

THE REPUBLIC OF VENEZUELA

**STUDY
ON
CHAMA RIVER BASIN CONSERVATION PROJECT**

**VOLUME 3
DRAWINGS**

FEBRUARY 1990

JAPAN INTERNATIONAL COOPERATION AGENCY

SSS

90-019(3/4)

THE REPUBLIC OF VENEZUELA

STUDY
ON
CHAMA RIVER BASIN CONSERVATION PROJECT

VOLUME 3

DRAWINGS

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FEBRUARY 1990

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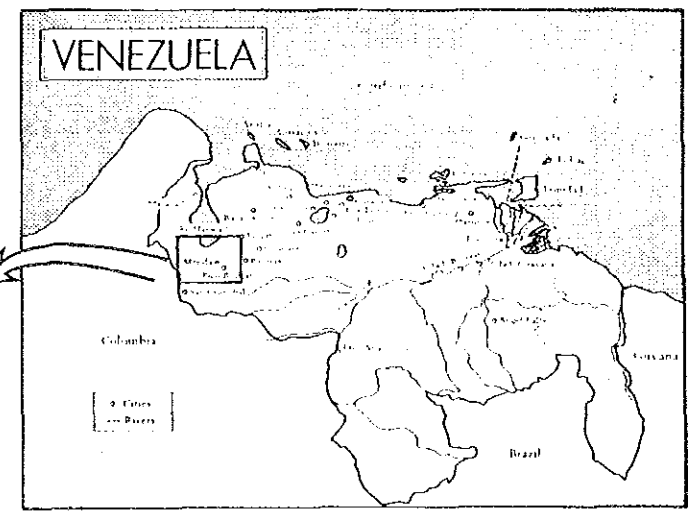
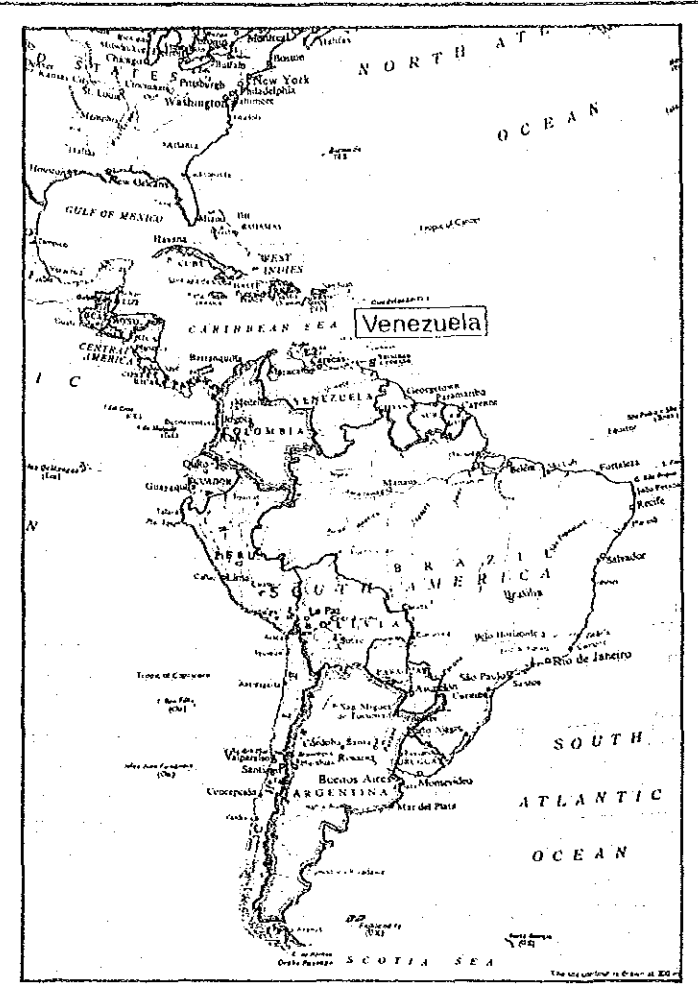
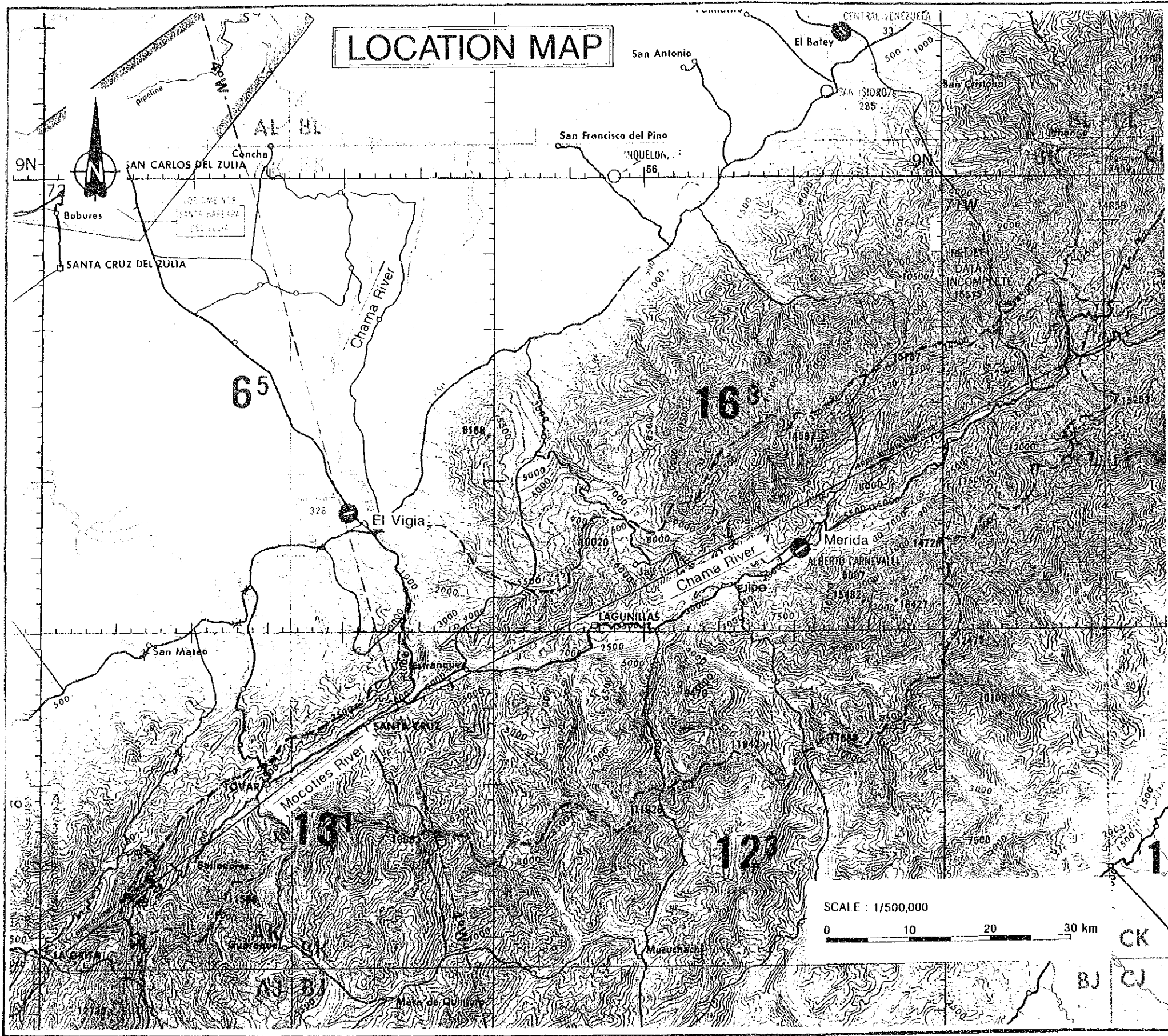
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STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT

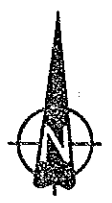
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GENERAL



THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Surveyed by:	G-1 LOCATION MAP		
Calculated by:			
Drawn by:			
Checked by:	Designed by:	Drawn by:	Date:
JAPAN INTERNATIONAL COOPERATION AGENCY			



Flood Control (Basin Wide Project)

River Improvement	53.4km
Reinforcement of Existing Dike	10.4km
Groundsill	1 nos
Puerto Chama Bridge Extention	1 nos

Sediment Control (Baisin Wide Project)

Sabo Dam	10 nos
Continuous Dam	110 nos
Retaining Wall for Gully Prevention	1,400 nos

Flood Control (Local Project)

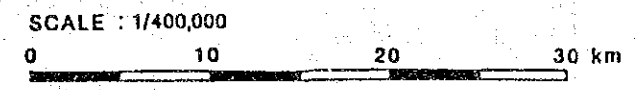
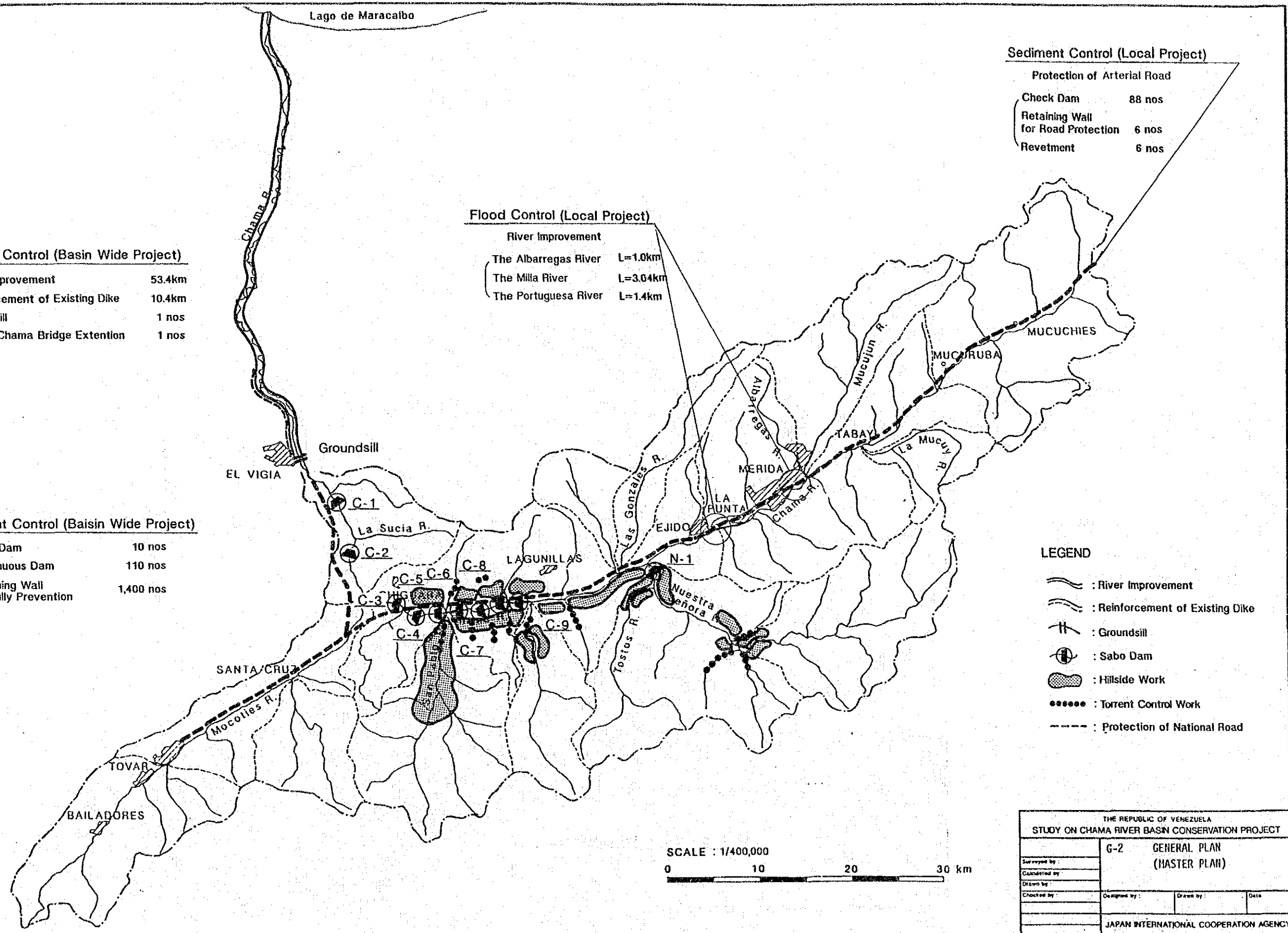
River Improvement

The Albarregas River	L=1.0km
The Milla River	L=3.04km
The Portuguesa River	L=1.4km

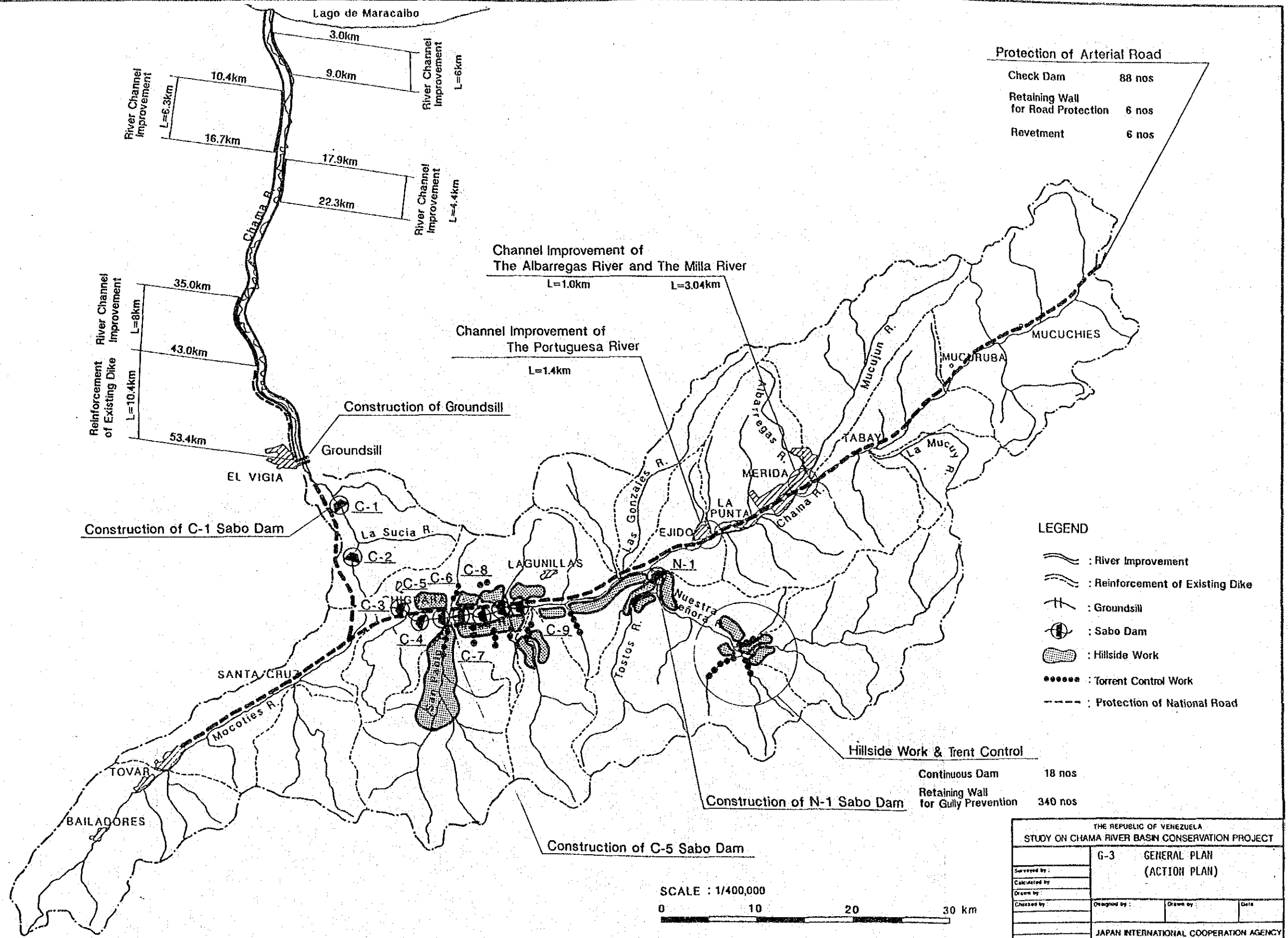
Sediment Control (Local Project)

Protection of Arterial Road

Check Dam	88 nos
Retaining Wall for Road Protection	6 nos
Revetment	6 nos



THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
G-2		GENERAL PLAN	
		(MASTER PLAN)	
Surveyed by:		Designed by:	
Calculated by:		Drew by:	
Drawn by:		Date:	
Checked by:			
JAPAN INTERNATIONAL COOPERATION AGENCY			



Protection of Arterial Road

Check Dam	88 nos
Retaining Wall for Road Protection	6 nos
Revetment	6 nos

LEGEND

- : River Improvement
- : Reinforcement of Existing Dike
- : Groundsill
- : Sabo Dam
- : Hillside Work
- : Torrent Control Work
- : Protection of National Road

Hillside Work & Trent Control

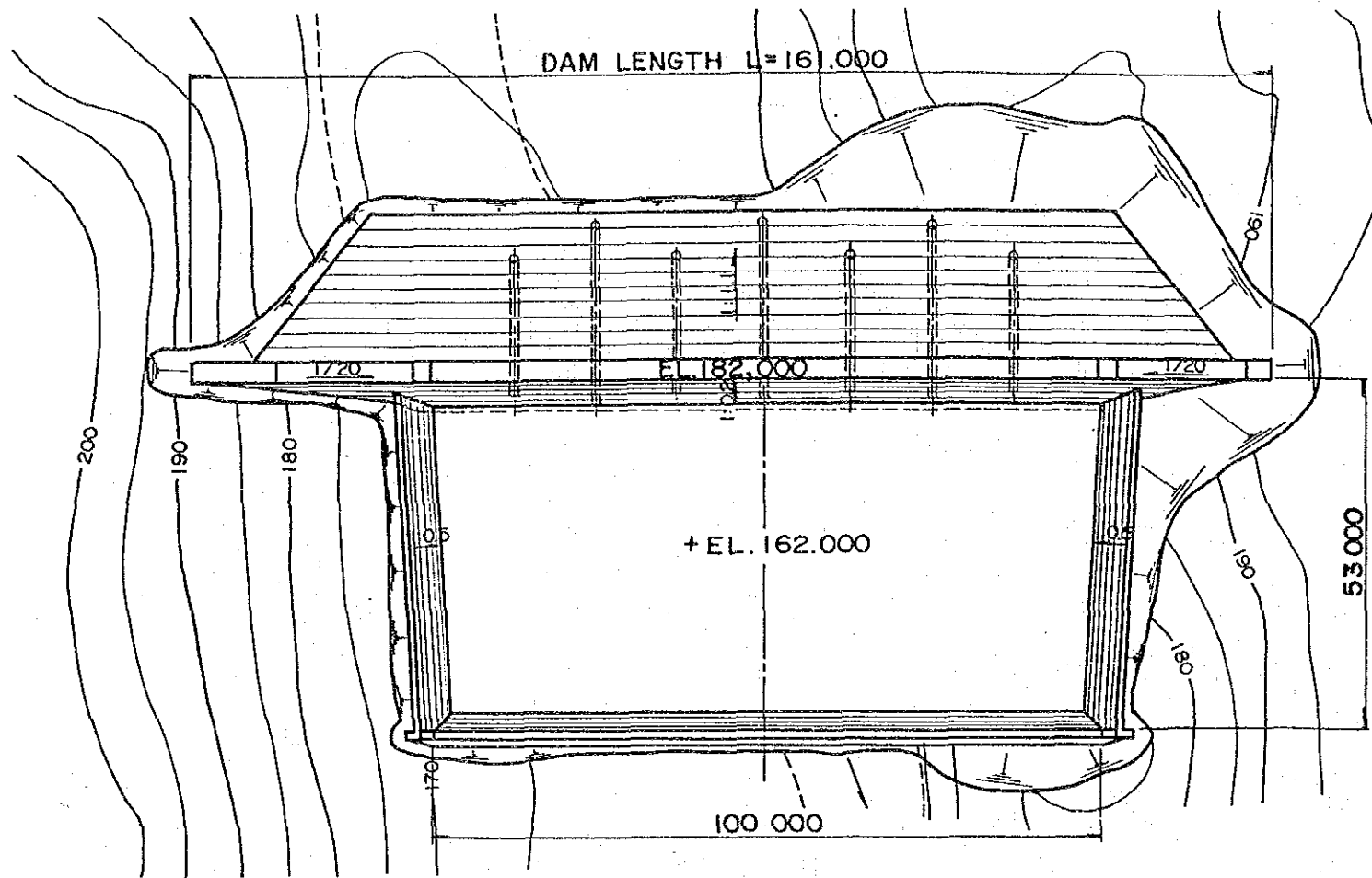
Continuous Dam	18 nos
Retaining Wall for Gully Prevention	340 nos



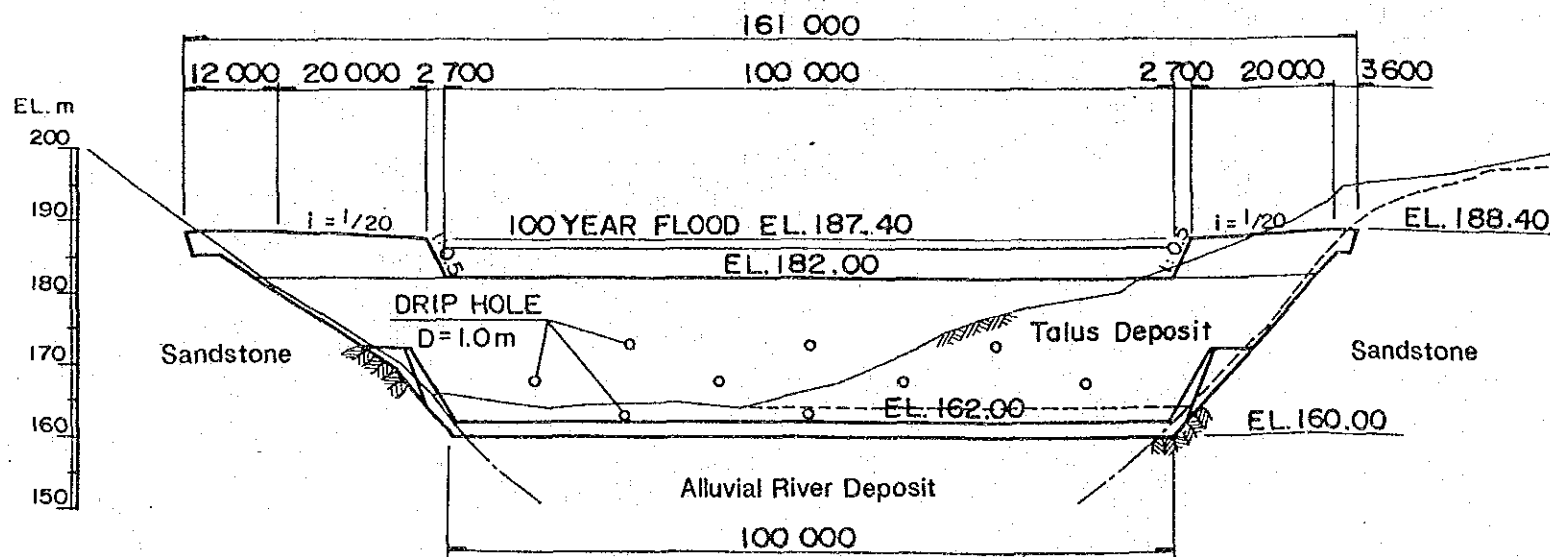
THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
G-3 GENERAL PLAN		(ACTION PLAN)	
Surveyed by:	Designed by:	Drawn by:	Date:
Calculated by:			
Drawn by:			
Checked by:			
JAPAN INTERNATIONAL COOPERATION AGENCY			

SEDIMENT CONTROL

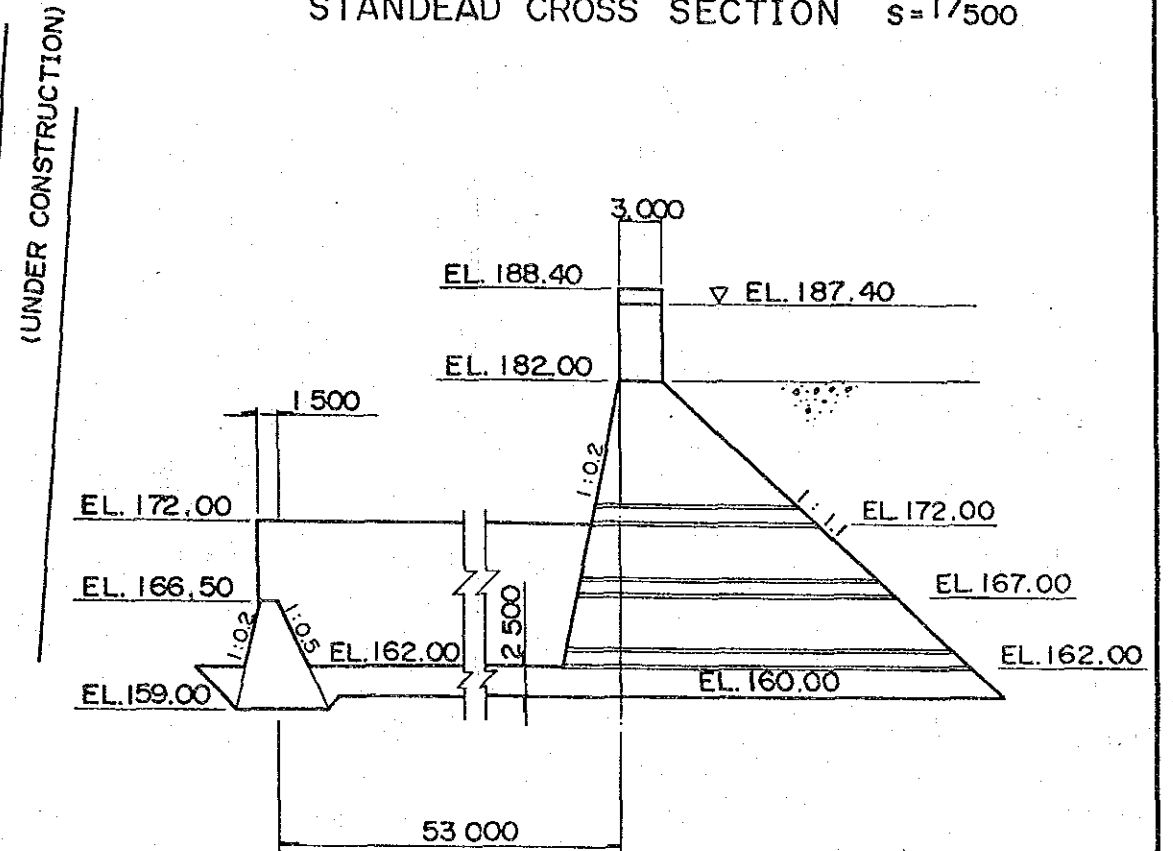
PLAN $s = 1/1000$



FRONT VIEW $s = 1/1000$

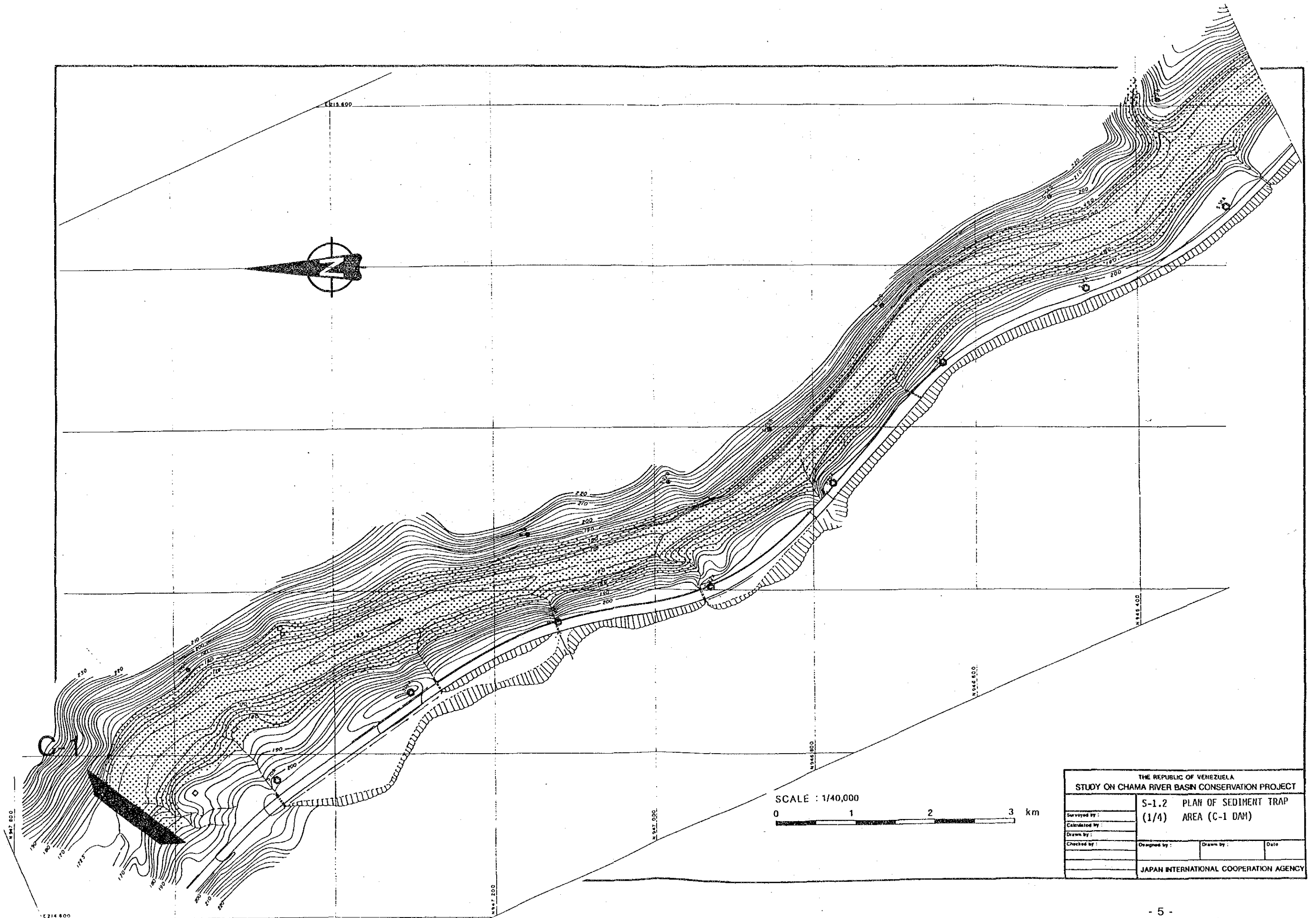


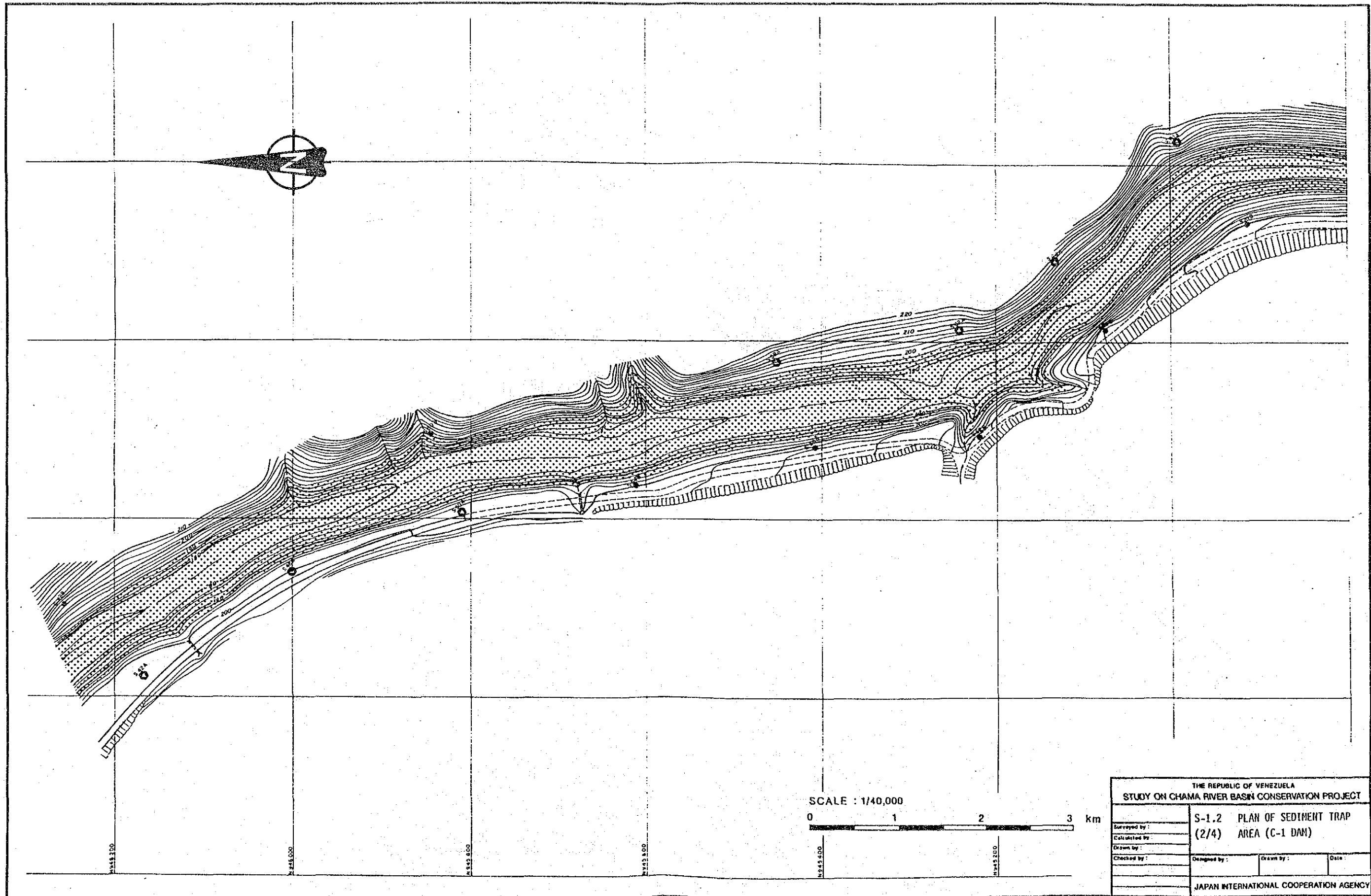
STANDARD CROSS SECTION $s = 1/500$



(UNDER CONSTRUCTION)

THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
S-1.1 PLAN, FRONT VIEW AND CROSS SECTION (C-1 DAM)			
Surveyed by:		Designed by:	Date:
Calculated by:		Drawn by:	
Drawn by:			
Checked by:			
JAPAN INTERNATIONAL COOPERATION AGENCY			

