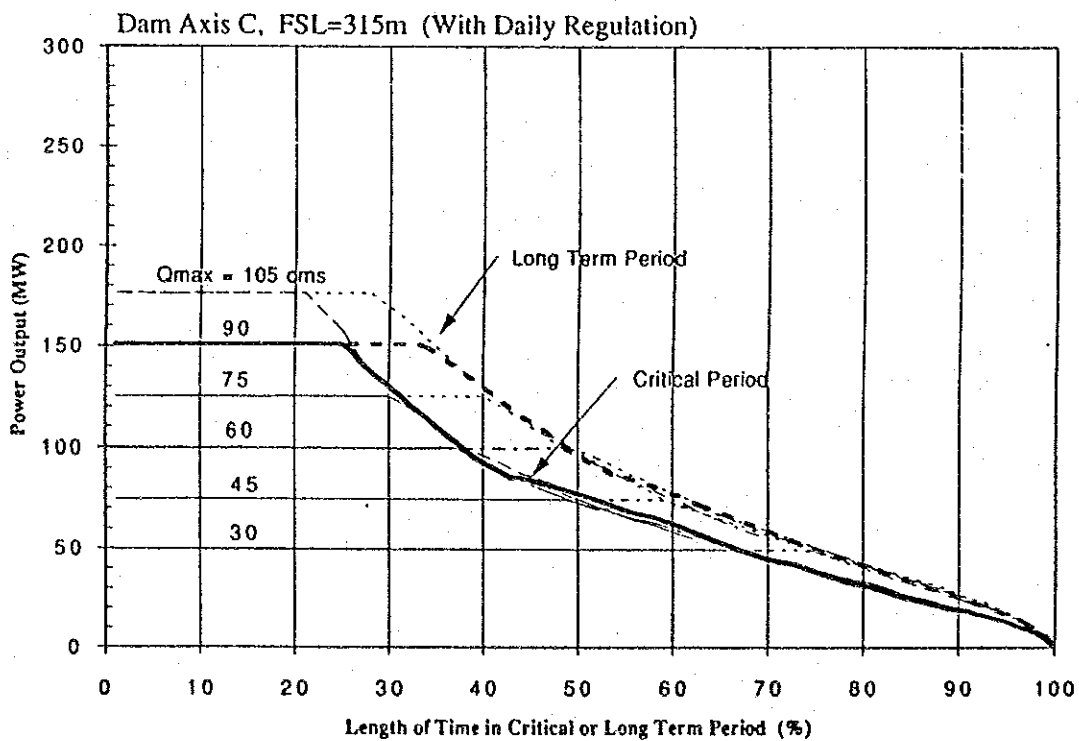
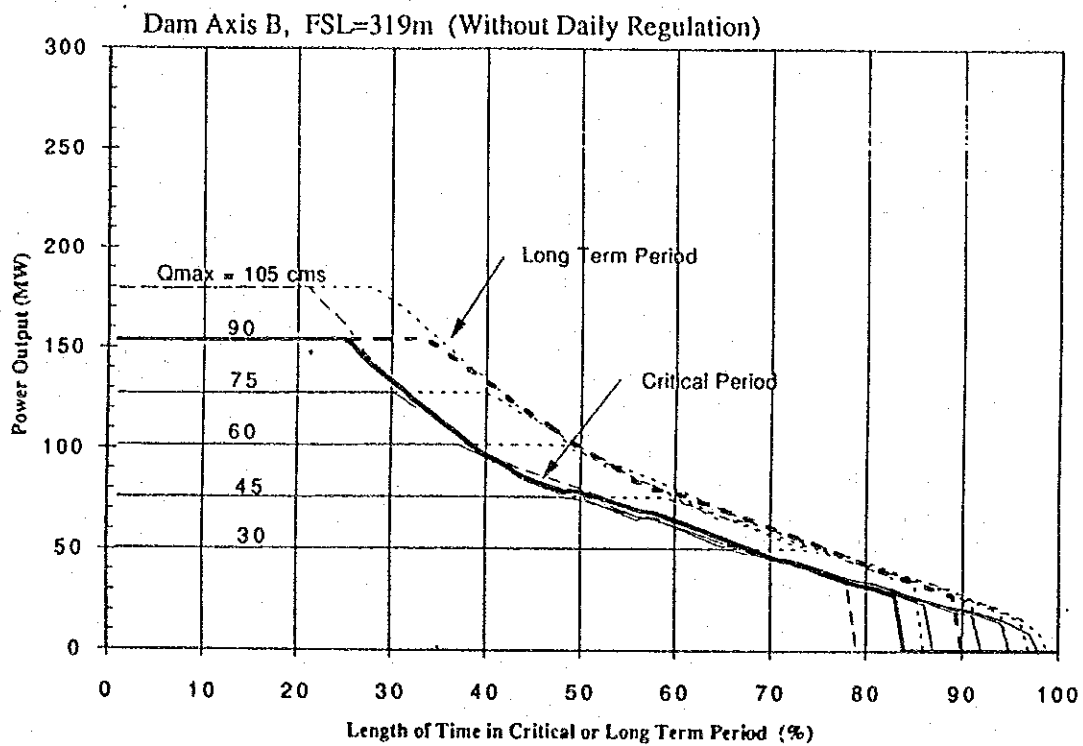


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Fig. 8.2  
 Duration Curves of Plant Discharge



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**Fig. 8.3**  
**Power Output Duration Curves**



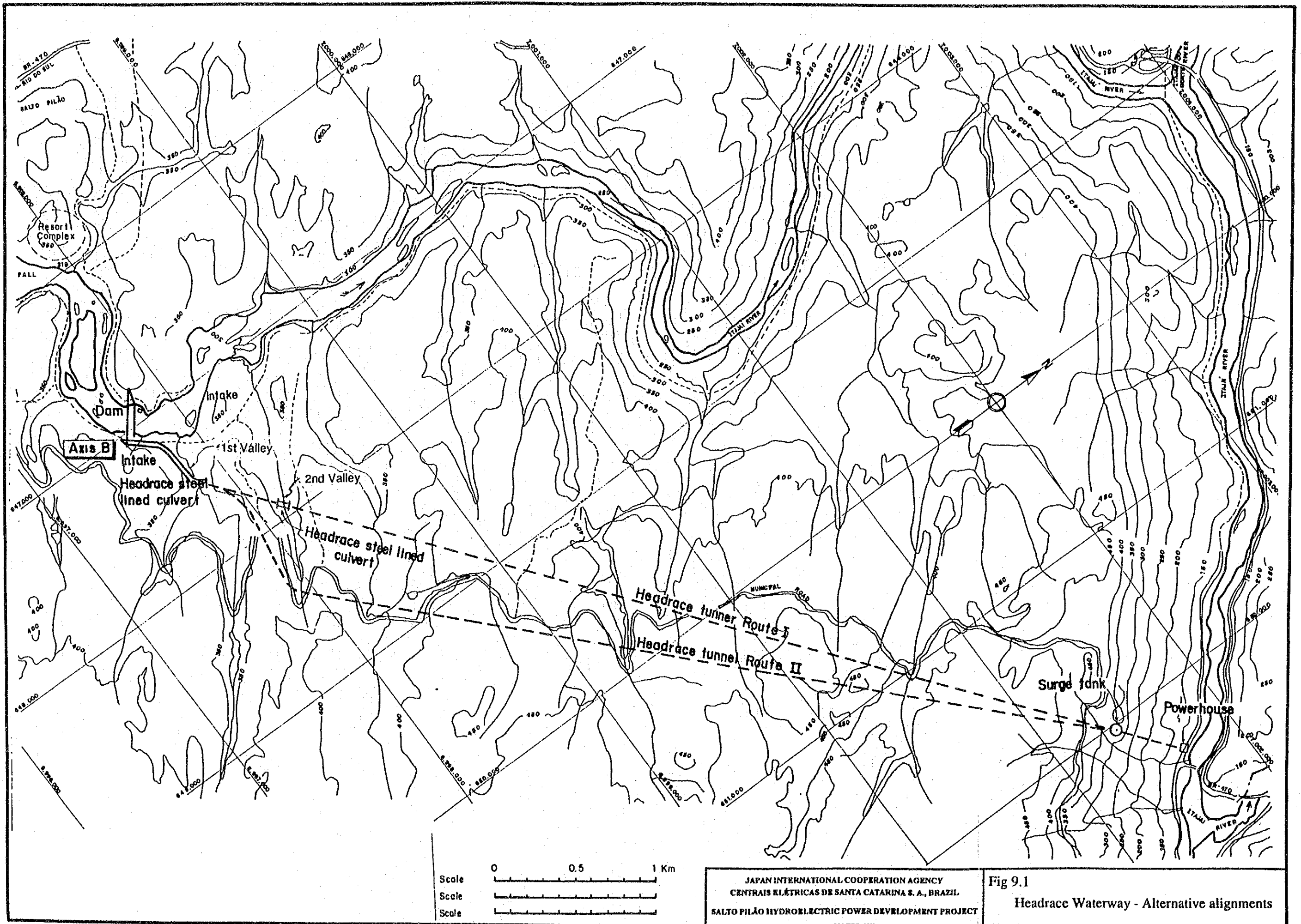
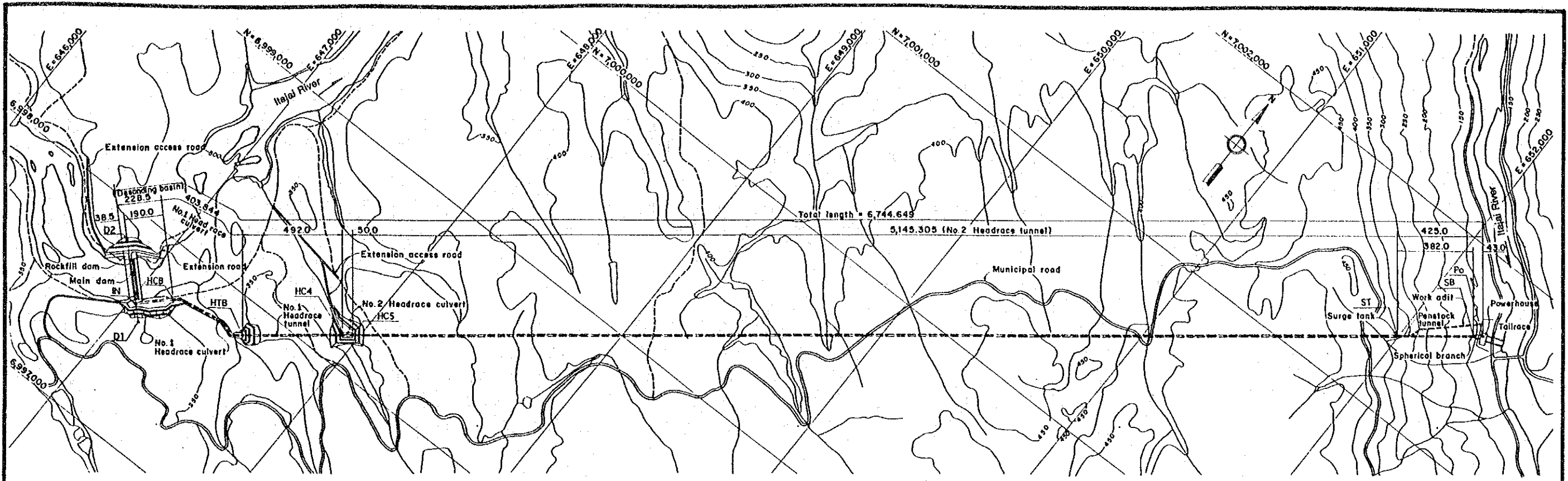


