

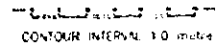


NE 1/4 SEC 44 T 12 N
 40E R 40A E 1/4 SEC 44 T 12 N

ADDIS ABABA

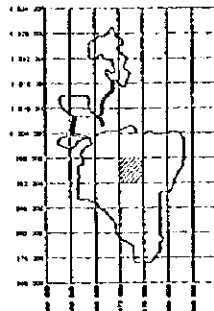
SHEET 932 472-A

SCALE 1:2500



CONTOUR INTERVAL 1.0 meter

MAP INDEX
 (By Block)



MAP INDEX
 (By Sheet)



United States Geological Survey
 Topographic Division
 General Reference Map Series
 Series 1000



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
 IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
 REGION 14 ADMINISTRATION

DRAWING NO.
 RV-LM-05

LOCATION OF RIVER
 CROSS SECTION (5/6)

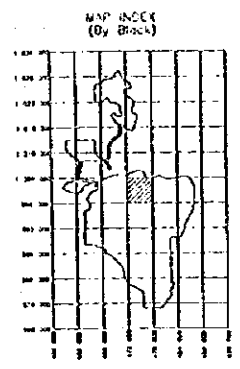
50 METRIC MAPS FOR
1:50,000 WITH SCALE 1:50,000

ADDIS ABABA

SHEET 933.472-M

SCALE 1:2000

CONTOUR INTERVAL 1.0 METRE



MAP INDEX
(By Sheet)

| | | | |
|---|---|---|---|
| A | B | C | D |
| E | F | G | H |
| I | J | K | L |
| M | N | O | P |

933.472-M

Local Control Drain Station
Reference (Sheet No. 933.472-M)
General Drainage Survey Project
Date 3/77

LEGEND

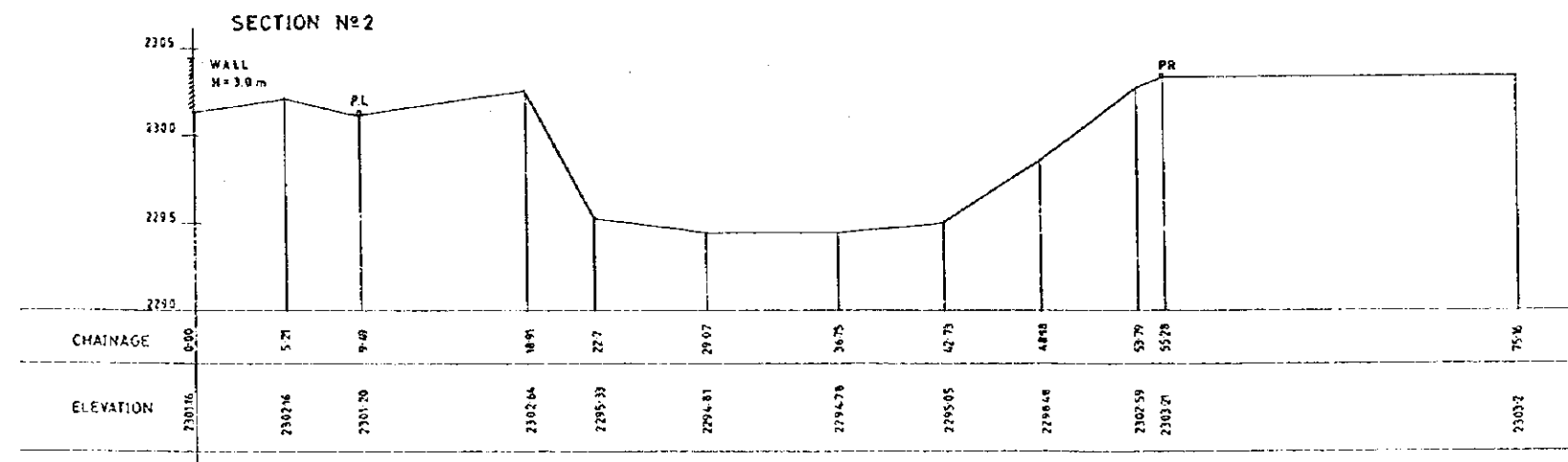
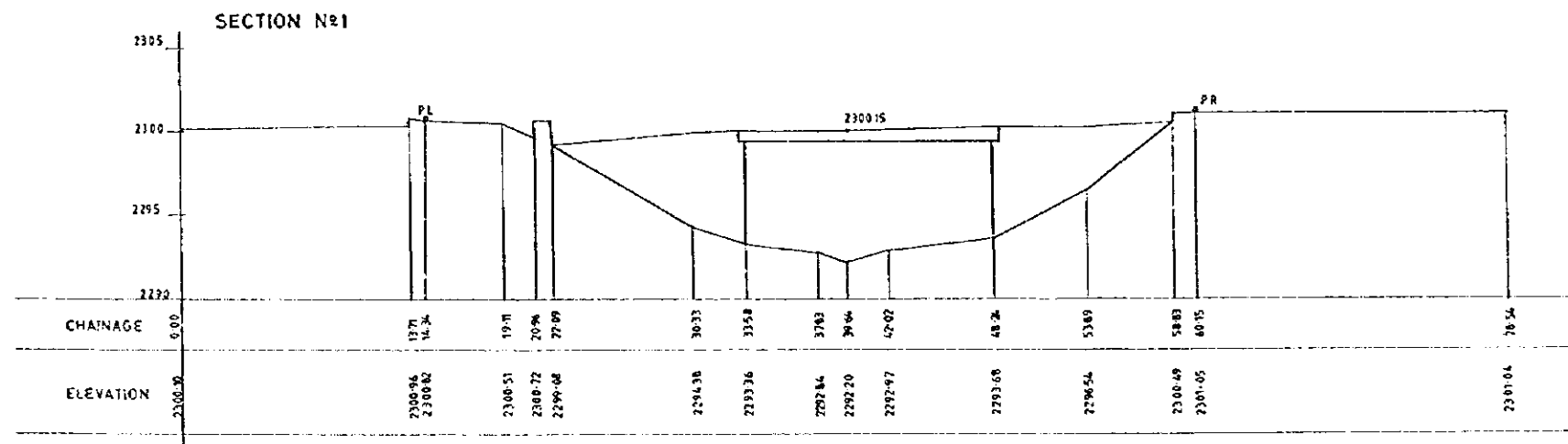
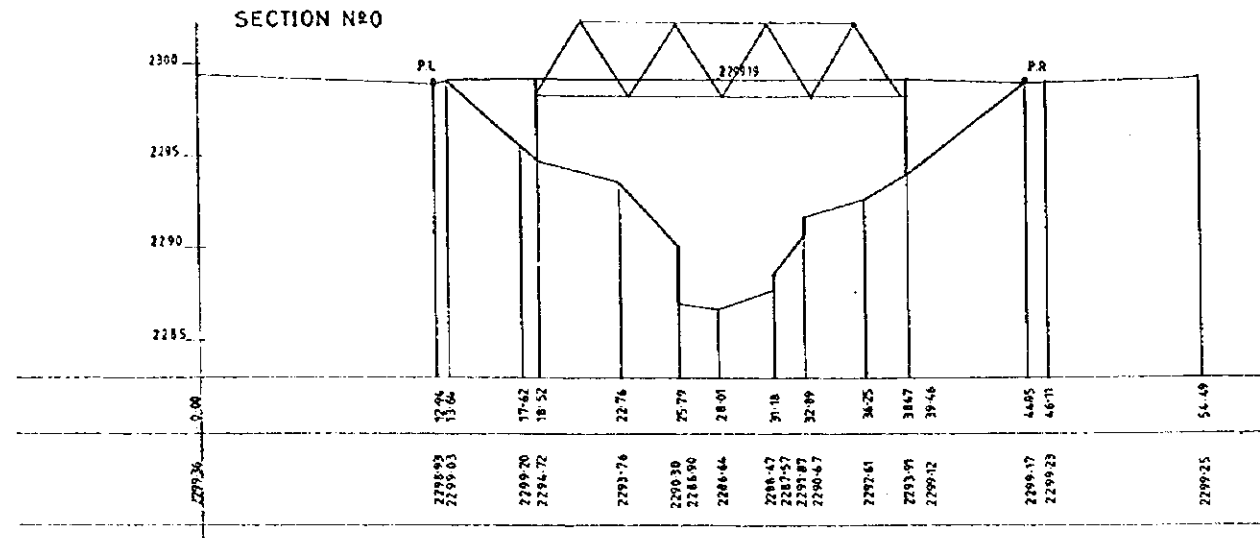
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|---------------------|---|
| 1:50,000 Scale | A |
| 1:20,000 Scale | B |
| 1:10,000 Scale | C |
| 1:5,000 Scale | D |
| 1:2,500 Scale | E |
| 1:1,250 Scale | F |
| 1:625 Scale | G |
| 1:312.5 Scale | H |
| 1:156.25 Scale | I |
| 1:78.125 Scale | J |
| 1:39.0625 Scale | K |
| 1:19.53125 Scale | L |
| 1:9.765625 Scale | M |
| 1:4.8828125 Scale | N |
| 1:2.44140625 Scale | O |
| 1:1.220703125 Scale | P |

THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 11 ADMINISTRATION

DRAWING NO.
RV-LM-06

LOCATION OF RIVER
CROSS SECTION (6/6)



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

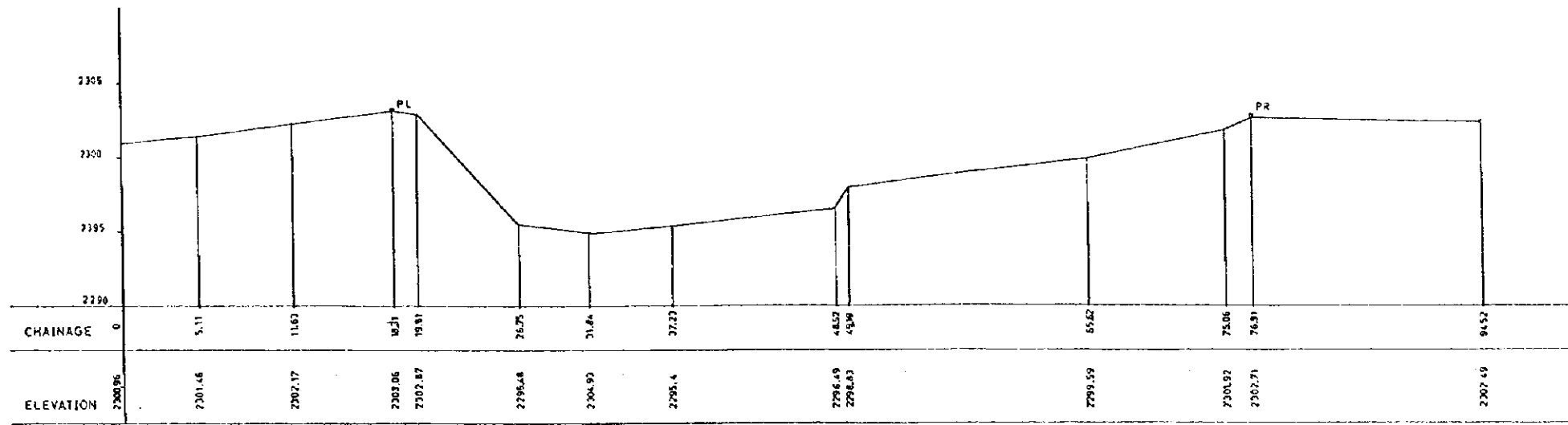
JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

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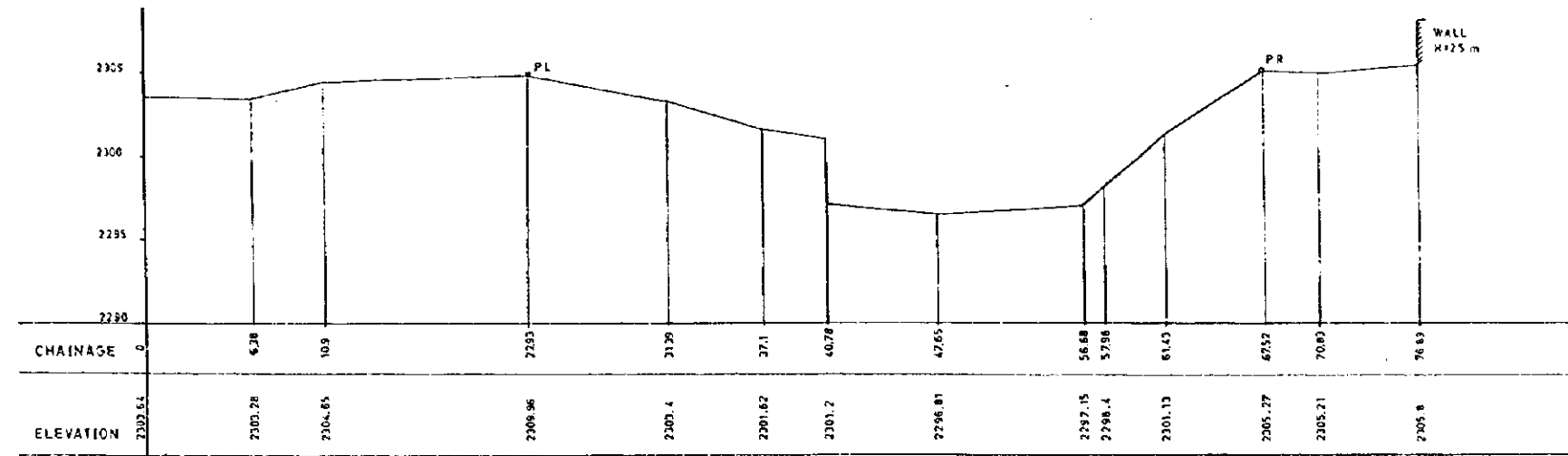
DRAWING NO.
RV-CS-01

RIVER CROSS SECTION (1/25)

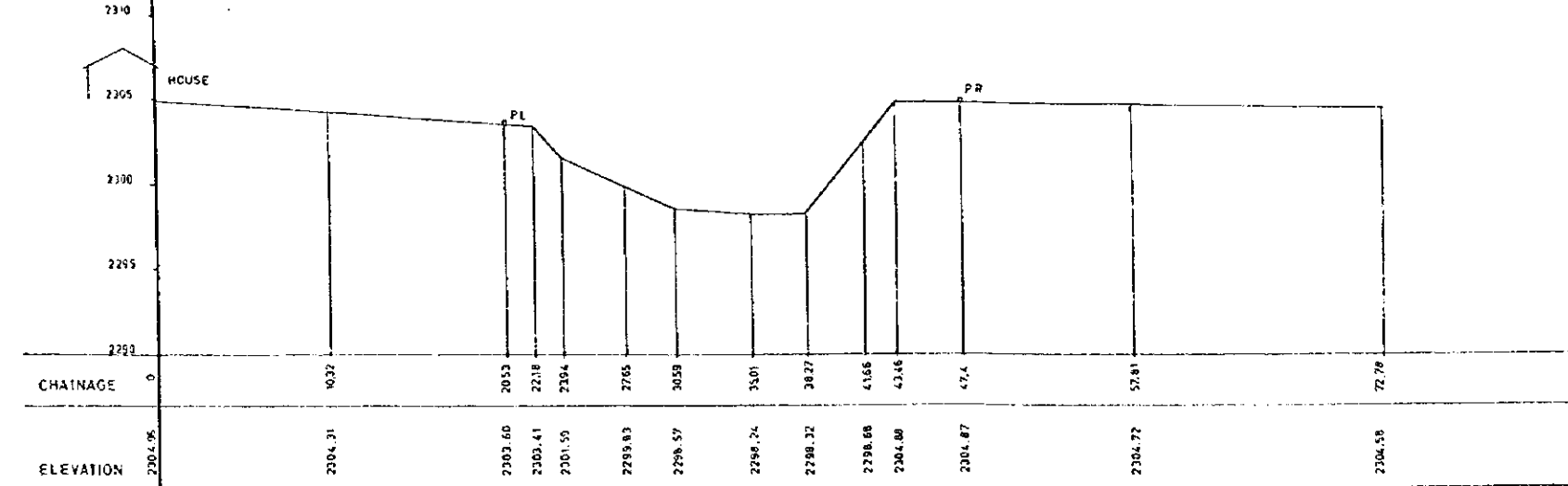
SECTION N° 3



SECTION N° 4



SECTION N° 5



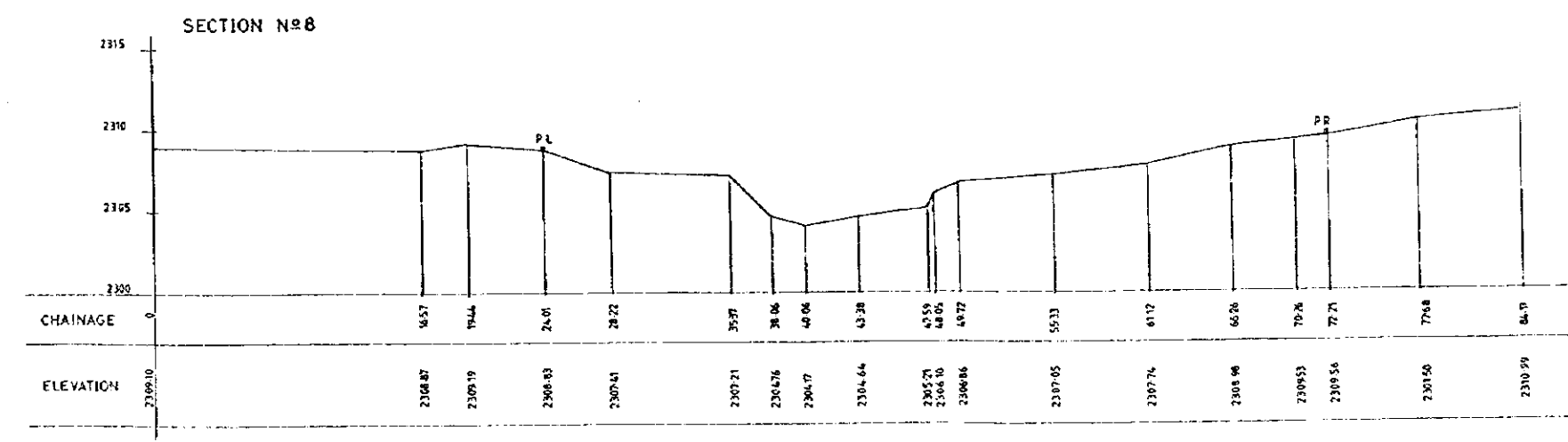
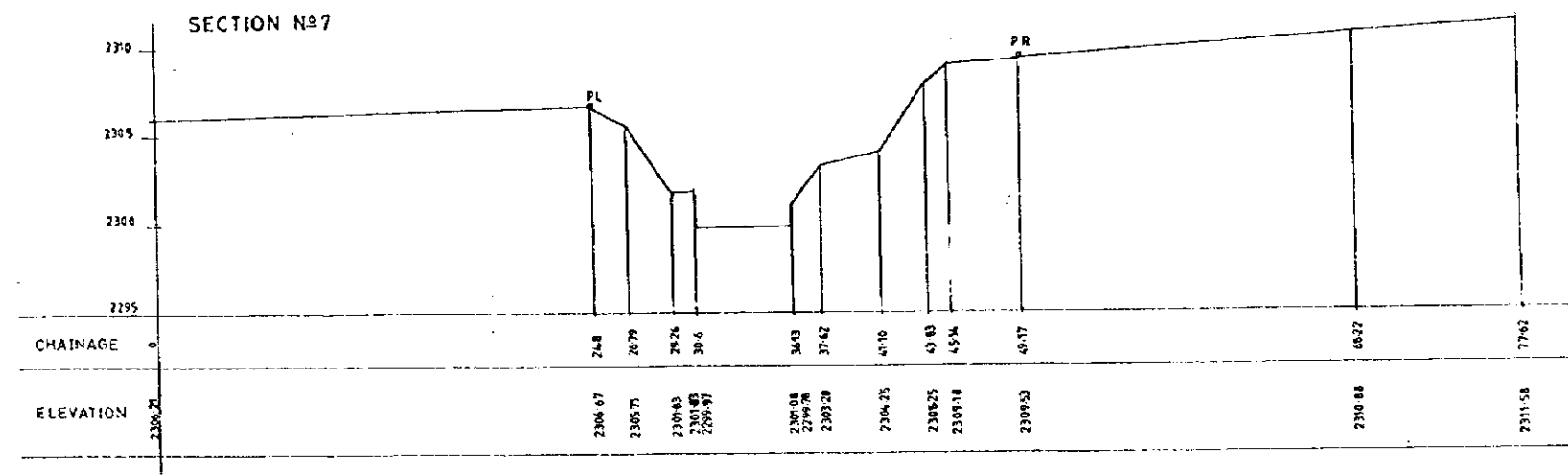
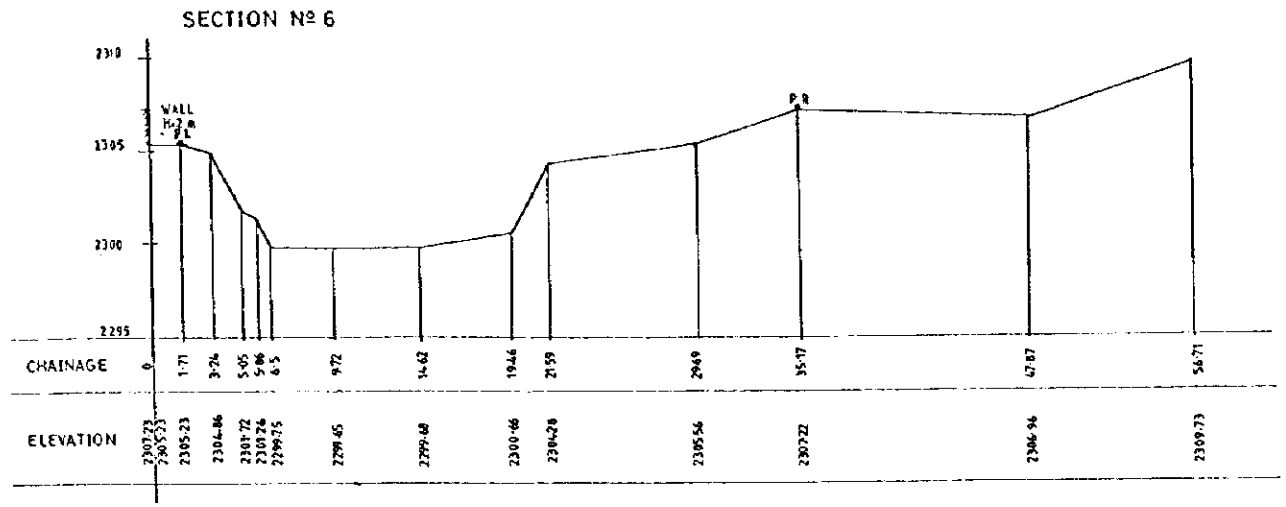
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
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DRAWING NO.
RV-CS-02

RIVER CROSS SECTION (2/25)

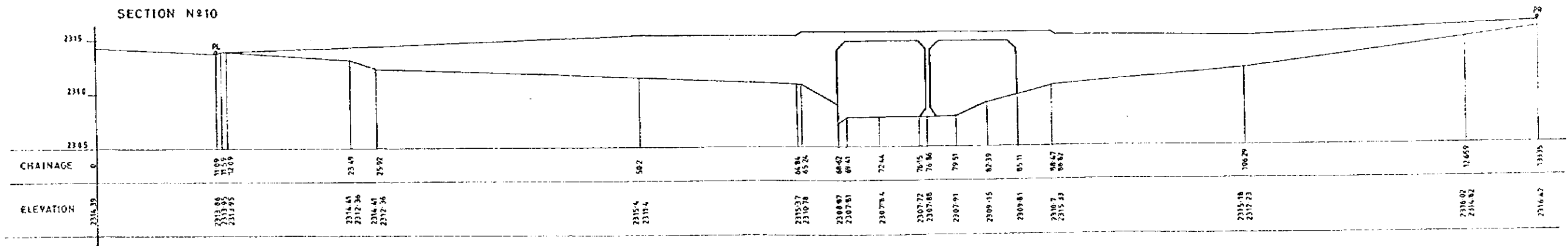
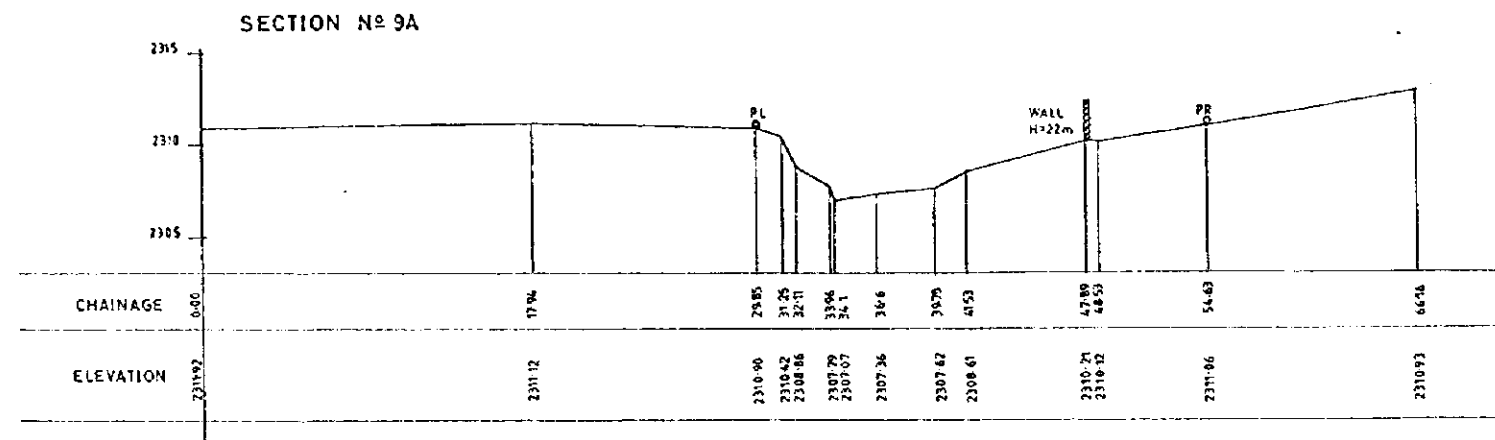
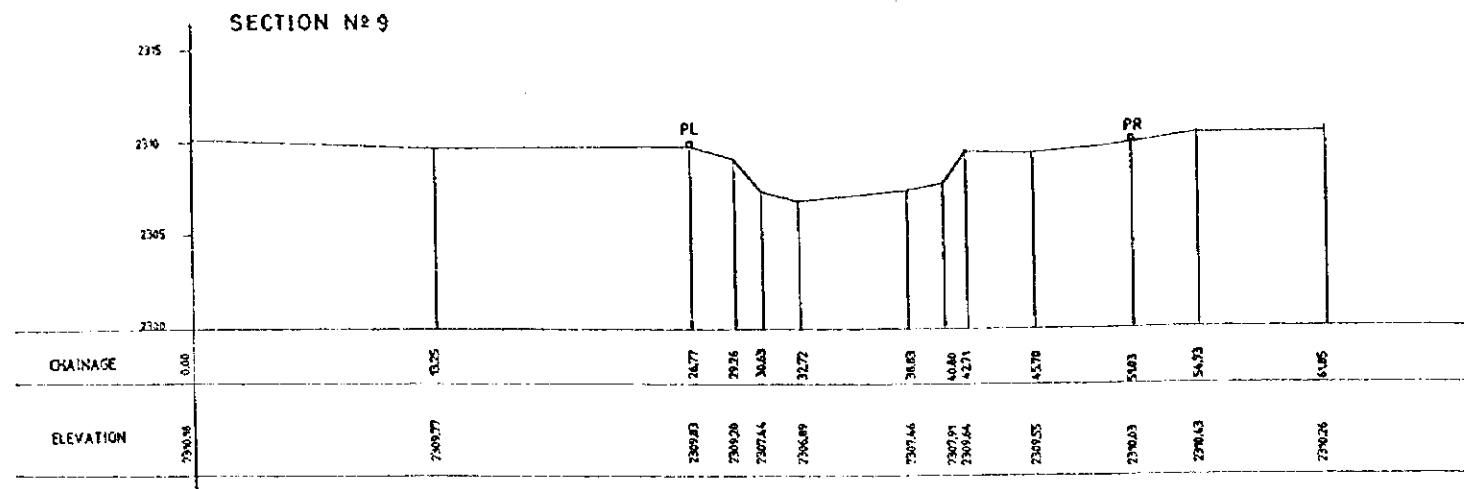


THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

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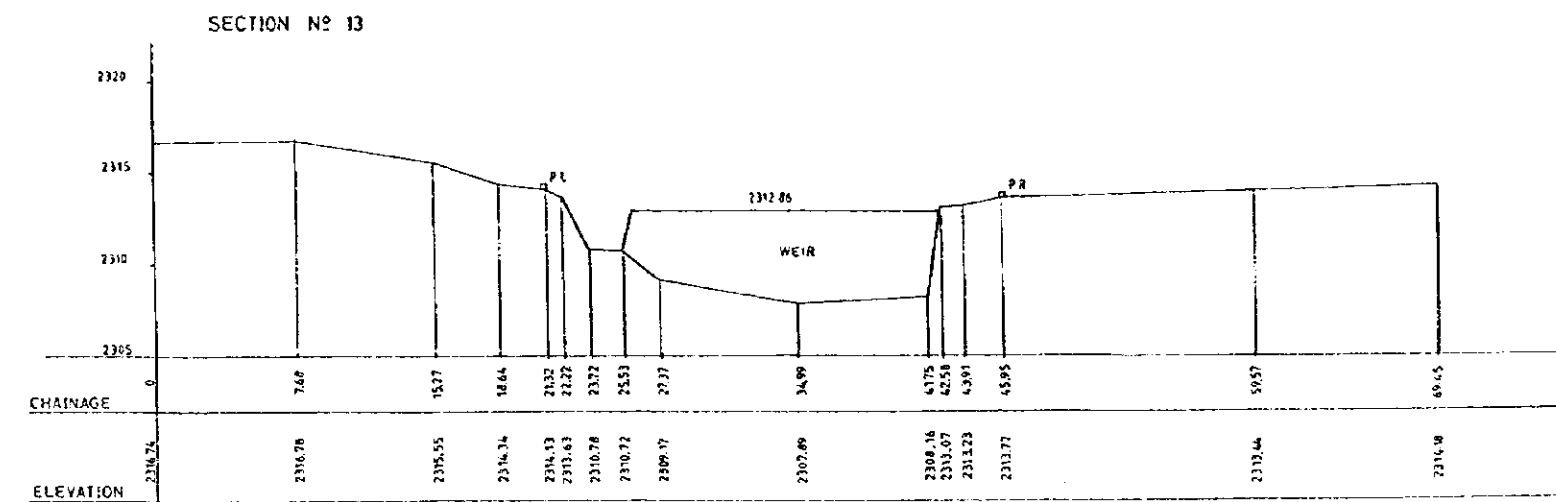
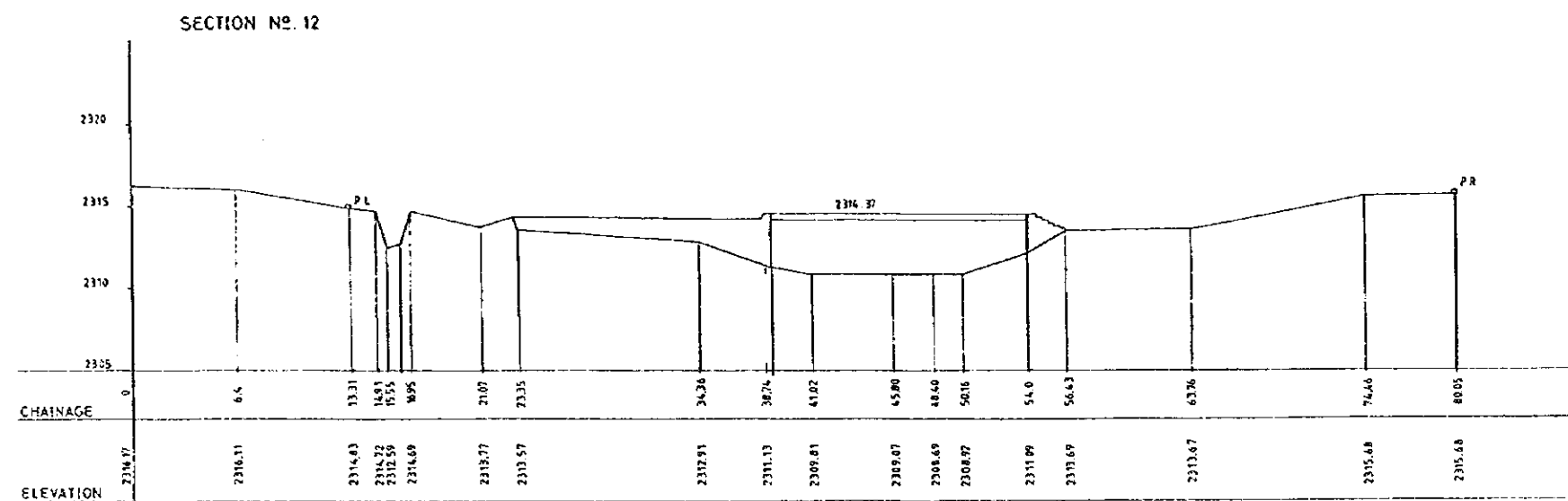
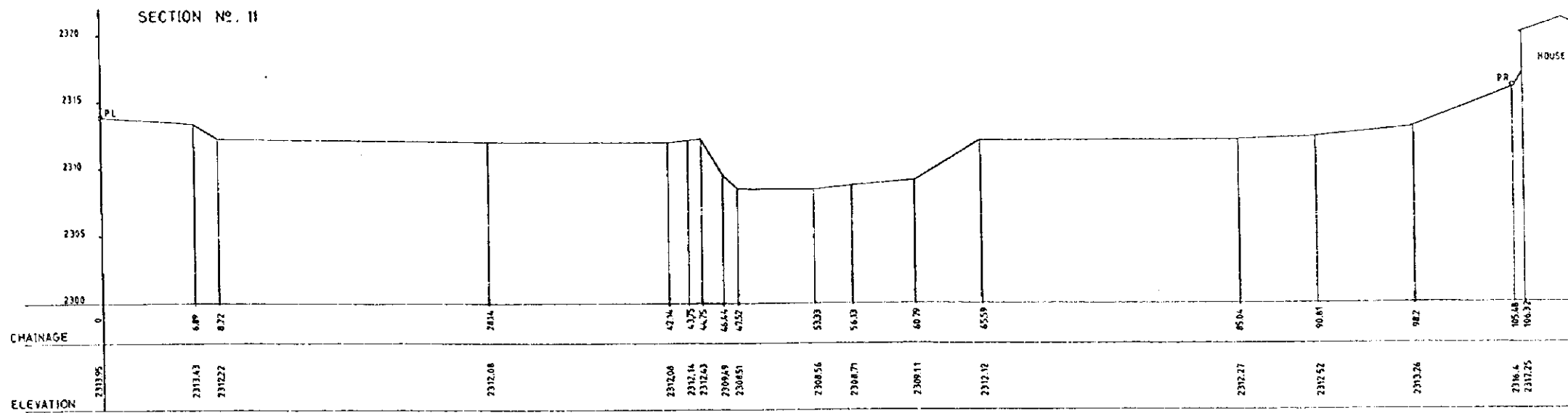
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
 IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
 REGION 14 ADMINISTRATION

SCALE
 H=1:200
 V=1:200

DRAWING NO.
 RV-CS-04

RIVER CROSS SECTION (4/25)