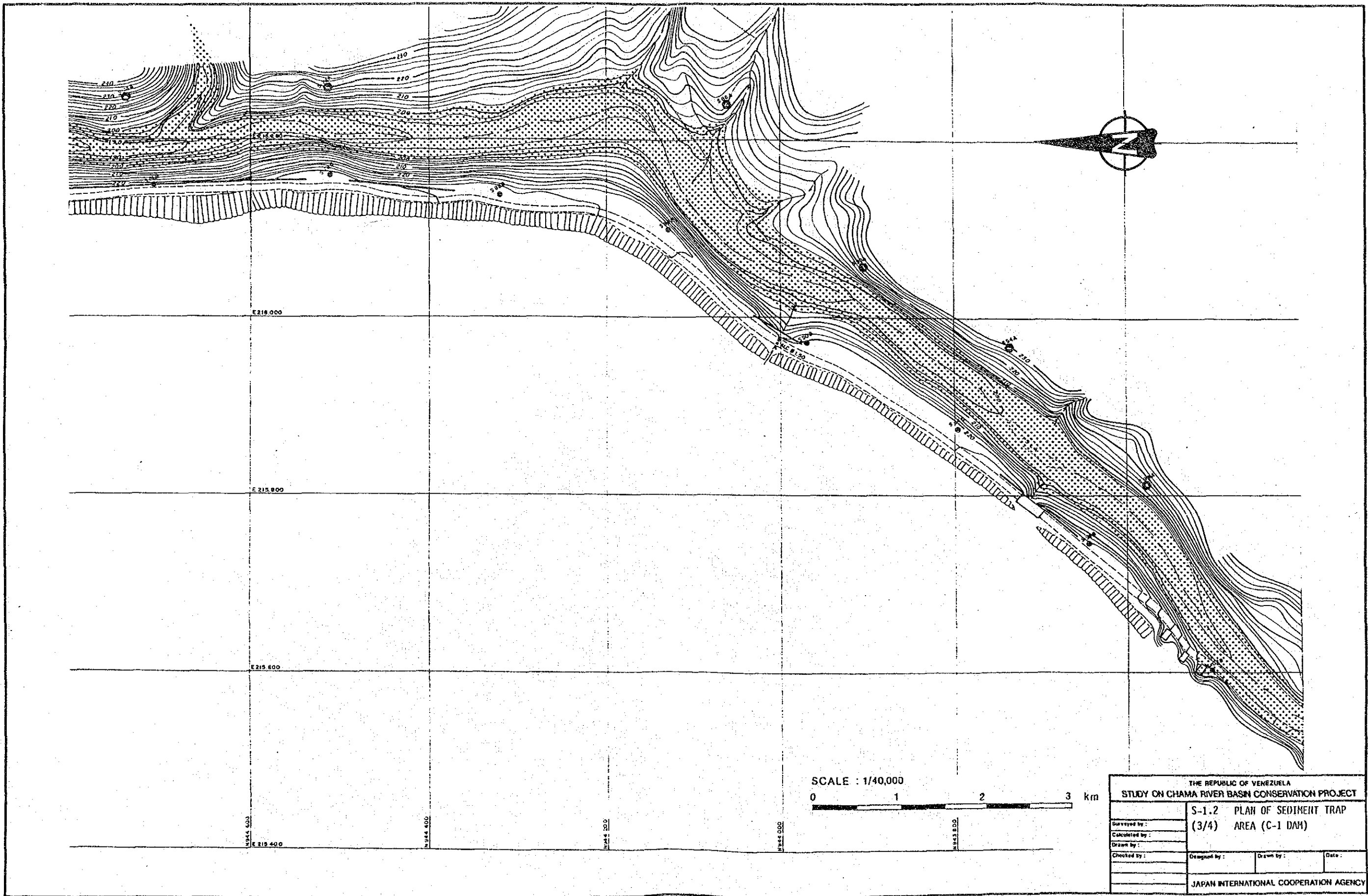


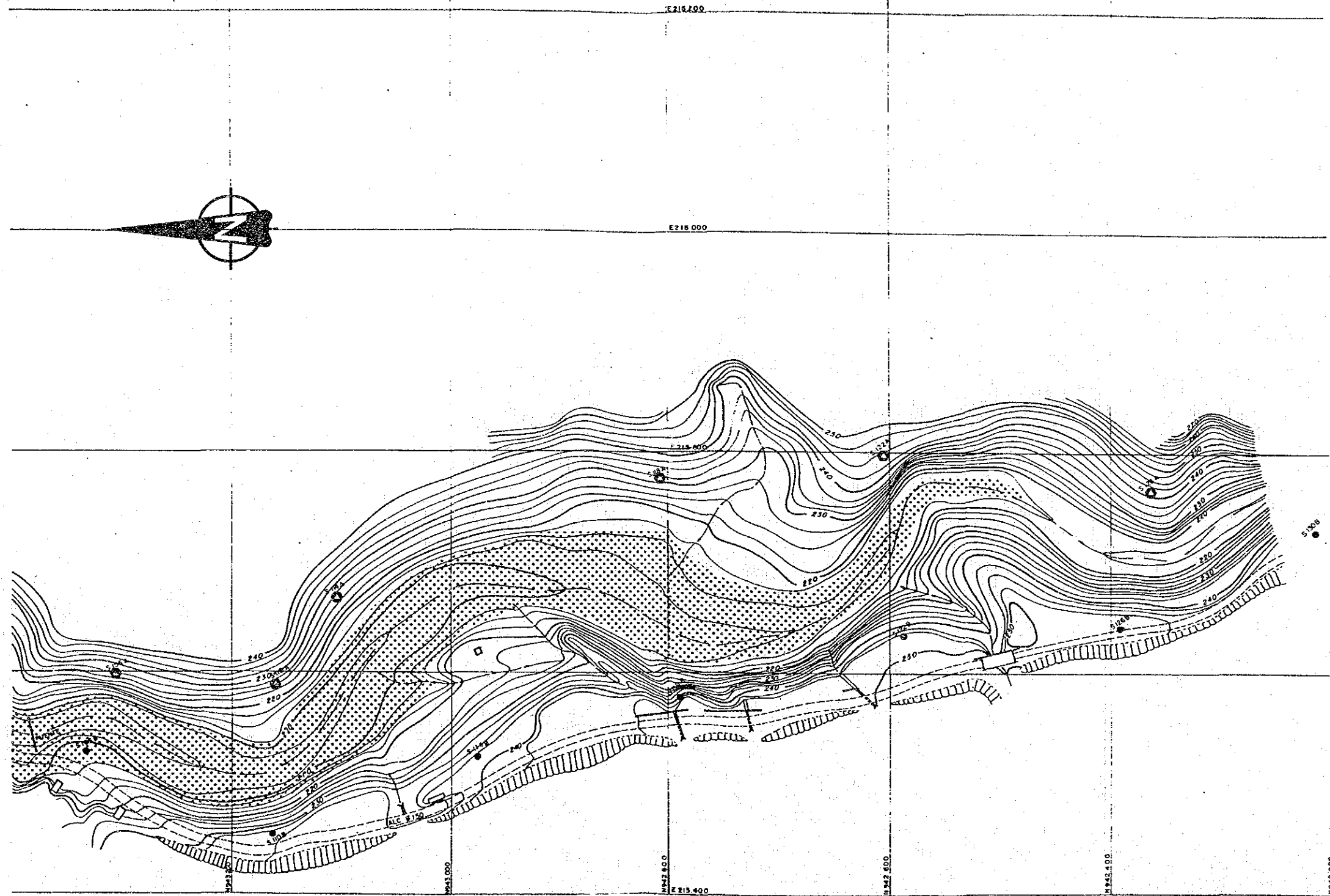


SCALE : 1/40,000

0 1 2 3 km

THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
S-1.2 PLAN OF SEDIMENT TRAP		(2/4) AREA (C-1 DAM)	
Surveyed by :	Designed by :	Drawn by :	Date :
Checked by :			
JAPAN INTERNATIONAL COOPERATION AGENCY			



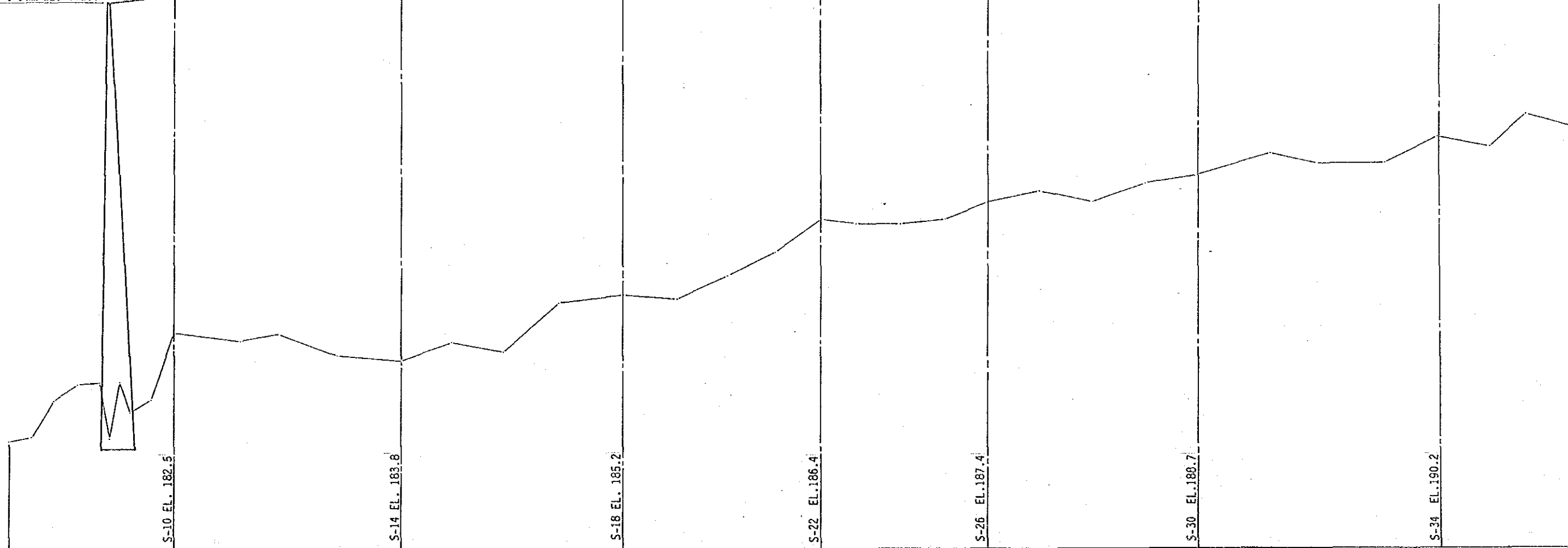


SCALE : 1/40,000
 0 1 2 3 km

THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Surveyed by :	S-1.2 PLAN OF SEDIMENT TRAP		
Calculated by :	(4/4) AREA (C-1 DAM)		
Drawn by :			
Checked by :	Designed by :	Drawn by :	Date :
JAPAN INTERNATIONAL COOPERATION AGENCY			

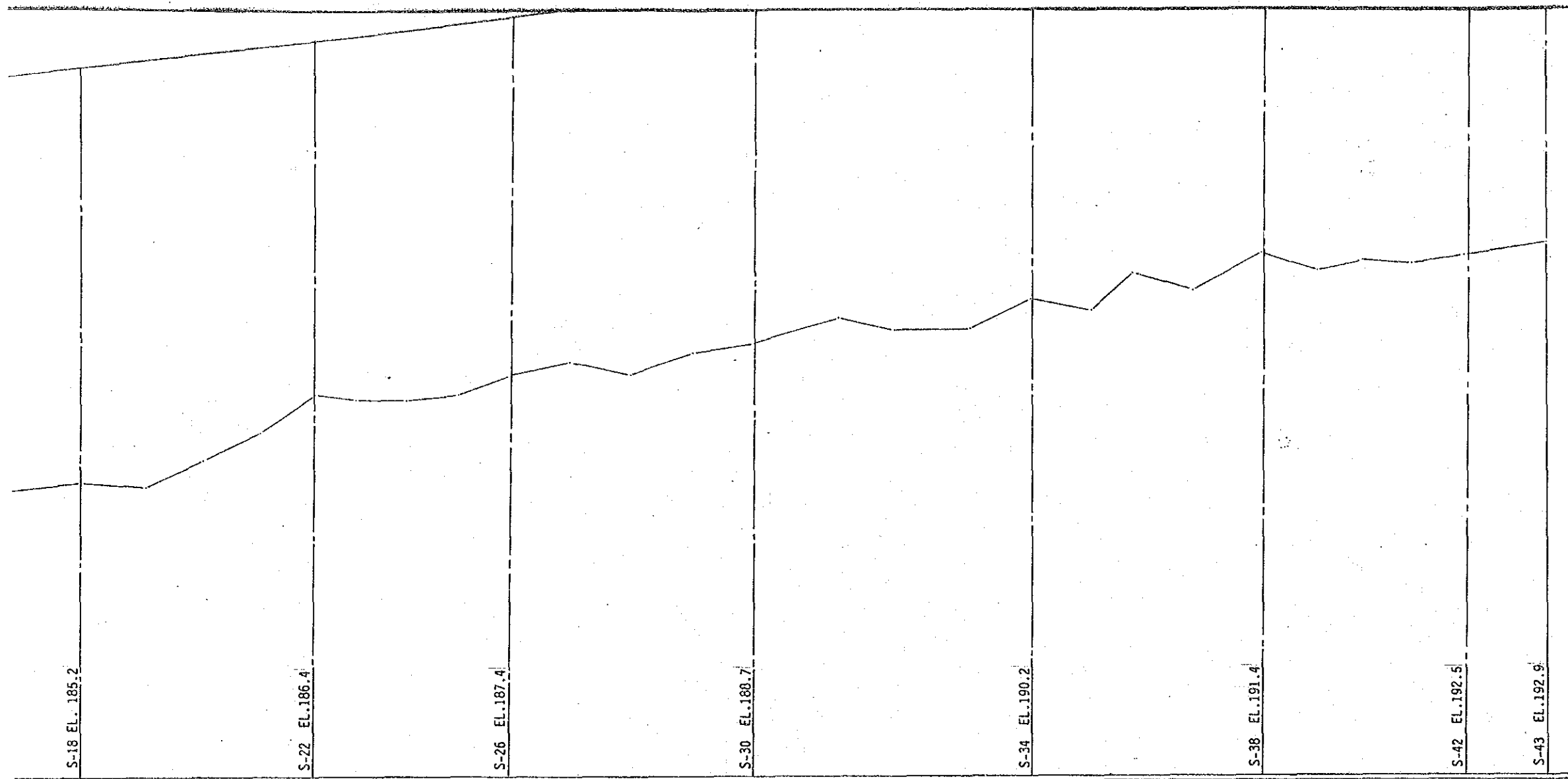
C-1 Dam EL. 182.0

1=1/160.5



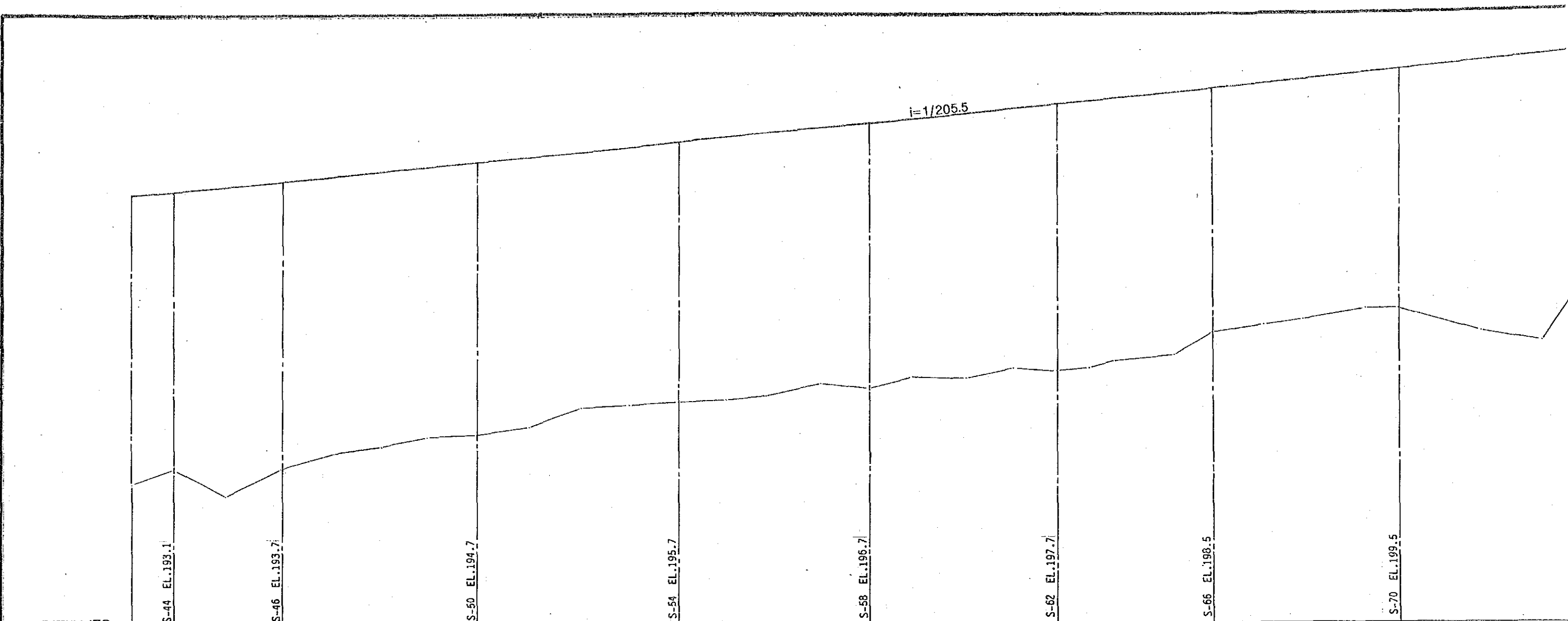
DATUM 155

STATION No	DISTANCE (m)	ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)			DESIGN ELEVATION (m)		
			RIVER BED	RIGHT BANK CROWN	LEFT BANK CROWN	RIVER BED	HIGH WATER LEVEL	BANK CROWN
S-1	21.00	0+000.00	160.33					
S-2	22.40	0+021.00	160.58					
S-3	23.00	0+043.70	162.35					
S-4	21.00	0+066.40	163.15					
S-5	10.00	0+087.40	163.20					
S-6	9.50	0+097.40	160.50					
S-7	11.00	0+108.90	163.32					
S-8	21.00	0+117.90	161.80					
S-9	21.80	0+138.90	162.40					
S-10	63.50	0+160.70	165.69				S-10 EL. 182.5	
S-11	38.00	0+226.20	165.31					
S-12	37.00	0+264.20	165.84					
S-13	61.00	0+321.20	164.55					
S-14	30.00	0+382.20	164.30					S-14 EL. 183.8
S-15	31.50	0+432.20	165.21					
S-16	23.50	0+482.70	164.73					
S-17	64.00	0+537.20	167.15					
S-18	53.00	0+600.20	167.51					S-18 EL. 185.2
S-19	48.50	0+654.20	167.32					
S-20	49.00	0+702.70	168.50					
S-21	44.00	0+751.70	169.65					
S-22	33.00	0+795.70	171.27					S-22 EL. 186.4
S-23	44.00	0+828.70	171.06					
S-24	44.00	0+872.70	171.02					
S-25	43.50	0+916.70	171.23					
S-26	50.50	0+960.20	172.10					S-26 EL. 187.4
S-27	32.00	1+000.70	172.63					
S-28	33.50	1+062.70	172.10					
S-29	49.00	1+116.20	173.03					
S-30	71.50	1+185.20	173.42					S-30 EL. 188.7
S-31	48.50	1+236.70	174.50					
S-32	64.50	1+285.20	173.97					
S-33	51.00	1+349.70	174.03					
S-34	51.50	1+405.70	173.32					S-34 EL. 190.2
S-35	35.00	1+452.20	174.80					
S-36	51.50	1+487.20	176.39					

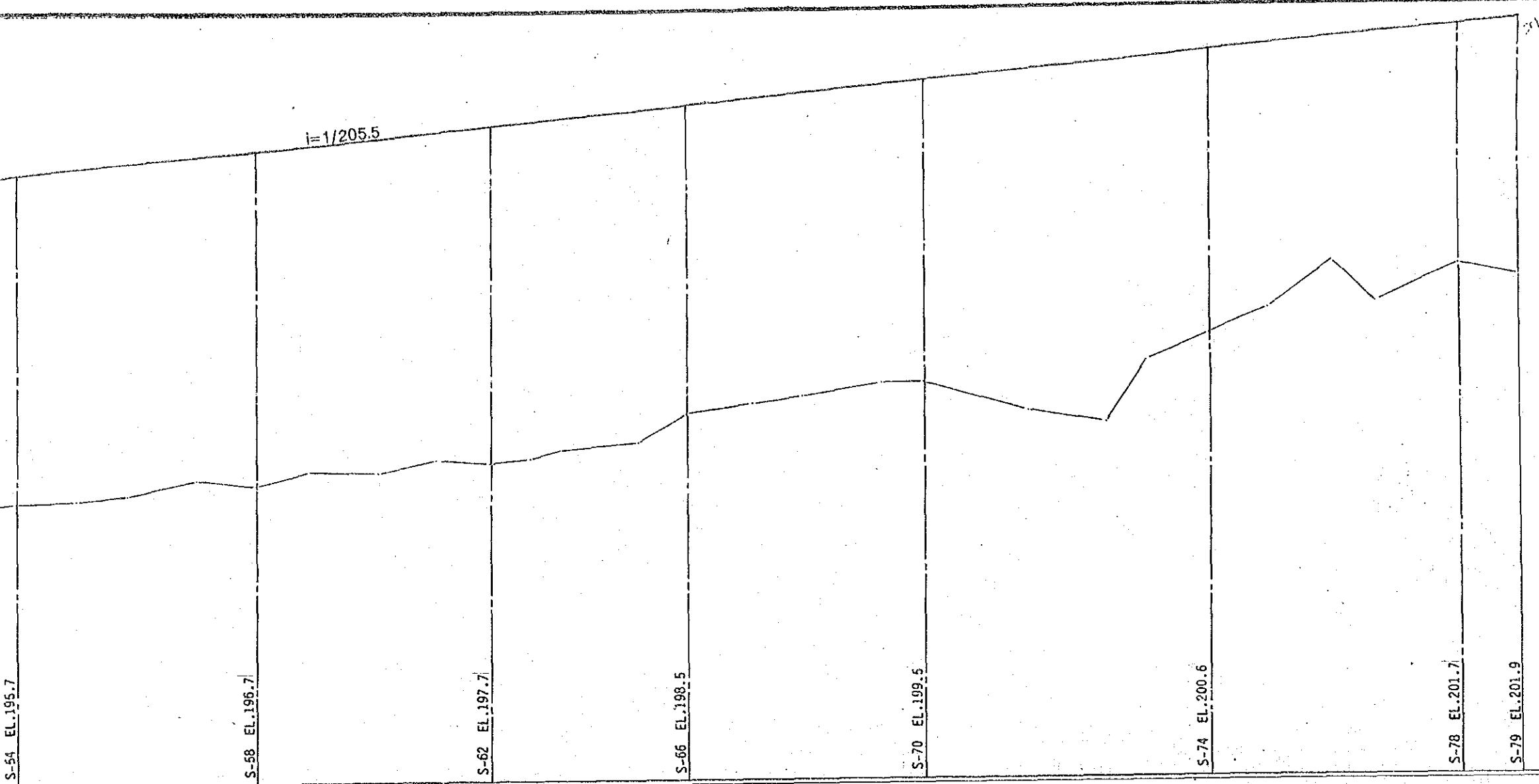


S 18	53.00	0+601.20	167.51
S 19	48.50	0+654.20	167.32
S 20	49.00	0+702.70	168.50
S 21	44.00	0+751.70	169.65
S 22	33.00	0+795.70	171.27
S 23	44.00	0+828.70	171.06
S 24	44.00	0+872.70	171.02
S 25	43.50	0+916.70	171.23
S 26	50.50	0+960.20	172.10
S 27	52.00	1+010.70	172.63
S 28	53.50	1+062.70	172.10
S 29	49.00	1+116.20	173.03
S 30	71.50	1+165.20	173.42
S 31	46.50	1+235.70	174.50
S 32	64.50	1+285.20	173.97
S 33	51.00	1+349.70	174.05
S 34	51.50	1+400.70	175.32
S 35	55.00	1+452.20	174.60
S 36	51.50	1+487.20	176.39
S 37	60.00	1+538.70	175.66
S 38	48.50	1+598.70	177.19
S 39	36.50	1+643.20	176.50
S 40	42.00	1+683.70	176.87
S 41	46.00	1+723.70	176.74
S 42	70.50	1+771.70	177.09
S 43	44.50	1+842.20	177.55

THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Scale H 1:4,000 V 1:200	S-1.3 LONGITUDINAL PROFILE (1/4) OF SEDIMENT TRAP AREA (C-1 DAM)		
SURVEYED PROTONAL C.A.			
CALCULATED PROTONAL C.A.			
PROJECT S KOFMO	DESIGNED BY	DRAWN BY	DATE
JAPAN INTERNATIONAL COOPERATION AGENCY			

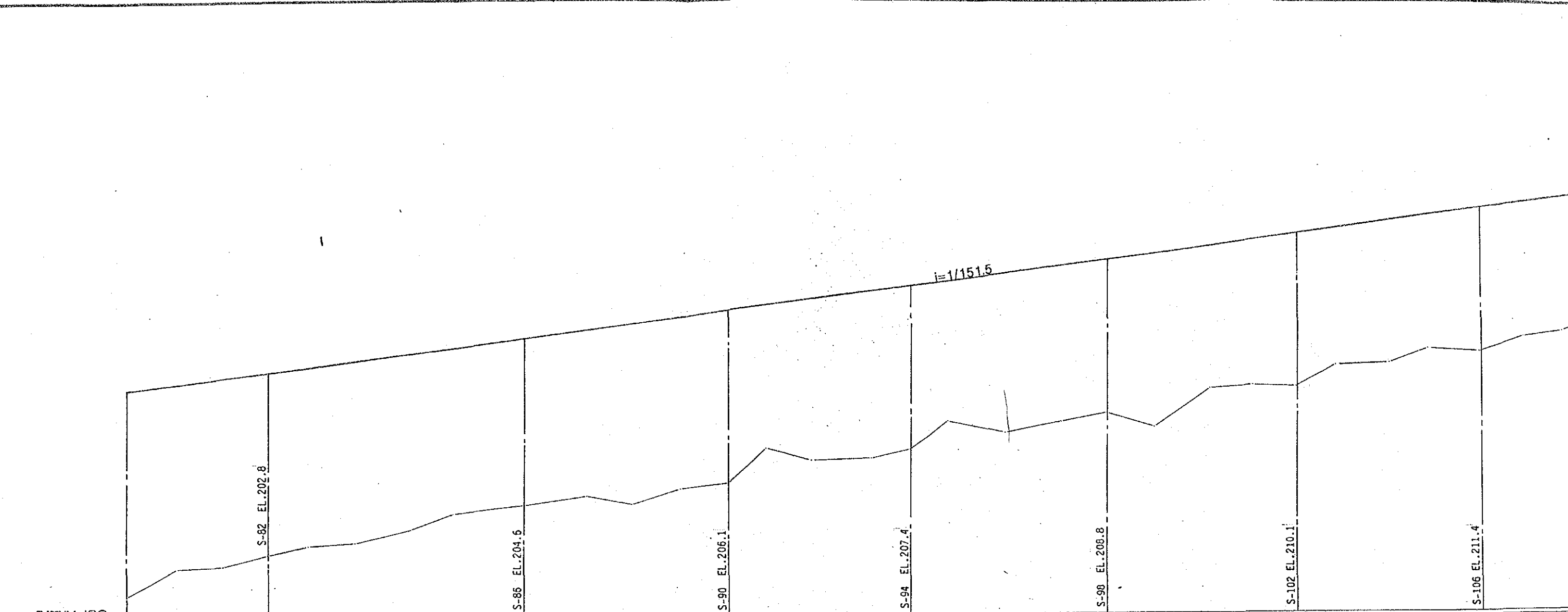


STATION N°	DISTANCE (m)	ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)			DESIGN ELEVATION (m)		
			RIVER BED	RIGHT BANK CROWN	LEFT BANK CROWN	RIVER BED	HIGH WATER LEVEL	BANK CROWN
S-43	44.30	184220	177.58					
S-44	53.30	184650	178.58					
S-45	57.50	184900	176.97					
S-46	56.00	184750	178.41					
S-47	32.00	240350	179.22					
S-48	47.00	210550	179.58					
S-49	51.00	216250	180.11					
S-50	56.50	220350	180.22					
S-51	32.50	218600	180.66					
S-52	51.00	210250	181.64					
S-53	51.50	218650	181.76					
S-54	50.00	214150	181.85					
S-55	42.00	214650	182.04					
S-56	58.00	215070	182.22					
S-57	47.50	215600	182.88					
S-58	46.50	216150	182.63					
S-59	58.50	216620	183.21					
S-60	50.50	217200	183.13					
S-61	45.50	217110	183.67					
S-62	34.50	2181650	183.49					
S-63	26.70	2185100	183.66					
S-64	64.80	2187700	183.99					
S-65	40.00	2194200	184.27					
S-66	37.00	2198200	185.34					
S-67	42.30	2193950	185.83					
S-68	65.00	2198150	186.24					
S-69	36.50	2114650	186.82					
S-70	89.00	2183000	186.81					
S-71	65.00	2127200	189.60					
S-72	34.50	2133700	185.00					



S 54	50.00	2+415.00	181.93
S 55	42.00	2+465.00	182.04
S 56	59.00	2+507.00	182.22
S 57	47.50	2+556.00	182.84
S 58	48.50	2+613.50	182.83
S 59	58.50	2+682.00	183.21
S 60	50.50	2+725.50	183.13
S 61	45.50	2+771.00	183.67
S 62	34.50	2+816.50	183.45
S 63	26.70	2+851.00	183.66
S 64	64.50	2+877.70	183.99
S 65	40.00	2+942.20	184.27
S 66	57.00	2+982.20	185.54
S 67	42.30	3+039.20	185.93
S 68	65.00	3+081.50	186.24
S 69	36.50	3+146.20	186.82
S 70	85.00	3+283.00	186.81
S 71	65.00	3+272.00	185.60
S 72	34.50	3+337.00	185.02
S 73	52.50	3+371.50	187.86
S 74	50.00	3+424.00	188.74
S 75	54.20	3+474.00	189.80
S 76	56.50	3+528.20	191.70
S 77	71.00	3+584.70	190.07
S 78	48.00	3+635.70	191.62
S 79	50.00	3+683.70	191.05

THE REPUBLIC OF VENEZUELA		
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT		
Scale H 1:4,000 V 1:200	S-1.3 LONGITUDINAL PROFILE (2/4) OF SEDIMENT TRAP AREA (C-1 DAM)	
SURVEYED: PROTOVAL C.A.	DESIGNED BY:	DATE:
CALCULATED: PROTOVAL C.A.	DRAWN BY:	
INCH: PROTOVAL C.A.		
REVISED: S20/80		
JAPAN INTERNATIONAL COOPERATION AGENCY		



STATION N ^o	DISTANCE (m)	ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)			DESIGN ELEVATION (m)		
			RIVER BED	RIGHT BANK CROWN	LEFT BANK CROWN	RIVER BED	HIGH WATER LEVEL	BANK CROWN
S-79	50.20	31683.70	191.05					
S-80	48.50	31735.90	192.51					
S-81	46.00	31782.40	192.59					
S-82	43.00	31828.40	193.21					
S-83	50.20	31871.40	193.68					
S-84	56.50	31921.60	193.87					
X1	47.00	31978.10	194.60					
S-85	76.00	40251.0	195.39					
S-86	65.00	41101.0	195.62					
S-87	49.00	41166.10	196.31					
S-88	51.00	41215.10	195.87					
S-89	53.20	41266.10	196.68					
S-90	40.20	41318.30	196.97					
S-91	49.00	41355.50	196.60					
S-92	65.00	41408.50	198.16					
S-93	40.50	41473.50	198.28					
S-94	41.50	41514.20	198.72					
S-95	61.00	41555.90	200.23					
S-96	61.00	41616.50	199.64					
S-97	50.00	41677.50	200.23					
S-98	50.50	41727.50	200.69					
S-99	58.00	41778.00	199.92					
S-100	47.50	41836.00	202.01					
S-101	48.00	41893.50	202.14					
S-102	51.00	41931.50	202.05					
S-103	47.00	41982.50	203.20					
S-104	42.00	51029.50	203.24					
S-105	56.00	51071.50	204.02					
S-106	48.50	51127.50	203.84					
S-107	45.00	51176.00	204.62					
S-108	47.00	51221.00	204.91					

S-82 EL. 202.8

S-86 EL. 204.5

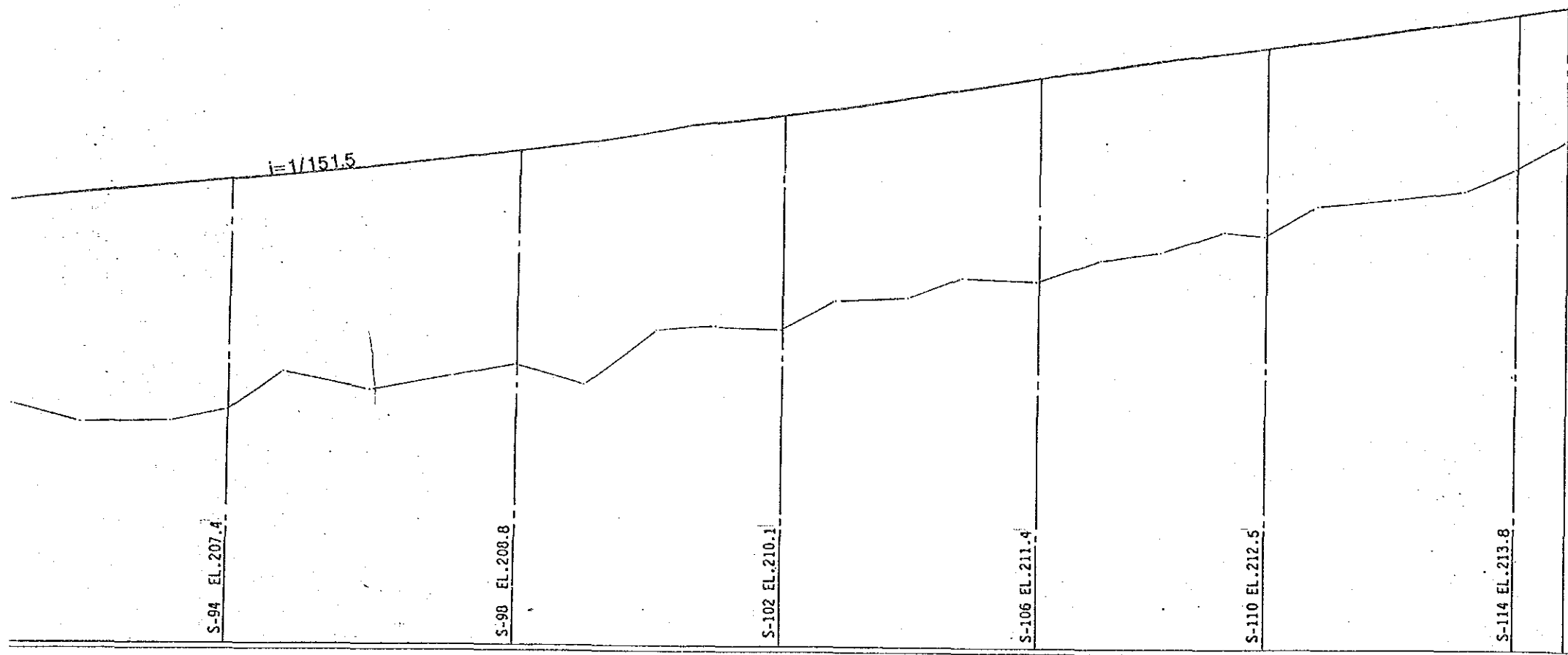
S-90 EL. 206.1

S-94 EL. 207.4

S-98 EL. 208.8

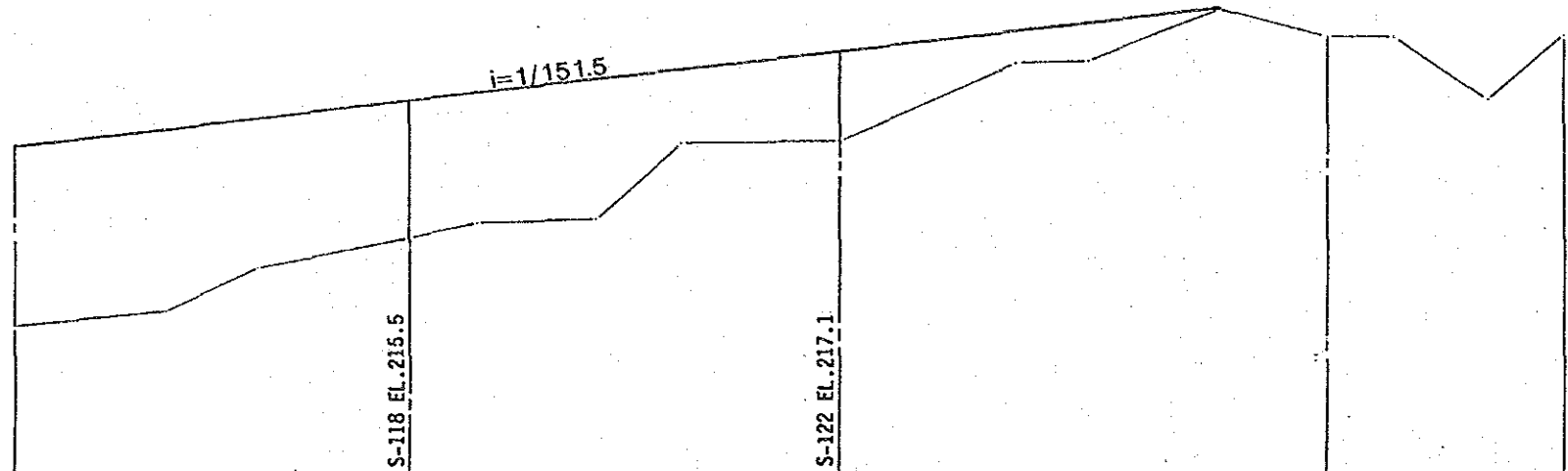
S-102 EL. 210.1

S-106 EL. 211.4



S-92	65.00	4+065.00	198.76
S-93	40.50	4+473.50	198.28
S-94	41.50	4+514.00	198.72
S-95	61.00	4+585.50	200.23
S-96	61.00	4+616.50	199.64
S-97	50.00	4+677.50	200.23
S-98	50.50	4+727.50	200.69
S-99	38.00	4+778.00	199.82
S-100	47.50	4+836.00	202.01
S-101	48.00	4+883.50	202.14
S-102	51.00	4+931.50	202.05
S-103	47.00	4+982.50	203.20
S-104	42.00	5+029.50	203.24
S-105	56.00	5+071.50	204.02
S-106	48.50	5+127.50	203.84
S-107	45.00	5+176.00	204.62
S-108	47.00	5+221.00	204.91
S-109	30.00	5+268.00	205.71
S-110	41.50	5+298.00	205.57
S-111	58.00	5+339.50	206.75
S-112	51.00	5+397.50	207.02
S-113	37.00	5+446.50	207.55
X-1	41.50	5+485.50	208.10
S-115	63.00	5+527.00	209.26

THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Scale H 1:4,000 V 1:200	S-1.3 LONGITUDINAL PROFILE (3/4) OF SEDIMENT TRAP AREA (C-1 DAM)		
DESIGNED BY PROYECTOAL C.A.	DRAWN BY		
CHECKED BY PROYECTOAL C.A.	DATE		
APPROVED BY S. KOHNO	JAPAN INTERNATIONAL COOPERATION AGENCY		



STATION N°	DISTANCE (m)	ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)			DESIGN ELEVATION (m)		
			RIVER BED	RIGHT BANK CROWN	LEFT BANK CROWN	RIVER BED	HIGH WATER LEVEL	BANK CROWN
S-115	0.00	0.00	209.26					
S-116	5.00	5.00	209.64					
S-117	8.40	8.40	210.83					
S-118	37.00	37.00	211.64					
S-119	63.00	63.00	212.05					
S-120	48.00	111.00	212.13					
S-121	8.00	119.00	214.25					
S-122	97.00	216.00	214.32					
S-123	41.00	257.00	216.43					
S-124	71.00	328.00	216.48					
S-125	60.00	388.00	217.29					
S-126	37.00	425.00	217.11					
S-127	52.00	477.00	217.10					
S-128	42.00	519.00	215.39					
S-129		561.00	217.20					

THE REPUBLIC OF VENEZUELA

STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT

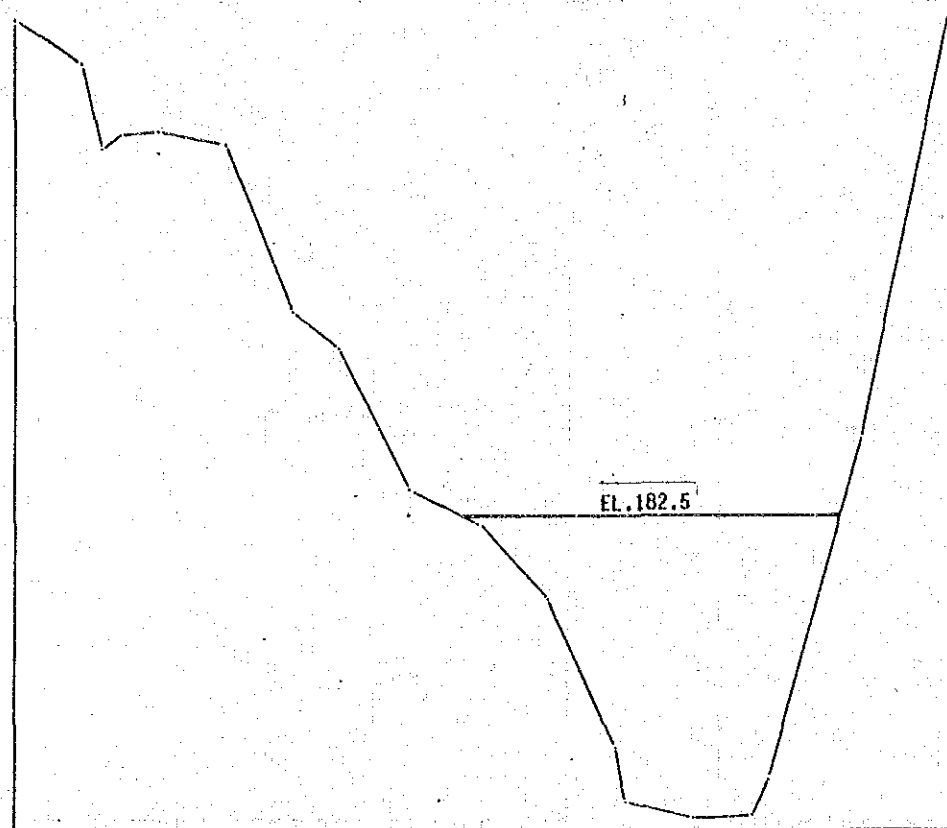
Scale H 1:4,000
V 1:200

S-1.3 LONGITUDINAL PROFILE
(4/4) OF SEDIMENT TRAP AREA
(C-1 DAM)

DESIGNED BY	DRAWN BY	DATE
S. KONO		

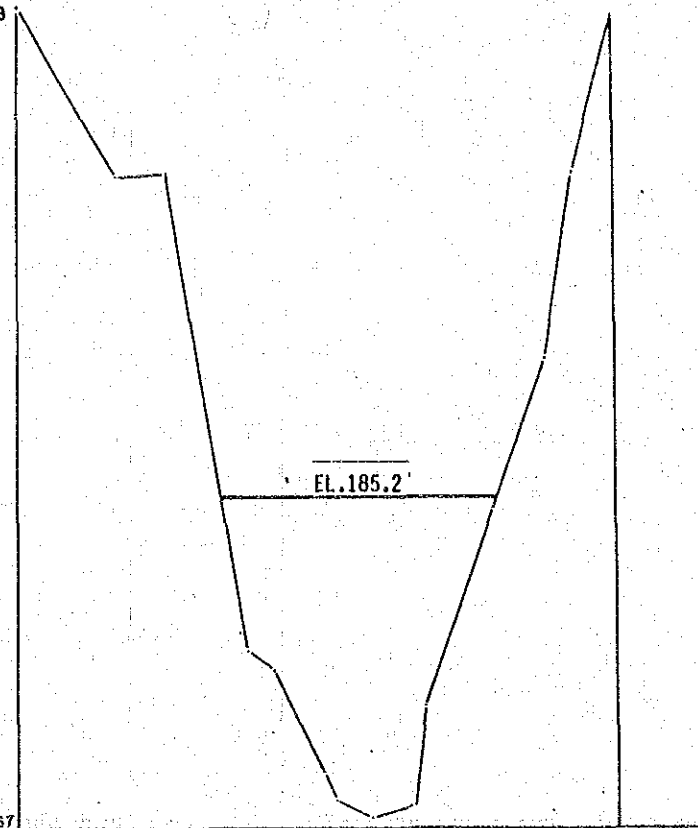
JAPAN INTERNATIONAL COOPERATION AGENCY

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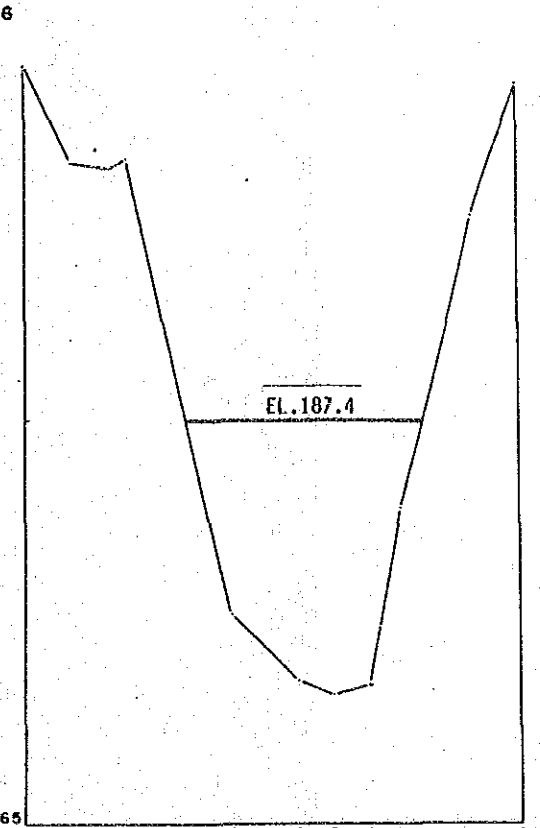
DATUM 164	
ACCUMULATIVE DISTANCE (m)	0+000.00
PRESENT ELEVATION (m)	182.50
DESIGN ELEVATION (m)	182.50

S-18



DATUM 167	
ACCUMULATIVE DISTANCE (m)	0+000.00
PRESENT ELEVATION (m)	185.20
DESIGN ELEVATION (m)	185.20

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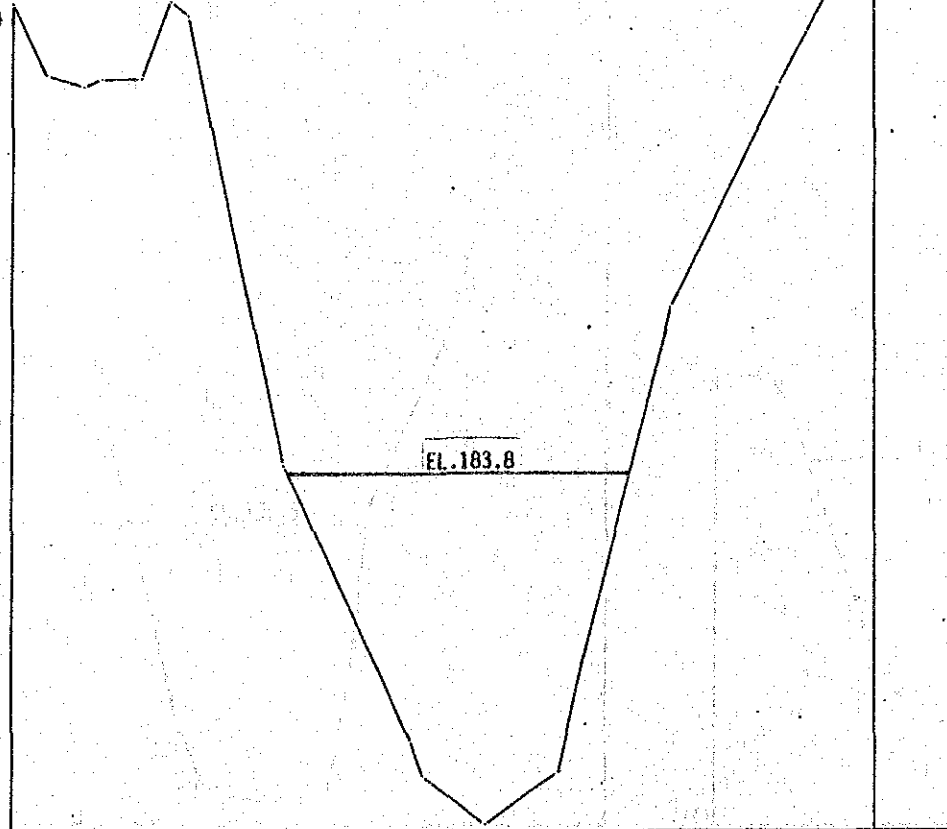
DATUM 165	
ACCUMULATIVE DISTANCE (m)	0+000.00
PRESENT ELEVATION (m)	187.40
DESIGN ELEVATION (m)	187.40

S-34



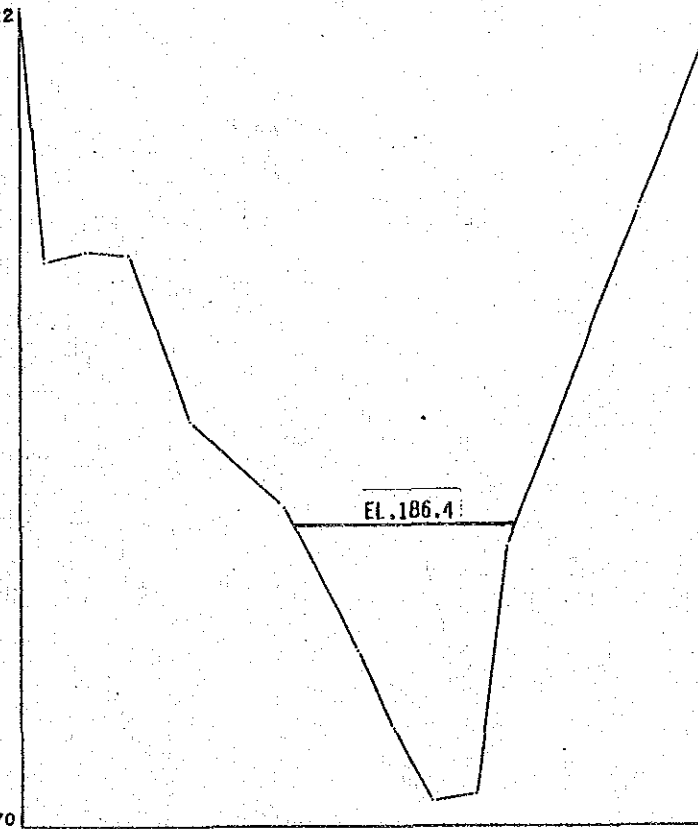
DATUM 170	
ACCUMULATIVE DISTANCE (m)	0+000.00
PRESENT ELEVATION (m)	187.40
DESIGN ELEVATION (m)	187.40

S-14



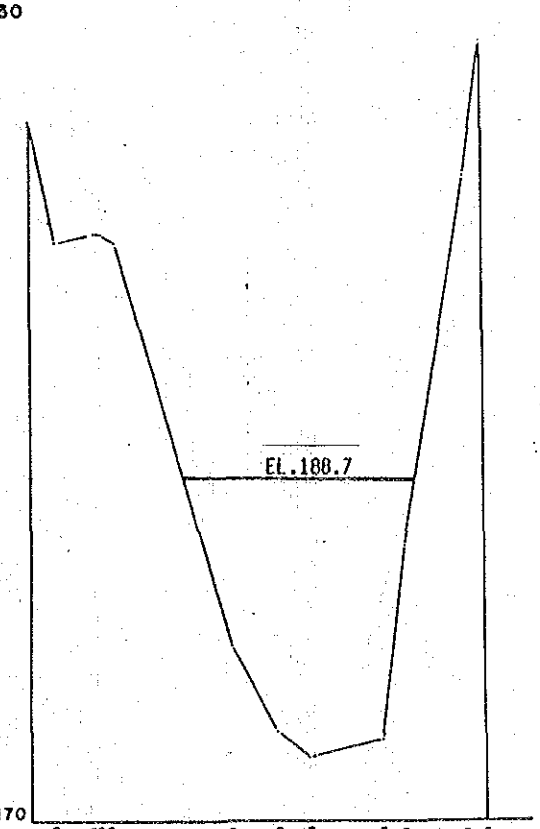
DATUM 164	
ACCUMULATIVE DISTANCE (m)	0+000.00
PRESENT ELEVATION (m)	183.80
DESIGN ELEVATION (m)	183.80

S-22

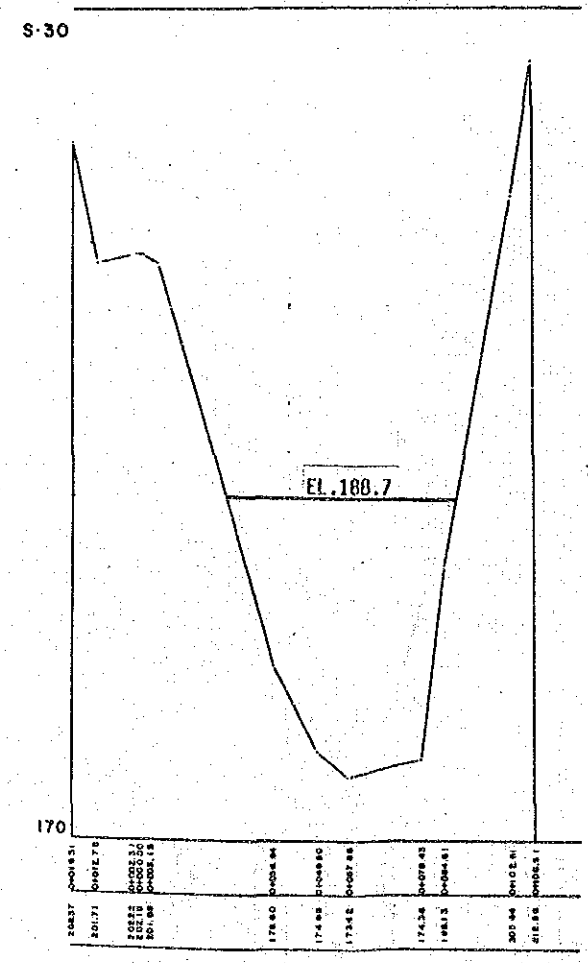
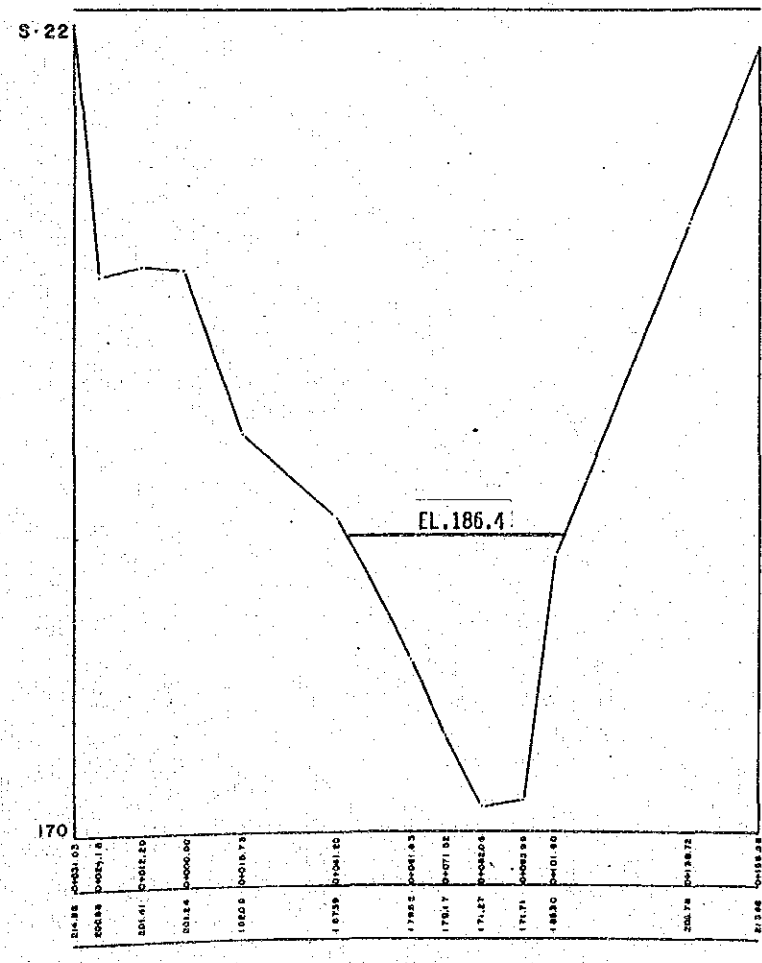
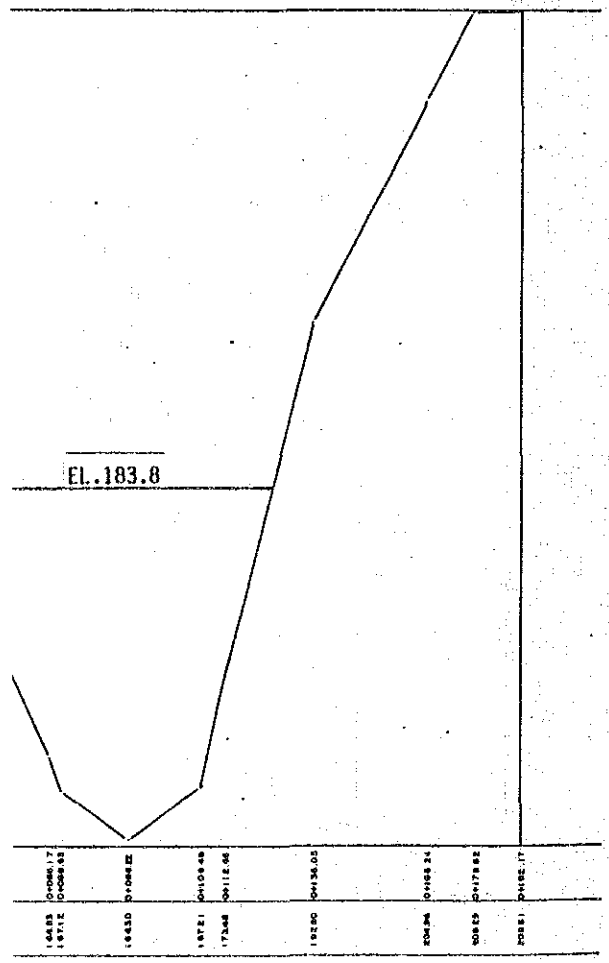
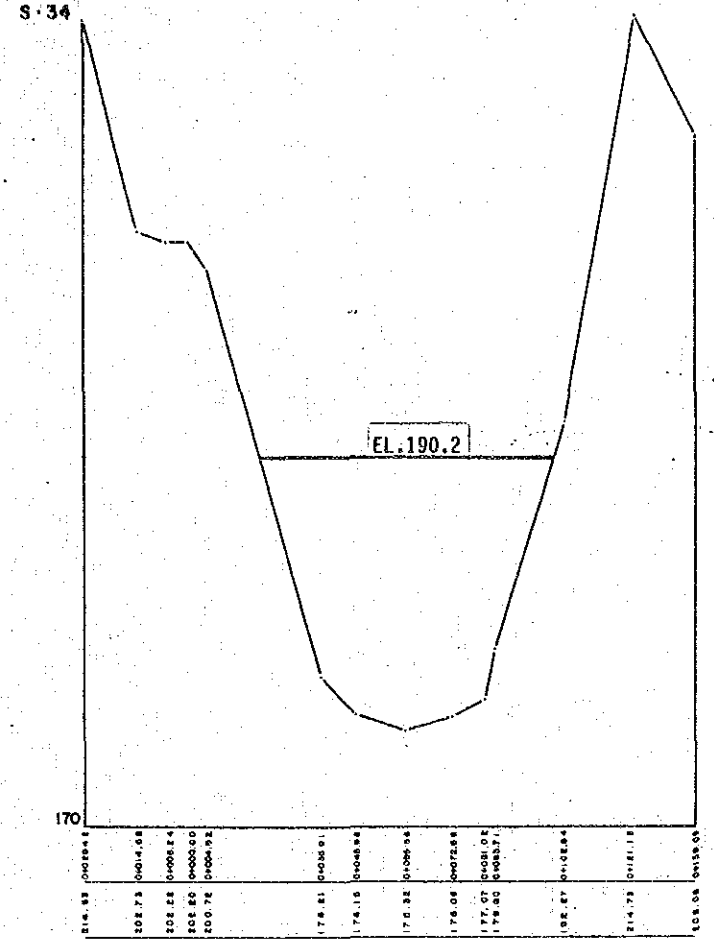
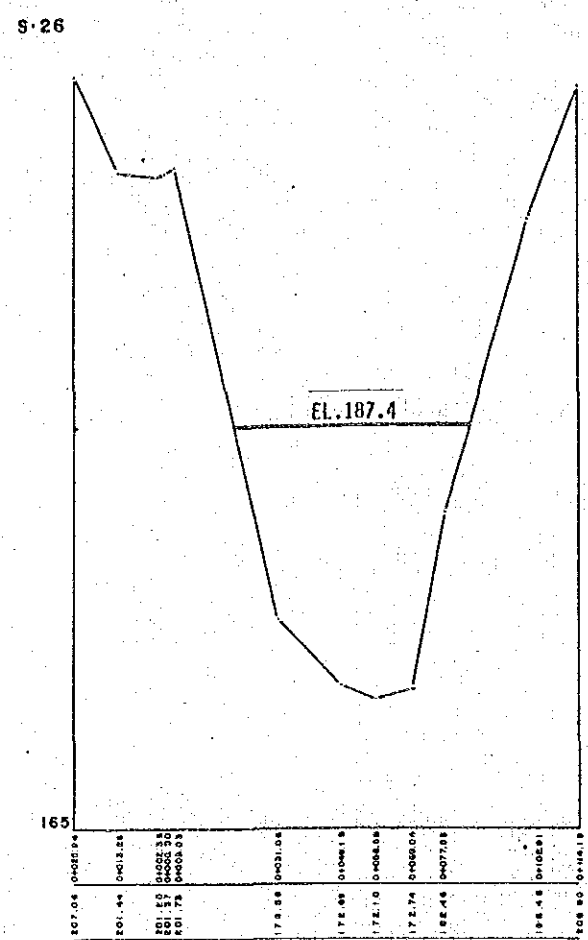
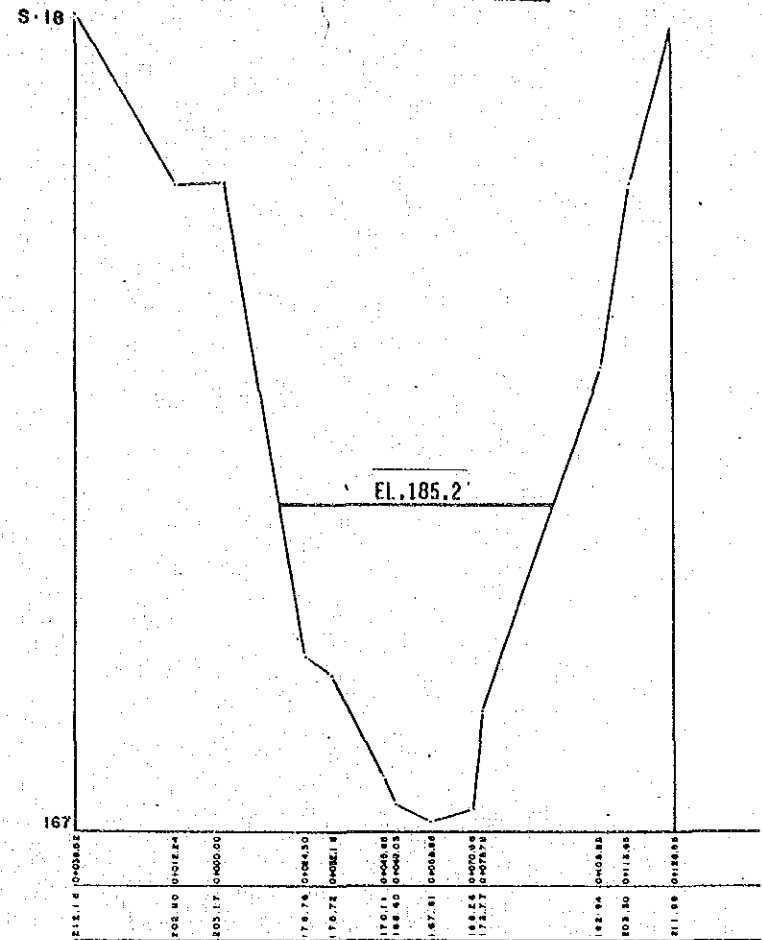
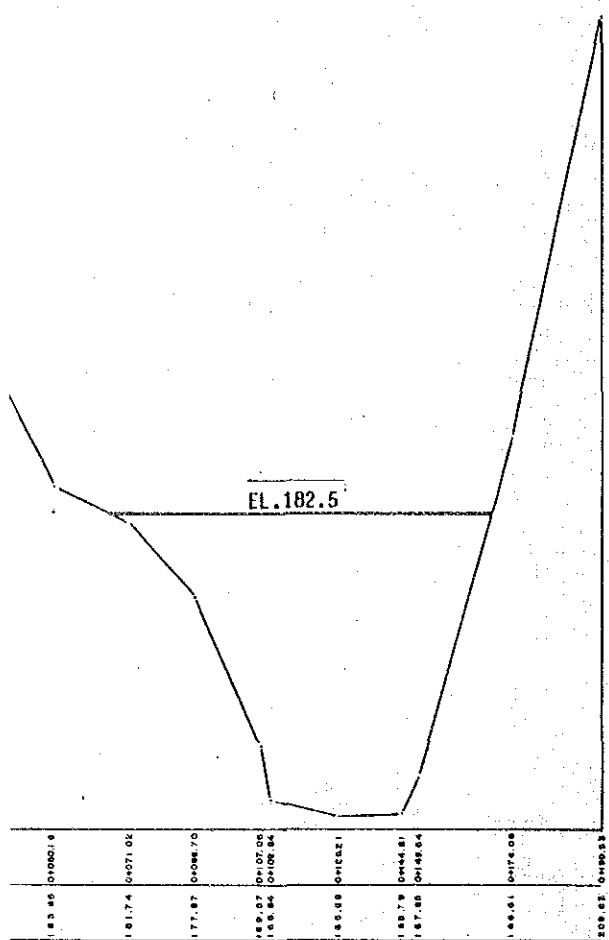


DATUM 170	
ACCUMULATIVE DISTANCE (m)	0+000.00
PRESENT ELEVATION (m)	186.40
DESIGN ELEVATION (m)	186.40

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DATUM 170	
ACCUMULATIVE DISTANCE (m)	0+000.00
PRESENT ELEVATION (m)	188.70
DESIGN ELEVATION (m)	188.70



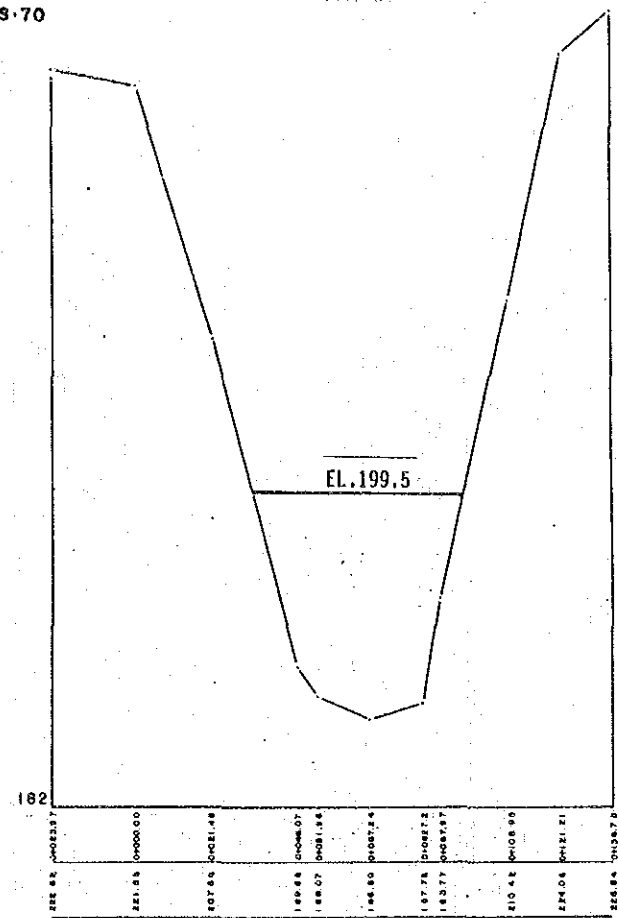
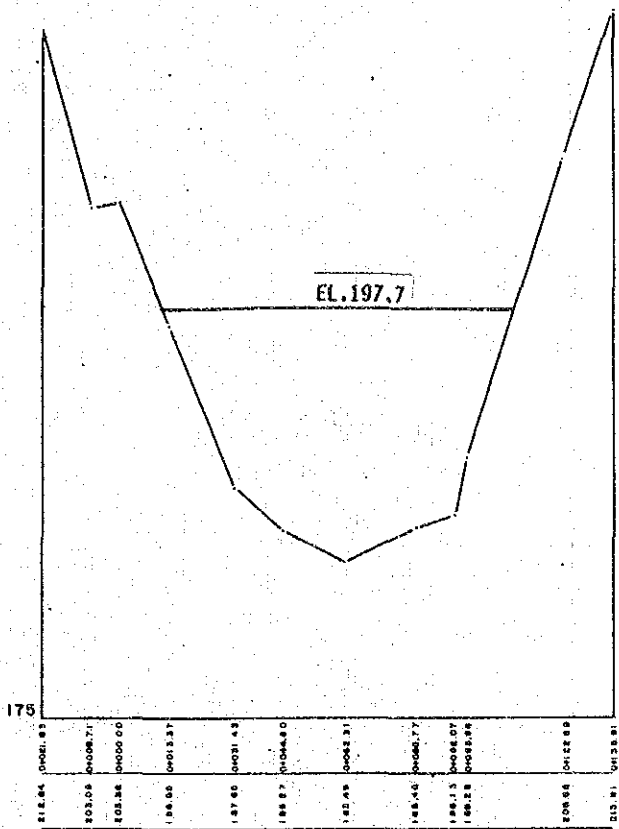
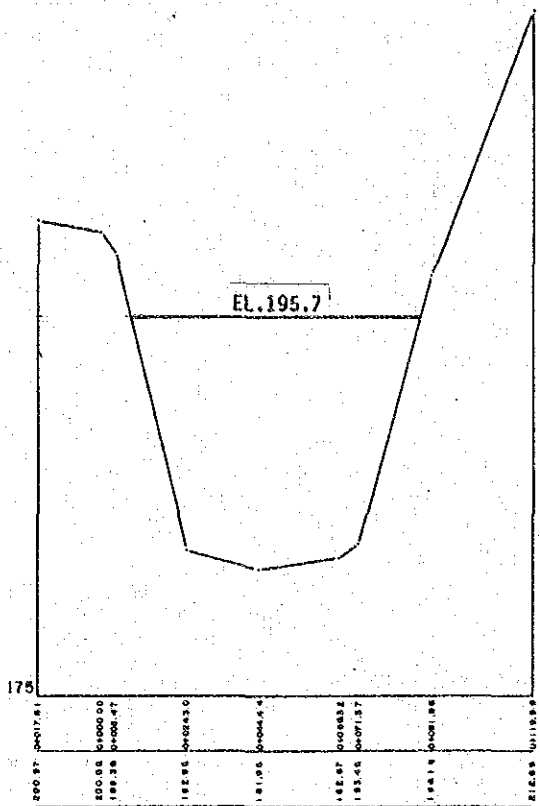
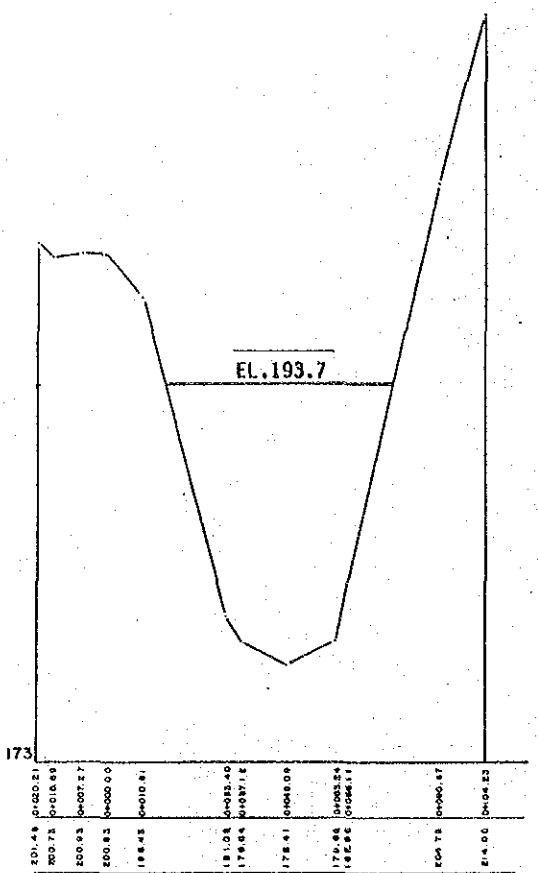
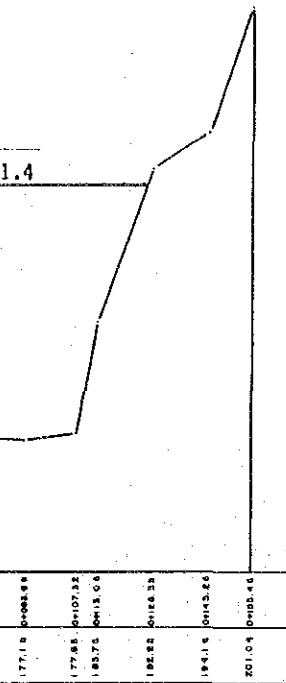
THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Scale: H 1:2,000	S-1.4 CROSS SECTION OF		
V 1:400	(1/5) SEDIMENT TRAP AREA		
PROJECT: PROTOVAL C.A.	(C-1 DAM)		
CALCULATOR: PROTOVAL C.A.	DESIGNED BY:	DRAWN BY:	CHECKED BY:
DATE: PROTOVAL C.A.			
APPROVED BY: S. KOHNO	JAPAN INTERNATIONAL COOPERATION AGENCY		