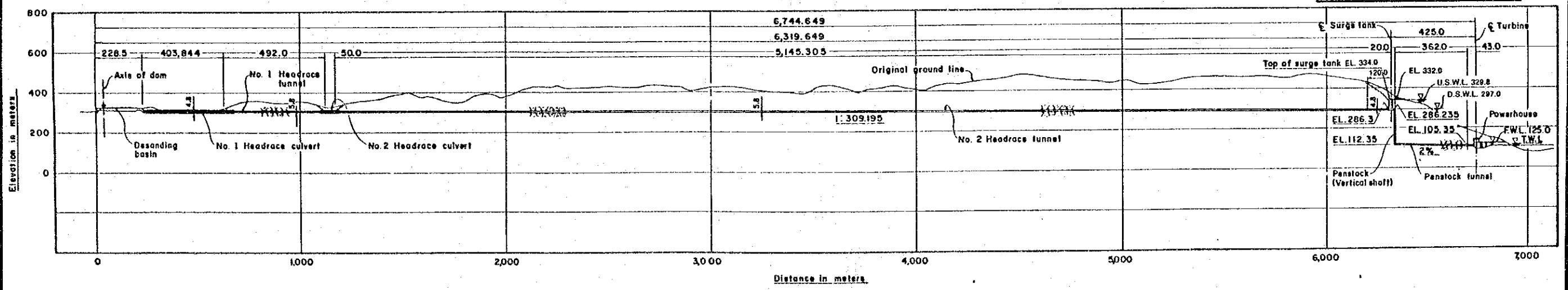
Fig 9.1  
Headrace Waterway - Alternative alignments



General Plan

COORDINATES (Unit : m)

Points	N	E
D1	6,997,560.000	647,100.000
D2	6,997,850.000	646,800.000
IN	6,997,622.552	647,035.291
HCB	6,997,759.160	647,167.345
HTB	6,997,830.000	647,540.000
HC4	6,998,135.656	647,925.536
HCS	6,998,166.719	647,964.717
ST	7,001,363.255	651,996.630
SB	7,001,600.573	652,295.969
Po	7,001,627.287	652,329.665

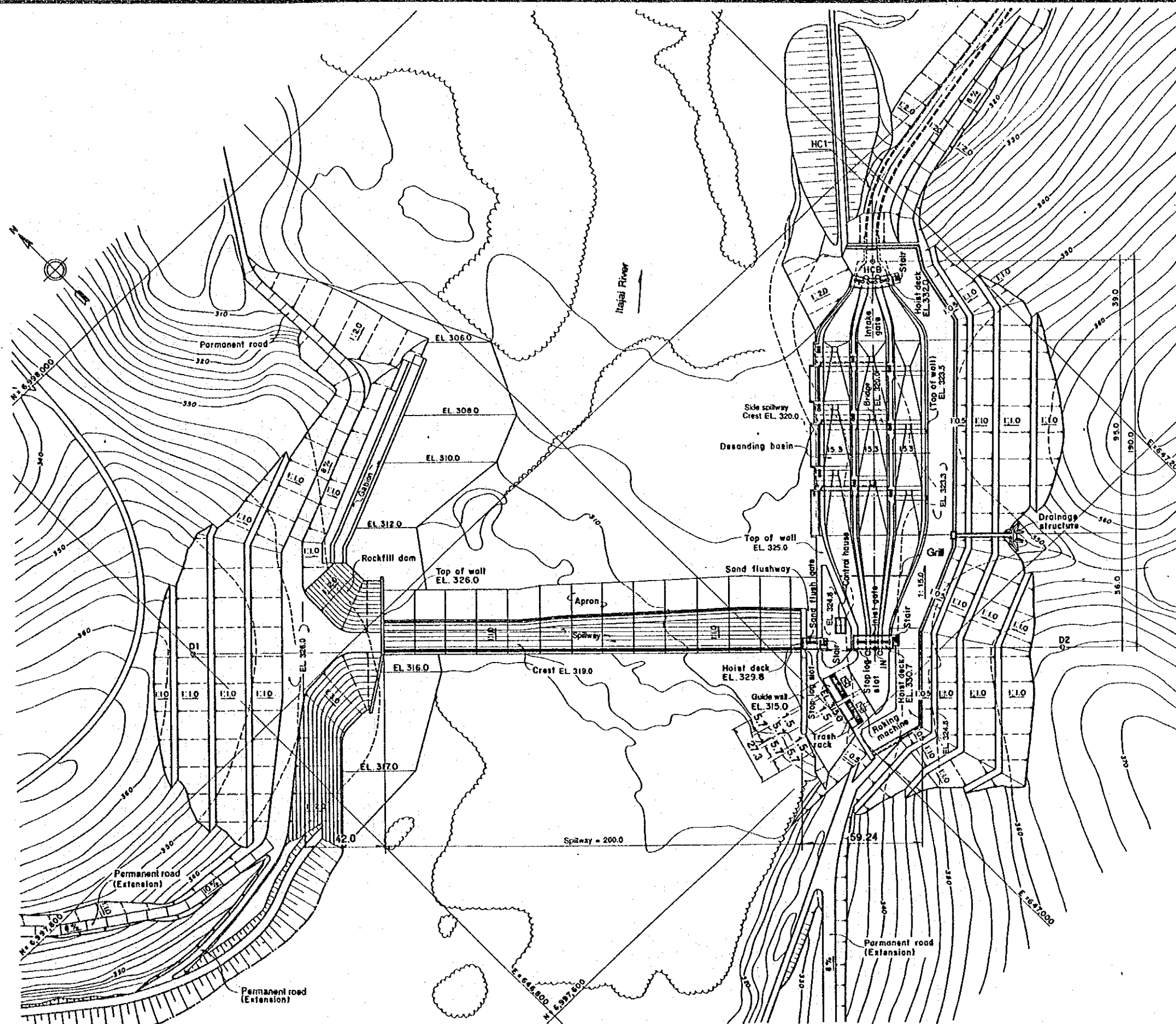


Profile



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Fig 9.2  
 General Plan and Profile