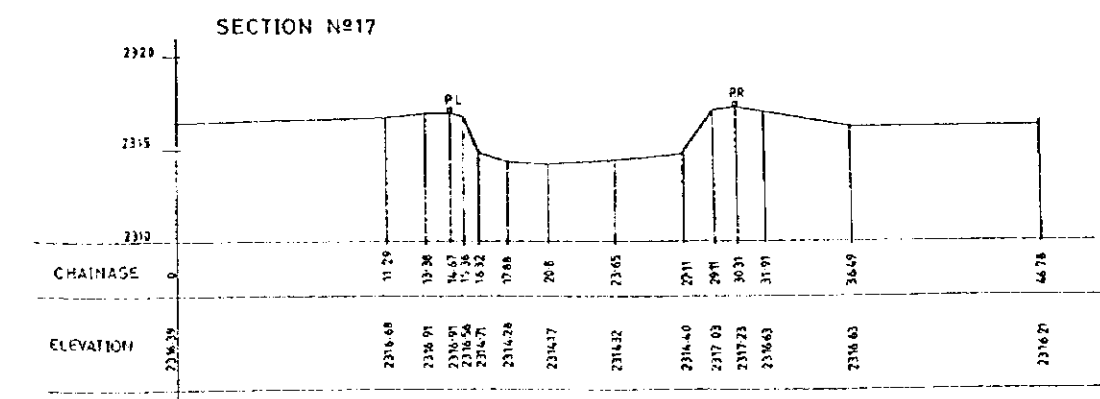
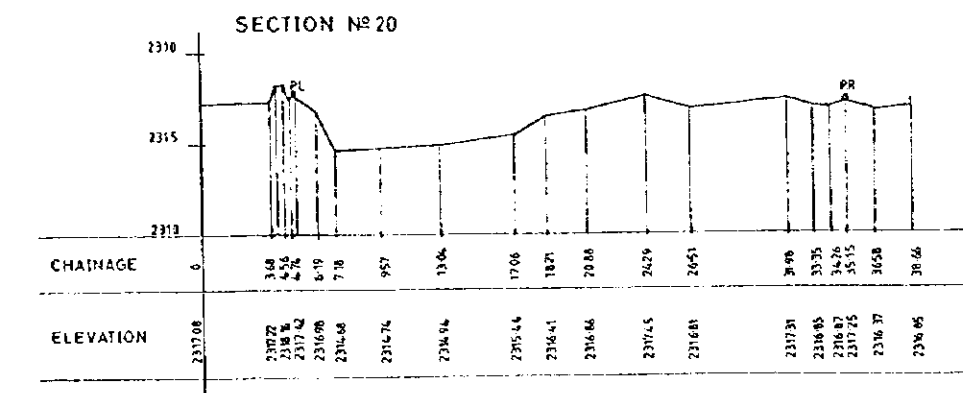
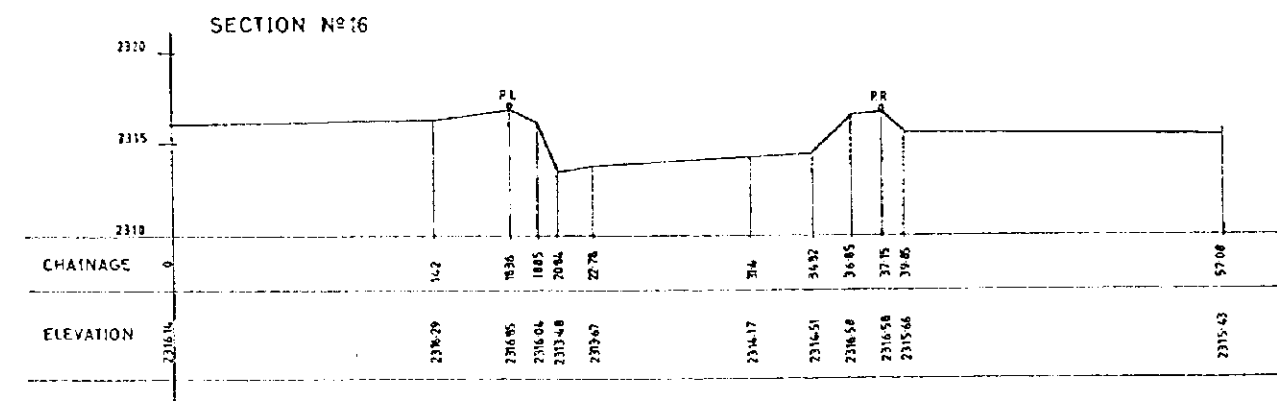
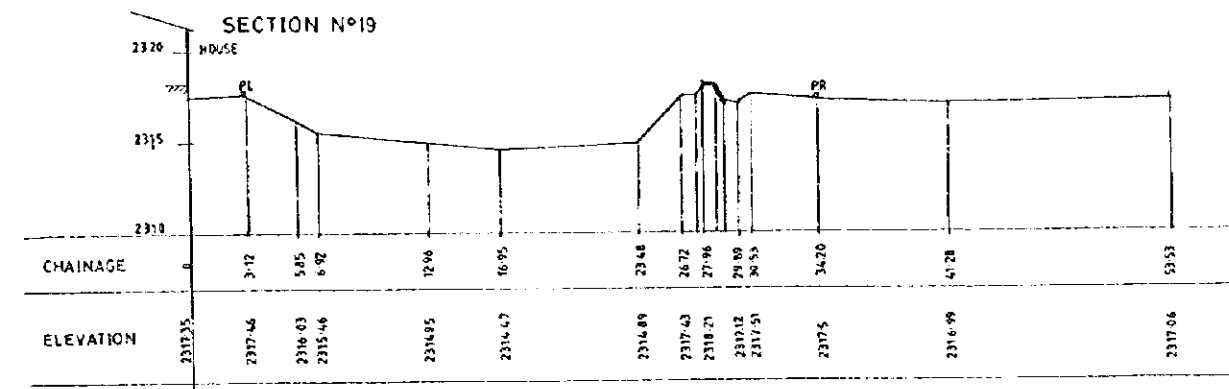
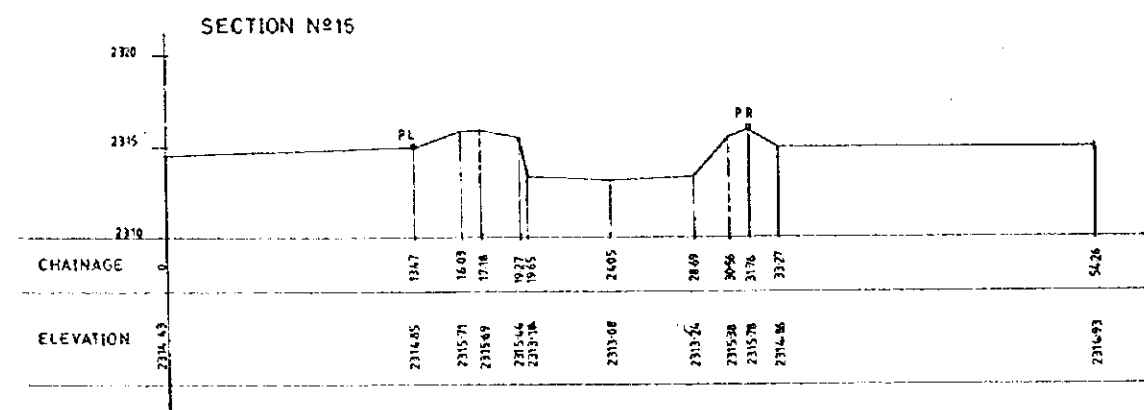
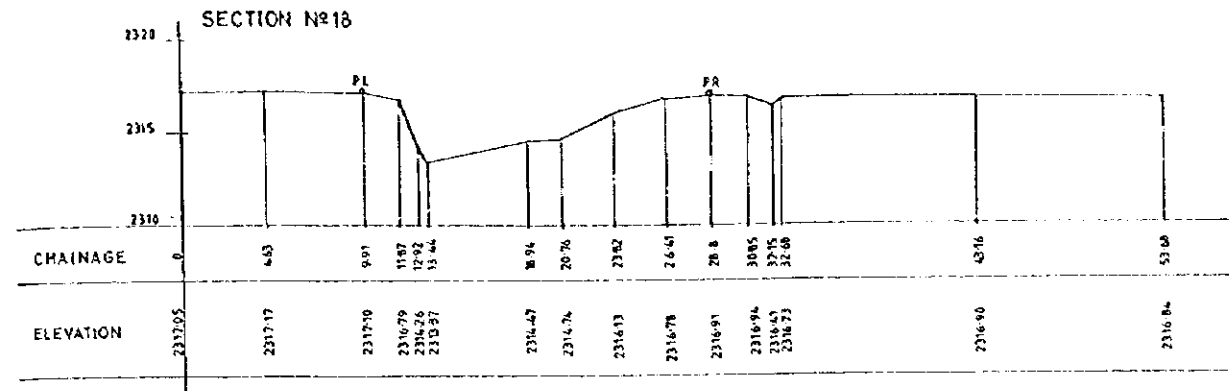
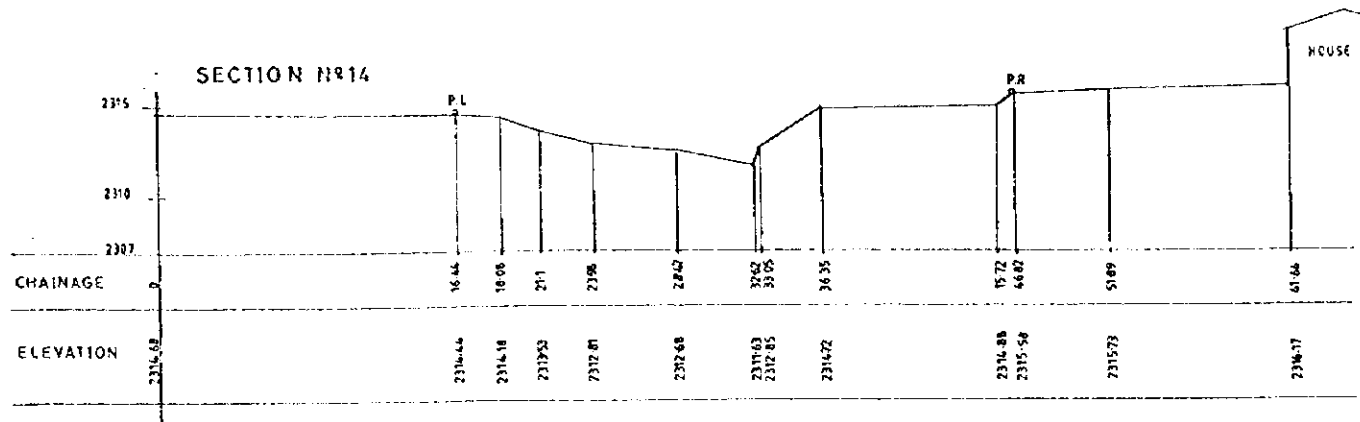


THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
 IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
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SCALE
 H=1:200
 V=1:200

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| DRAWING NO. RV-CS-05 | RIVER CROSS SECTION (5/25) |
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THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

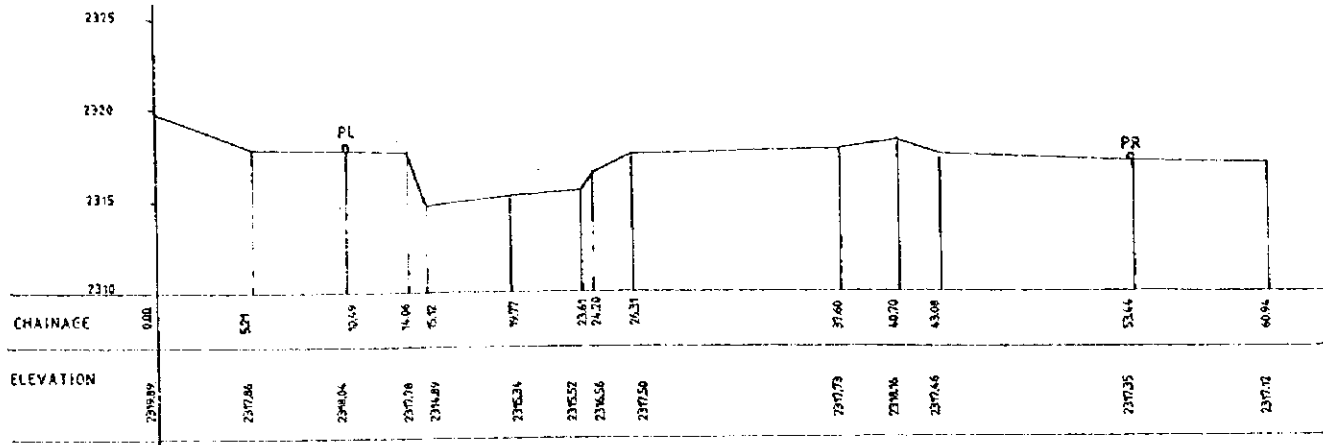
JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
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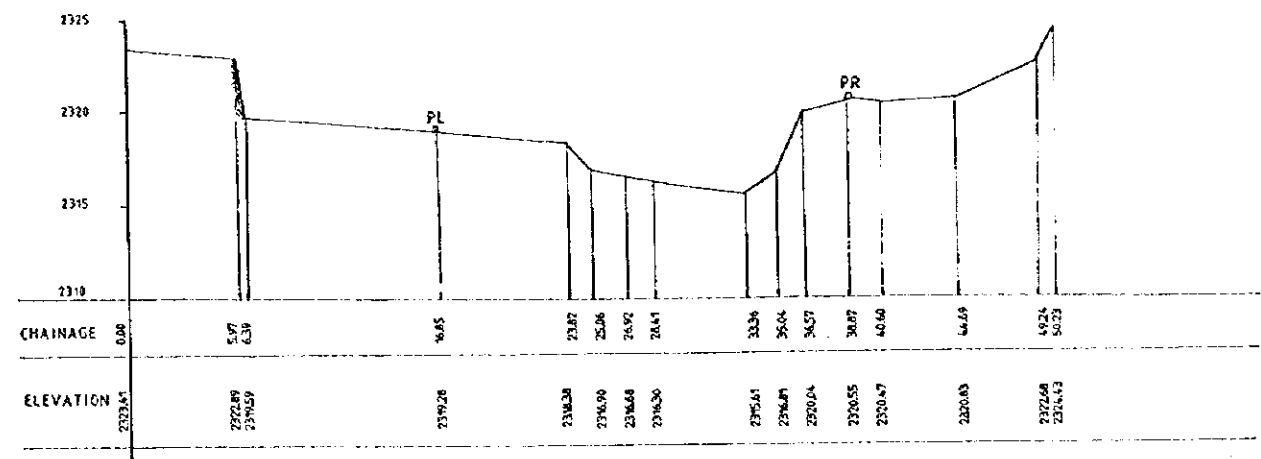
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RV-CS-06

RIVER CROSS SECTION (6/25)

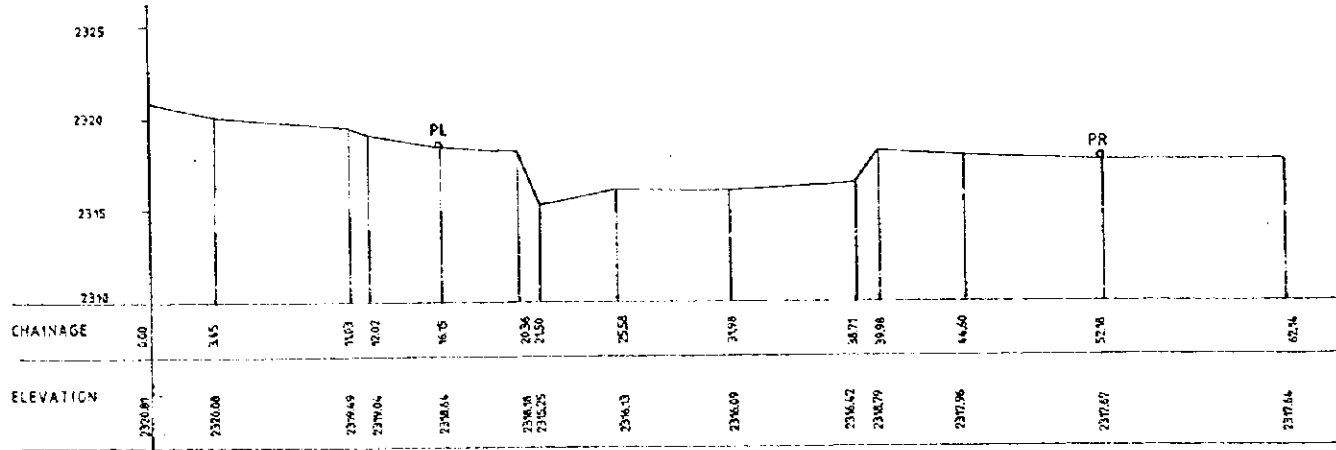
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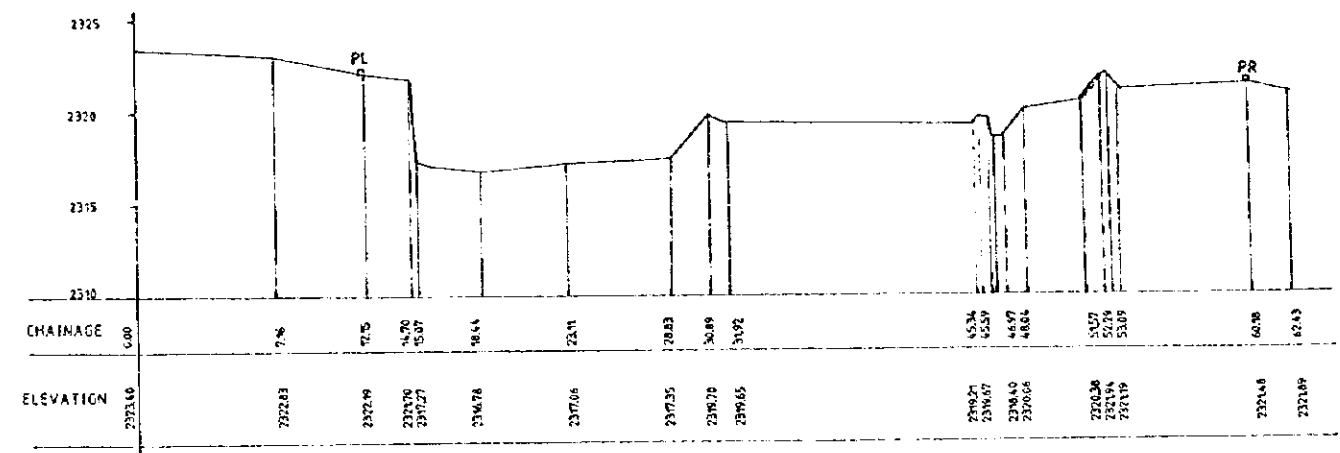
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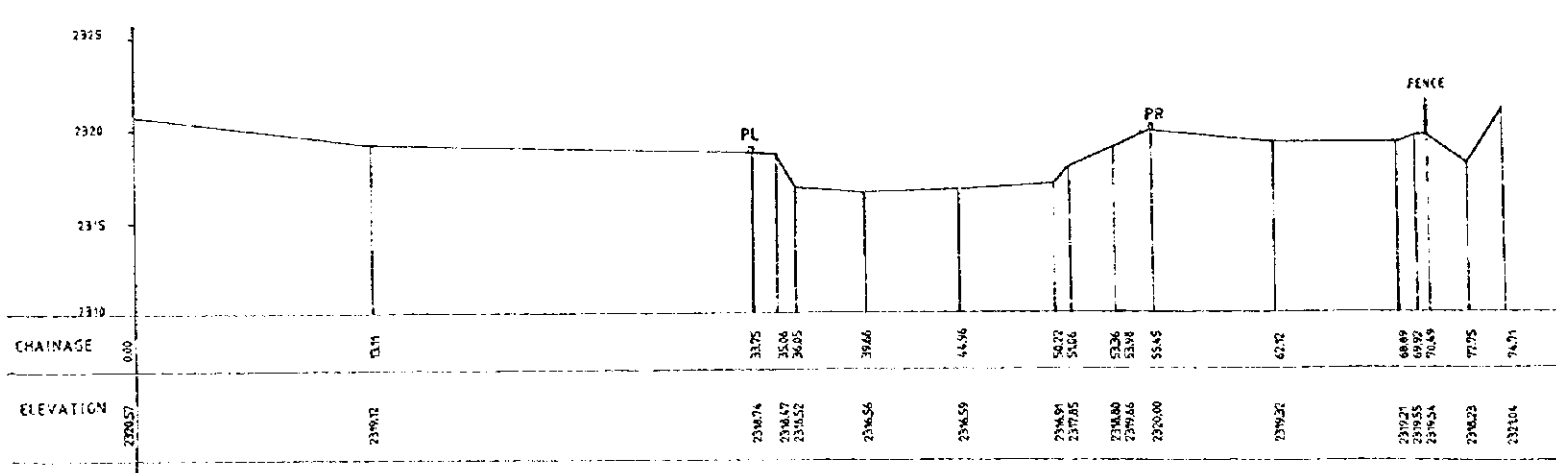
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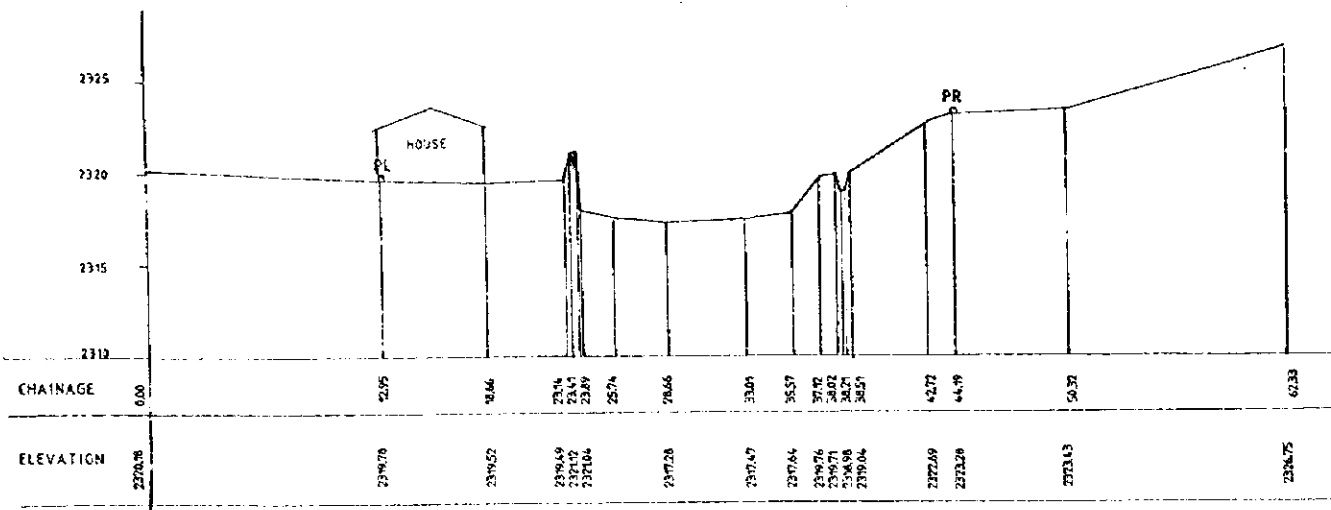
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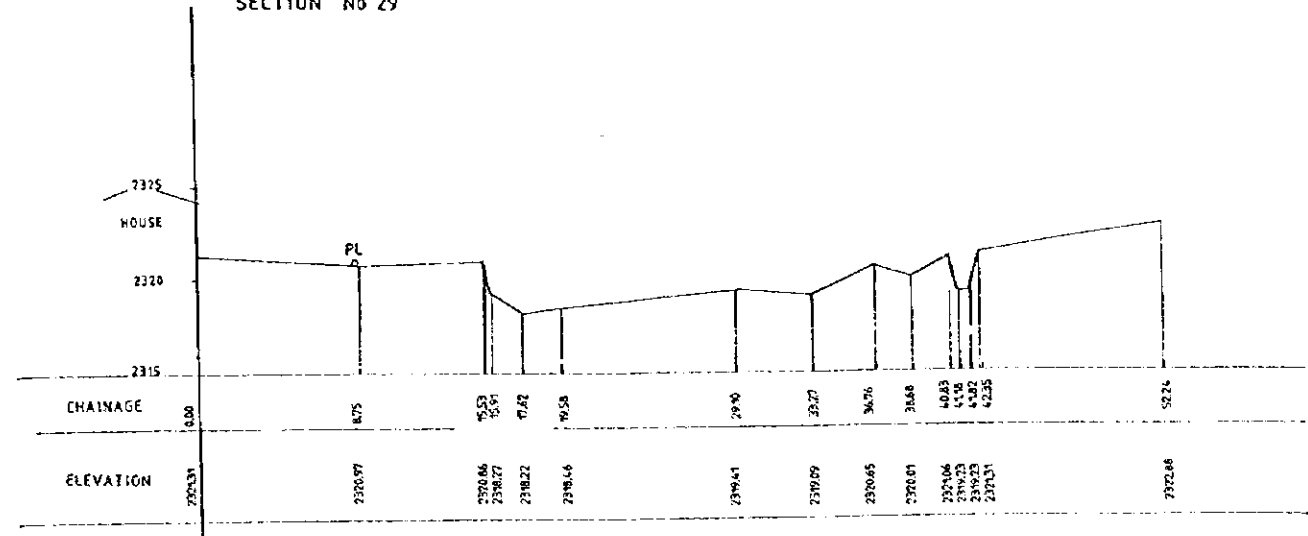
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| THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA | |
| JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION | |
| DRAWING NO. RV-CS-07 | RIVER CROSS SECTION (7/25) |

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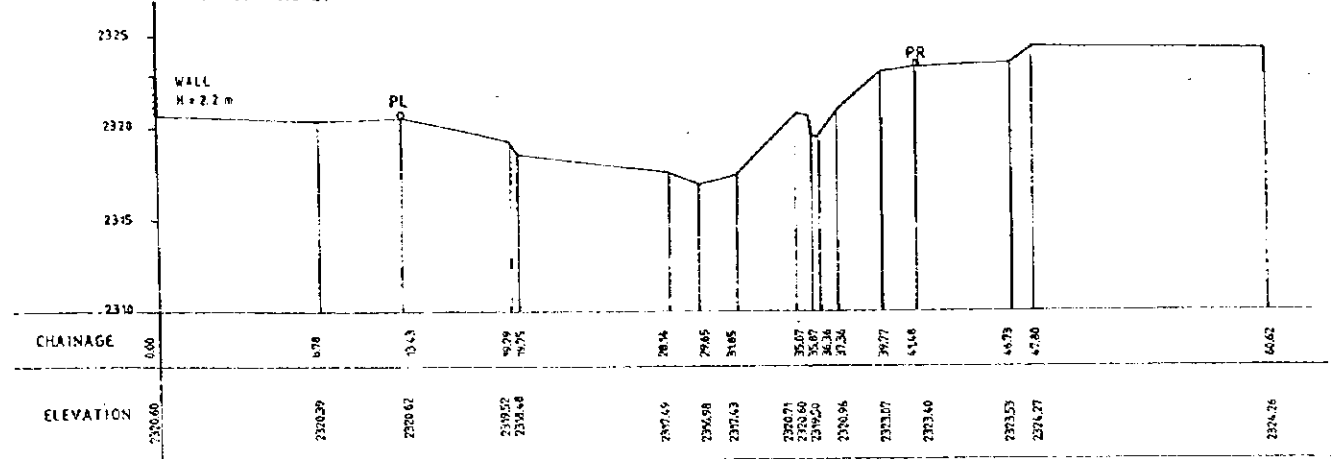
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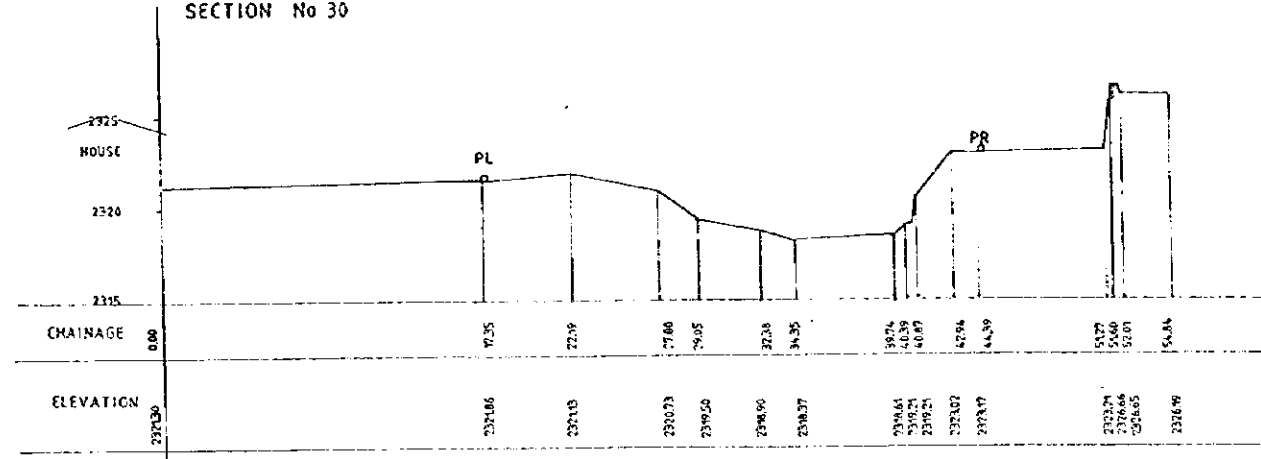
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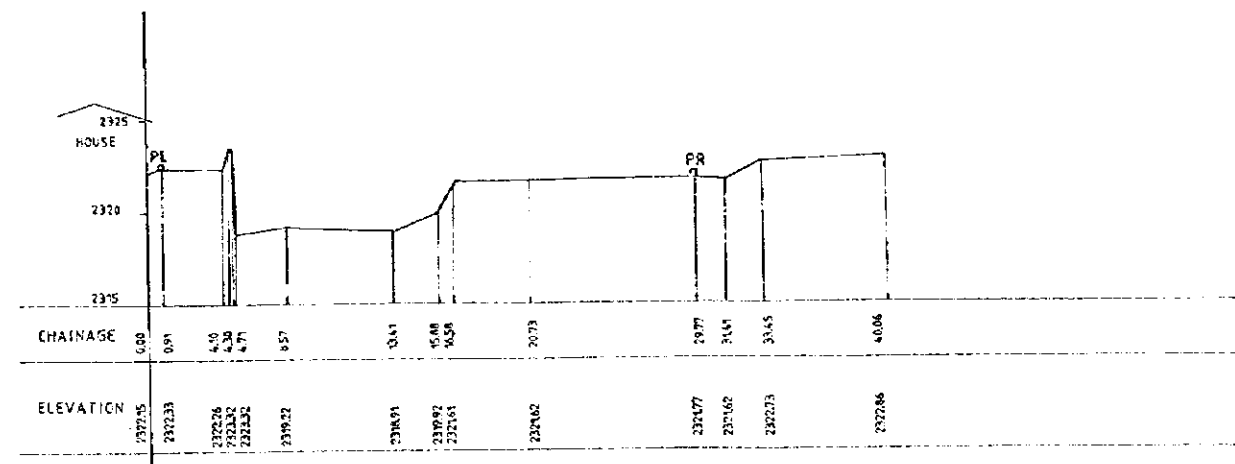
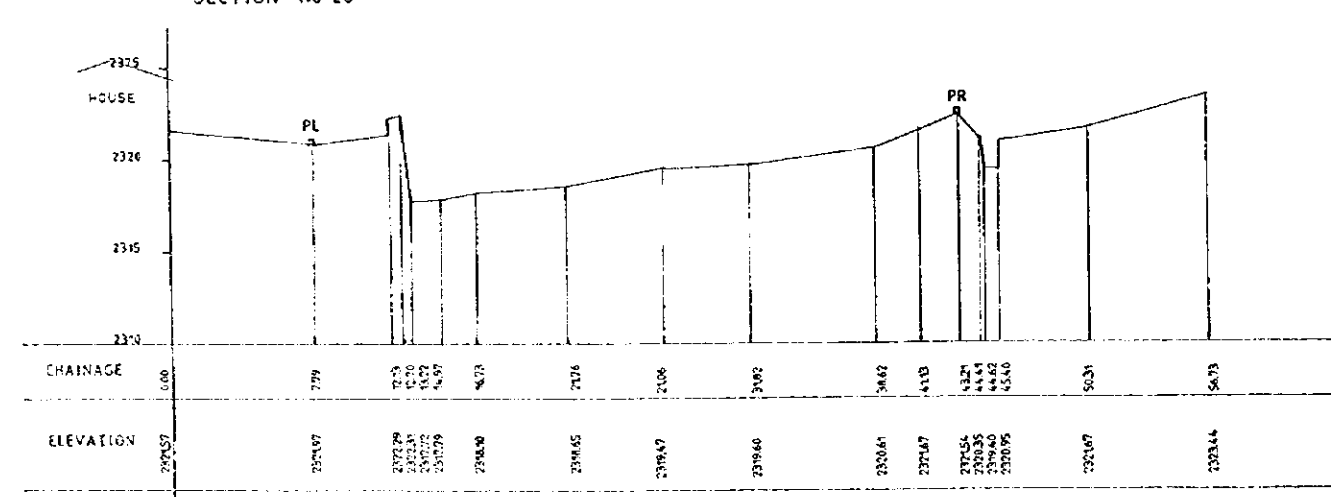
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SECTION No 30



SECTION No 28



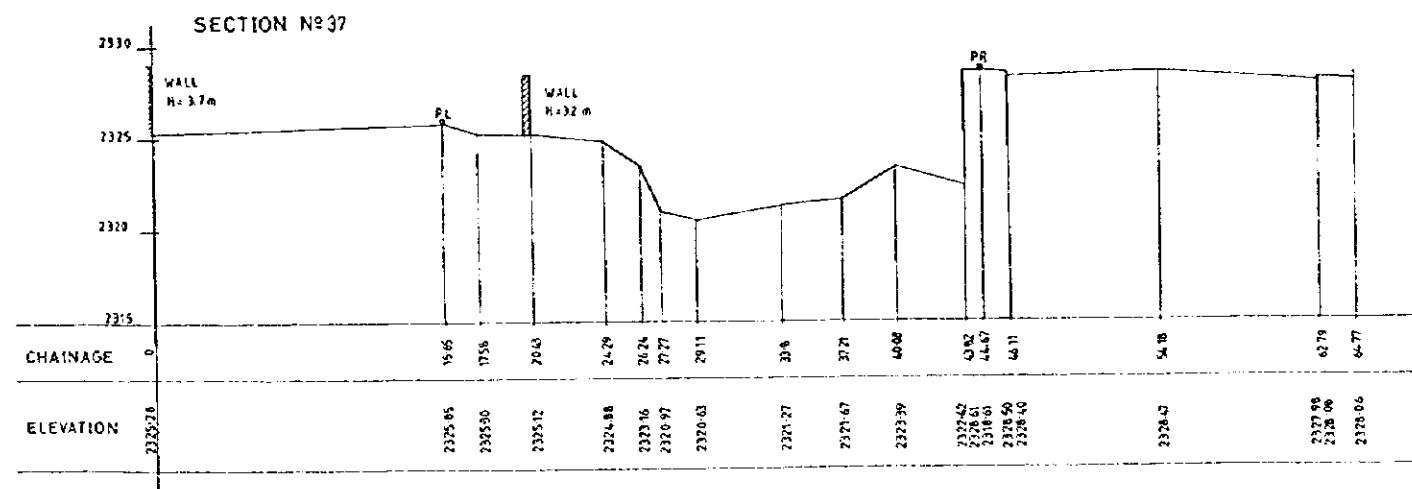
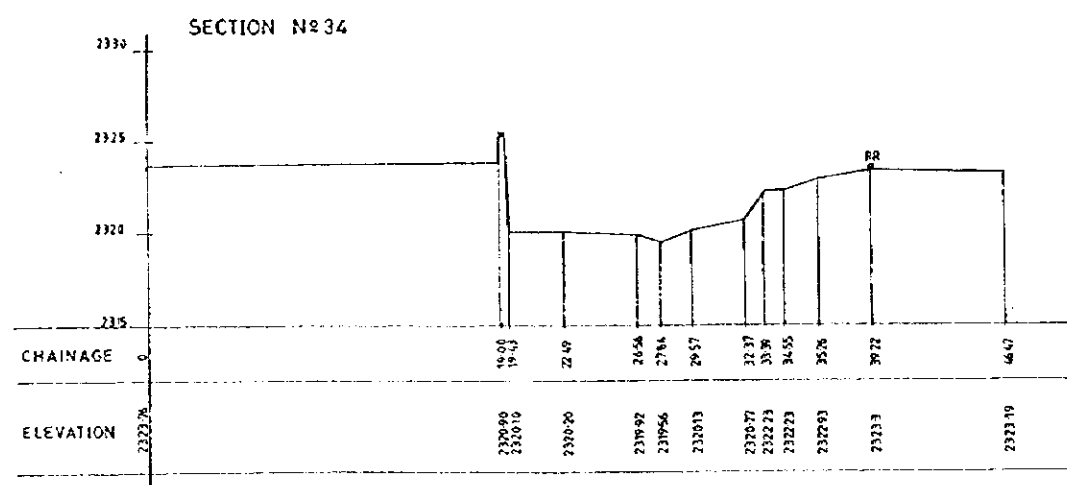
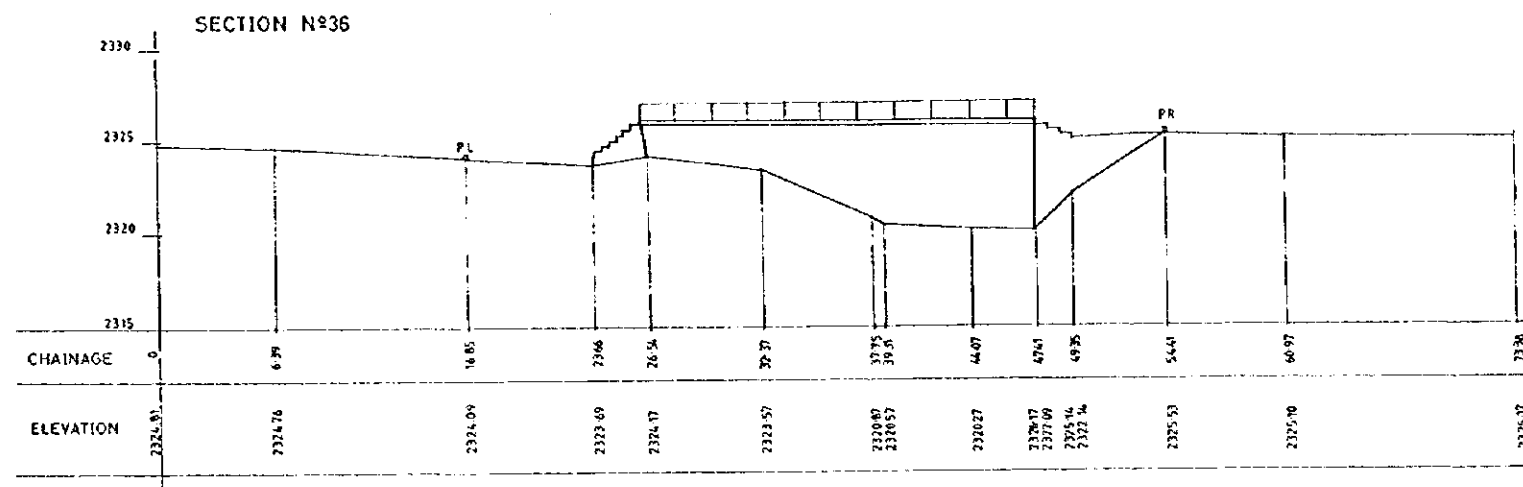
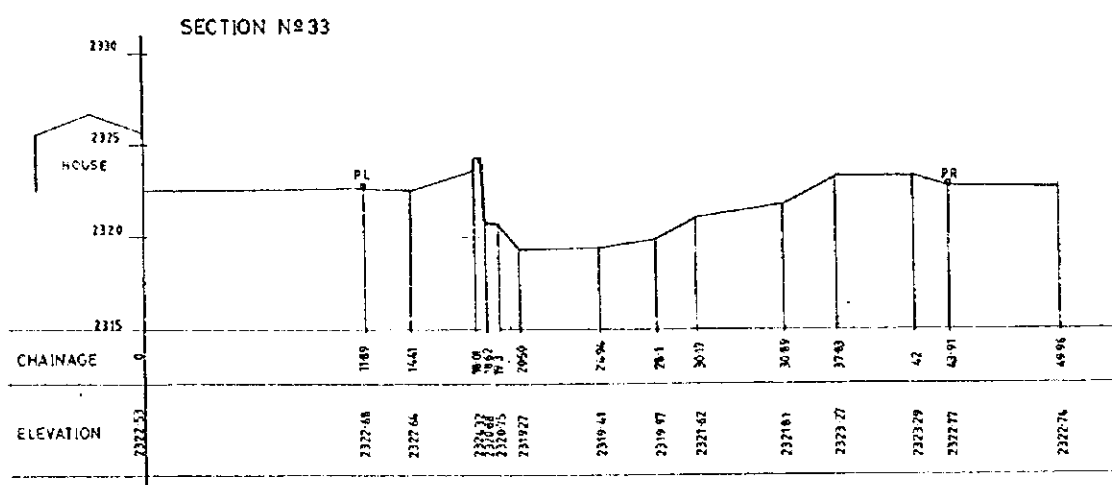
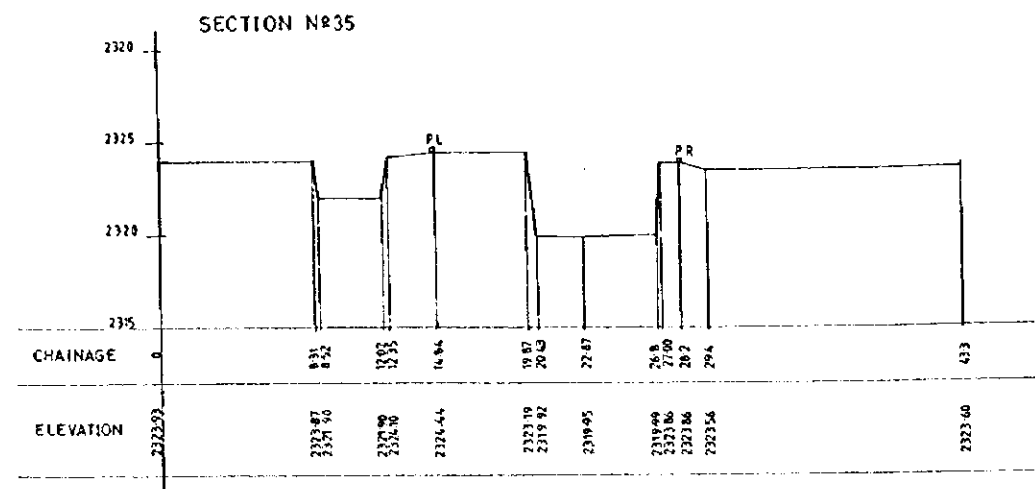
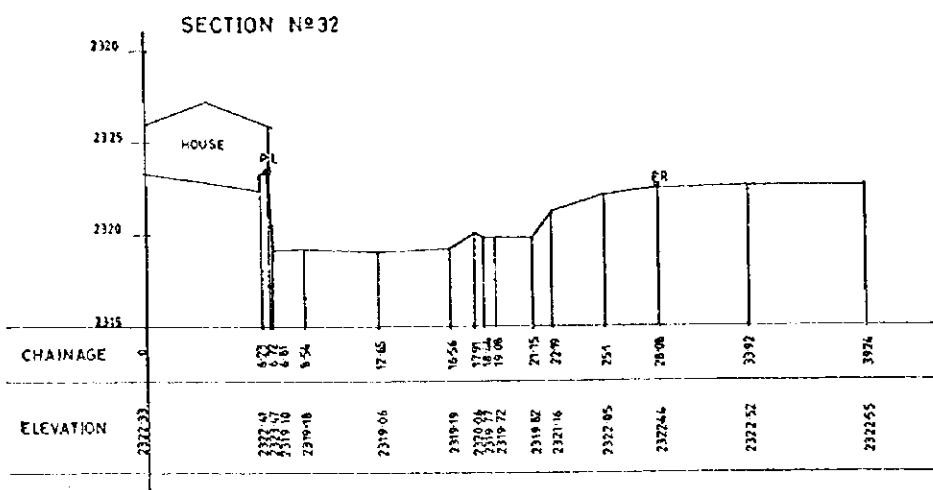
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H = 1:200
V = 1:200