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S-62

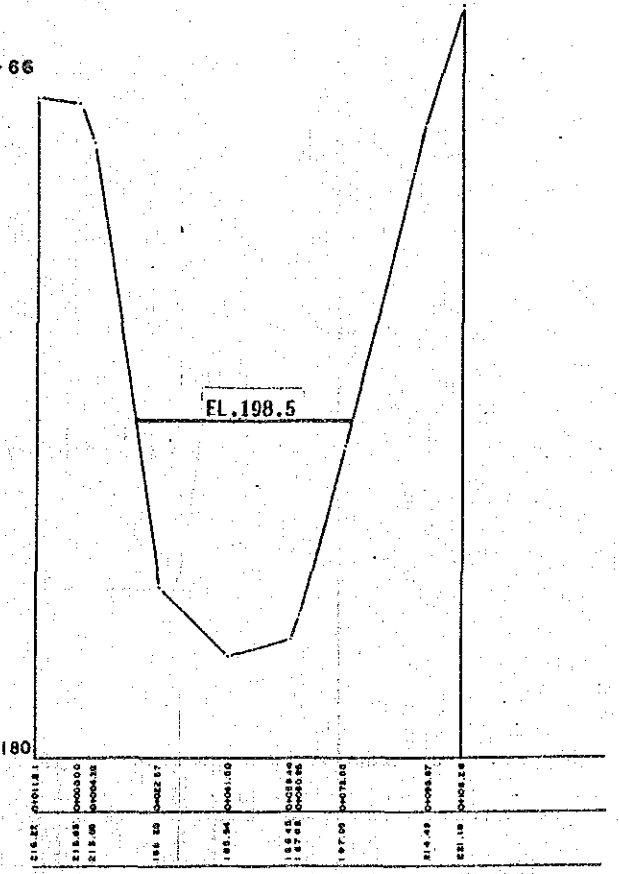
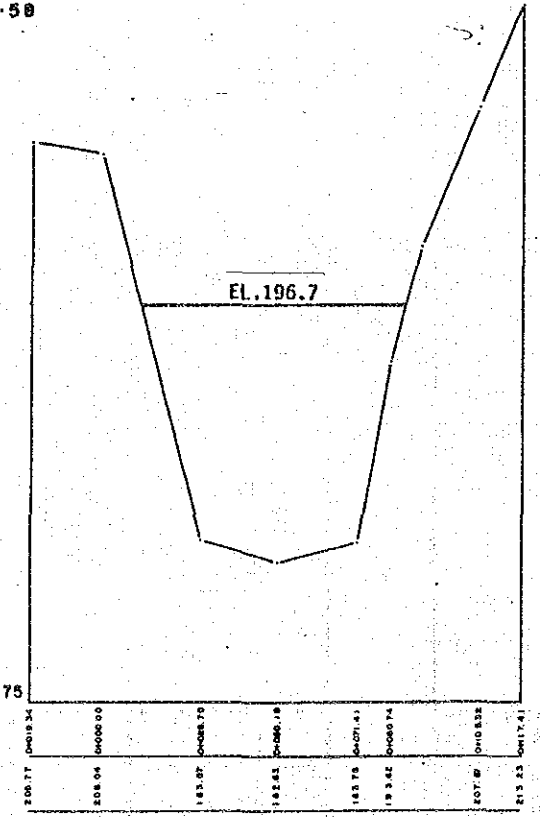
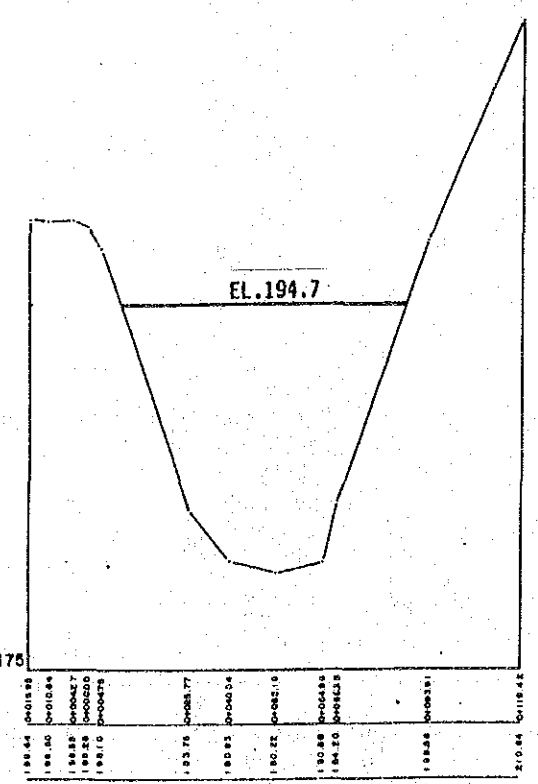
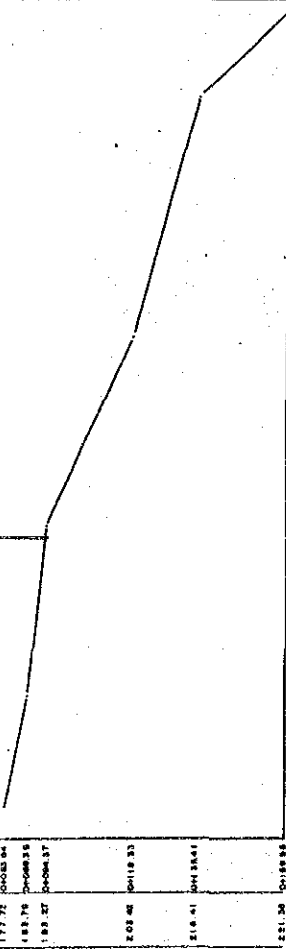
S-70



S-50

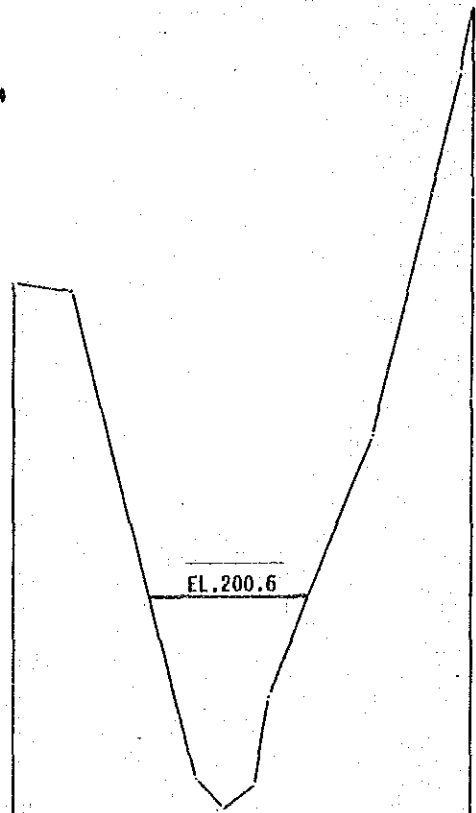
S-58

S-66



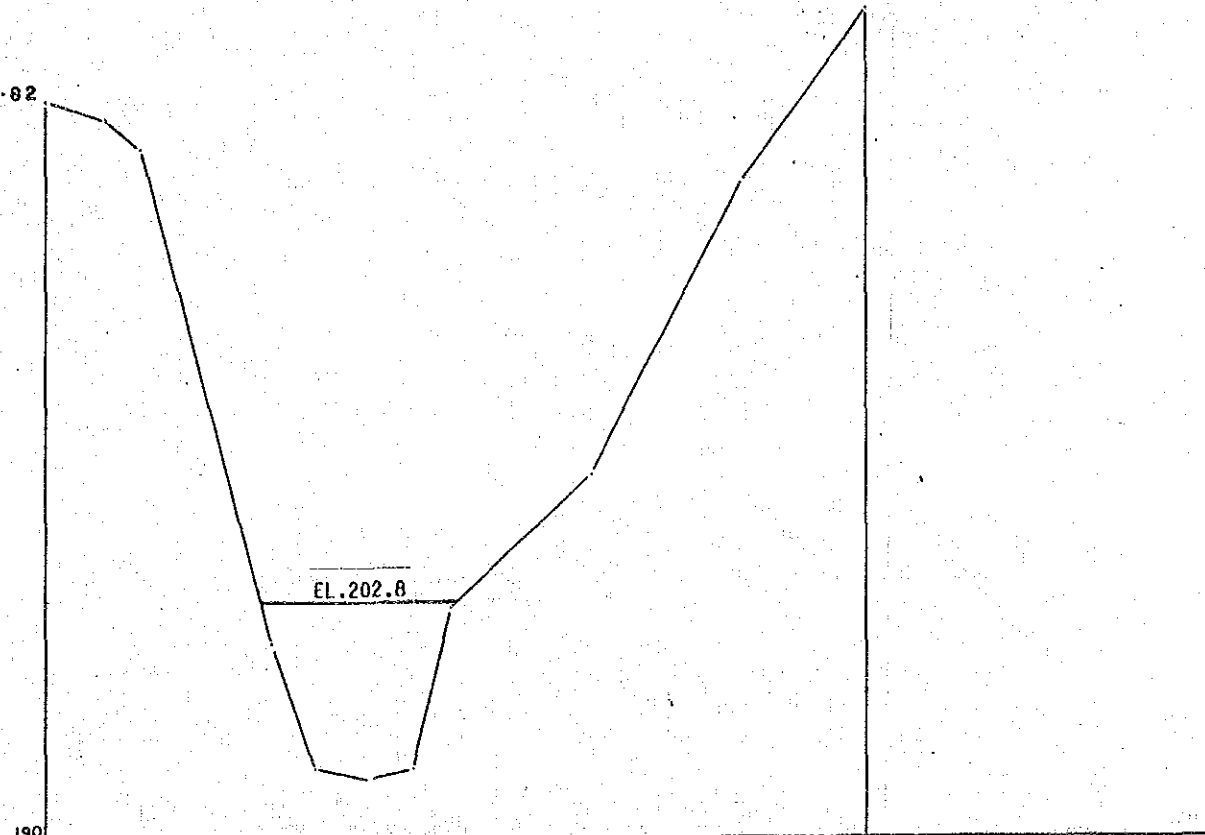
THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Scale: H 1:2,000		S-1.4 CROSS SECTION OF	
V 1:400		(2/5) SEDIMENT TRAP AREA	
DATE: 1982	PROYECTO: PROTOMAL C.A.	C-1 DAN	
DISEÑO: PROTOMAL C.A.			
ELABORADO: S. KODOMO	REVISADO: _____	FECHA: _____	
JAPAN INTERNATIONAL COOPERATION AGENCY			

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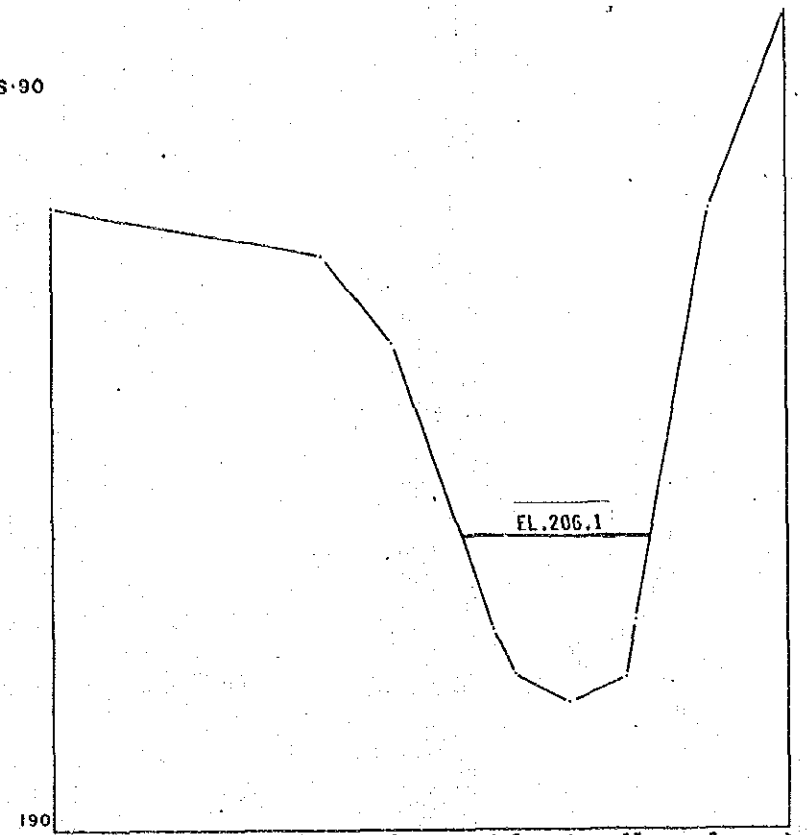
DATUM 187	
ACCUMULATIVE DISTANCE (m)	227.74 0+000.00 227.25 0+000.20 190.39 0+000.98 188.74 0+001.88 190.01 0+008.98 188.04 0+009.01 208.28 0+009.98 228.07 0+010.78
PRESENT ELEVATION (m)	
DESIGN ELEVATION (m)	

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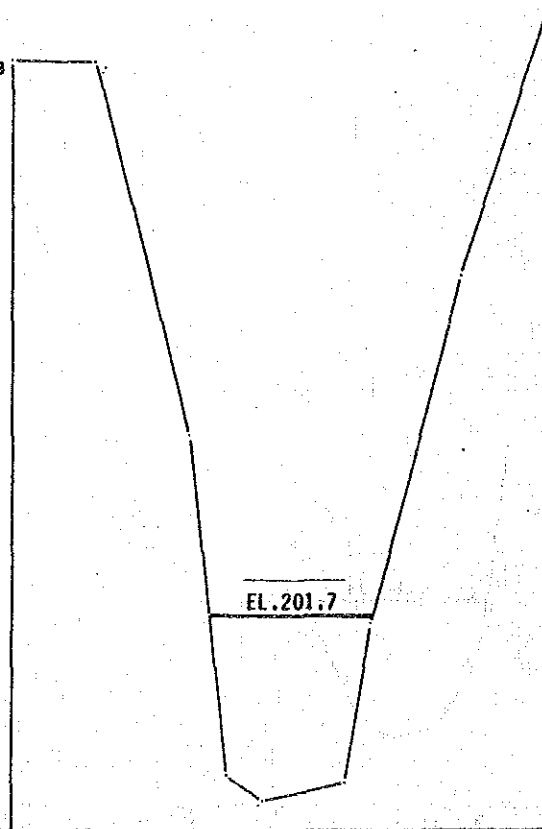
ACCUMULATIVE DISTANCE (m)	220.48 0+000.00 222.48 0+000.00 227.81 0+007.80 208.88 0+008.84 193.88 0+009.01 193.11 0+009.04 192.76 0+009.23 208.70 0+009.48 206.06 0+009.41 220.95 0+009.78 228.85 0+009.48
PRESENT ELEVATION (m)	
DESIGN ELEVATION (m)	

S-90



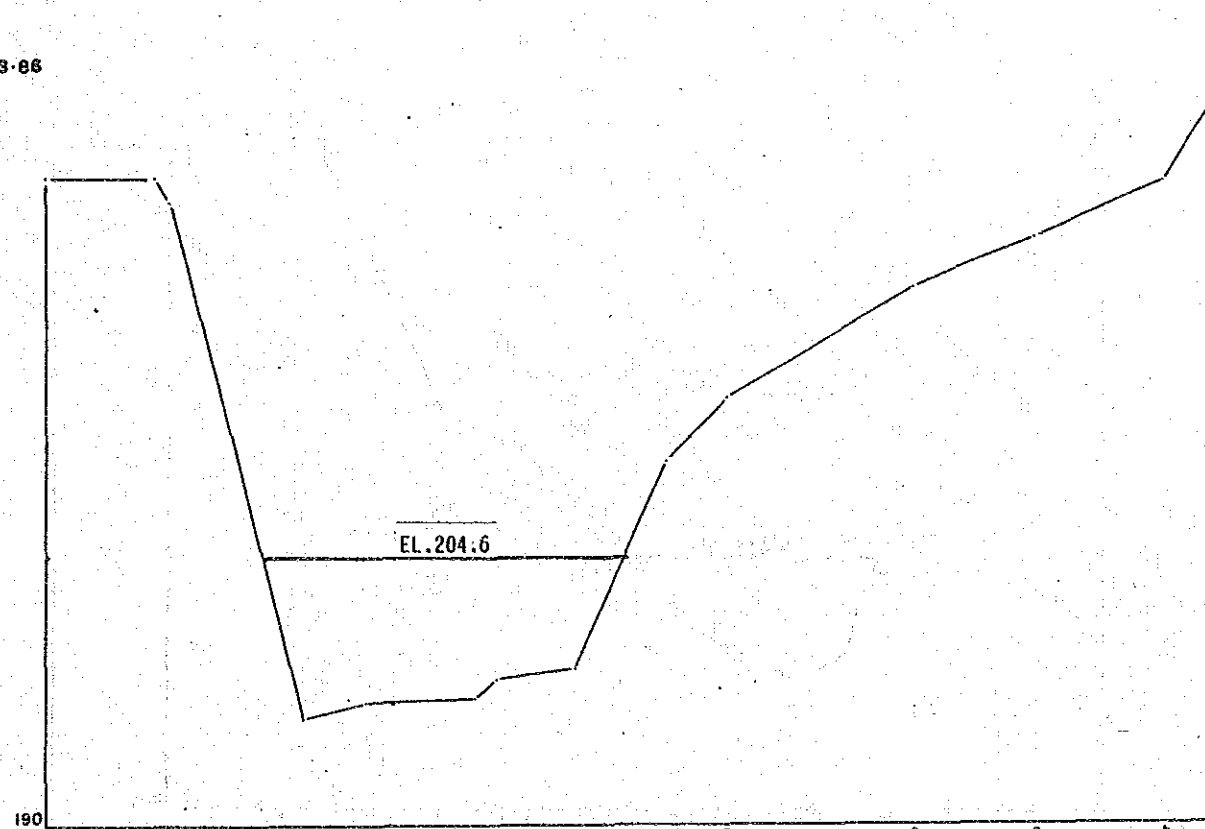
ACCUMULATIVE DISTANCE (m)	224.48 0+000.00 221.48 0+000.00 218.85 0+000.84 200.85 0+008.74 188.82 0+008.88 188.87 0+008.89 188.78 0+008.84 201.84 0+008.84 224.83 0+007.73 228.88 0+008.87
PRESENT ELEVATION (m)	
DESIGN ELEVATION (m)	

S-78



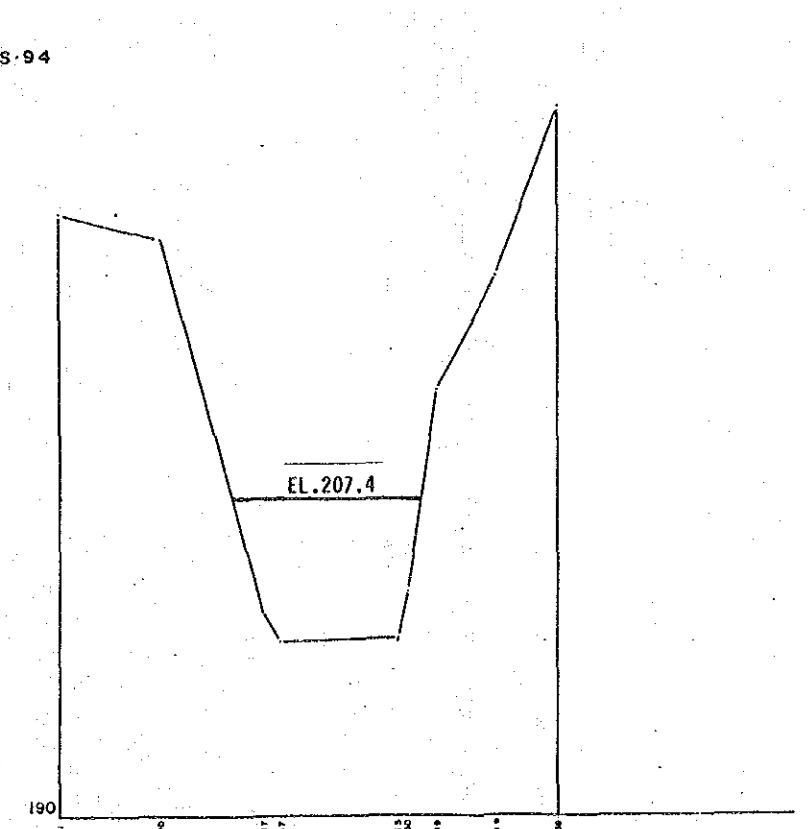
DATUM 190	
ACCUMULATIVE DISTANCE (m)	222.27 0+000.00 222.14 0+000.00 211.88 0+000.33 193.05 0+004.49 191.82 0+004.80 188.88 0+007.89 201.33 0+007.89 220.87 0+008.32 228.24 0+011.72
PRESENT ELEVATION (m)	
DESIGN ELEVATION (m)	

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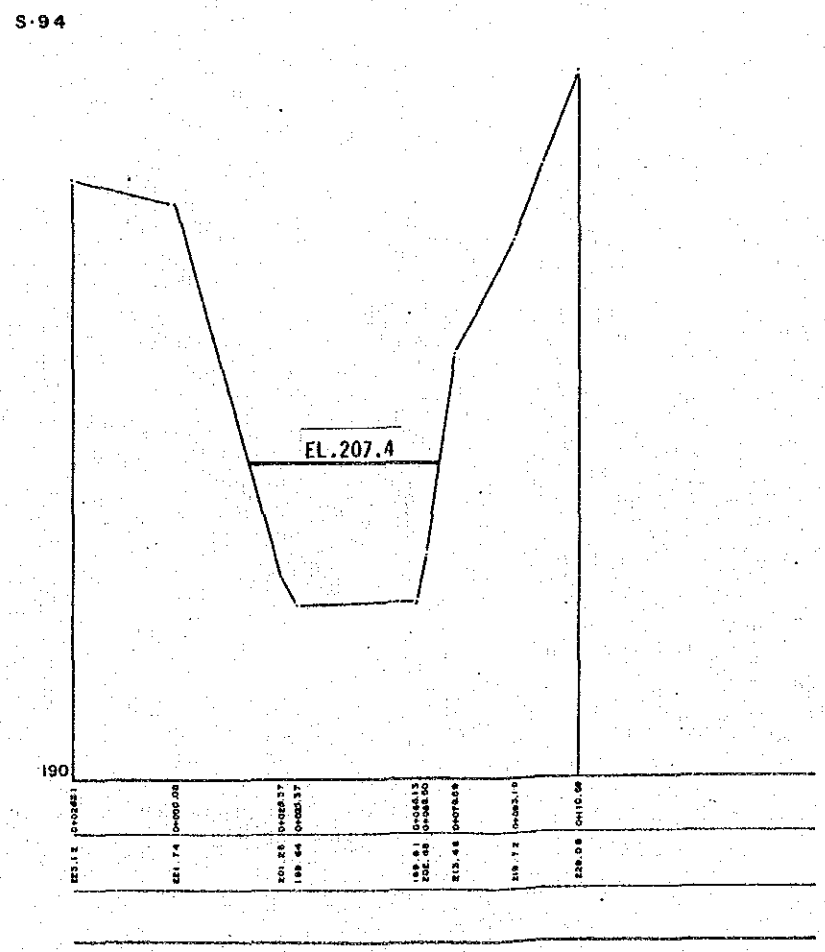
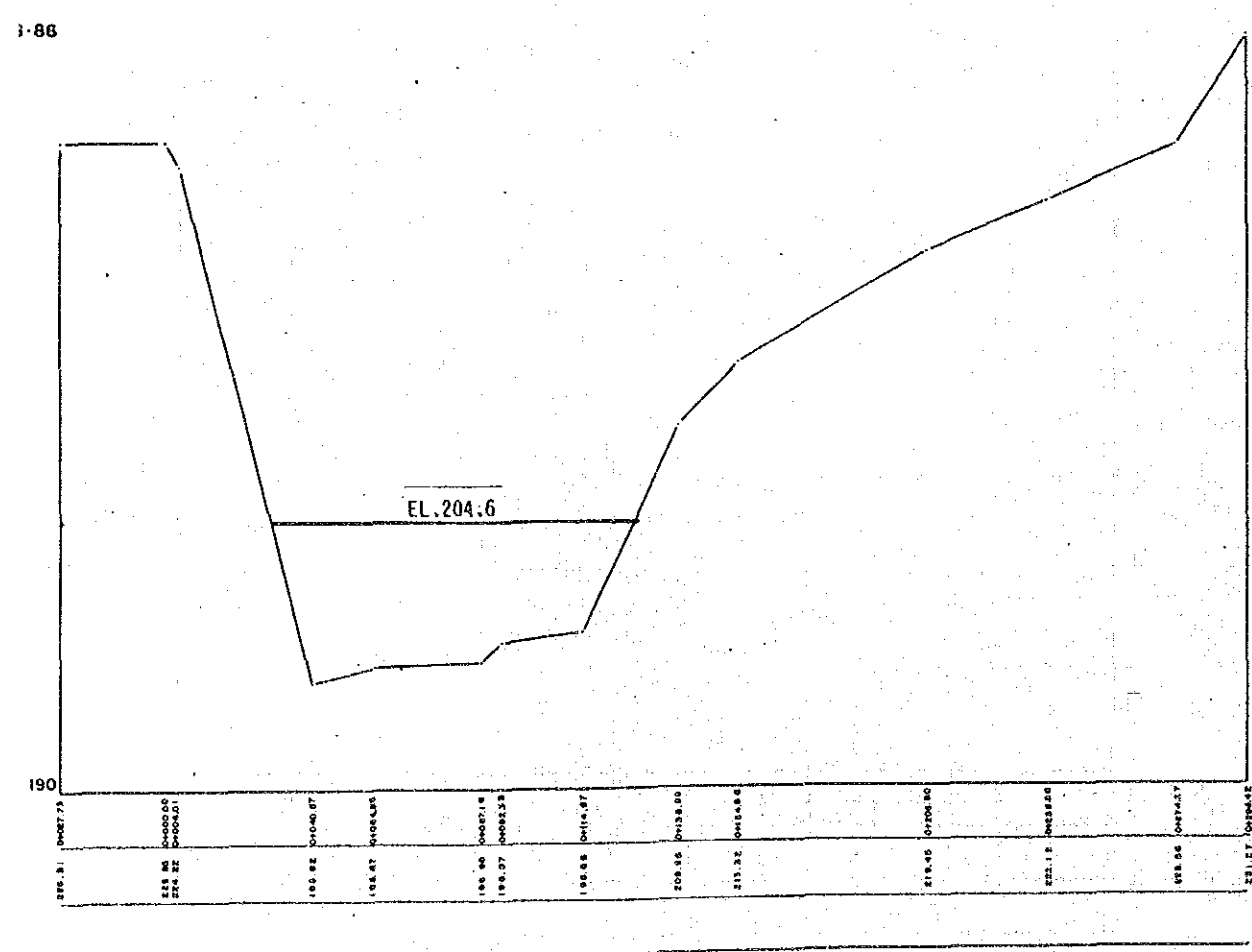
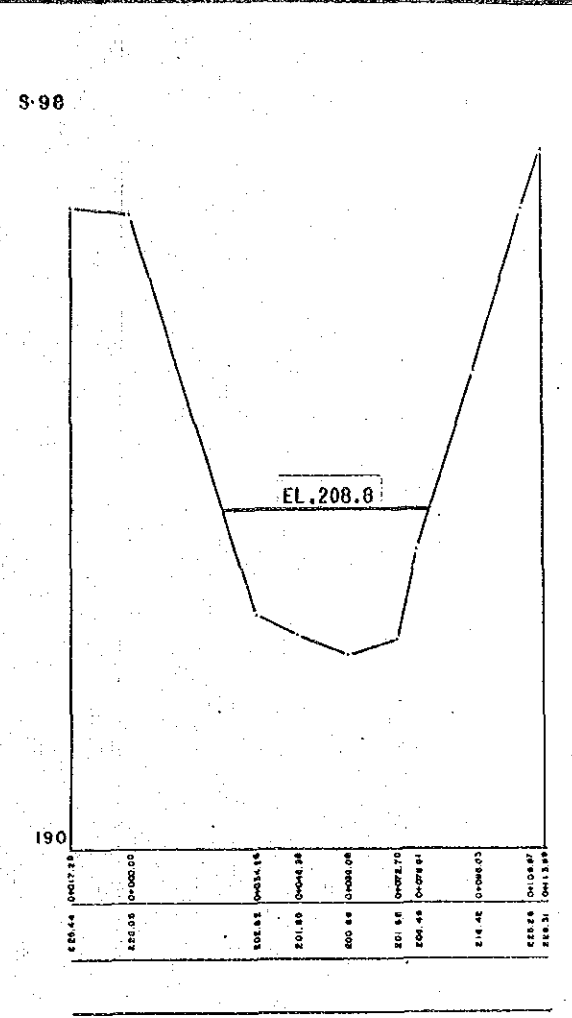
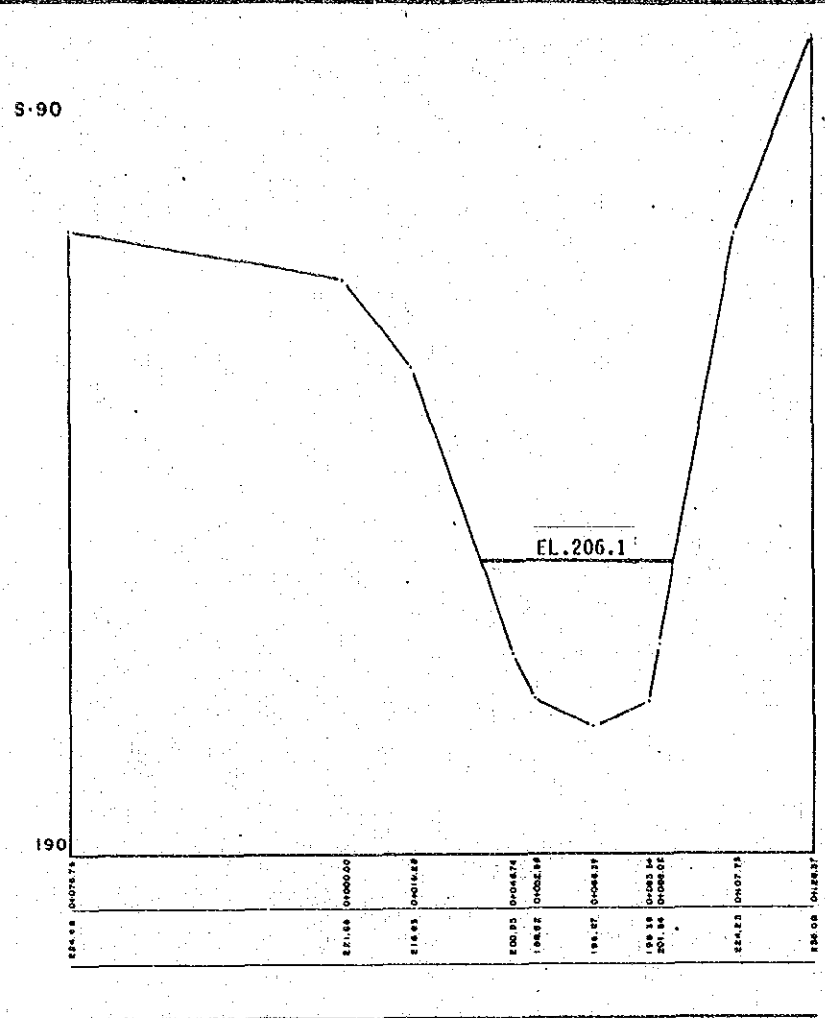
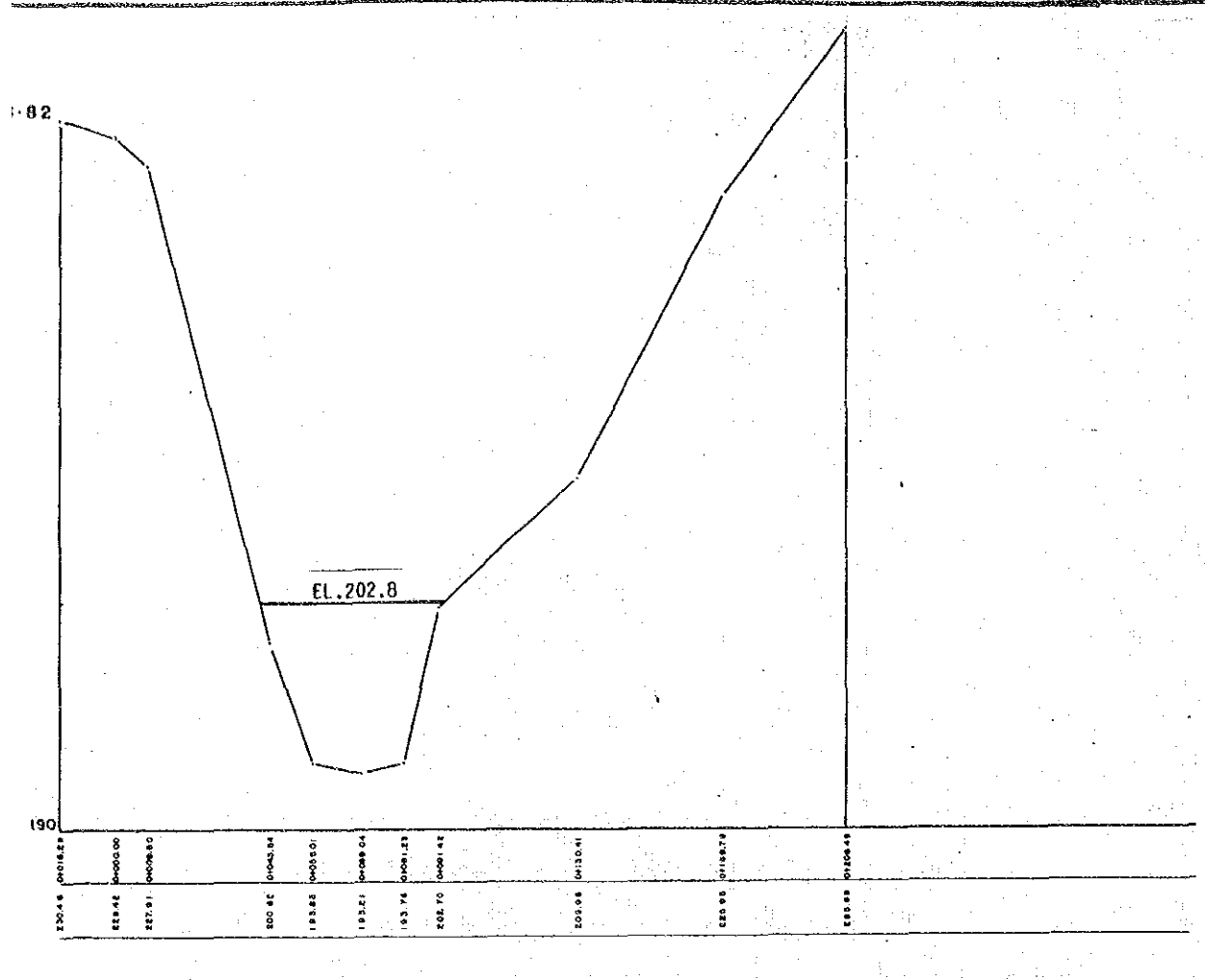


ACCUMULATIVE DISTANCE (m)	229.81 0+000.00 227.81 0+000.00 198.88 0+000.00 188.07 0+004.88 190.84 0+007.78 198.07 0+008.23 188.88 0+014.87 208.88 0+018.89 218.82 0+018.88 219.88 0+018.88 228.77 0+018.88 228.88 0+018.87 231.87 0+018.88
PRESENT ELEVATION (m)	
DESIGN ELEVATION (m)	

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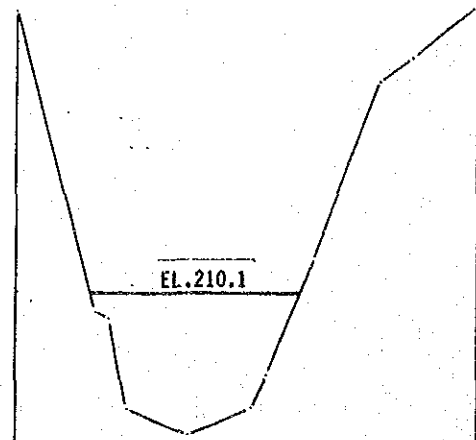


ACCUMULATIVE DISTANCE (m)	223.12 0+000.00 221.74 0+000.00 201.88 0+008.37 198.84 0+008.37 198.81 0+008.37 213.88 0+007.89 198.74 0+008.37 228.88 0+010.88
PRESENT ELEVATION (m)	
DESIGN ELEVATION (m)	



THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Scale H 1:2,000 V 1:1,000	S-1.4 CROSS SECTION OF (3/5) SEDIMENT TRAP AREA (C-1 DAM)		
DESIGNED BY	PROYECTOAL C.A.	DATE	
DRAWN BY	PROYECTOAL C.A.		
CHECKED BY	PROYECTOAL C.A.		
APPROVED BY	PROYECTOAL C.A.		
JAPAN INTERNATIONAL COOPERATION AGENCY			