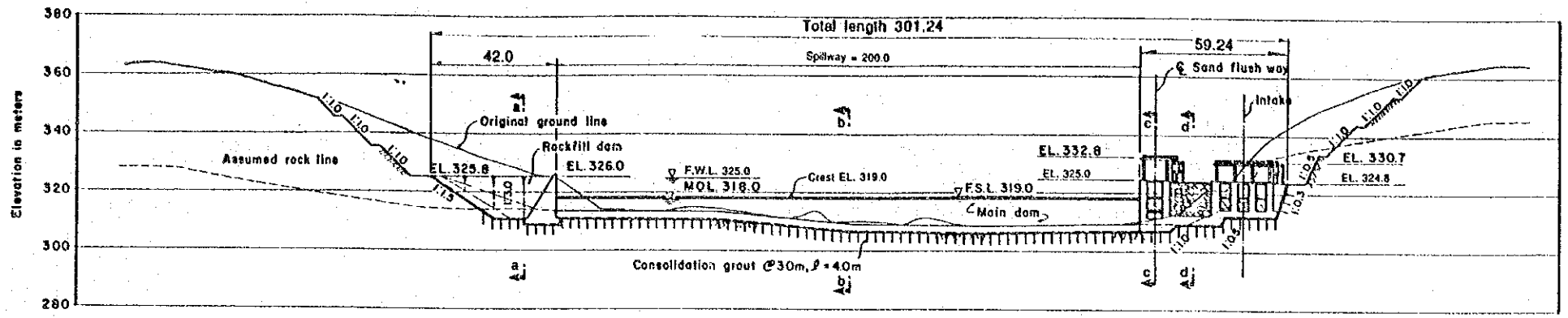
PLAN

Scale 0 100m

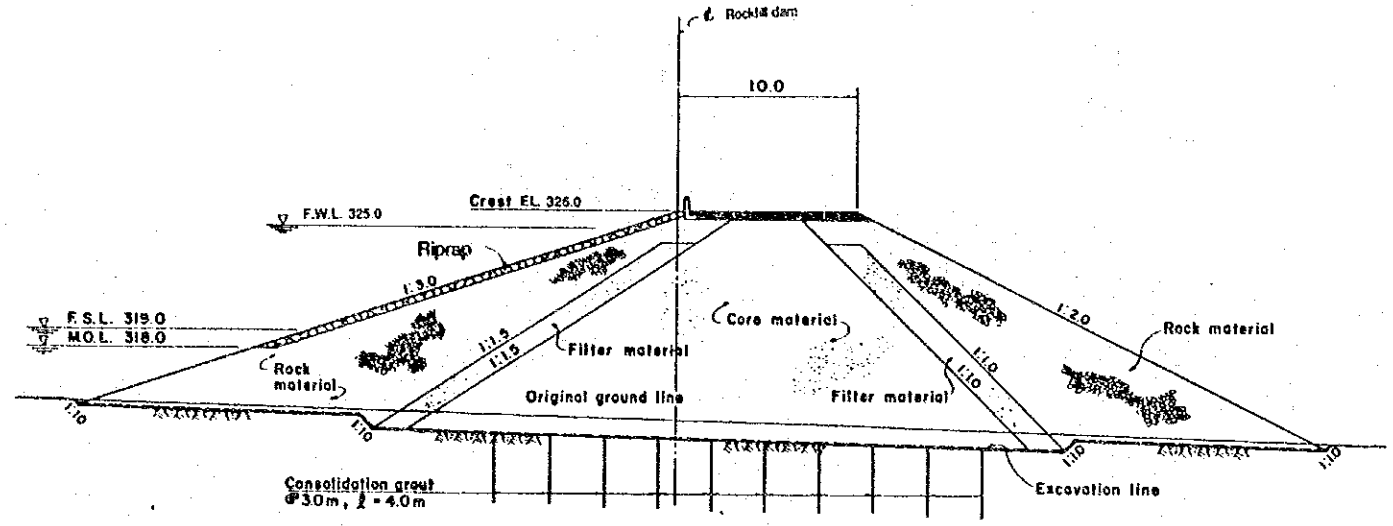
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 CENTRAIS ELÉTRICAS DE SANTA CATARINA S. A., BRAZIL  
 SALTO PIÃO HYDROELECTRIC POWER DEVELOPMENT PROJECT

Fig 9.3

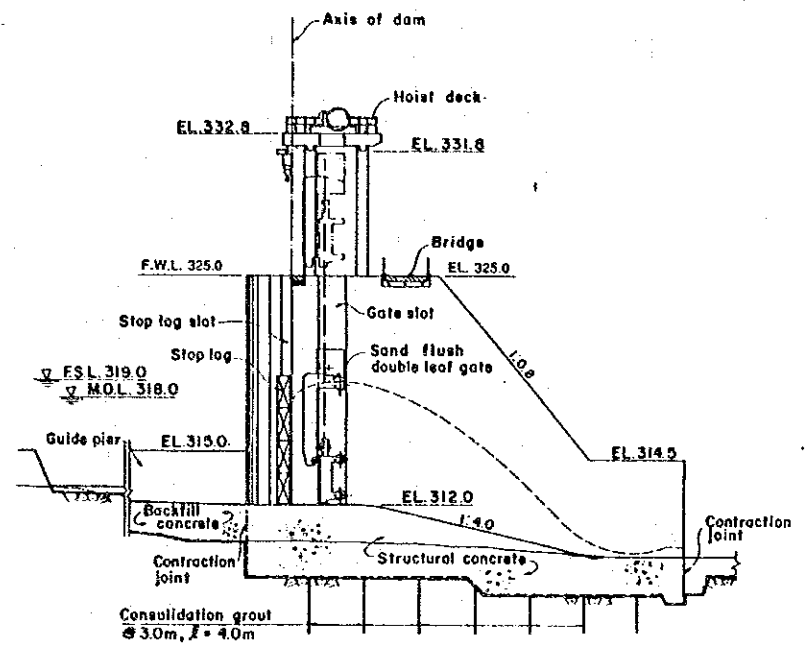
Dam and Intake Facilities - General Plan



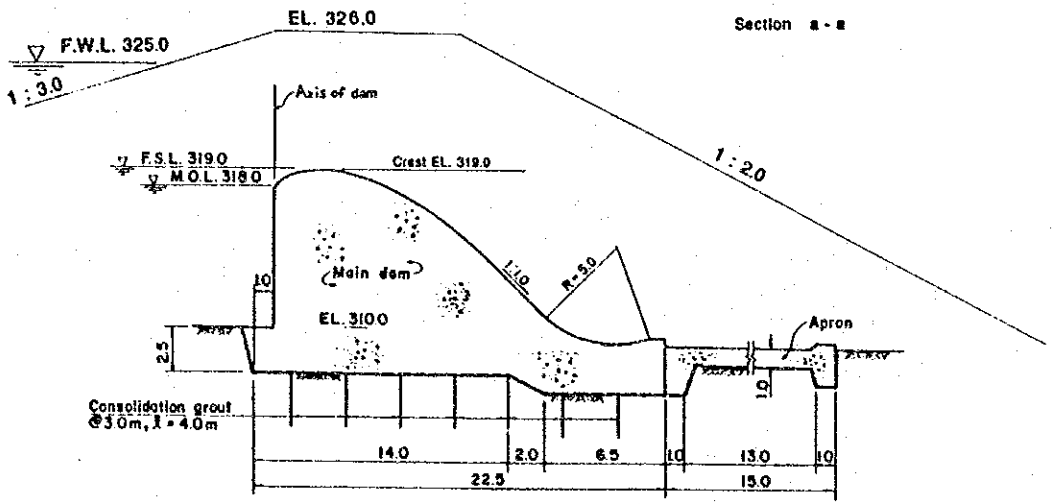
Profile of Dam scale a



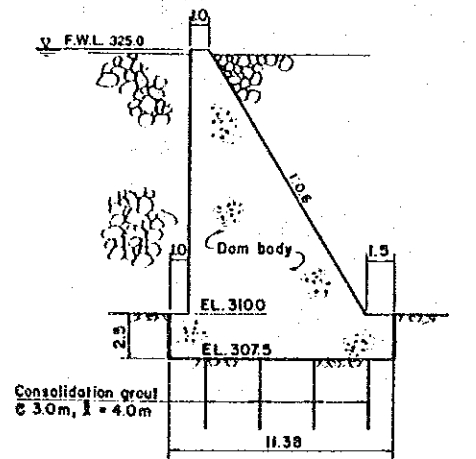
Typical Section of Rockfill Dam scale b



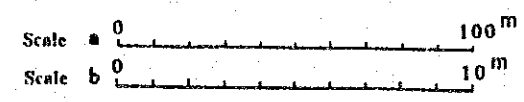
Typical Section of Sandflush Way scale b



