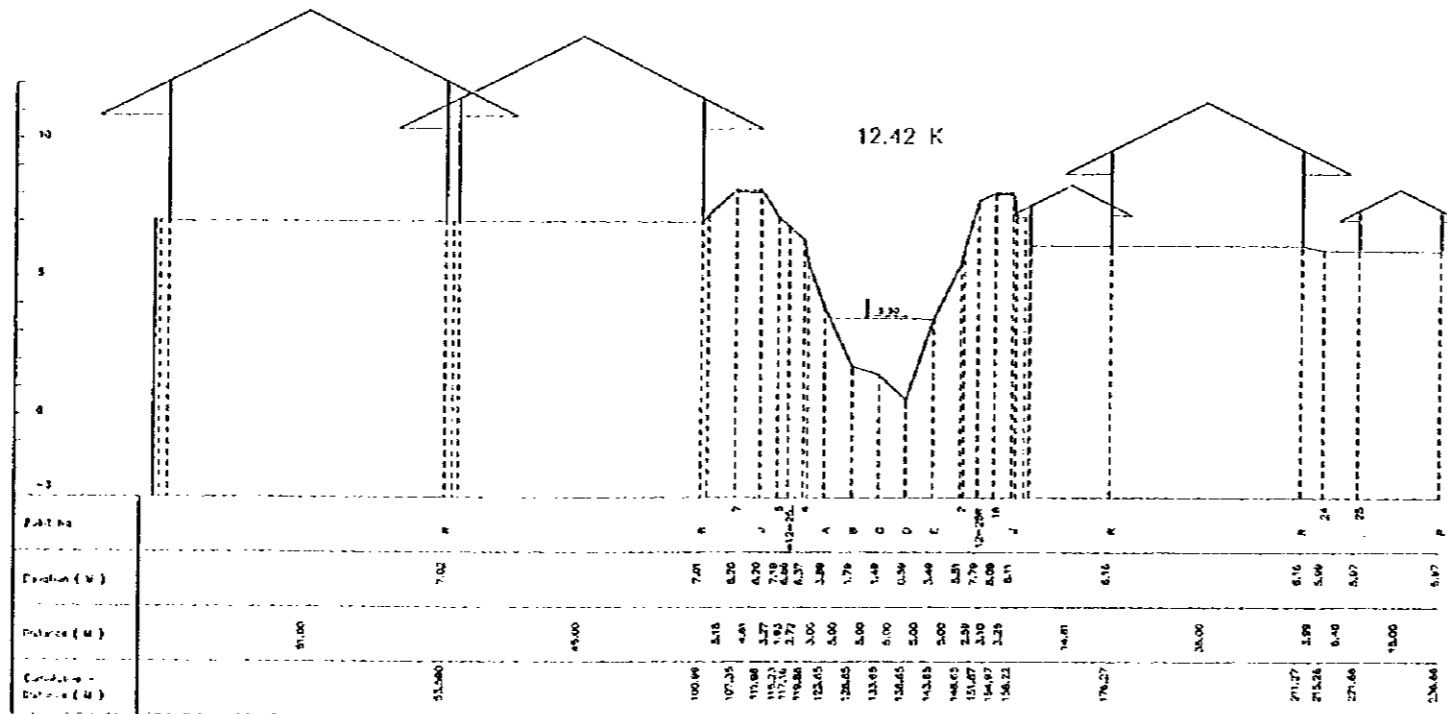
Scale: 1:500  
 Date: 1988.04.04  
 Drawn: 0.05



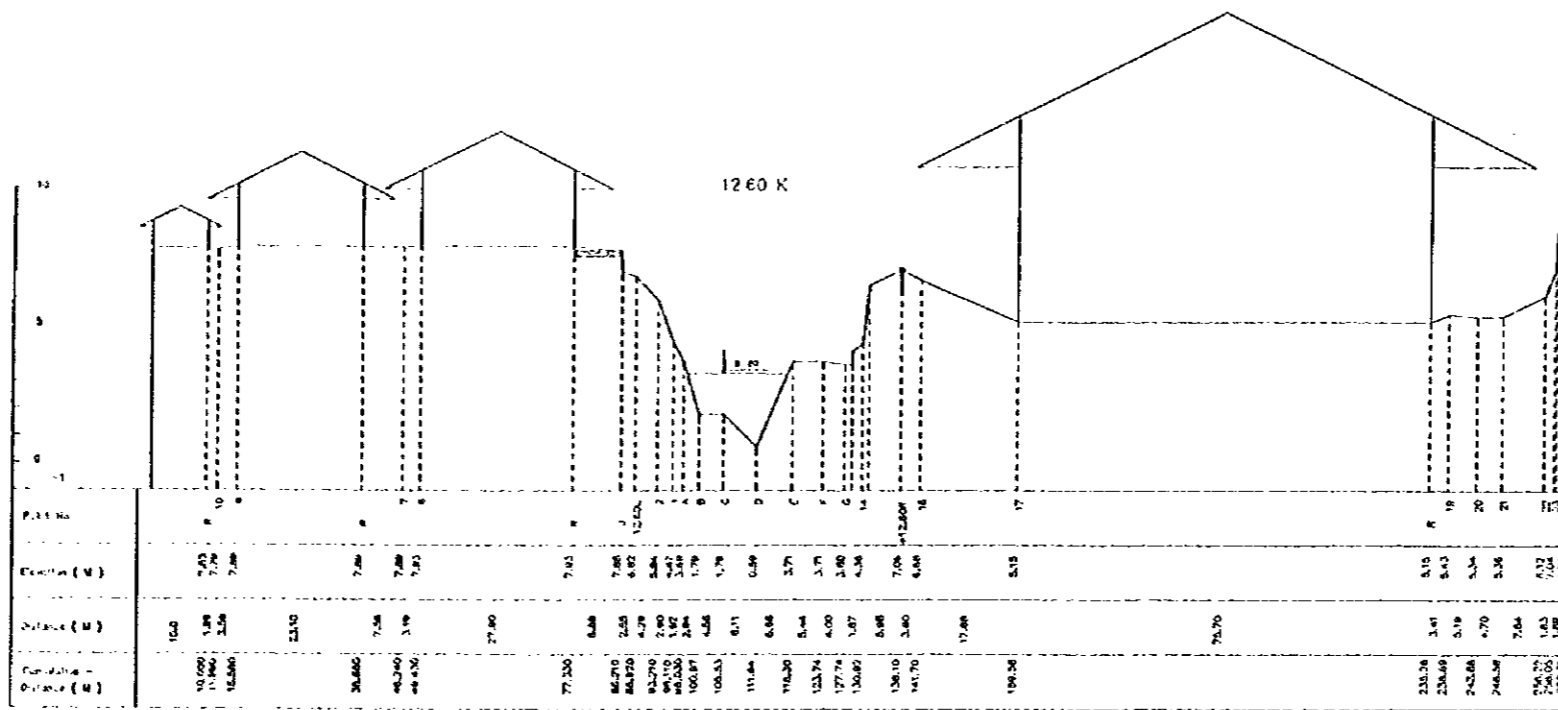
Scale: 1:500  
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 Drawn: 0.05

Note: Elevation is based on Mean Sea Level (TIG)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT		WESTERN BANJAR CANAL RIPE OF EFFLUENTS	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTABEK		CROSS SECTION	
RIVER SURVEY		SCALE	SHEET NO.
		H = 1 : 500	25 / 38
		V = 1 : 100	
DATE	DRAWN	APPROVED	
1988.04.04	0.05		
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ATLAS DELTASATYA	



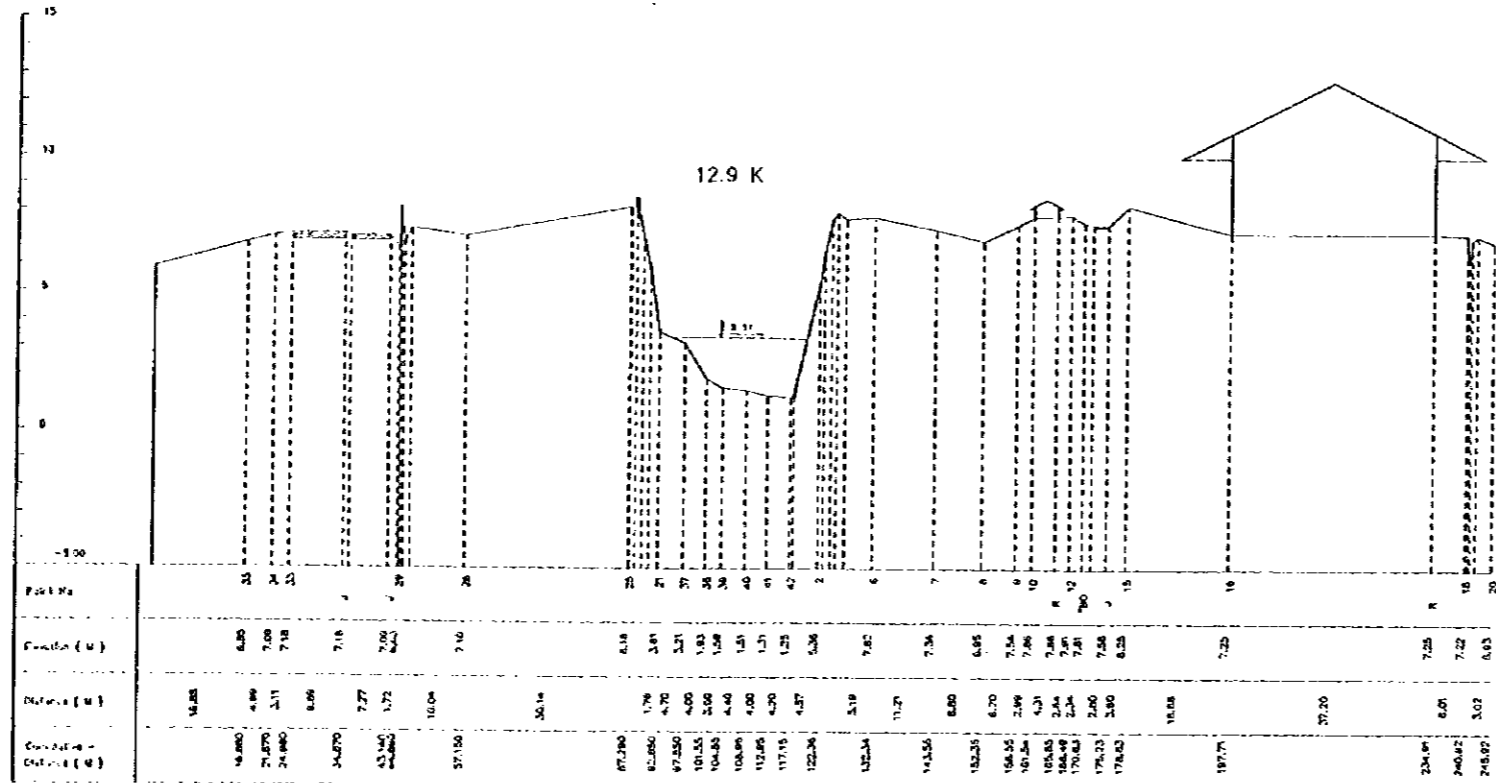
Date : June 04, 95  
Time : 13.25



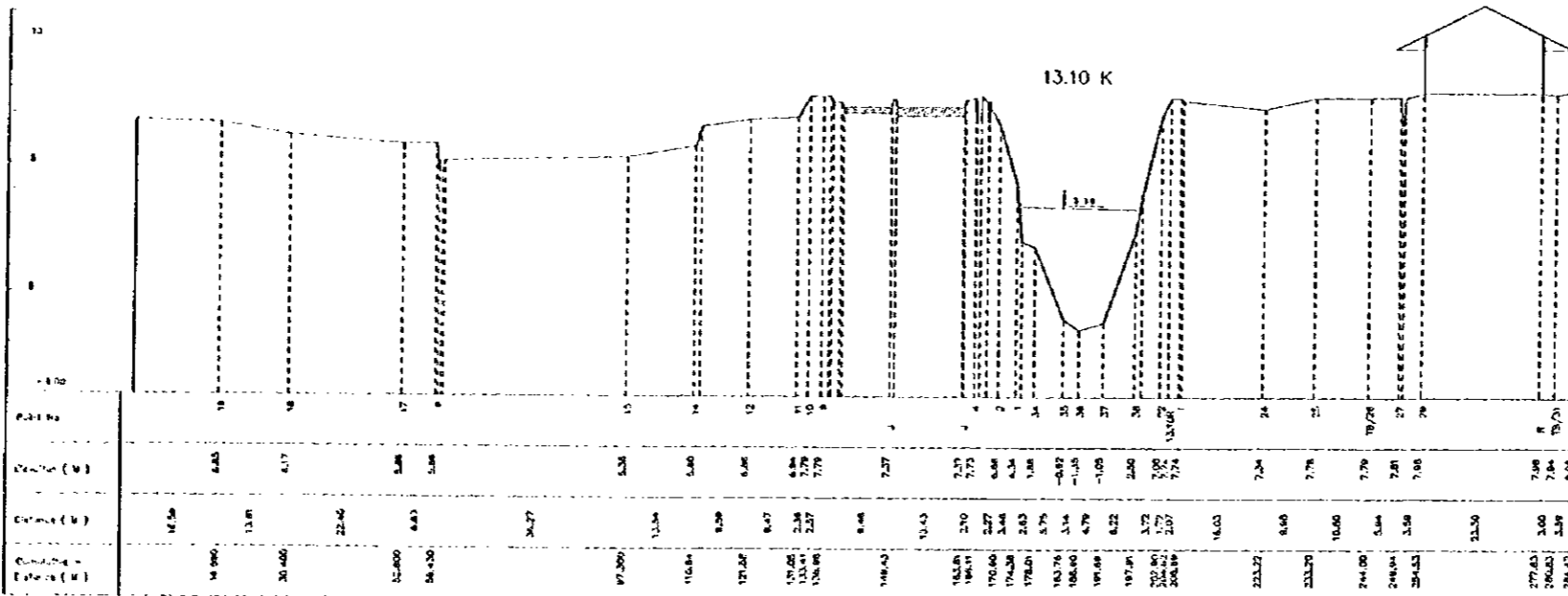
Date : June 04, 95  
Time : 14.20

Note : Elevation is based on Mean Sea Level (TIG)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK	
RIVER SURVEY	
WESTERN BANJIR CANAL TITLE OF DRAWING	
CROSS SECTION	
CHECKED [Signature]	APPROVED [Signature]
SCALE H = 1 : 500 V = 1 : 100	SHEET No. 26 / 38
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	
PT. ATLAS DELTASATYA	



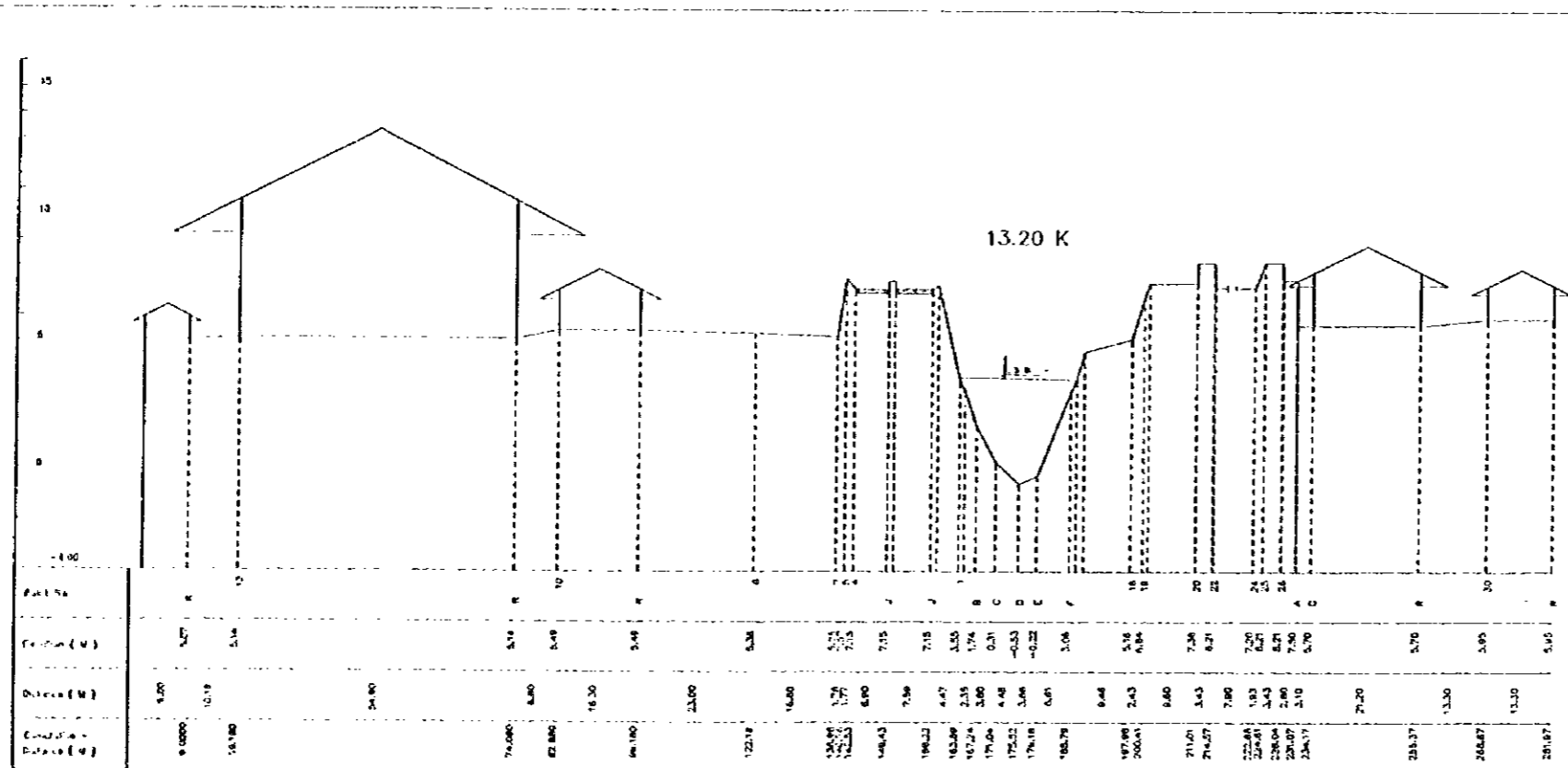
Scale: 1:500  
Date: 14.10.88



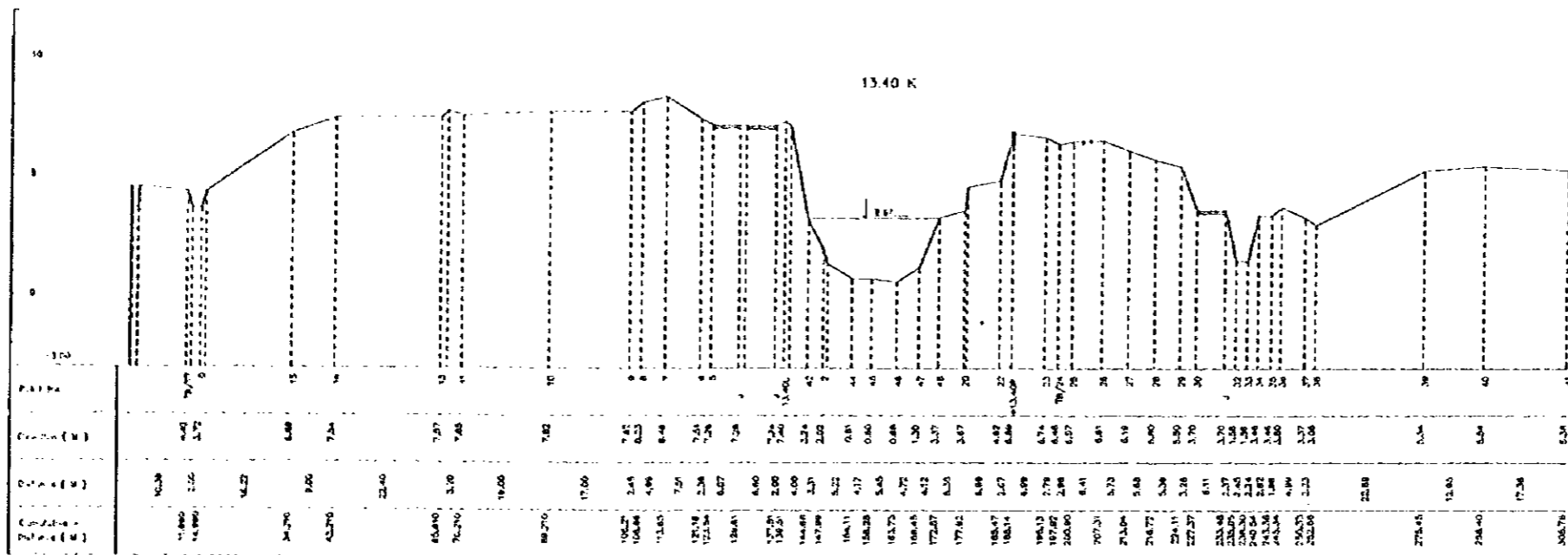
Scale: 1:500  
Date: 14.10.88

Note: Elevation is based on Mean Sea Level (T.S.C.)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JAWOTABEK	
RIVER SURVEY	WESTERN BANJAR CANAL TITLE OF DRAWING
CROSS SECTION	
CHECKED	APPROVED
Signature	Signature
Date	Date
SCALE	SHEET No.
H = 1 : 500	27 / 38
V = 1 : 100	
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	P.F. ATLAS DELTASATYA



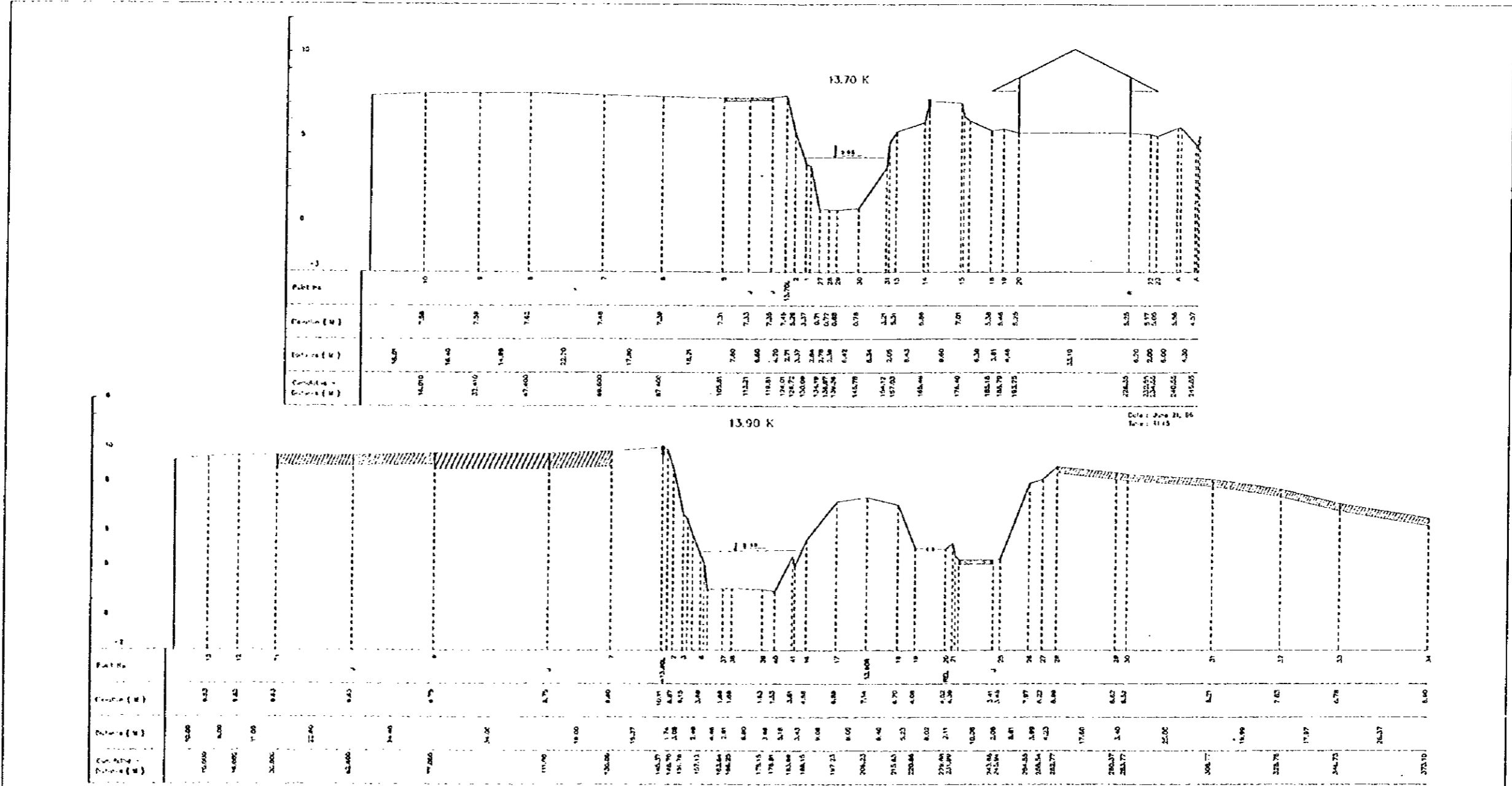
Date: June 26, 86  
Time: 8:05



Date: June 26, 86  
Time: 09:10

(Note: Elevation is based on Mean Sea Level (+1.0))