DRAWING NO.
RV-CS-08

RIVER CROSS SECTION (8/25)



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

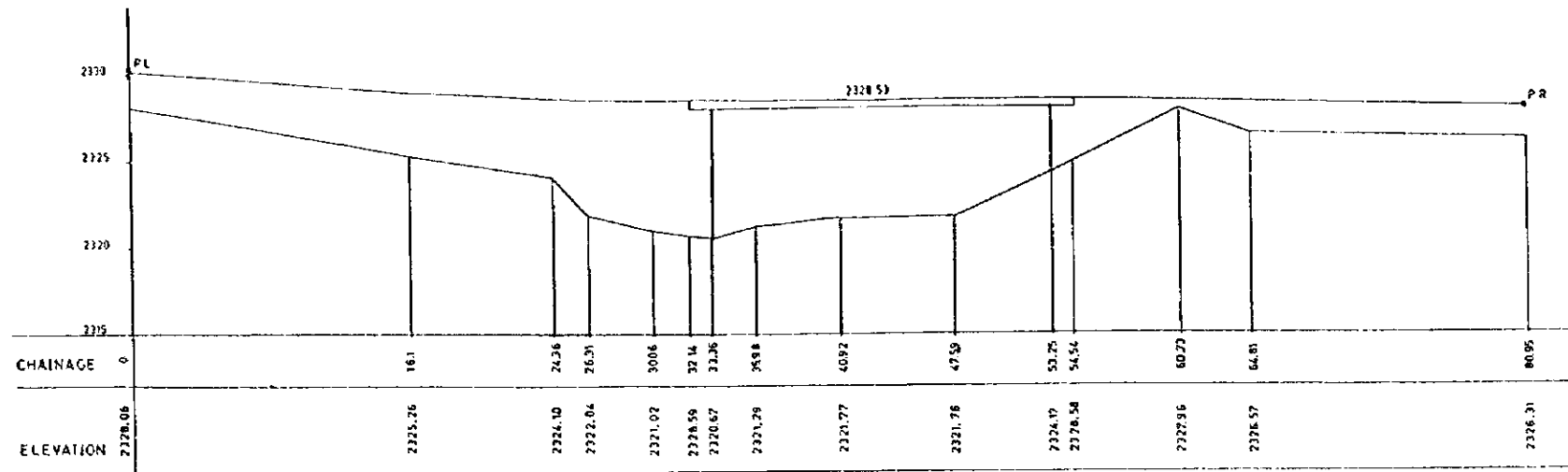
JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
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V=1:200

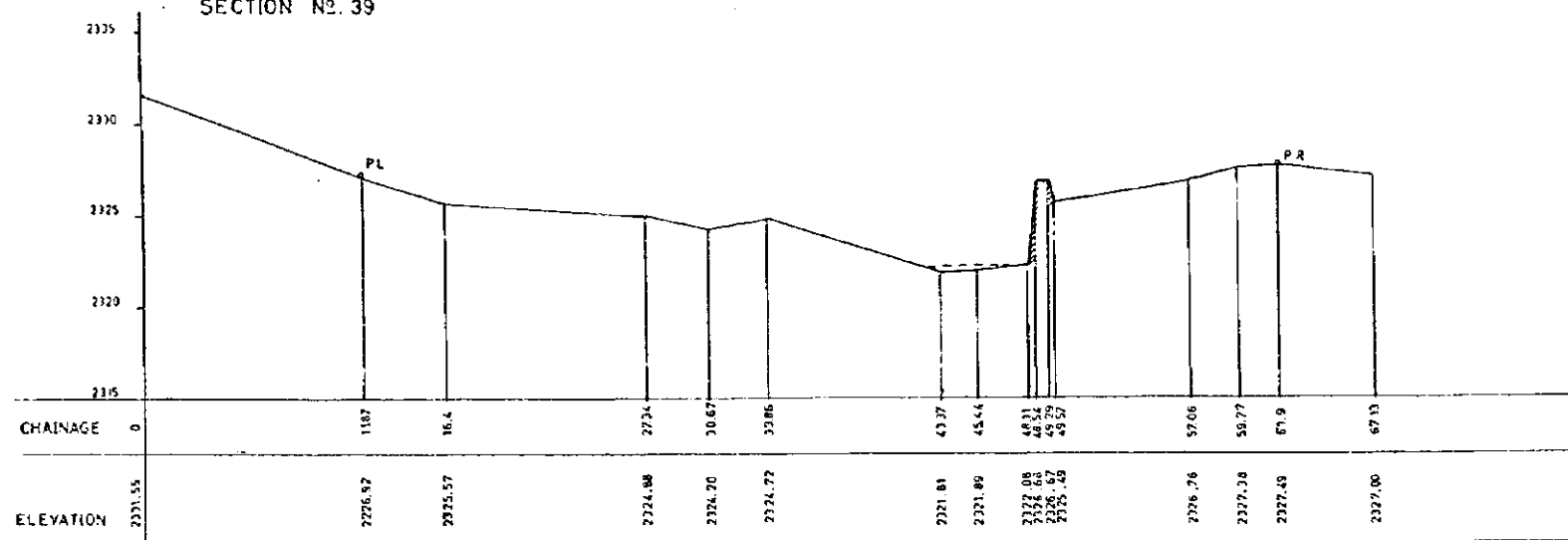
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RV-CS-09

RIVER CROSS SECTION (9/25)

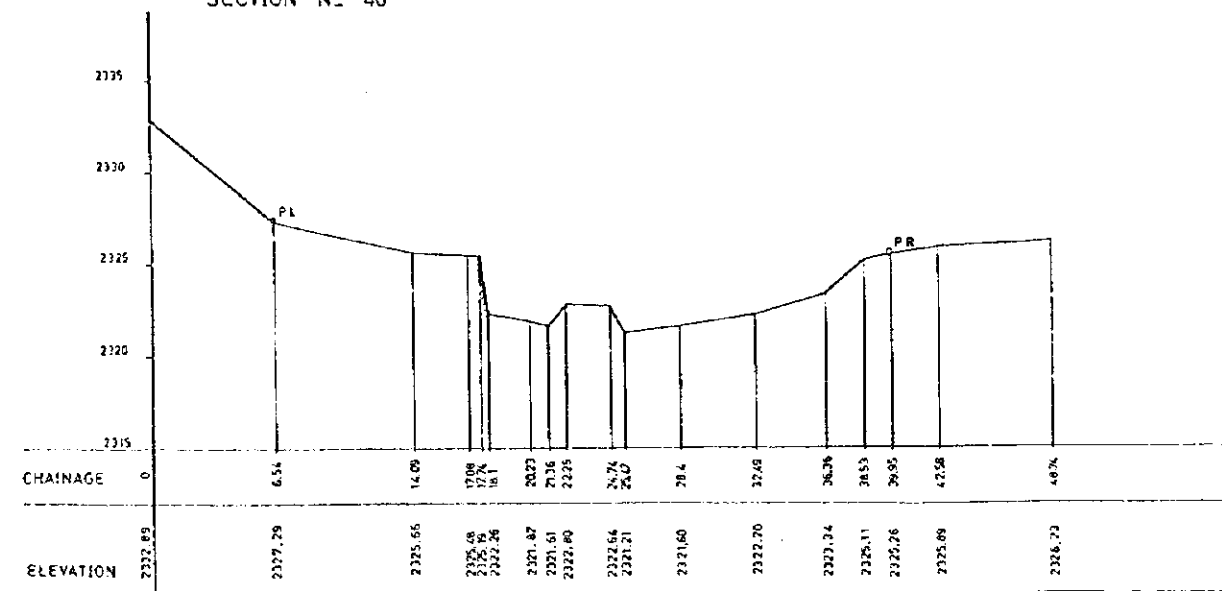
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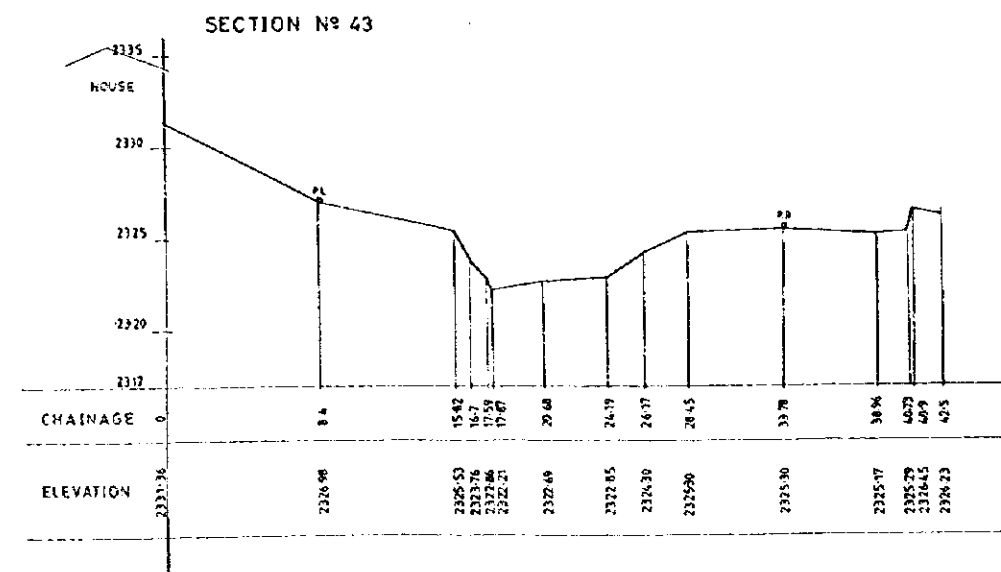
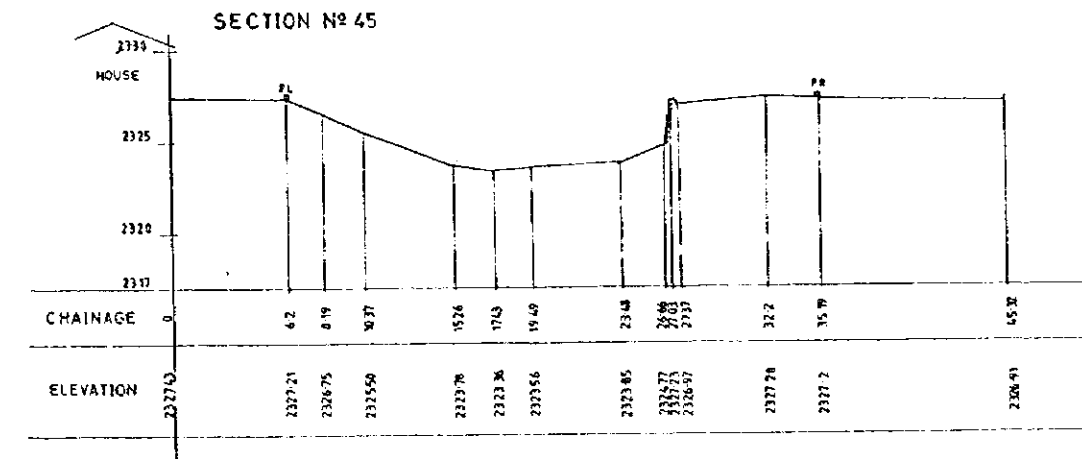
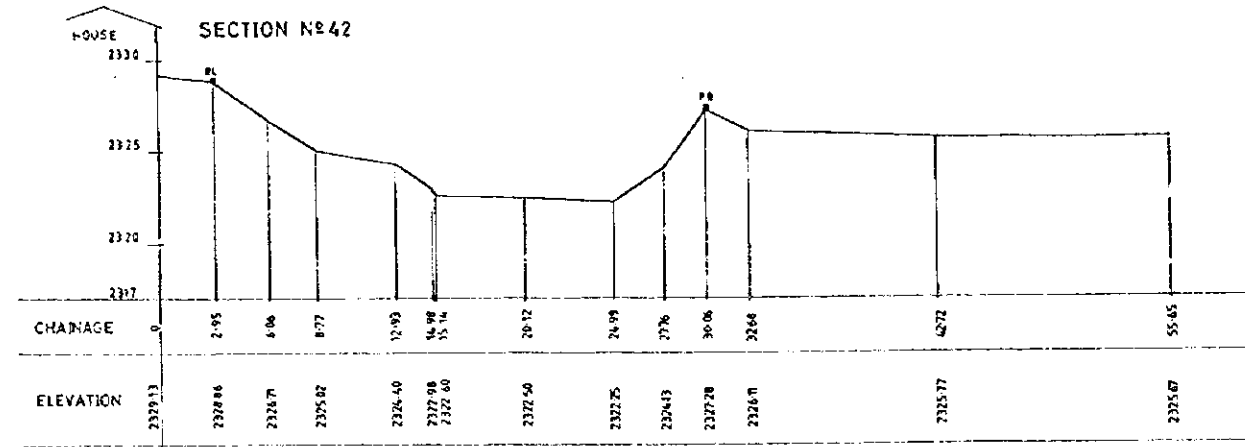
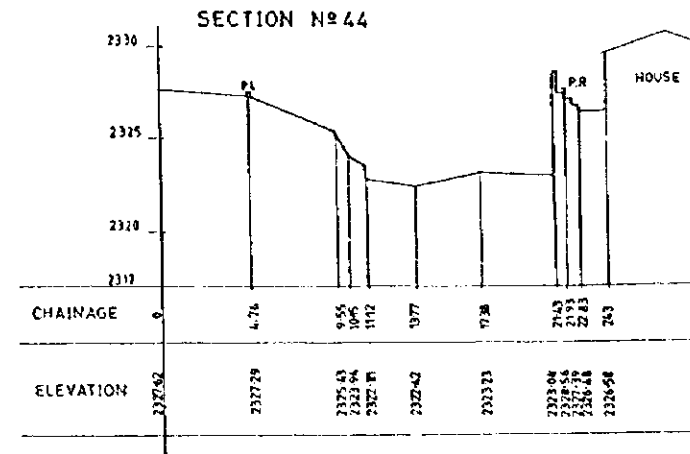
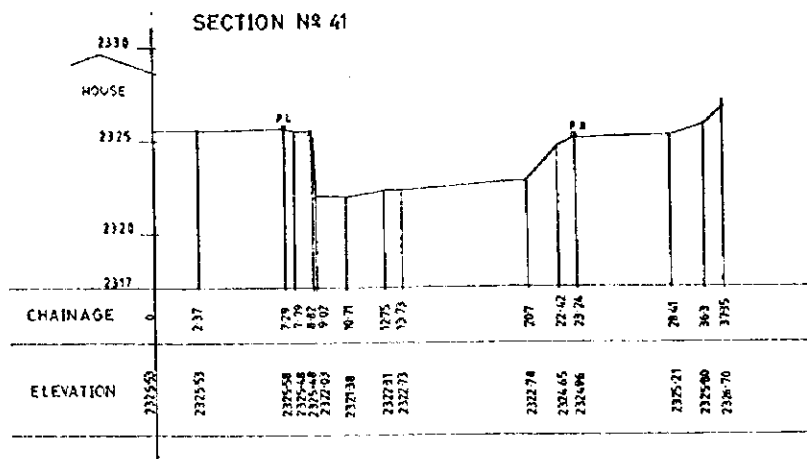
SECTION NO. 39



SECTION NO. 40



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| THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA | |
| JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION | |
| SCALE H=1:200 V=1:200 | DRAWING NO. RV-CS-10 |
| RIVER CROSS SECTION (10/25) | |



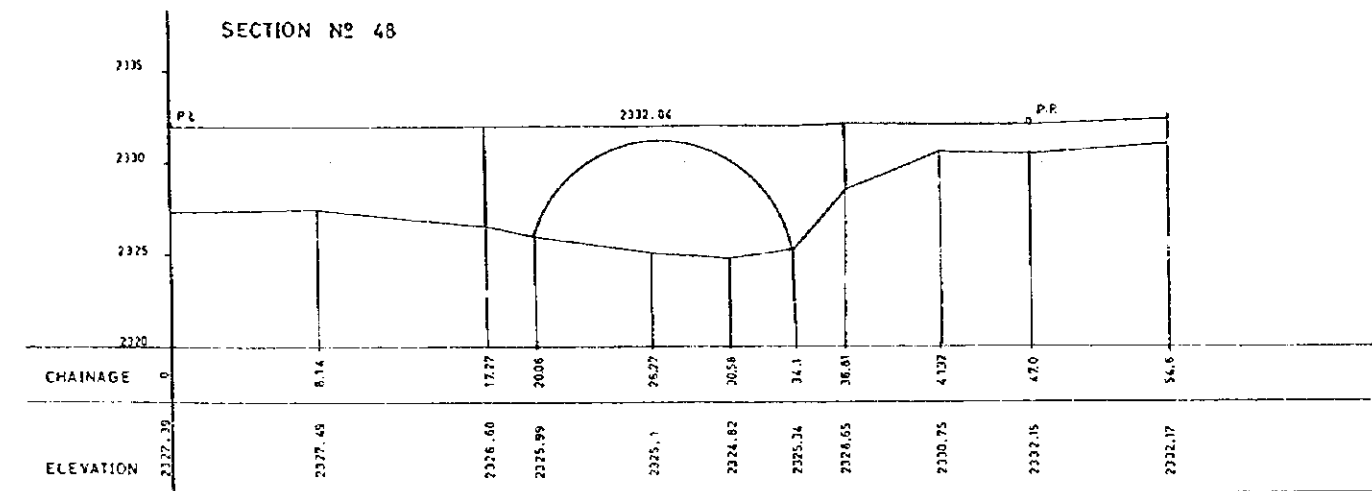
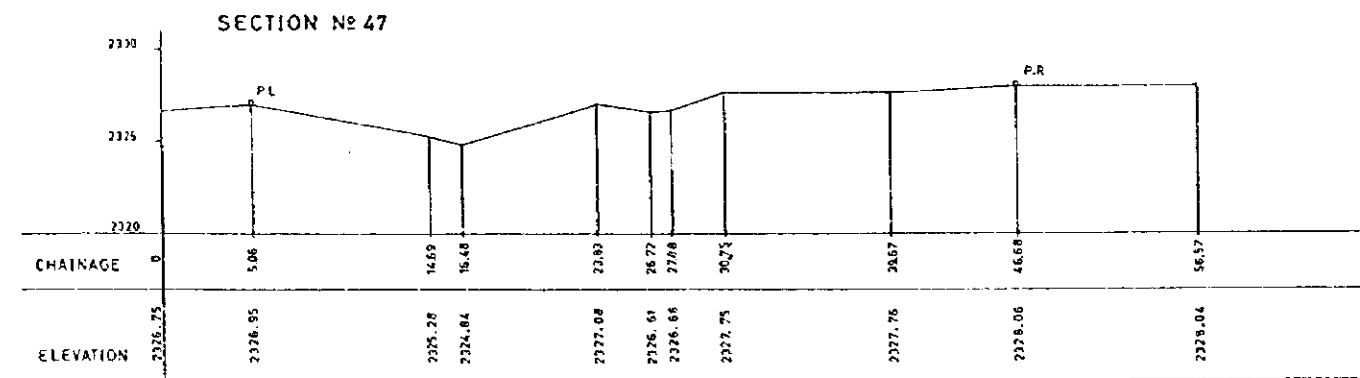
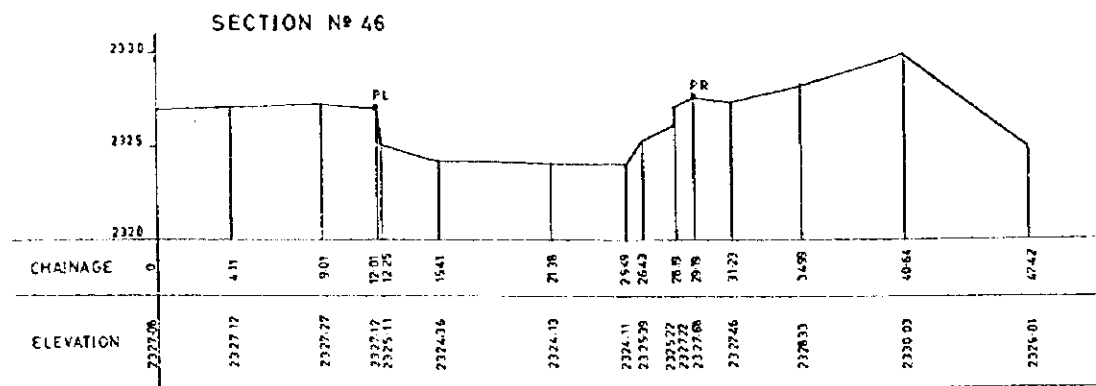
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H=1:200
V=1:200

DRAWING NO.
RV-CS-11

RIVER CROSS SECTION (11/25)



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

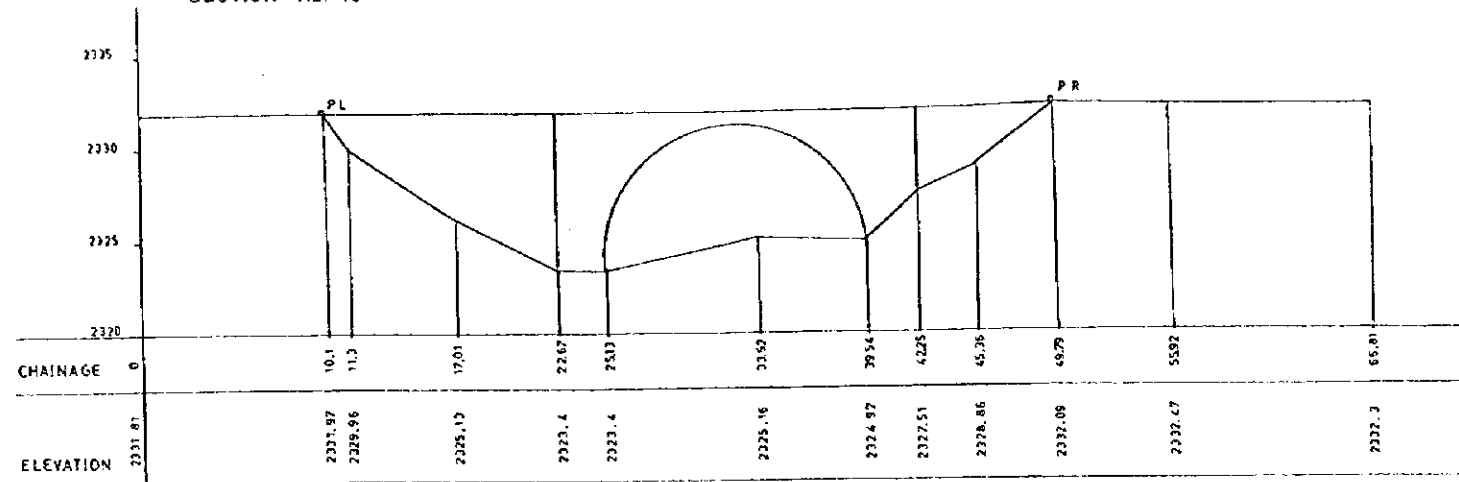
JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

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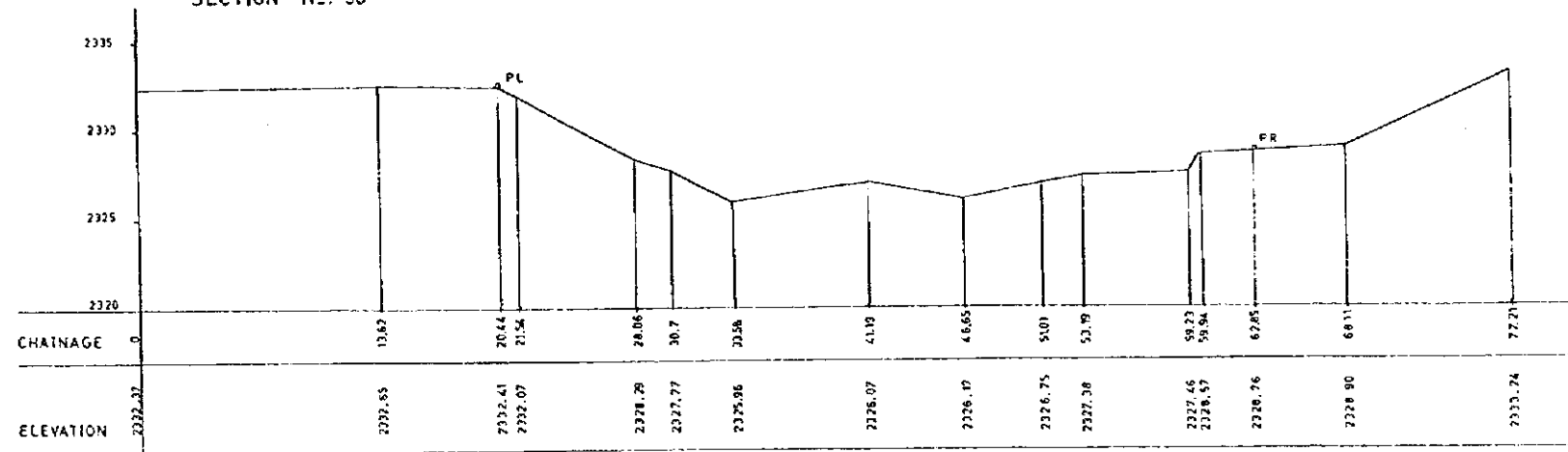
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RV-CS-12

RIVER CROSS SECTION (12/25)

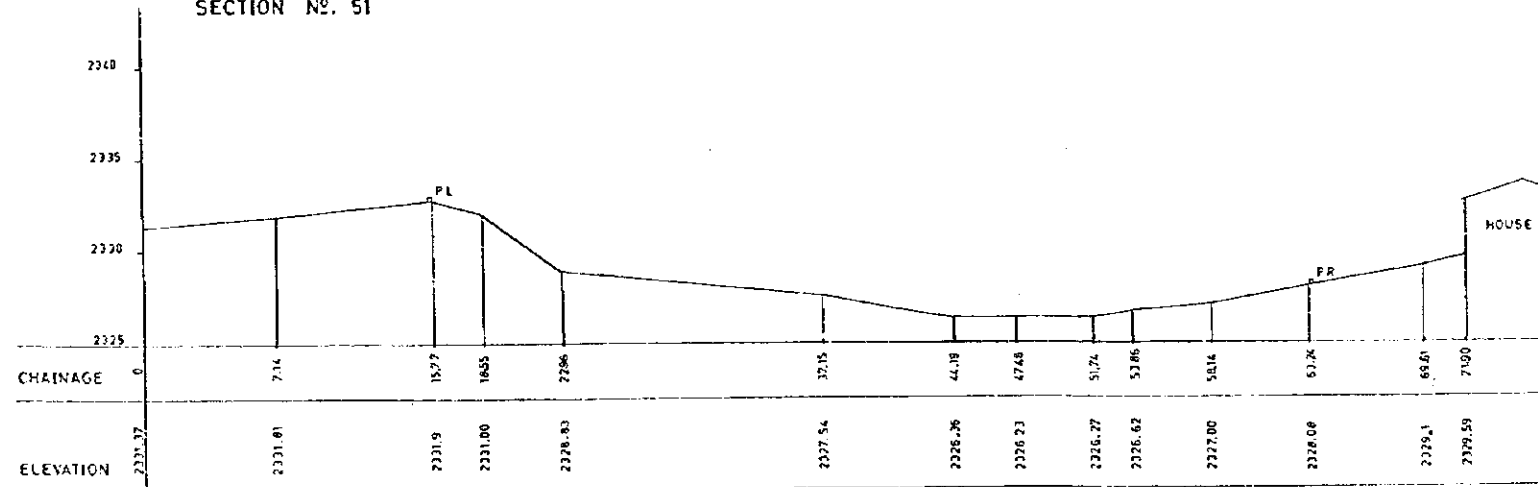
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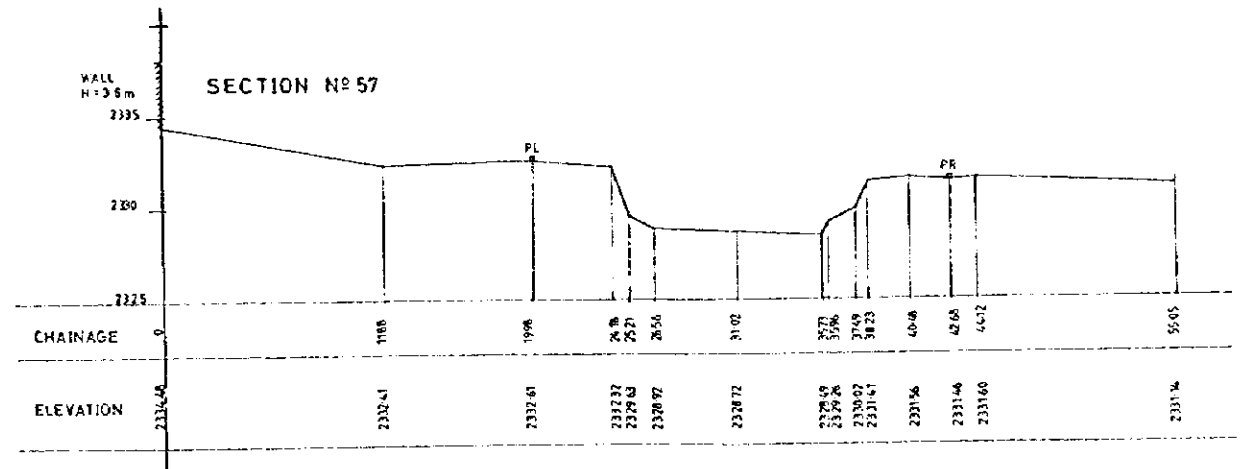
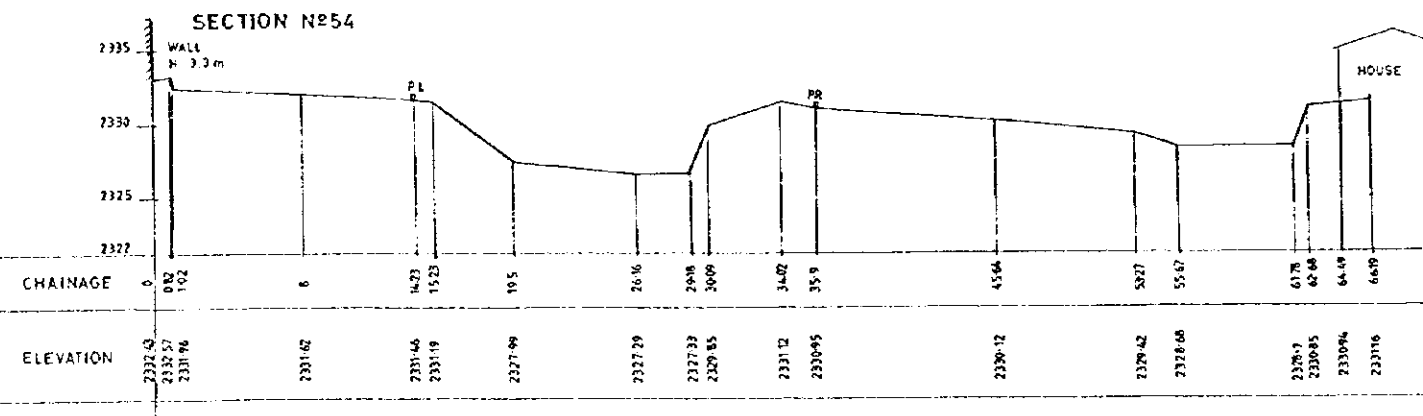
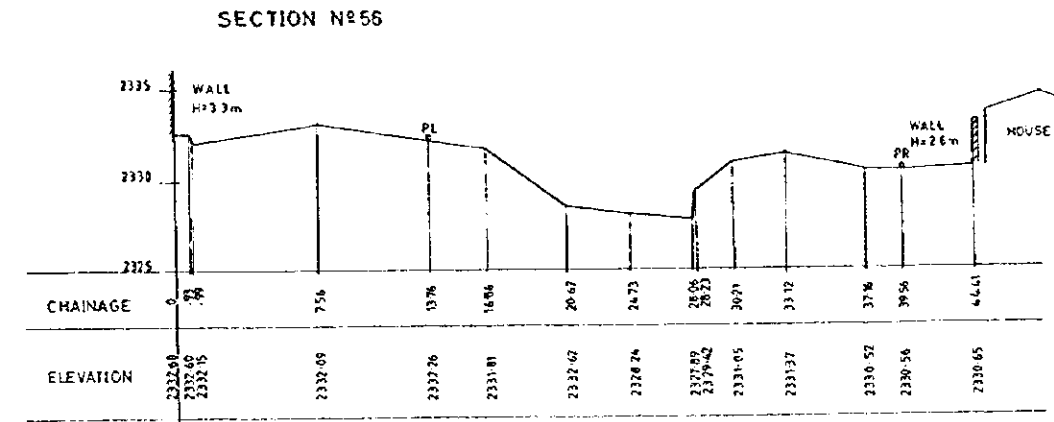
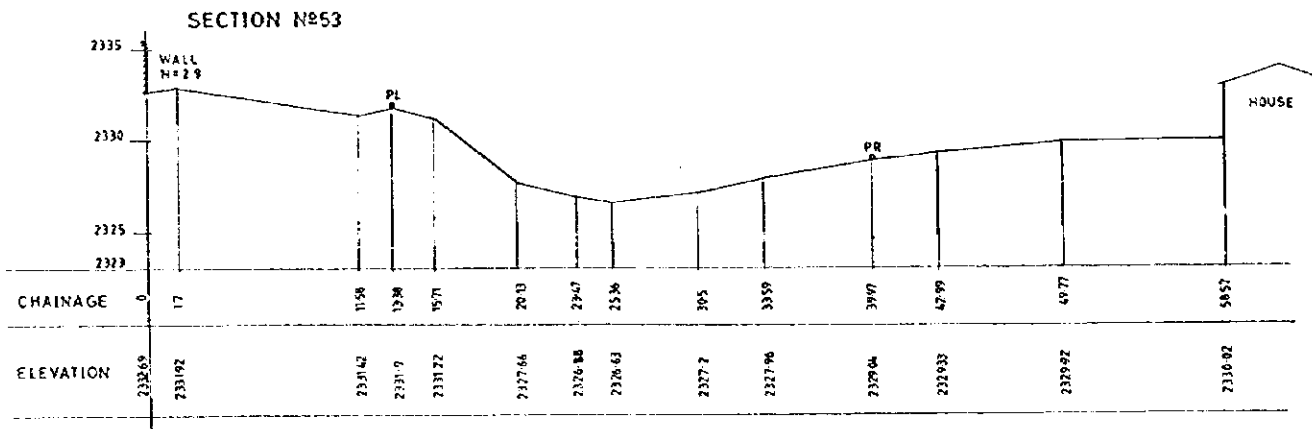
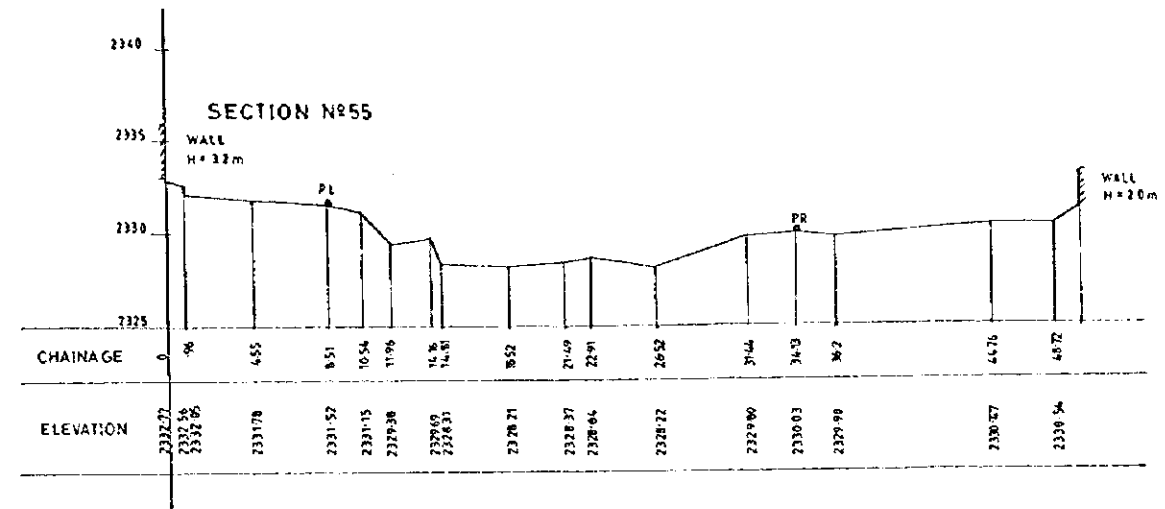
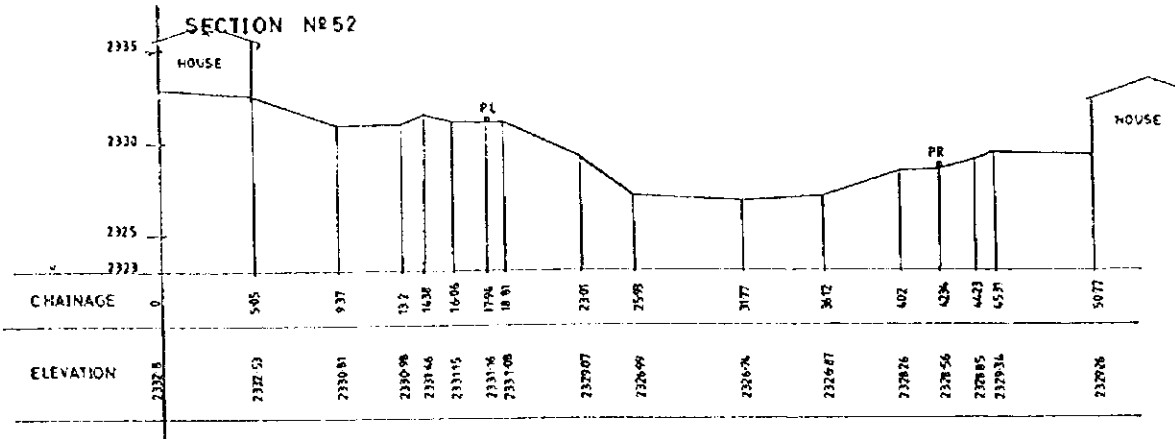
SECTION No. 50



SECTION No. 51



| | |
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| THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA | |
| JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION | |
| SCALE H=1:200 V=1:200 | DRAWING NO. RV-CS-13 |
| RIVER CROSS SECTION (13/25) | |



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

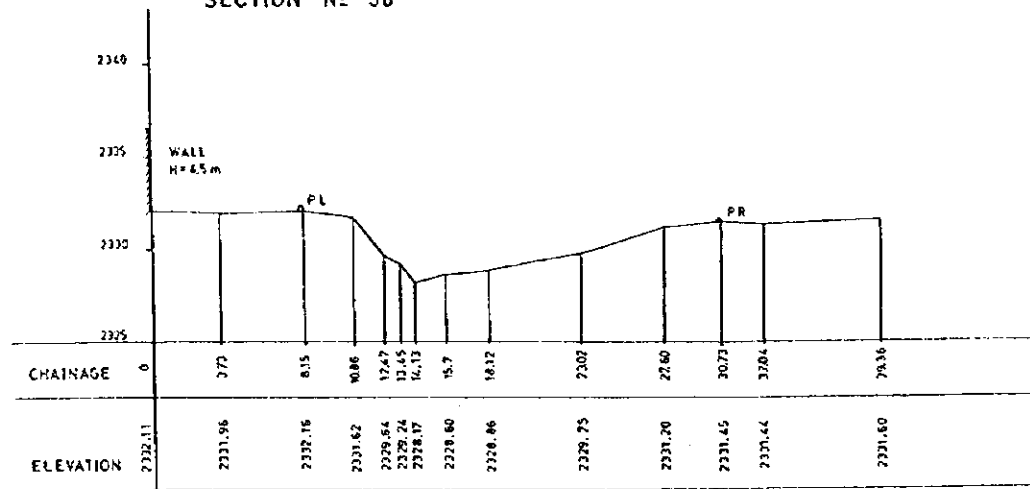
JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
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V = 1:200