Typical Section of Main Dam Spillway Portion scale b

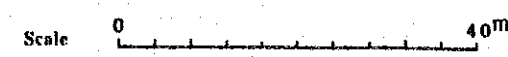
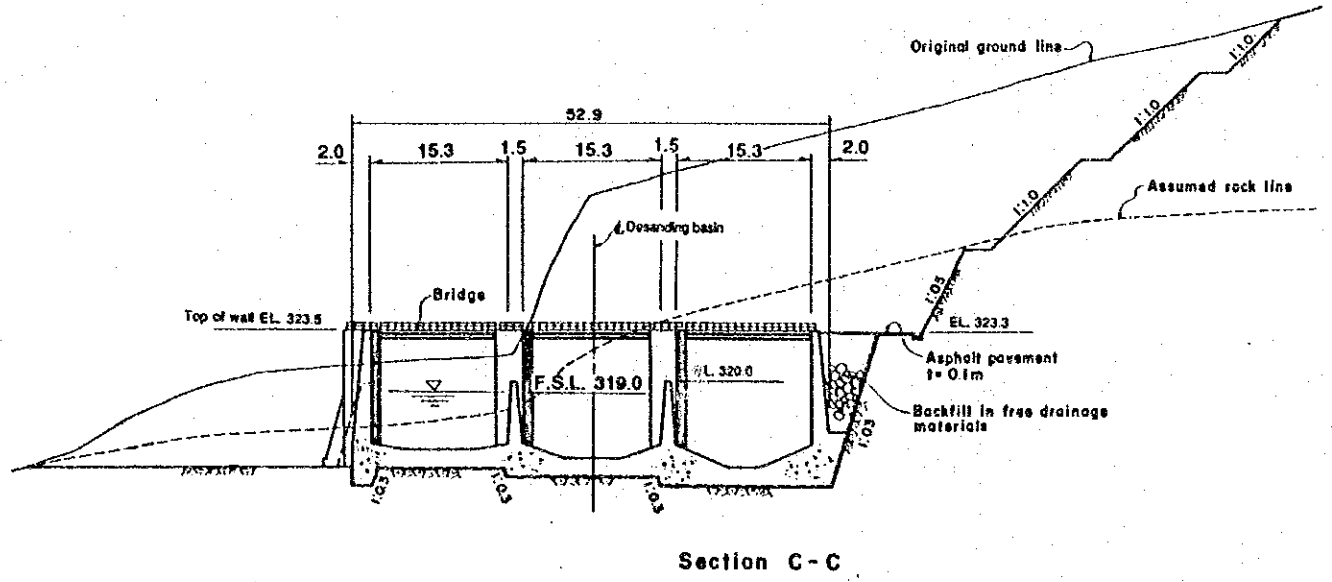
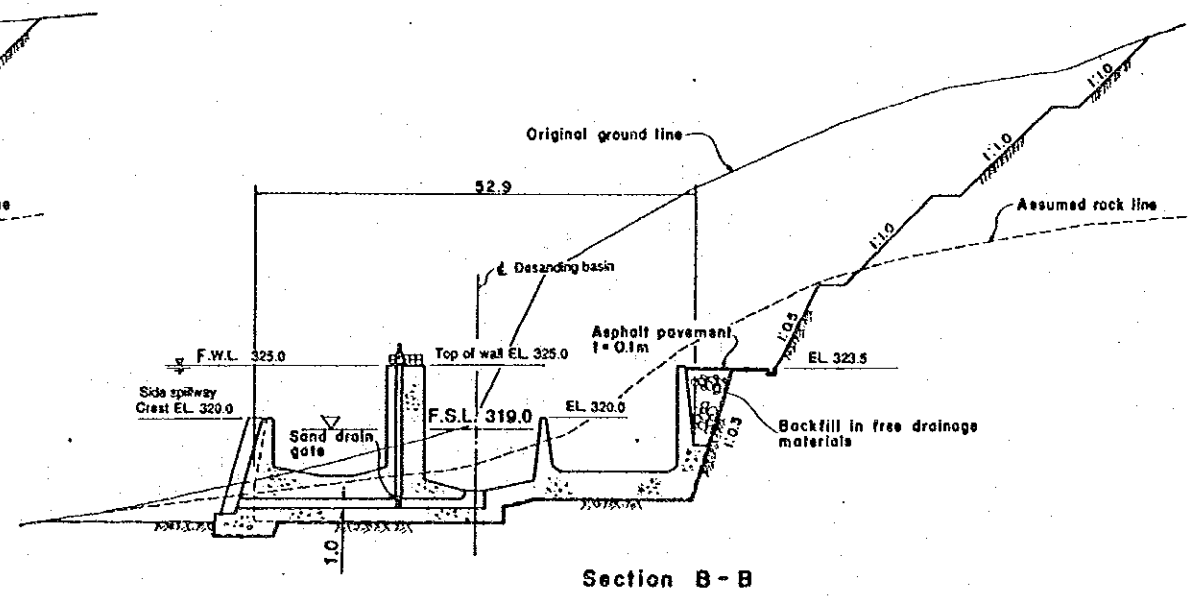
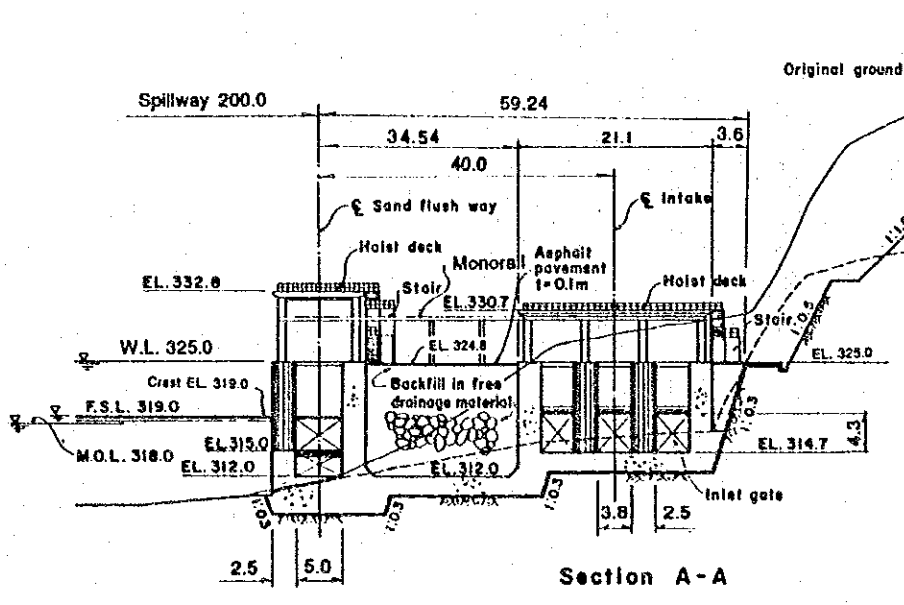
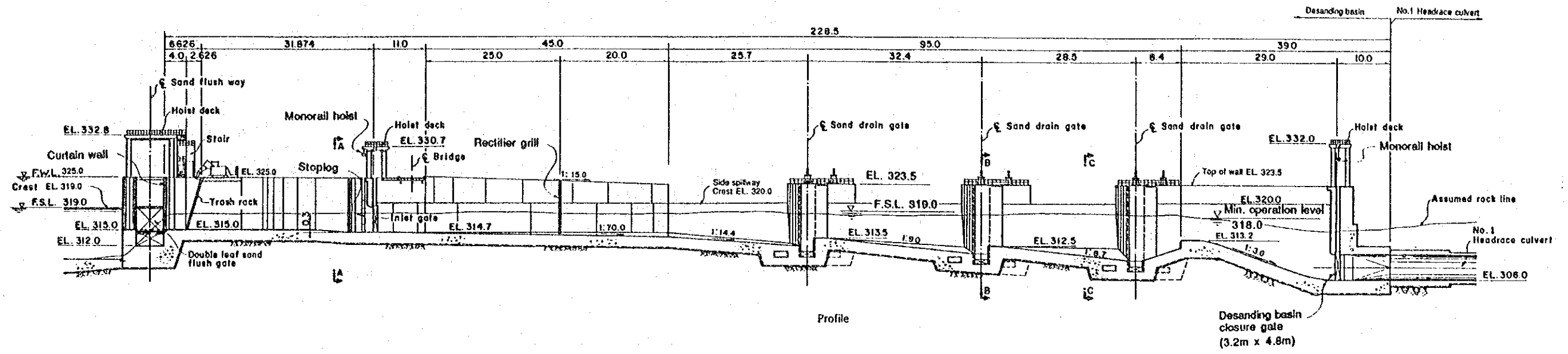