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BANJIR CANAL	
		SITE OF BRIDGES	
CROSS SECTION			
Checked	Approved	Scale	Sheet No.
Signature	Signature	H = 1 : 500	28 / 38
Date	Date	V = 1 : 100	
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ABAS DELTASATYA	



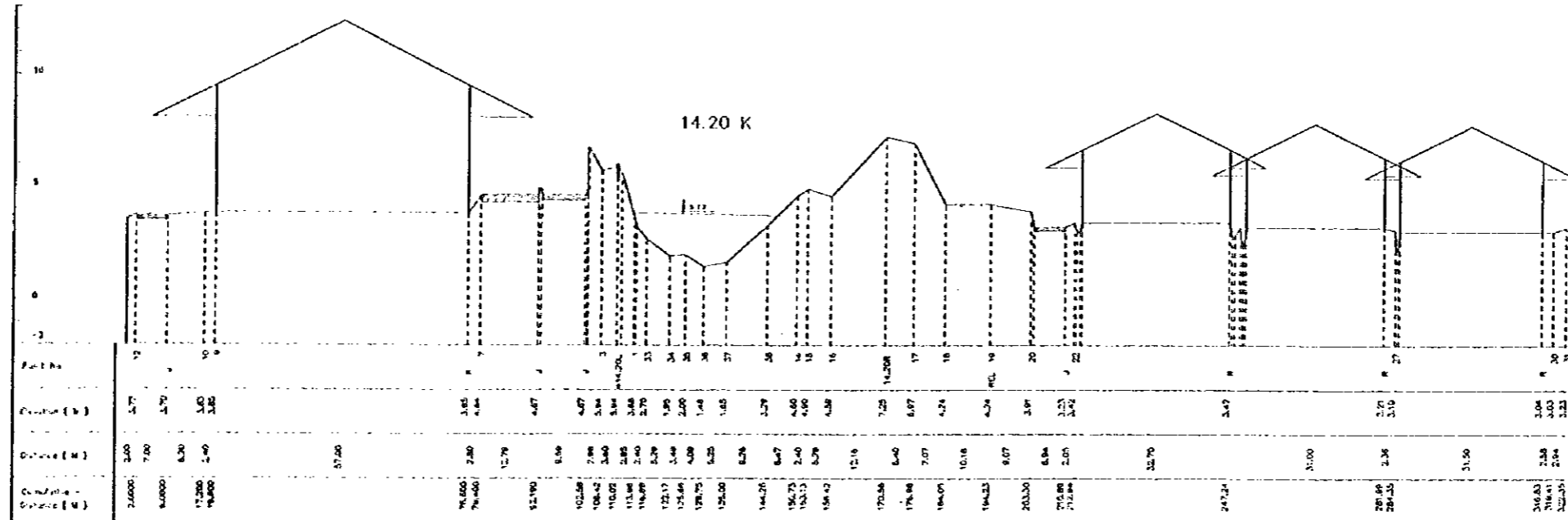
Date: June 21, 86  
Time: 11:15

Date: June 21, 86  
Time: 11:15

Note: Elevation is based on Mean Sea Level (M.S.L.)

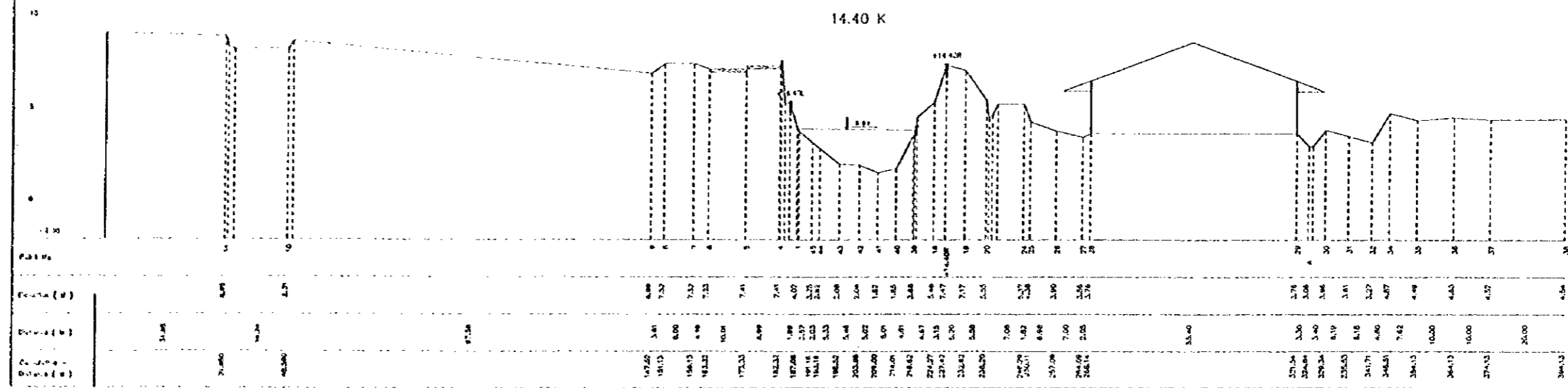
MINISTRY OF PUBLIC WORKS			
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JAJOTAREK			
RIVER SURVEY		WESTERN BANJAR CANAL	
		D.R.E. OF DRAWINGS	
		CROSS SECTION	
DESIGNED		APPROVED	
Name	Section	Name	Scale
Signature	Date	Signature	Date
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PI. ANAS DELIASATYA	





Point No.	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Point (E)	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75		
Distance (m)	3.00	7.00	8.30	1.00	3.00	37.00	3.00	12.70	5.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	
Cumulative Distance (m)	3.00	10.00	18.30	19.30	20.30	57.30	60.30	73.00	78.00	82.00	85.00	88.00	91.00	94.00	97.00	100.00	103.00	106.00	109.00	112.00	115.00	118.00	121.00

Date: June 21, 68  
Time: 12.50

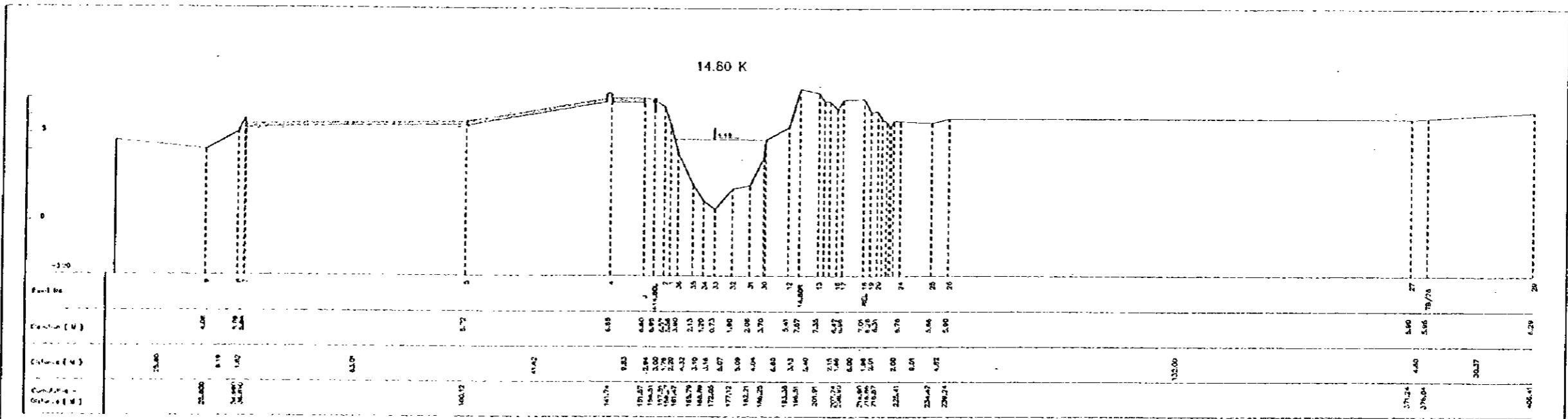


Point No.	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	
Point (E)	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
Distance (m)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Cumulative Distance (m)	3.00	6.00	9.00	12.00	15.00	18.00	21.00	24.00	27.00	30.00	33.00	36.00	39.00	42.00	45.00	48.00	51.00	54.00	57.00	60.00	63.00	66.00	69.00	72.00	75.00

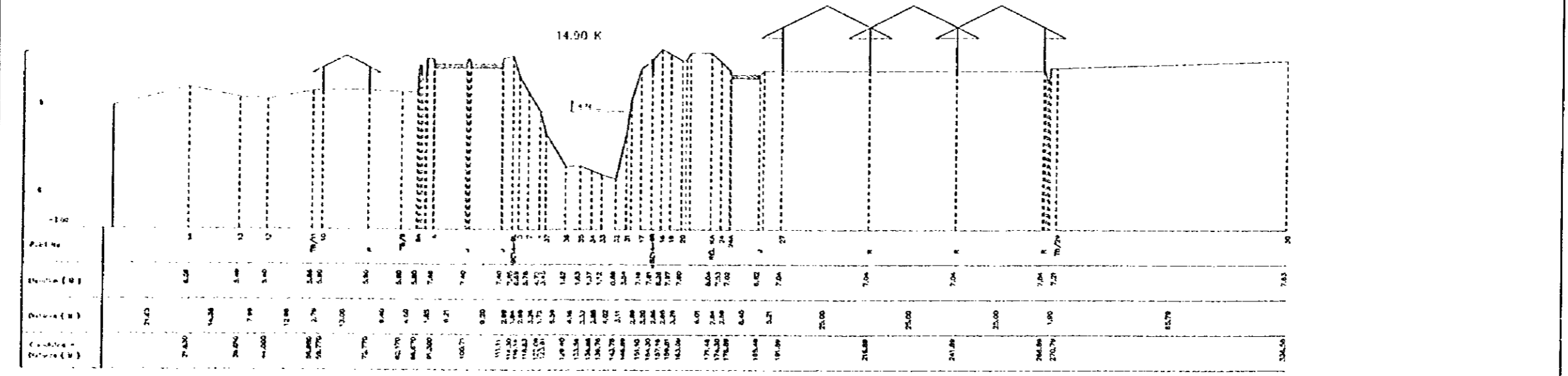
Date: June 15, 68  
Time: 09.45

Note: Elevation is based on Mean Sea Level (M.S.L.)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTAJEK	
RIVER SURVEY	
WESTERN BANIR CANAL	
CROSS SECTION	
Checked	Approved
Scale	Sheet No.
H = 1 : 500	30 / 38
V = 1 : 100	
JICA	PT. ATLAS ULTASARYA



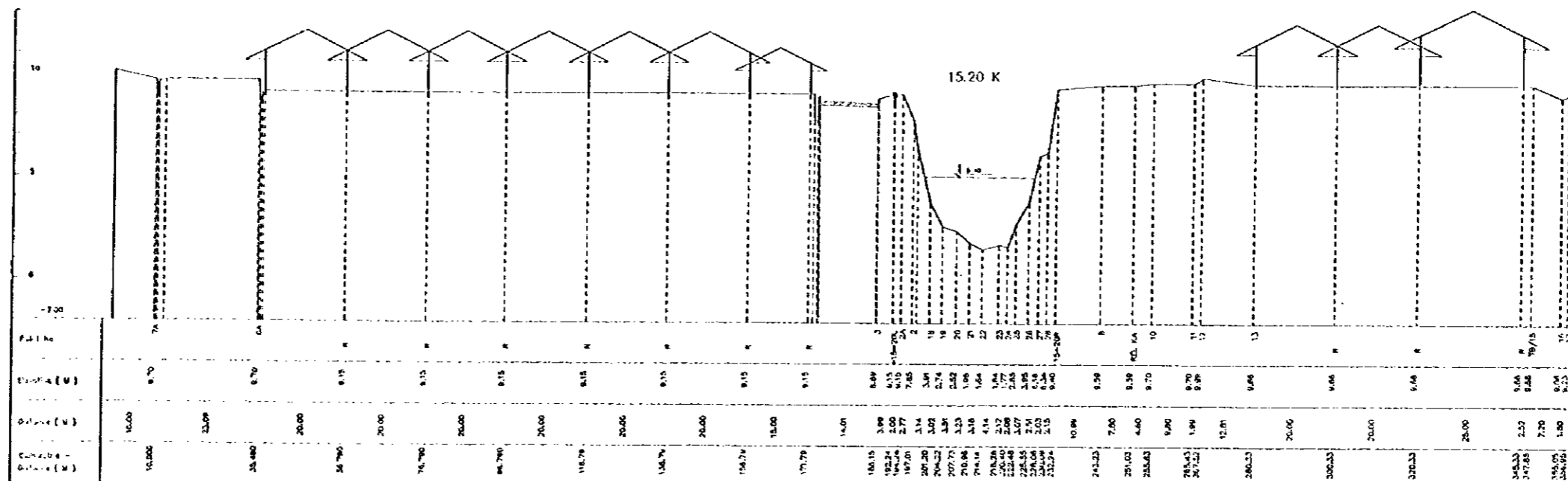
Date: June 13, 66  
 Scale: 1:100



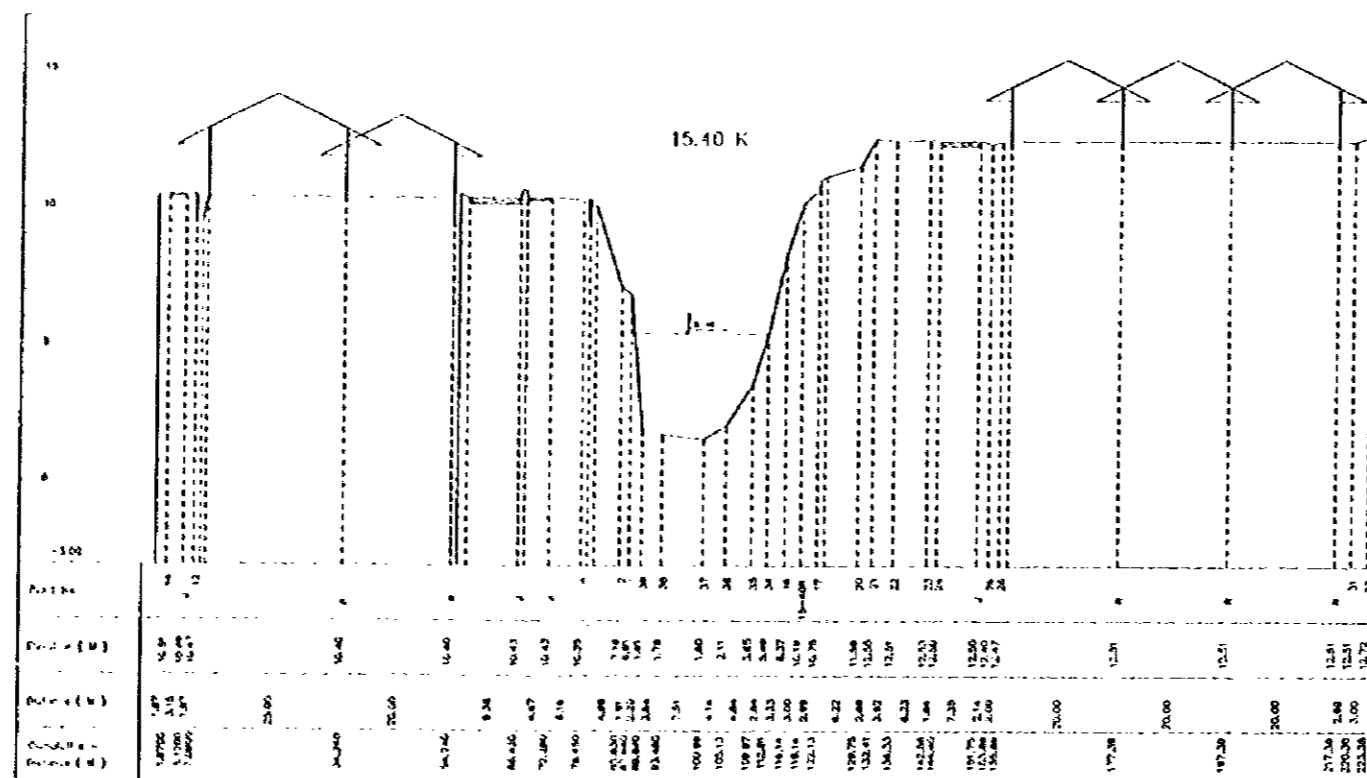
Date: June 12, 66  
 Scale: 1:100

Note: Elevation is based on Mean Sea Level (110)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BANJAR CANAL RALE OF BRANGES	
		CROSS SECTION	
DATE	OKAYED	APPROVED	SCALE
NAME	SIGNATURE	SIGNATURE	H = 1 : 500
SIGNATURE	DATE	DATE	V = 1 : 100
DATE			SHEET NO. 1
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			PT. ATLAS DELTASATYA



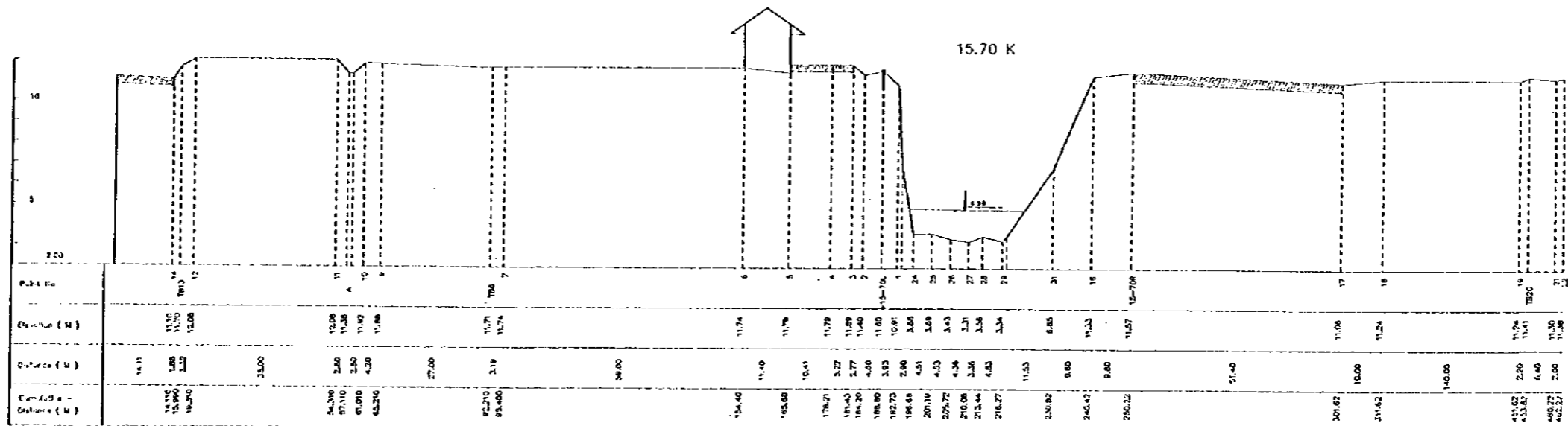
Date: June 10, 95  
 Page: 11/65



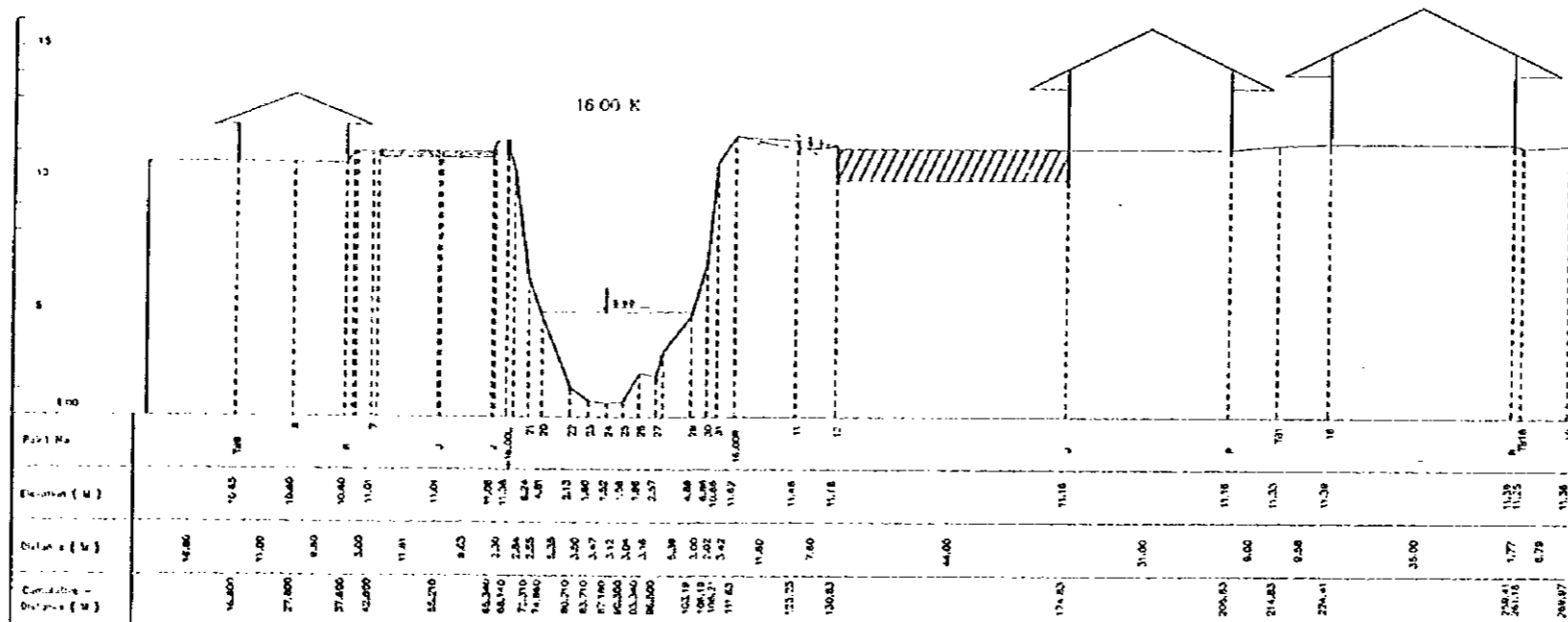
Date: June 11, 95  
 Page: 11/65

Note: Elevation is based on Mean Sea Level (T.M)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTANAK	
RIVER SURVEY	
WESTERN BANJAR CANAL AREA OF DRAWINGS CROSS SECTION	
Name: _____ Signature: _____ Date: _____	DESIGNED: _____ APPROVED: _____ SCALE: H = 1 : 500 V = 1 : 100 SHEET No. 32 / 38
JAPAN INTERNATIONAL COOPERATION AGENCY	PT. AIRAS DELTASATYA