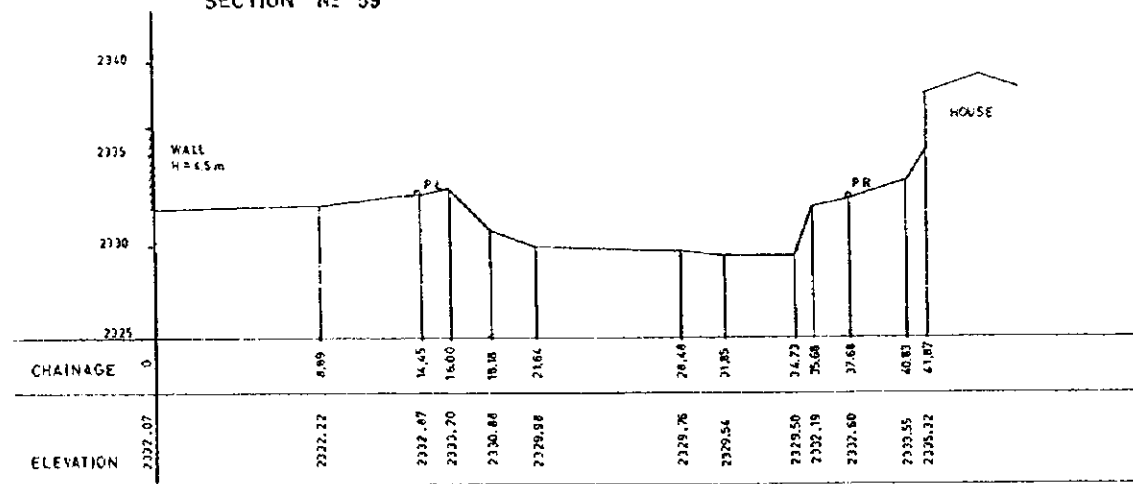
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RV-CS-14

RIVER CROSS SECTION (14/25)

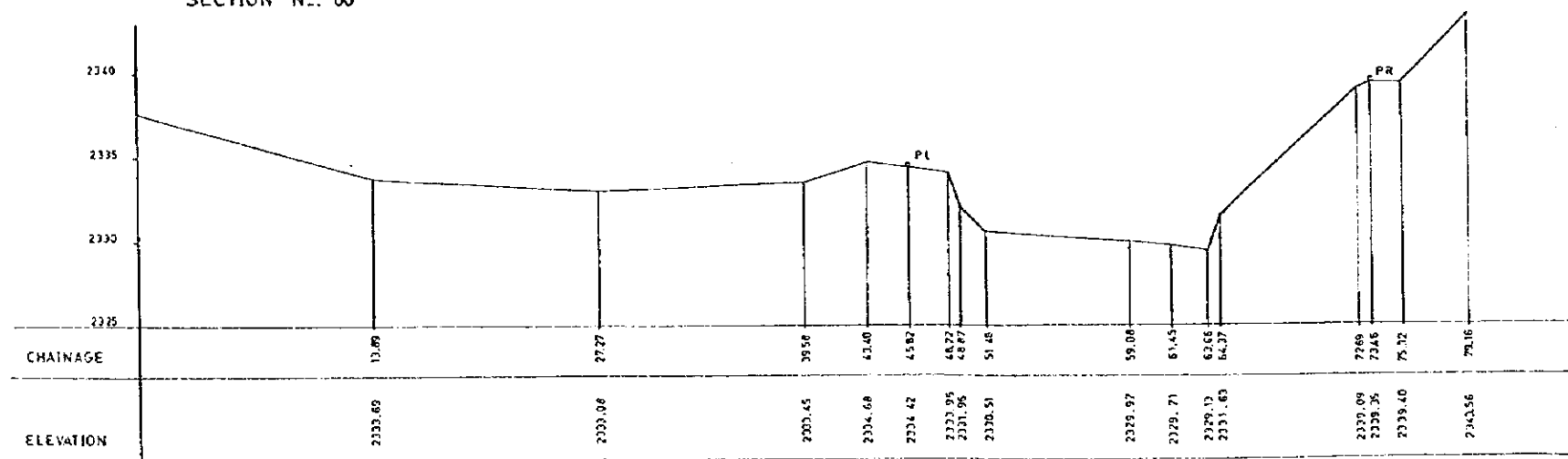
SECTION № 58



SECTION № 59



SECTION №. 60



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

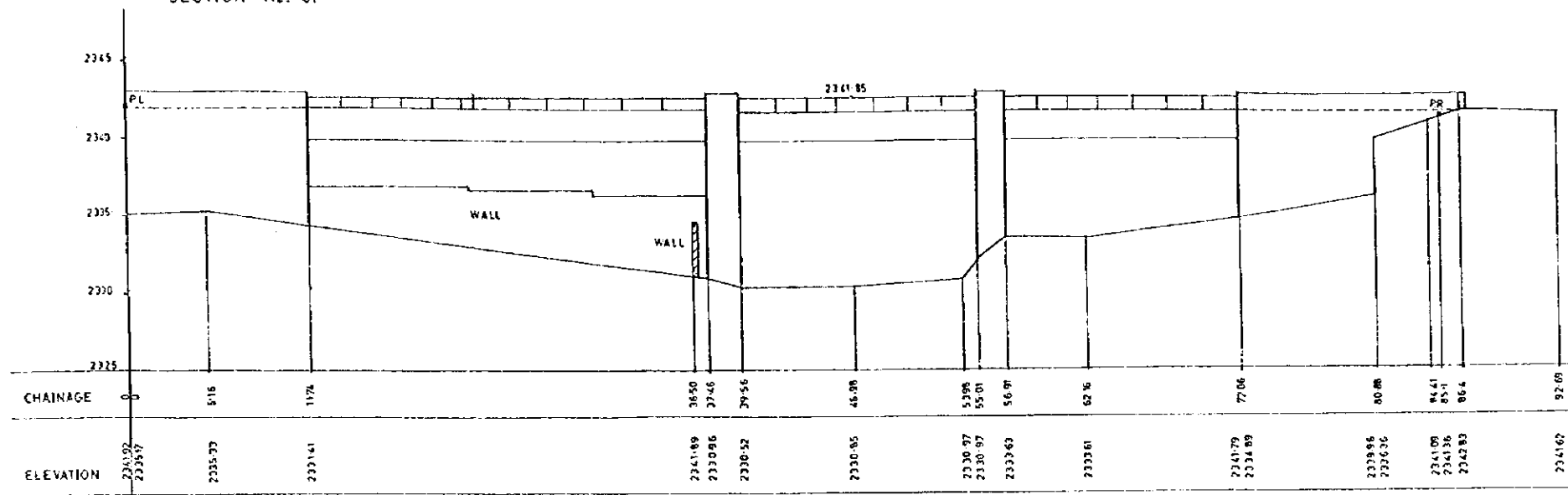
JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
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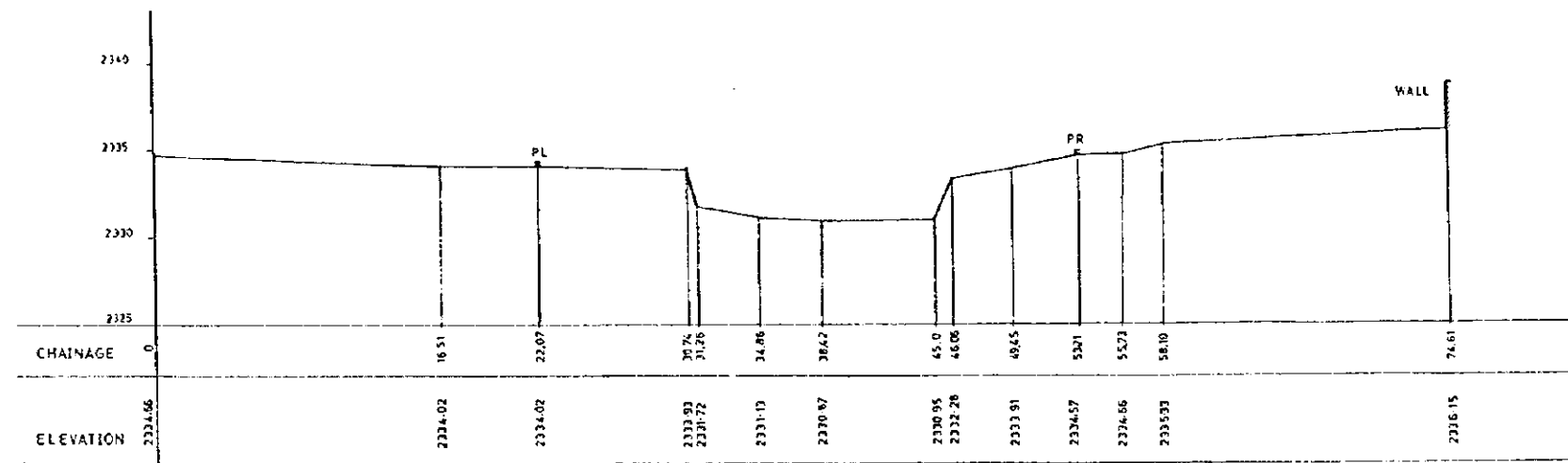
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RV-CS-15

RIVER CROSS SECTION (15/25)

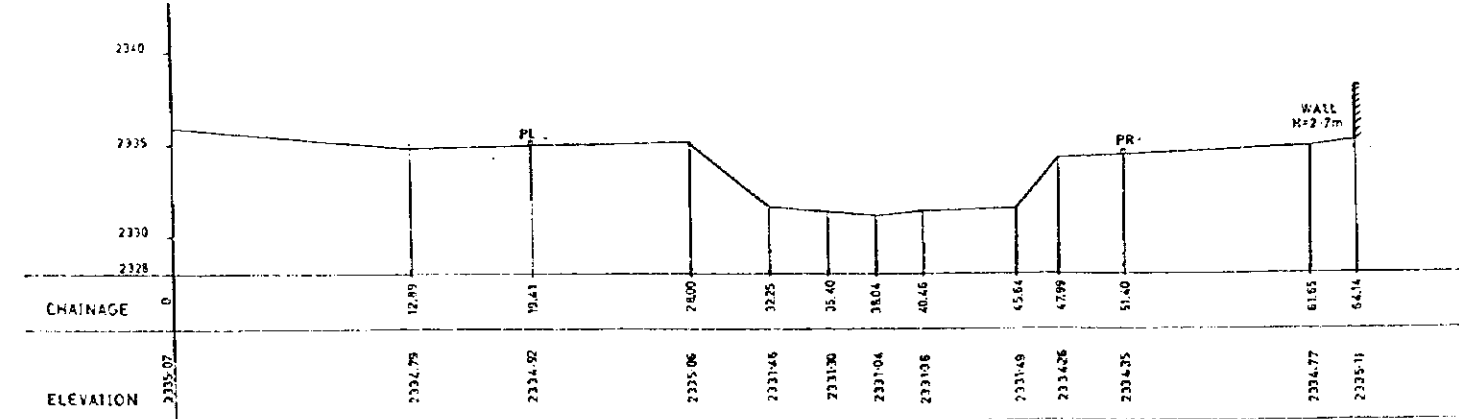
SECTION No. 61



SECTION No. 62



SECTION No. 63



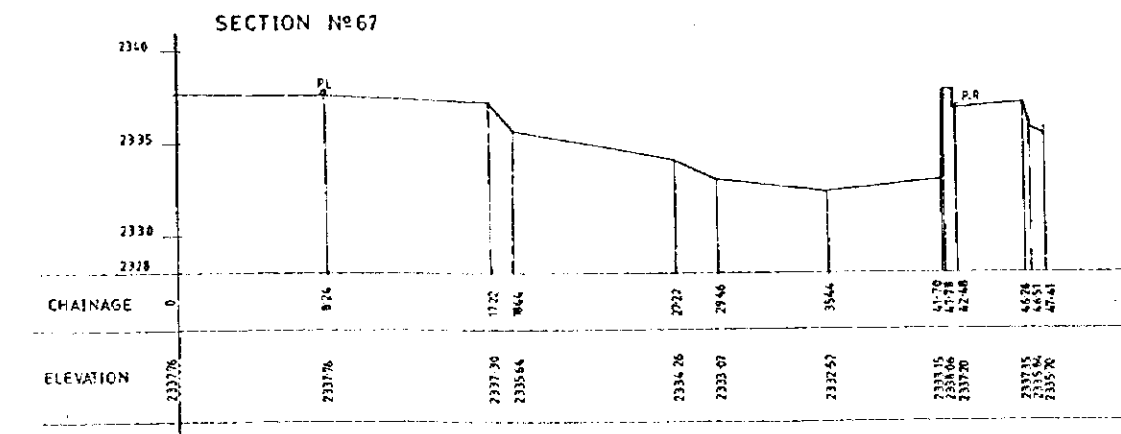
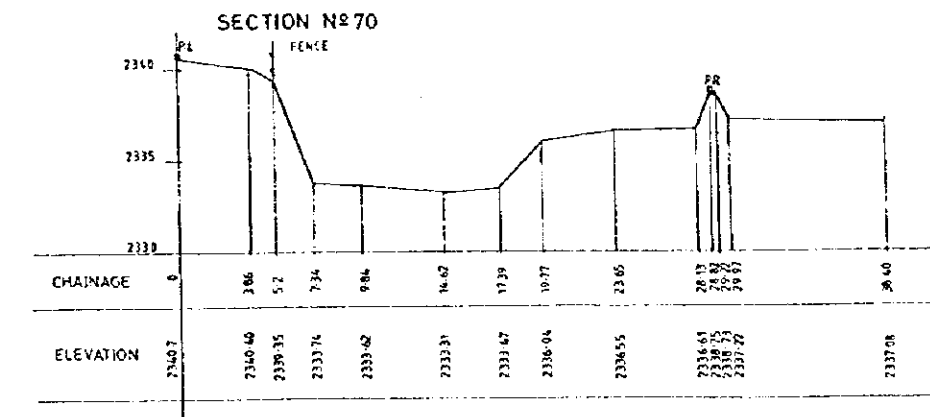
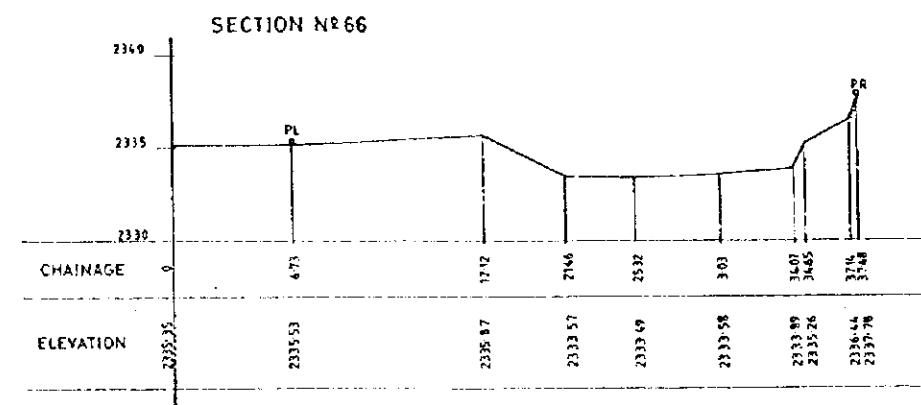
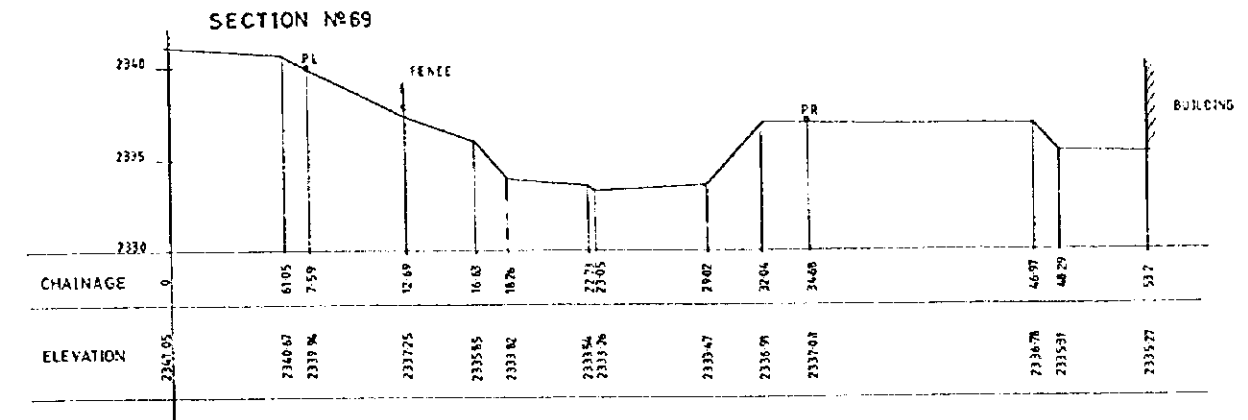
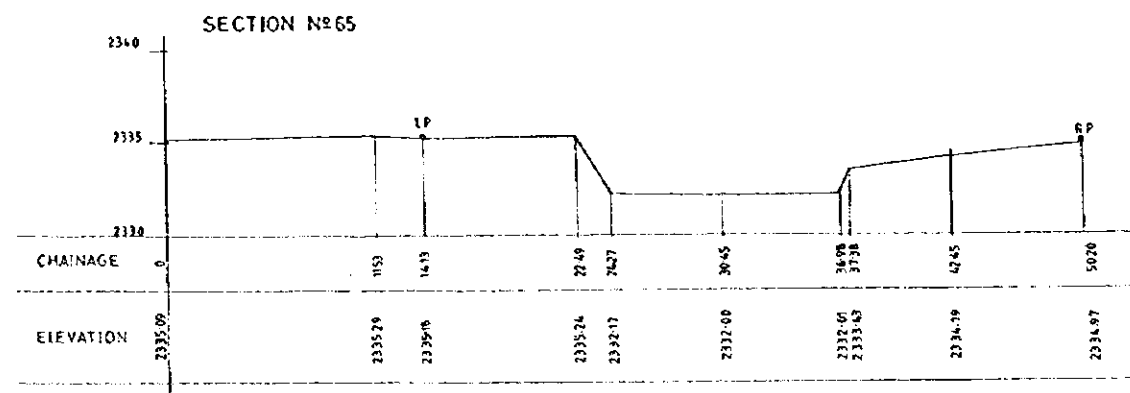
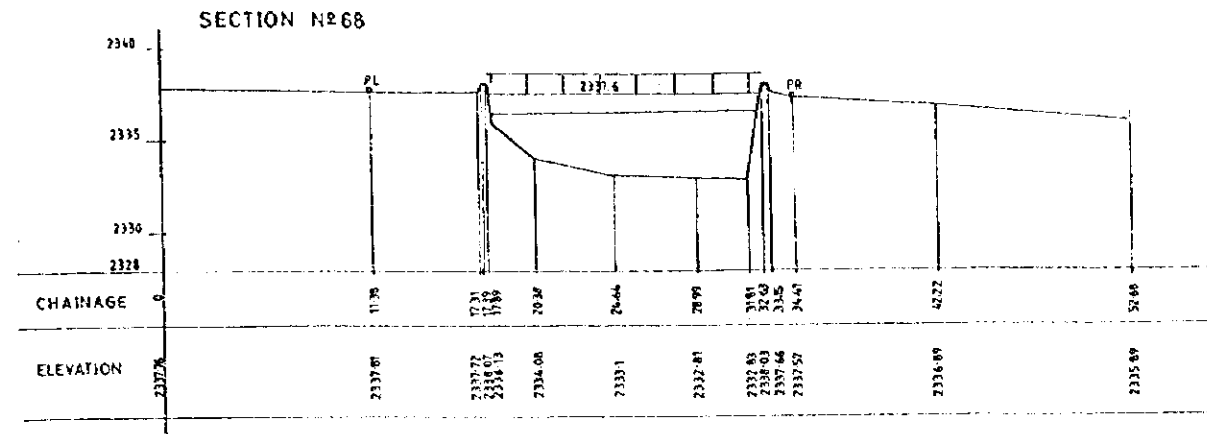
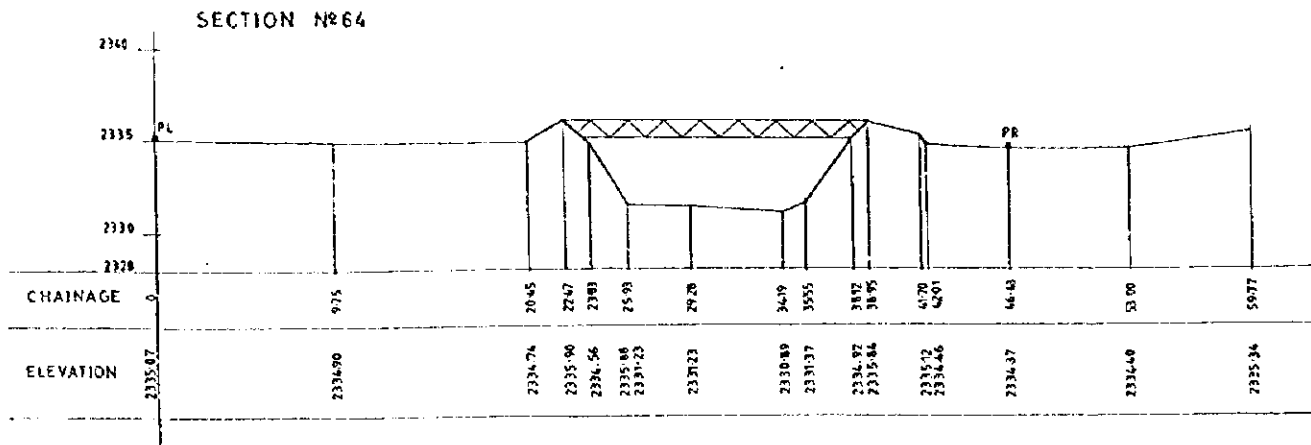
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H = 1:200
V = 1:200

DRAWING NO.
RV-CS-16

RIVER CROSS SECTION (16/25)



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

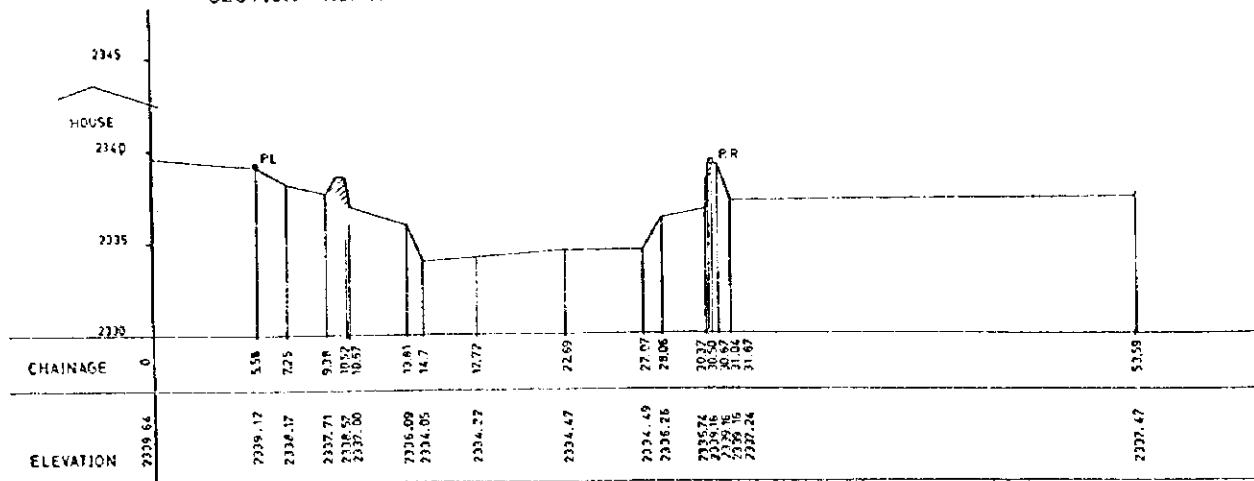
JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
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V = 1:200

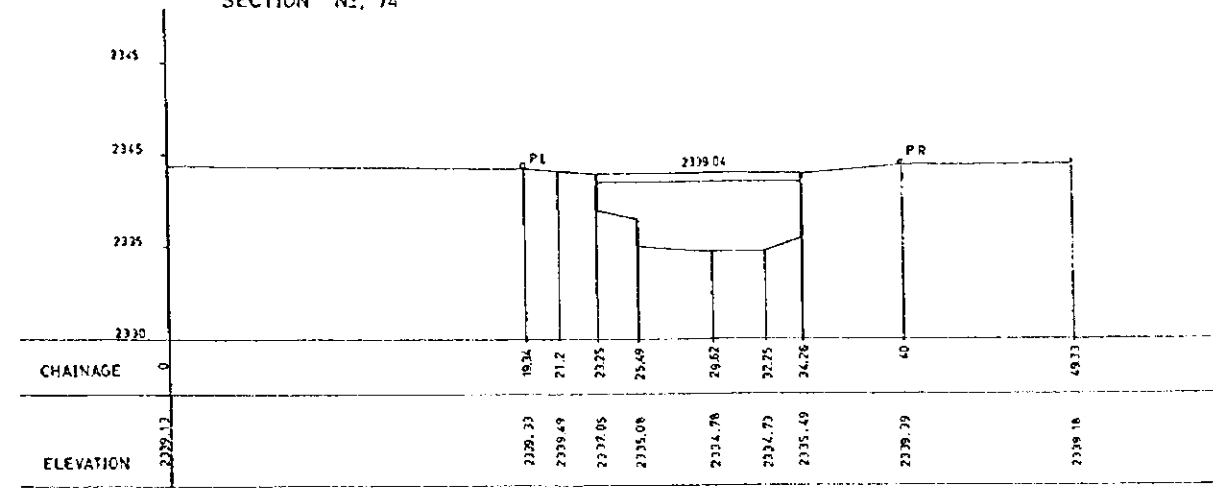
DRAWING NO.
RV-CS-17

RIVER CROSS SECTION (17/25)

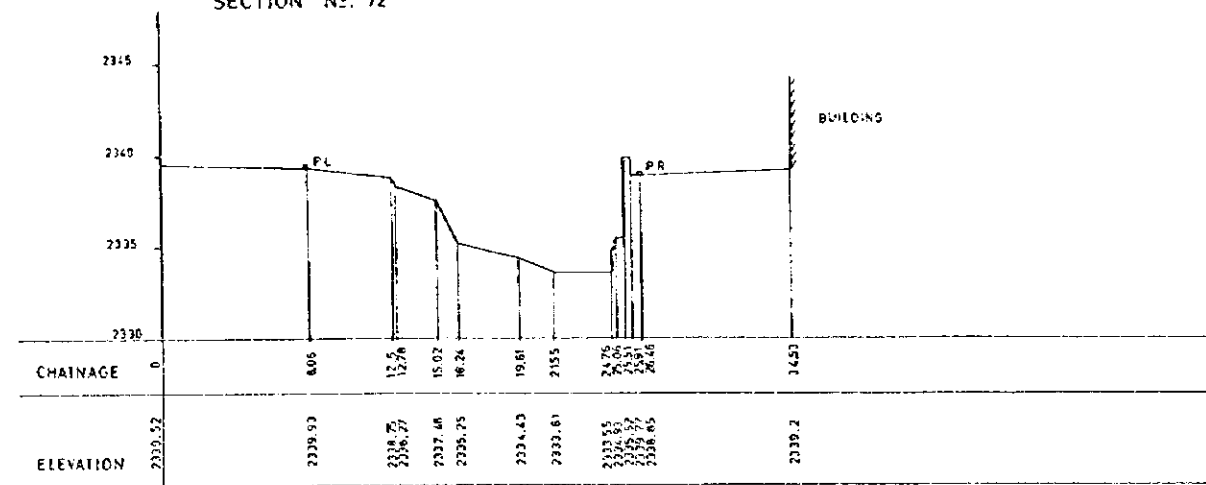
SECTION No. 71



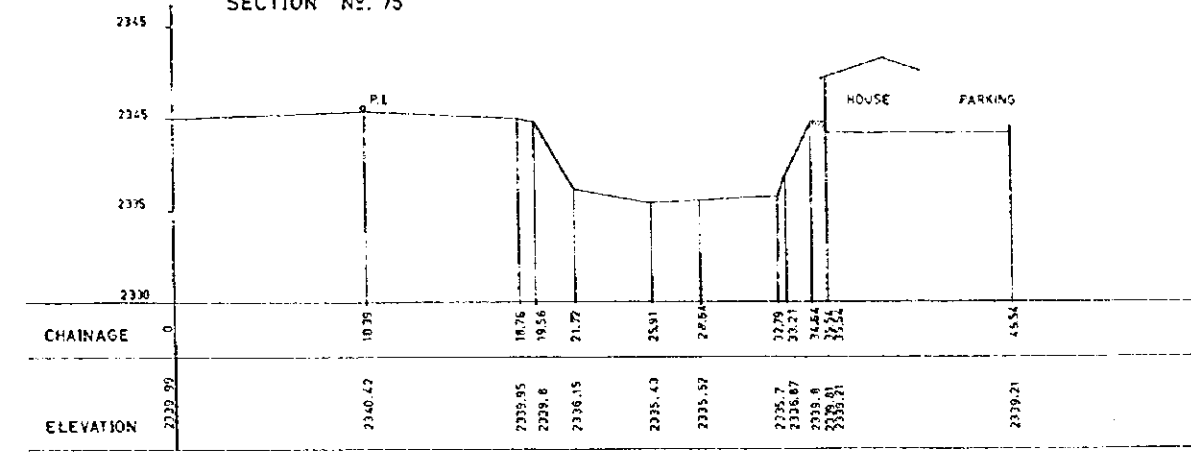
SECTION No. 74



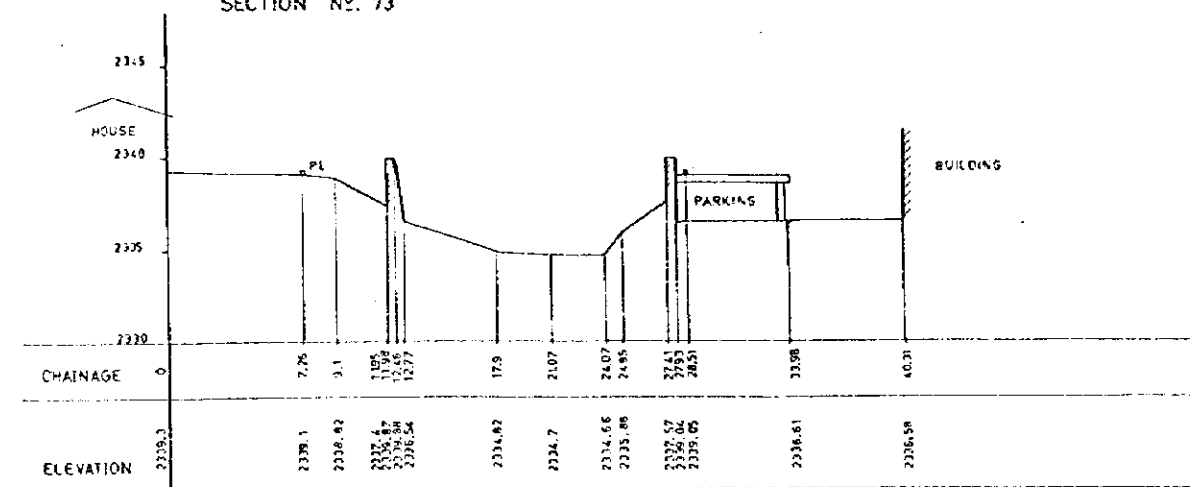
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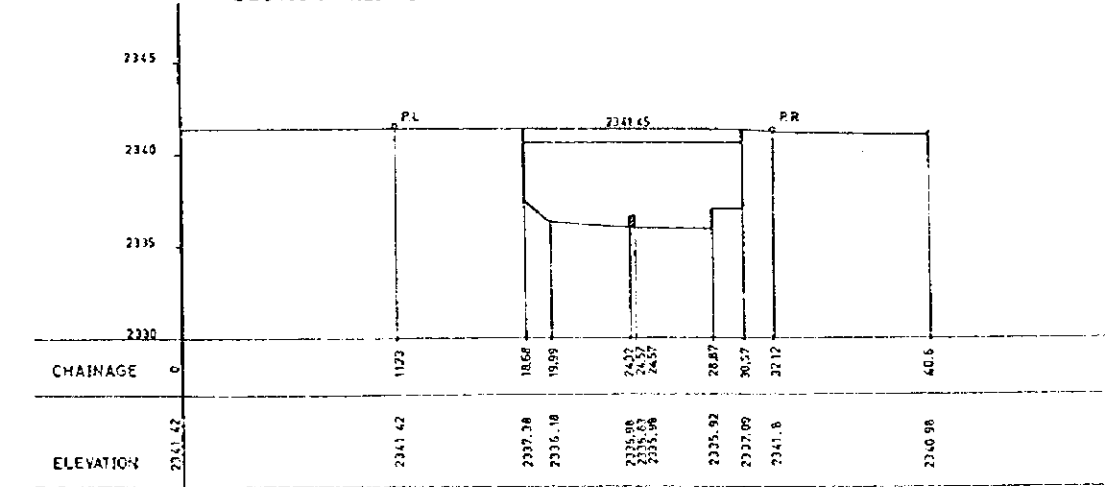
SECTION No. 75



SECTION No. 73



SECTION No. 76



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

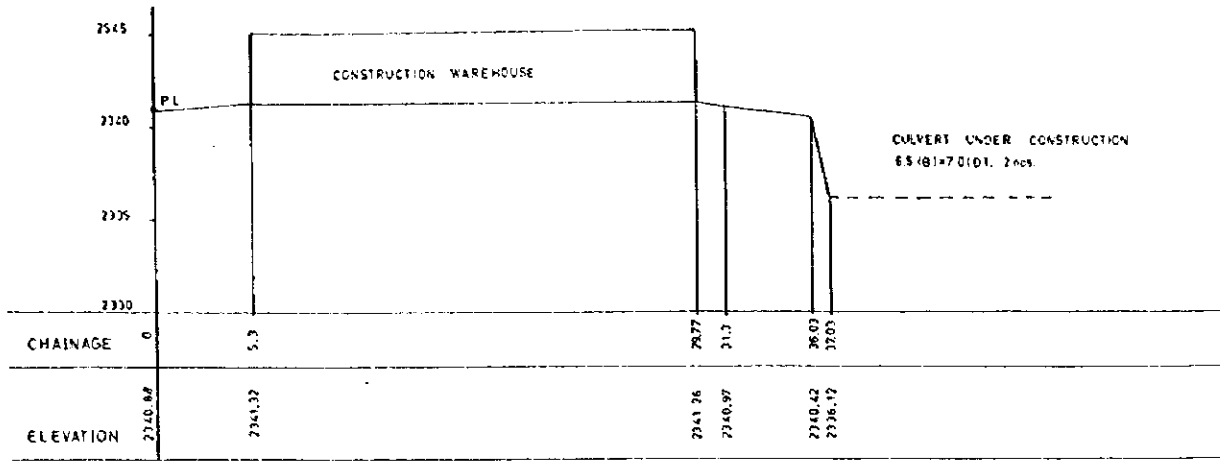
JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H=1:200
V=1:200

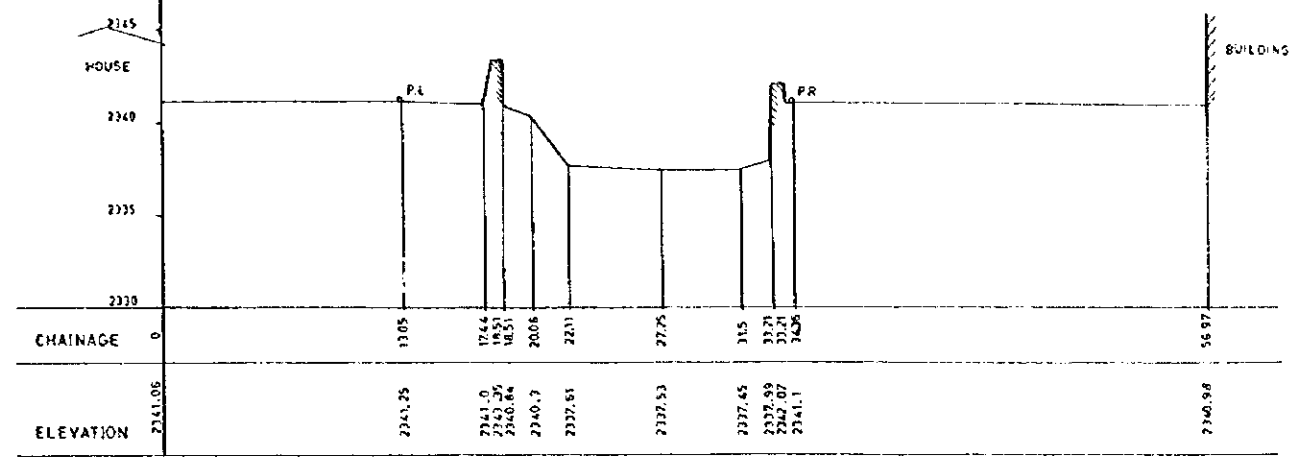
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RV-CS-18

RIVER CROSS SECTION (18/25)