Typical Section of Non Overflow Portion scale b



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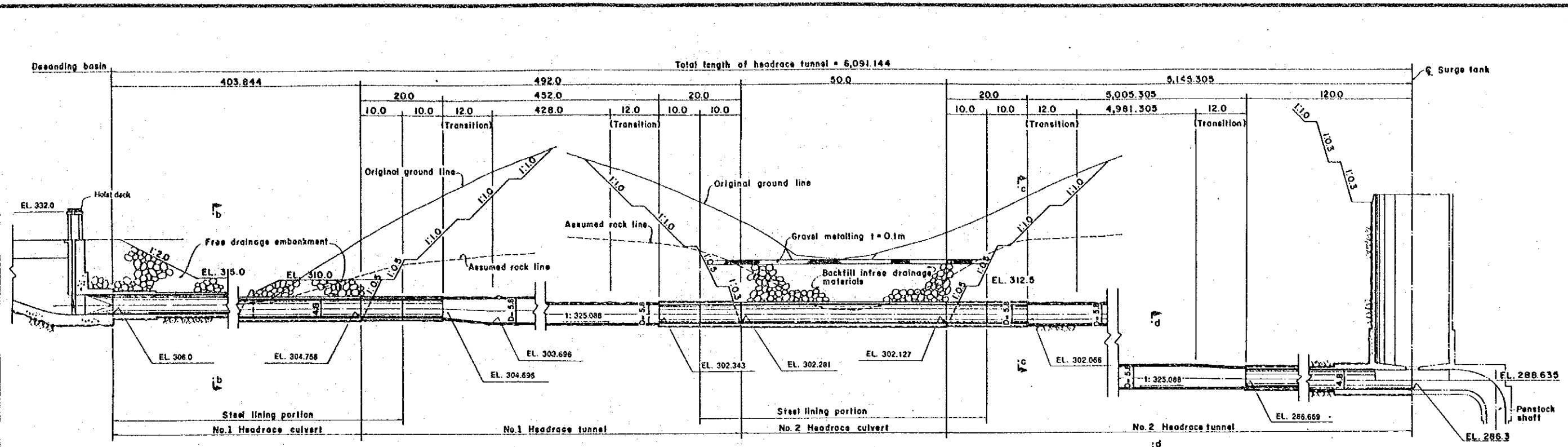
Fig 9.4  
 Dam - Profile and Typical Sections



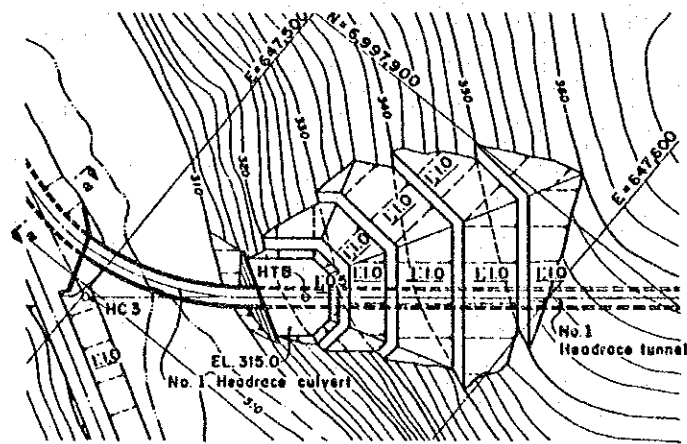
JAPAN INTERNATIONAL COOPERATION AGENCY  
 CENTRAIS ELÉTRICAS DE SANTA CATARINA S. A., BRAZIL  
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Fig 9.5  
 Intake and Desanding Basin - Typical Sections

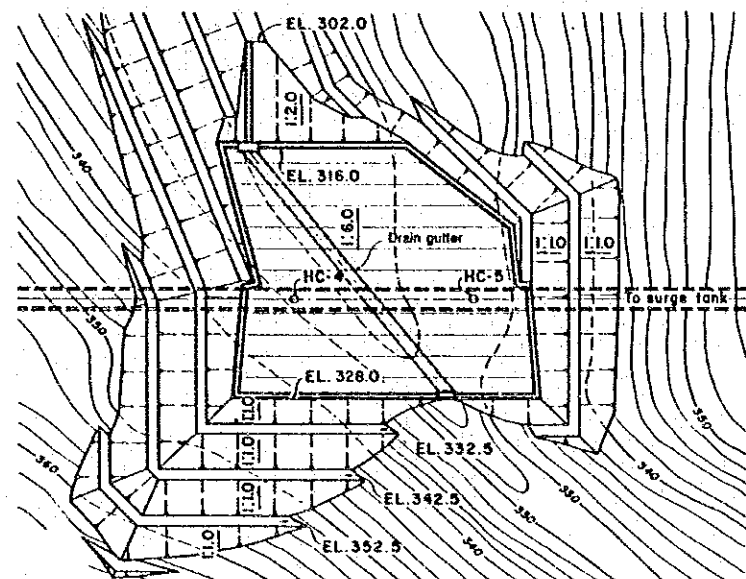




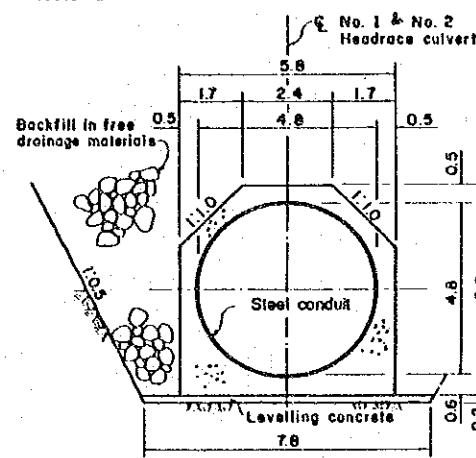
Profile of Headrace Tunnel scale b



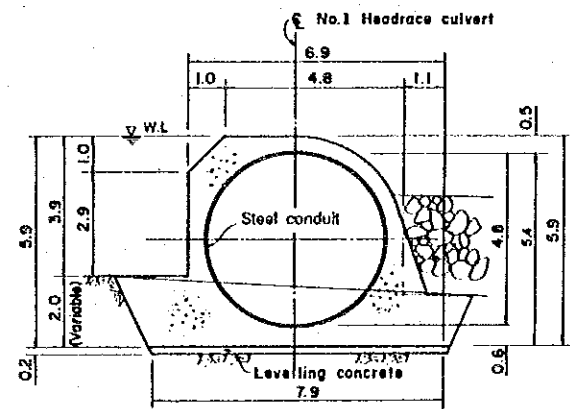
Plan (Portal of headrace tunnel) scale a



Plan (No. 2 Headrace culvert portion) scale a



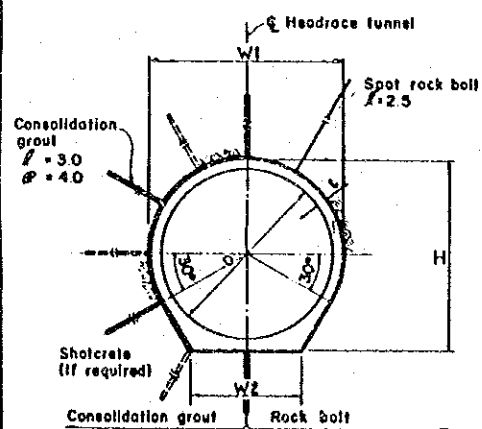
Section a-a scale c



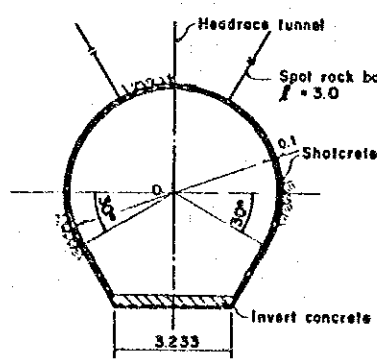
Section (Swamp cross portion) scale c

COORDINATES (Unit : m)

Points	N	E
HTB	6,997,830.000	647,540.000
HC4	6,998,135.656	647,925.536
HC5	6,998,166.719	647,964.717



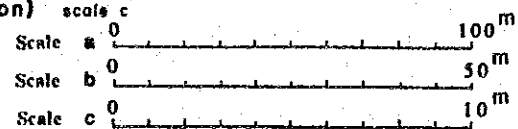
Typical Section for Fair condition & Good condition scale c