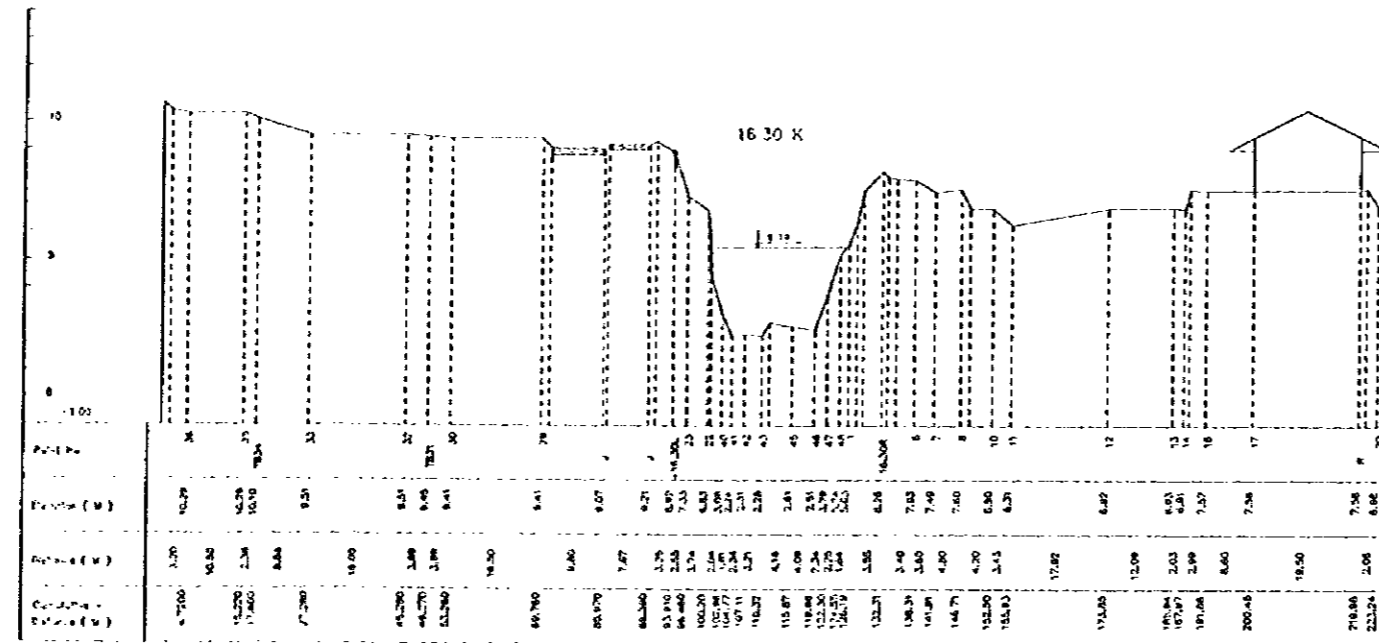
Date: June 27, 98  
Time: 09:15



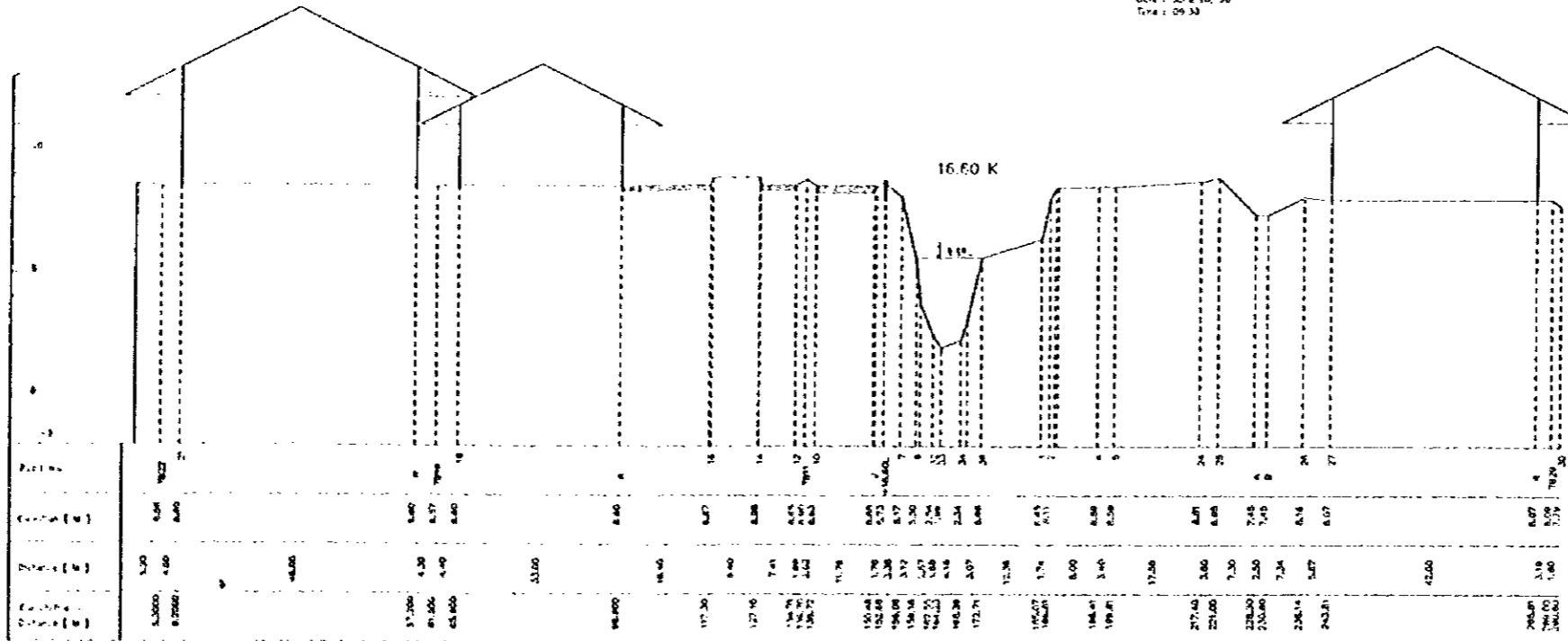
Date: June 27, 98  
Time: 10:15

Note: Elevation is based on Mean Sea Level (+110)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTABEK			
RIVER SURVEY		WESTERN BANTAR CANAL	
		CROSS SECTION	
Checked	Approved	Scale	Sheet No.
Signature	Signature	H = 1 : 500 V = 1 : 100	33 / 38
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			PT. ATLAS DELTASAYA



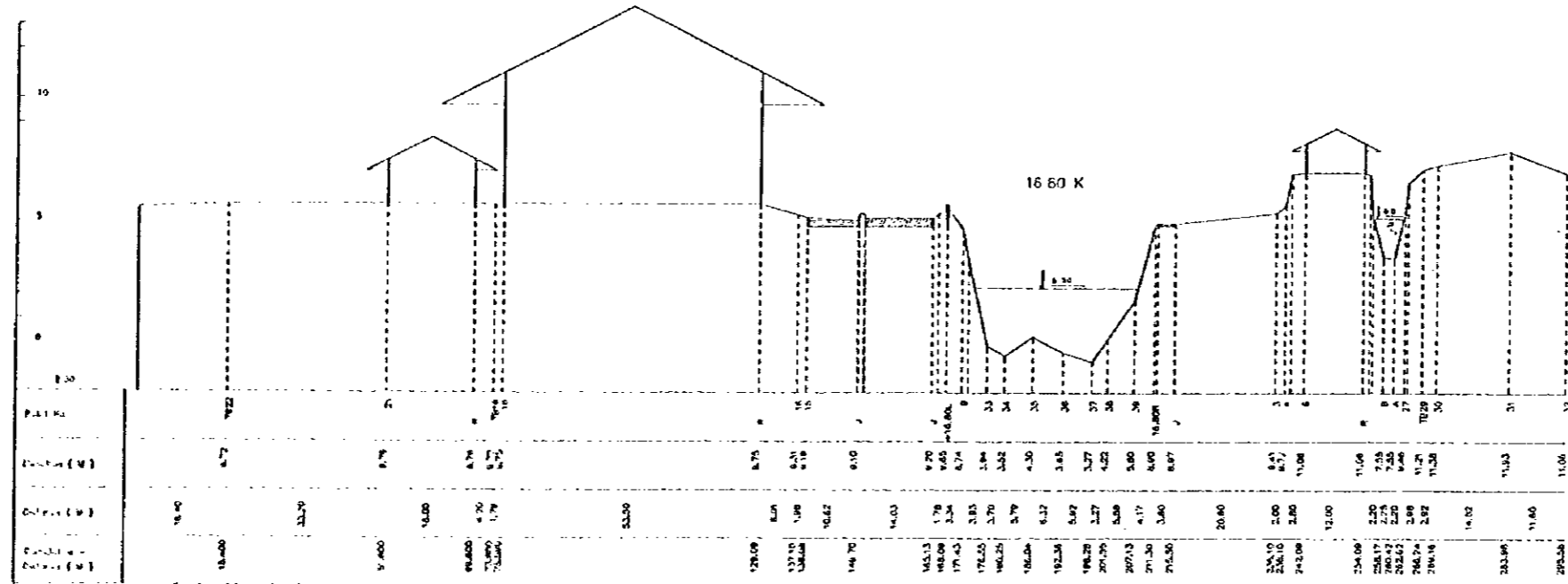
0.14 : June 10, 92  
 Total : 59.33



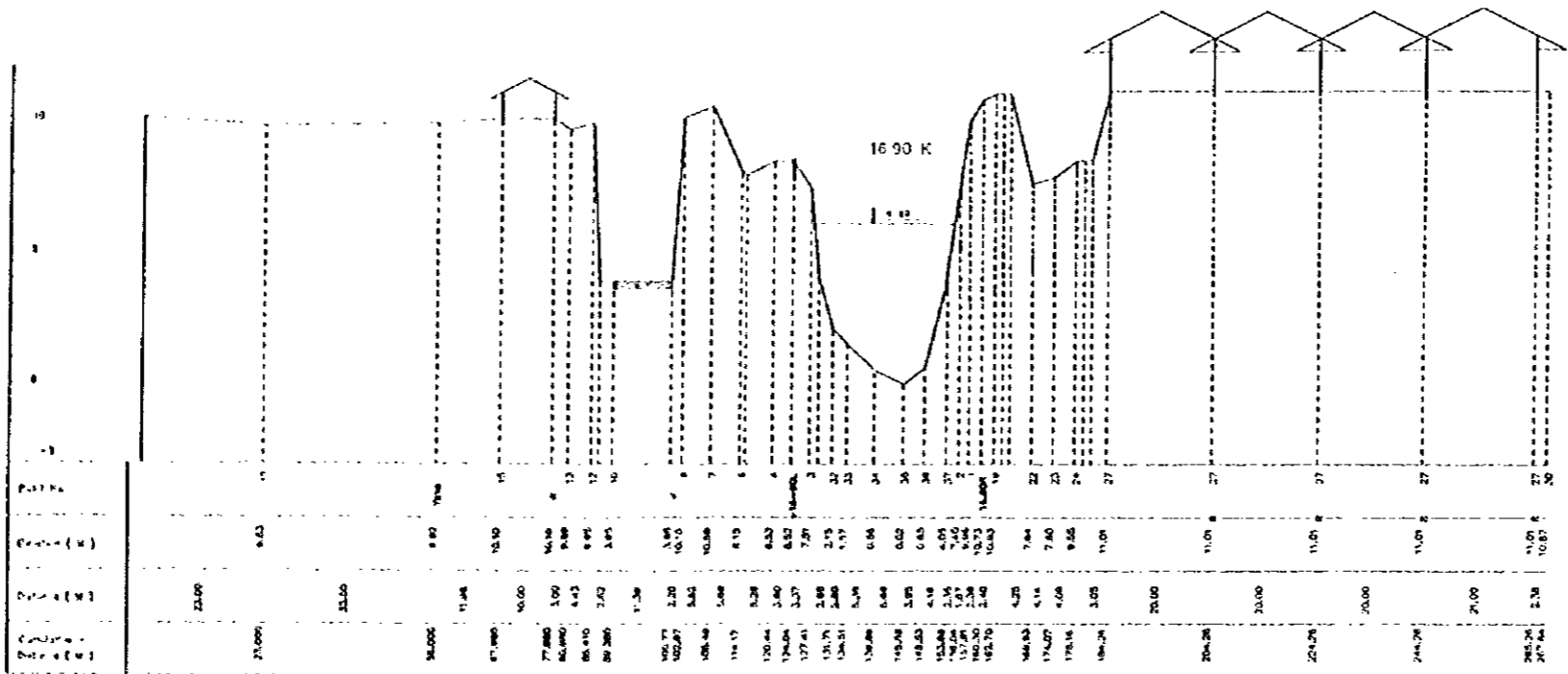
0.14 : June 10, 92  
 Total : 59.33

Note : Elevation is based on Mean Sea Level ( MSL )

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK	
WESTERN BANJIR CANAL SIDE OF DRAINAGE	
RIVER SURVEY CROSS SECTION	
DATE	SCALE
SIGNATURE	H = 1 : 500
EDUCATION	V = 1 : 100
REVISION	34 / 36
JICA JAPAN INTERNATIONAL COOPERATION AGENCY PT. ATLAS DELTASATVA	



Date: 21.02.96  
Scale: 1:500



Date: 21.02.96  
Scale: 1:500

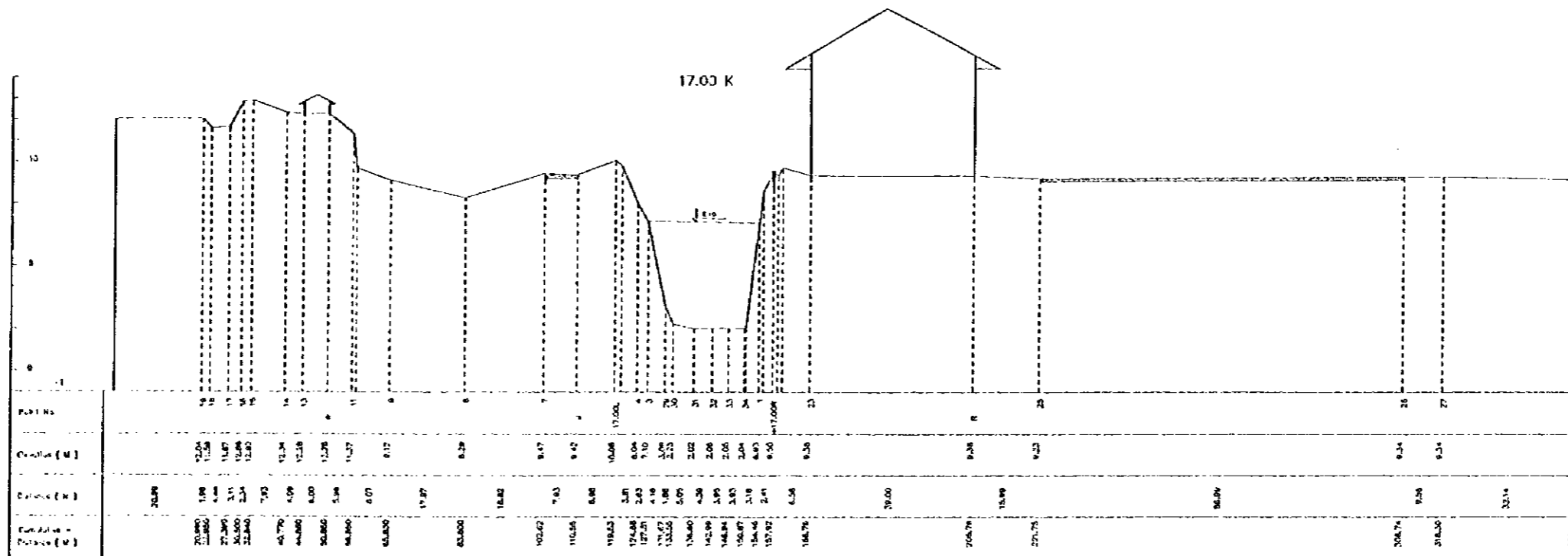
Note: Elevation is based on Mean Sea Level (1.70)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK WESTERN BANJAR CANAL SITE OF DRAWING	
RIVER SURVEY CROSS SECTION	
Name: _____ Station: _____ Date: _____	CHECKED: _____ ATTACHED: _____ SCALE: 1:500 SHEET No.: 35 / 38
JICA JAPAN INTERNATIONAL COOPERATION AGENCY P.T. ARAS ECLASATAYA	





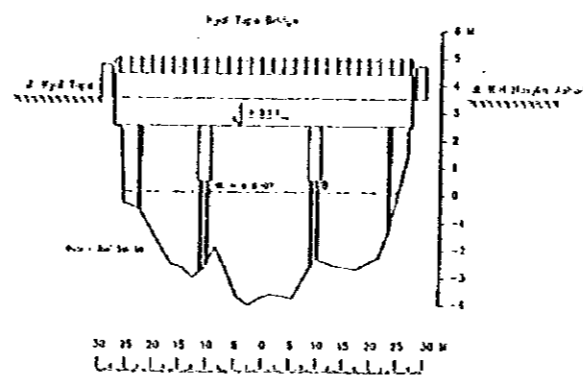
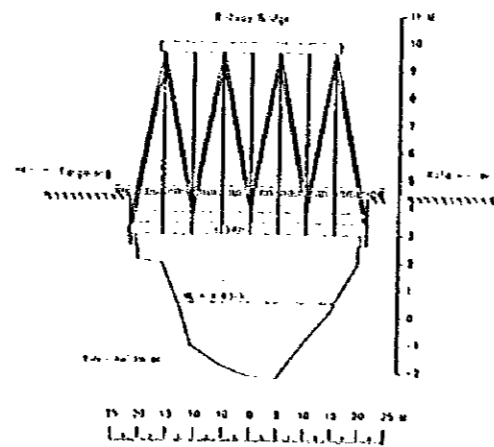
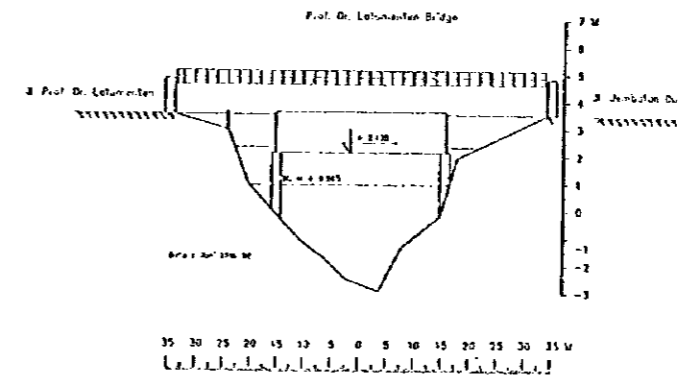
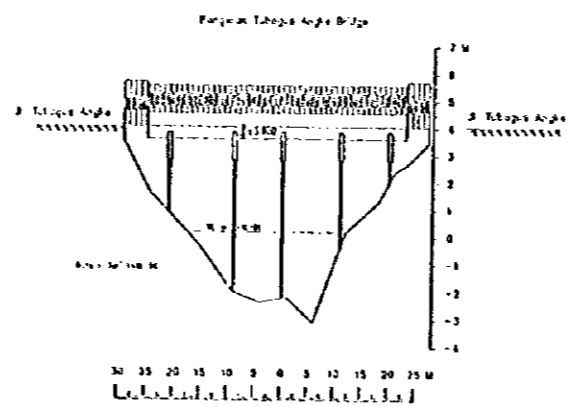
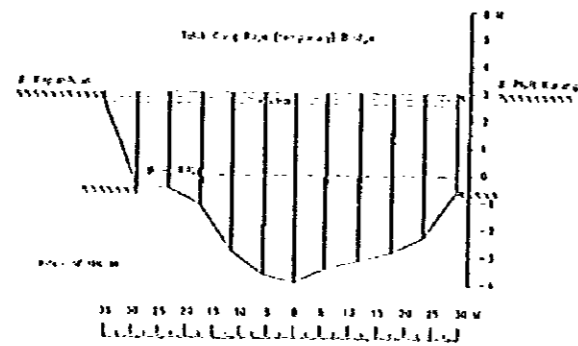
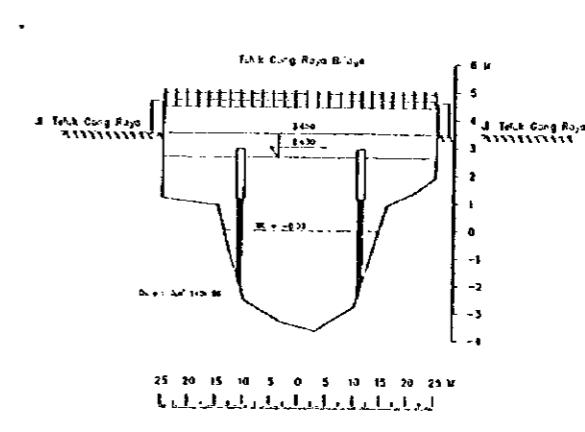
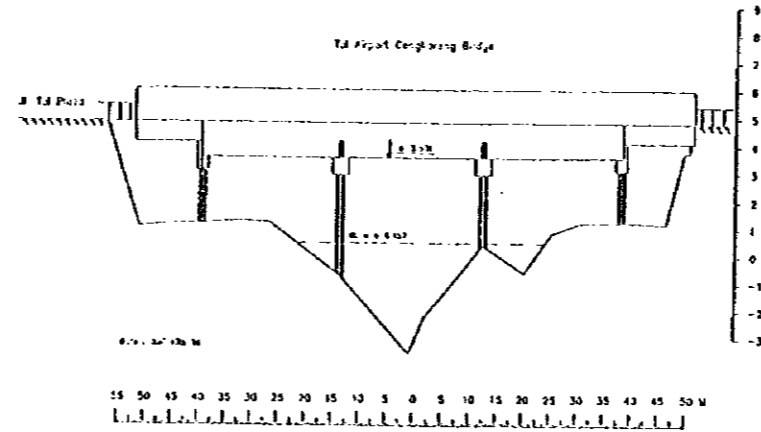
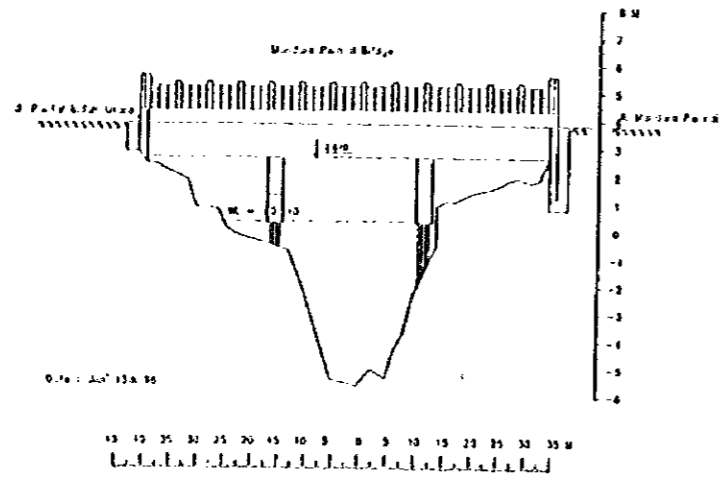




Date: Apr 19, 96  
Time: 11.05

Note: Elevation is based on Mean Sea Level (TIG)