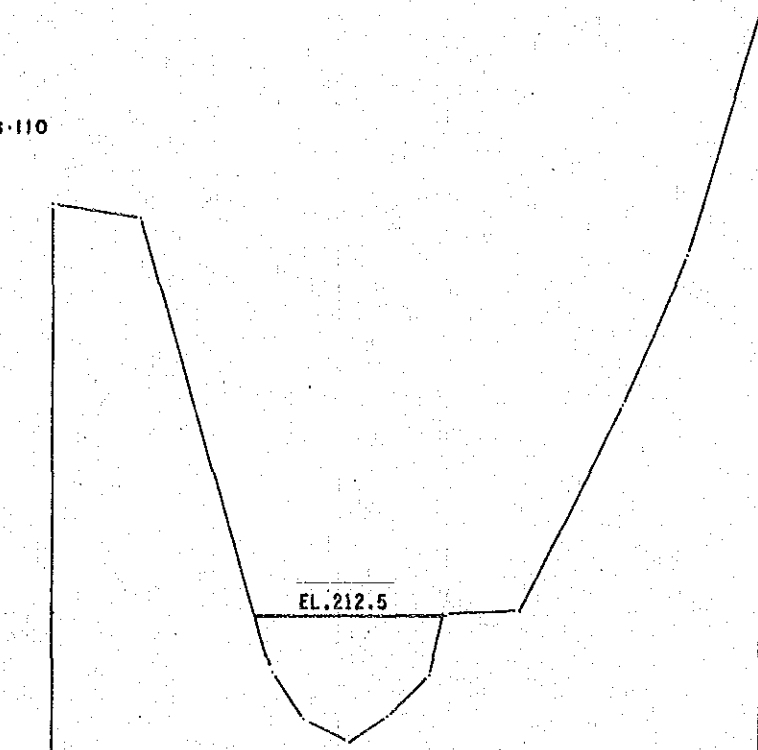
S-102



DATUM 195

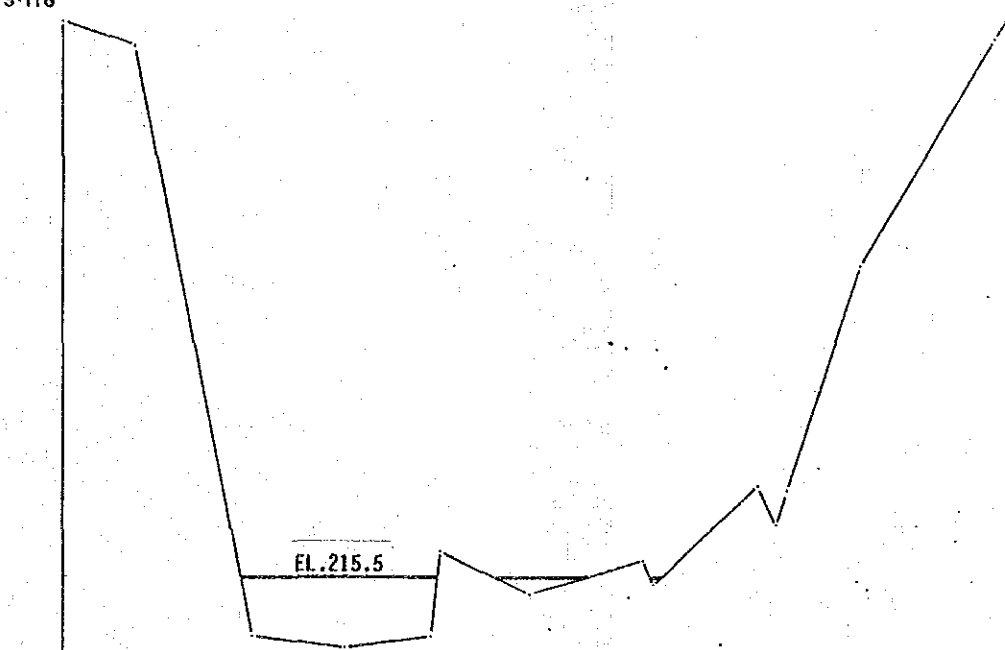
ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)	DESIGN ELEVATION (m)
209.82	20821.81	
209.87	20800.00	
209.92	20804.75	
209.97	20808.84	
209.99	20808.01	
209.99	20804.06	
209.99	20805.87	
210.00	20808.18	
211.08	20807.89	
211.27	20807.66	
212.04	20808.99	
212.74	20808.01	

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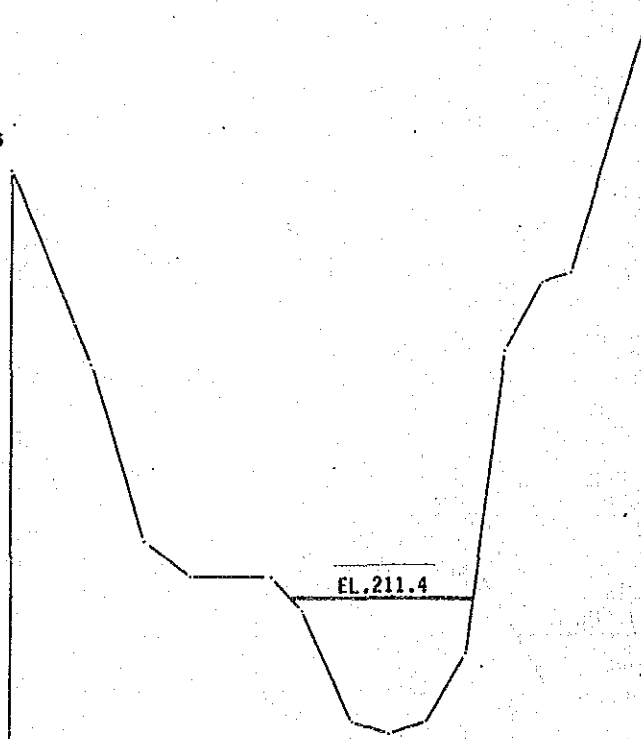
209.98	20824.00	
210.50	20800.00	
209.91	20816.12	
209.79	20816.14	
209.87	20807.43	
207.91	20807.79	
209.91	20807.44	
210.92	20808.92	
212.93	20804.29	
224.00	20825.43	
232.21	20818.24	
246.02	20819.82	

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246.17	20818.44	
244.83	20800.00	
212.97	20808.51	
211.45	20808.27	
212.22	20811.7	
212.99	20809.94	
214.47	20808.09	
219.37	20806.04	
219.07	20812.15	
220.81	20807.71	
218.17	20808.37	
230.17	20816.49	
237.43	20814.99	
244.83	20818.44	

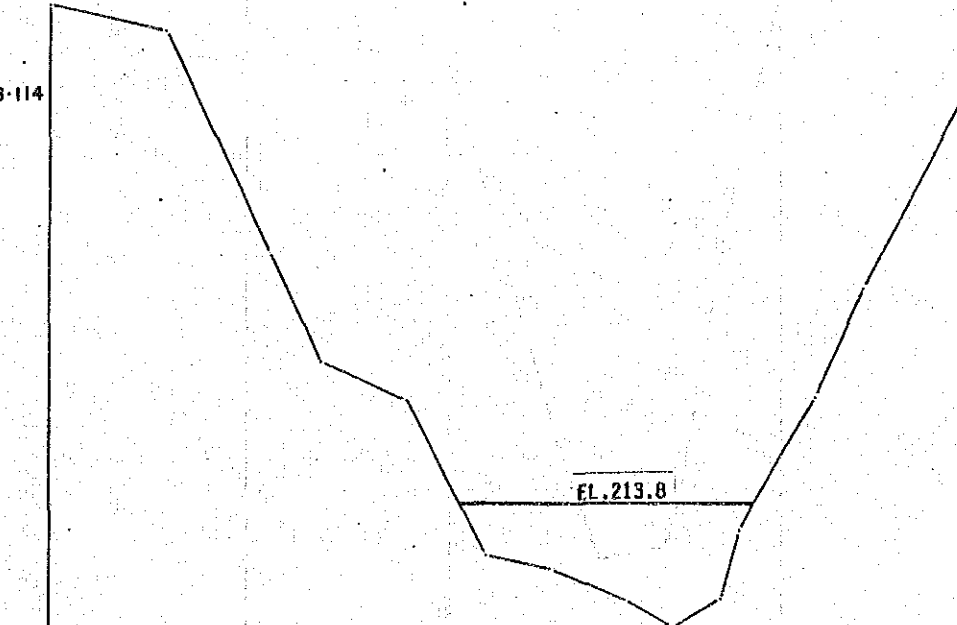
S-106



DATUM 200

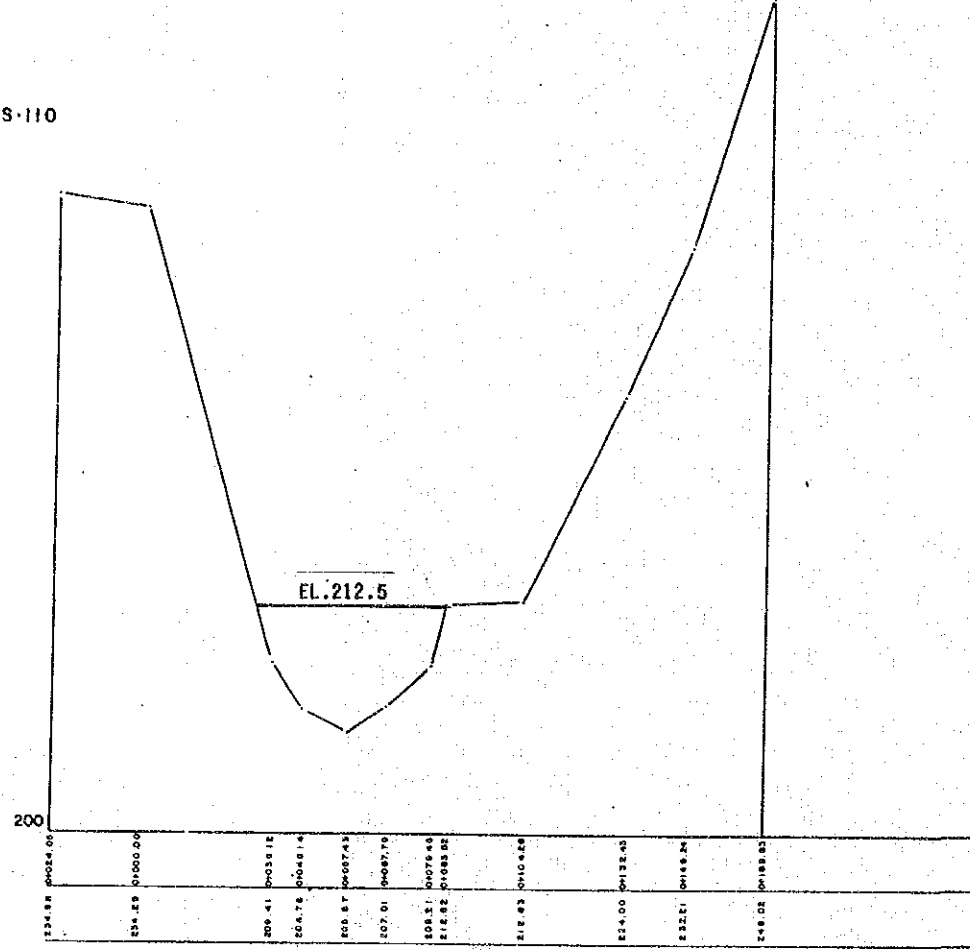
ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)	DESIGN ELEVATION (m)
214.73	21071.79	
214.15	20810.82	
214.47	20813.1	
212.91	20808.97	
212.80	20800.00	
210.94	20808.84	
209.40	20821.14	
208.94	20822.83	
208.86	20818.25	
209.50	20808.92	
214.94	20806.98	
212.80	20807.80	
212.84	20808.98	
213.37	20814.80	

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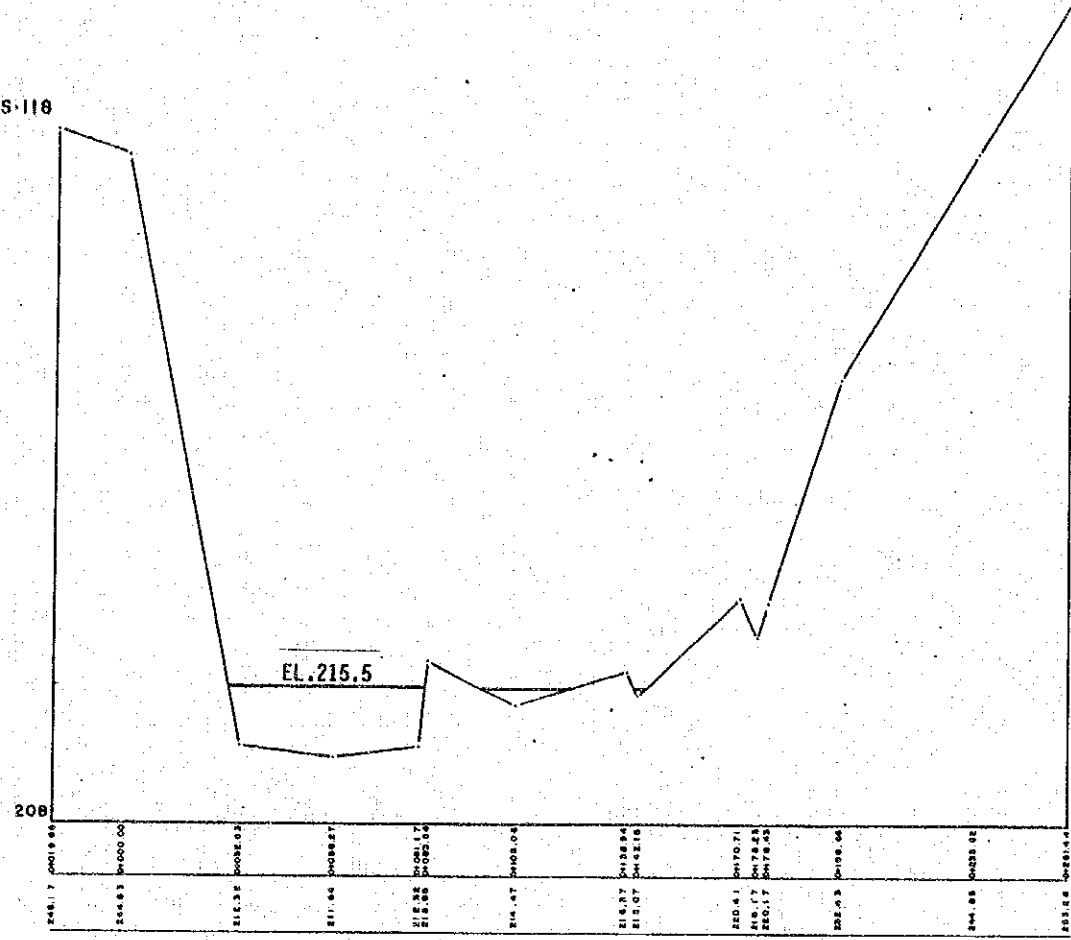


211.92	20806.67	
216.00	20800.00	
217.86	20808.98	
221.76	20804.80	
219.87	20808.95	
211.04	20808.76	
210.28	20803.80	
209.48	20818.80	
209.39	20815.53	
209.41	20816.99	
212.24	20810.99	
219.72	20816.16	
229.66	20818.23	

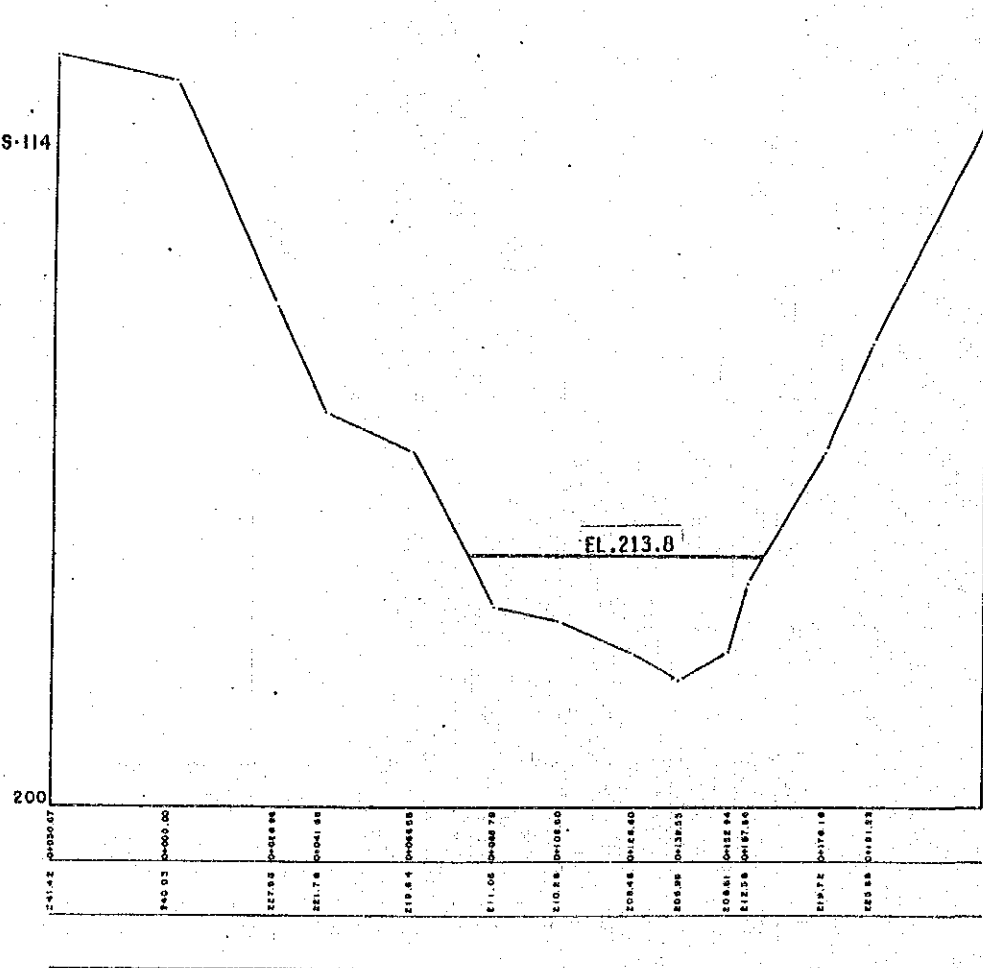
S-110



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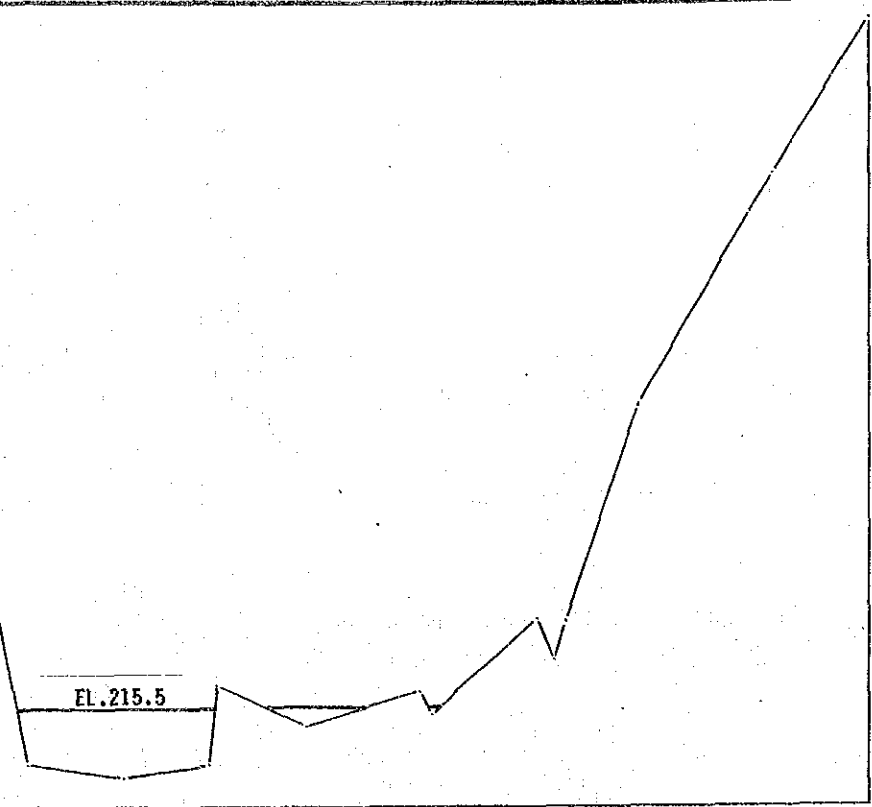


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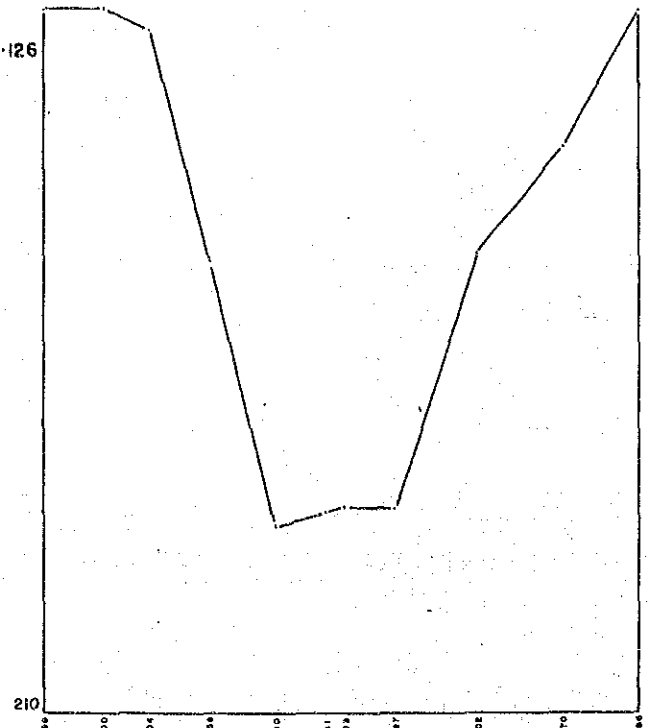
THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Scale: H 1:2,000 V 1:1,400	S-1.4 CROSS SECTION OF (4/5) SEDIMENT TRAP AREA (C-1 DAM)		
DESIGNED BY: PROTOVAL C.A.	DRAWN BY: PROTOVAL C.A.		
CHECKED BY: PROTOVAL C.A.	DATE: _____		
APPROVED BY: S. KOSIĆ	DATE: _____		
JAPAN INTERNATIONAL COOPERATION AGENCY			

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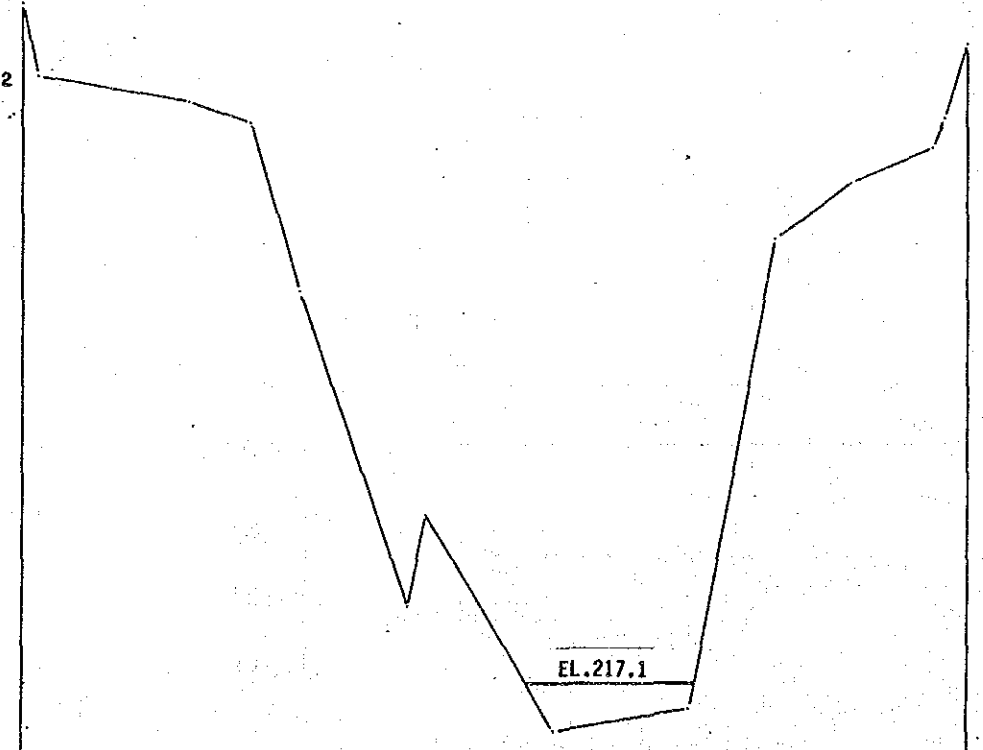
DATUM 210	
ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)
0+00	245.18
0+05	244.85
0+10	212.32
0+15	211.04
0+20	212.33
0+25	212.80
0+30	214.57
0+35	215.37
0+40	215.08
0+45	220.41
0+50	218.17
0+55	220.18
0+60	225.03
0+65	244.88
0+70	252.28

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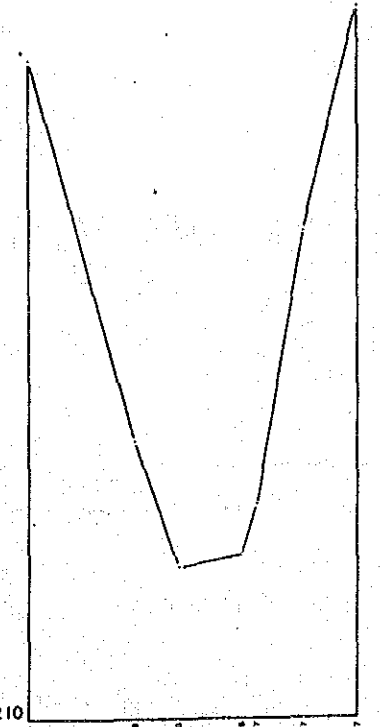
DATUM 210	
ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)
0+00	244.88
0+05	244.88
0+10	247.82
0+15	228.00
0+20	220.31
0+25	221.11
0+30	221.44
0+35	221.33
0+40	228.48
0+45	241.30
0+50	248.88

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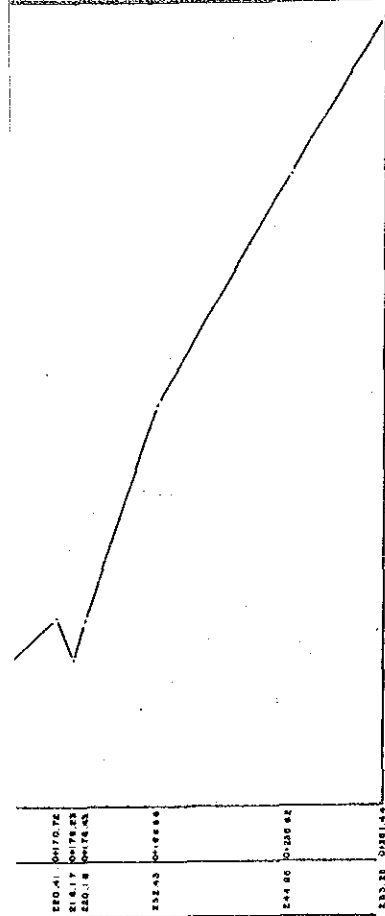


DATUM 210	
ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)
0+00	234.42
0+05	233.37
0+10	248.06
0+15	247.88
0+20	238.48
0+25	231.20
0+30	228.21
0+35	214.32
0+40	215.80
0+45	241.22
0+50	244.27
0+55	249.14
0+60	247.75
0+65	251.88

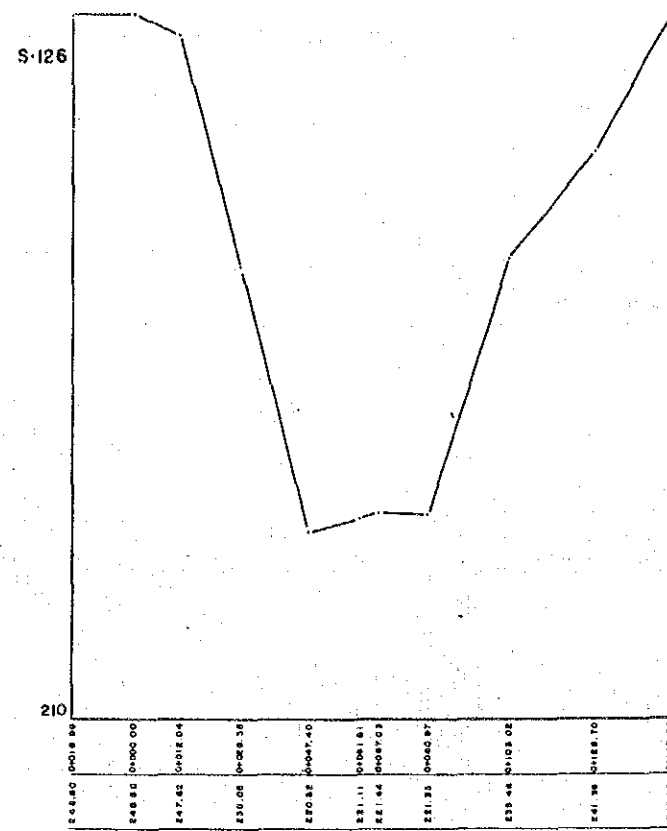
S-130



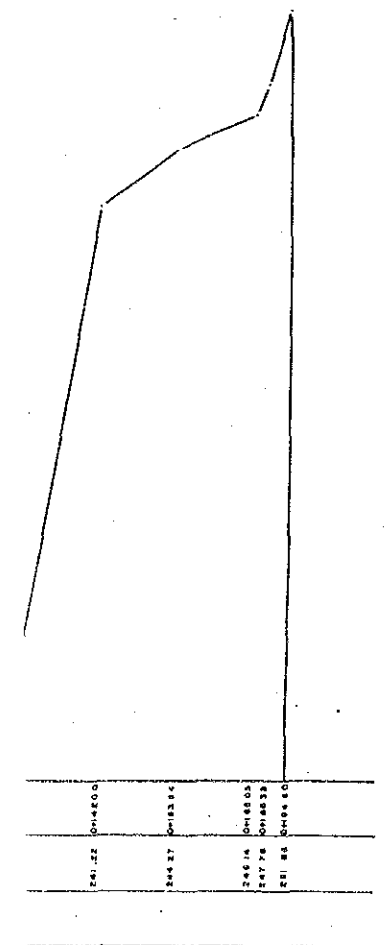
DATUM 210	
ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)
0+00	245.80
0+05	225.08
0+10	216.14
0+15	218.84
0+20	221.72
0+25	235.88
0+30	249.14



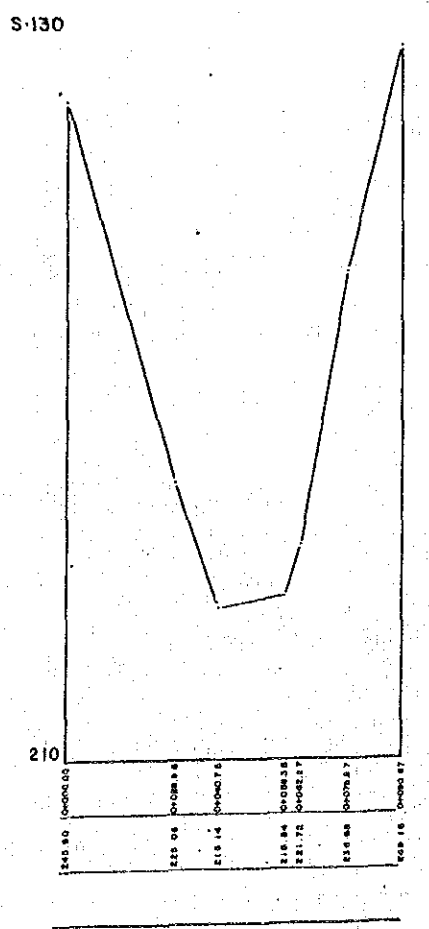
230.41	0107.72
231.17	0107.84
231.16	0107.84
231.43	0108.84
244.80	0108.84
250.22	0108.44



248.80	0100.00
247.82	0101.04
230.05	0102.30
220.82	0103.40
221.11	0104.41
221.44	0105.02
221.33	0106.97
239.48	0108.02
241.98	0108.70
240.08	0107.55

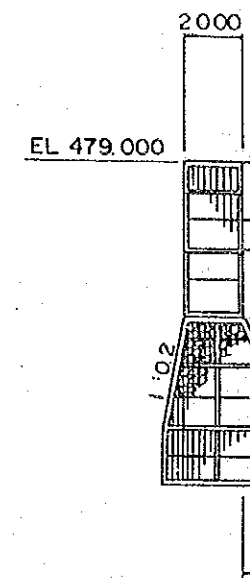
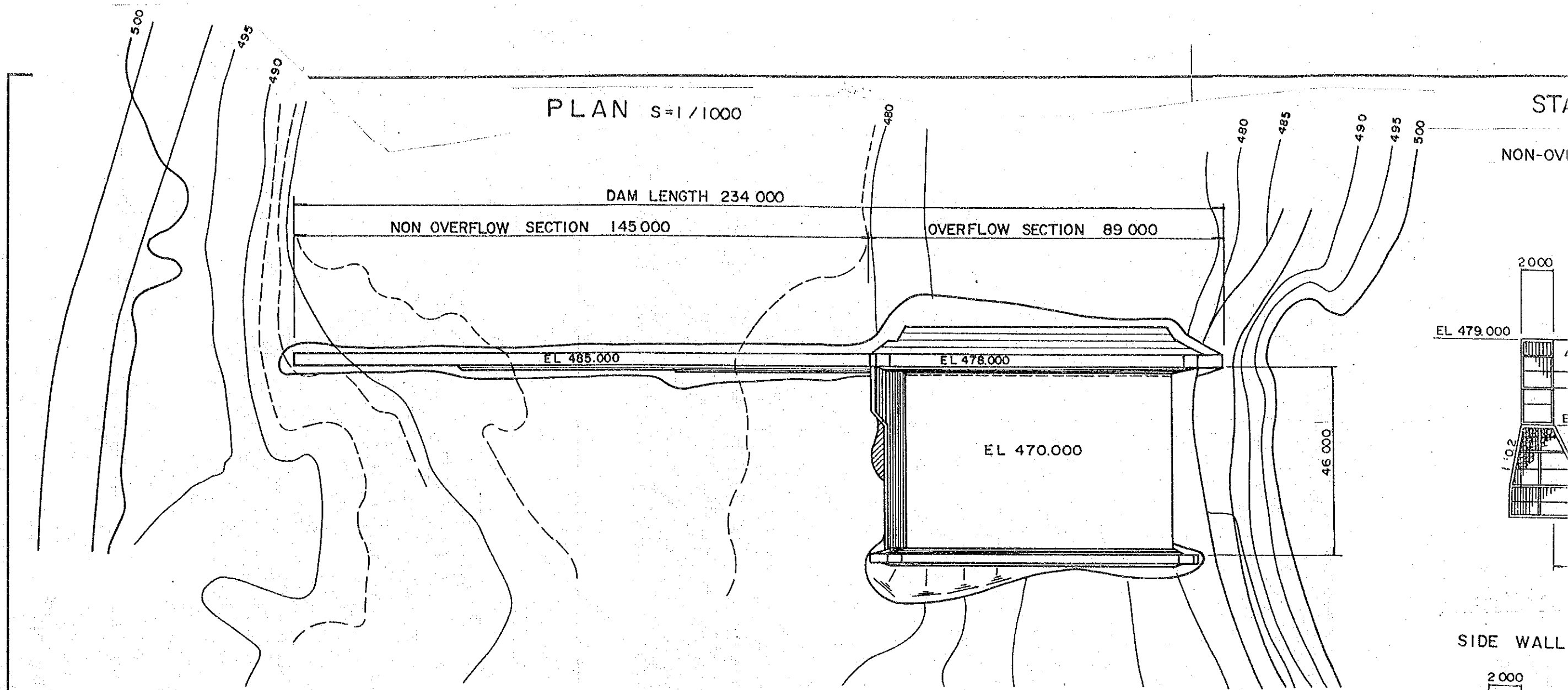


241.22	0108.00
244.27	0103.14
246.14	0105.03
247.78	0105.23
251.84	0106.40

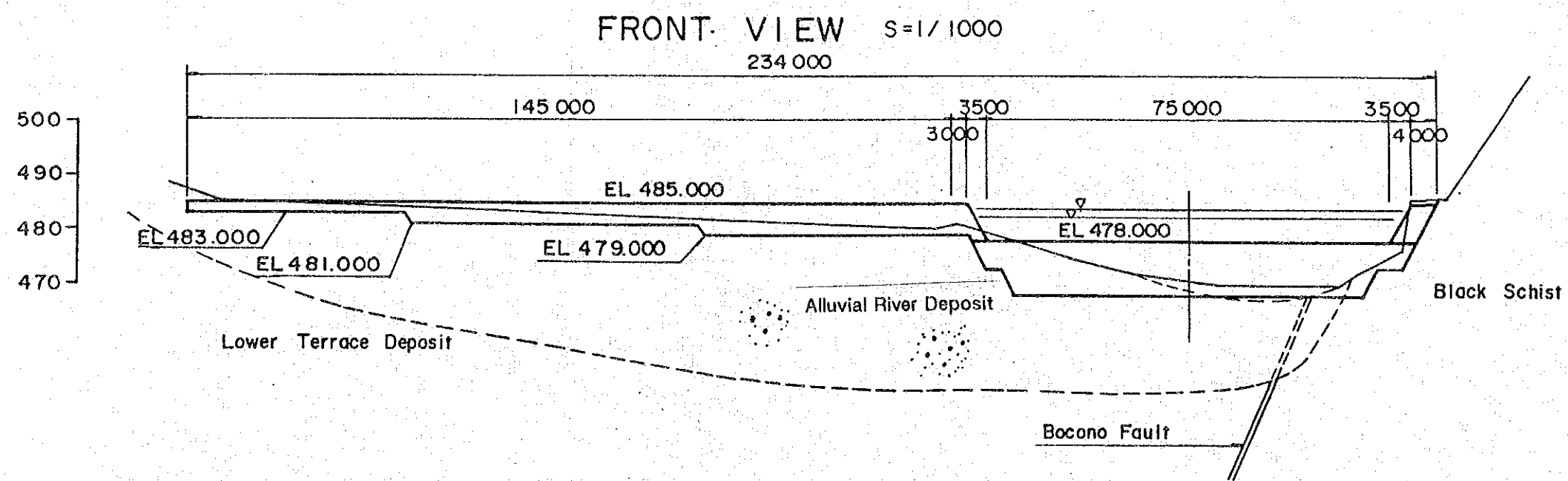
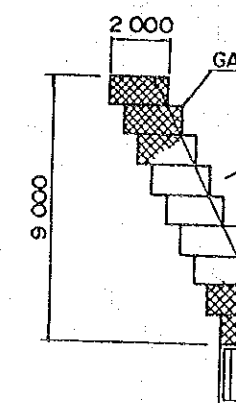