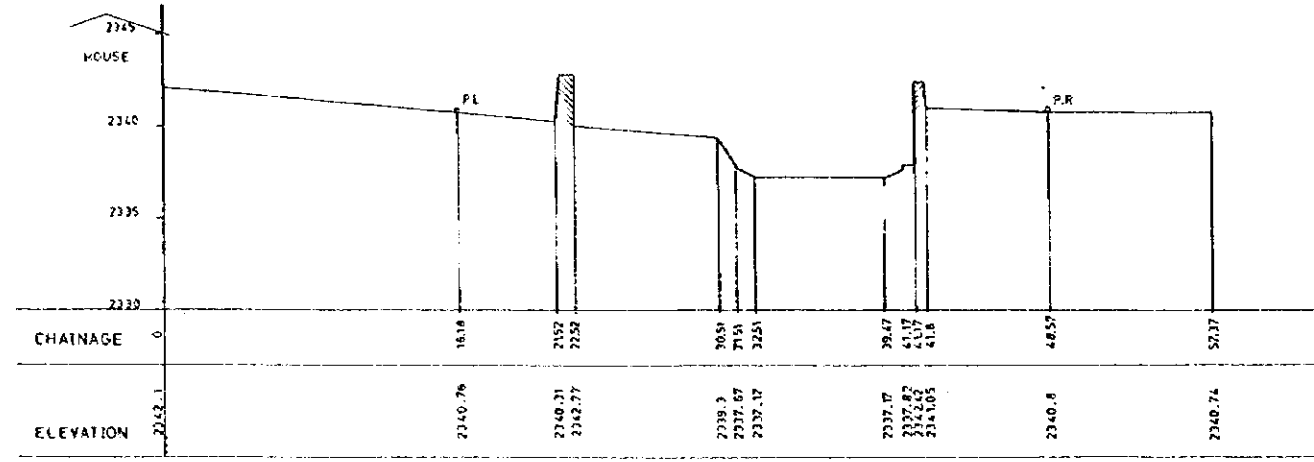
SECTION NO. 77



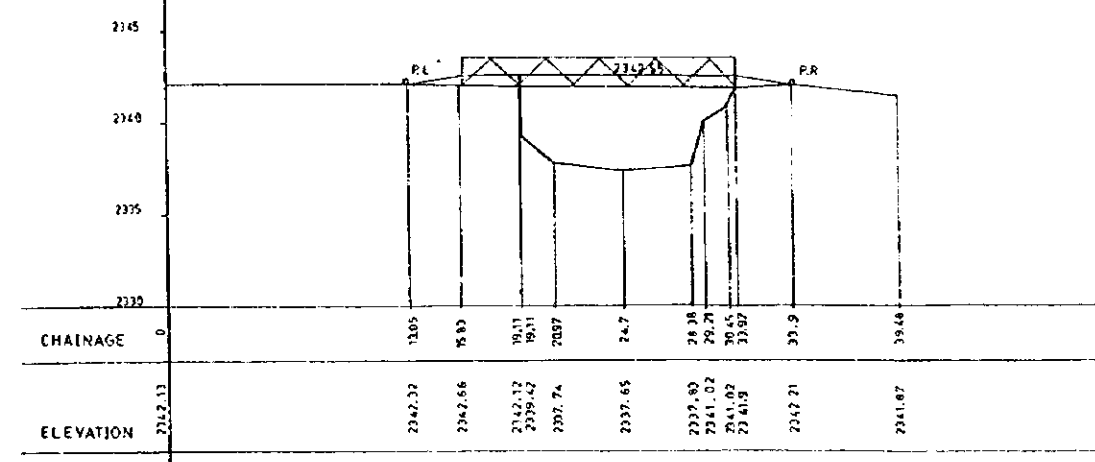
SECTION NO. 80



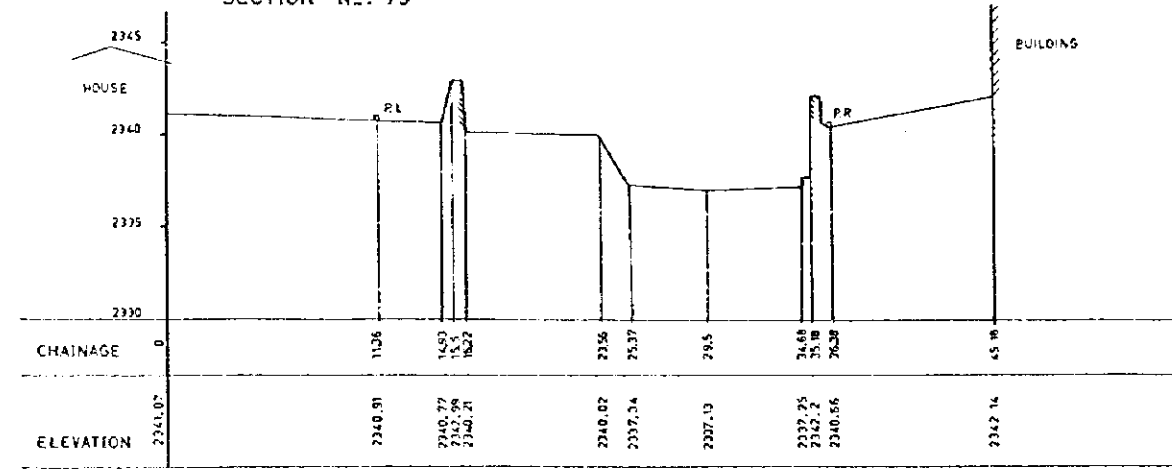
SECTION NO. 78



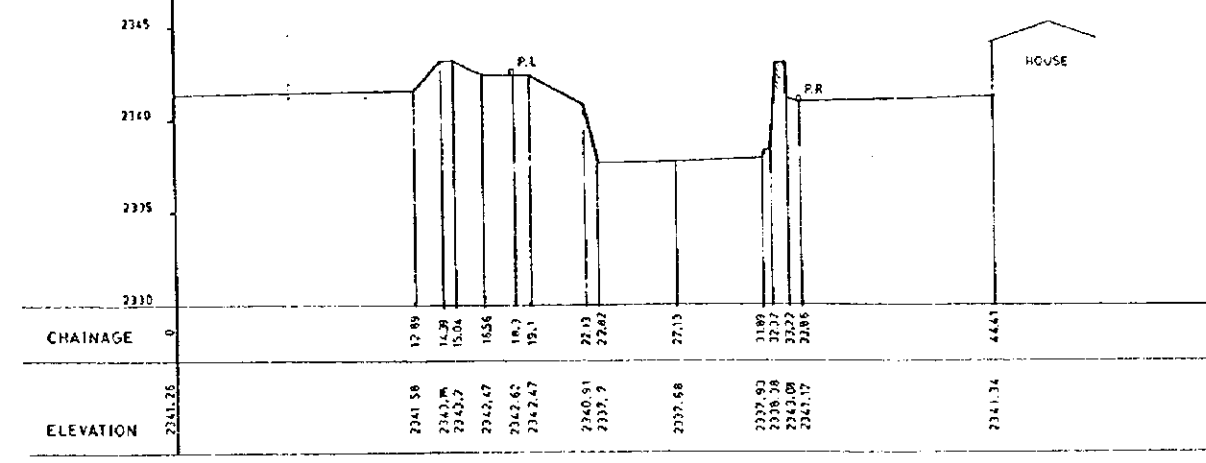
SECTION NO. 81



SECTION NO. 79



SECTION NO. 82



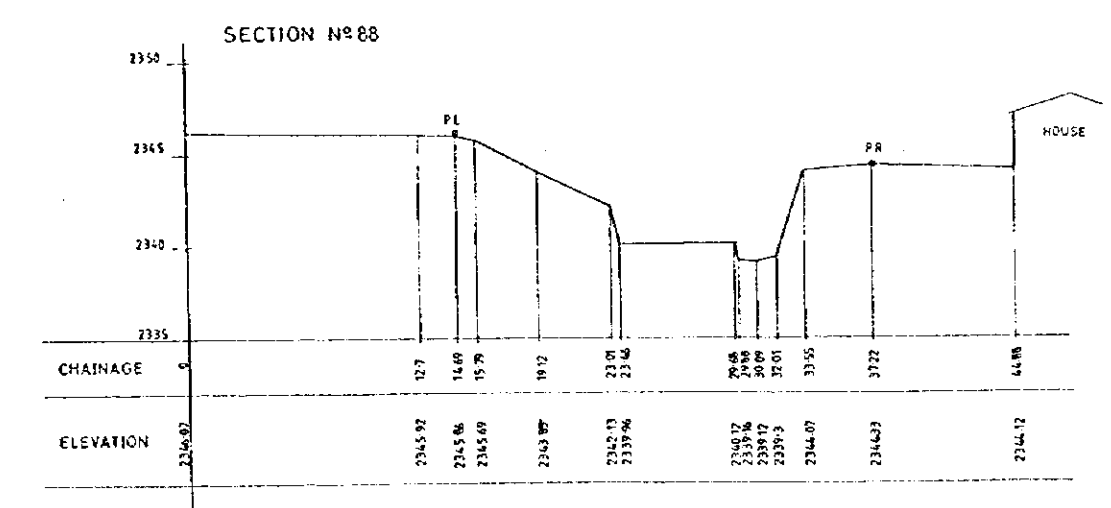
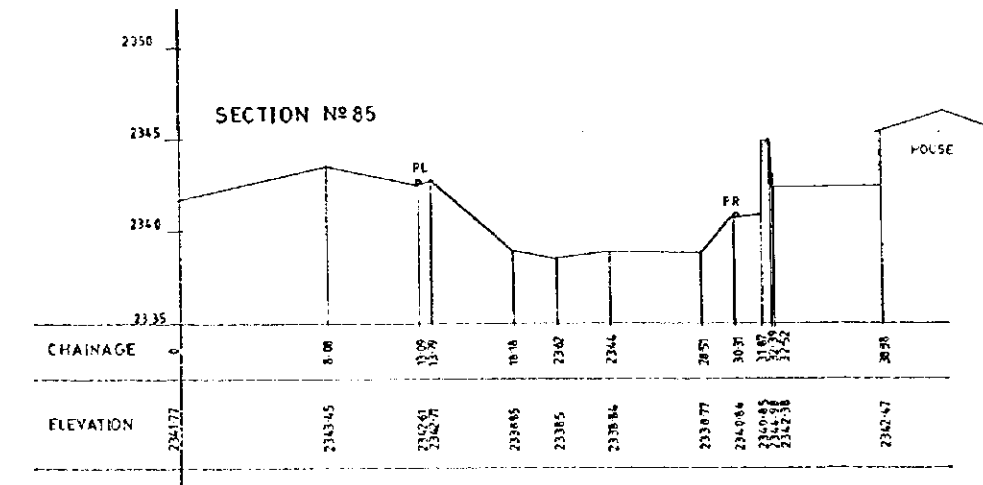
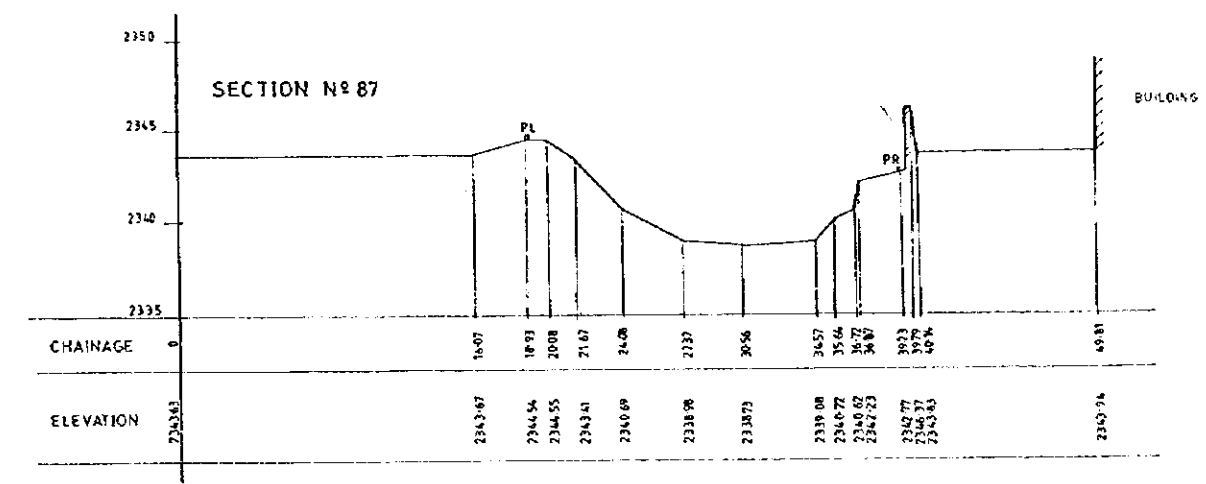
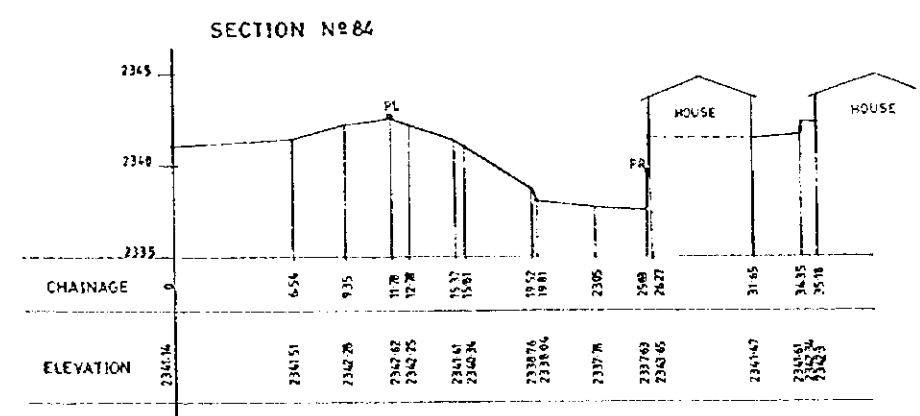
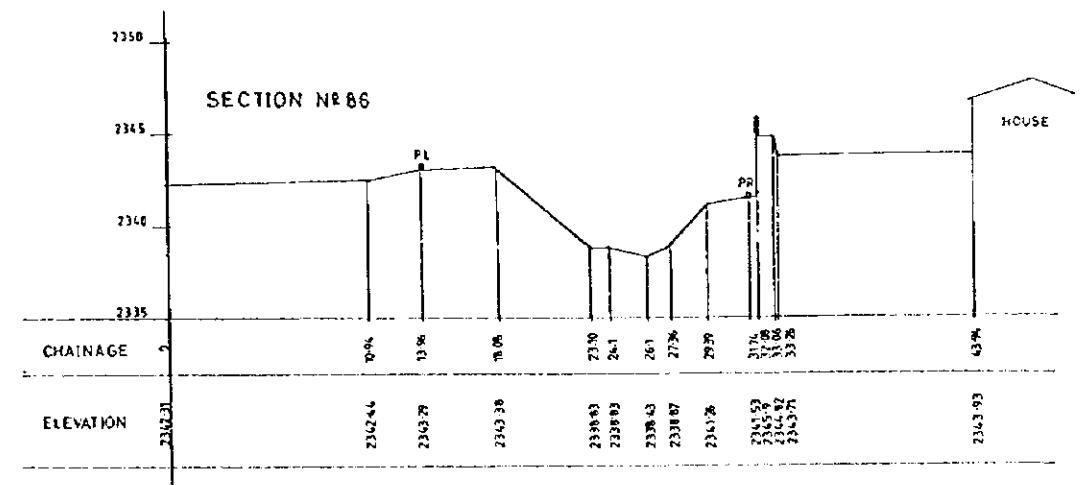
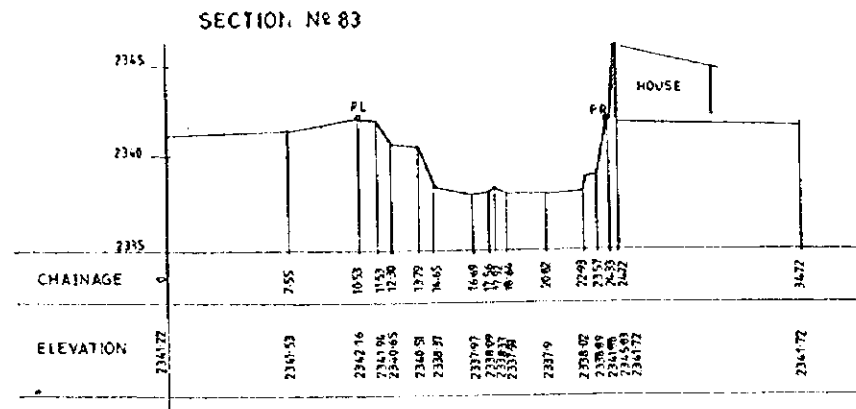
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
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JAPAN INTERNATIONAL COOPERATION AGENCY
 REGION 14 ADMINISTRATION

SCALE
 H=1:200
 V=1:200

DRAWING NO.
 RV-CS-19

RIVER CROSS SECTION (19/25)

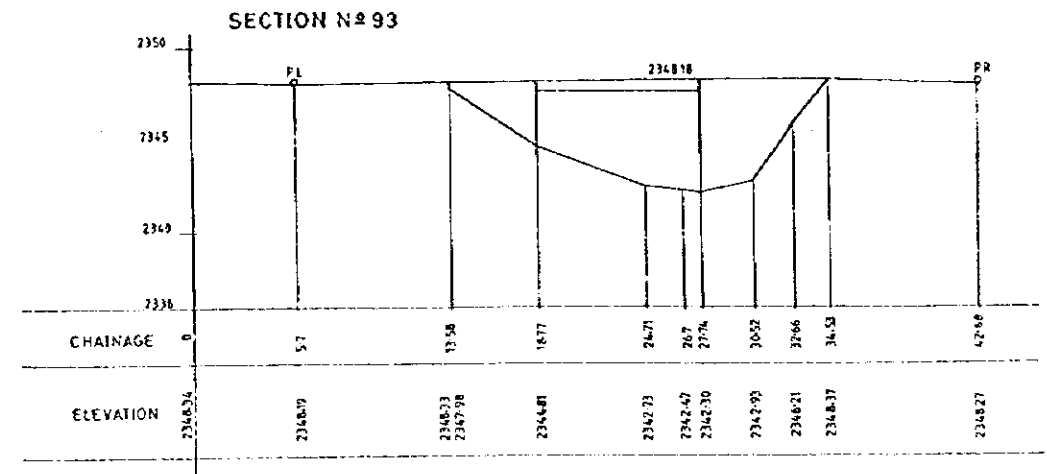
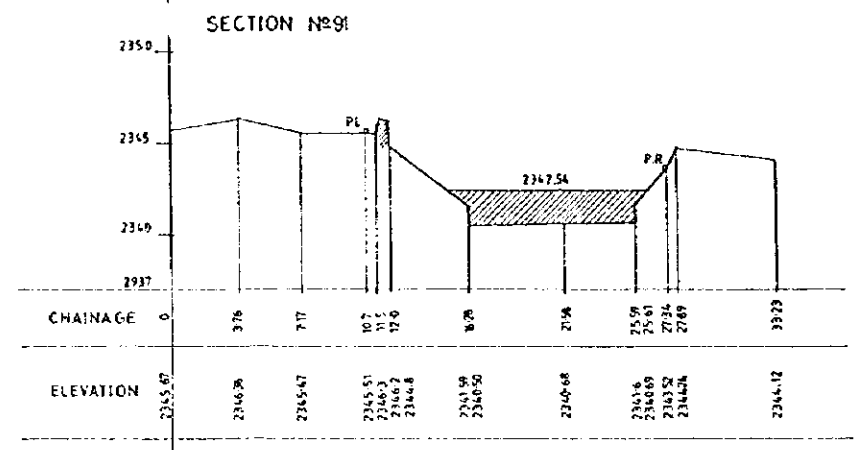
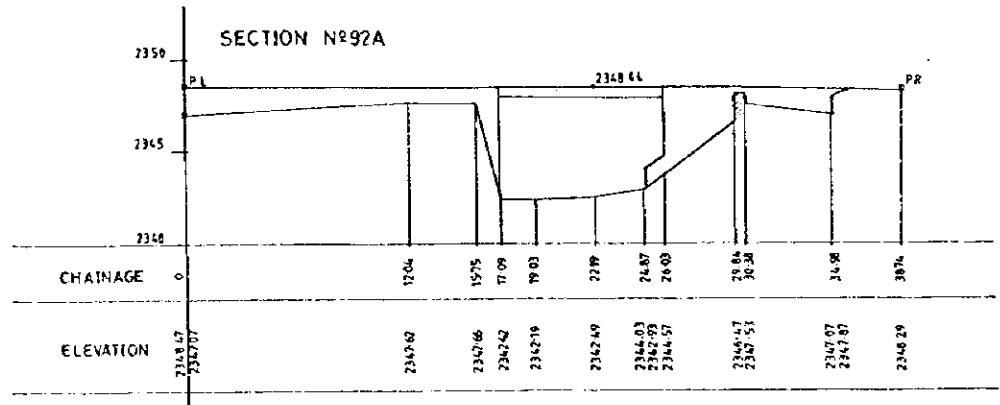
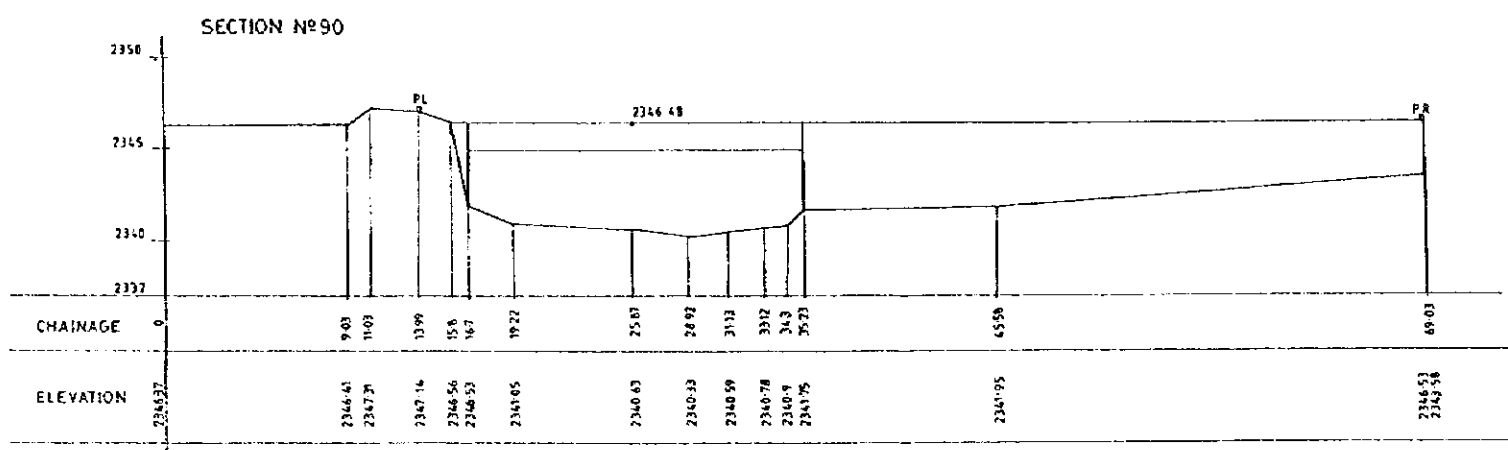
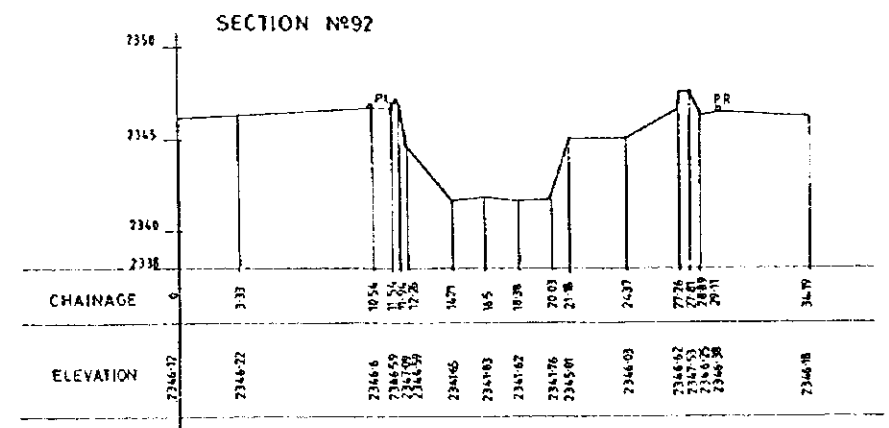
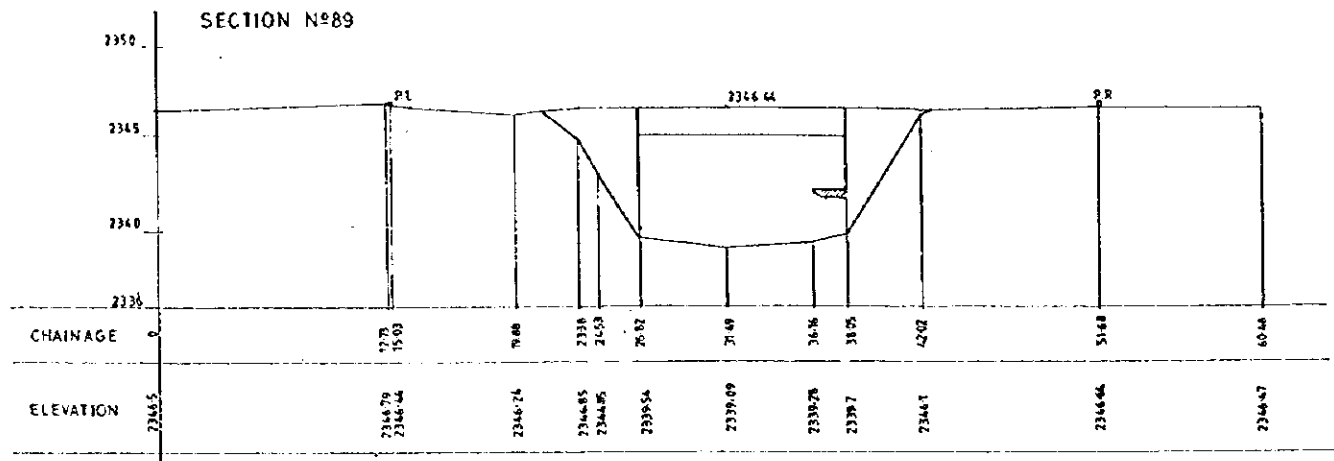


THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H=1:200
V=1:200

| | |
|--------------------------------|-----------------------------|
| DRAWING NO. RV-CS-20 | RIVER CROSS SECTION (20/25) |
|--------------------------------|-----------------------------|



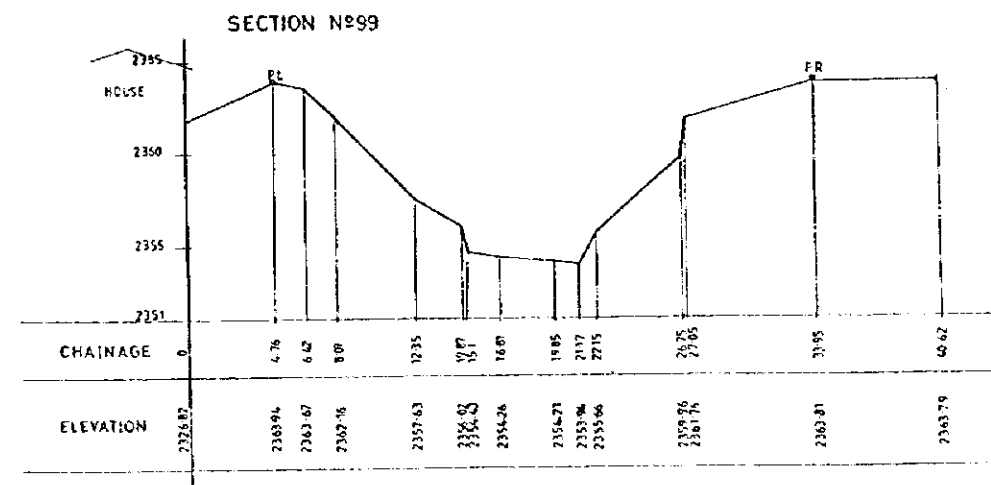
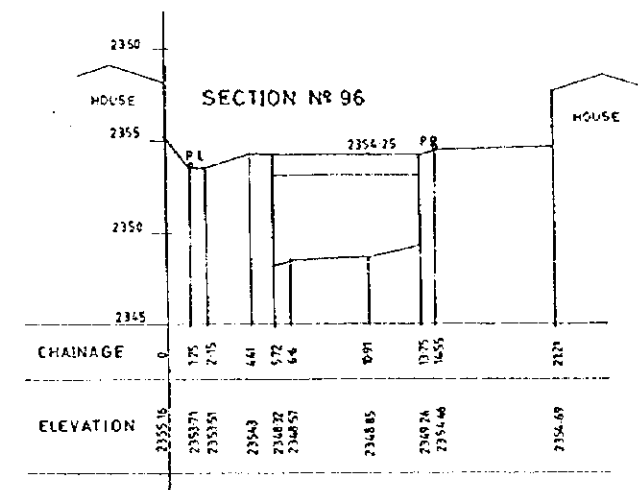
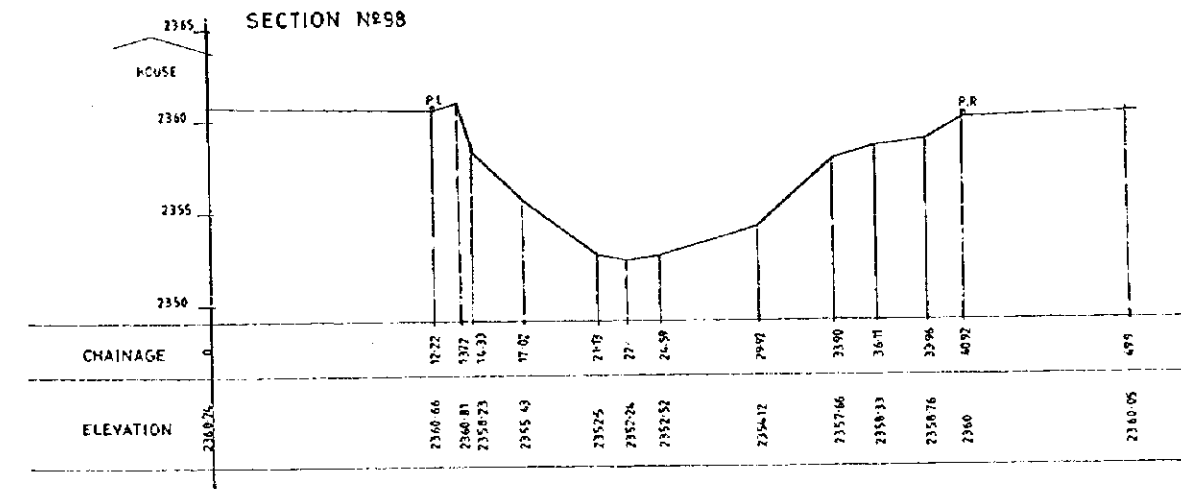
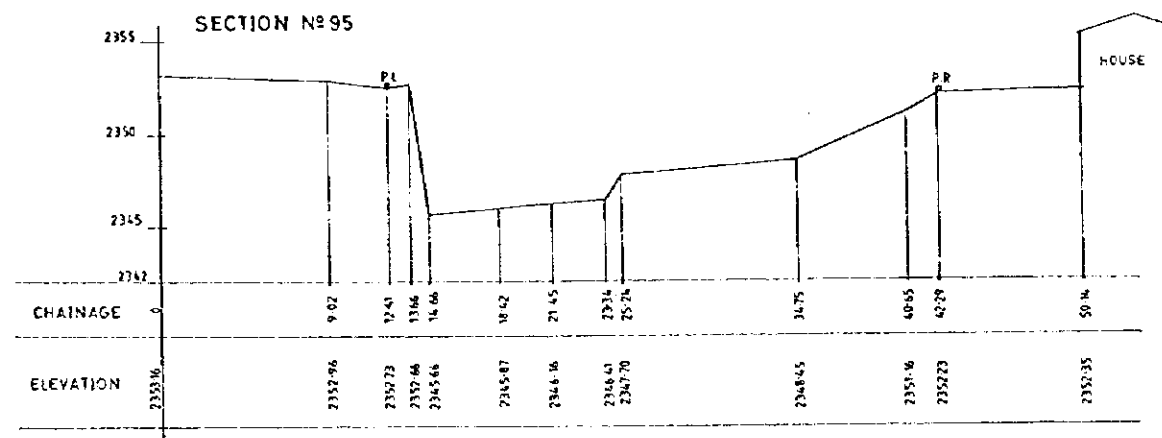
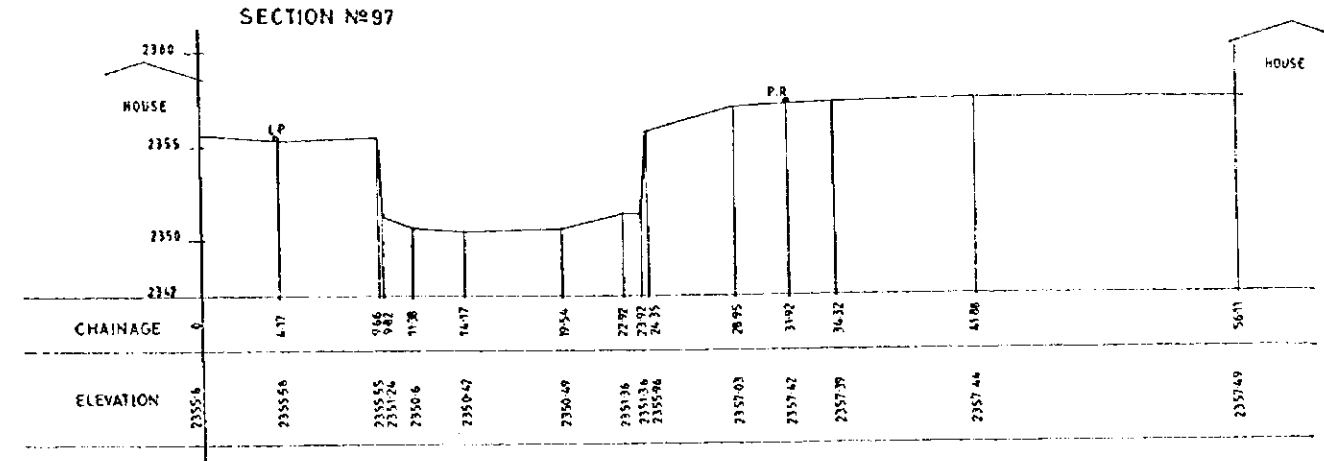
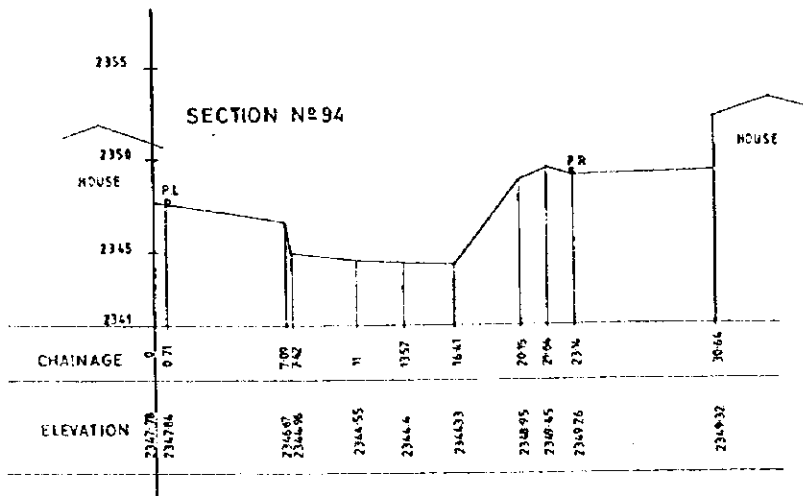
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H=1:200
V=1:200

DRAWING NO.
RV-CS-21

RIVER CROSS SECTION (21/25)



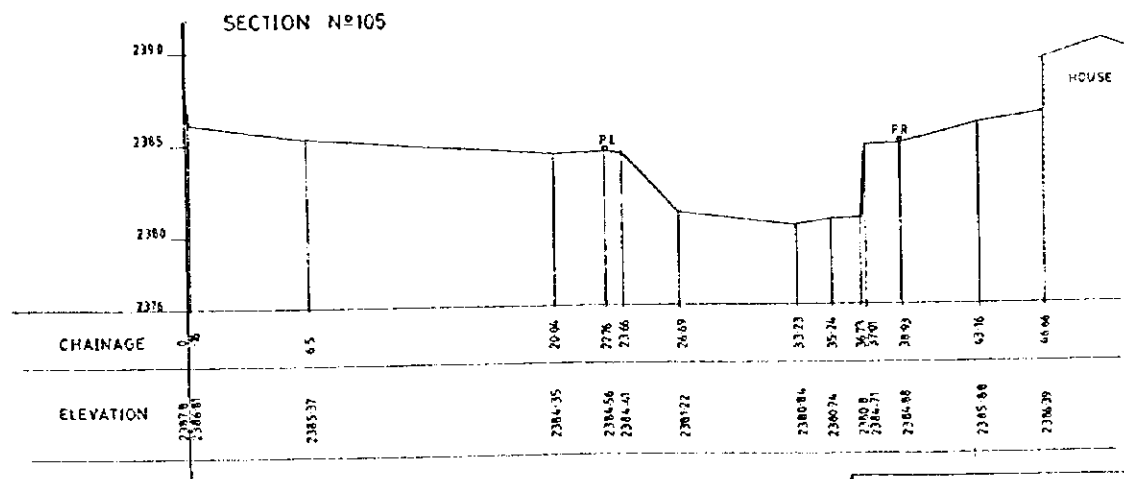
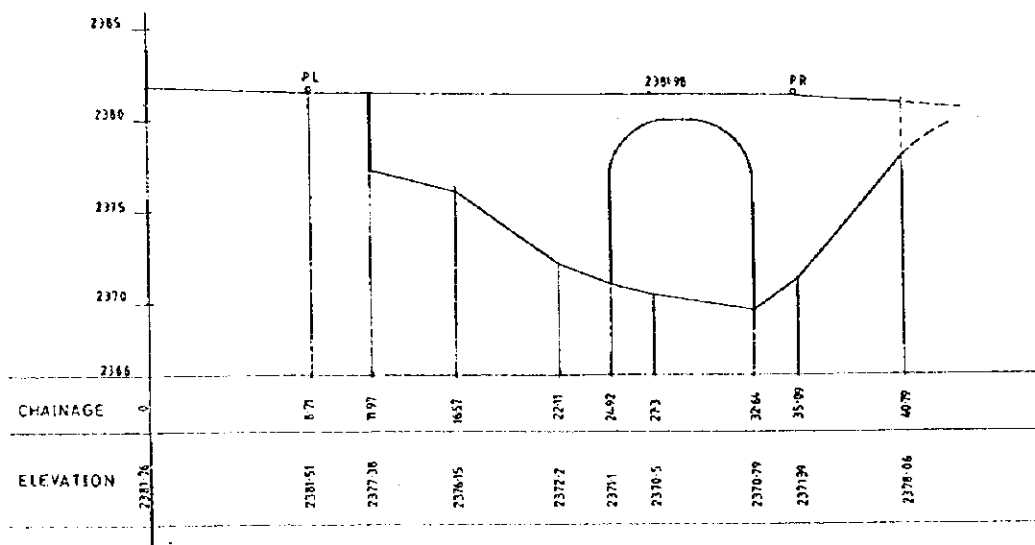
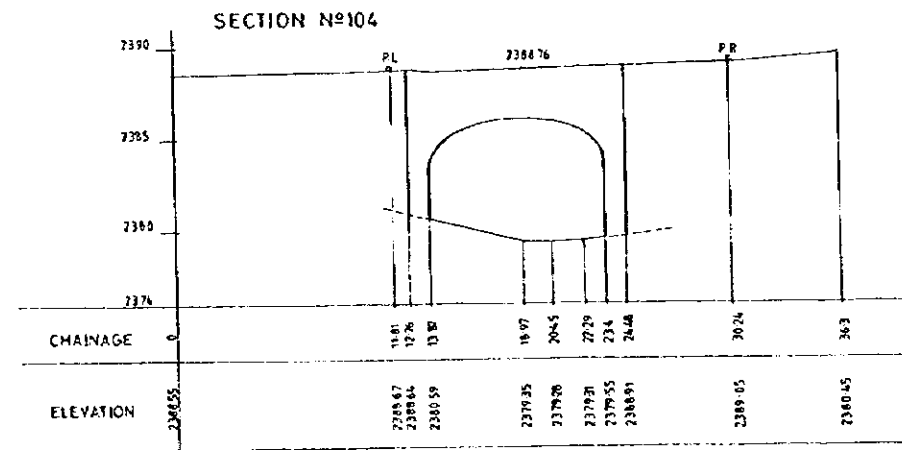
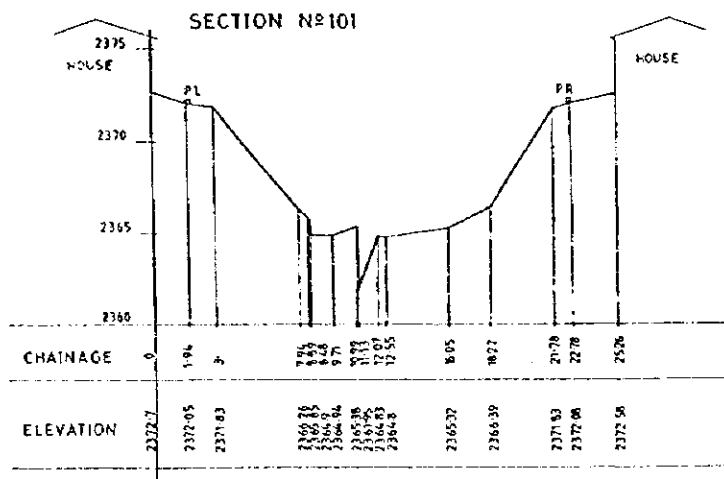
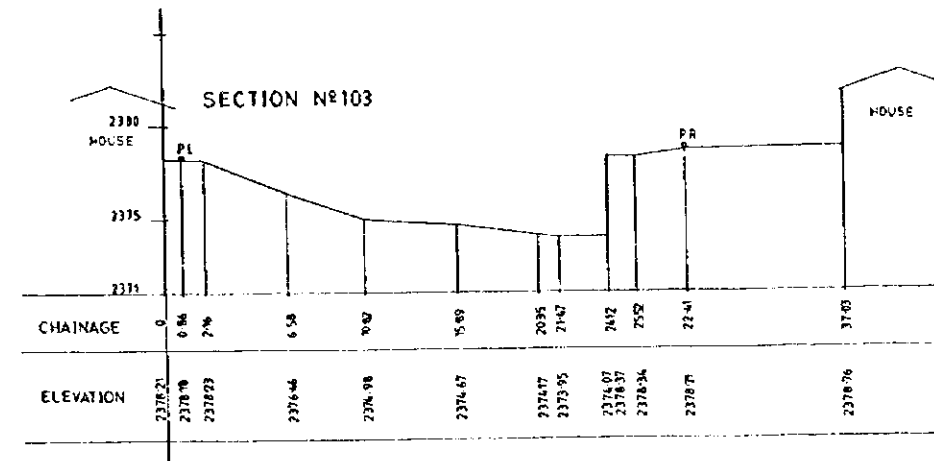
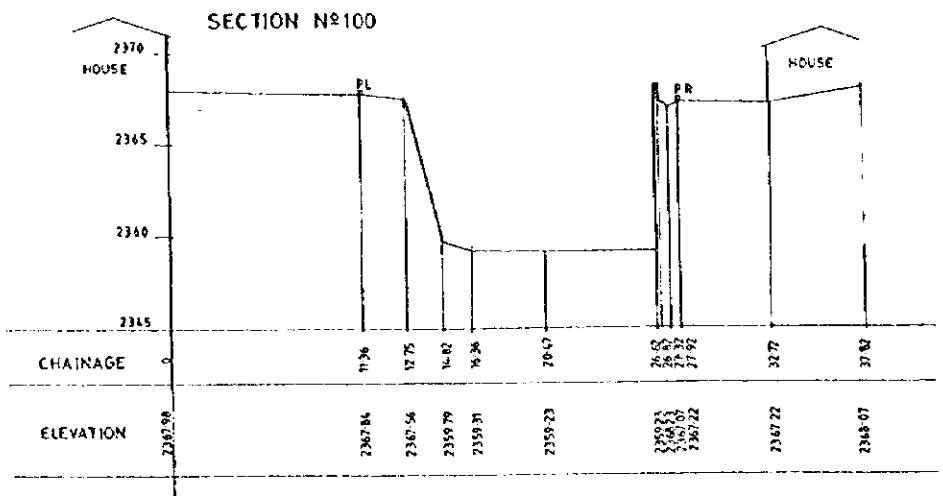
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H = 1:200
V = 1:200