Section (Shotcrete portion) scale c

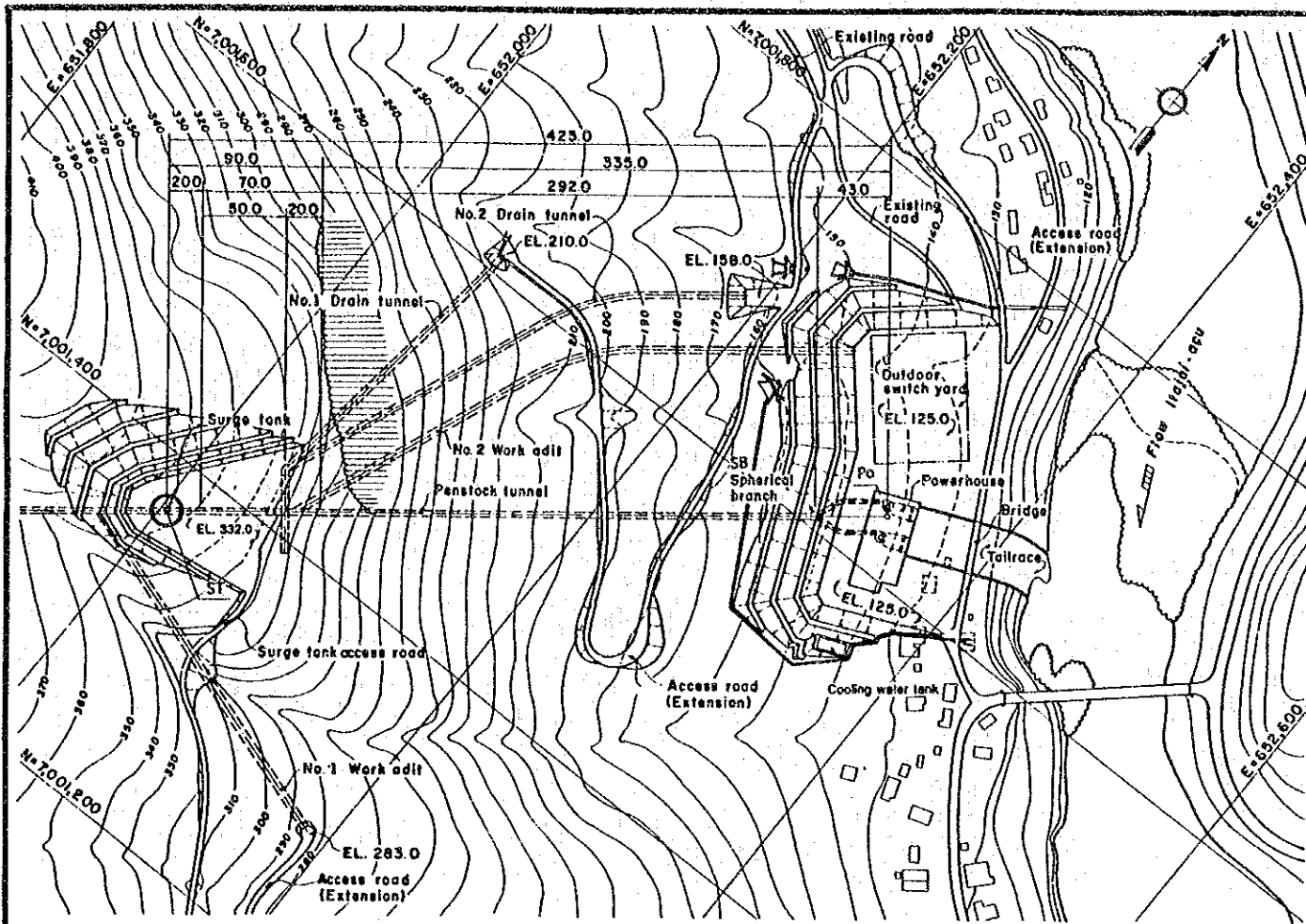
Dimension Table

	D=4.8		D=5.6	
	t=40cm	t=25cm	t=40cm	t=25cm
W1	5.9	5.3	6.6	6.1
W2	3.395	3.377	2.817	2.6
H	5.88	5.85	4.88	4.85

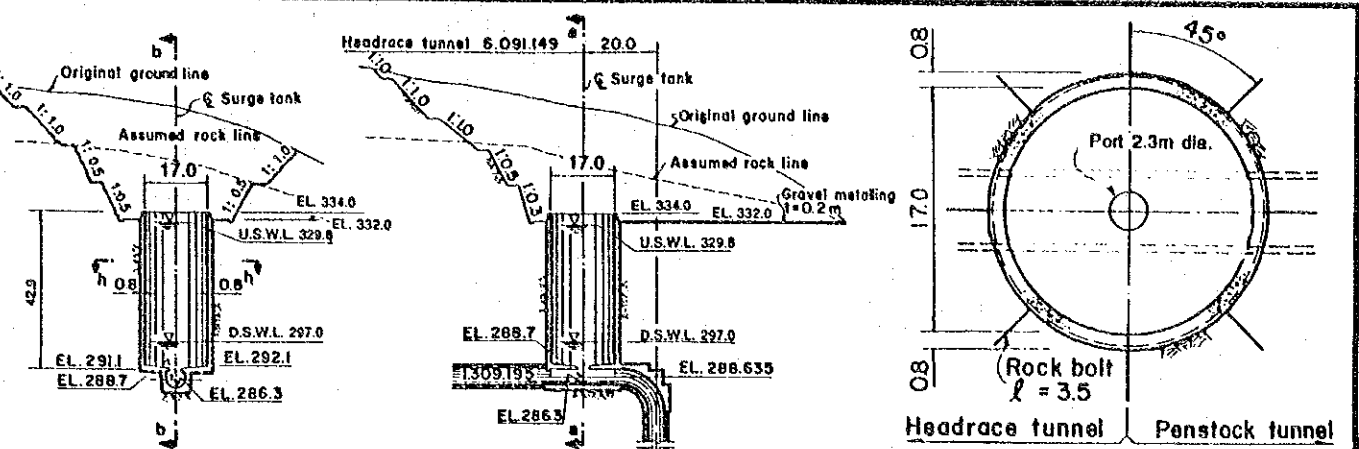


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Fig 9.6  
Waterway - Headrace Culvert and Headrace Tunnel  
Plans and Sections