245.80	0100.00
222.05	0102.84
219.14	0103.75
216.84	0104.35
221.72	0105.17
228.88	0107.67
249.16	0108.87

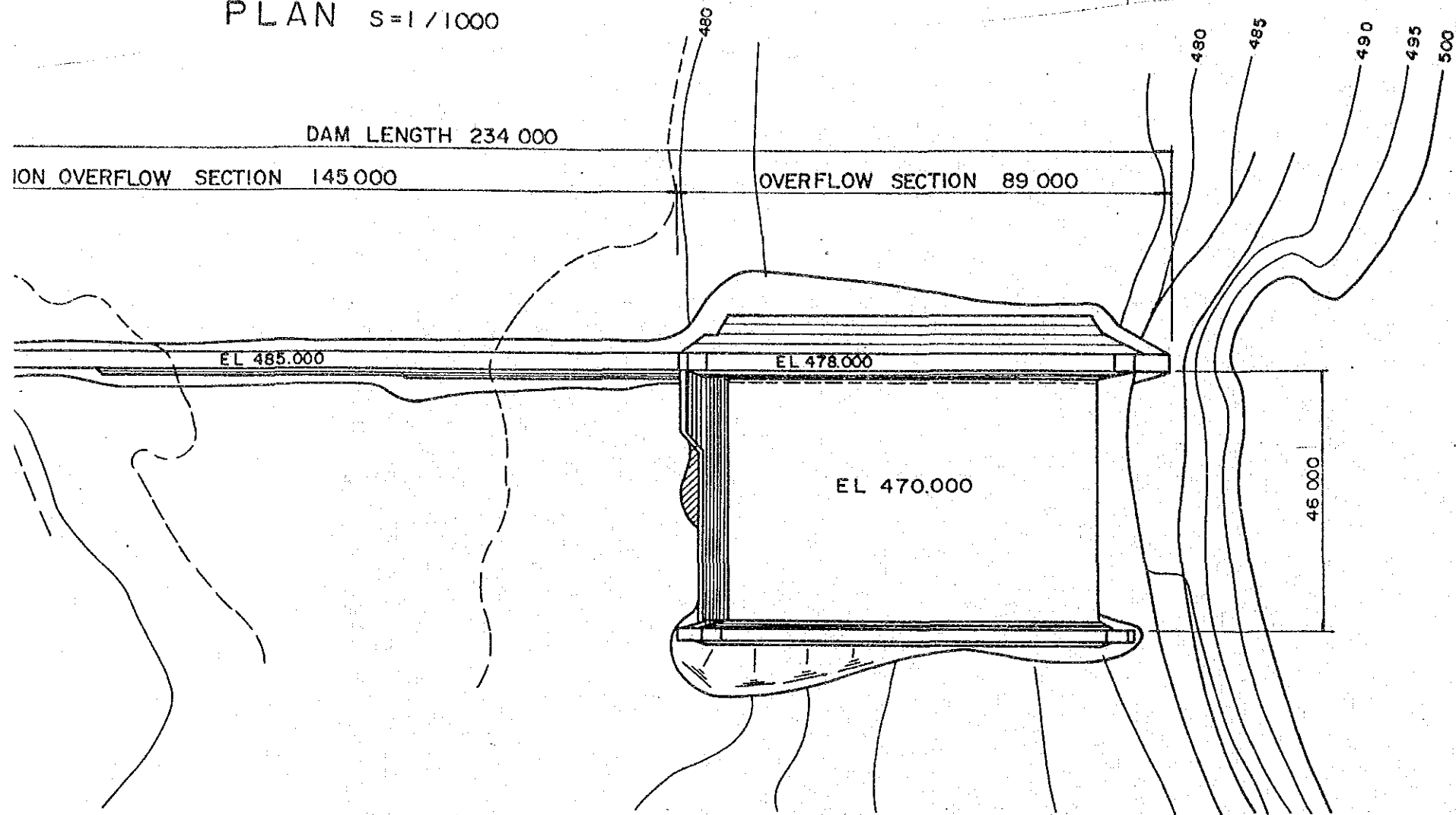
THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Scale 1:12,000 V 1:400	S-1.4 CROSS SECTION OF (5/5) SEDIMENT TRAP AREA (C-1 DAM)		
DRAWN BY PROYOMA C.A.	DATE		
CHECKED BY PROYOMA C.A.	DATE		
DESIGNED BY S. KONO	DATE		
JAPAN INTERNATIONAL COOPERATION AGENCY			



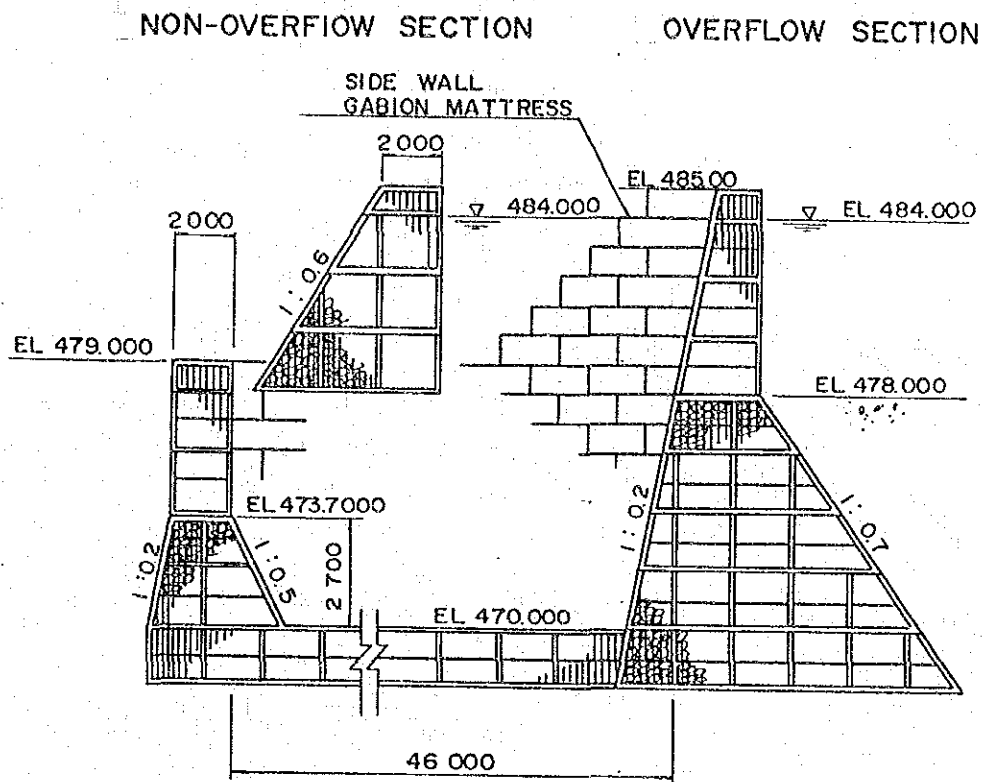
SIDE WALL



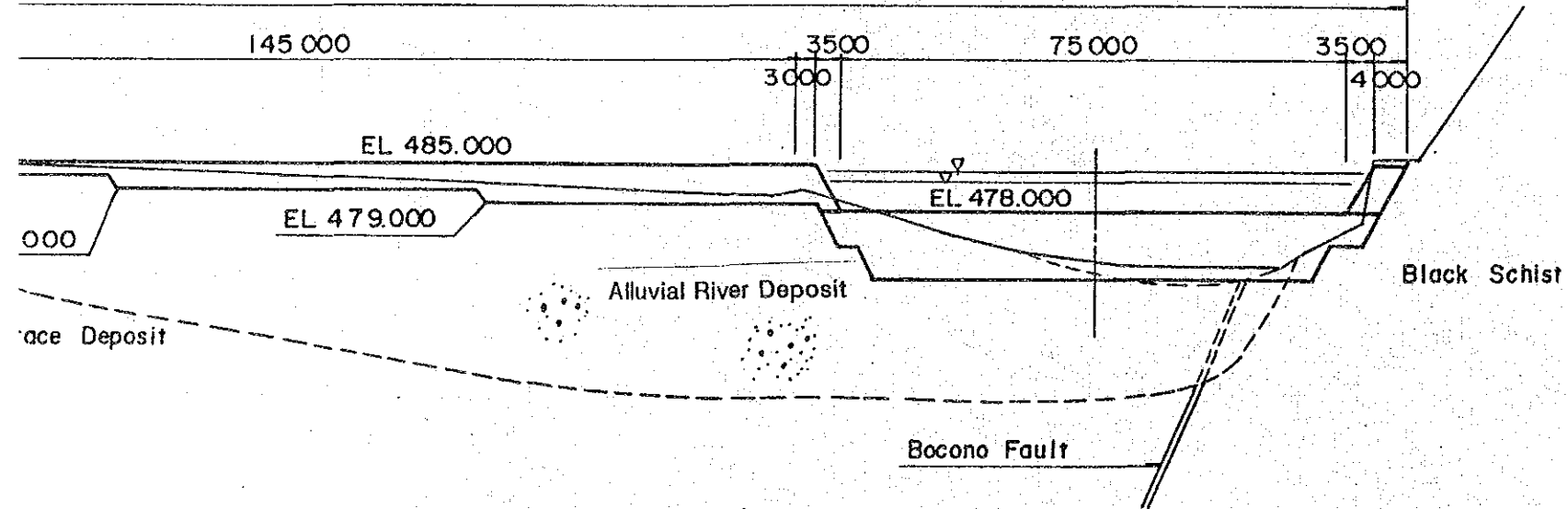
PLAN S=1/1000



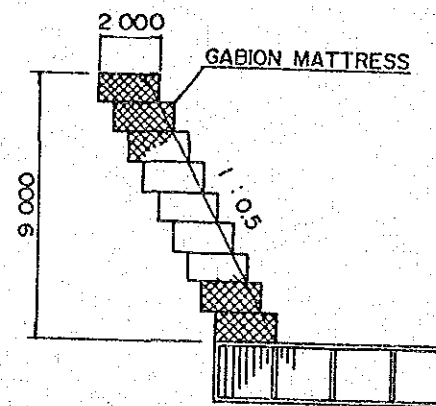
STANDARD CROSS SECTION S= 1/250



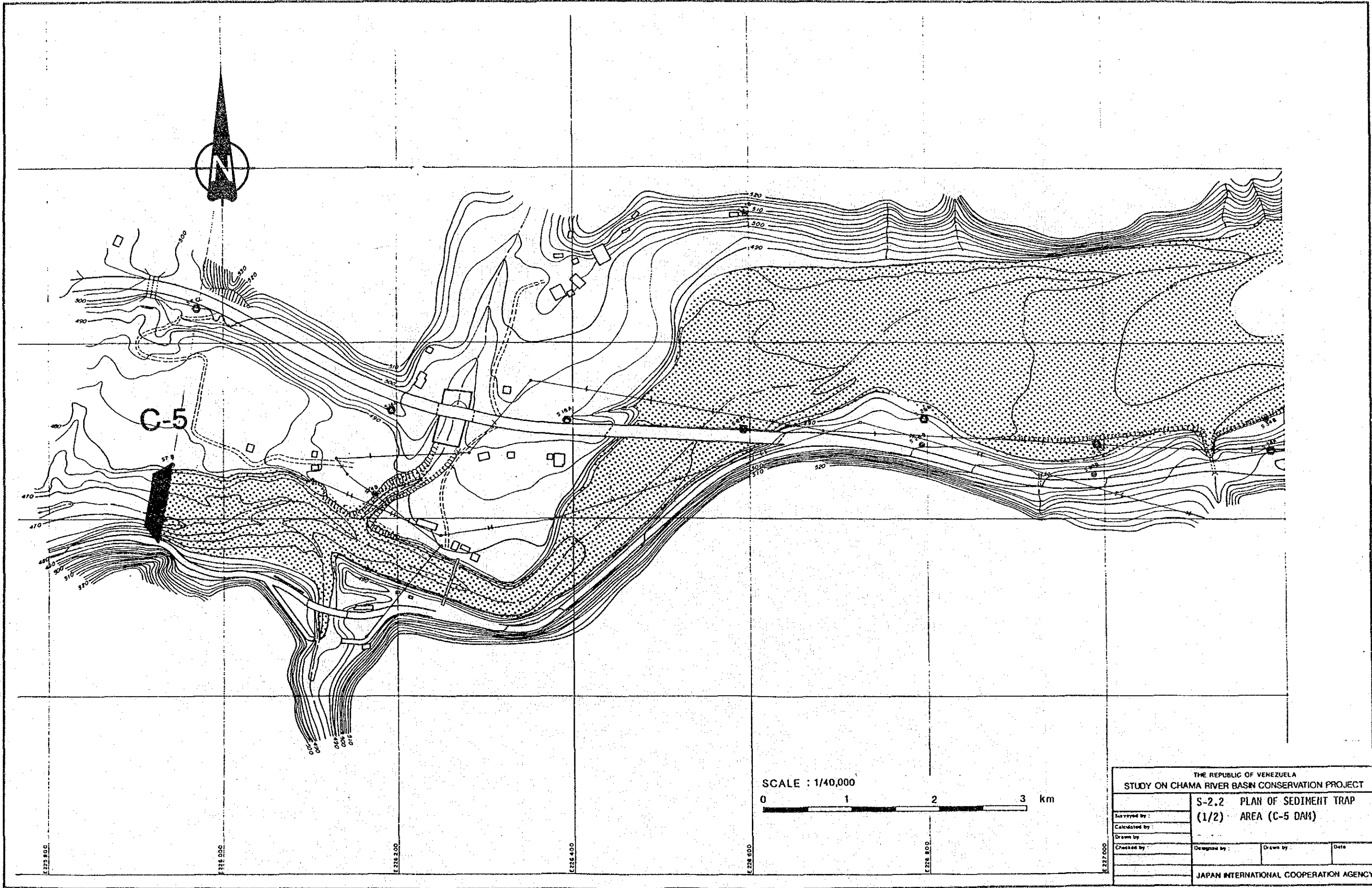
FRONT VIEW S=1/1000



SIDE WALL



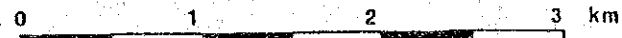
THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
S-2.1		PLAN, FRONT VIEW AND CROSS SECTION (C-5 DAM)	
Surveyed by:		Designed by:	Drawn by:
Calculated by:			Date:
Drawn by:			
Checked by:			
JAPAN INTERNATIONAL COOPERATION AGENCY			



THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
S-2.2 PLAN OF SEDIMENT TRAP		(1/2) AREA (C-5 DAM)	
Surveyed by:		Designed by:	
Calculated by:		Drawn by:	
Drawn by:		Date:	
Checked by:		JAPAN INTERNATIONAL COOPERATION AGENCY	



SCALE : 1/40,000



THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
S-2.2 PLAN OF SEDIMENT TRAP		(2/2) AREA (C-5 DAM)	
Surveyed by :		Designed by :	Drawn by :
Calculated by :			Date :
Drawn by :			
Checked by :			
JAPAN INTERNATIONAL COOPERATION AGENCY			

C-5 Dam EL. 478.0

i=1/90

i=1/124.5

DATUM, 460

S-10 EL. 479.2

S-14 EL. 481.5

S-18 EL. 483.9

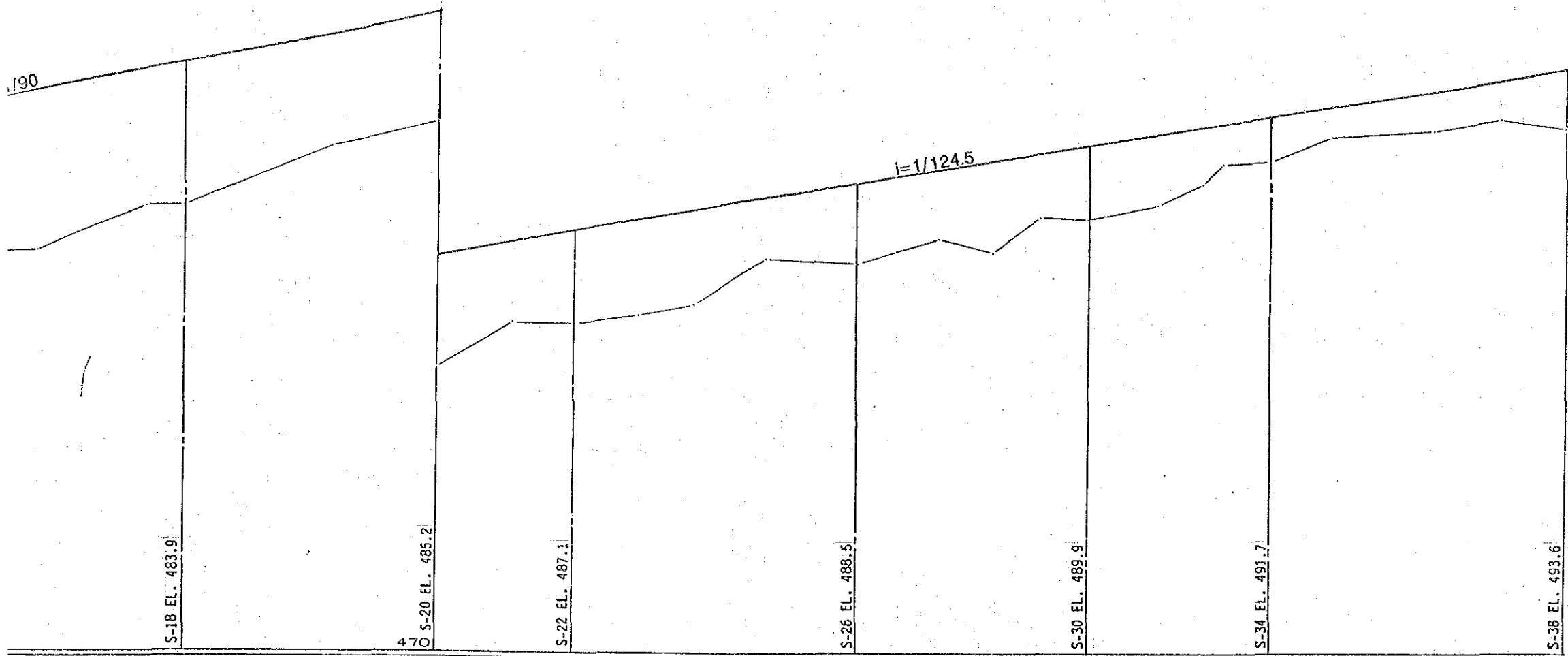
S-20 EL. 486.2

S-22 EL. 487.1

S-26 EL. 488.5

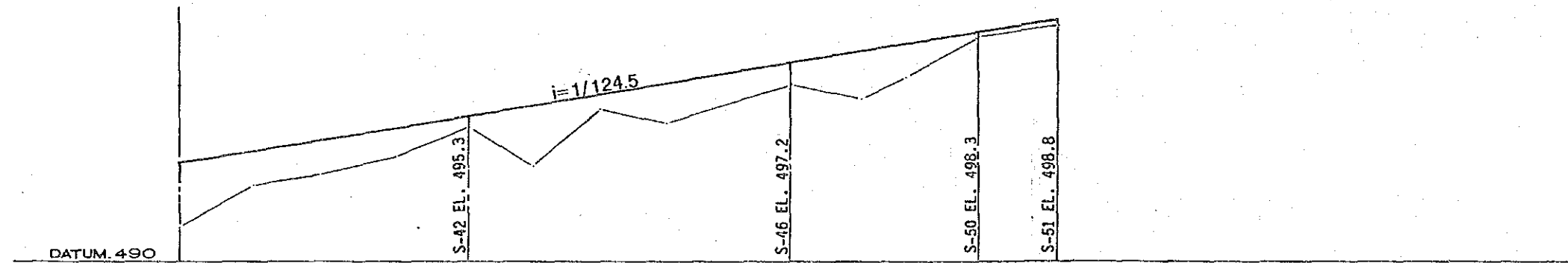
S-30 EL. 489.9

STATION N ^o	DESIGN ELEVATION (m)			PRESENT ELEVATION (m)			ACCUMULATIVE DISTANCE (m)	DISTANCE (m)
	BANK CROWN	HIGH WATER LEVEL	RIVER BED	LEFT BANK CROWN	RIGHT BANK CROWN	RIVER BED		
	S-1							
S-2						466.96	4.00	0+037.00
S-3						467.91	3.00	0+063.00
S-4						468.30	41.50	0+121.00
S-5						468.05	19.00	0+162.50
S-6						468.35	23.00	0+181.50
S-7						468.61	23.00	0+204.50
S-8						468.86	40.00	0+227.50
S-9						469.02	42.00	0+267.50
S-10						469.92	54.50	0+309.50
S-11						470.16	42.50	0+386.00
S-12						472.23	42.50	0+406.50
S-13						473.11	69.00	0+469.00
S-14						473.10	55.00	0+518.00
S-15						476.02	49.50	0+573.00
S-16						476.19	84.00	0+622.50
S-17						478.02	31.00	0+706.50
S-18						478.07	11.600	0+737.50
S-19						480.61	67.00	0+803.50
S-20						481.61	62.00	0+840.50
S-21						483.45	53.50	0+902.50
S-22						483.39	54.00	0+956.00
X-1						483.70	45.50	1+10.00
X-2						484.12	35.00	1+135.50
S-23						486.00	74.00	1+214.50
S-24						485.90	68.50	1+226.50
S-25						486.69	43.50	1+307.00
S-26						486.25	38.00	1+400.50
S-27						487.70	36.00	1+438.50
S-28						487.60	55.50	1+477.50
S-29						488.15	33.50	1+503.00
S-30						488.15		



S-15	84.00	0+322.50	476.15
S-17	31.00	0+706.50	478.02
S-18	11.600	0+737.50	478.07
S-19	87.00	0+833.50	480.61
S-20	62.00	0+942.50	481.81
S-21	53.50	1+002.50	483.45
S-22	54.00	1+056.00	483.96
X-1	45.50	1+110.00	483.70
X-2	39.00	1+153.50	484.12
S-25	74.00	1+214.50	486.00
S-26	68.50	1+228.50	486.80
S-27	43.50	1+357.00	486.81
S-28	38.00	1+400.50	486.25
S-29	38.00	1+435.50	487.70
S-30	53.50	1+477.50	487.60
S-31	35.50	1+533.00	488.10
S-32	17.50	1+568.00	488.00
S-33	38.00	1+585.00	488.75
S-34	50.50	1+623.00	489.90
S-35	81.00	1+673.00	490.93
S-36	53.00	1+724.00	491.18
S-37	54.00	1+807.50	491.65
S-38	54.00	1+881.50	491.21

THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Scale: H 1:4,000 V 1:200	S-2.3 LONGITUDINAL PROFILE (1/2) OF SEDIMENT TRAP AREA (C-5 DAM)		
SURVEYED: PROTOVAL C.A.			
CREATED: PROTOVAL C.A.			
LABOR: PROTOVAL C.A.			
DRAWN: S. KOHNO	DESIGNED BY:	CHECKED BY:	DATE:
JAPAN INTERNATIONAL COOPERATION AGENCY			



STATION N ^o	DESIGN ELEVATION (m)		PRESENT ELEVATION (m)		ACCUMULATIVE DISTANCE (m)	DISTANCE (m)
	BANK CROWN	HIGH WATER LEVEL	LEFT BANK CROWN	RIGHT BANK CROWN		
3-39			491.21		1181.30	34.00
3-39			492.73		1195.50	47.00
3-40			493.16		1192.50	37.00
3-41			493.81		2109.50	34.00
3-42			494.89		2103.50	47.50
3-43			493.49		2121.00	50.00
3-44			495.56		2117.00	47.50
3-45			495.05		2218.00	95.00
3-46			496.42		2213.50	52.00
3-47			495.88		2230.50	32.50
3-49			496.71		2238.00	55.00
3-50			498.16		2243.00	39.00
3-51			498.63		2252.00	51.00

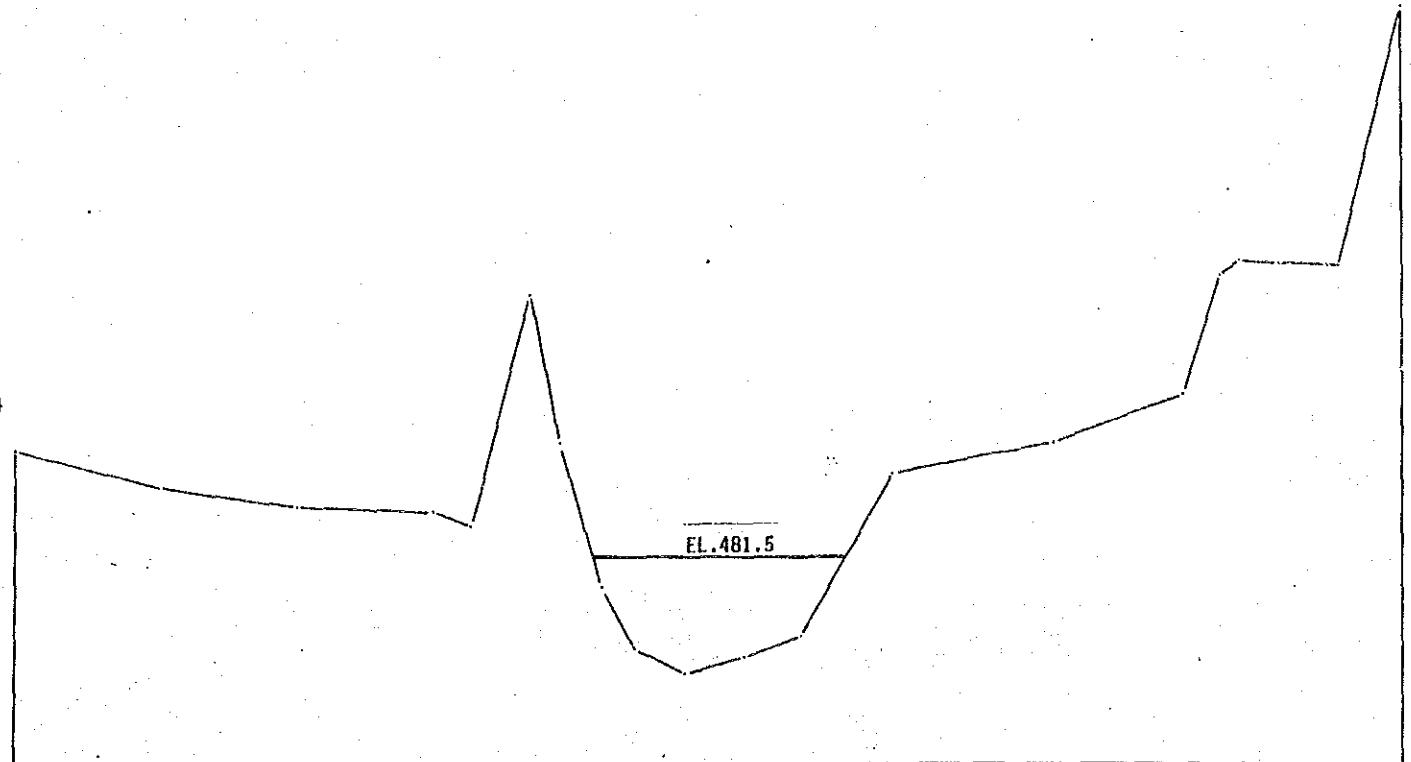
THE REPUBLIC OF VENEZUELA

STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT

Scale H 1:4,000 V 1:200	S-2.3 LONGITUDINAL PROFILE (2/2) OF SEDIMENT TRAP AREA (C-5 DAM)
DESIGNED BY PROTOVAL C.A.	
CHECKED BY PROTOVAL C.A.	
DATE	DESIGNED BY
	DATE

JAPAN INTERNATIONAL COOPERATION AGENCY

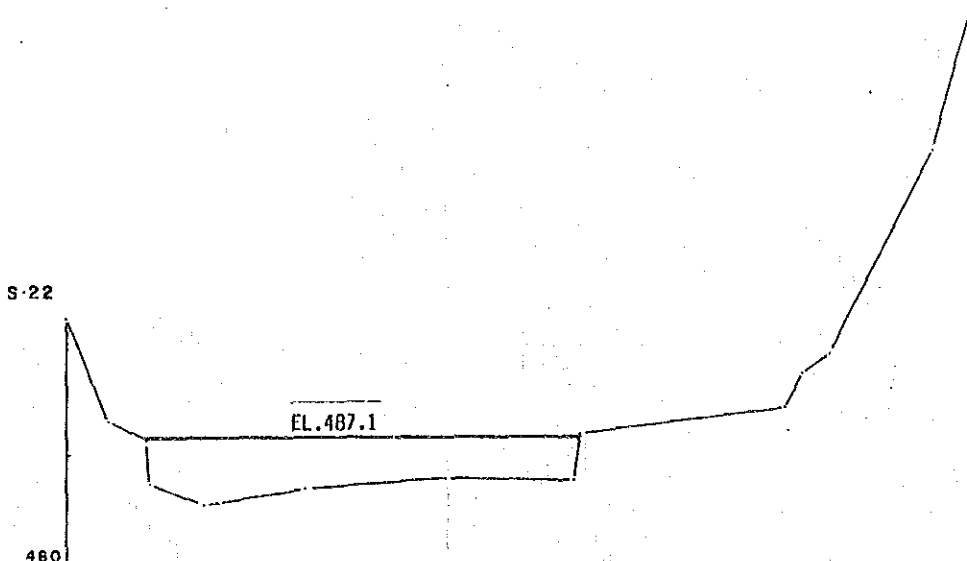
S-14



DATUM 470

ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)	DESIGN ELEVATION (m)
481.30	481.30	481.30
482.00	482.00	481.30
483.00	483.00	481.30
484.00	484.00	481.30
485.00	485.00	481.30
486.00	486.00	481.30
487.00	487.00	481.30
488.00	488.00	481.30
489.00	489.00	481.30
490.00	490.00	481.30
491.00	491.00	481.30
492.00	492.00	481.30
493.00	493.00	481.30
494.00	494.00	481.30
495.00	495.00	481.30
496.00	496.00	481.30
497.00	497.00	481.30
498.00	498.00	481.30
499.00	499.00	481.30
500.00	500.00	481.30

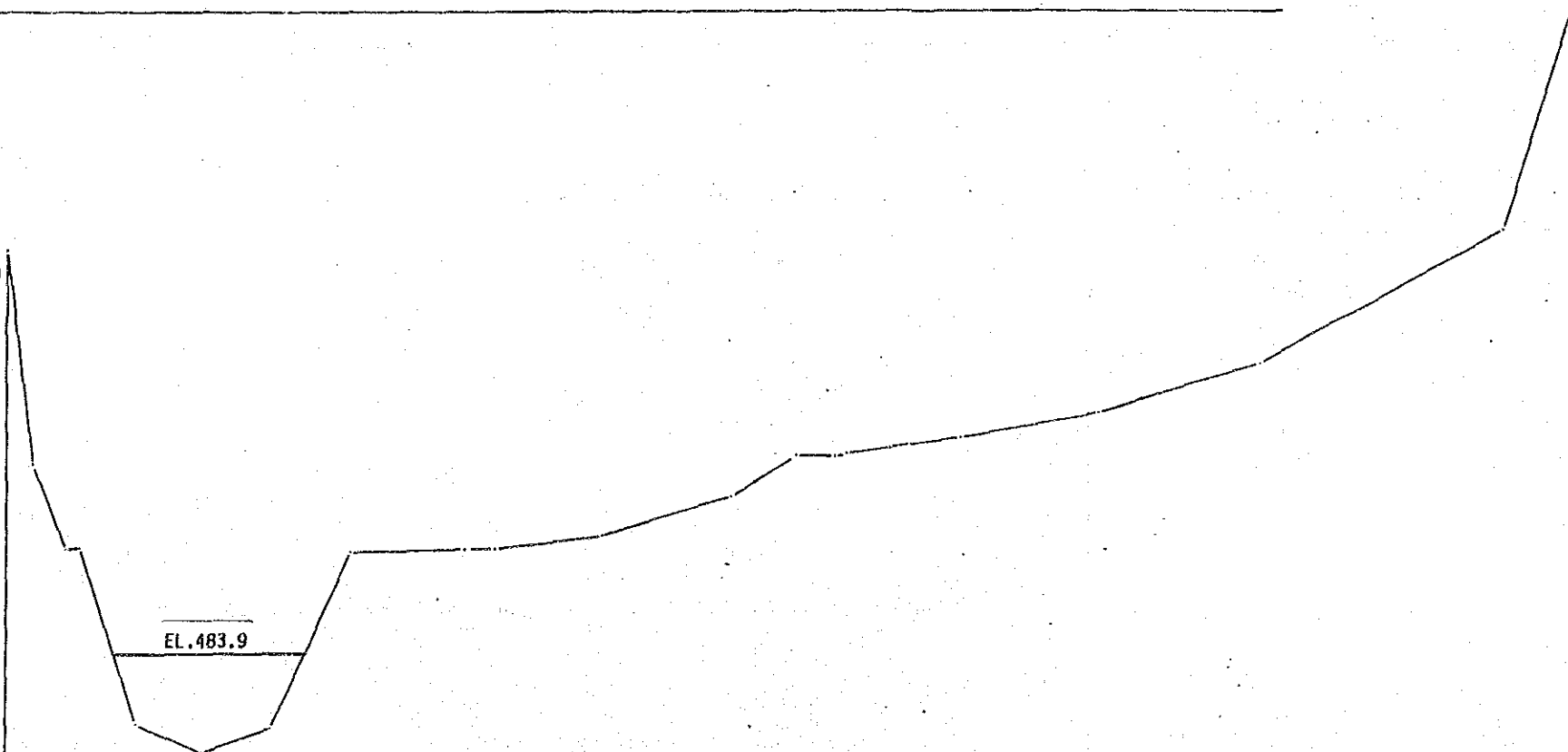
S-22



DATUM 480

ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)	DESIGN ELEVATION (m)
480.00	480.00	480.00
481.00	481.00	480.00
482.00	482.00	480.00
483.00	483.00	480.00
484.00	484.00	480.00
485.00	485.00	480.00
486.00	486.00	480.00
487.00	487.00	480.00
488.00	488.00	480.00
489.00	489.00	480.00
490.00	490.00	480.00
491.00	491.00	480.00
492.00	492.00	480.00
493.00	493.00	480.00
494.00	494.00	480.00
495.00	495.00	480.00
496.00	496.00	480.00
497.00	497.00	480.00
498.00	498.00	480.00
499.00	499.00	480.00
500.00	500.00	480.00

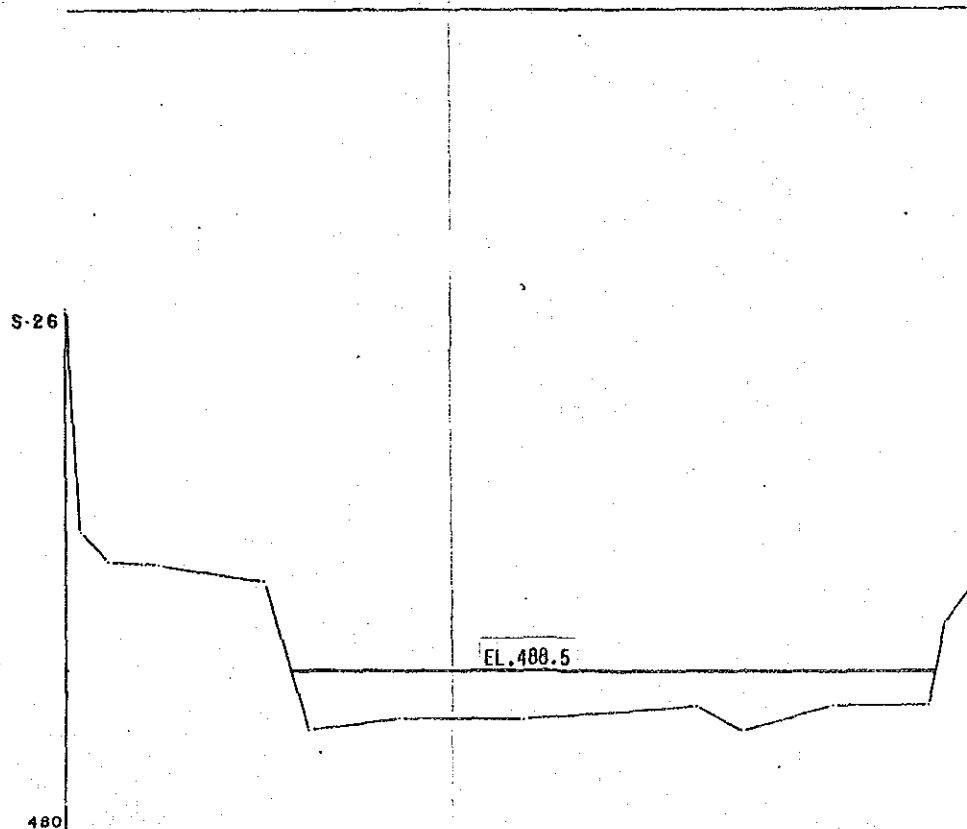
S-18



DATUM 477

ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)	DESIGN ELEVATION (m)
477.00	477.00	477.00
478.00	478.00	477.00
479.00	479.00	477.00
480.00	480.00	477.00
481.00	481.00	477.00
482.00	482.00	477.00
483.00	483.00	477.00
484.00	484.00	477.00
485.00	485.00	477.00
486.00	486.00	477.00
487.00	487.00	477.00
488.00	488.00	477.00
489.00	489.00	477.00
490.00	490.00	477.00
491.00	491.00	477.00
492.00	492.00	477.00
493.00	493.00	477.00
494.00	494.00	477.00
495.00	495.00	477.00
496.00	496.00	477.00
497.00	497.00	477.00
498.00	498.00	477.00
499.00	499.00	477.00
500.00	500.00	477.00