DRAWING NO.
RV-CS-22

RIVER CROSS SECTION (22/25)



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

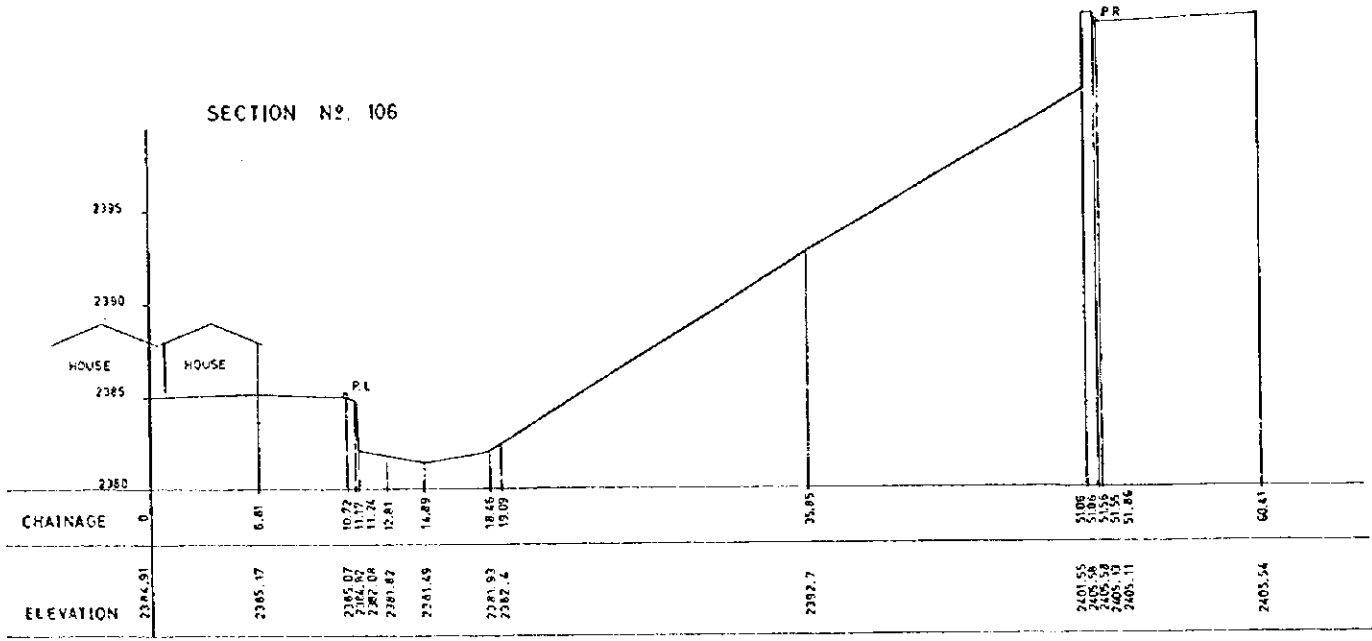
JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
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V=1:200

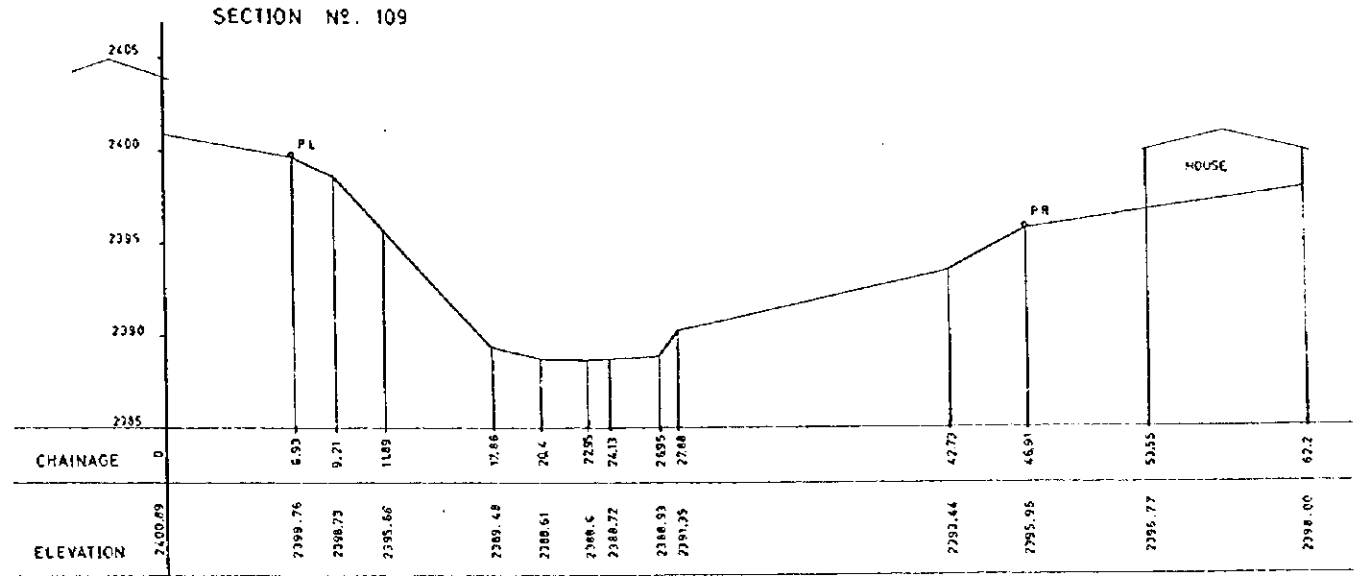
DRAWING NO.
RV-CS-23

RIVER CROSS SECTION (23/25)

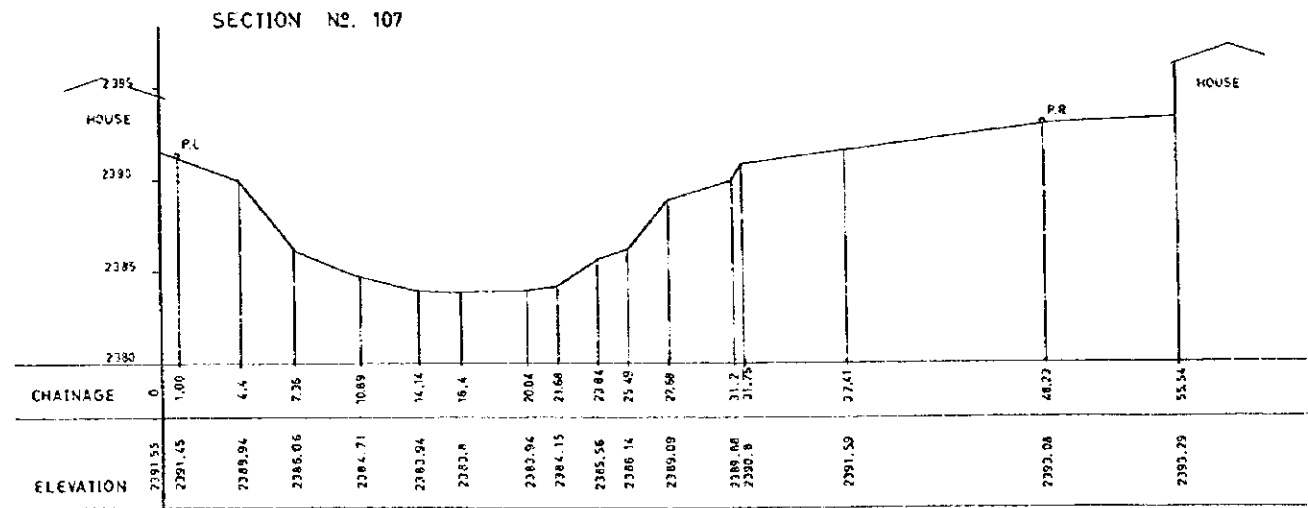
SECTION No. 106



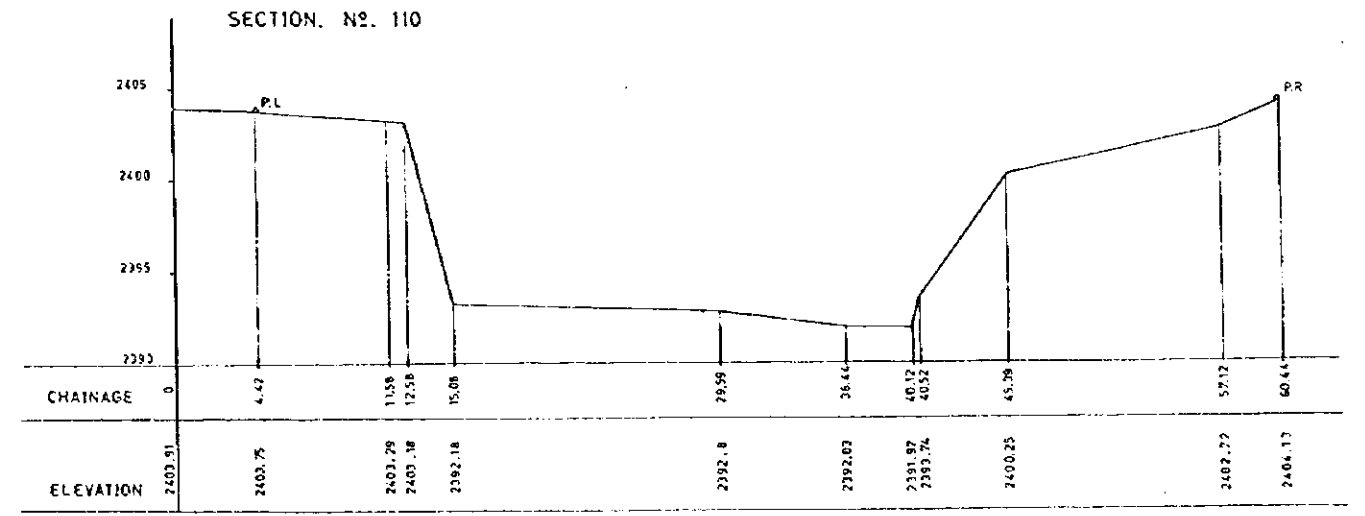
SECTION No. 109



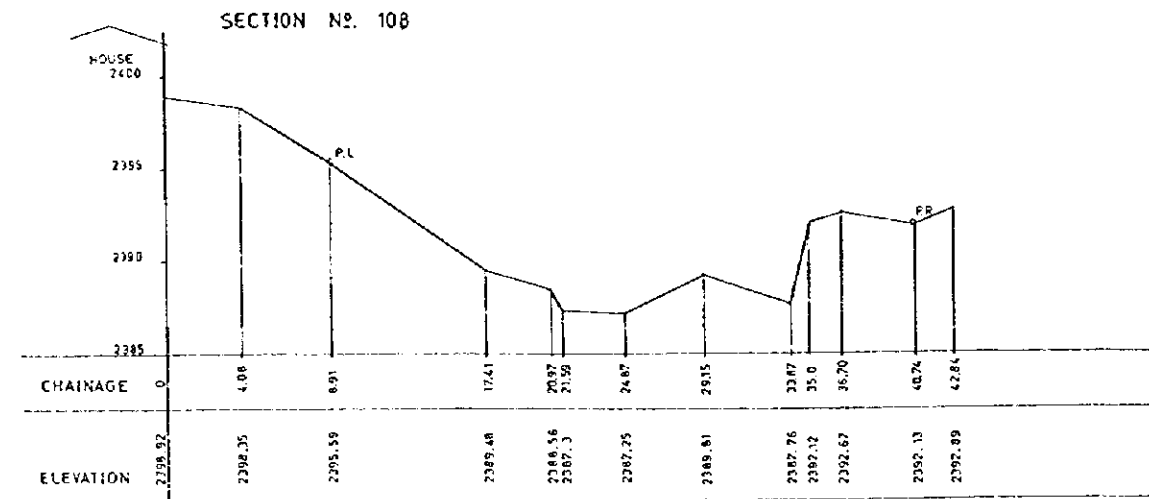
SECTION No. 107



SECTION No. 110



SECTION No. 108



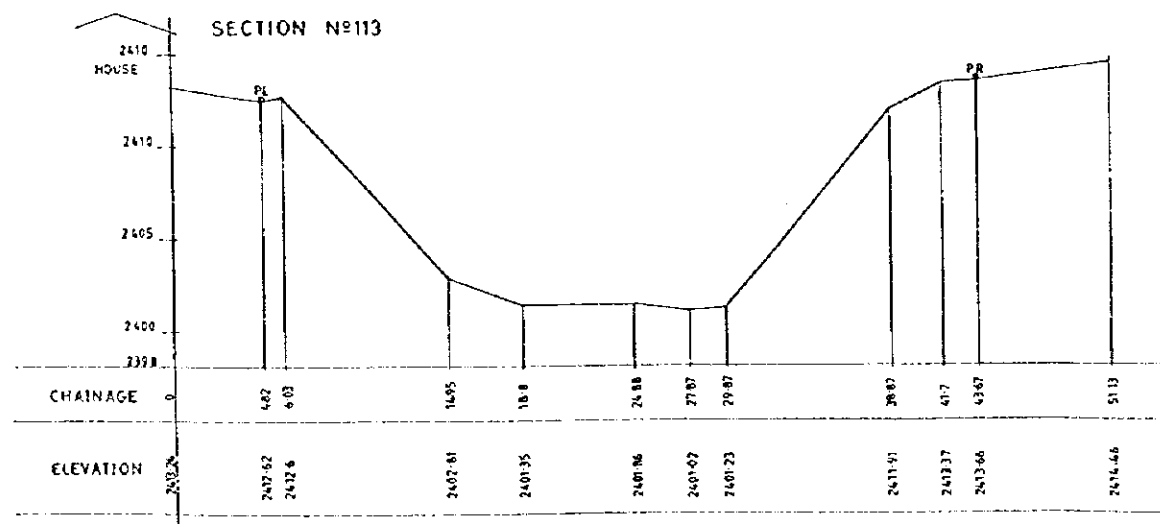
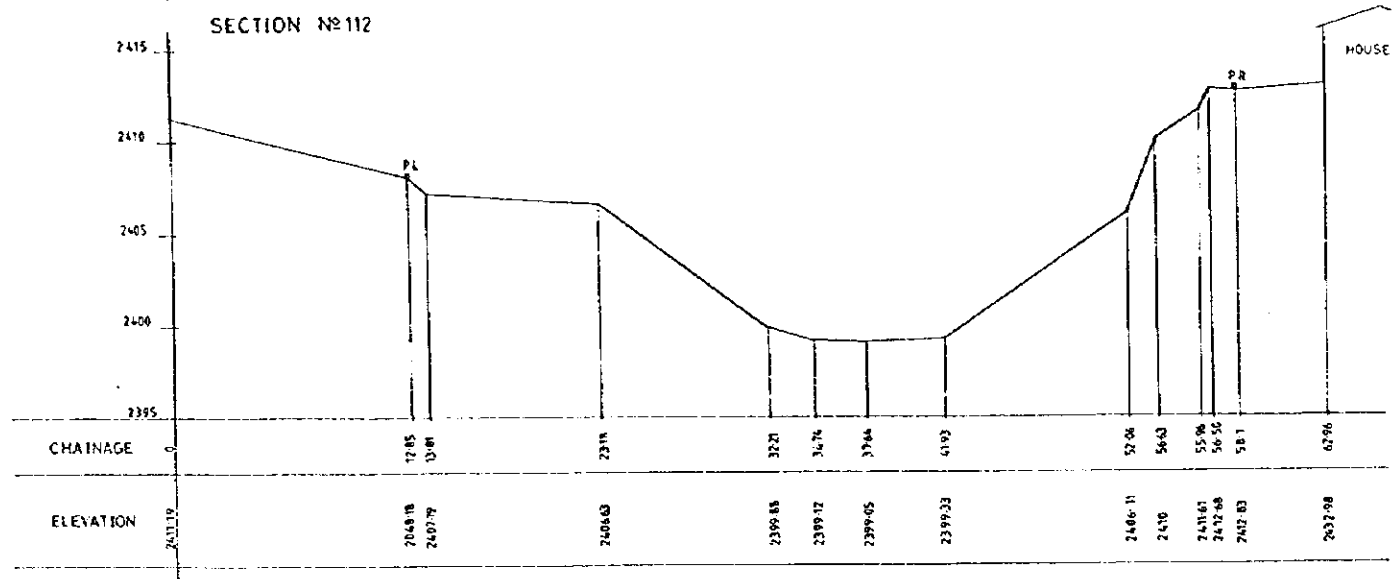
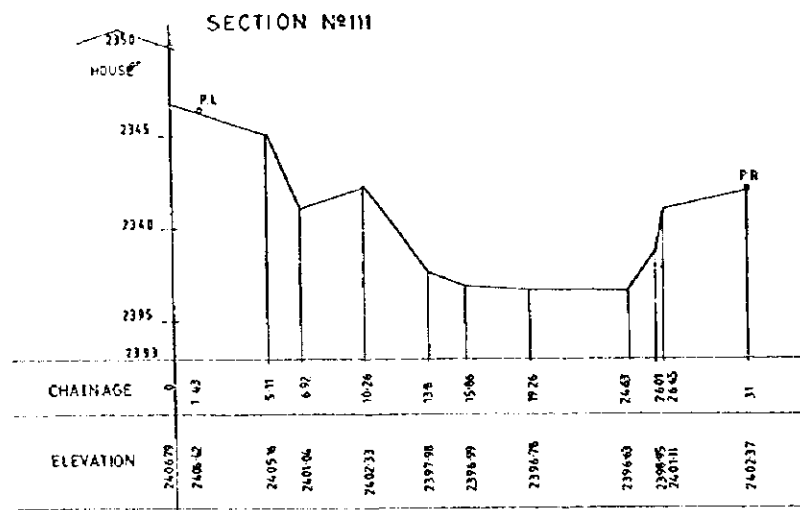
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H=1:200
V=1:200

DRAWING NO.
RV-CS-24

RIVER CROSS SECTION (24/25)



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

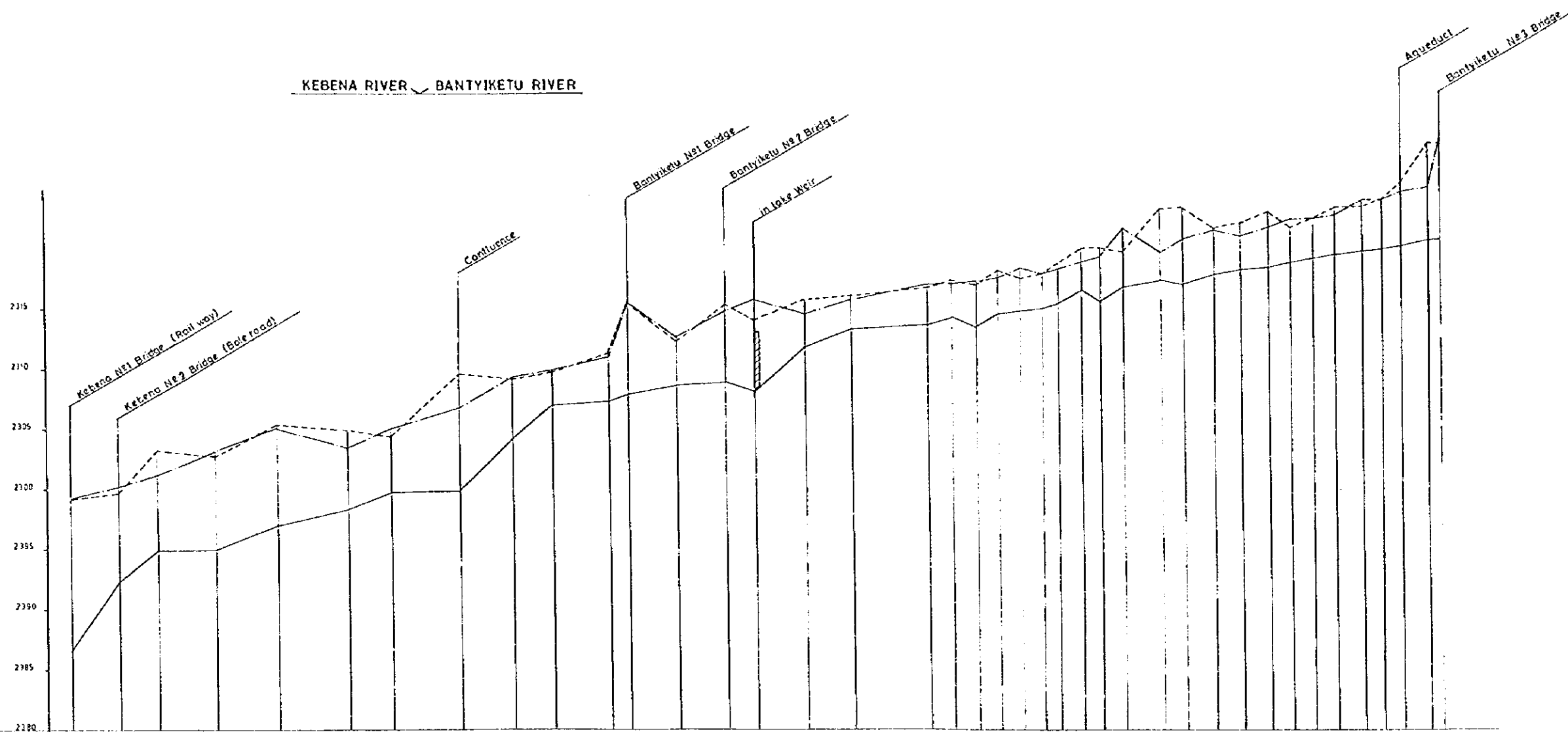
JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H=1:200
V=1:200

DRAWING NO.
RV-CS-25

RIVER CROSS SECTION (25/25)

KEBENA RIVER BANTYIKETU RIVER



| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| LEFT BANK | 2299.7 | 2300.1 | 2300.1 | 2302.1 | 2305.6 | 2303.4 | 2304.9 | 2306.7 | 2309.2 | 2309.8 | 2310.9 | 2315.4 | 2312.4 | 2314.7 | 2315.6 | 2316.9 | 2318.9 | 2317.1 | 2317.5 | 2318.2 | 2317.8 | 2318.2 | 2319.2 | 2319.7 | 2319.2 | 2319.5 | 2320.8 | 2321.3 | 2320.9 | 2321.6 | 2322.3 | 2322.4 | 2322.4 | 2322.6 | 2322.9 | 2323.5 | 2324.9 | 2326.6 | 2328.6 | 2328.6 | | | |
| RIGHT BANK | 2299.1 | 2299.7 | 2300.2 | 2302.7 | 2305.3 | 2304.9 | 2304.3 | 2308.5 | 2309.0 | 2309.4 | 2311.1 | 2315.3 | 2312.1 | 2315.2 | 2315.6 | 2316.6 | 2317.2 | 2316.9 | 2318.2 | 2317.5 | 2317.9 | 2318.7 | 2319.2 | 2319.7 | 2319.2 | 2319.5 | 2320.8 | 2321.7 | 2322.0 | 2322.0 | 2322.0 | 2322.0 | 2322.0 | 2322.0 | 2322.0 | 2322.0 | 2322.0 | 2322.0 | 2322.0 | 2322.0 | 2322.0 | 2322.0 | |
| LOWEST RIVER BED | 2286.6 | 2292.2 | 2294.8 | 2294.9 | 2296.6 | 2298.2 | 2299.7 | 2299.8 | 2304.2 | 2304.9 | 2307.1 | 2307.7 | 2308.5 | 2308.7 | 2311.6 | 2313.5 | 2314.2 | 2313.4 | 2314.5 | 2314.7 | 2314.9 | 2315.3 | 2316.5 | 2316.8 | 2316.8 | 2317.3 | 2317.0 | 2317.7 | 2318.2 | 2318.4 | 2318.4 | 2318.4 | 2318.4 | 2318.4 | 2318.4 | 2318.4 | 2318.4 | 2318.4 | 2318.4 | 2318.4 | 2318.4 | 2318.4 | 2318.4 |
| CHAINAGE (km) | 0.0 | 0.10 | 0.18 | 0.20 | 0.43 | 0.58 | 0.67 | 0.81 | 0.92 | 1.06 | 1.12 | 1.12 | 1.26 | 1.26 | 1.62 | 1.70 | 1.83 | 1.88 | 1.99 | 1.97 | 2.02 | 2.05 | 2.10 | 2.14 | 2.19 | 2.26 | 2.31 | 2.42 | 2.49 | 2.53 | 2.58 | 2.62 | 2.68 | 2.73 | 2.76 | 2.82 | 2.84 | 2.84 | 2.84 | 2.84 | | | |
| SECTION NO. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 9A | 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 | | | |

| | |
|------------------|-------|
| LEFT BANK | ——— |
| RIGHT BANK | ----- |
| LOWEST RIVER BED | |

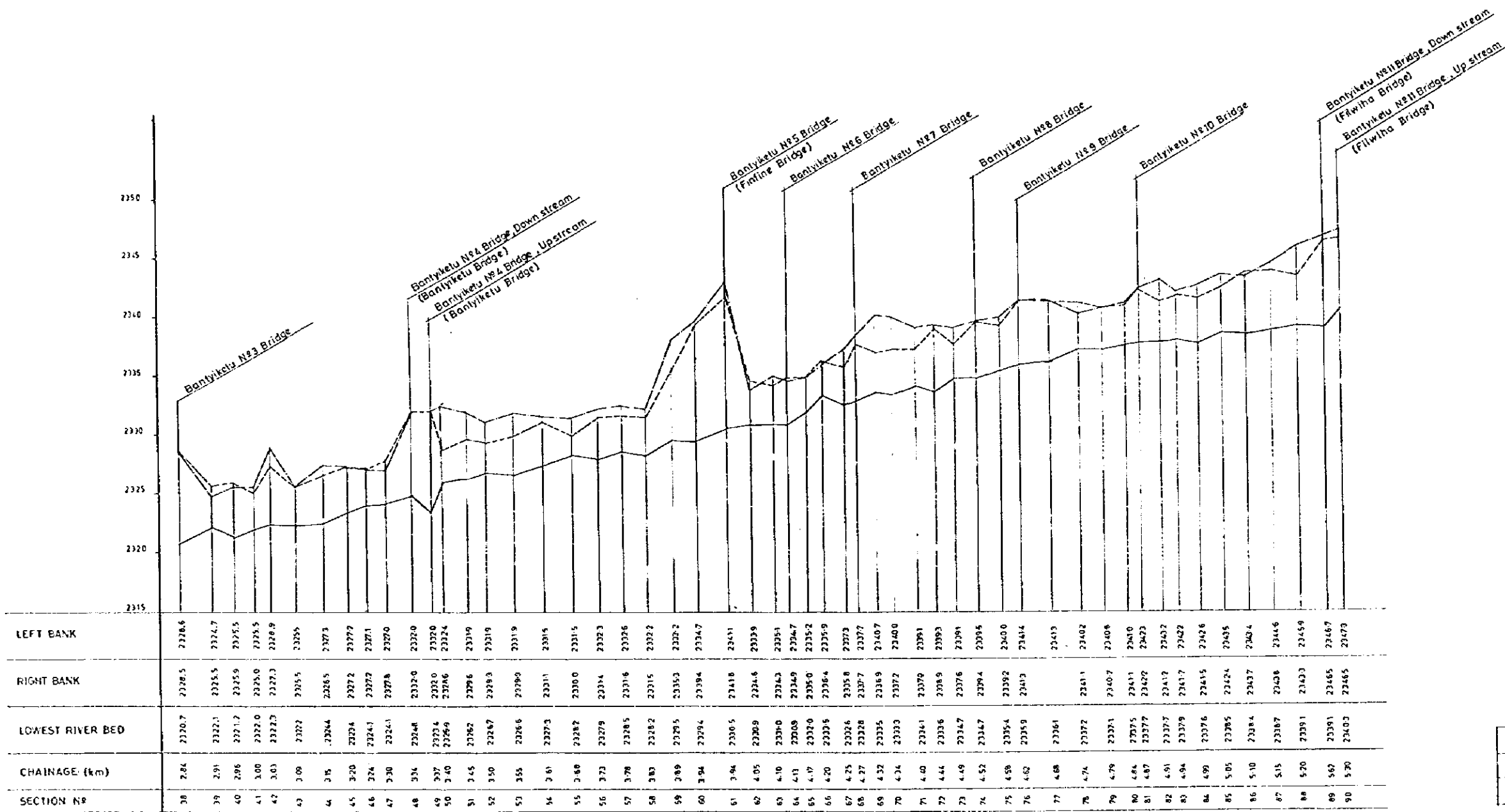
SCALE
H=1:5000
V=1:200

THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

DRAWING NO.
RV-PR-01

LONGITUDINAL PROFILE (1/3)
KEBENA RIVER
BANTYIKETU RIVER



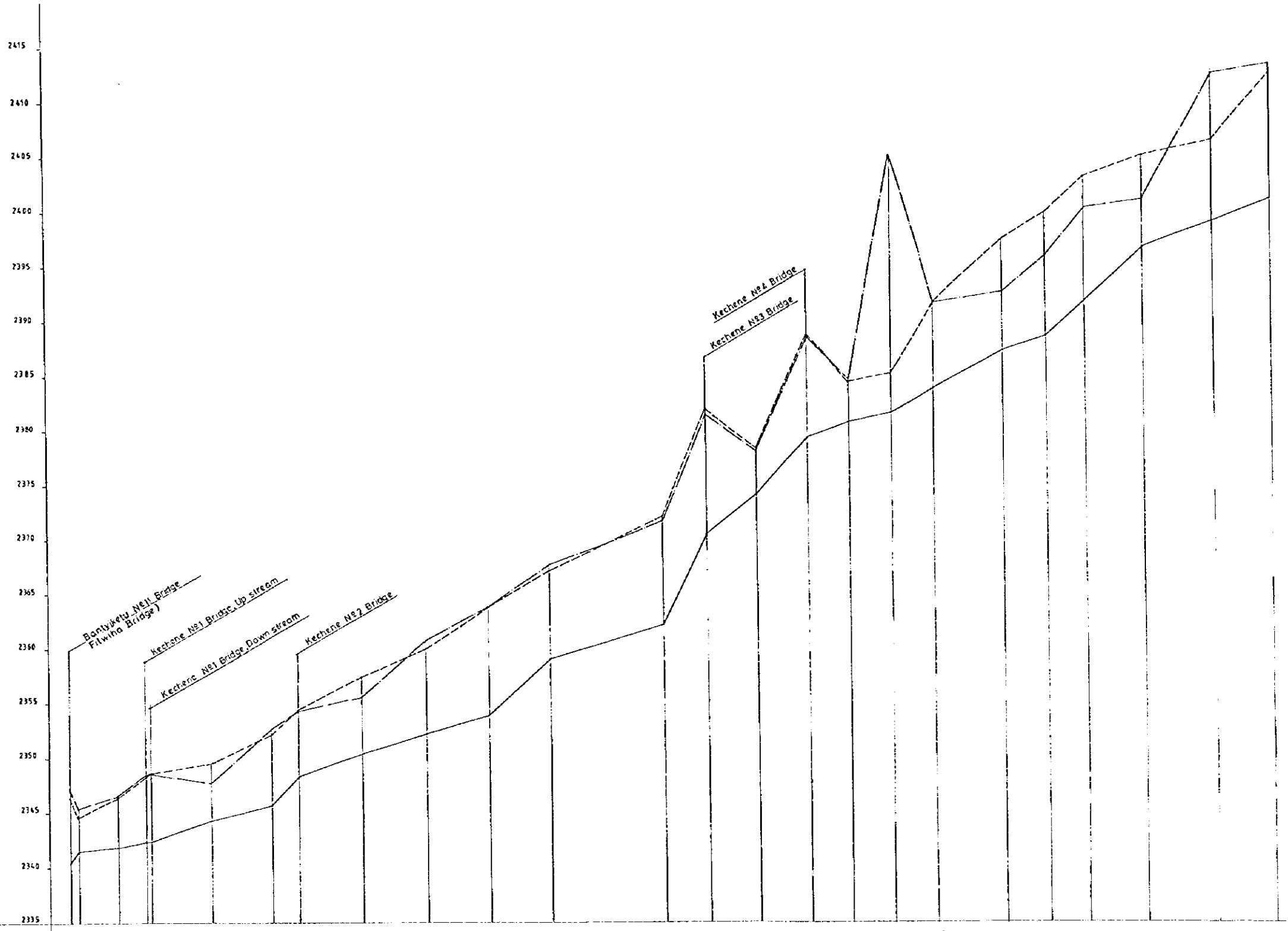
| | |
|------------------|-----------|
| LEFT BANK | ————— |
| RIGHT BANK | - - - - - |
| LOWEST RIVER BED | ————— |

THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

| | |
|-------------------------|---|
| DRAWING NO. RV-PR-02 | LONGITUDINAL PROFILE (2/3) BANTYKETU RIVER |
|-------------------------|---|

SCALE
H=1:5000
V=1:200



| | |
|------------------|-------|
| LEFT BANK | ----- |
| RIGHT BANK | ----- |
| LOWEST RIVER BED | ----- |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| LEFT BANK | 2347.3 | 2345.5 | 2346.6 | 2348.5 | 2348.6 | 2347.8 | 2352.7 | 2354.3 | 2355.6 | 2360.8 | 2361.9 | 2367.8 | 2371.8 | 2381.5 | 2378.2 | 2388.6 | 2384.7 | 2405.1 | 2391.6 | 2392.7 | 2395.9 | 2403.3 | 2401.1 | 2427.7 | 2413.4 | |
| RIGHT BANK | 2344.5 | 2344.7 | 2346.4 | 2348.4 | 2348.6 | 2349.5 | 2352.2 | 2354.5 | 2357.4 | 2360.0 | 2363.9 | 2367.2 | 2372.1 | 2381.9 | 2378.4 | 2388.9 | 2384.6 | 2385.1 | 2391.5 | 2393.6 | 2398.4 | 2399.6 | 2403.2 | 2405.2 | 2426.6 | 2426.4 |
| LOWEST RIVER BED | 2340.3 | 2341.6 | 2341.8 | 2342.3 | 2342.4 | 2344.3 | 2345.7 | 2348.9 | 2350.4 | 2352.2 | 2353.9 | 2355.2 | 2362.0 | 2370.5 | 2374.0 | 2379.3 | 2386.7 | 2381.5 | 2383.8 | 2387.3 | 2388.6 | 2391.9 | 2396.8 | 2398.1 | 2421.0 | 2401.0 |
| CHAINAGE (km) | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | |
| SECTION NO | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | |

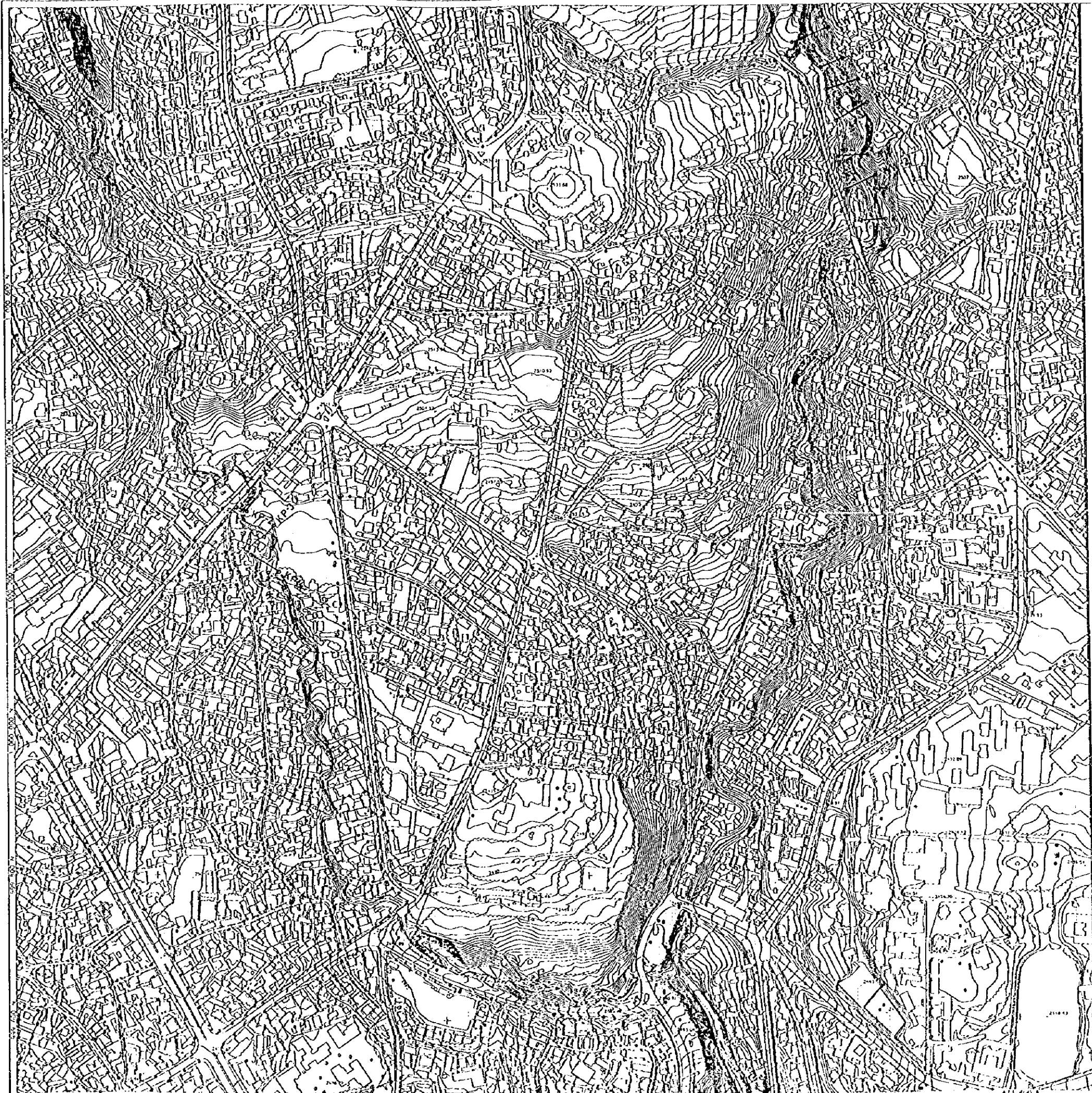
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
 IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
 REGION 14 ADMINISTRATION