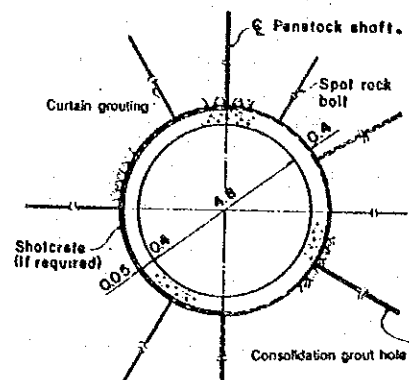
General Plan scale a



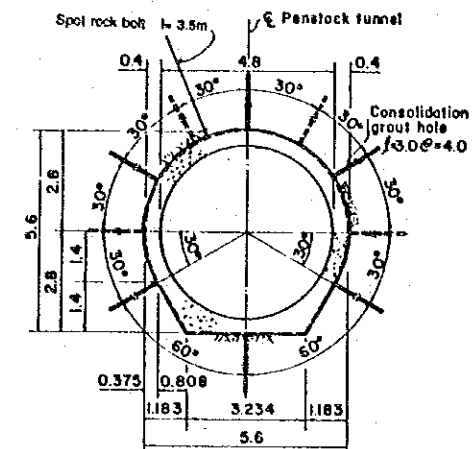
Section a-a scale b

Section b-b scale b

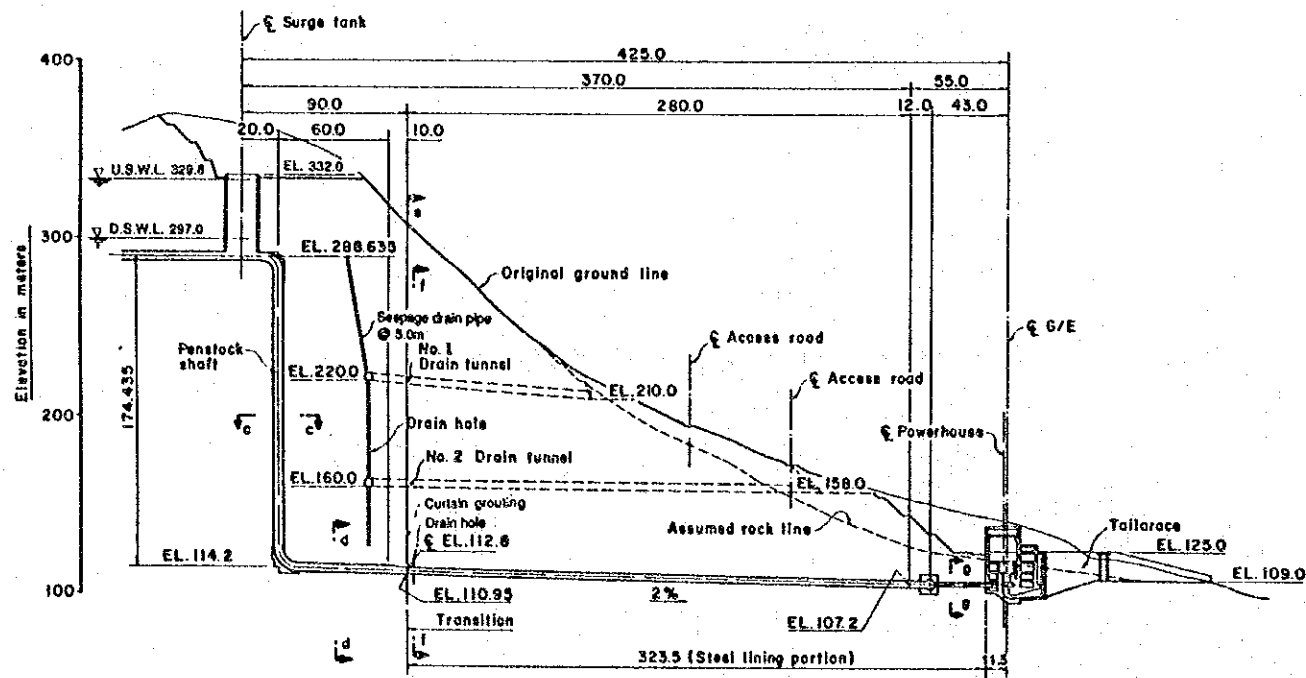
Section h-h scale c



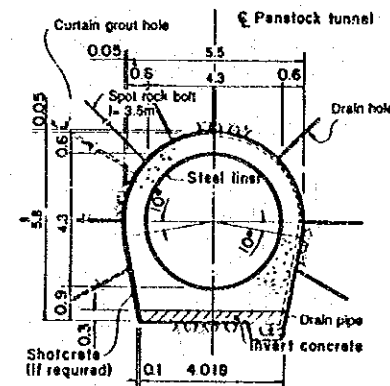
Section c-c scale d



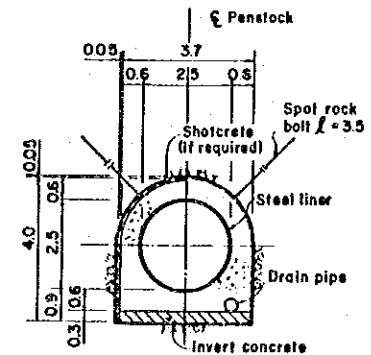
Section d-d scale d



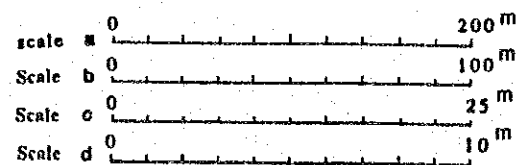
Profile scale a



Section e-e & f-f scale d

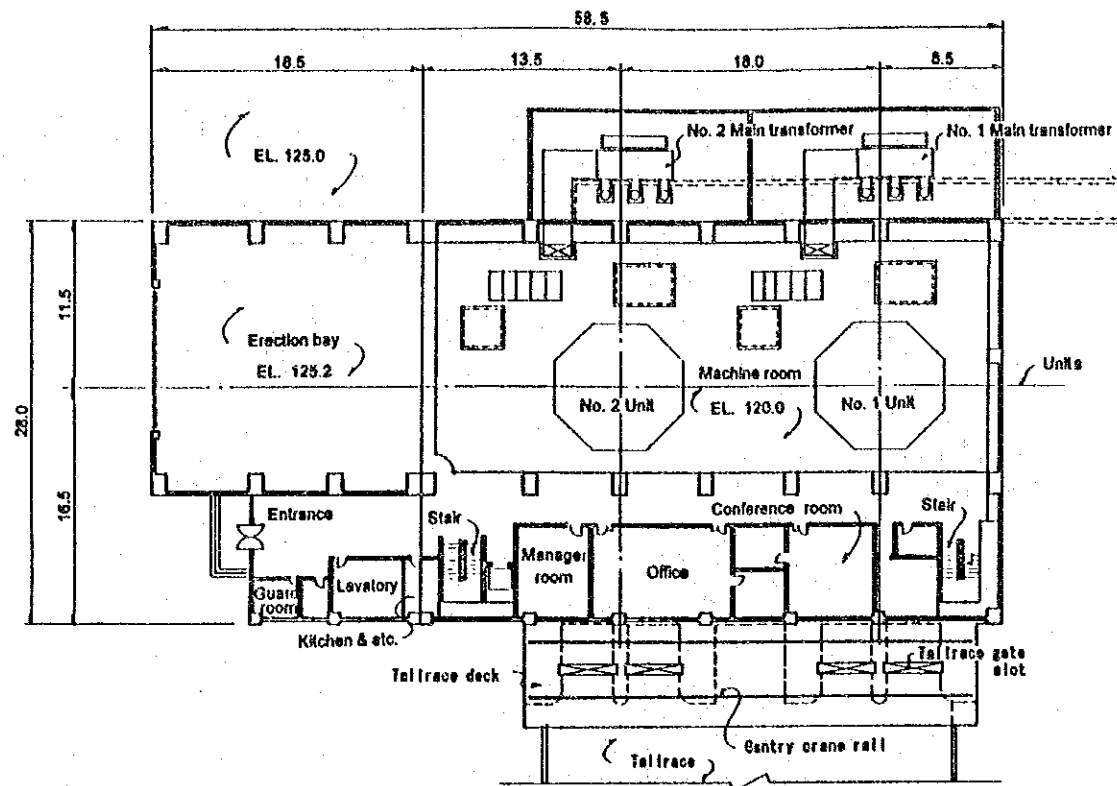


Section g-g scale d

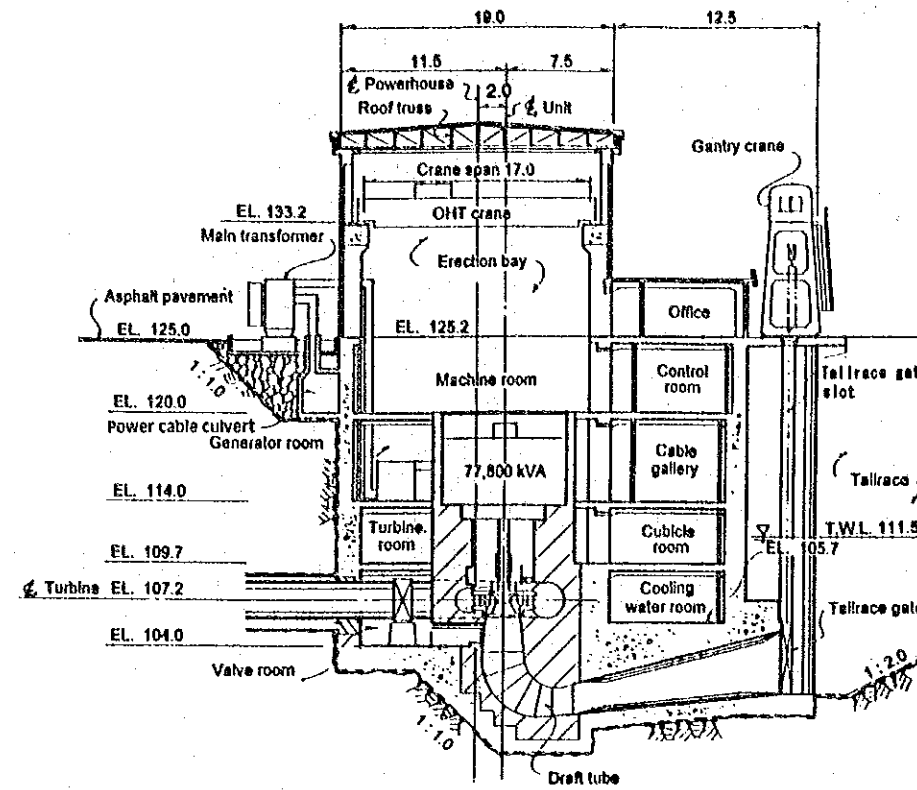


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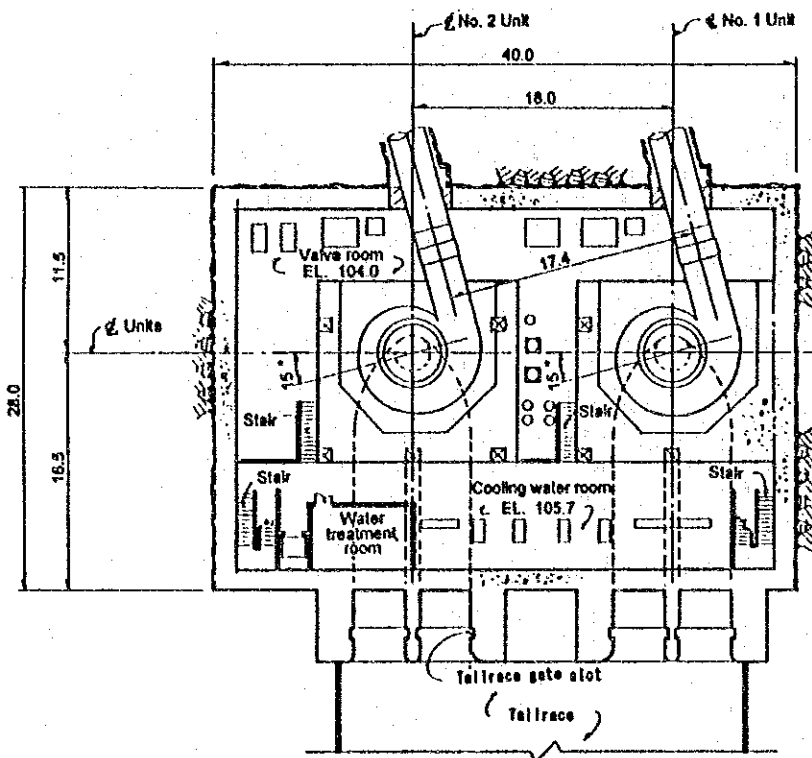
Fig 9.7  
Waterway - Surge Tank and Penstock Tunnel  
General Plan, Profile and Sections