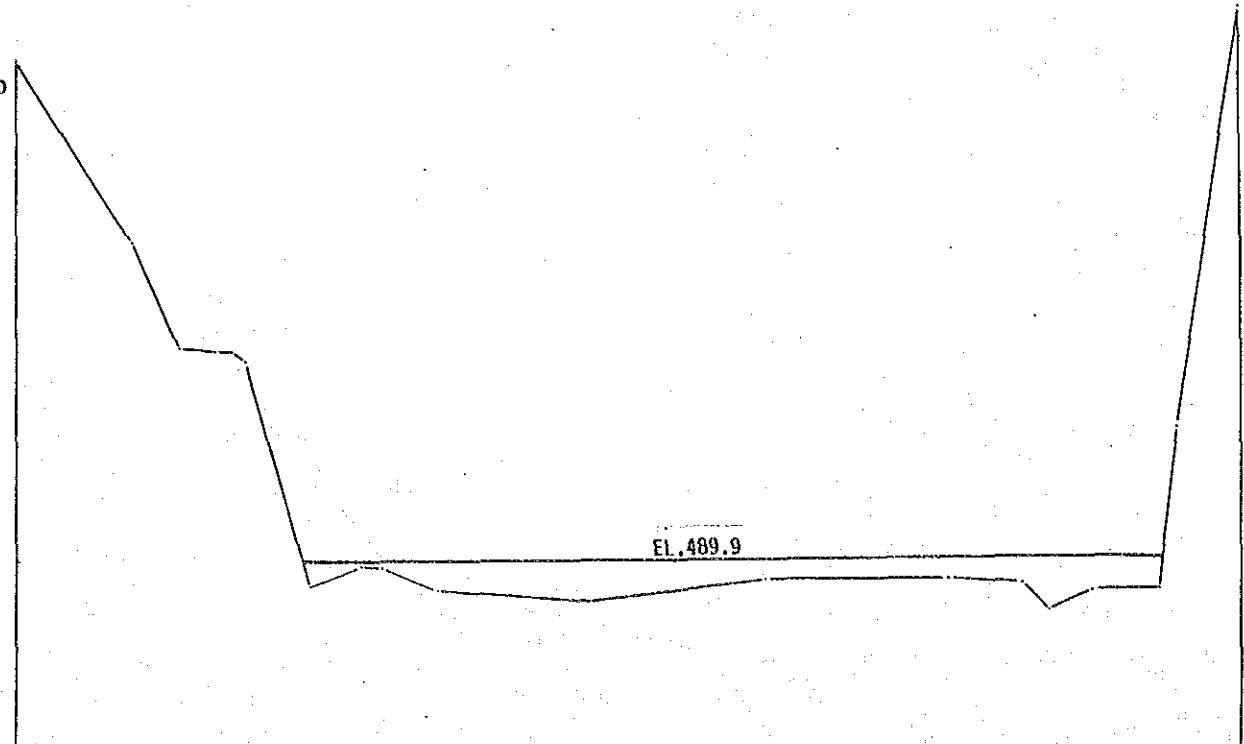
S-26



DATUM 480

ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)	DESIGN ELEVATION (m)
480.00	480.00	480.00
481.00	481.00	480.00
482.00	482.00	480.00
483.00	483.00	480.00
484.00	484.00	480.00
485.00	485.00	480.00
486.00	486.00	480.00
487.00	487.00	480.00
488.00	488.00	480.00
489.00	489.00	480.00
490.00	490.00	480.00
491.00	491.00	480.00
492.00	492.00	480.00
493.00	493.00	480.00
494.00	494.00	480.00
495.00	495.00	480.00
496.00	496.00	480.00
497.00	497.00	480.00
498.00	498.00	480.00
499.00	499.00	480.00
500.00	500.00	480.00

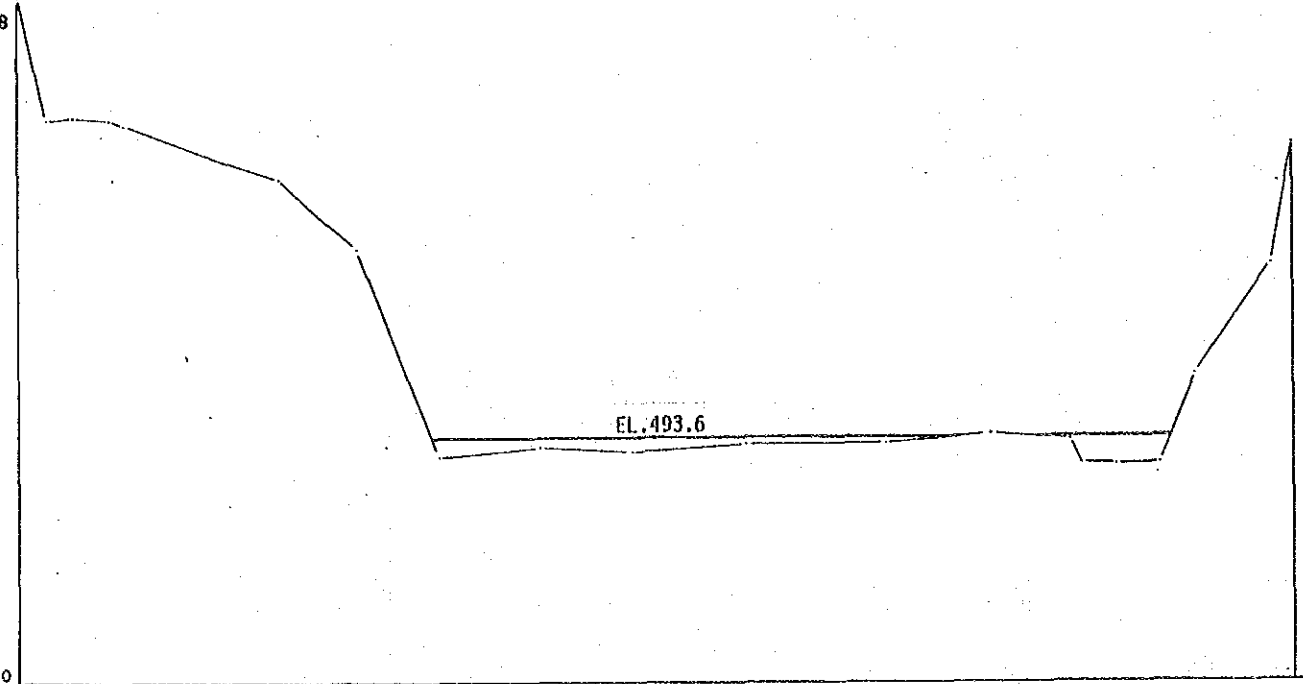
S-30



DATUM 480

ACCUMULATIVE DISTANCE (m)	0+00.00	0+05.00	0+10.00	0+15.00	0+20.00	0+25.00	0+30.00	0+35.00	0+40.00	0+45.00	0+50.00	0+55.00	0+60.00	0+65.00	0+70.00	0+75.00	0+80.00	0+85.00	0+90.00	0+95.00	1+00.00
PRESENT ELEVATION (m)	489.77	489.78	489.79	489.80	489.81	489.82	489.83	489.84	489.85	489.86	489.87	489.88	489.89	489.90	489.91	489.92	489.93	489.94	489.95	489.96	489.97
DESIGN ELEVATION (m)	489.9																				

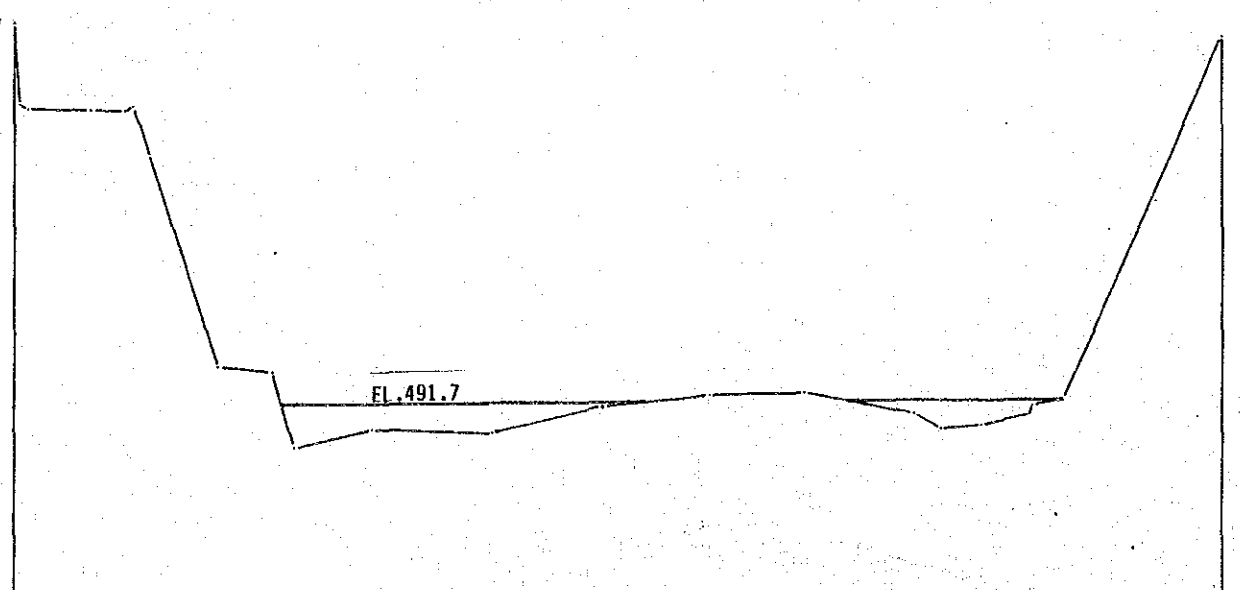
S-38



DATUM 480

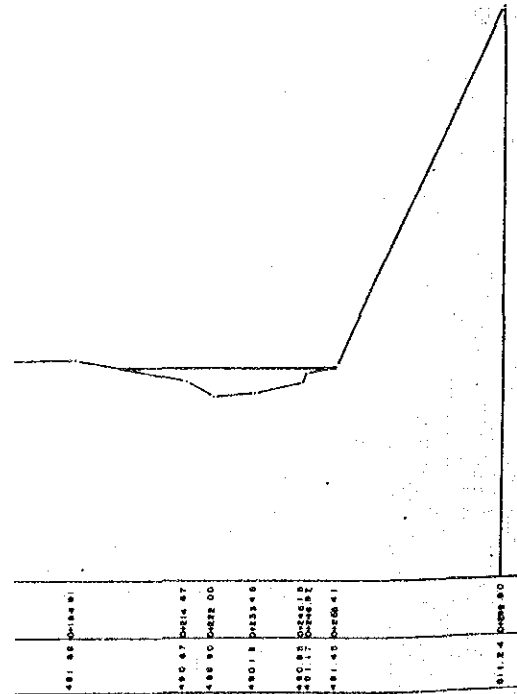
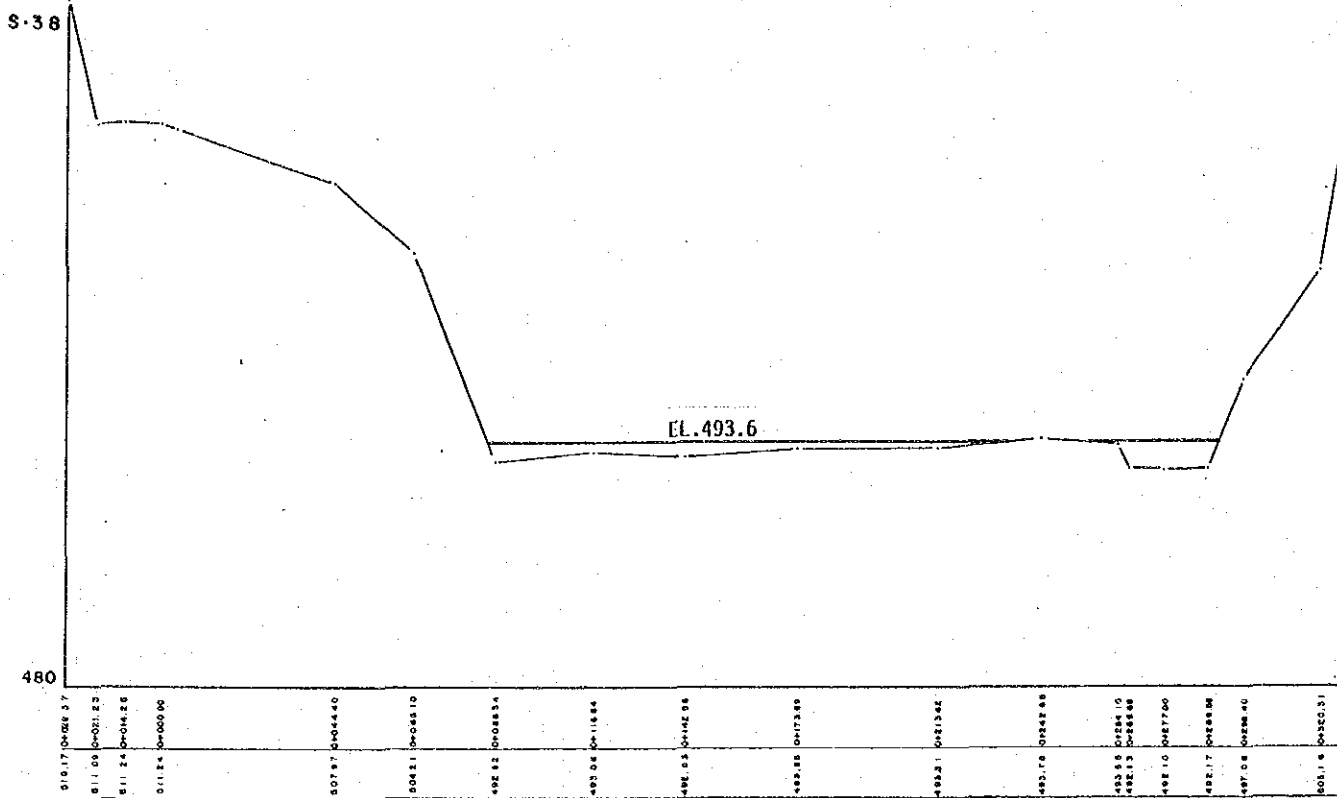
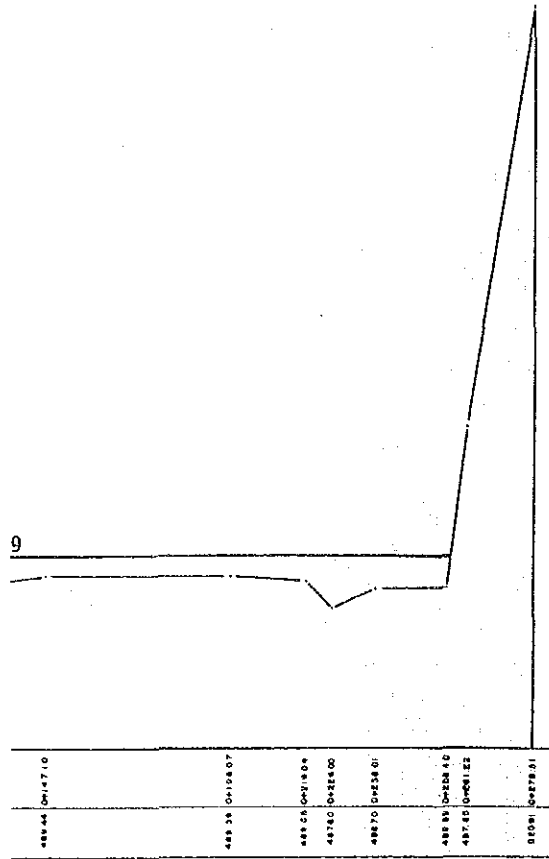
ACCUMULATIVE DISTANCE (m)	0+00.00	0+05.00	0+10.00	0+15.00	0+20.00	0+25.00	0+30.00	0+35.00	0+40.00	0+45.00	0+50.00	0+55.00	0+60.00	0+65.00	0+70.00	0+75.00	0+80.00	0+85.00	0+90.00	0+95.00	1+00.00
PRESENT ELEVATION (m)	493.17	493.18	493.19	493.20	493.21	493.22	493.23	493.24	493.25	493.26	493.27	493.28	493.29	493.30	493.31	493.32	493.33	493.34	493.35	493.36	493.37
DESIGN ELEVATION (m)	493.6																				

S-34

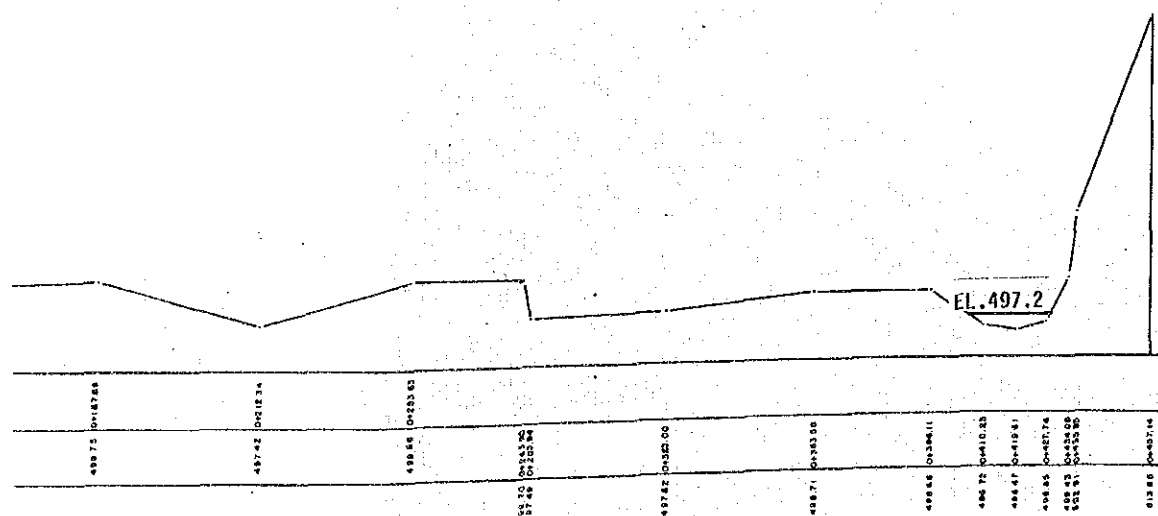
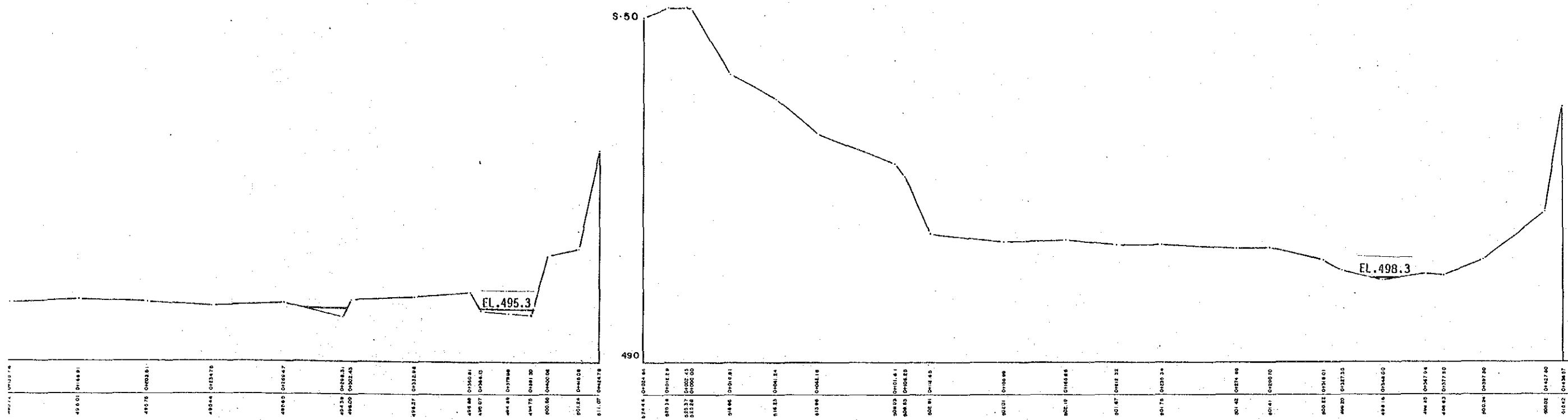


DATUM 480

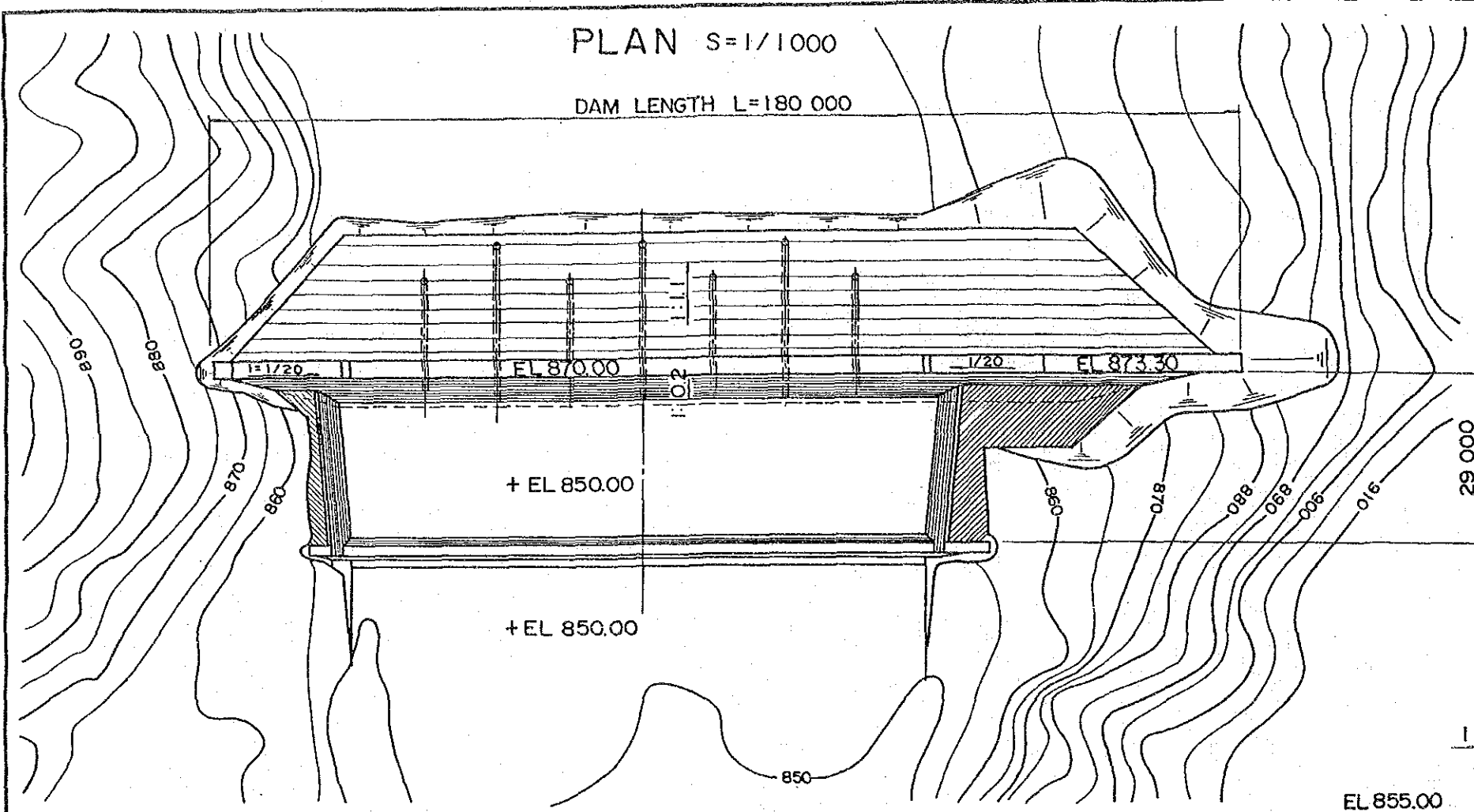
ACCUMULATIVE DISTANCE (m)	0+00.00	0+05.00	0+10.00	0+15.00	0+20.00	0+25.00	0+30.00	0+35.00	0+40.00	0+45.00	0+50.00	0+55.00	0+60.00	0+65.00	0+70.00	0+75.00	0+80.00	0+85.00	0+90.00	0+95.00	1+00.00
PRESENT ELEVATION (m)	491.81	491.82	491.83	491.84	491.85	491.86	491.87	491.88	491.89	491.90	491.91	491.92	491.93	491.94	491.95	491.96	491.97	491.98	491.99	492.00	492.01
DESIGN ELEVATION (m)	491.7																				



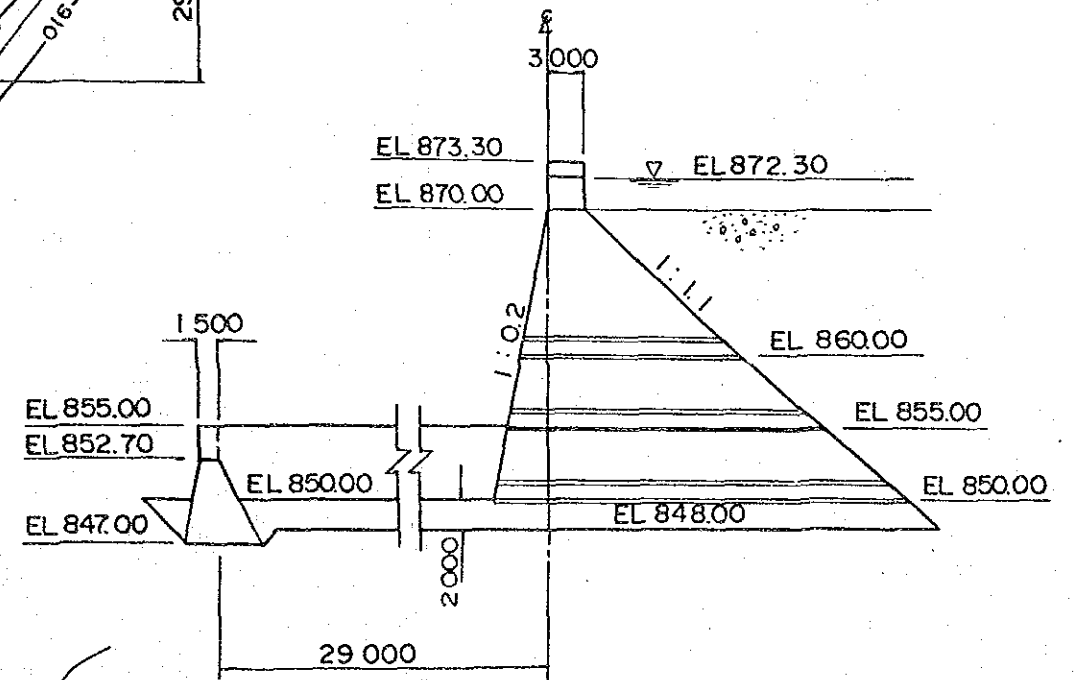
THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Scale H 1:2,000	S-2.4 CROSS SECTION OF		
V 1:400	(2/3) SEDIMENT TRAP AREA		
DESIGNED BY	PROYECTAL C.A.	C-5 DAM	
DRAWN BY	PROYECTAL C.A.		
CHECKED BY	PROYECTAL C.A.		
PROJECT	S. KOPPIO	DESIGNED BY	DATE
JAPAN INTERNATIONAL COOPERATION AGENCY			



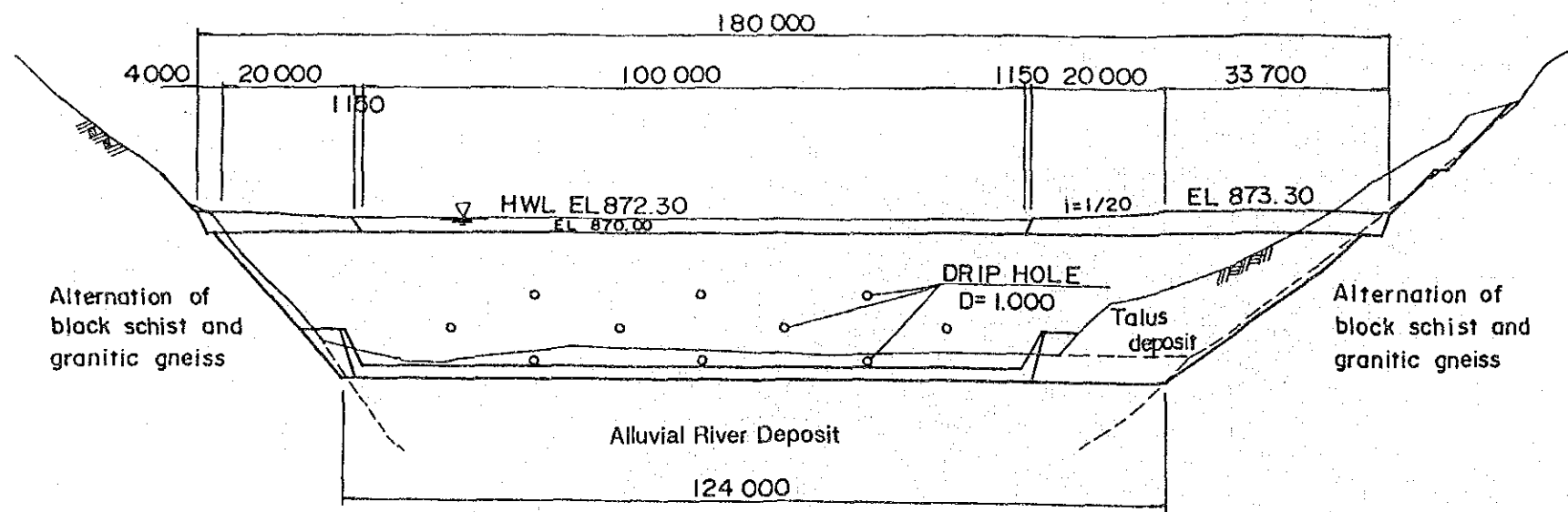
THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Scale 1:12,000 V 1:1400	S-2.4 CROSS SECTION OF (3/3) SEDIMENT TRAP AREA (C-5 DAM)		
SURVEYED	PROTOVAL C.A.		
CALCULATED	PROTOVAL C.A.		
DRAWN	PROTOVAL C.A.		
CHECKED	S. KOHNO	DESIGNED BY	DATE
		DRAWN BY	
JAPAN INTERNATIONAL COOPERATION AGENCY			



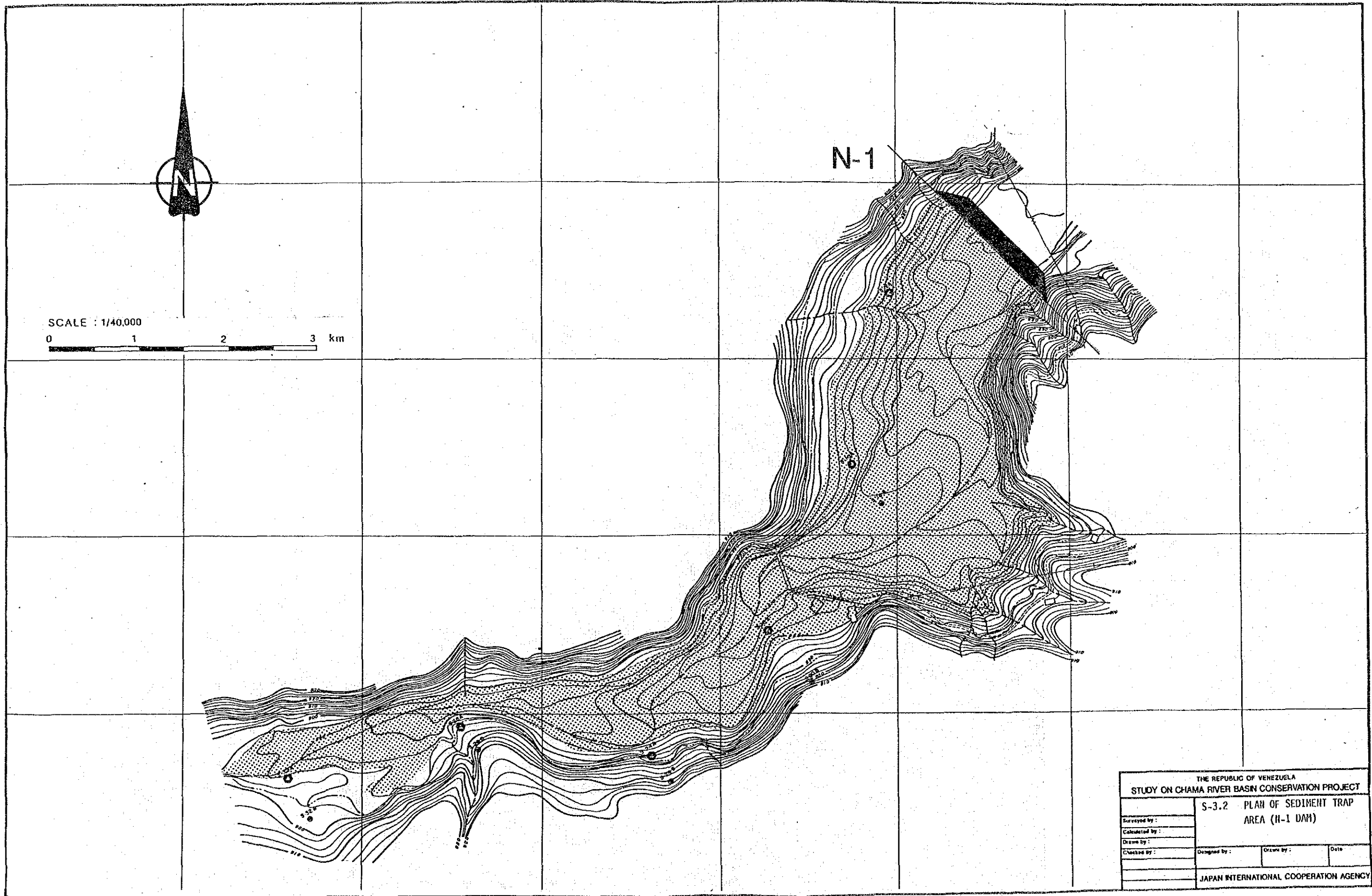
STANDARD CROSS SECTION S=1/500



FRONT VIEW S=1/1000



THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
S-3.1 PLAN, FRONT VIEW AND CROSS SECTION (N-1 DAM)			
Surveyed by:		Designed by:	Drawn by:
Calculated by:			Date:
Drawn by:			
Checked by:			
JAPAN INTERNATIONAL COOPERATION AGENCY			