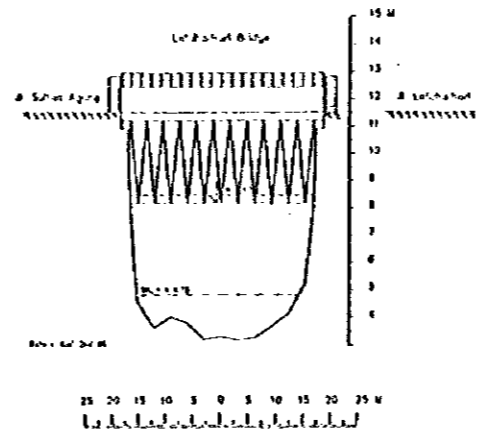
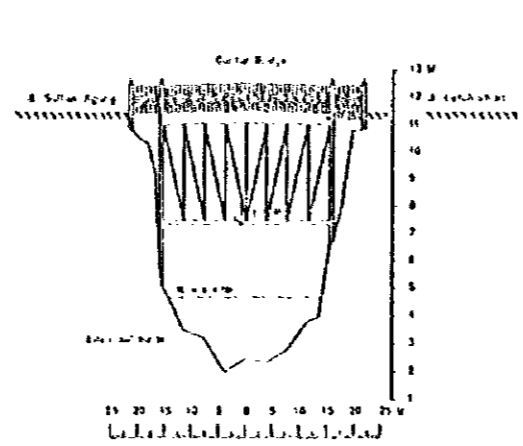
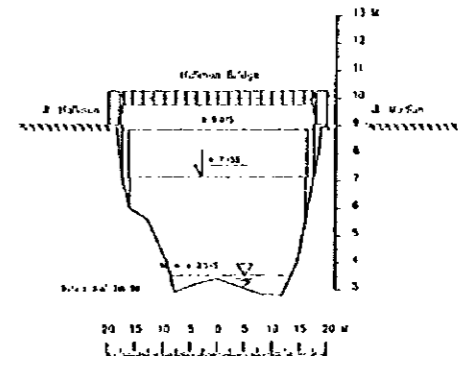
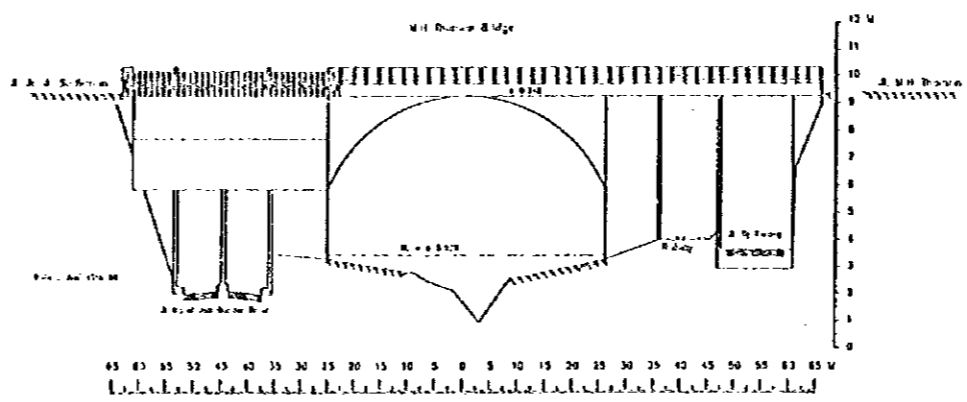
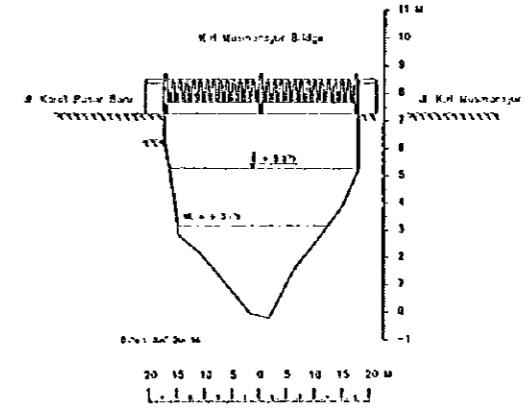
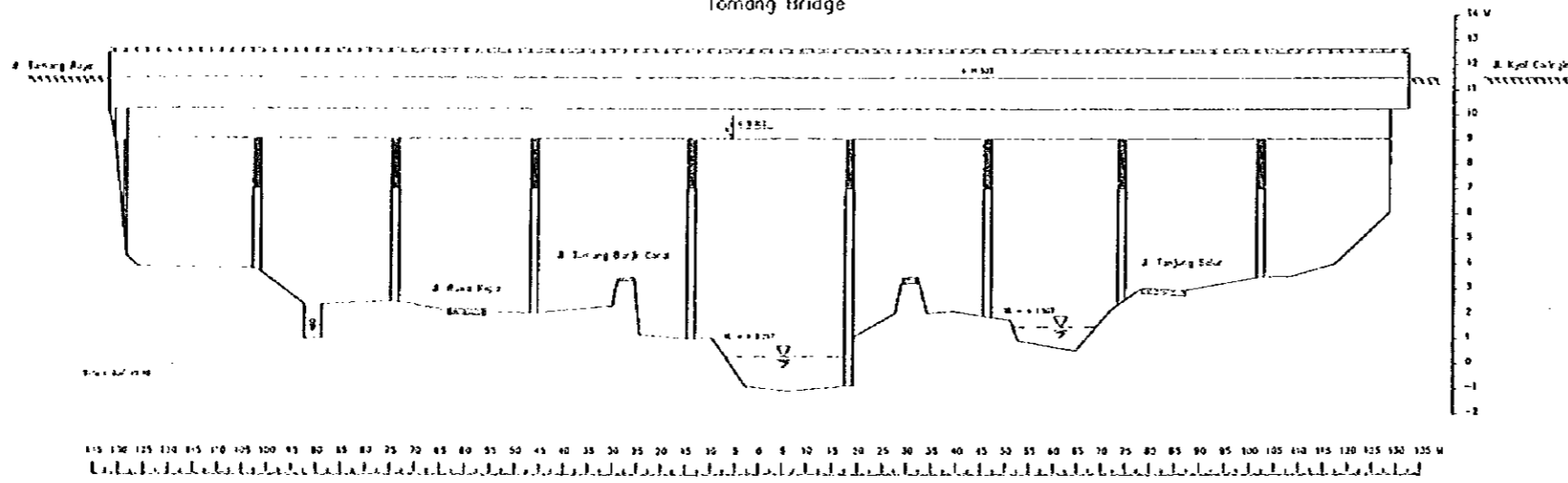
MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTABEK			
RIVER SURVEY		WESTERN BANAR CANAL SITE OF OBSERVATION	
CROSS SECTION		SITE NO.:	
Checked	Approved	Scale	Sheet No.
Name	Signature	H = 1 : 500	38 / 38
Date		V = 1 : 100	
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PI. ATLAS DELTASAIYA	



Bridge Elevation is based on Mean Sea Level (1972)

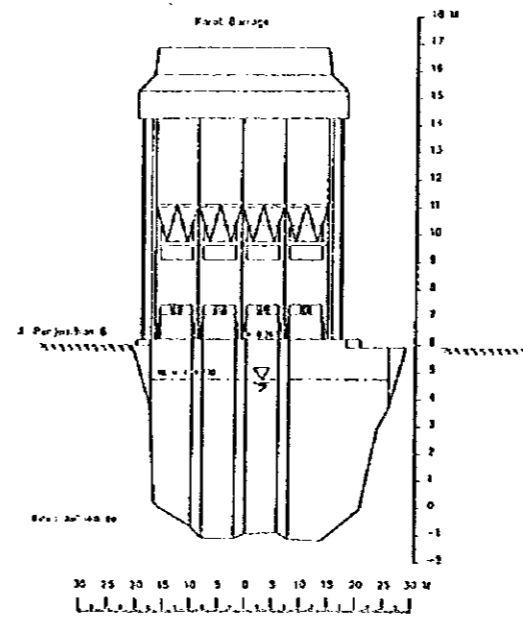
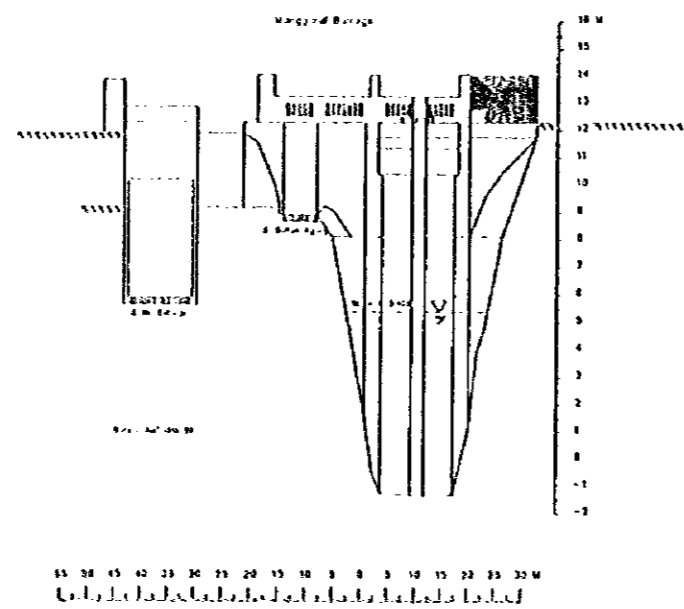
MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN JAW CANAL	
BRIDGES			
NO.	NAME	SCALE	SHEET No.
1	Madan Para	V = 1 : 100 H = 1 : 500	1 / 3
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			PT. ATLAS DELTASATTA

Tomang Bridge



Note: Elevation is based on Mean Sea Level ( M.S.L. )

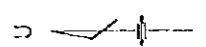
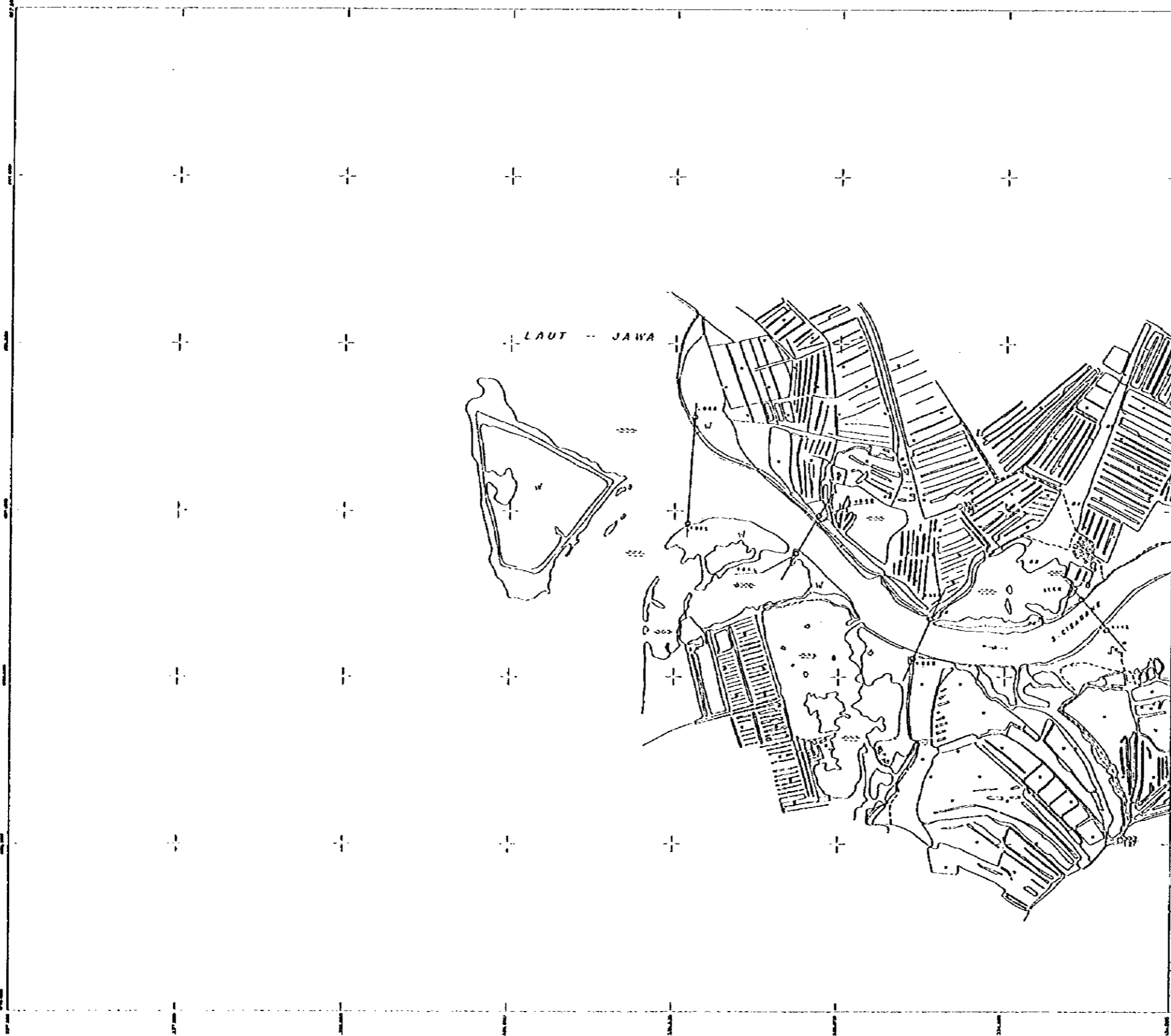
MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT		THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK WESTERN BANK CANAL	
RIVER SURVEY		BRIDGES	
DECID.	APPROV.	SCALE	REVISION
		V = 1 : 100	2 / 3
		H = 1 : 500	
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ANAS DELTASATA	



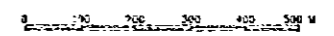
Note: Elevation is based on Mean Sea Level (MSL)

MINISTRY OF PUBLIC WORKS		DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		WESTERN BANK CANAL BARRAGES	
DRAWN		APPROVED	
Name: _____		Name: _____	
Signature: _____		Signature: _____	
Date: _____		Date: _____	
Scale: V = 1 : 100		Scale: H = 1 : 500	
Sheet No. 3 / 3		PI. ATLAS CILTASATYA	
JICA JAPAN INTERNATIONAL COOPERATION AGENCY			

## 2 River Survey of Cisadane River



SCALE 1 : 5000



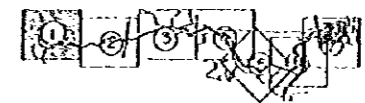
LEGEND

⊙ 243 Existing Mangrove Point	⊙ 243 Existing Mangrove Point
⊙ 243 Spring Point	⊙ 243 Spring Point
⊙ 243 GPS Point	⊙ 243 GPS Point
⊙ 243 Dama Mark	⊙ 243 Dama Mark
⊙ 243 Existing Bank Mark	⊙ 243 Existing Bank Mark
⊙ 243 Spot Leveling	⊙ 243 Spot Leveling
⊙ 243 Spot Height	⊙ 243 Spot Height
⊙ 243 Concrete Building	⊙ 243 Concrete Building
⊙ 243 House	⊙ 243 House
⊙ 243 Mosque	⊙ 243 Mosque
⊙ 243 Church	⊙ 243 Church
⊙ 243 Hospital	⊙ 243 Hospital
⊙ 243 Shop	⊙ 243 Shop
⊙ 243 Government Office	⊙ 243 Government Office
⊙ 243 Road	⊙ 243 Road
⊙ 243 Path	⊙ 243 Path
⊙ 243 Bridge	⊙ 243 Bridge
⊙ 243 Railway	⊙ 243 Railway
⊙ 243 Station	⊙ 243 Station
⊙ 243 Electric Power Line	⊙ 243 Electric Power Line
⊙ 243 Contour and Encasement	⊙ 243 Contour and Encasement
⊙ 243 Swamp	⊙ 243 Swamp
⊙ 243 Muslim grave	⊙ 243 Muslim grave
⊙ 243 Christian cemetery	⊙ 243 Christian cemetery
⊙ 243 Office plot	⊙ 243 Office plot
⊙ 243 Paddy field	⊙ 243 Paddy field
⊙ 243 Boundary of Vegetation	⊙ 243 Boundary of Vegetation
⊙ 243 Field	⊙ 243 Field
⊙ 243 Forest	⊙ 243 Forest
⊙ 243 Canal	⊙ 243 Canal
⊙ 243 Foundation	⊙ 243 Foundation
⊙ 243 Water hole	⊙ 243 Water hole
⊙ 243 Pond, lake	⊙ 243 Pond, lake
⊙ 243 Sand	⊙ 243 Sand
⊙ 243 Land Use	⊙ 243 Land Use

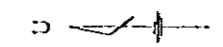
NOTE: 1. N. Y. 11  
 2. Based on the Zone 48  
 Mean Sea Level (115 260 - 110 260)

Index Contour : 10 meter  
 Main Contour : 2 meter  
 Spot Leveling Contour : 1 meter  
 Aerial Photography : 1 : 10 000  
 Date : 01.10.04

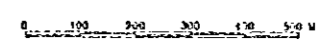
INDEX SHEET



MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTABEK			
RIVER SURVEY		CISADANE RIVER	
		CROSS SECTION - LOCATION	
On Job by	Checked by	Scale	Sheet No.
1/1/04	1/1/04	1 : 5,000	1/7
JICA JAPAN INTERNATIONAL COOPERATIVE AGENCY		PT. ATLAS PERTASATYA	



SCALE 1 : 5000



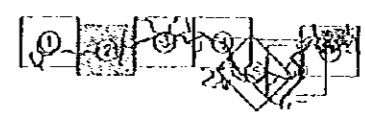
LEGEND

- |                               |                 |                 |                    |                           |                   |                     |         |          |          |           |                 |        |          |          |           |           |                       |                           |         |             |                  |              |               |                          |         |          |        |              |              |              |        |              |
|-------------------------------|-----------------|-----------------|--------------------|---------------------------|-------------------|---------------------|---------|----------|----------|-----------|-----------------|--------|----------|----------|-----------|-----------|-----------------------|---------------------------|---------|-------------|------------------|--------------|---------------|--------------------------|---------|----------|--------|--------------|--------------|--------------|--------|--------------|
| △ 243 Chiling Miculation Post | ○ 243 Bula Post | ○ 243 GPS Point | ○ 243 Control Mark | □ 243 Existing Bench Mark | △ 243 Spot Height | □ Concrete Building | □ House | □ Mosque | ○ Masjid | □ Sekolah | △ Cement Bridge | — Road | --- Path | — Bridge | — Highway | ○ Station | — Electric Power Line | — Drinking and Sanitation | □ Swamp | ○ Main gate | □ Quail cemetery | — Other gate | □ Paddy field | — Boundary of Regulation | □ Field | □ Forest | □ Gate | □ Canal flow | □ Water hole | □ Pond, lake | □ Sand | □ Land title |
|-------------------------------|-----------------|-----------------|--------------------|---------------------------|-------------------|---------------------|---------|----------|----------|-----------|-----------------|--------|----------|----------|-----------|-----------|-----------------------|---------------------------|---------|-------------|------------------|--------------|---------------|--------------------------|---------|----------|--------|--------------|--------------|--------------|--------|--------------|

NOTE : 1. 1 : 2. 1 : 3. 1 : 4. 1 : 5. 1 : 6. 1 : 7. 1 : 8. 1 : 9. 1 : 10. 1 : 11. 1 : 12. 1 : 13. 1 : 14. 1 : 15. 1 : 16. 1 : 17. 1 : 18. 1 : 19. 1 : 20. 1 : 21. 1 : 22. 1 : 23. 1 : 24. 1 : 25. 1 : 26. 1 : 27. 1 : 28. 1 : 29. 1 : 30. 1 : 31. 1 : 32. 1 : 33. 1 : 34. 1 : 35. 1 : 36. 1 : 37. 1 : 38. 1 : 39. 1 : 40. 1 : 41. 1 : 42. 1 : 43. 1 : 44. 1 : 45. 1 : 46. 1 : 47. 1 : 48. 1 : 49. 1 : 50. 1 : 51. 1 : 52. 1 : 53. 1 : 54. 1 : 55. 1 : 56. 1 : 57. 1 : 58. 1 : 59. 1 : 60. 1 : 61. 1 : 62. 1 : 63. 1 : 64. 1 : 65. 1 : 66. 1 : 67. 1 : 68. 1 : 69. 1 : 70. 1 : 71. 1 : 72. 1 : 73. 1 : 74. 1 : 75. 1 : 76. 1 : 77. 1 : 78. 1 : 79. 1 : 80. 1 : 81. 1 : 82. 1 : 83. 1 : 84. 1 : 85. 1 : 86. 1 : 87. 1 : 88. 1 : 89. 1 : 90. 1 : 91. 1 : 92. 1 : 93. 1 : 94. 1 : 95. 1 : 96. 1 : 97. 1 : 98. 1 : 99. 1 : 100.

Order Contour : 10 meter  
 1/2 Contour : 5 meter  
 Supplemental Contour : 1 meter  
 Aerial Photography : 1 : 10,000  
 Source : 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

INDEX SHEET



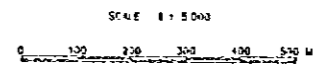
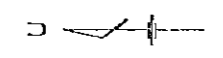
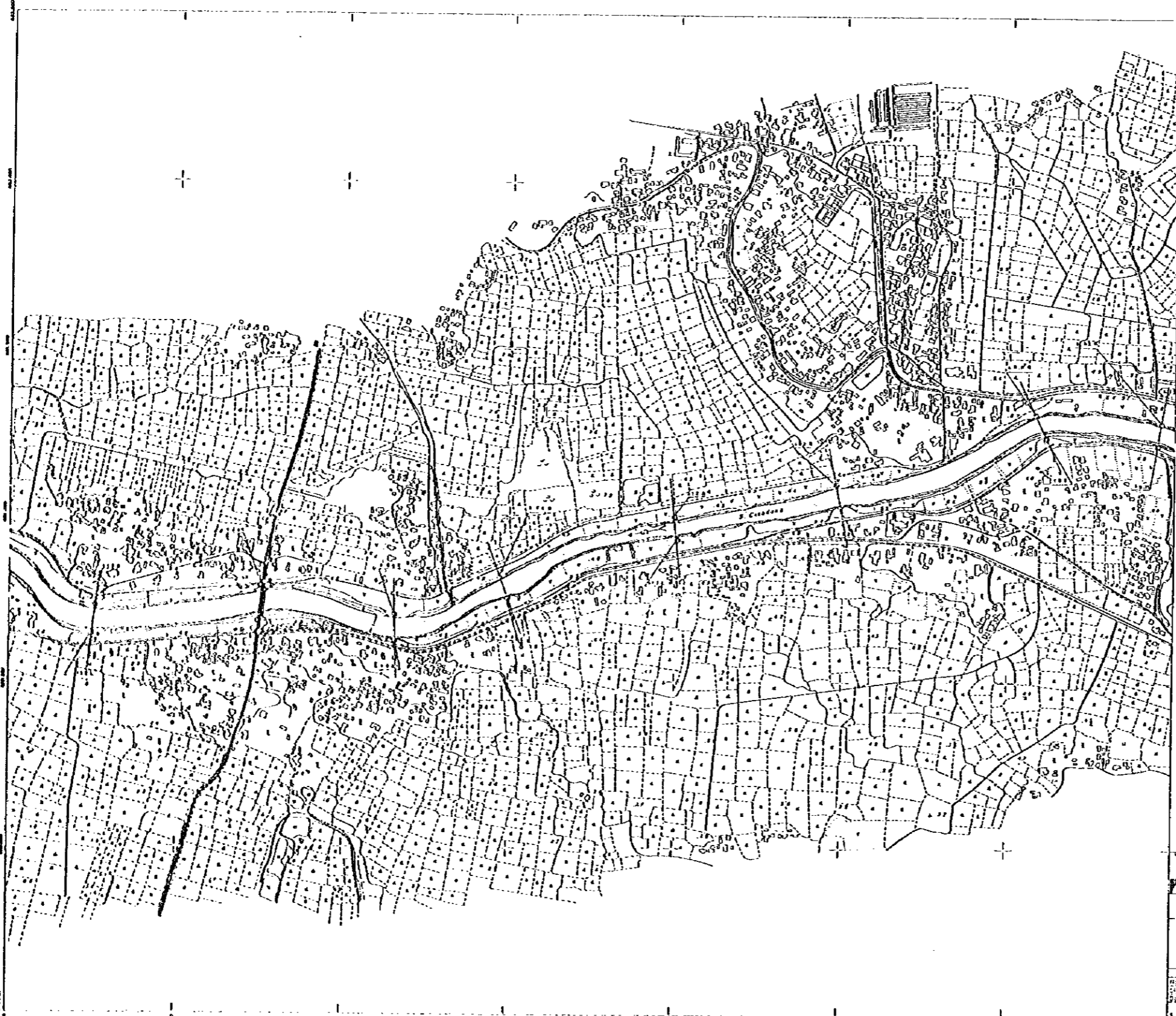
MINISTRY OF PUBLIC WORKS  
 DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT

RIVER STUDY ON COMPREHENSIVE RIVER  
 WATER MANAGEMENT PLAN IN JABOTABEK  
 CISADANE RIVER

RIVER SURVEY

DATE OF SURVEY	DATE OF PLOTTING	SCALE	SHEET No. 1
1974	1974	1 : 5,000	2/7

JICA JAPAN INTERNATIONAL COOPERATION AGENCY P. F. ANAS GELASATYA



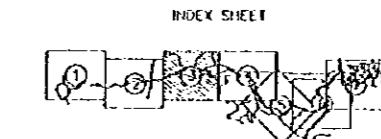
LEGEND

△ 445 Existing Triangulation Point	○ 423 Existing Bench Mark	+ 2.4 Spot Height	⊠ Station
○ 423 GPS Point	○ 424 Double Mark	⊠ Concrete Building	⊠ Electric Power Line
⊠ House	⊠ Mosque	⊠ Church	⊠ Hospital
⊠ School	⊠ Government Office	⊠ Road	⊠ Path
⊠ Bridge	⊠ Railway	⊠ Cultig and Embankment	⊠ Swamp
⊠ Muslim grove	⊠ Chinese grove	⊠ Paddy field	⊠ Boundary of Vegetation
⊠ Field	⊠ Forest	⊠ Grass	⊠ Cloudless Water Hole
⊠ Pond, Lake	⊠ Sand	⊠ Land Slide	

NOTE : X, Y  
H

⊠ Based on Zone 48  
⊠ Mean Sea Level (170 280-170 280)

⊠ Main Contour : 10 meter  
⊠ Main Contour : 2 meter  
⊠ Supplemental Contour : 1 meter  
⊠ Auto Elevation : 1 : 10 000  
⊠ Other 601



MINISTRY OF PUBLIC WORKS  
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT

THE STUDY ON COMPREHENSIVE RIVER  
WATER MANAGEMENT PLAN IN JABOTABEK

CISADANE RIVER

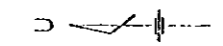
RIVER SURVEY

CROSS SECTION --  
LOCATION

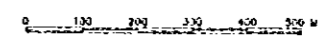
Checked by	Approved by	SCALE	SHEET No.
		1 : 5,000	3/7

JICA JAPAN INTERNATIONAL COOPERATION AGENCY PT. ARAS DELTASATYA





SCALE 1 : 5000



LEGEND

▲ 448 Existing Mangrove Plant	— Station
○ 804 Spring Point	— Electric Power Line
○ 243 GPS Point	— Cutting and Embankment
○ 422 Concrete Wall	— Swamp
○ 432 Existing Beach Mark	— Mangrove
• 243 Grid Point	— Outfall canality
• 244 Spot Height	— Chinese grave
□ Concrete Building	— Paddy field
○ House	— Boundary of Vegetation
⊕ Mosque	— Field
⊕ Church	— Forest
⊕ Hospital	— Road
⊕ School	— Path
⊕ Government Office	— Bridge
— Road	— Railway
— Path	— Canal
— Bridge	— Canal Dam
— Railway	— Water Hole
	— Pond, Lake
	— Sand
	— Sand Shore

NOTE : N, T : Based UTM Zone 48  
 H : Mean Sea Level (16G 260 TIC 261)

Index Contour : 10 meter  
 Main Contour : 2 meter  
 Supplemental Contour : 1 meter  
 Aerial Photography : 1 : 10,000  
 October 1974

INDEX SHEET



MINISTRY OF PUBLIC WORKS  
 DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT

THE STUDY ON COMPREHENSIVE RIVER  
 WATER MANAGEMENT PLAN IN JABOTABEK

CISADANE RIVER  
 RIVER SURVEY  
 CROSS SECTION -  
 LOCATION

Checked by Sunarto	Approved by S. H. H. H.	Scale 1 : 5,000	Sheet No. 4/7
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ATLAS DELTASATYA	



SCALE 1:5000



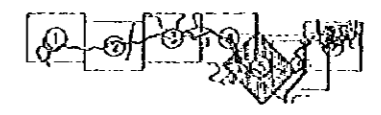
LEGEND

- △ 243 Existing Interchange Point
- 244 Boreg Post
- 245 QPS Point
- 420 Drain Mark
- 422 Existing Patch Mark
- 243 Drain Leaking
- 244 Spot Height
- Concrete B.T. Log
- House
- ⊞ Mosque
- ⊞ Church
- ⊞ Hospital
- ⊞ School
- ⊞ Government Office
- Road
- Path
- Bridge
- Railway
- Station
- Electric Power Line
- Cutting and Embankment
- Swamp
- Mudflat ground
- Drainage cemetery
- Drainage gully
- Paddy field
- Boundary of Vegetation
- Field
- Forest
- Grass
- Orchard
- Water hole
- Pond, lake
- Soil
- Land Side

NOTE: X, Y, M : Based on UTM Zone 48  
 : Mean Sea Level (110 203 - 110 204)

Water Contour : 10 meter  
 Main Contour : 2 meter  
 Supplemental Contour : 1 meter  
 Aerial Photography : 1 : 10 000  
 Date: 05/84

INDEX SHEET

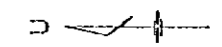
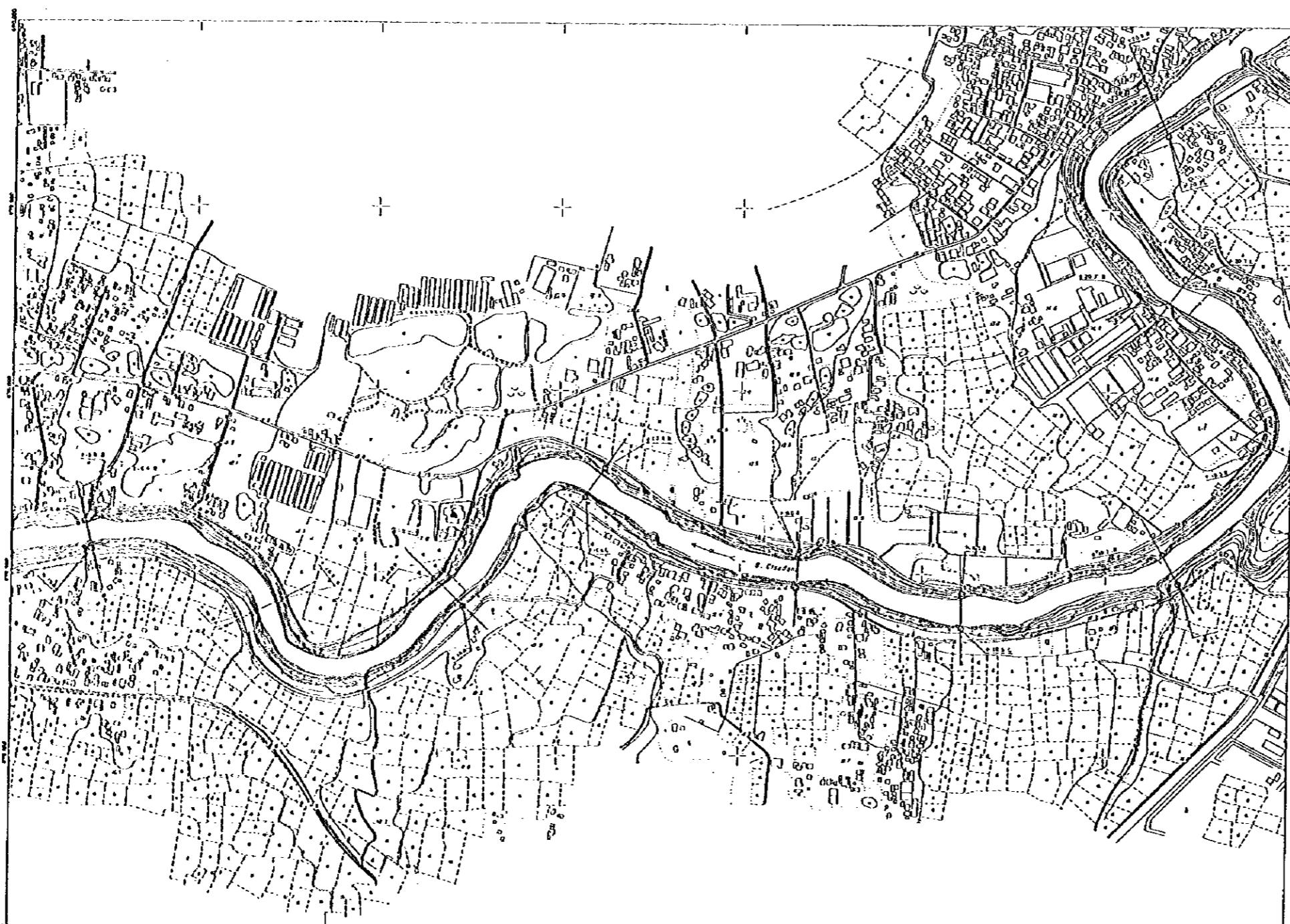


MINISTRY OF PUBLIC WORKS  
 DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT

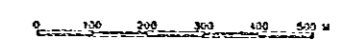
THE STUDY ON COMPREHENSIVE RIVER  
 WATER MANAGEMENT PLAN IN JABOTABEK

RIVER SURVEY  
 CISADANE RIVER  
 TITLE OF DRAWING  
 CROSS SECTION --  
 LOCATION

DATE	SCALE	SHEET No.
05/84	1 : 5,000	5/7
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ANAS DELTASATYA



SCALE 1 : 5000



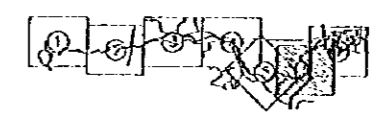
LEGEND

- |                                |                      |                 |                    |                           |                   |                   |         |                   |                        |         |                |                  |                |             |                        |       |        |       |         |            |           |      |           |
|--------------------------------|----------------------|-----------------|--------------------|---------------------------|-------------------|-------------------|---------|-------------------|------------------------|---------|----------------|------------------|----------------|-------------|------------------------|-------|--------|-------|---------|------------|-----------|------|-----------|
| ▲ 243 Existing Elevation Point | ○ 243 Existing Point | ○ 243 GPS Point | ○ 430 Outline Mark | □ 243 Existing Bench Mark | - 243 Dotted Line | - 24 Spot Height  | Station | Divide Power Line | Cutting and Embankment | Swamp   | Mudflat ground | Outdoor cemetery | Orchard ground | Paddy field | Boundary of vegetation | Field | Forest | Quasi | Orchard | River side | Pond side | Sand | Soil Side |
| Concrete Building              | House                | Monastery       | Church             | Hospital                  | School            | Government Office | Road    | Path              | Bridge                 | Railway |                |                  |                |             |                        |       |        |       |         |            |           |      |           |

NOTE : X, Y : Based on UTM Zone 48  
 H : Mean Sea Level (1984-1985)

Index Contour : 10 meter  
 Main Contour : 2 meter  
 Supplemental Contour : 1 meter  
 Field Photography : 1 : 10,000  
 Date : Dec 1994

INDEX SHEET

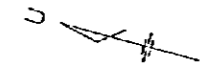
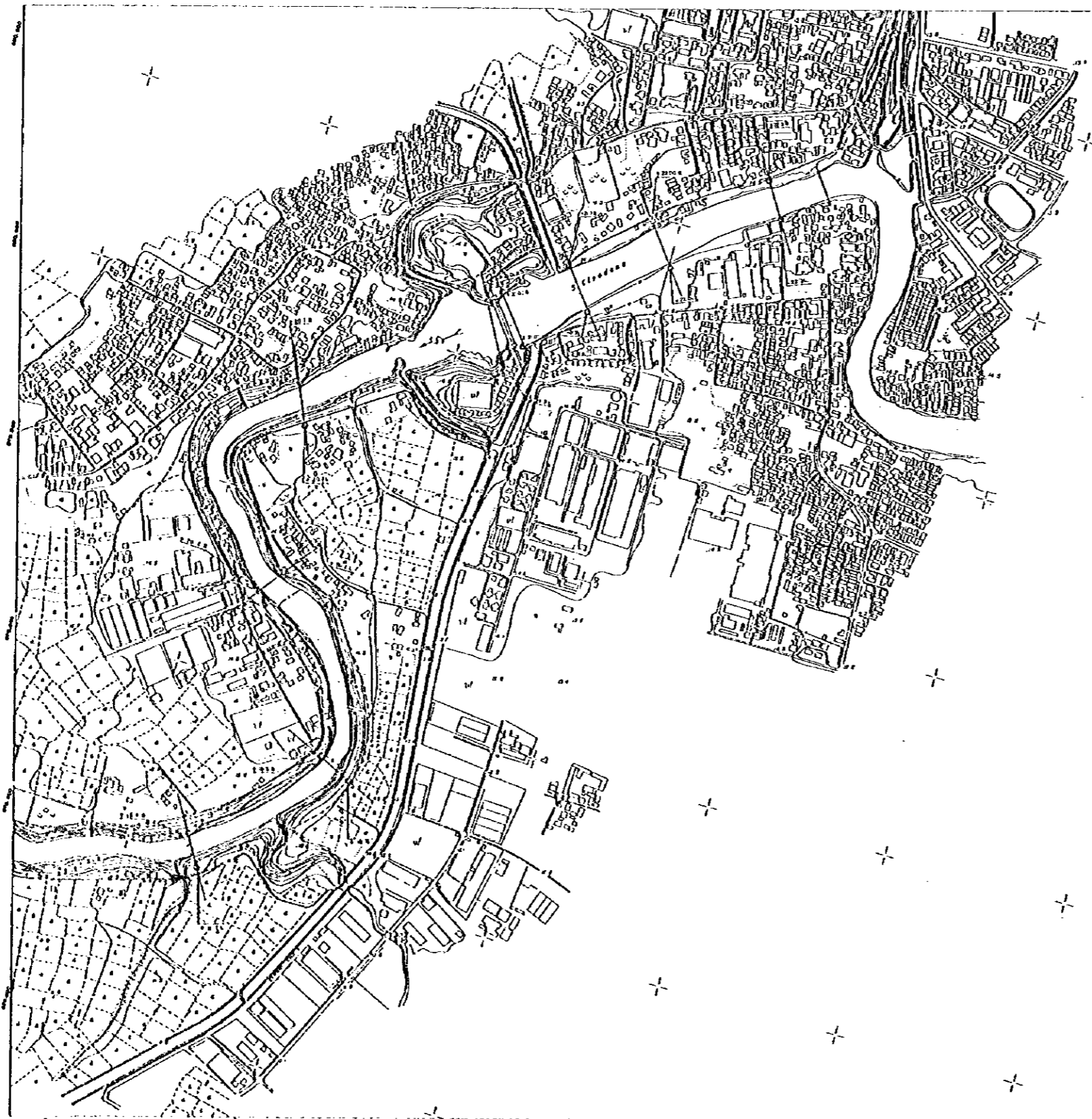


MINISTRY OF PUBLIC WORKS  
 DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT

THE STUDY ON COMPREHENSIVE RIVER  
 WATER MANAGEMENT PLAN IN JABOTABEK

RIVER SURVEY  
 CISADANE RIVER  
 TITLE OF SURVEY  
 CROSS SECTION --  
 LOCATION

Scale	1 : 5,000	Sheet No.	6/7
Checked By	Approved By	Scale	Sheet No.
Surveyed By	Drawn By	1 : 5,000	6/7
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ATLAS OKEASATYA	



SCALE 1 : 5000



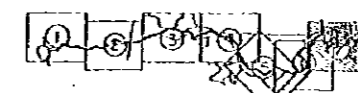
LEGEND

- |                                  |                        |
|----------------------------------|------------------------|
| △ 45 Contour Interpolation Point | Station                |
| ○ 80m Bench Mark                 | Electric Power Line    |
| ○ 25m GPS Point                  | Quarry and Embankment  |
| ○ 42m Control Mark               | Sewage                 |
| (□) 25m Elevation Bench Mark     | Muslim graves          |
| - 2.5 Depressing                 | Christian cemetery     |
| - 2.4 Spot Height                | Buddhist graves        |
| □ Concrete Building              | Police Station         |
| □ House                          | Boundary of Vegetation |
| □ Mosque                         | Field                  |
| □ Church                         | Forest                 |
| □ Hospital                       | Grass                  |
| □ School                         | Ground Top             |
| □ Government Office              | Water Hole             |
| □ Park                           | Pond, Lake             |
| □ Path                           | Sand                   |
| □ Bridge                         | Sand Slide             |
| □ Railway                        |                        |

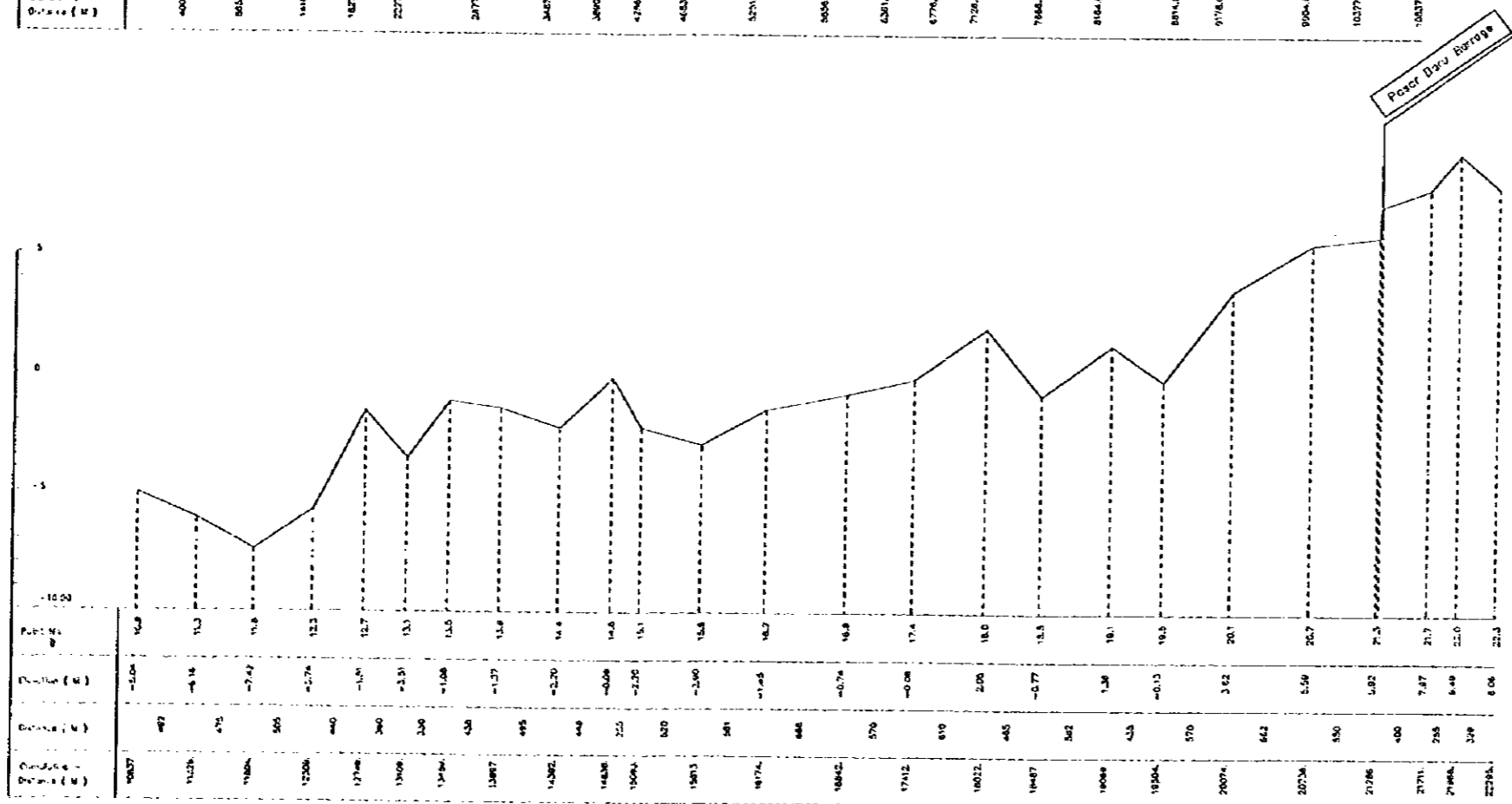
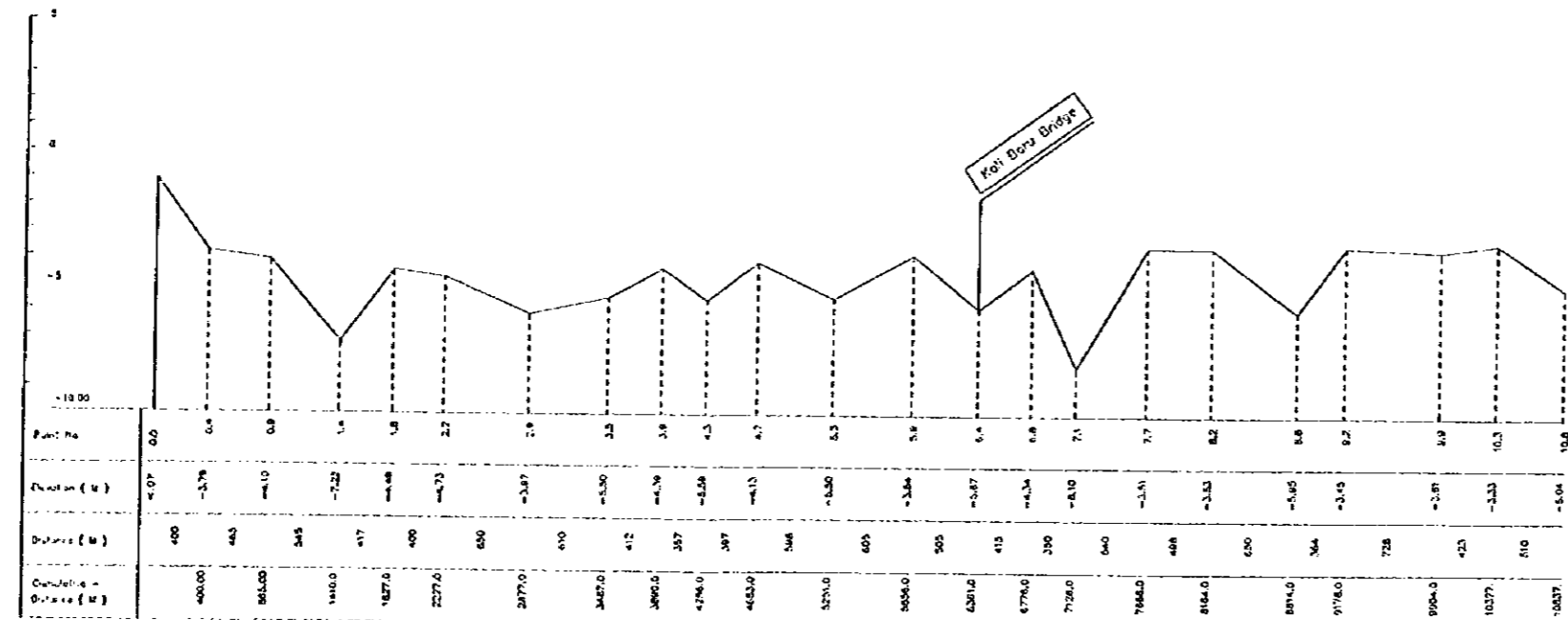
NOTE : 1 Y : Based on M Zone 48  
 11 : Mean Sea Level (110 263 - 113 261)

Water Contour : 10 meter  
 Drain Contour : 2 meter  
 Supplemental Contour : 1 meter  
 Aerial Photography : 1 : 10 000  
 Date : 1977