DRAWING NO. RV-PR-03

LONGITUDINAL PROFILE (3/3)
 KECHENE RIVER

SCALE
 H=1:5000
 V=1:200



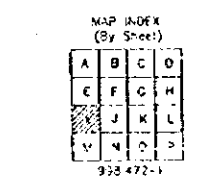
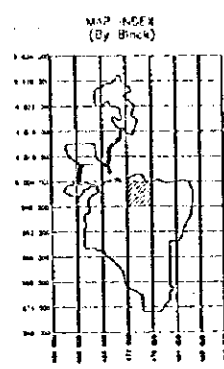
NO WORKING PROGS FOR
ADDIS ABABA WITH SPATIAL REFERENCE

ADDIS ABABA

SHEET 938 472-1

SCALE 1:2000

CONTOUR INTERVAL 1.0 metre

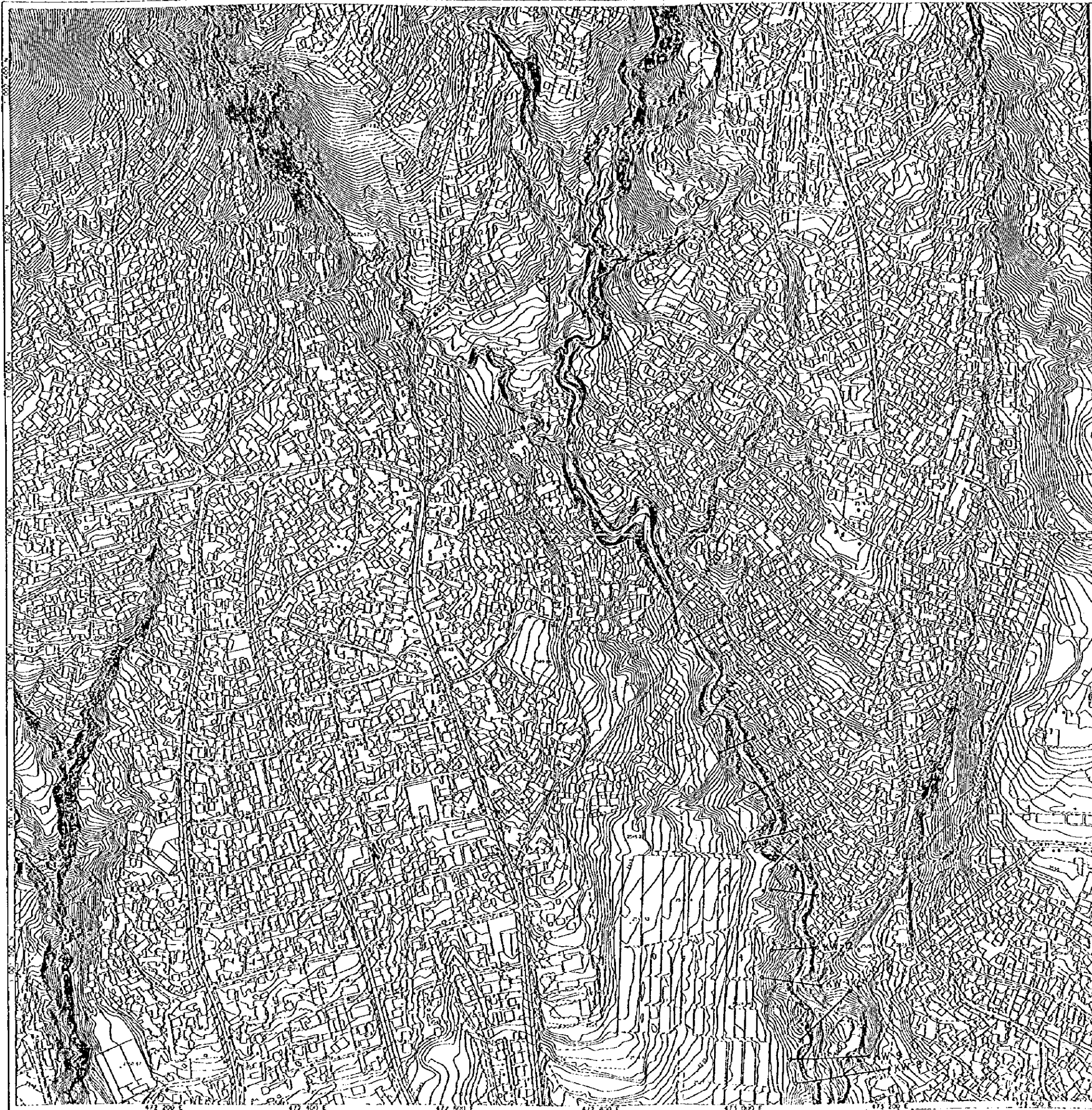


Use of Scale: 1:2000
Reference: Sheet 938 472-1
Original: 1:5000 (1:5000 Projection Zone 37)

USK

| | |
|--------------------|---|
| Full Scale Road | A |
| Major Road | B |
| Minor Road | C |
| Footpath | D |
| Canal | E |
| Drainage | F |
| Watercourse | G |
| Stream | H |
| River | I |
| Lake | J |
| Swamp | K |
| Marsh | L |
| Field | M |
| Forest | N |
| Open Area | O |
| Settlement | P |
| Industrial Area | Q |
| Public Building | R |
| Religious Building | S |
| Monument | T |
| Spot Height | U |
| Contour Interval | V |
| Contour Interval | W |
| Contour Interval | X |
| Contour Interval | Y |
| Contour Interval | Z |

| | |
|--|--|
| THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA | |
| JAPAN INTERNATIONAL COOPERATION AGENCY REGION 13 ADMINISTRATION | |
| DRAWING NO. KW-LM-01 | LOCATION OF RIVER CROSS SECTION (1/2) |



NO. 10000 1:50,000
 ADDIS ABABA

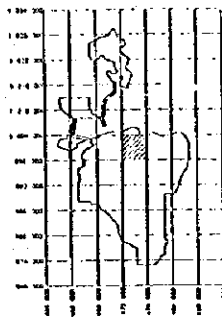
ADDIS ABABA

SHEET 903 472-E

SCALE 1:25,000

CONTOUR INTERVAL 1.0 METERS

MAP INDEX
 (By Block)



MAP INDEX
 (By Sheet)

| | | | |
|---|---|---|---|
| A | D | C | O |
| F | G | H | |
| I | J | K | L |
| M | N | P | |

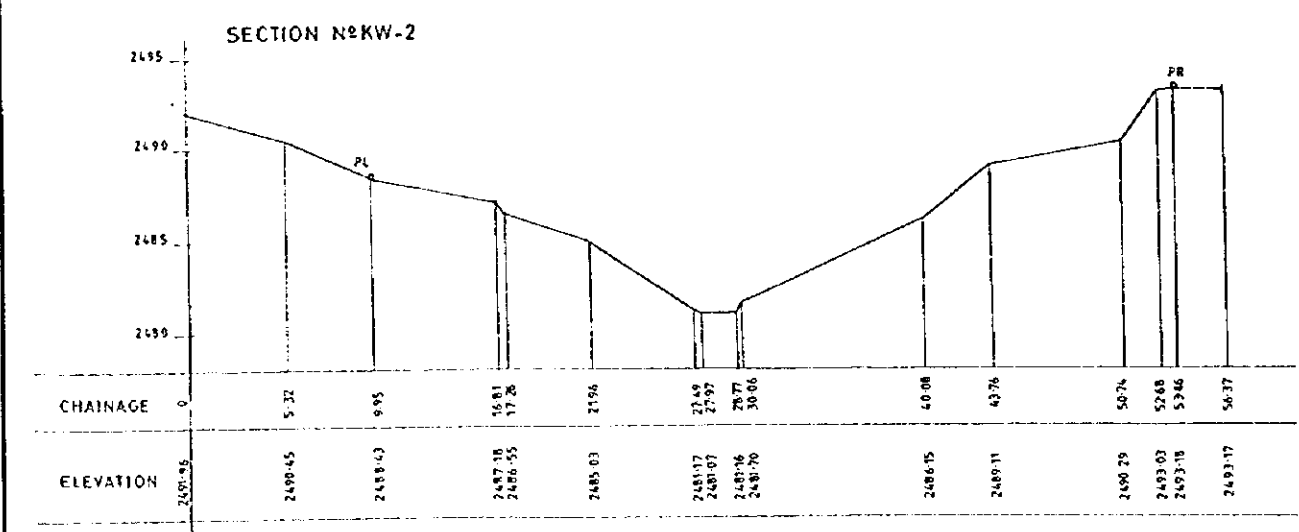
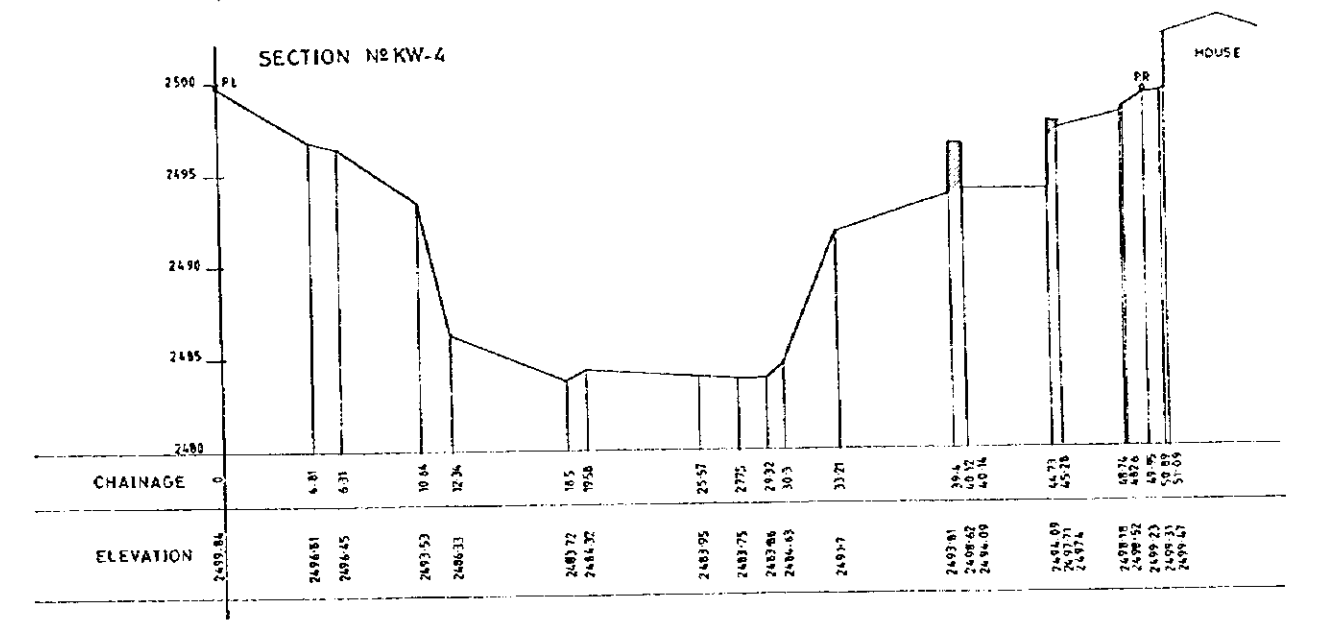
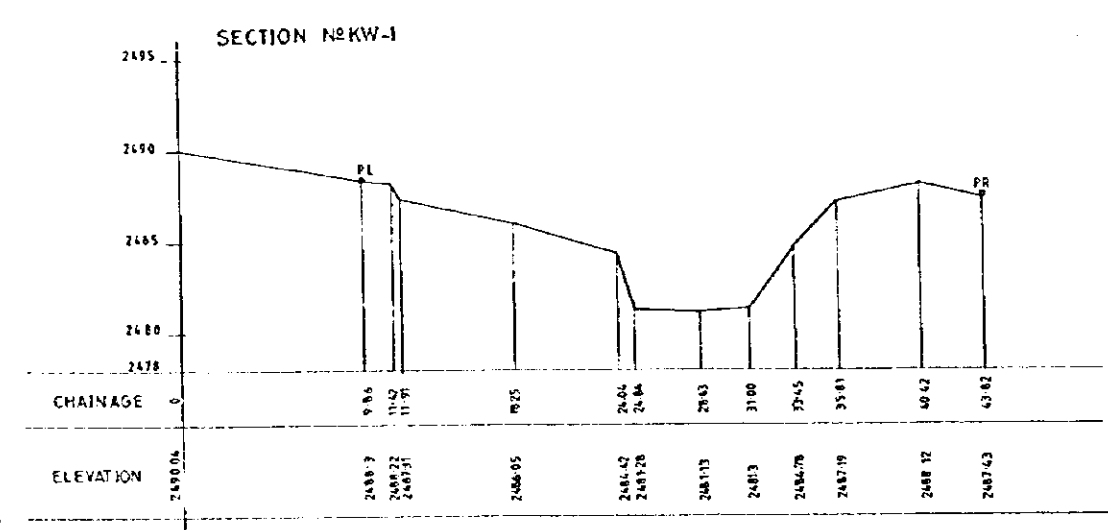
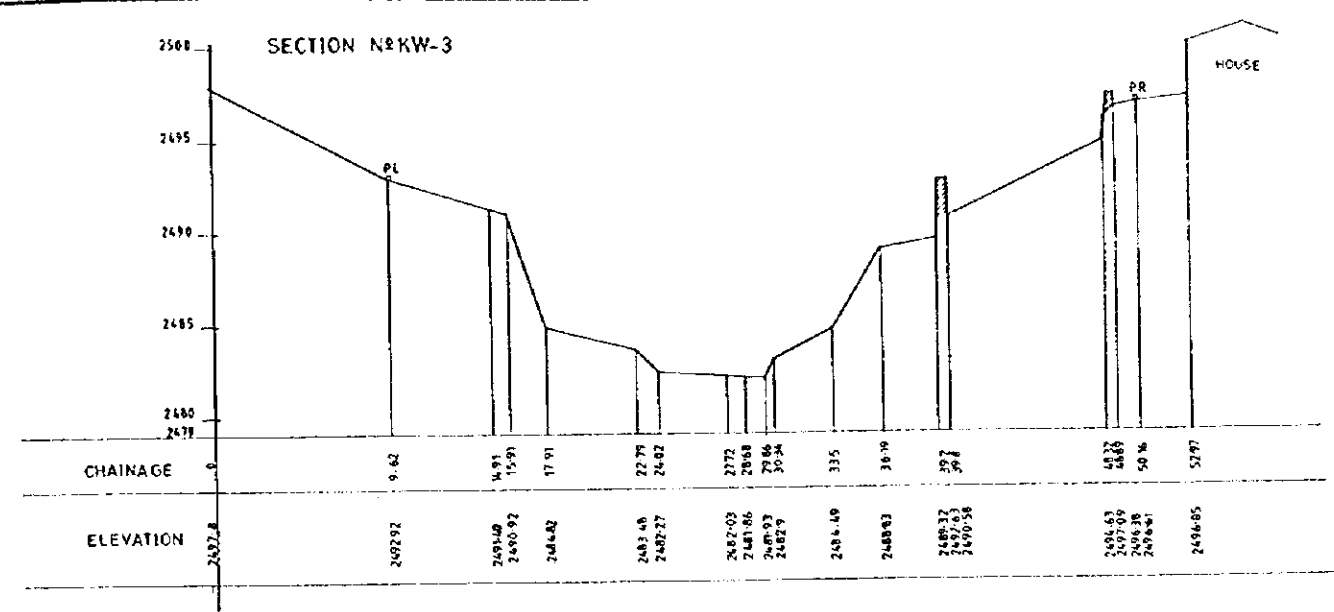
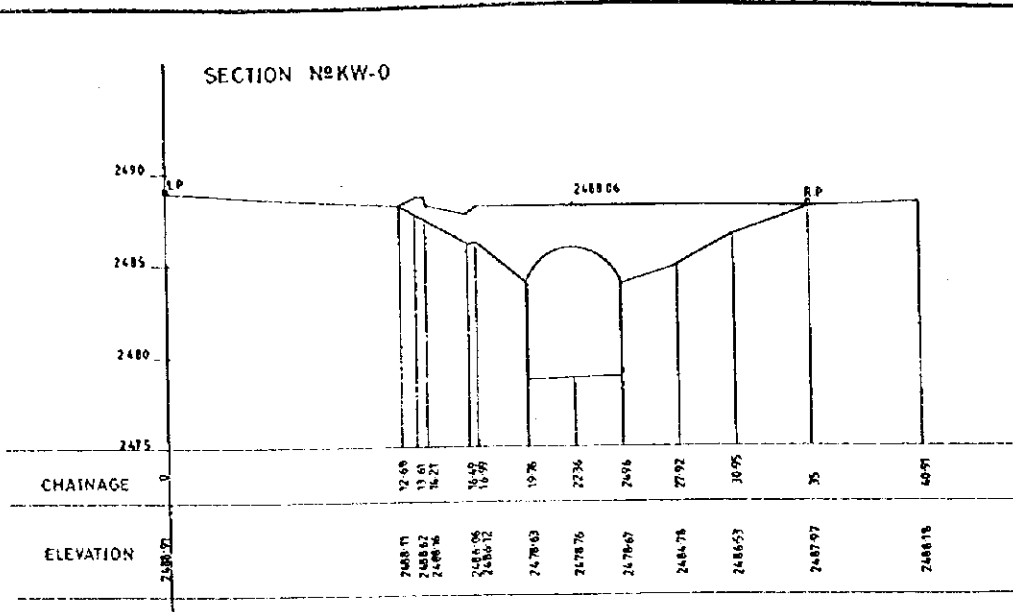
903 472-E

Scale 1:50,000
 National Geographical Institute
 Addis Ababa, Ethiopia

SYMBOLS

| | |
|--------------------|-------|
| 100m Contour Line | ——— A |
| 200m Contour Line | ——— B |
| 300m Contour Line | ——— C |
| 400m Contour Line | ——— D |
| 500m Contour Line | ——— E |
| 600m Contour Line | ——— F |
| 700m Contour Line | ——— G |
| 800m Contour Line | ——— H |
| 900m Contour Line | ——— I |
| 1000m Contour Line | ——— J |
| 1100m Contour Line | ——— K |
| 1200m Contour Line | ——— L |
| 1300m Contour Line | ——— M |
| 1400m Contour Line | ——— N |
| 1500m Contour Line | ——— O |

| | |
|--|--|
| THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA | |
| JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION | |
| DRAWING NO. KW-LM-02 | LOCATION OF RIVER CROSS SECTION (2/2) |



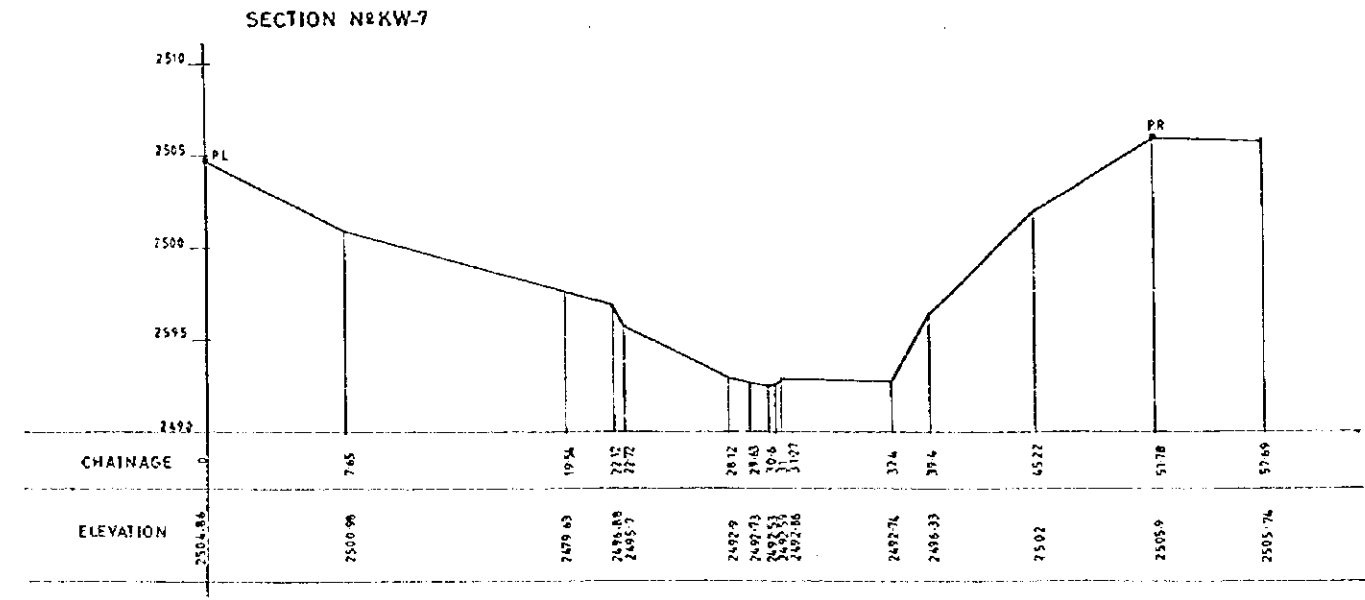
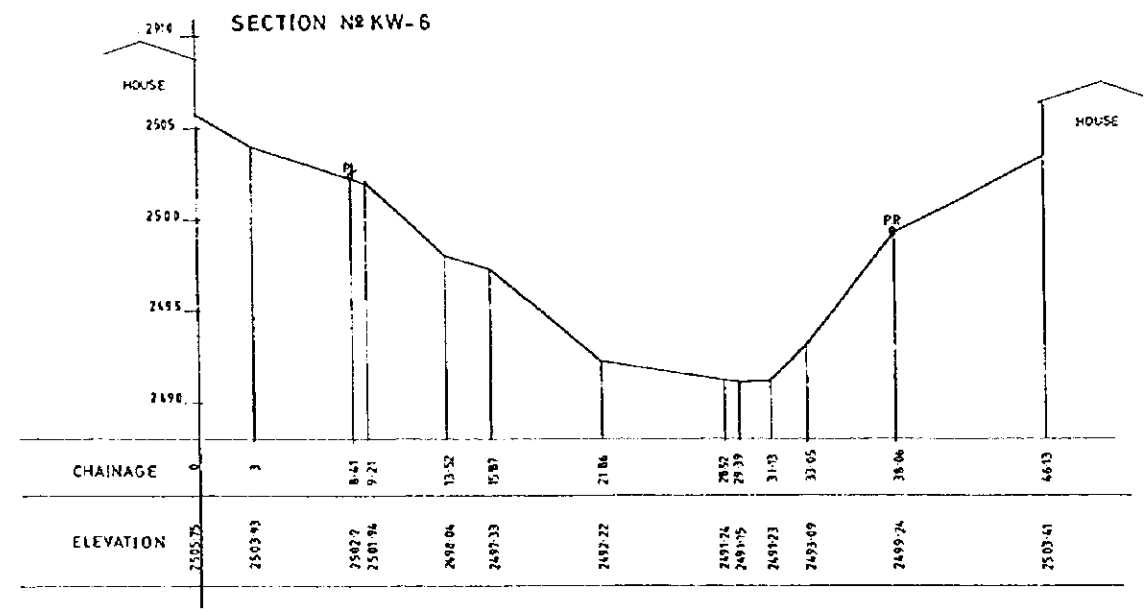
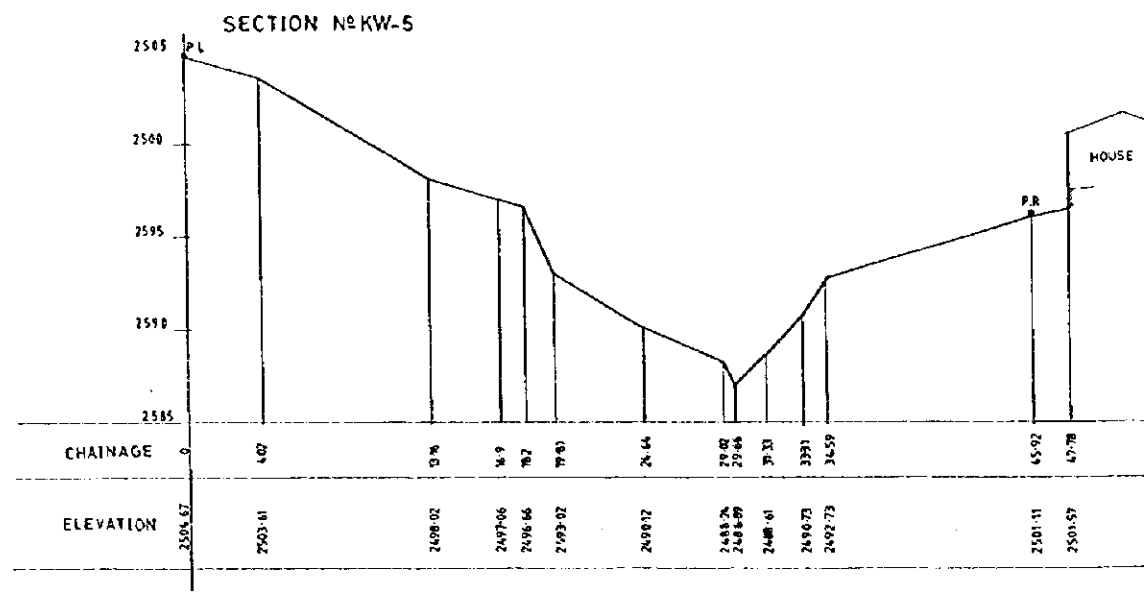
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H:1:200
V:1:200

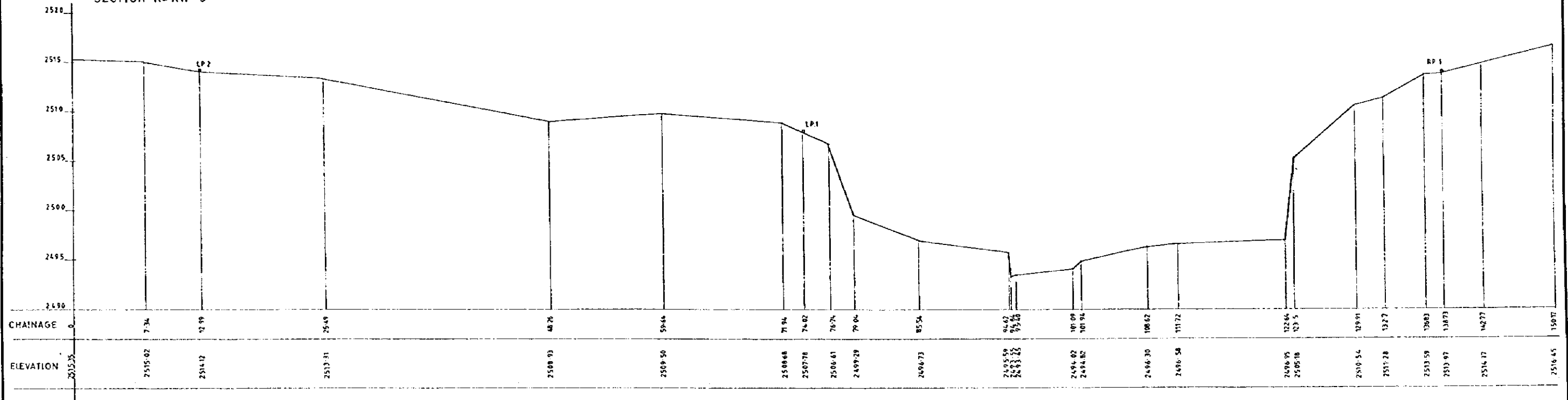
DRAWING NO.
KW-CS-01

RIVER CROSS SECTION
KECHENE WEIR (1/8)



| | |
|--|---|
| THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA | |
| JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION | |
| SCALE H = 1:200 V = 1:200 | DRAWING NO. KW-CS-02 |
| | RIVER CROSS SECTION KECHENE WEIR (2/8) |

SECTION № KW-8



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

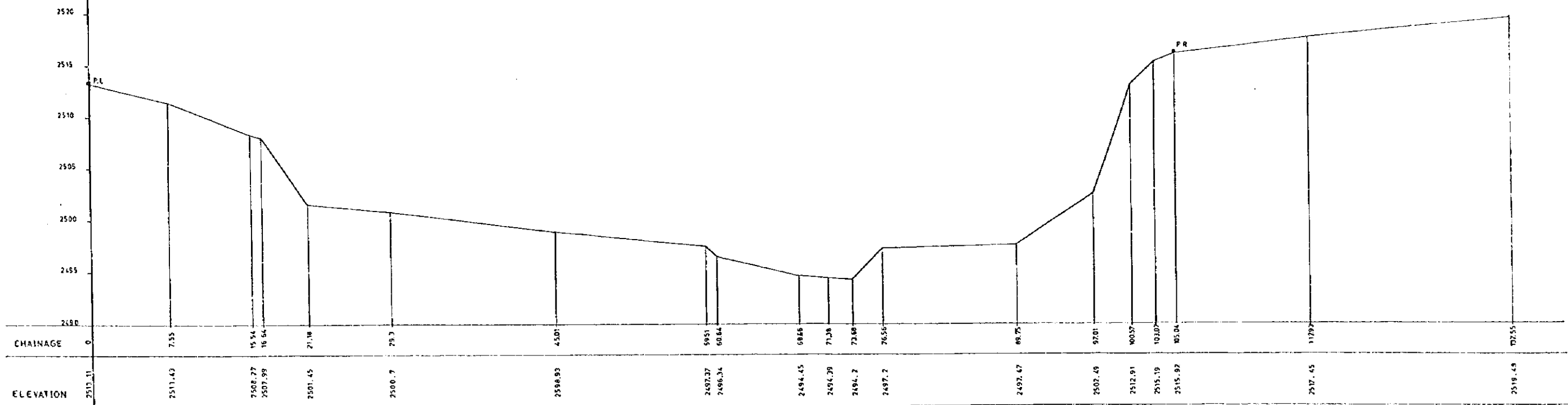
JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H=1:200
V=1:200

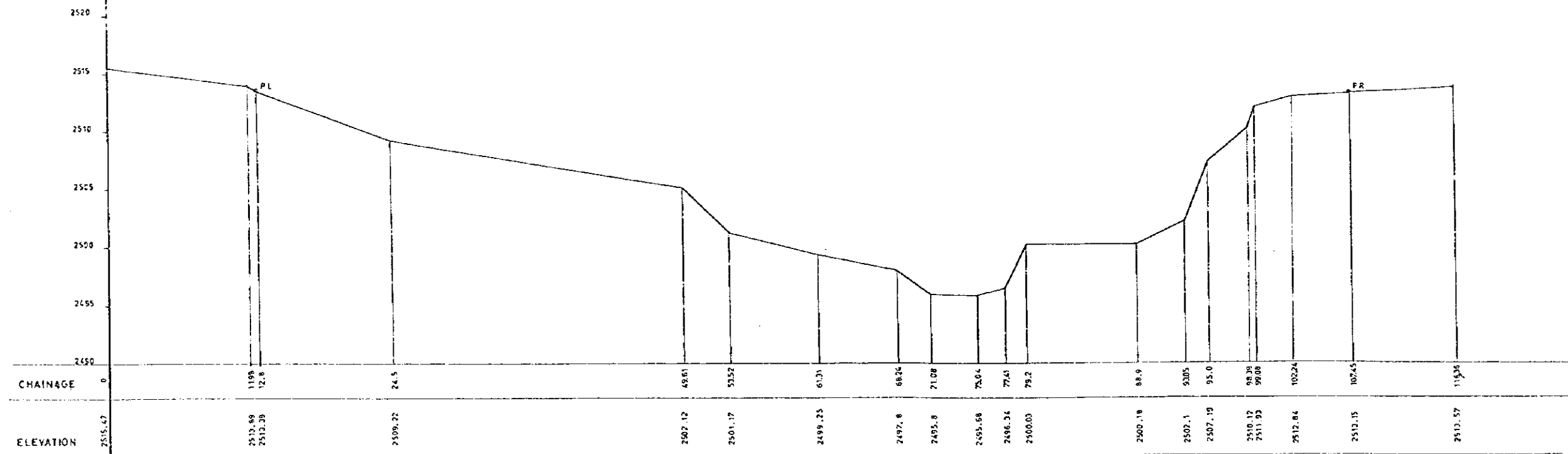
DRAWING NO.
KW-CS-03

RIVER CROSS SECTION
KECHENE WEIR (3/8)

SECTION N° KW-9



SECTION N° KW-10



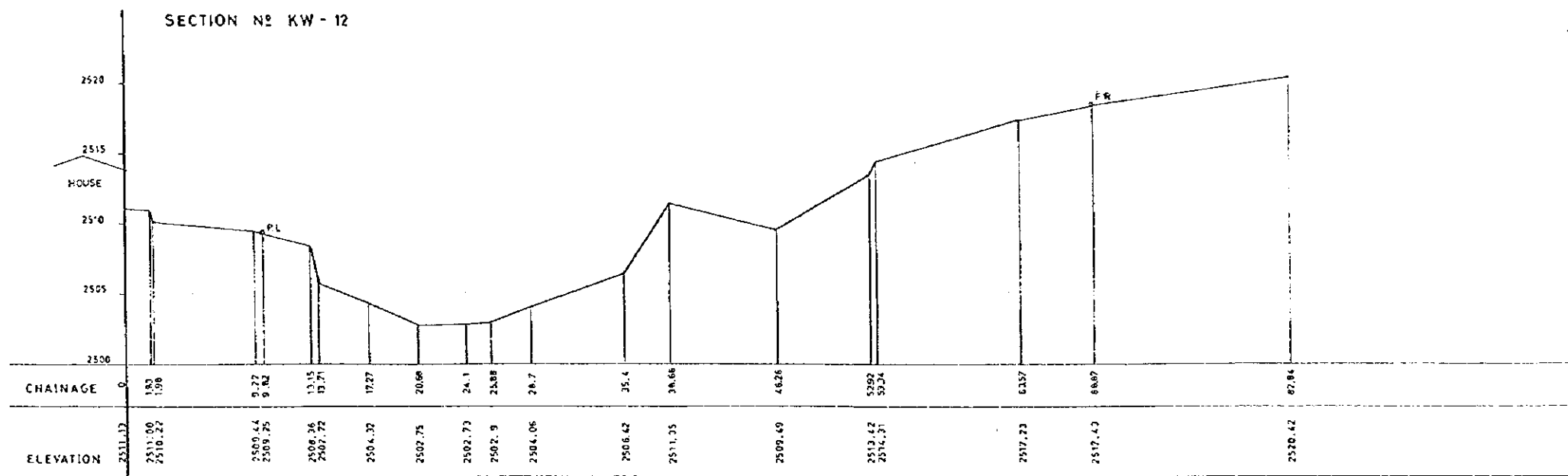
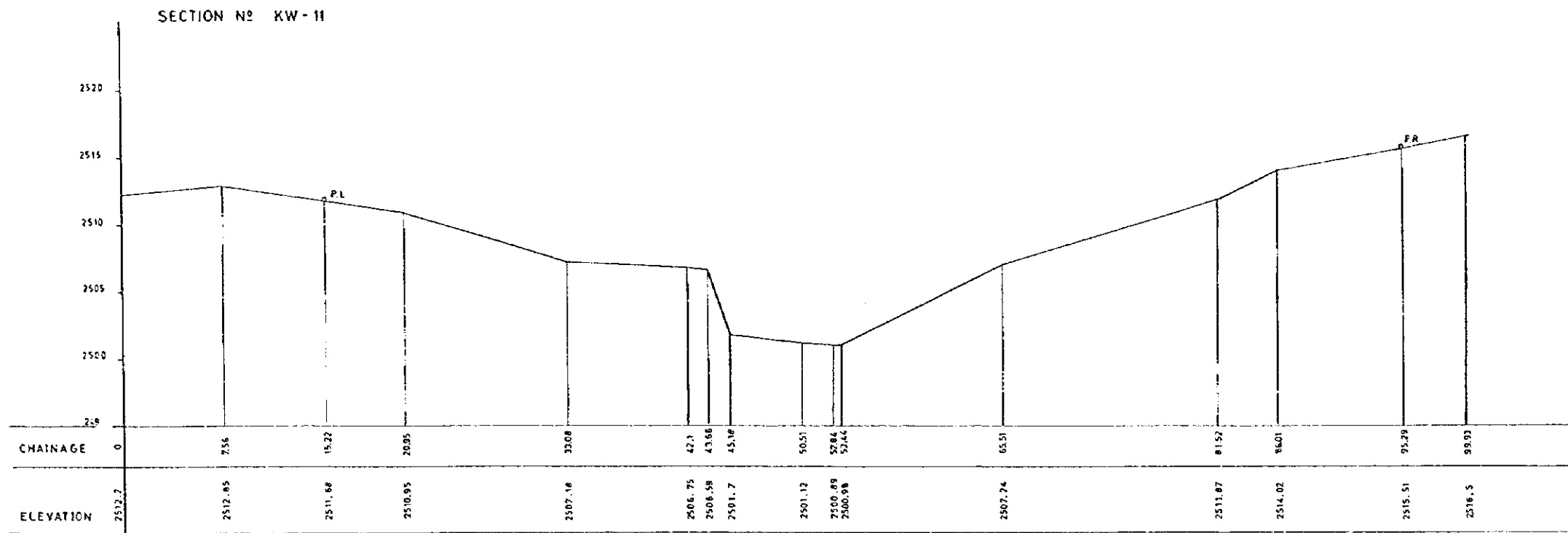
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H=1:200
V=1:200

DRAWING NO.
KW-CS-04

RIVER CROSS SECTION
KECHENE WEIR (4/8)