N-1 Dam El. 870.0

$I=1/45$

$I=1/45$

$I=1/45$

S-10 EL. 870.7

S-14 EL. 876.1

S-17 EL. 879.3

S-18 EL. 880.6

S-22 EL. 885.3

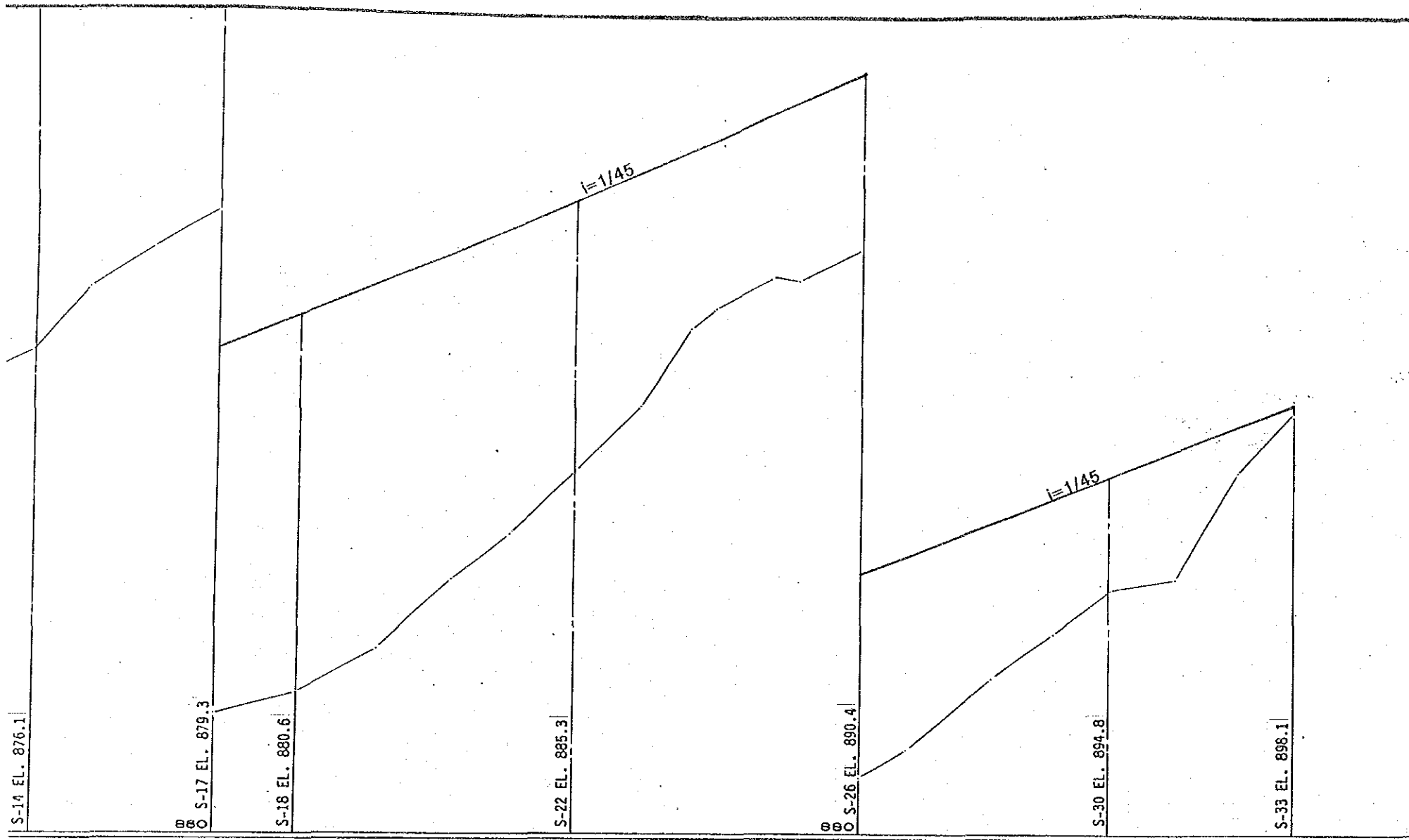
S-26 EL. 890.4

S-30 EL. 894.8

S-33 EL. 898.1

DATUM. 840

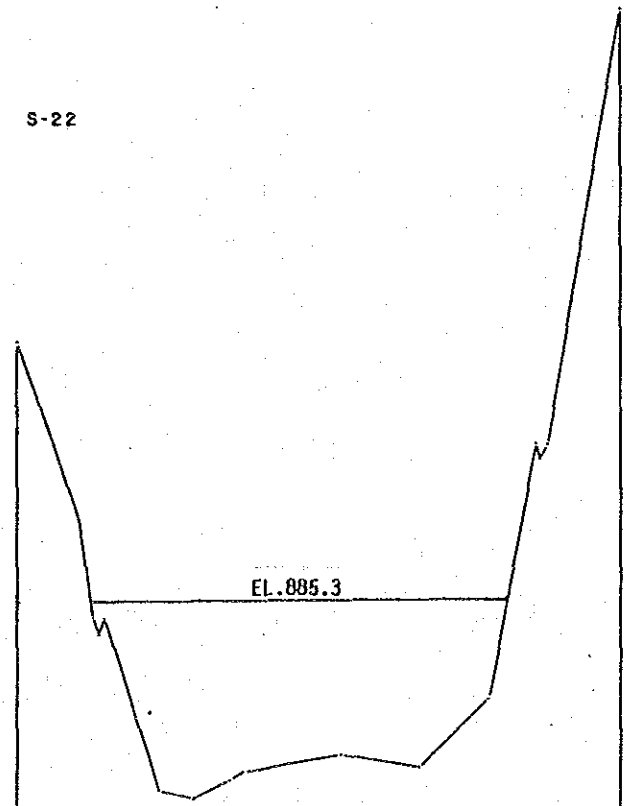
STATION No	DISTANCE (m)	ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)			DESIGN ELEVATION (m)		
			RIVER BED	RIGHT BANK CROWN	LEFT BANK CROWN	RIVER BED	HIGH WATER LEVEL	BANK CROWN
S-1	17.00	0+000.00	843.92					
S-2	15.10	0+017.00	849.40					
S-3	13.00	0+032.10	849.78					
S-4	15.00	0+045.10	850.44					
S-5	15.30	0+060.10	850.61					
S-6	15.50	0+075.60	850.71					
S-7	16.25	0+091.10	850.80					
S-8	12.60	0+107.35	851.74					
S-9	21.00	0+119.95	851.90					
S-10	18.00	0+140.95	852.84					
S-11	39.00	0+158.95	853.46					
	32.00	0+197.95	854.28					
S-12	19.00	0+229.95	855.23					
	43.50	0+244.95	855.40					
	28.00	0+288.45	857.01					
	36.00	0+311.45	857.26					
S-13	32.00	0+347.95	858.31					
S-14	43.50	0+379.95	859.10					
S-15	51.50	0+423.45	861.58					
S-16	49.50	0+474.95	863.21					
S-17	56.00	0+524.45	864.64					
S-18	61.00	0+583.95	865.92					
S-19	56.00	0+644.95	867.27					
S-20	43.00	0+700.95	870.04					
S-21	51.00	0+745.95	871.86					
S-22	52.50	0+796.95	874.39					
S-23	38.00	0+849.45	877.03					
S-24	47.00	0+906.95	880.93					
	20.50	0+933.95	882.21					
S-25	49.00	0+974.45	882.06					
S-26	37.00	1+023.45	882.16					
S-27	67.50	1+060.45	883.32					
S-28	49.00	1+127.95	886.17					
S-29	46.00	1+176.95	887.95					
S-30	94.00	1+223.45	889.65					
S-31	46.00	1+277.45	891.10					
S-32	45.00	1+326.45	894.33					
S-33		1+371.45	896.77					



S 14	45.00	0+379.95	859.10
S 15	31.50	0+423.45	861.58
S 16	49.50	0+474.95	863.21
S 17	39.50	0+524.45	864.64
S 18	61.00	0+583.95	865.52
S 19	56.00	0+644.95	867.27
S 20	45.00	0+700.95	870.04
S 21	31.00	0+745.95	871.86
S 22	32.50	0+796.95	874.39
S 23	38.00	0+849.45	877.05
S 24	47.00	0+906.95	880.12
S 25	49.00	0+953.95	882.21
S 26	37.00	1+023.45	882.18
S 27	67.50	1+060.45	883.32
S 28	49.00	1+127.95	886.17
S 29	46.50	1+176.95	887.95
S 30	54.00	1+223.45	889.65
S 31	49.00	1+277.45	891.10
S 32	45.00	1+326.45	894.33
S 33		1+371.45	896.77

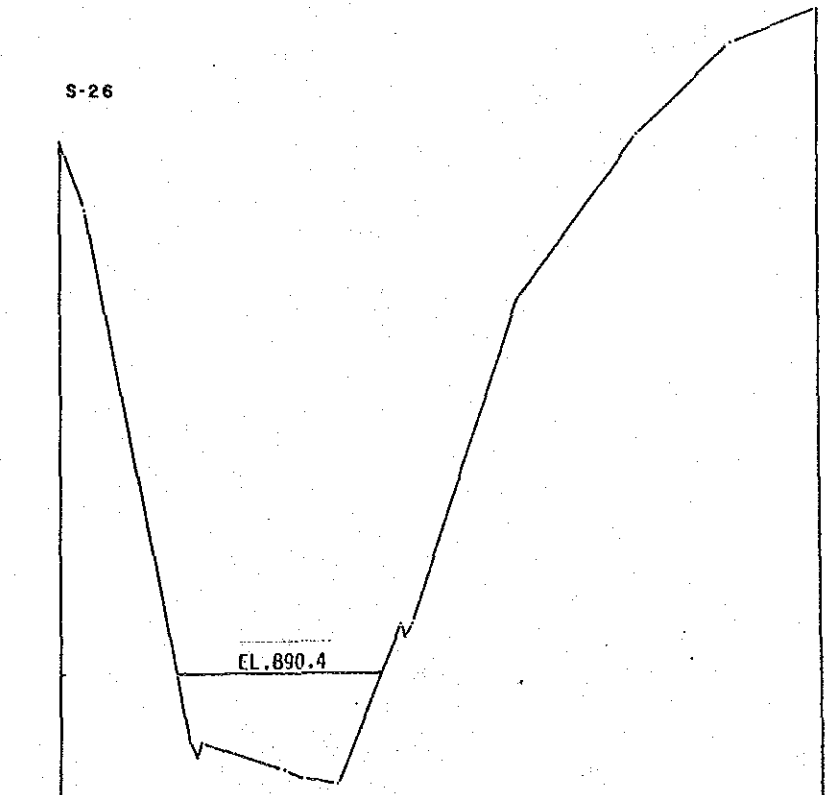
THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Scale: H 1:4,000 V 1:200	S-3.3 LONGITUDINAL PROFILE OF SEDIMENT TRAP AREA (II-1 DAM)		
DESIGNED BY PROTONAL C.A.			
CHECKED BY PROTONAL C.A.			
DRAWN BY PROTONAL C.A.			
DATE	DESIGNED BY	DRAWN BY	DATE
JAPAN INTERNATIONAL COOPERATION AGENCY			

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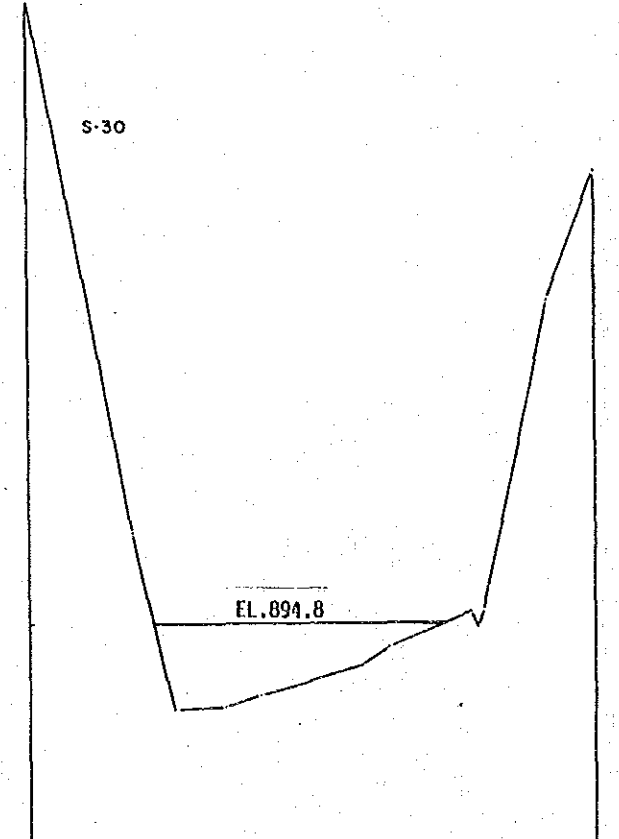
DATUM: 870	
ACCUMULATIVE DISTANCE (m)	916.00 916.25 916.50 916.75 917.00 917.25 917.50 917.75 918.00 918.25 918.50 918.75 919.00
PRESENT ELEVATION (m)	916.00 915.50 915.00 914.50 914.00 913.50 913.00 912.50 912.00 911.50 911.00 910.50 910.00
DESIGN ELEVATION (m)	

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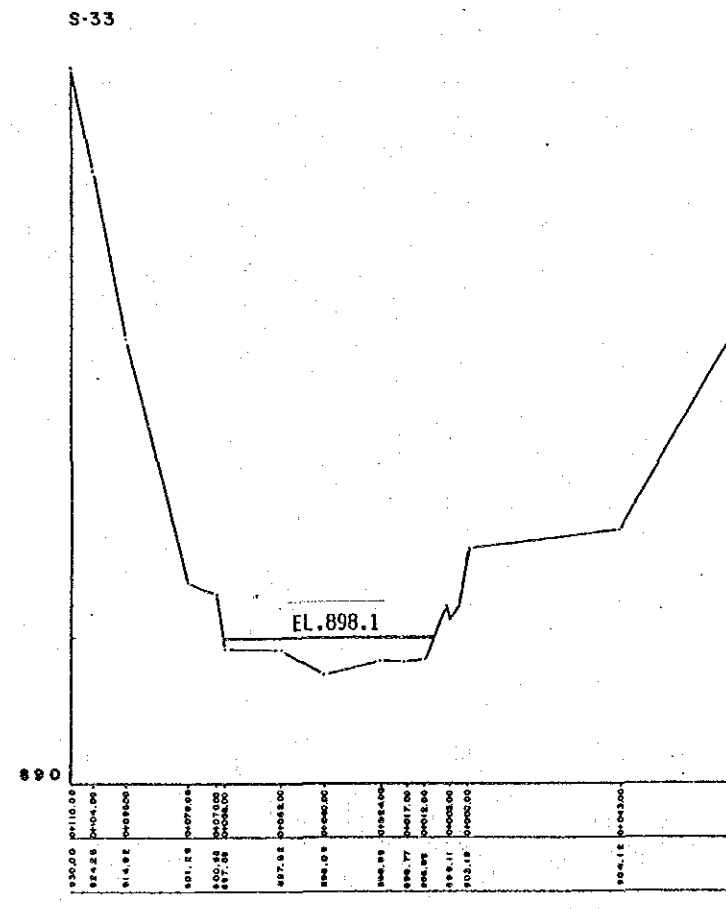
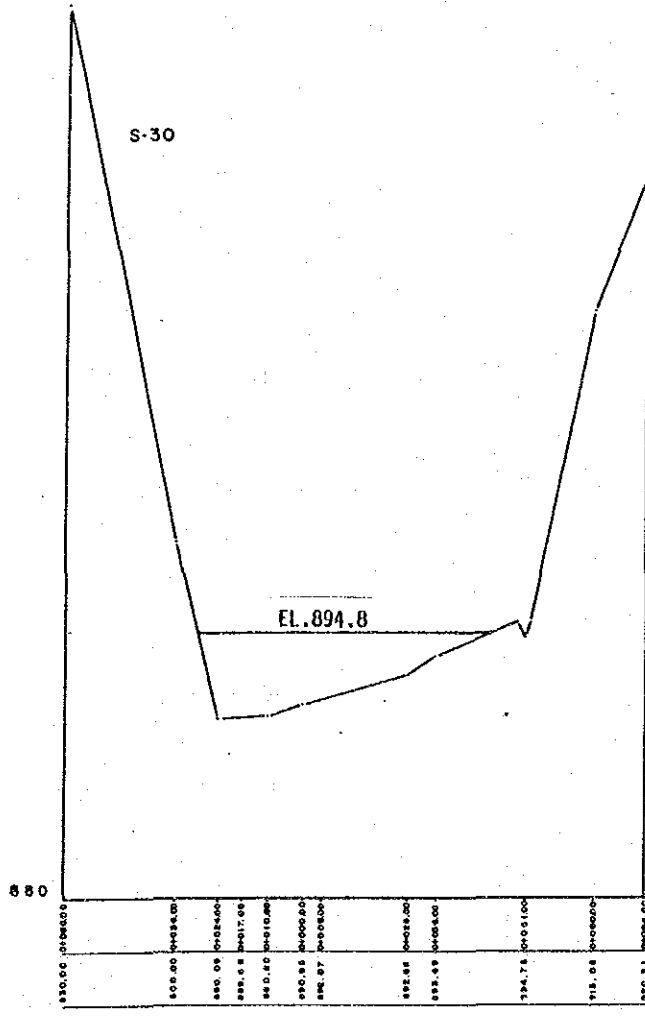
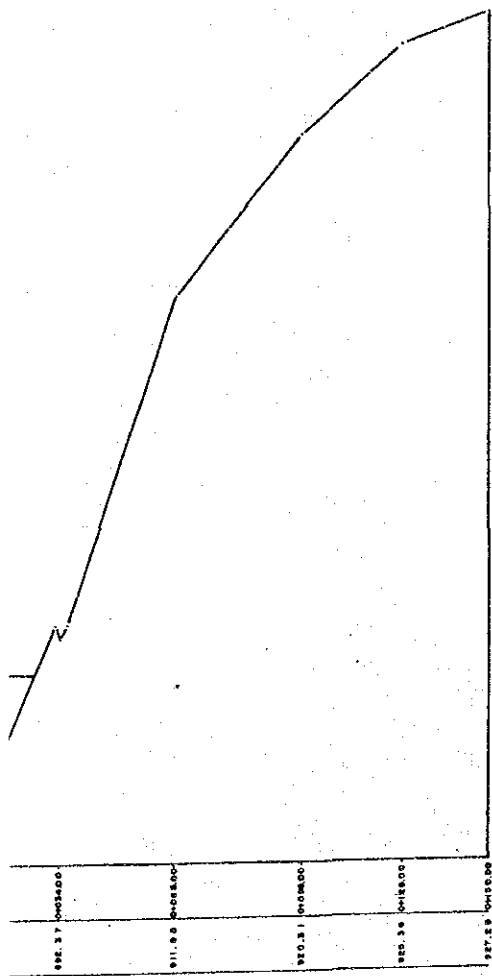


ACCUMULATIVE DISTANCE (m)	880.00 880.25 880.50 880.75 881.00 881.25 881.50 881.75 882.00 882.25 882.50 882.75 883.00
PRESENT ELEVATION (m)	880.00 879.50 879.00 878.50 878.00 877.50 877.00 876.50 876.00 875.50 875.00 874.50 874.00
DESIGN ELEVATION (m)	

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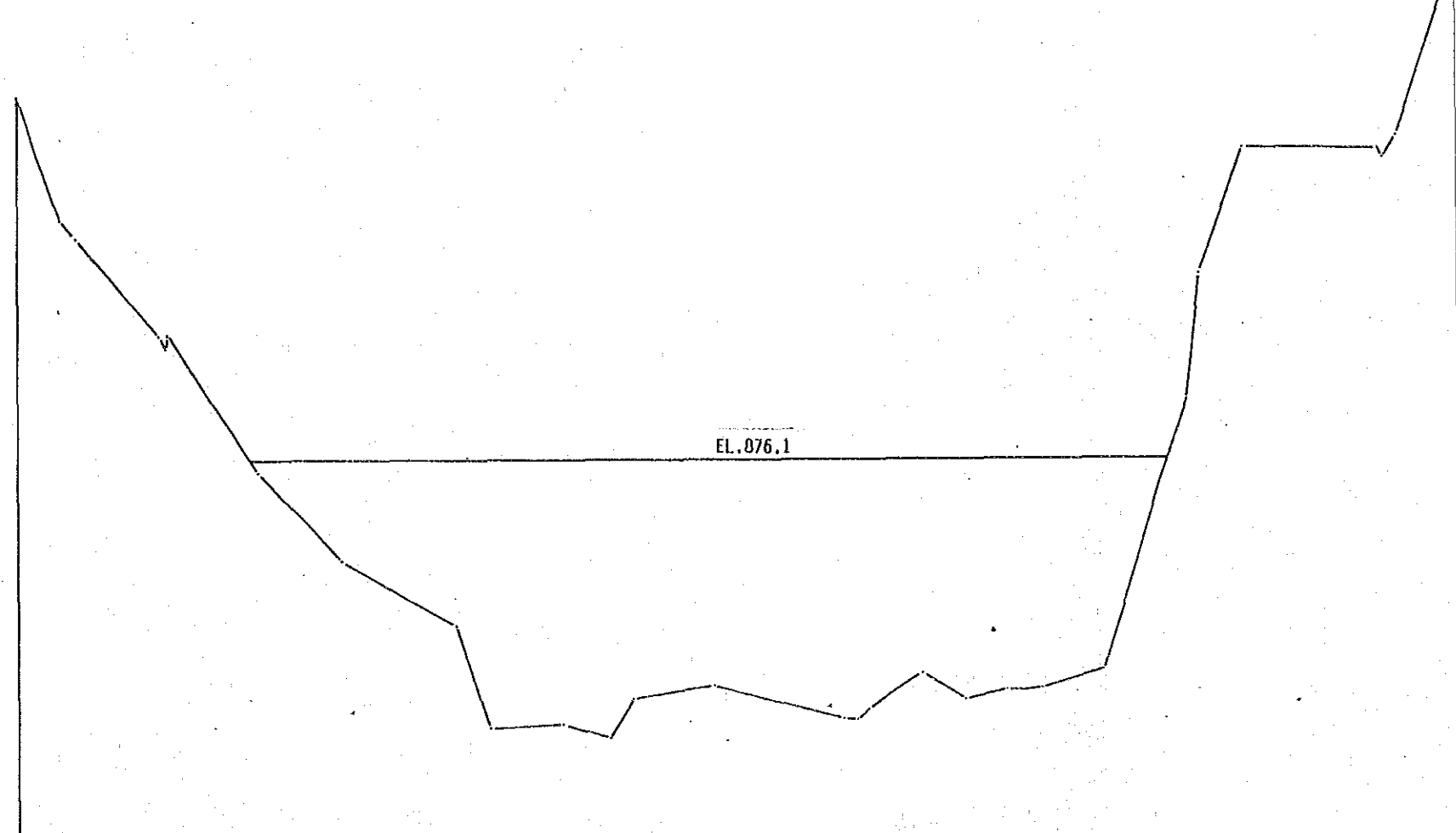
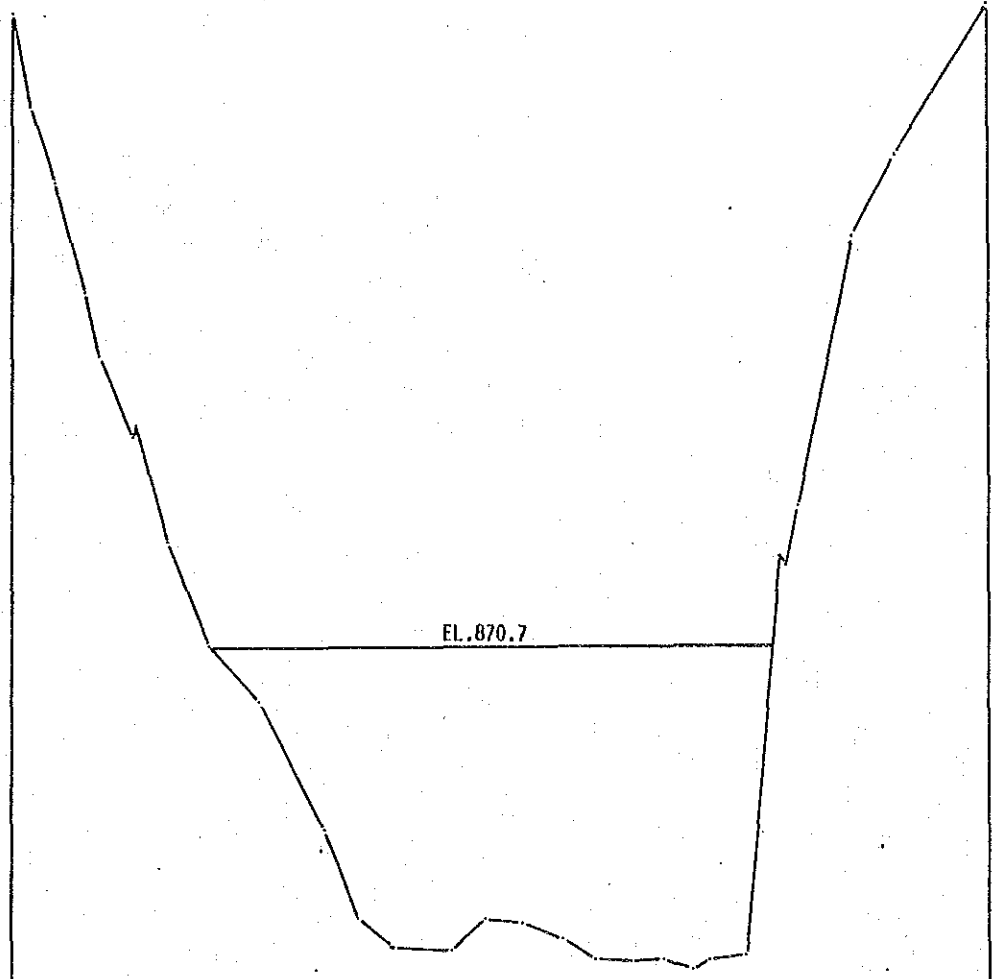
ACCUMULATIVE DISTANCE (m)	880.00 880.25 880.50 880.75 881.00 881.25 881.50 881.75 882.00 882.25 882.50 882.75 883.00
PRESENT ELEVATION (m)	880.00 879.50 879.00 878.50 878.00 877.50 877.00 876.50 876.00 875.50 875.00 874.50 874.00
DESIGN ELEVATION (m)	



THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Scale H 1:2,000	S-3.4 CROSS SECTION OF		
V 1:400	(1/2) SEDIMENT TRAP AREA		
SURVEYED BY: PROTOVAL C.A.		DRAWN BY: PROTOVAL C.A.	
CALCULATED BY: PROTOVAL C.A.		CHECKED BY: PROTOVAL C.A.	
DESIGNED BY: S. KOFIHO	DATE: / /	BY: / /	DATE: / /
JAPAN INTERNATIONAL COOPERATION AGENCY			

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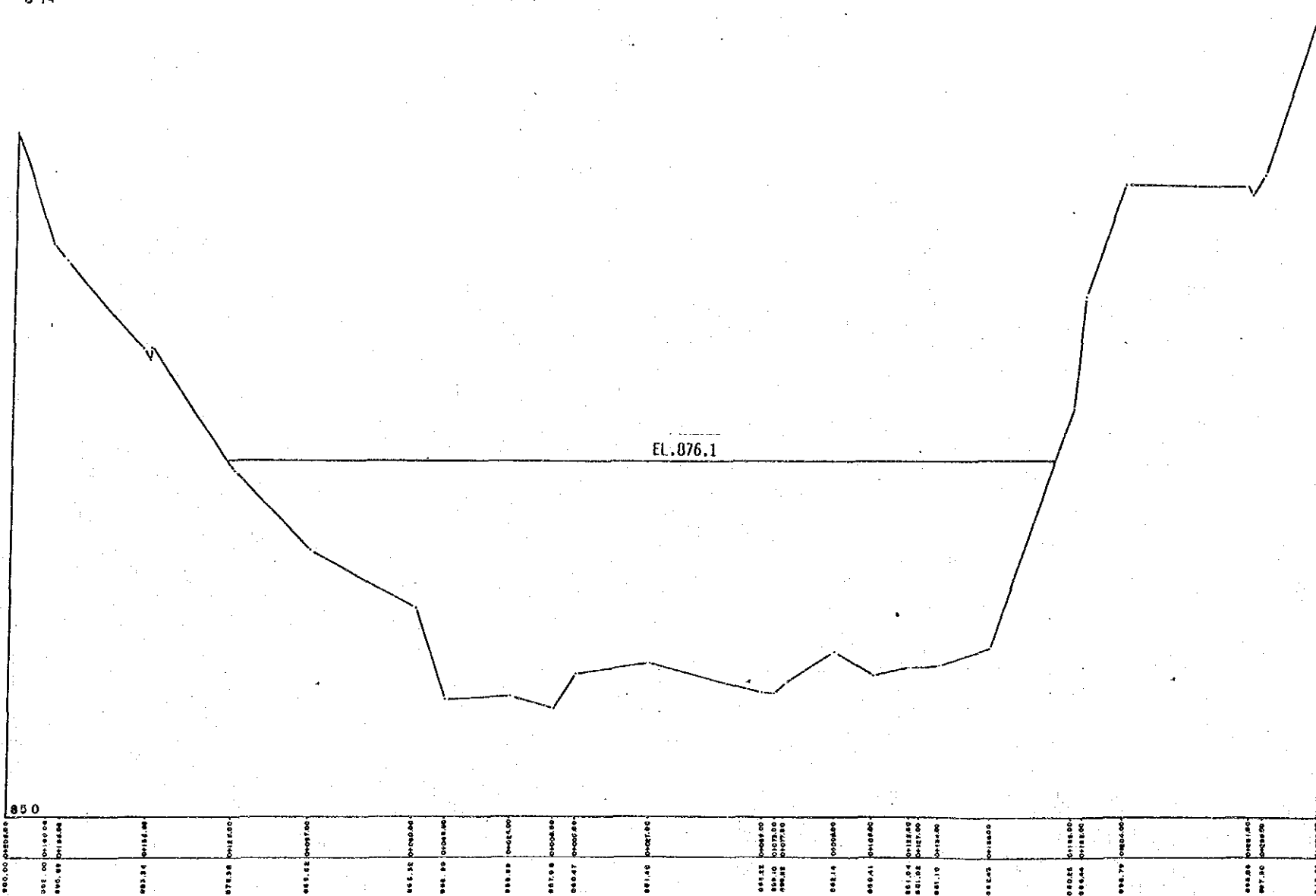
S-14



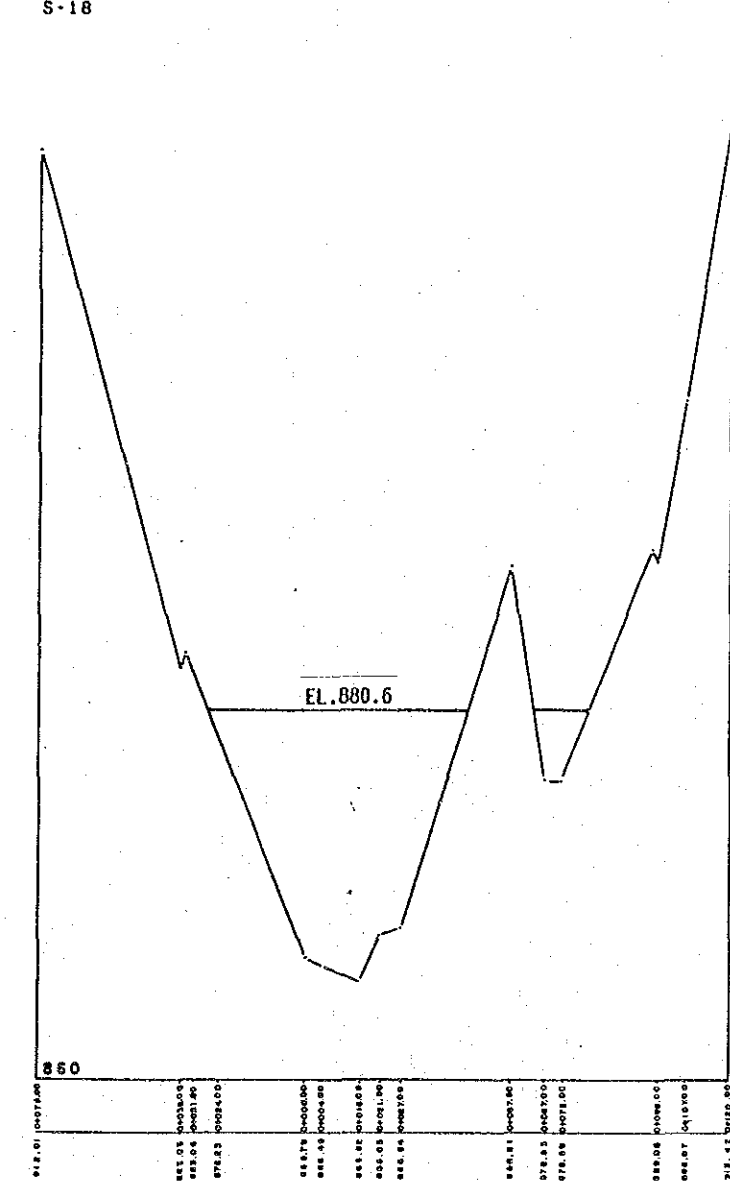
ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)	DESIGN ELEVATION (m)
000.00	885.40	885.40
001.00	885.00	885.00
002.00	884.50	884.50
003.00	884.00	884.00
004.00	883.50	883.50
005.00	883.00	883.00
006.00	882.50	882.50
007.00	882.00	882.00
008.00	881.50	881.50
009.00	881.00	881.00
010.00	880.50	880.50
011.00	880.00	880.00
012.00	879.50	879.50
013.00	879.00	879.00
014.00	878.50	878.50
015.00	878.00	878.00
016.00	877.50	877.50
017.00	877.00	877.00
018.00	876.50	876.50
019.00	876.00	876.00
020.00	875.50	875.50
021.00	875.00	875.00
022.00	874.50	874.50
023.00	874.00	874.00
024.00	873.50	873.50
025.00	873.00	873.00
026.00	872.50	872.50
027.00	872.00	872.00
028.00	871.50	871.50
029.00	871.00	871.00
030.00	870.50	870.50
031.00	870.00	870.00
032.00	869.50	869.50
033.00	869.00	869.00
034.00	868.50	868.50
035.00	868.00	868.00
036.00	867.50	867.50
037.00	867.00	867.00
038.00	866.50	866.50
039.00	866.00	866.00
040.00	865.50	865.50
041.00	865.00	865.00
042.00	864.50	864.50
043.00	864.00	864.00
044.00	863.50	863.50
045.00	863.00	863.00
046.00	862.50	862.50
047.00	862.00	862.00
048.00	861.50	861.50
049.00	861.00	861.00
050.00	860.50	860.50
051.00	860.00	860.00
052.00	859.50	859.50
053.00	859.00	859.00
054.00	858.50	858.50
055.00	858.00	858.00
056.00	857.50	857.50
057.00	857.00	857.00
058.00	856.50	856.50
059.00	856.00	856.00
060.00	855.50	855.50
061.00	855.00	855.00
062.00	854.50	854.50
063.00	854.00	854.00
064.00	853.50	853.50
065.00	853.00	853.00
066.00	852.50	852.50
067.00	852.00	852.00
068.00	851.50	851.50
069.00	851.00	851.00
070.00	850.50	850.50
071.00	850.00	850.00
072.00	849.50	849.50
073.00	849.00	849.00
074.00	848.50	848.50
075.00	848.00	848.00
076.00	847.50	847.50
077.00	847.00	847.00
078.00	846.50	846.50
079.00	846.00	846.00
080.00	845.50	845.50
081.00	845.00	845.00
082.00	844.50	844.50
083.00	844.00	844.00
084.00	843.50	843.50
085.00	843.00	843.00
086.00	842.50	842.50
087.00	842.00	842.00
088.00	841.50	841.50
089.00	841.00	841.00
090.00	840.50	840.50
091.00	840.00	840.00
092.00	839.50	839.50
093.00	839.00	839.00
094.00	838.50	838.50
095.00	838.00	838.00
096.00	837.50	837.50
097.00	837.00	837.00
098.00	836.50	836.50
099.00	836.00	836.00
100.00	835.50	835.50

ACCUMULATIVE DISTANCE (m)	PRESENT ELEVATION (m)	DESIGN ELEVATION (m)
000.00	850.00	850.00
001.00	849.50	849.50
002.00	849.00	849.00
003.00	848.50	848.50
004.00	848.00	848.00
005.00	847.50	847.50
006.00	847.00	847.00
007.00	846.50	846.50
008.00	846.00	846.00
009.00	845.50	845.50
010.00	845.00	845.00
011.00	844.50	844.50
012.00	844.00	844.00
013.00	843.50	843.50
014.00	843.00	843.00
015.00	842.50	842.50
016.00	842.00	842.00
017.00	841.50	841.50
018.00	841.00	841.00
019.00	840.50	840.50
020.00	840.00	840.00
021.00	839.50	839.50
022.00	839.00	839.00
023.00	838.50	838.50
024.00	838.00	838.00
025.00	837.50	837.50
026.00	837.00	837.00
027.00	836.50	836.50
028.00	836.00	836.00
029.00	835.50	835.50
030.00	835.00	835.00
031.00	834.50	834.50
032.00	834.00	834.00
033.00	833.50	833.50
034.00	833.00	833.00
035.00	832.50	832.50
036.00	832.00	832.00
037.00	831.50	831.50
038.00	831.00	831.00
039.00	830.50	830.50
040.00	830.00	830.00
041.00	829.50	829.50
042.00	829.00	829.00
043.00	828.50	828.50
044.00	828.00	828.00
045.00	827.50	827.50
046.00	827.00	827.00
047.00	826.50	826.50
048.00	826.00	826.00
049.00	825.50	825.50
050.00	825.00	825.00
051.00	824.50	824.50
052.00	824.00	824.00
053.00	823.50	823.50
054.00	823.00	823.00
055.00	822.50	822.50
056.00	822.00	822.00
057.00	821.50	821.50
058.00	821.00	821.00
059.00	820.50	820.50
060.00	820.00	820.00
061.00	819.50	819.50
062.00	819.00	819.00
063.00	818.50	818.50
064.00	818.00	818.00
065.00	817.50	817.50
066.00	817.00	817.00
067.00	816.50	816.50
068.00	816.00	816.00
069.00	815.50	815.50
070.00	815.00	815.00
071.00	814.50	814.50
072.00	814.00	814.00
073.00	813.50	813.50
074.00	813.00	813.00
075.00	812.50	812.50
076.00	812.00	812.00
077.00	811.50	811.50
078.00	811.00	811.00
079.00	810.50	810.50
080.00	810.00	810.00
081.00	809.50	809.50
082.00	809.00	809.00
083.00	808.50	808.50
084.00	808.00	808.00
085.00	807.50	807.50
086.00	807.00	807.00
087.00	806.50	806.50
088.00	806.00	806.00
089.00	805.50	805.50
090.00	805.00	805.00
091.00	804.50	804.50
092.00	804.00	804.00
093.00	803.50	803.50
094.00	803.00	803.00
095.00	802.50	802.50
096.00	802.00	802.00
097.00	801.50	801.50
098.00	801.00	801.00
099.00	800.50	800.50
100.00	800.00	800.00

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THE REPUBLIC OF VENEZUELA			
STUDY ON CHAMA RIVER BASIN CONSERVATION PROJECT			
Scale H 1:2,000	S-3.4 CROSS SECTION (N-1)		
V 1:400	(2/2) SEDIMENT TRAP AREA		
DATE: PROTOVAL C.A.	DRAWN BY: GATE		
DESIGNED BY: PROTOVAL C.A.	CHECKED BY: GATE		
PROJECT: S KONO	DRAWN BY: GATE		
JAPAN INTERNATIONAL COOPERATION AGENCY			