INDEX SHEET

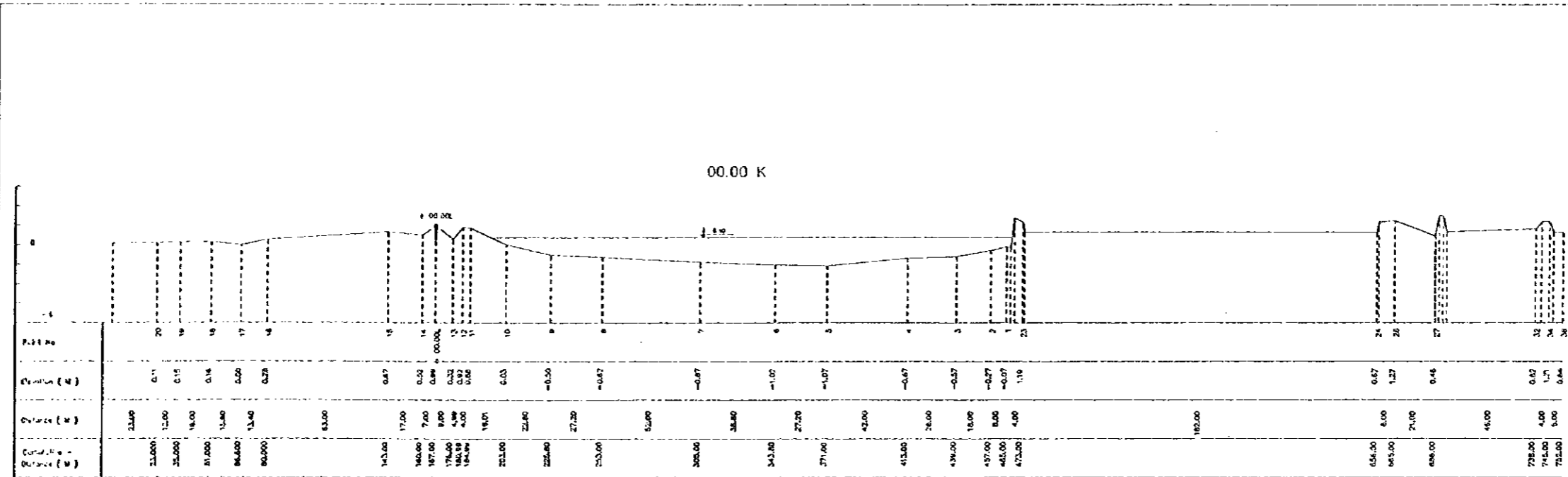


MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		CISADANE RIVER	
		TITLE OF DRAWING CROSS SECTION -- LOCATION	
Drawn by	Checked by	SCALE	SHEET No.
Suranto	W. H. S.	1 : 5,000	7/7
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ARAS DELTASATYA	

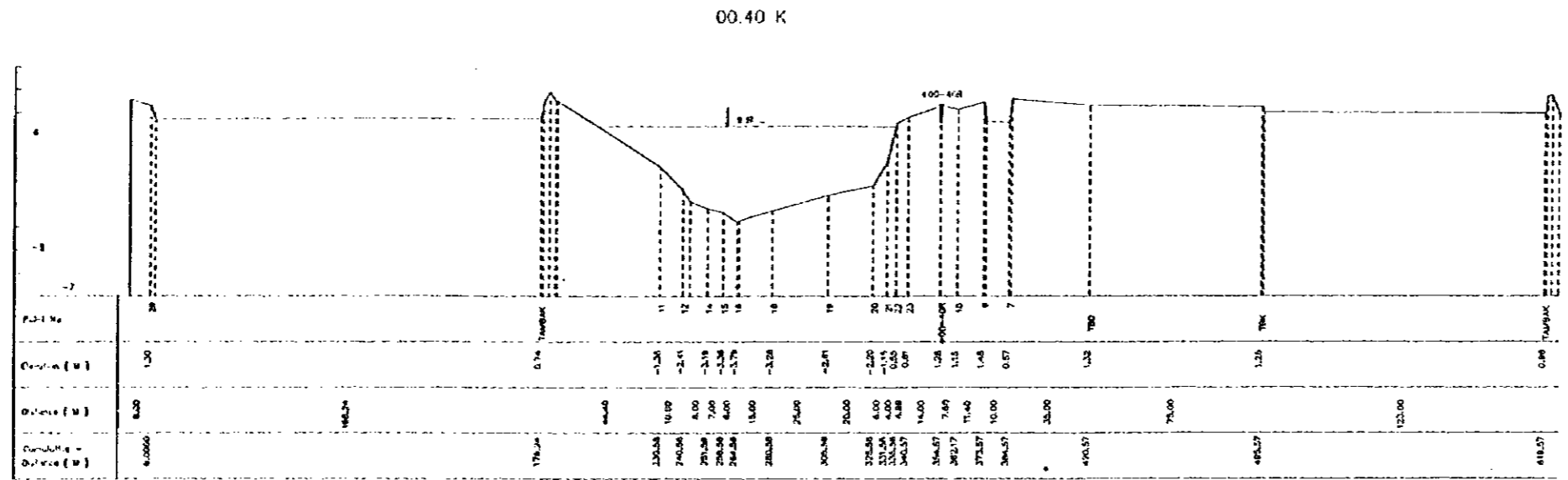


Note: Elevation is based on Mean Sea Level (TIS)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT DIRECTORATE OF RIVERS			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		CISADANE RIVER	
		SCALE OF DRAWING	
		LONGITUDINAL PROFILE	
Checked	Approved	Scale	Sheet No.
Name	Name	H = 1 : 20 000	1 / 1
Signature	Signature	V = 1 : 100	
Date	Date		
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		P.T. ATLAS DELTASATYA	



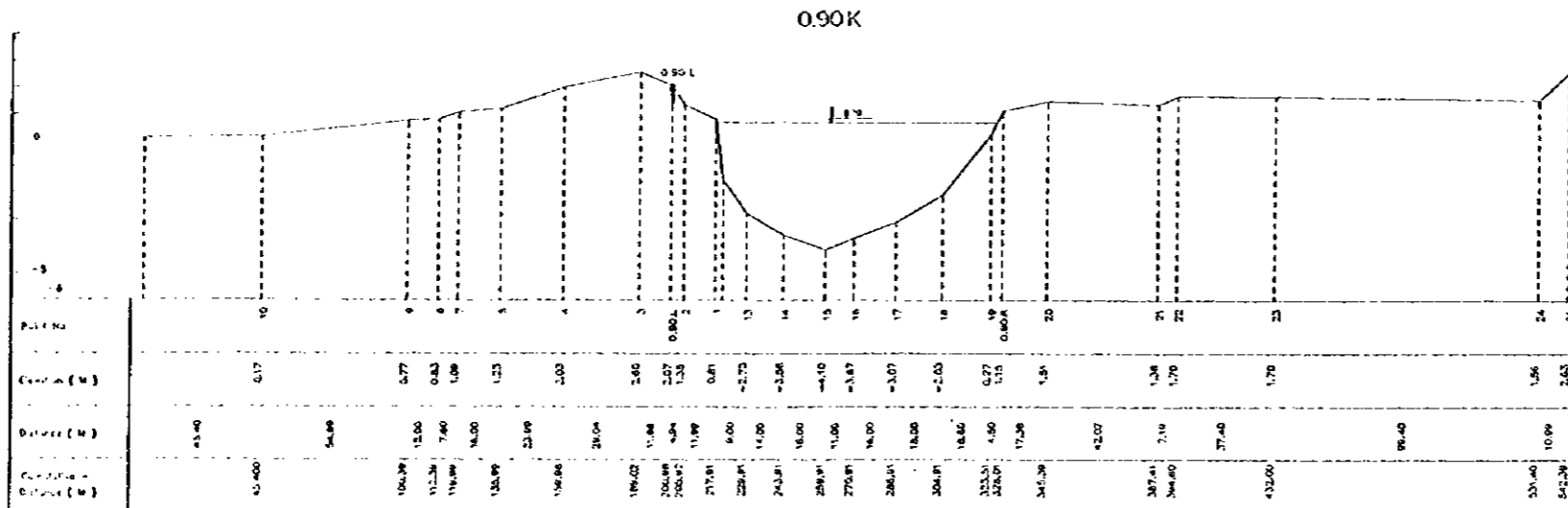
Date : June 11, 58  
Time : 12.00



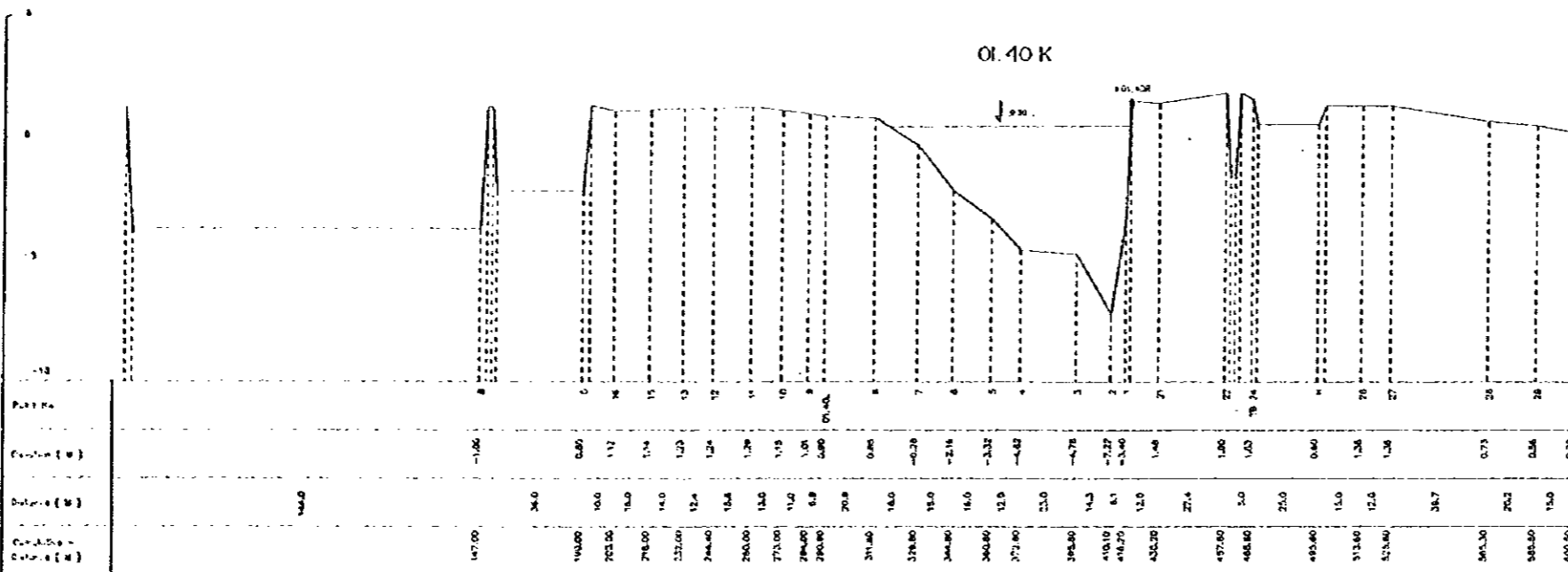
Date : June 27, 58  
Time : 14.00

Note: elevation is based on Mean Sea Level (TIG)

MINISTRY OF PUBLIC WORKS			
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
DIRECTORATE OF RIVERS			
<b>THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTANDEK</b>			
RIVER SURVEY		CISADANE RIVER	
		PILE OF BRIDGES	
		CROSS SECTION	
NAME	DRAWN	APPROVED	SCALE
SIGNATURE	DATE	DATE	1:1,000
			1 / 25
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ATLAS DELTASATYA	



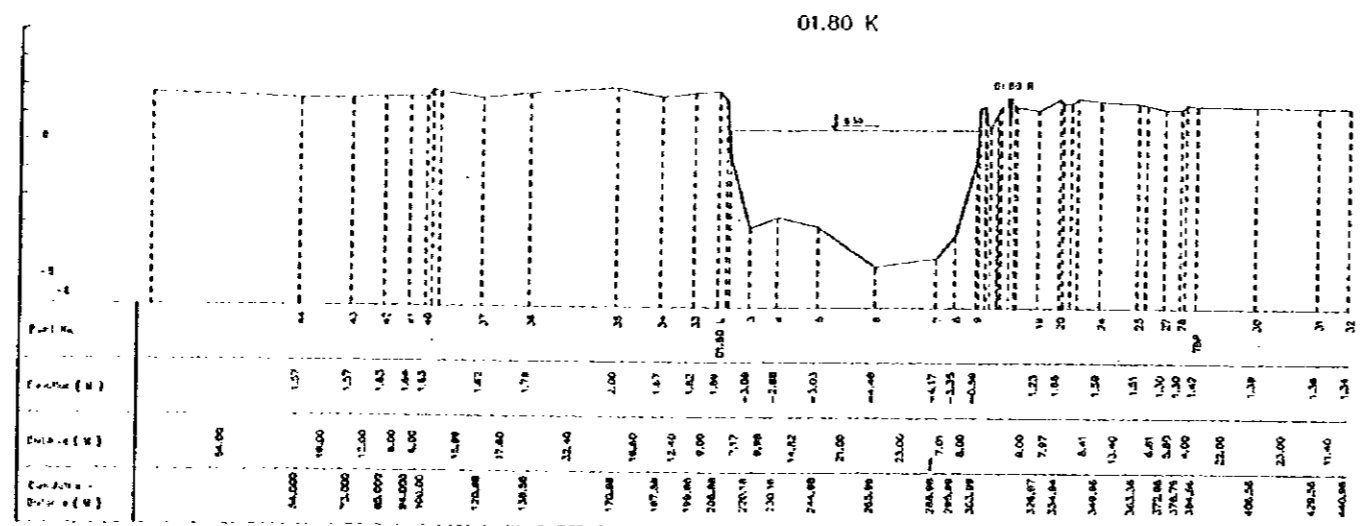
Date : May 29, 98  
Time : 11:03



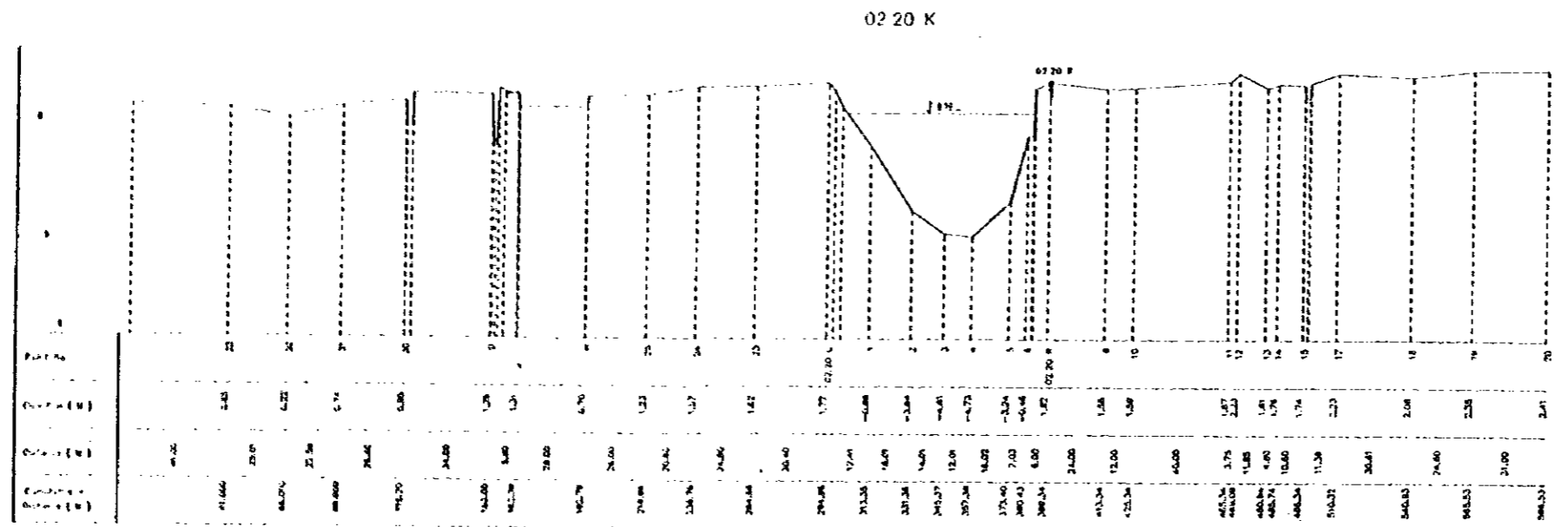
Date : May 29, 98  
Time : 10:05

Note : Elevation based on Mean Sea Level ( 170 )

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK	
RIVER SURVEY	
CISADANE RIVER SCALE OF GRAPHICS CROSS SECTION	
No. 1 DATE JICA	Checked S. Goto T. Imai I. Nakano H. Saito P.T. AMAS DELTASATYA
Scale H = 1 : 1000 V = 1 : 100	SHEET No. 2 / 25



Date: July 05, 88  
Time: 13:00



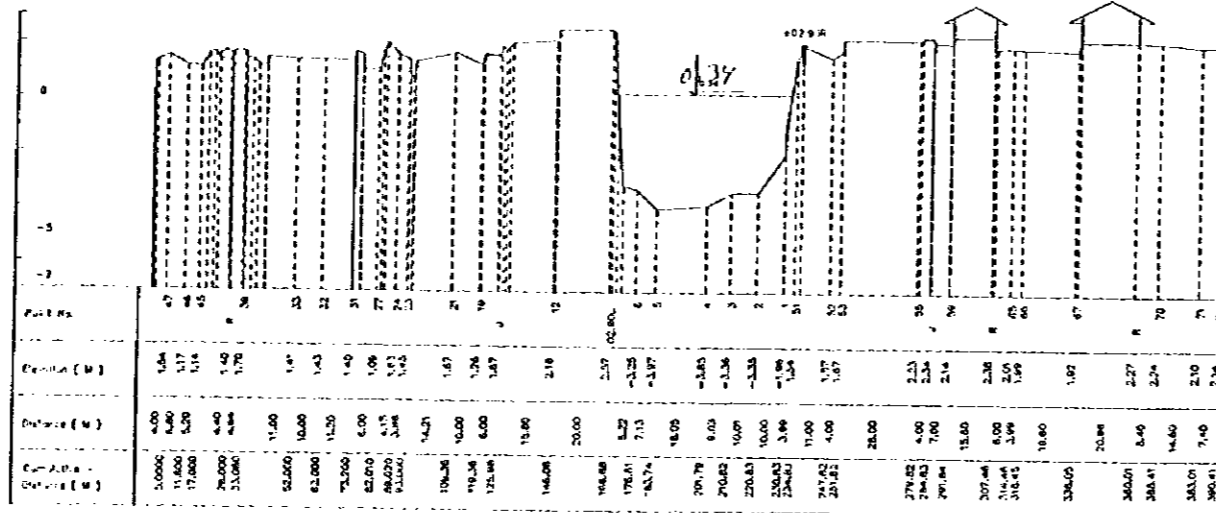
Date: July 31, 88  
Time: 10:00

Note: Elevation based on Mean Sea Level (T.D.)

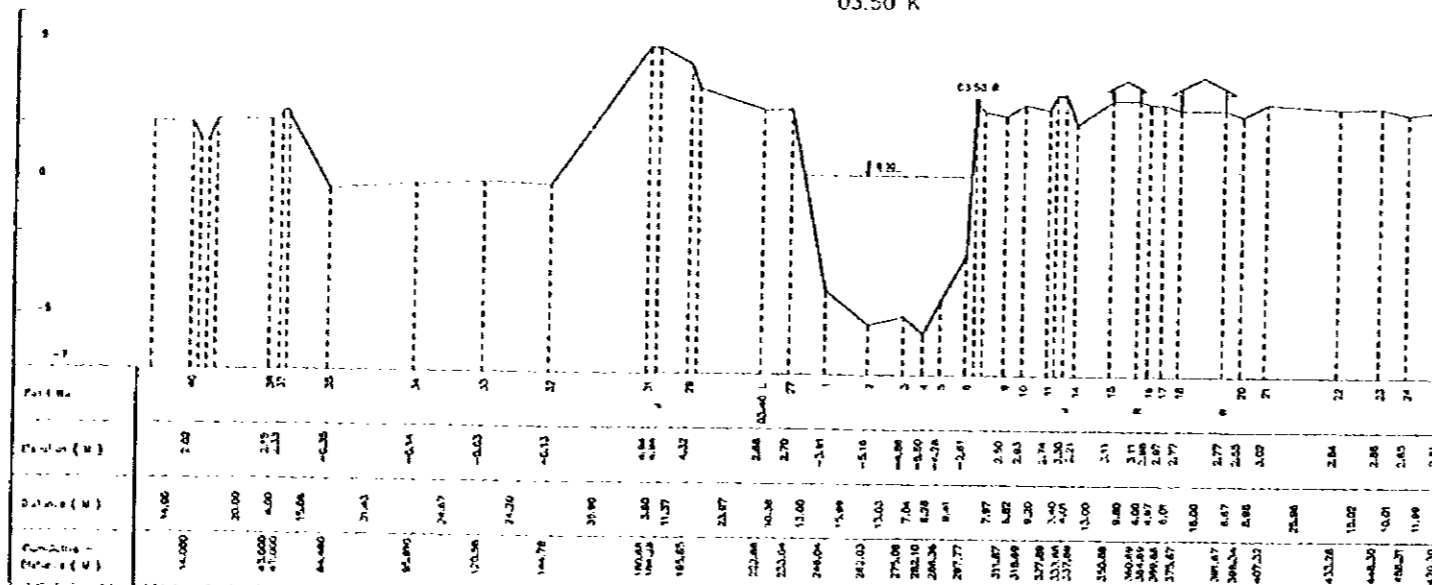
MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK	
RIVER SURVEY	
OSADANE RIVER SITE OF DRAWING	
CROSS SECTION	
DATE	DATE
SCALE	SHEET NO.
H = 1 : 1,000	3 / 25
V = 1 : 100	
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. ARAS DELTASATYA



02.90 K



03.50 K

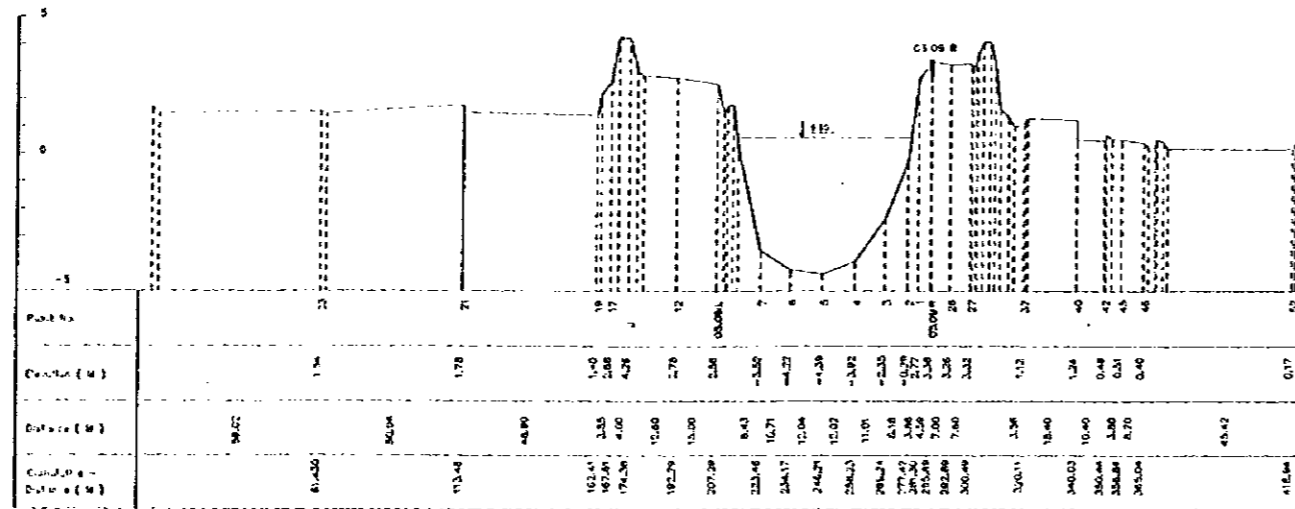


Note: Elevation based on Mean Sea Level (170.)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT DIRECTORATE OF RIVERS			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		CISADANE RIVER	
		RIVE OF DRAWINGS	
		CROSS SECTION	
NAME	CHECKED	APPROVED	SCALE
SIGNATURE	Survei	E. Sidi	H = 1 : 1,000
DATE	10/10	10/10	V = 1 : 100
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ATLAS DELTASATYA	