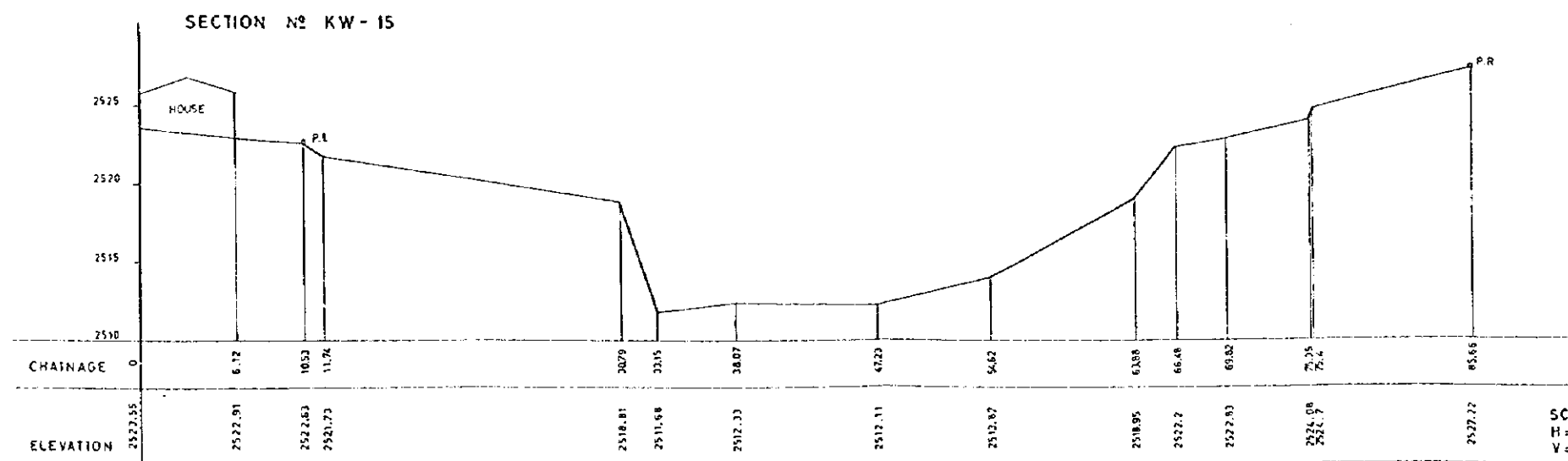
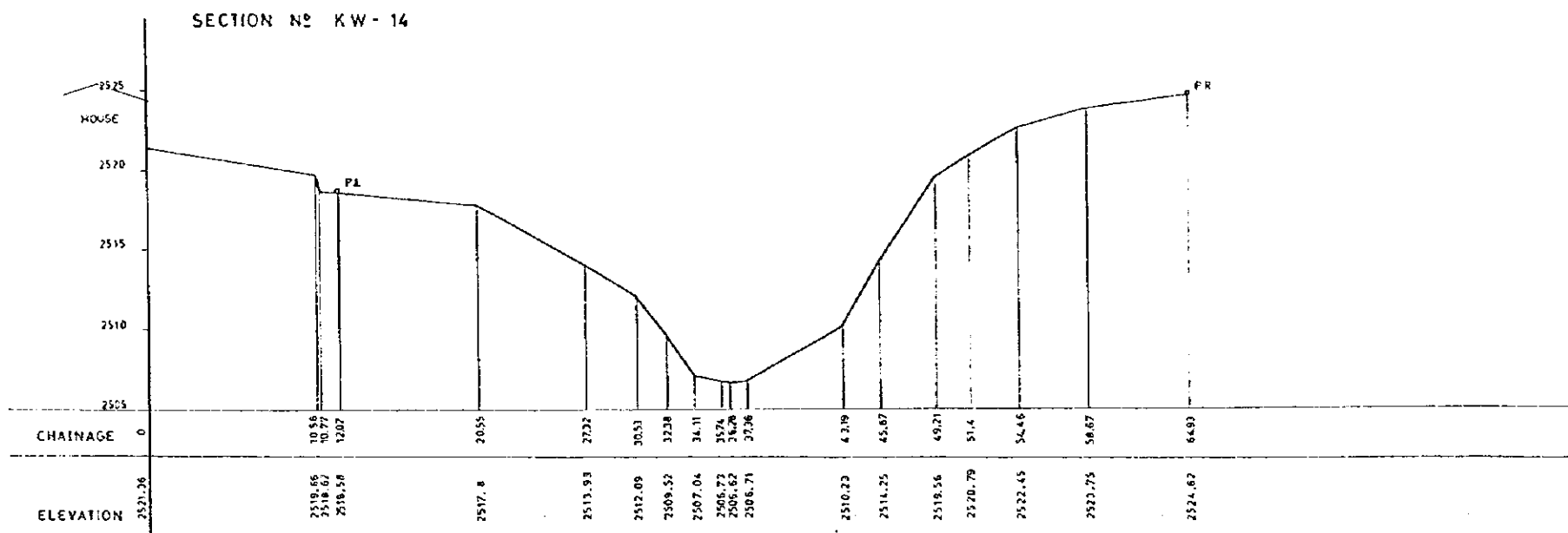
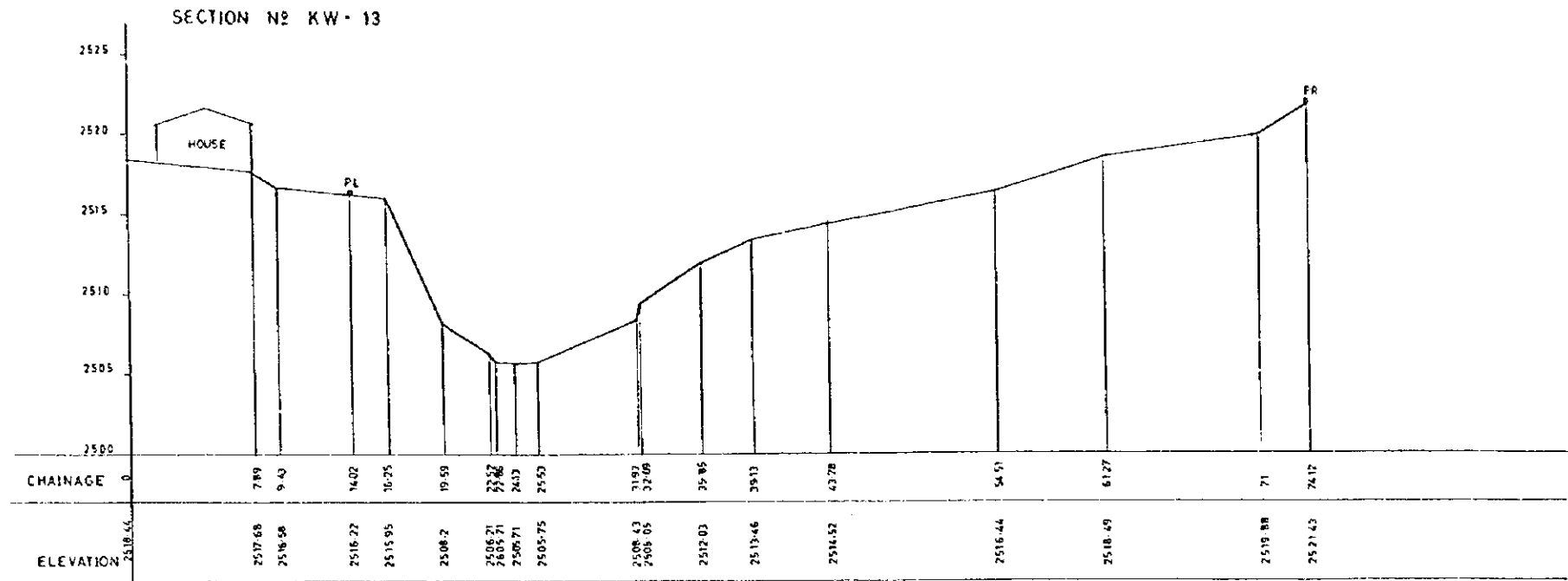
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H=1:200
V=1:200

DRAWING NO.
KW-CS-05

RIVER CROSS SECTION
KECHENE WEIR (5/8)



THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

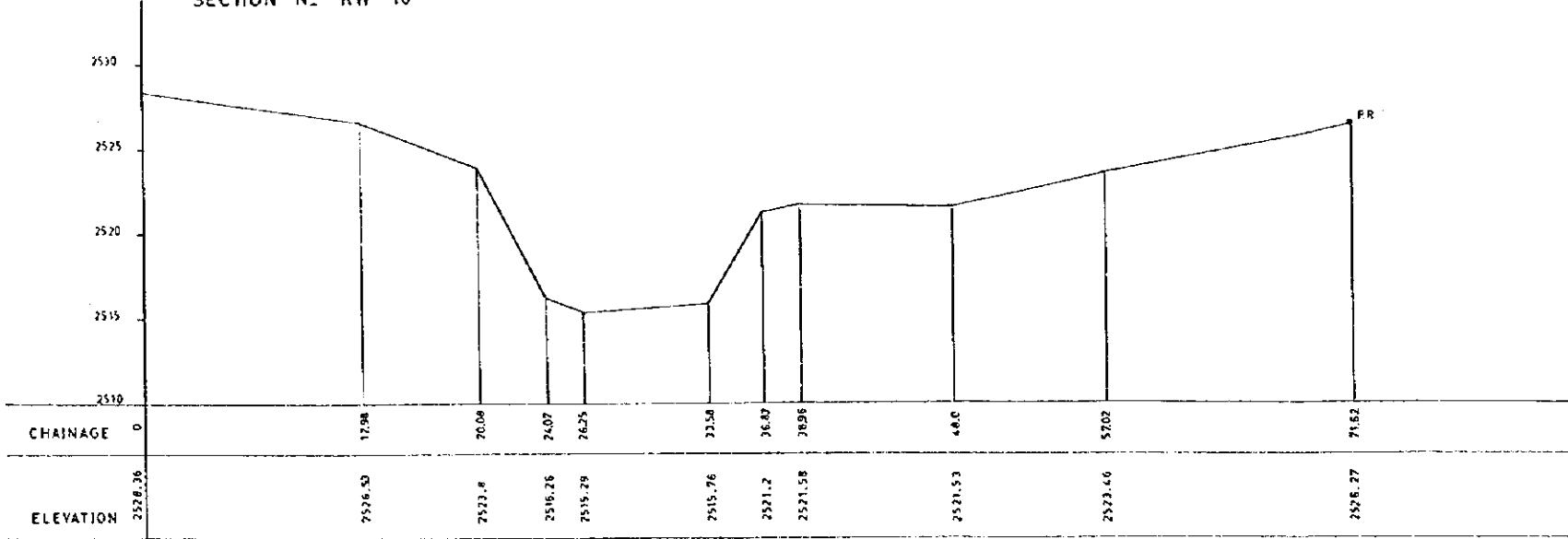
JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

DRAWING NO.
KW-CS-06

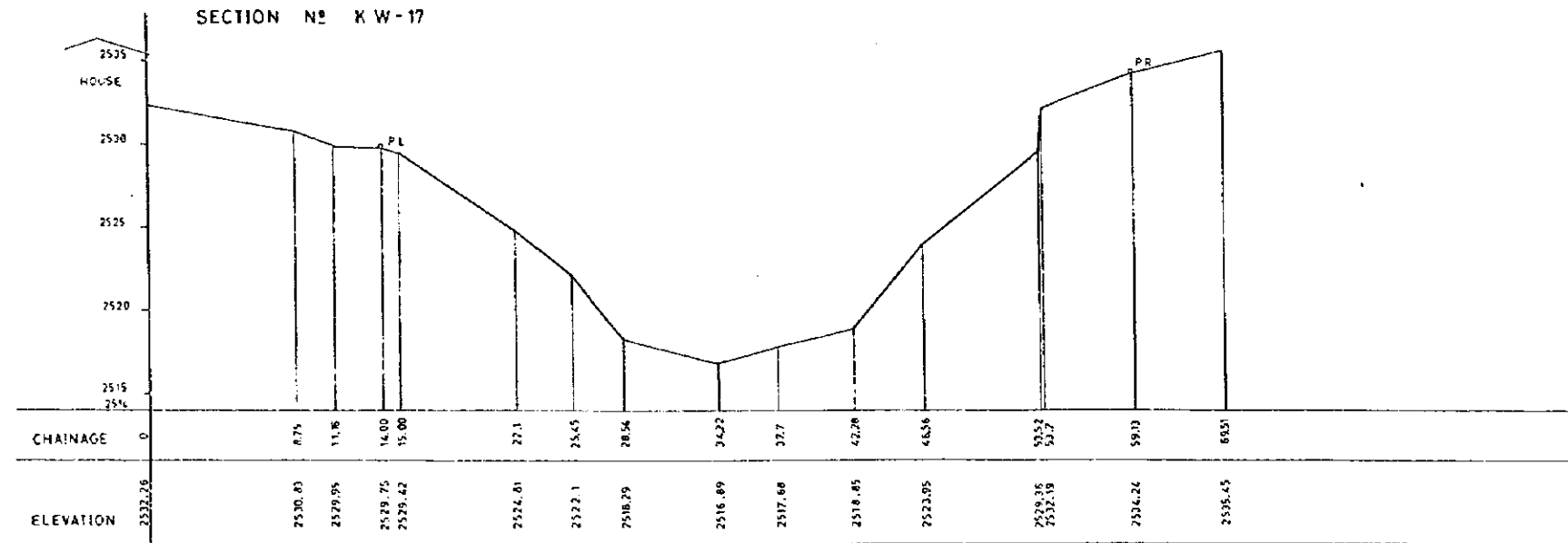
RIVER CROSS SECTION
KECHENE WEIR (6/8)

SCALE
H=1:200
V=1:200

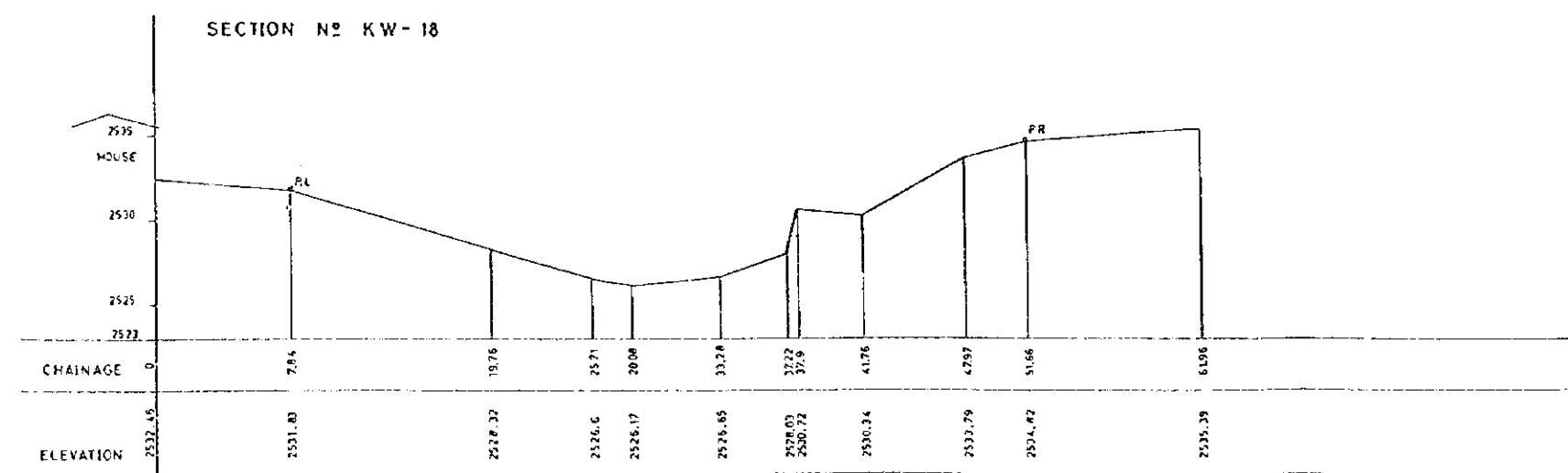
SECTION № KW-16



SECTION № KW-17



SECTION № KW-18



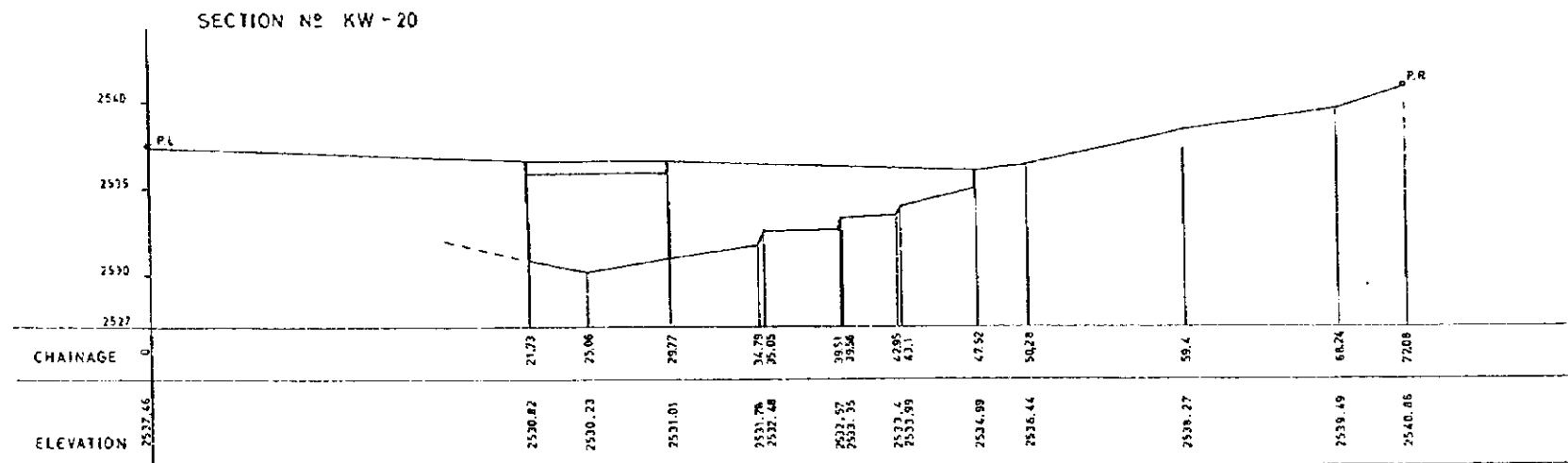
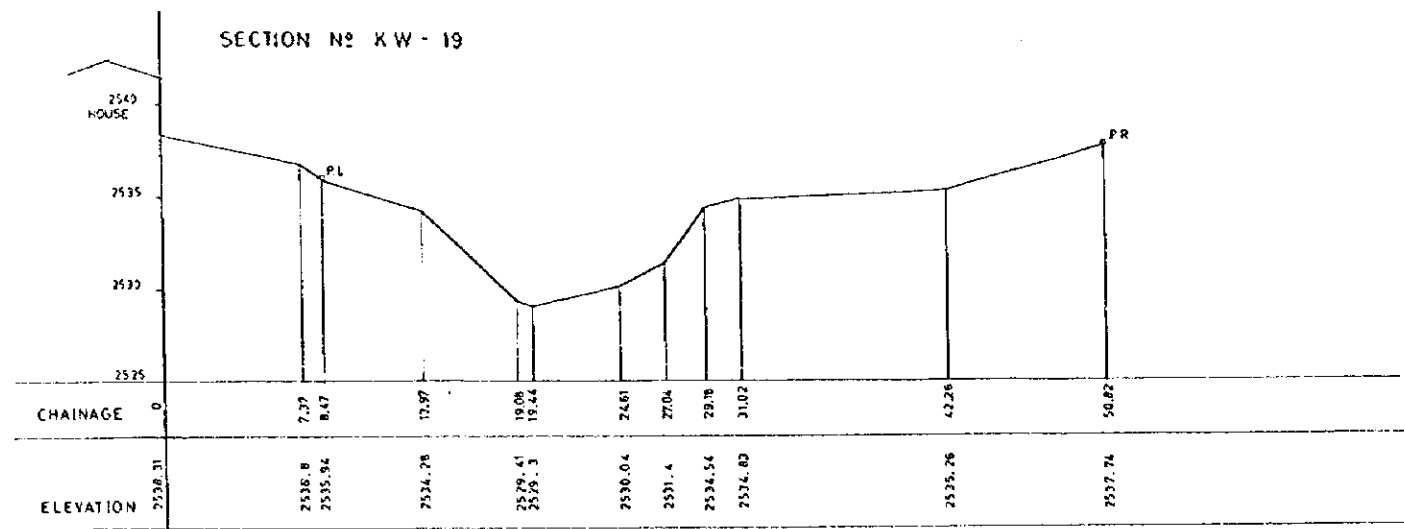
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H=1:200
V=1:200

DRAWING NO.
KW-CS-07

RIVER CROSS SECTION
KECHENE WEIR (7/8)



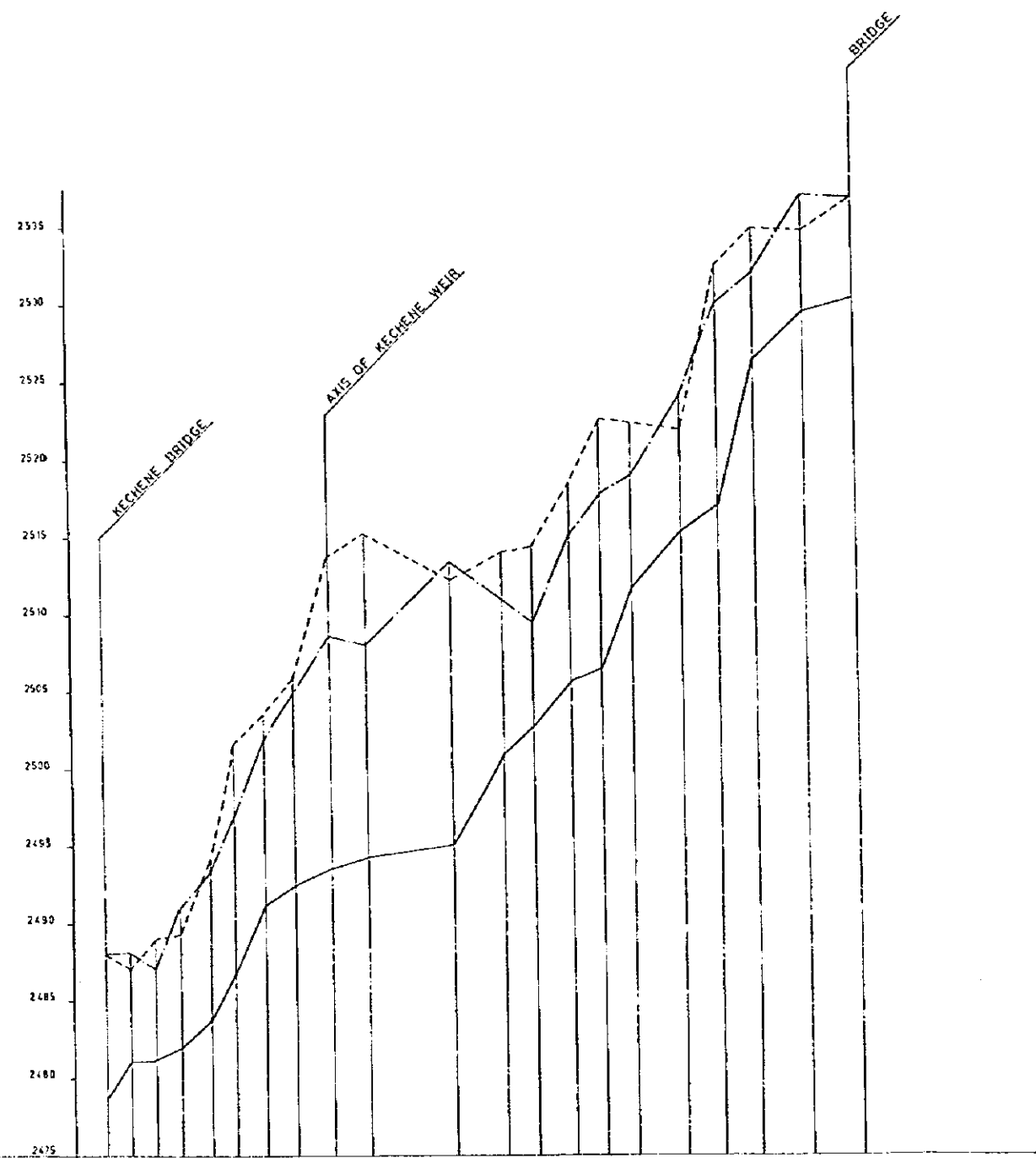
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

SCALE
H=1:200
V=1:200

DRAWING NO.
KW-CS-08

RIVER CROSS SECTION
KECHENE WEIR (8/8)



| | |
|------------------|-----|
| LEFT BANK | --- |
| RIGHT BANK | --- |
| LOWEST RIVER BED | --- |

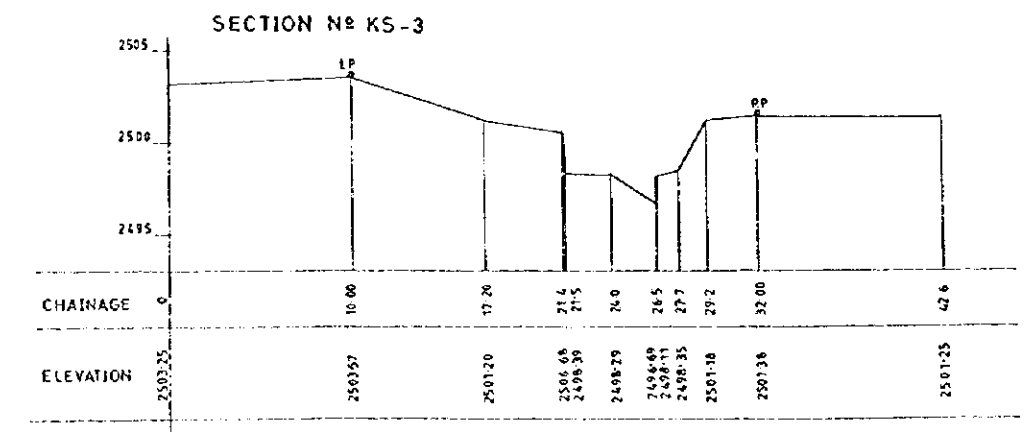
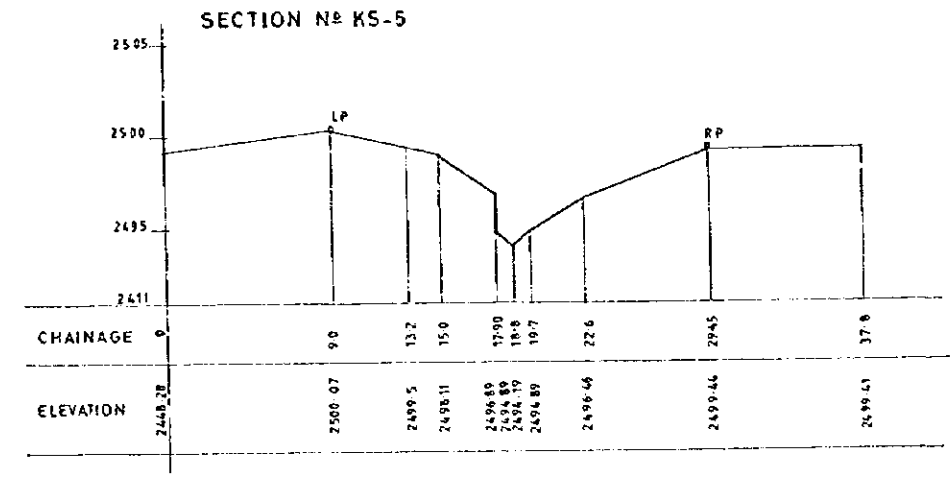
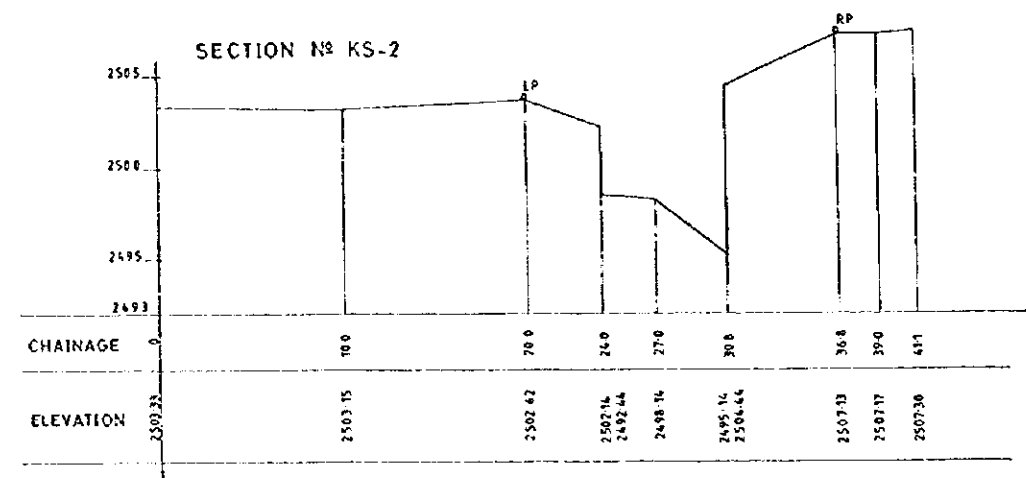
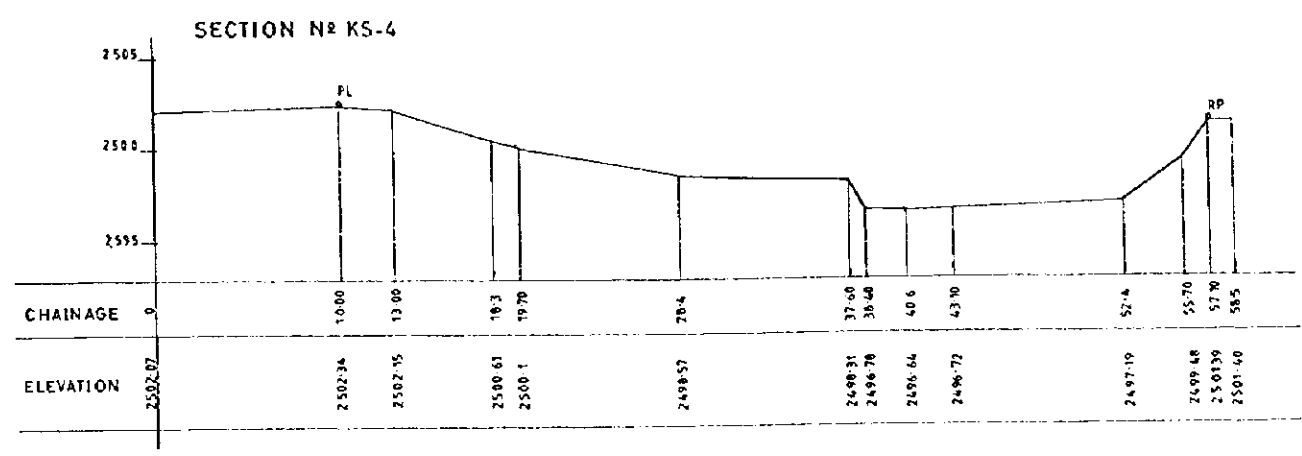
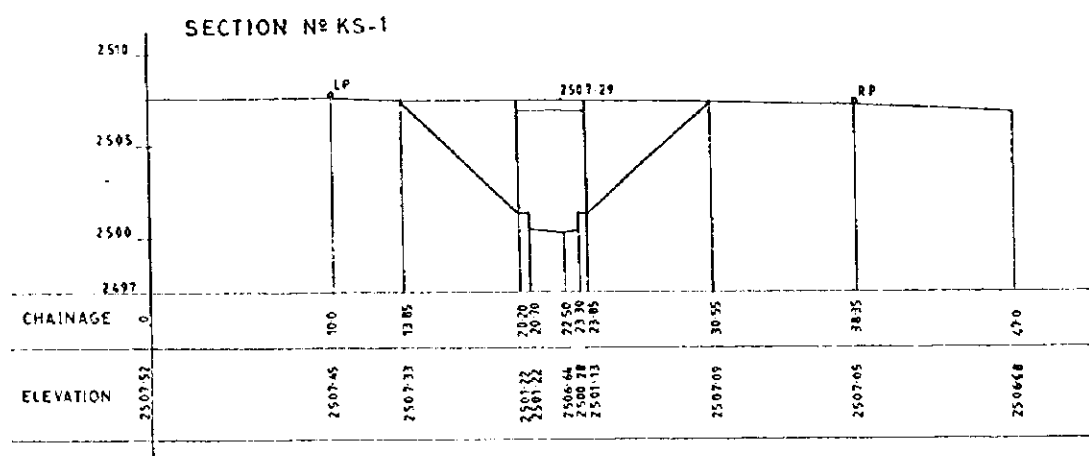
| | | | | | | | | | | | | | | | | | | | | | | |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|
| LEFT BANK | 2488.1 | 2488.2 | 2487.2 | 2490.9 | 2492.5 | 2498.7 | 2504.9 | 2508.7 | 2508.0 | | 2513.4 | 2511.0 | 2508.4 | 2516.0 | 2512.8 | 2518.4 | 2522.6 | 2529.6 | 2531.00 | 2536.9 | 2526.7 | |
| RIGHT BANK | 2484.0 | 2487.1 | 2489.1 | 2489.3 | 2492.8 | 2501.6 | 2502.4 | 2505.9 | 2510.6 | 2515.2 | 2512.8 | 2514.0 | 2514.3 | 2516.5 | 2522.5 | 2522.2 | 2521.6 | 2522.2 | 2524.8 | 2534.5 | 2536.9 | 2526.7 |
| LOWEST RIVER BED | 2478.6 | 2481.1 | 2481.1 | 2481.9 | 2483.8 | 2486.9 | 2491.2 | 2492.5 | 2493.5 | 2494.7 | 2495.7 | 2500.9 | 2502.7 | 2505.7 | 2506.6 | 2511.7 | 2515.3 | 2516.9 | 2526.2 | 2528.3 | 2530.2 | 2500.2 |
| CHAINAGE | 0.0 | 0.04 | 0.08 | 0.12 | 0.17 | 0.21 | 0.26 | 0.31 | 0.37 | 0.43 | 0.57 | 0.65 | 0.70 | 0.76 | 0.81 | 0.86 | 0.94 | 1.00 | 1.06 | 1.14 | 1.22 | |
| SECTION NO | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | |

THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
REGION 14 ADMINISTRATION

| | |
|-------------------------|--|
| DRAWING NO. KW-PR-01 | LONGITUDINAL PROFILE KECHENE WEIR (1/1) |
|-------------------------|--|

SCALE
H = 1:200
V = 1:5000



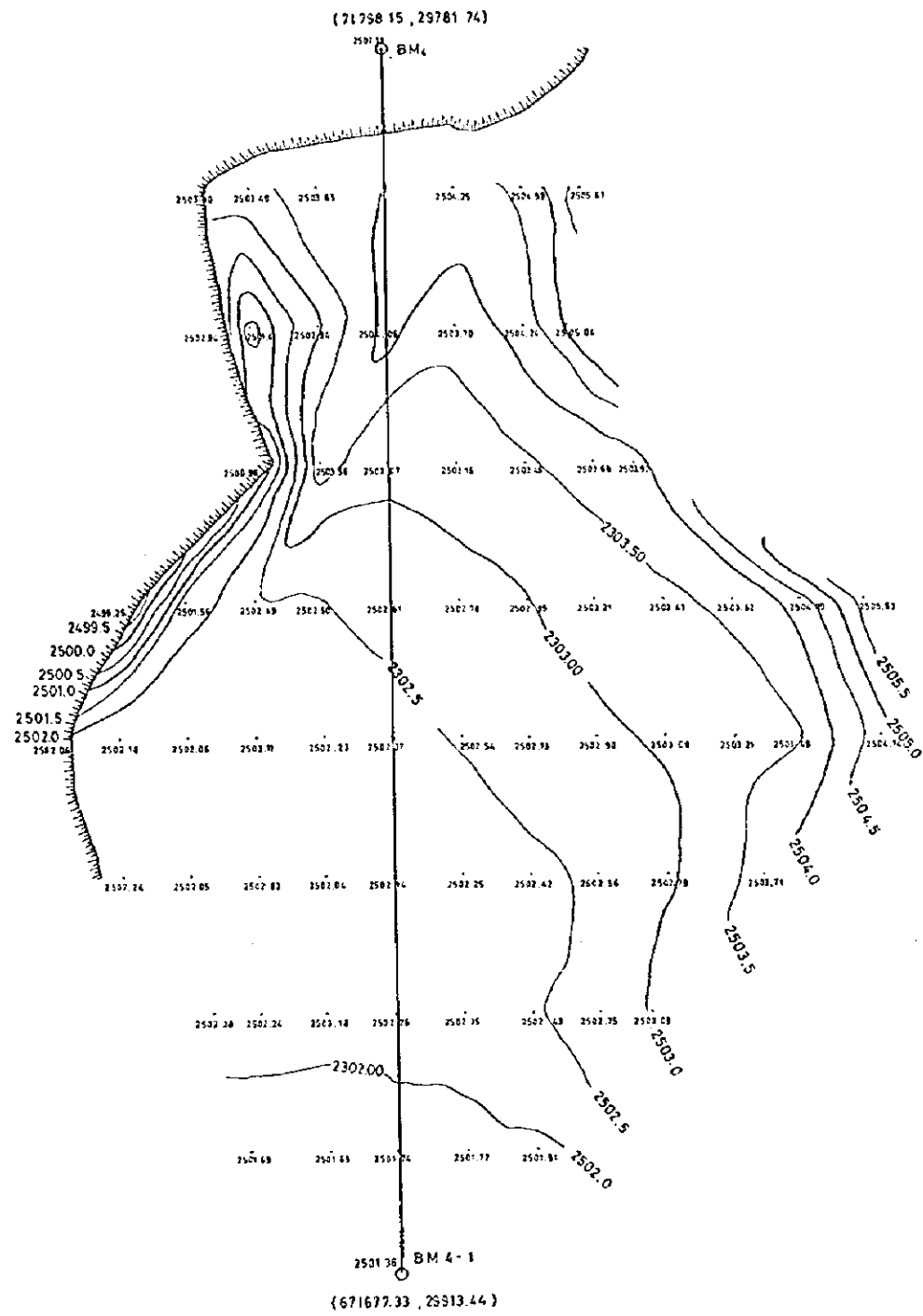
THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT
 IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

JAPAN INTERNATIONAL COOPERATION AGENCY
 REGION 14 ADMINISTRATION

SCALE
 H=1:200
 V=1:200

DRAWING NO.
KP-CS-01

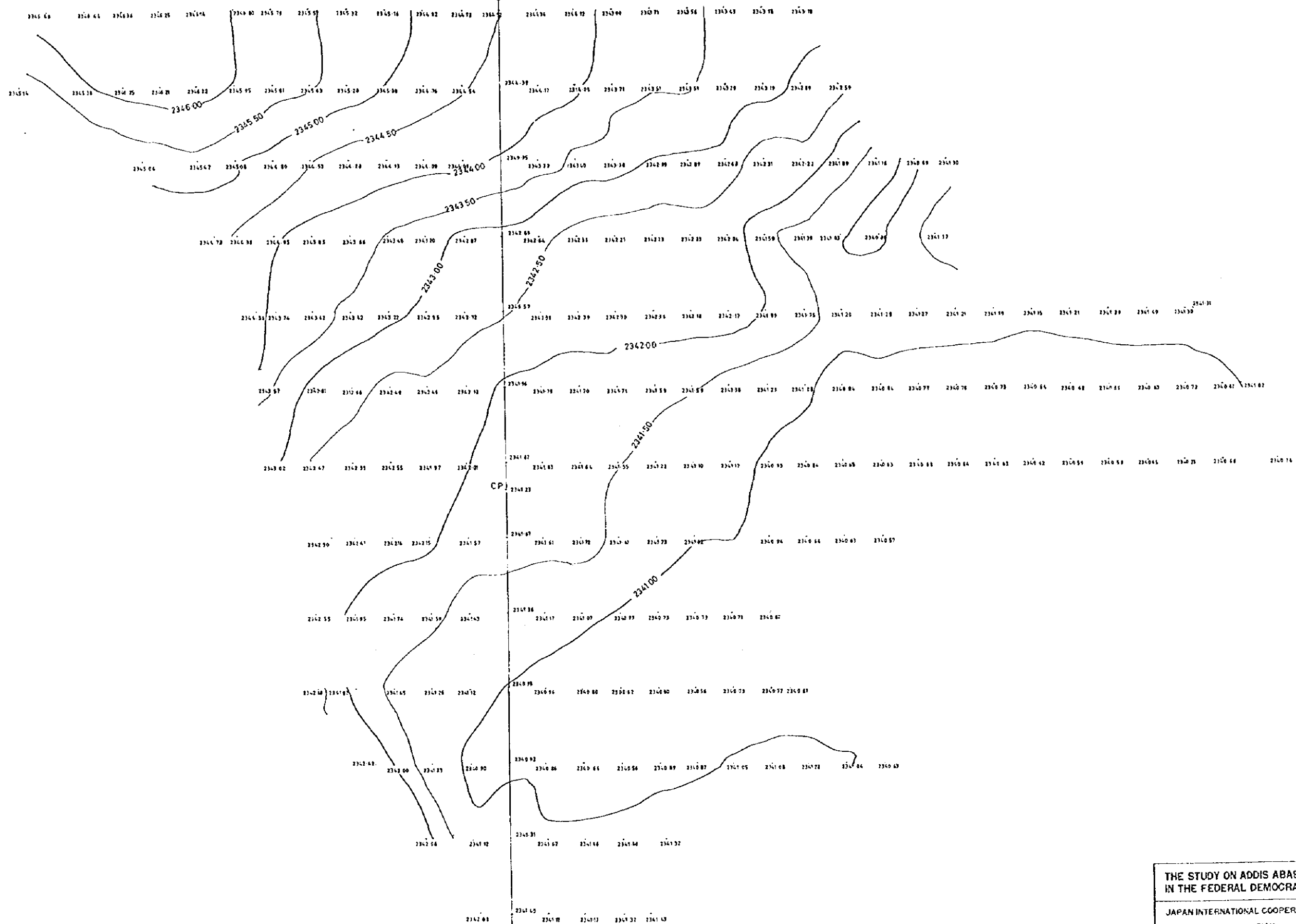
RIVER CROSS SECTION
 KOSTRE REGULATING POND(1/1)



| | |
|--|--|
| THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA | |
| JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION | |
| DRAWING NO. KP-PL-01 | KOSTRE REGULATING POND RESERVOIR AREA (1/1) |

SCALE
1:500

(67807.92, 30654.69)



RSP-1
(68045.13, 30626.80)

| | |
|--|--|
| THE STUDY ON ADDIS ABABA FLOOD CONTROL PROJECT IN THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA | |
| JAPAN INTERNATIONAL COOPERATION AGENCY REGION 14 ADMINISTRATION | |
| DRAWING NO. BP-PL-01 | BANTYIKETU REGULATING POND RESERVOIR AREA (1/1) |

SCALE
1:500