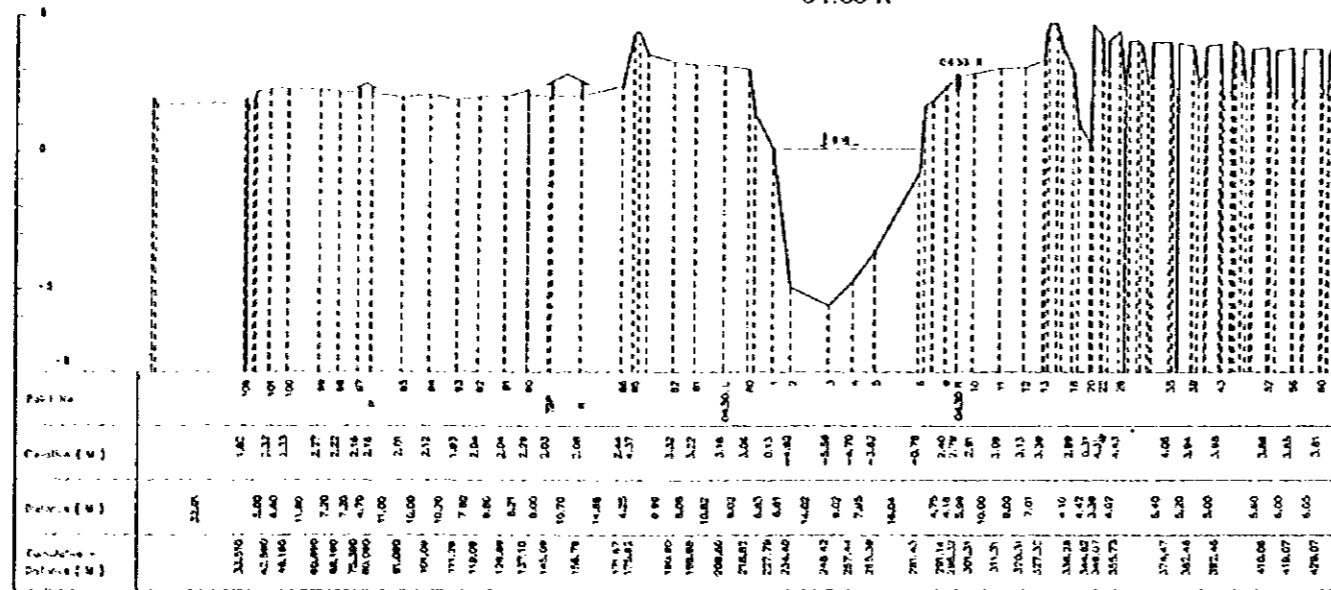
Date: 10/10/05  
 No: 13/25

03.09 K



Date: May 30, 98  
Time: 10.00

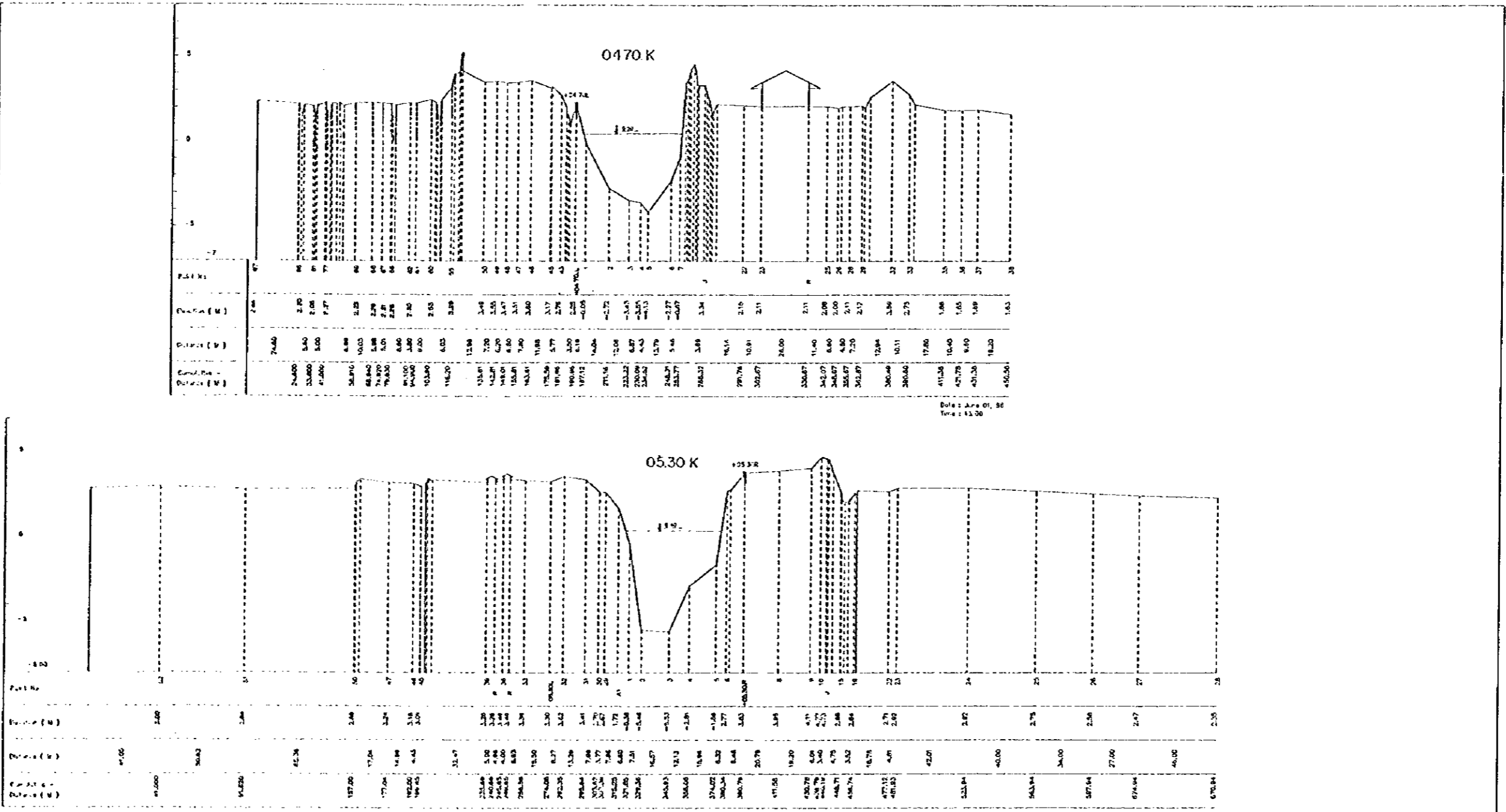
01.30 K



Date: Jul 02, 98  
Time: 09.45


Note: Elevation Based on Mean Sea Level (116.1)

MINISTRY OF PUBLIC WORKS			
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		CISADANE RIVER	
		RIVE OF DRAWINGS	
		CROSS SECTION	
NAME	Checked	Approved	SCALE
SIGNATURE	Scale	Initial	H = 1 : 1,000
DATE	Scale	Initial	V = 1 : 100
JICA	JAPAN INTERNATIONAL COOPERATION AGENCY	PT. ATLAS DELTASATYA	5 / 25

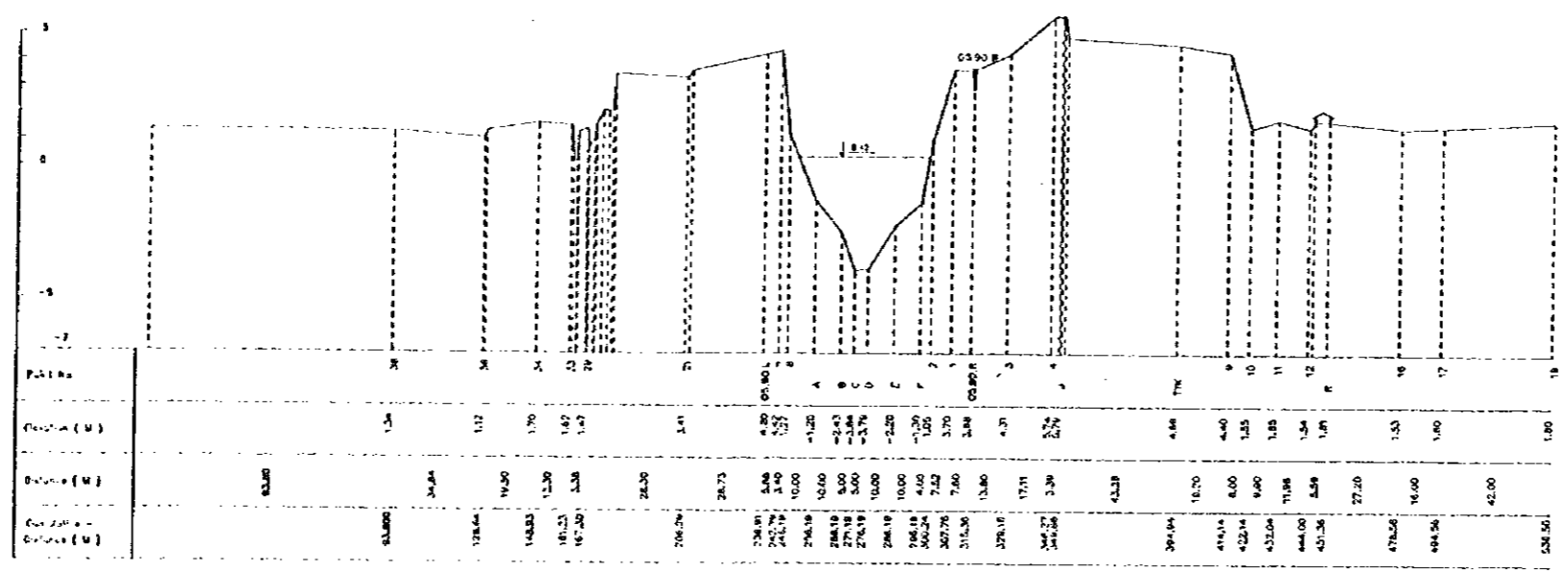


Date: 10/01/98  
Time: 15:30

Date: Apr 02, 98  
Time: 11:00  
N.A.S.: Elevation based on Mean Sea Level (+110)

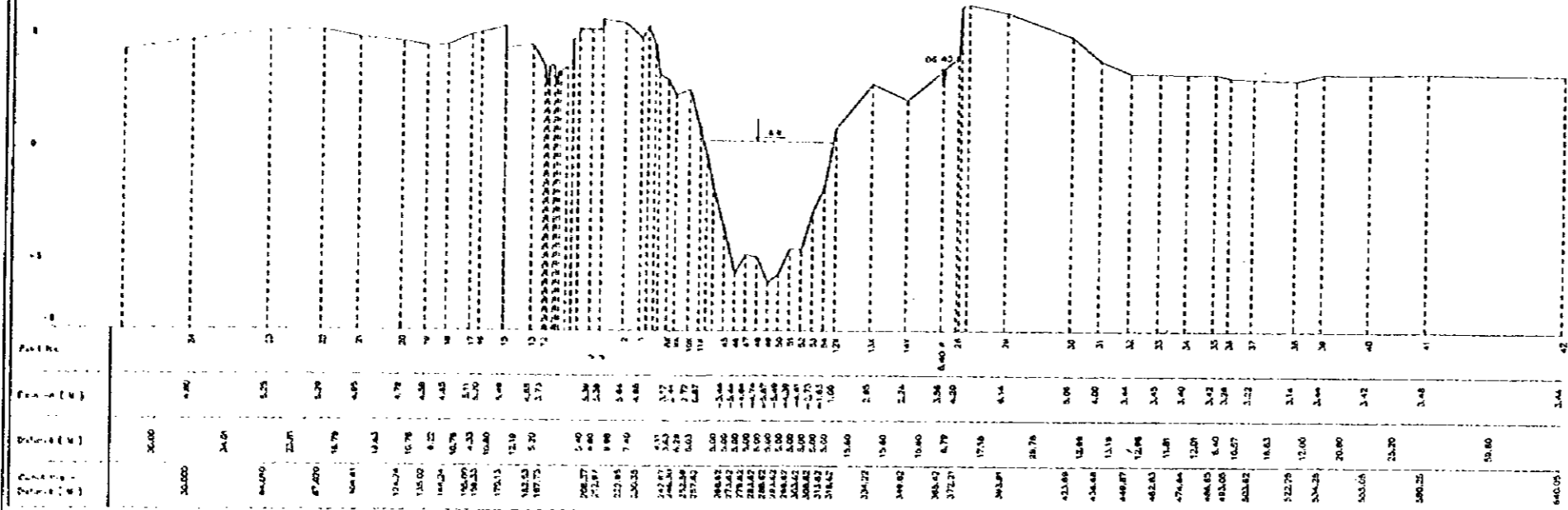
 MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT				THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK		GISADANE RIVER	
						RIVER SURVEY	
NAME	DATE	SCALE	BY	CHECKED	DATE	NO.	SHEET No.
SHOJI, R.P.E.	10/01/98	1:1000				6/25	
JICA JAPAN INTERNATIONAL COOPERATION AGENCY						PT. ATLAS DELTASATYA	

05.90 K



Date: June 09, 96  
No: 05.45

06.40 K

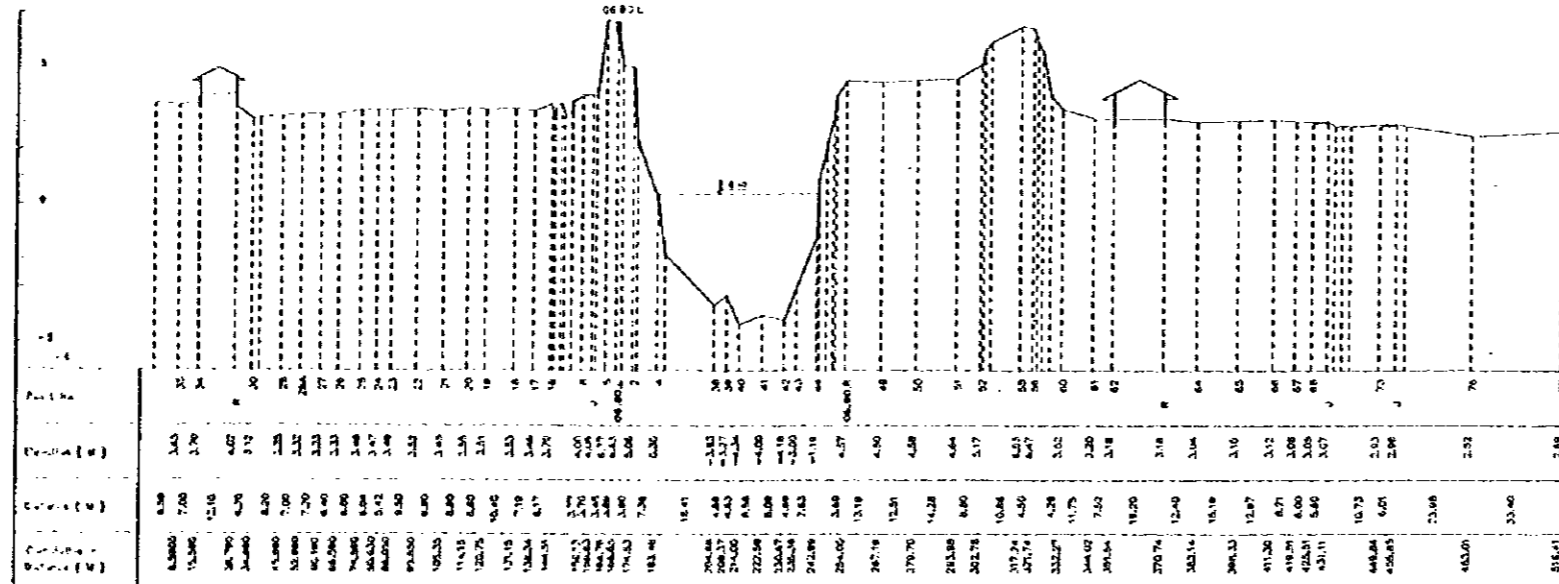


Date: June 09, 96  
No: 06.45

Note: Elevation is based on Mean Sea Level + 100.1

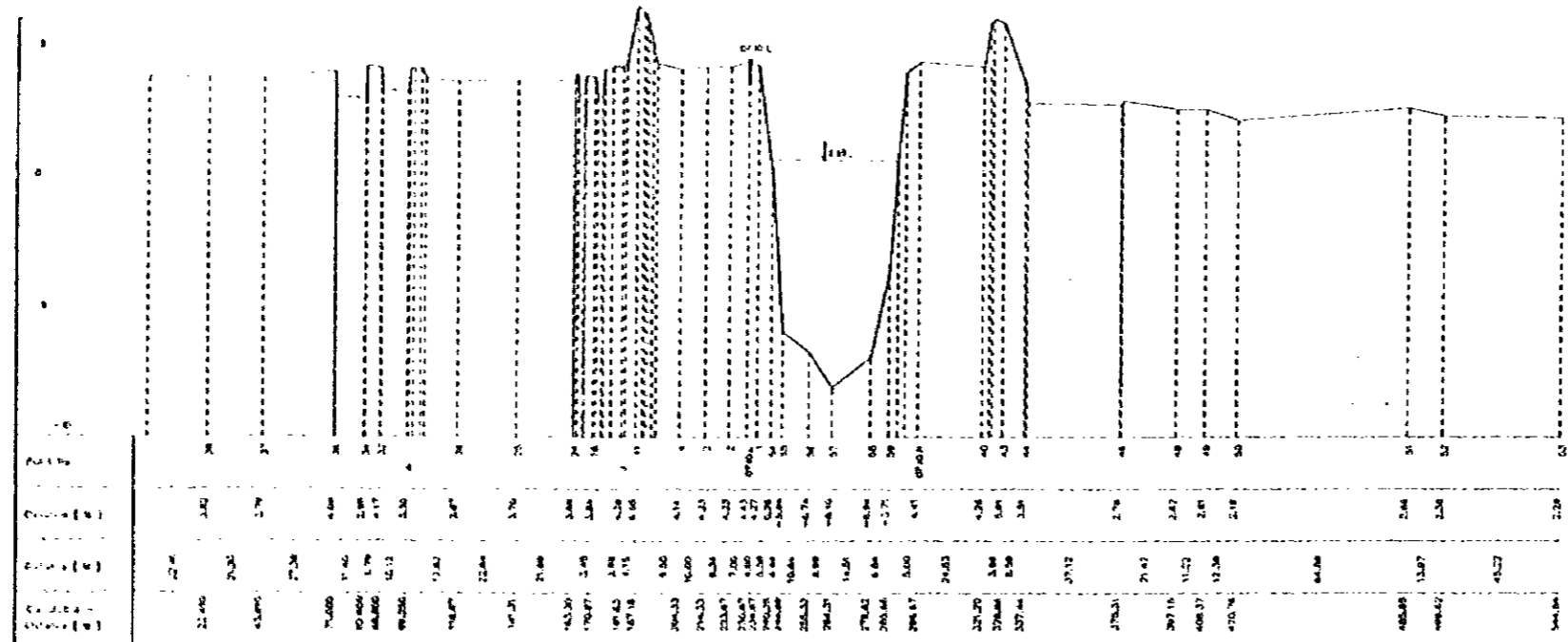
MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK	
CISADANE RIVER RIVER SURVEY	
RIVER SURVEY CROSS SECTION	
NAME: [Signature] SIGNATURE: [Signature] DATE: [Signature]	CHECKED: [Signature] APPROVED: [Signature]
SCALE: H = 1 : 1,000 V = 1 : 100	SHEET NO.: 7 / 25
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	PT. ATLAS DELSATIYA

06.80 K



Date: Apr 02, 98  
Time: 15:00

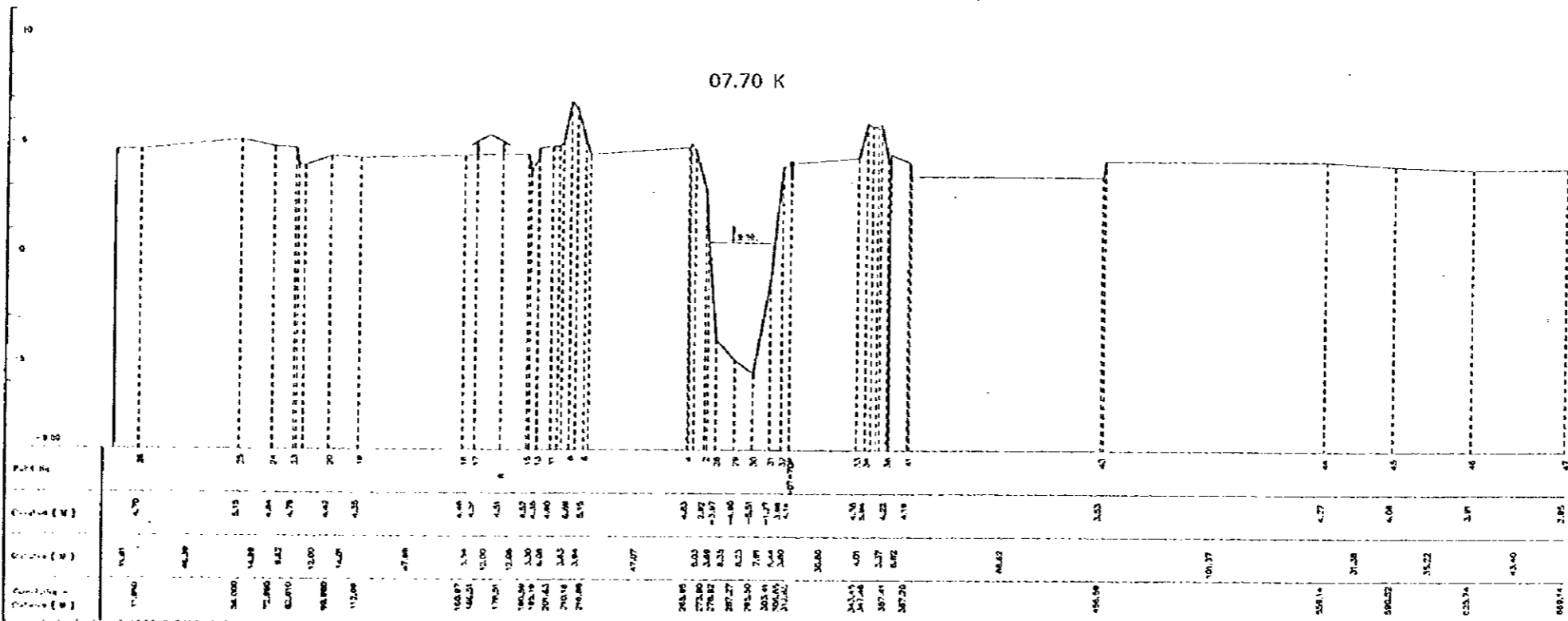
07.10 K



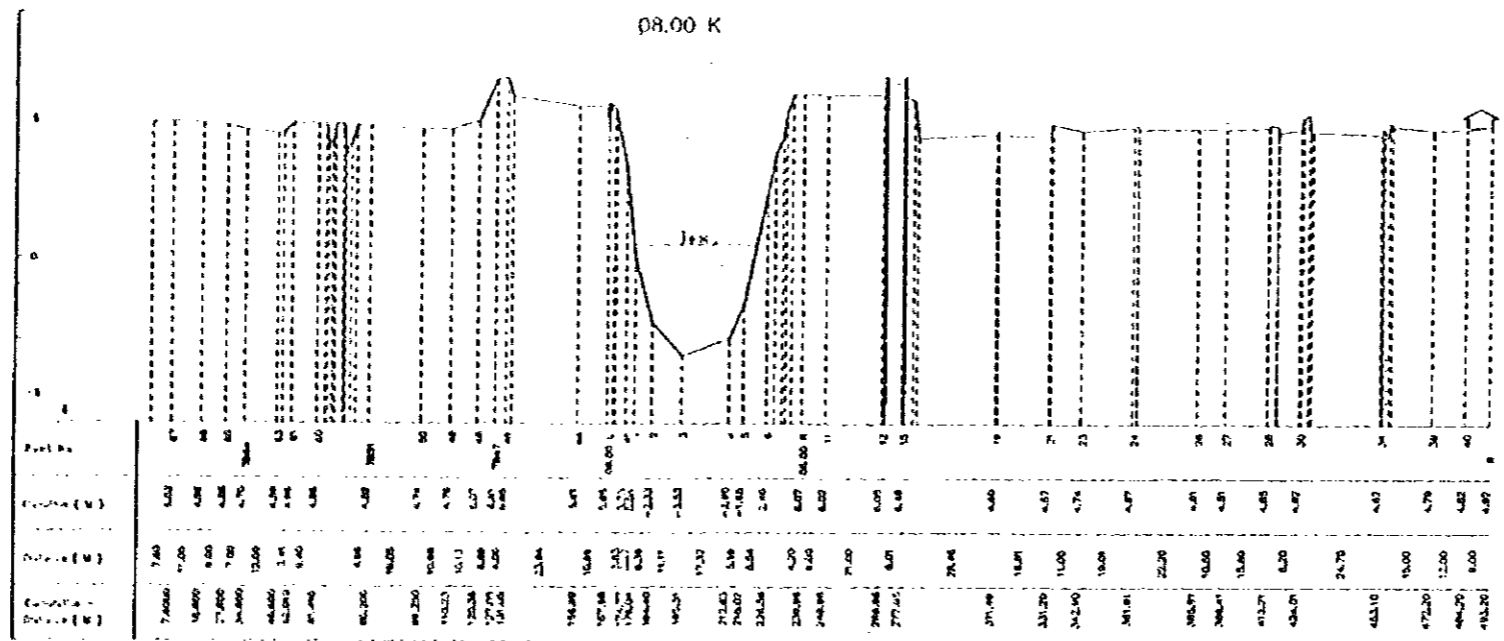
Date: Apr 02, 98  
Time: 13:10

Note: Elevation based on Mean Sea Level (1980)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTABEK	
RIVER SURVEY	
CISADANE RIVER SITE OF DRAWING	
CROSS SECTION	
DATE	SCALE
04/02/98	H = 1 : 1,000 V = 1 : 100
DATE	SCALE
04/02/98	H = 1 : 1,000 V = 1 : 100
JICA JAPAN INTERNATIONAL COOPERATION AGENCY	
PT. ATLAS CEKTASATYA	



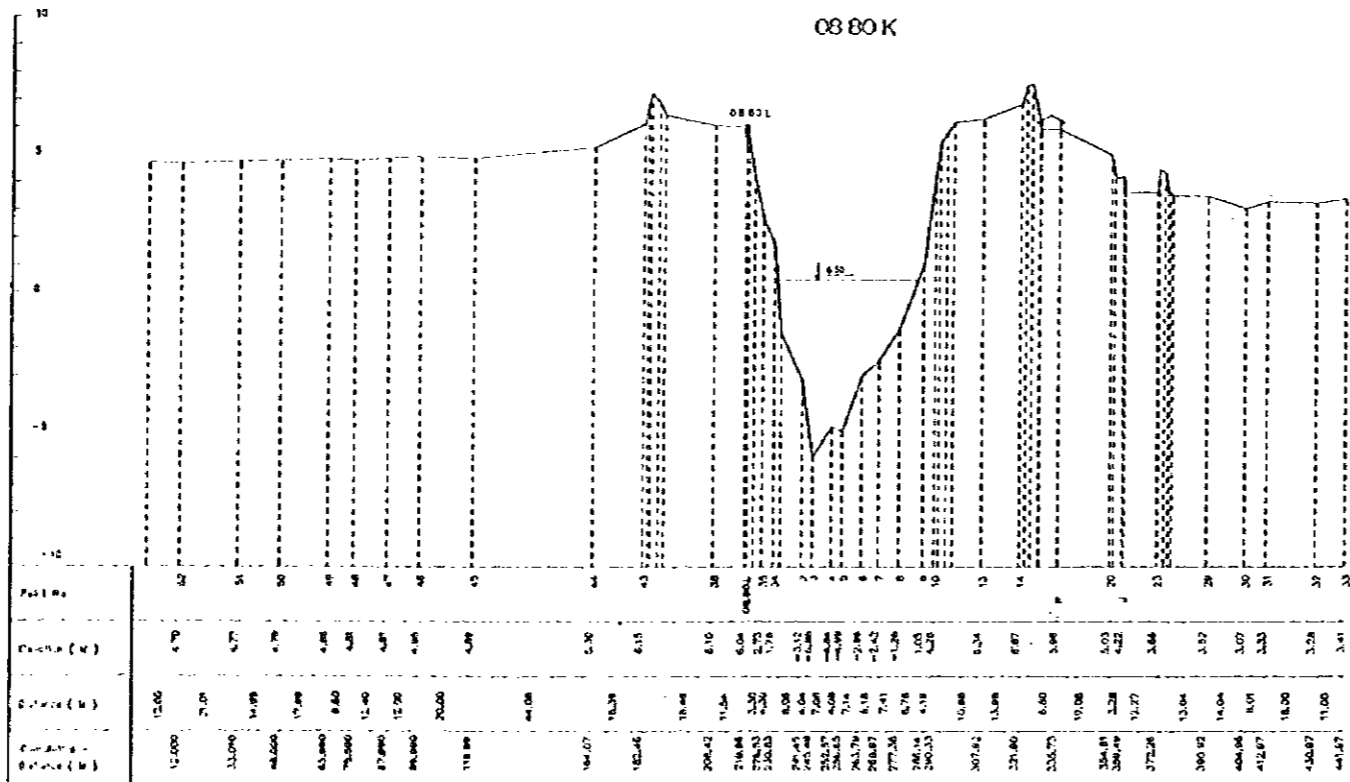
Date: June 01, 98  
Time: 09:00



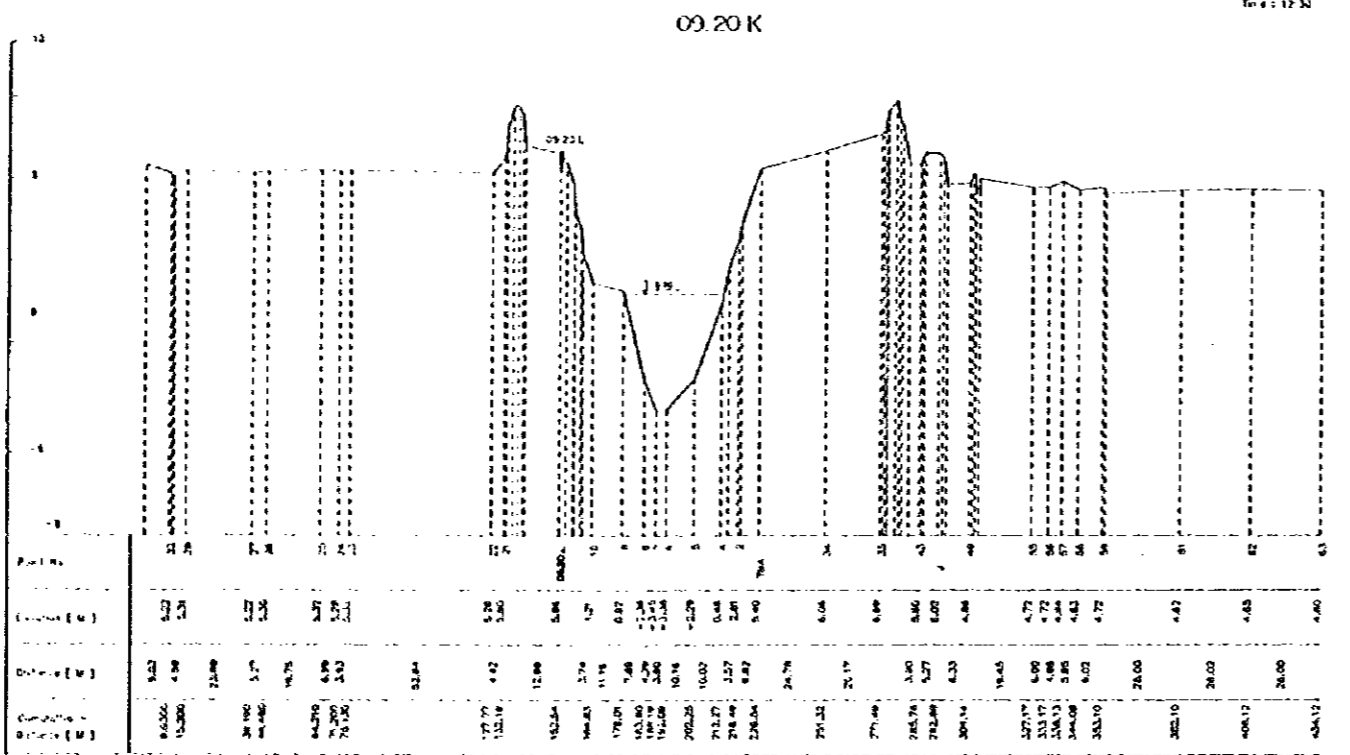
Date: June 01, 98  
Time: 10:15

Note: Elevation is based on mean Sea Level 1972

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT DIRECTORATE OF RIVERS			
<b>THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JADOTABEK</b>			
RIVER SURVEY		CISADANE RIVER	
		RBE OF 08+00-05	
		CROSS SECTION	
NAME	CODED	APPROVED	SCALE
SIGNATURE	DATE		H = 1 : 1000 V = 1 : 100
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ATLAS DELTASATYA	



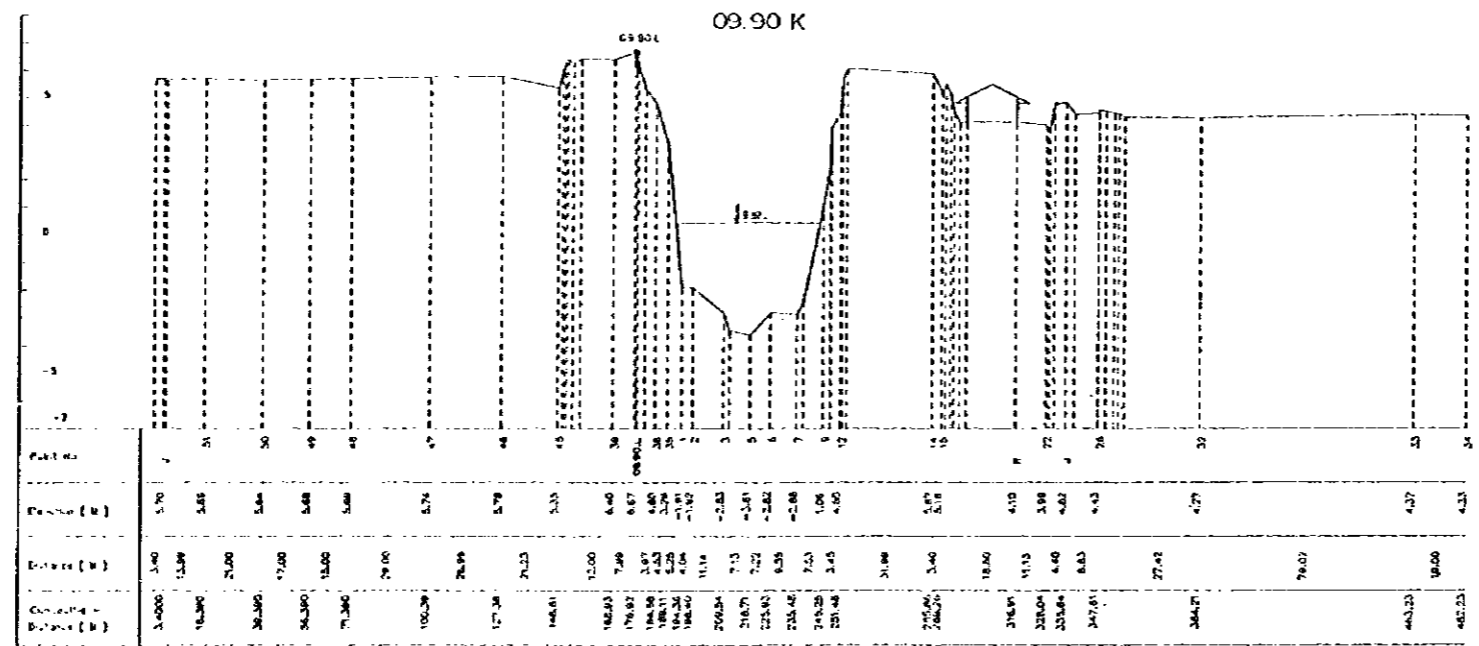
Date: June 13, 88  
Time: 12:30



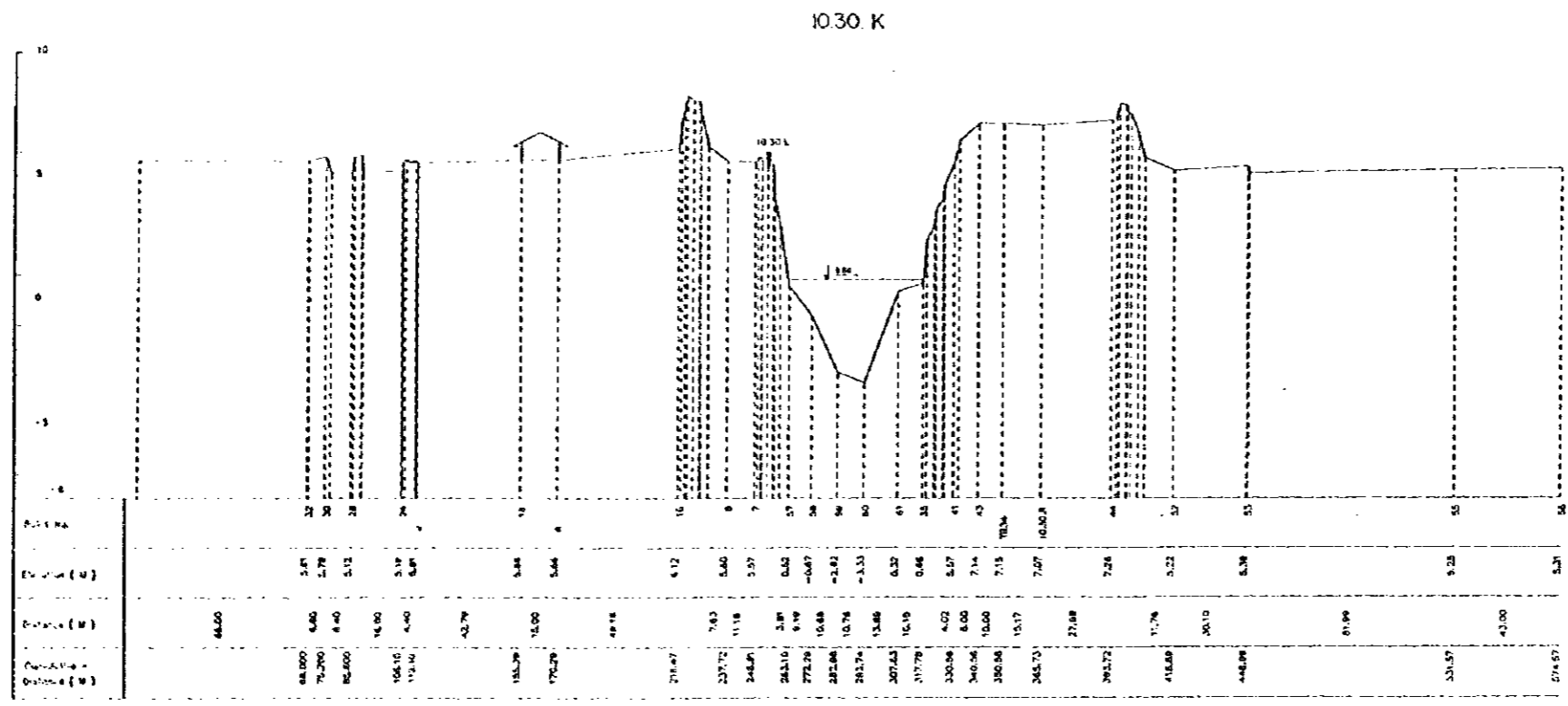
Date: June 23, 88  
Time: 12:30

Fig. 1: Elevation based on Mean Sea Level (TIG.)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT			
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK			
RIVER SURVEY		OSADANE RIVER SITE OF DRAWINGS	
		CROSS SECTION	
NAME	CREATED	APPROVED	SCALE
SIGNATURE	DATE	DATE	H = 1 : 1,000 V = 1 : 100
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PI. ATLAS DELTASATTA	
		PROJECT NO.	10 / 25



Date: June 14, 98  
Time: 12:30

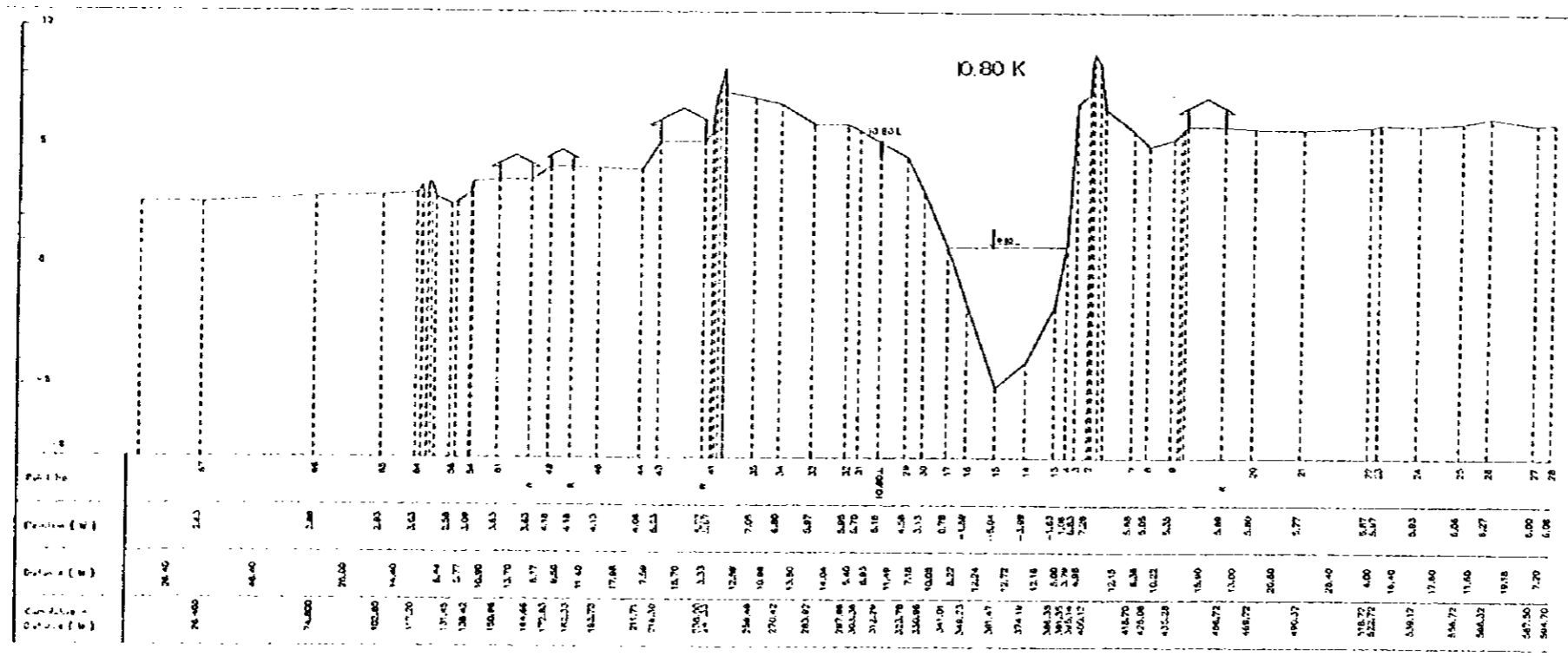


Date: June 14, 98  
Time: 13:00

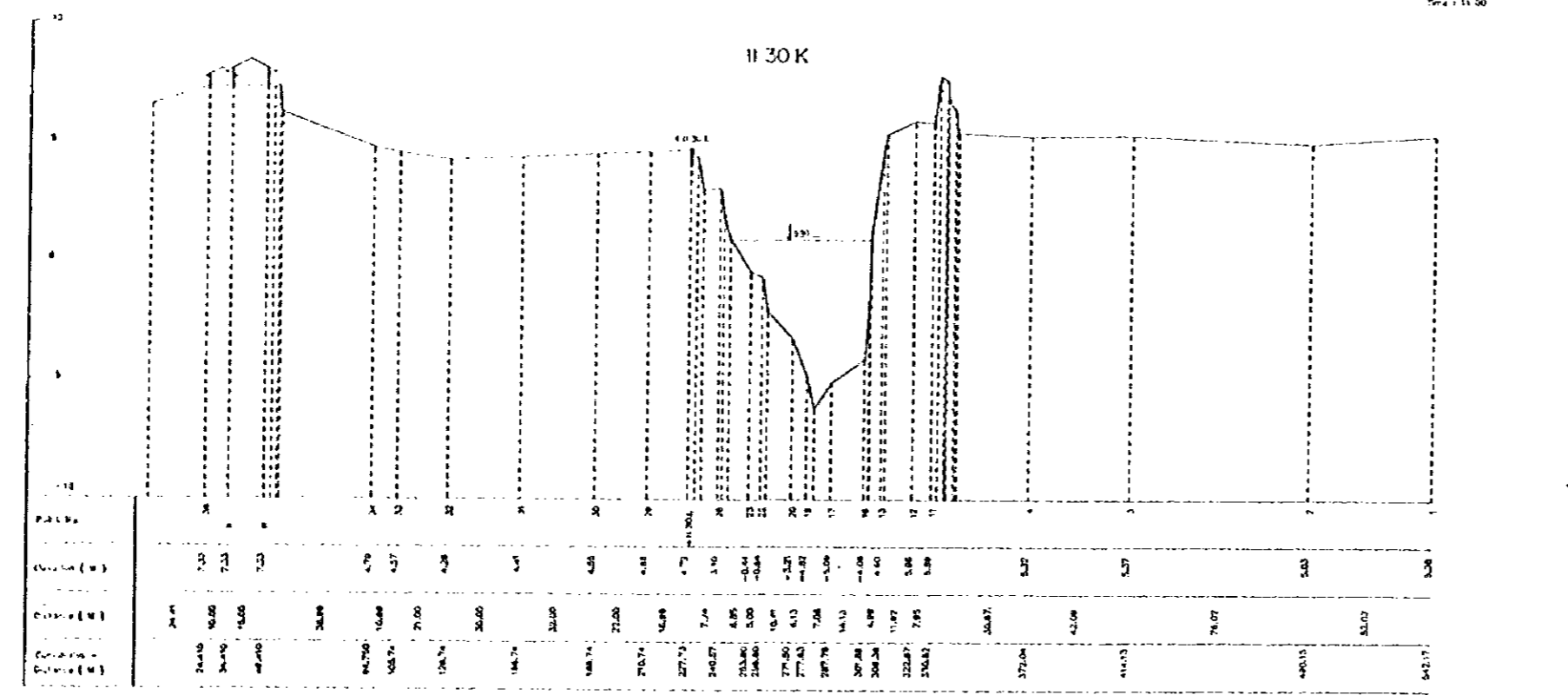
Note: Elevation based on Mean Sea Level (T.T.C.)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK	
RIVER SURVEY	
CISADANE RIVER	
TREE OF DRAWINGS	
CROSS SECTION	
SCALE	SHEET NO. 1
H = 1 : 1,600	11 / 25
V = 1 : 100	
DATE	JICA JAPAN INTERNATIONAL COOPERATION AGENCY
PI. ATLAS DELTASAFYA	





Date: Apr 03, 98  
Time: 11:50



Date: Apr 21, 98  
Time: 10:35

Note: Elevation based on Mean Sea Level (110)

MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT		CROSS SECTION	
THE STUDY ON COMPREHENSIVE RIVER WATER MANAGEMENT PLAN IN JABOTABEK		CISADANE RIVER RRE OF BRUNIS	
RIVER SURVEY		CROSS SECTION	
DATE	SCALE	DATE	SHEET No.
2003/04/03	H = 1 : 1,000 V = 1 : 100	2003/04/03	12 / 25
JICA JAPAN INTERNATIONAL COOPERATION AGENCY		PT. ATLAS CILTASATYA	