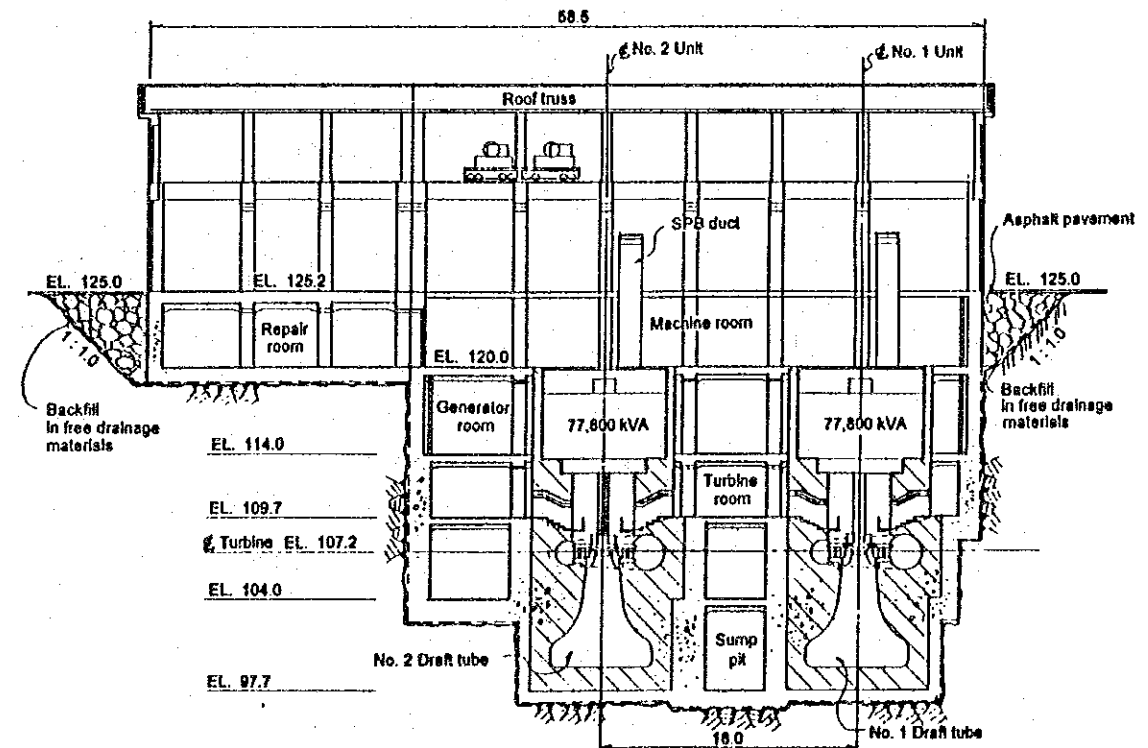
FLOOR PLAN 120.0 AND 125.2



TRANSVERSE SECTION



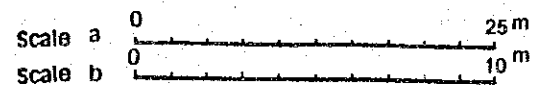
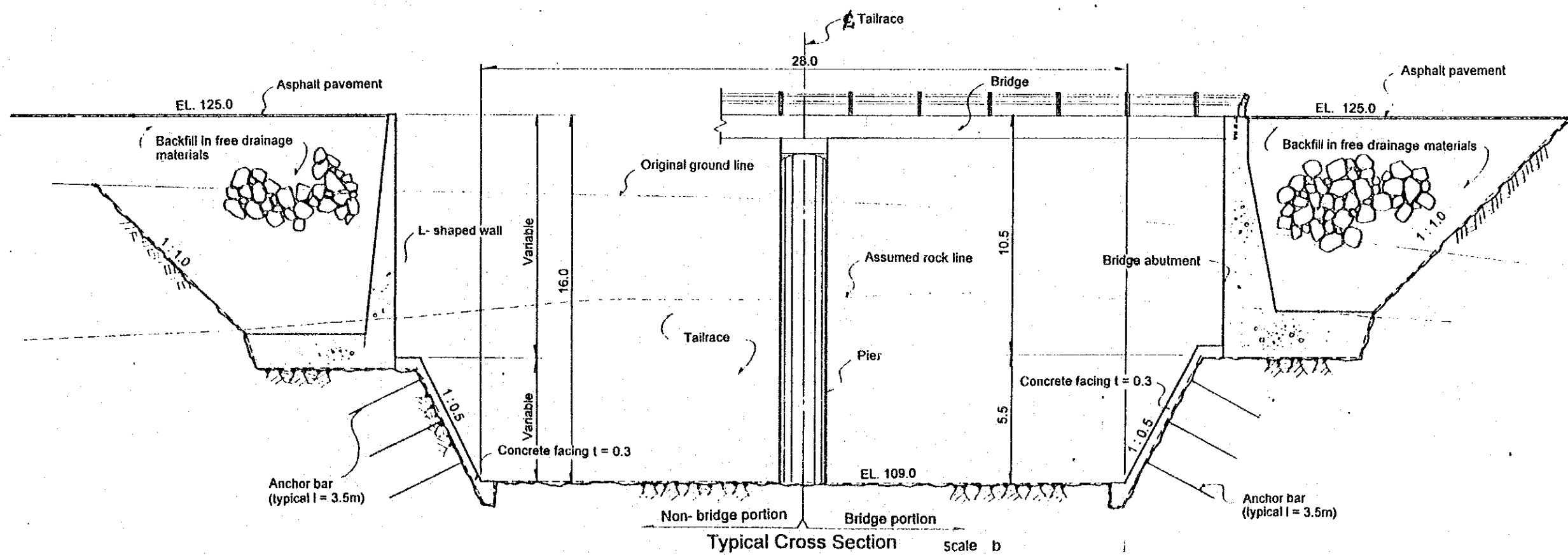
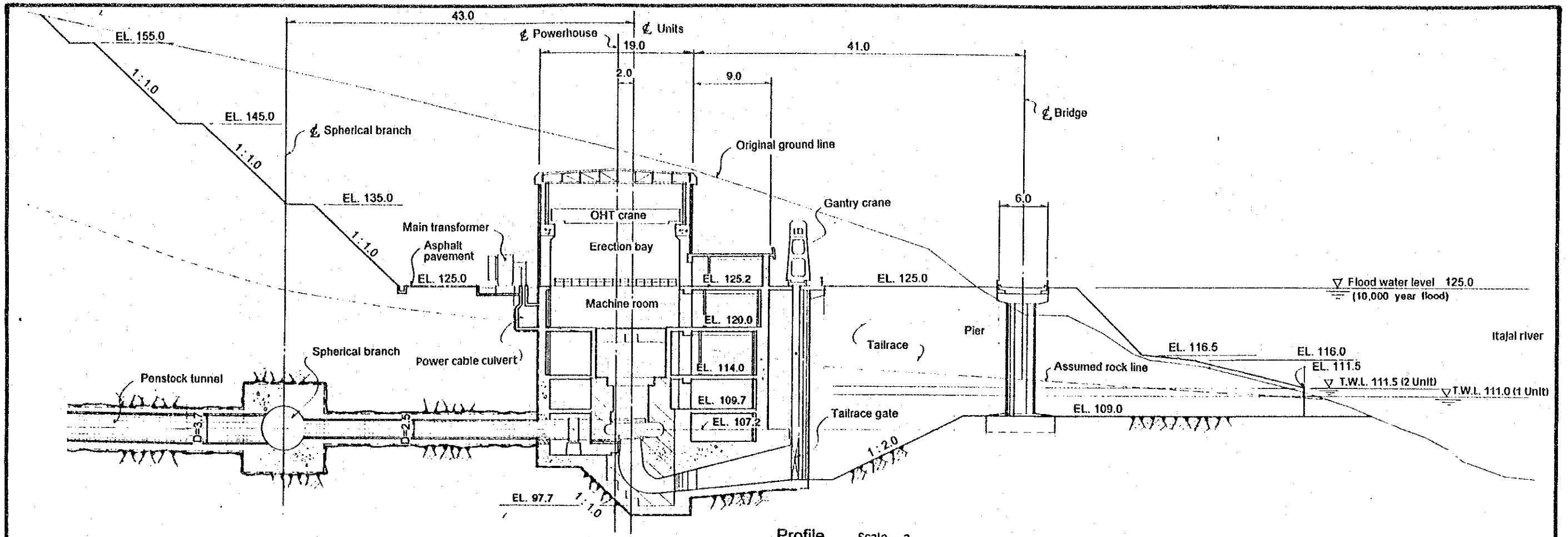
FLOOR PLAN EL. 104.0 AND 105.7



LONGITUDINAL SECTION

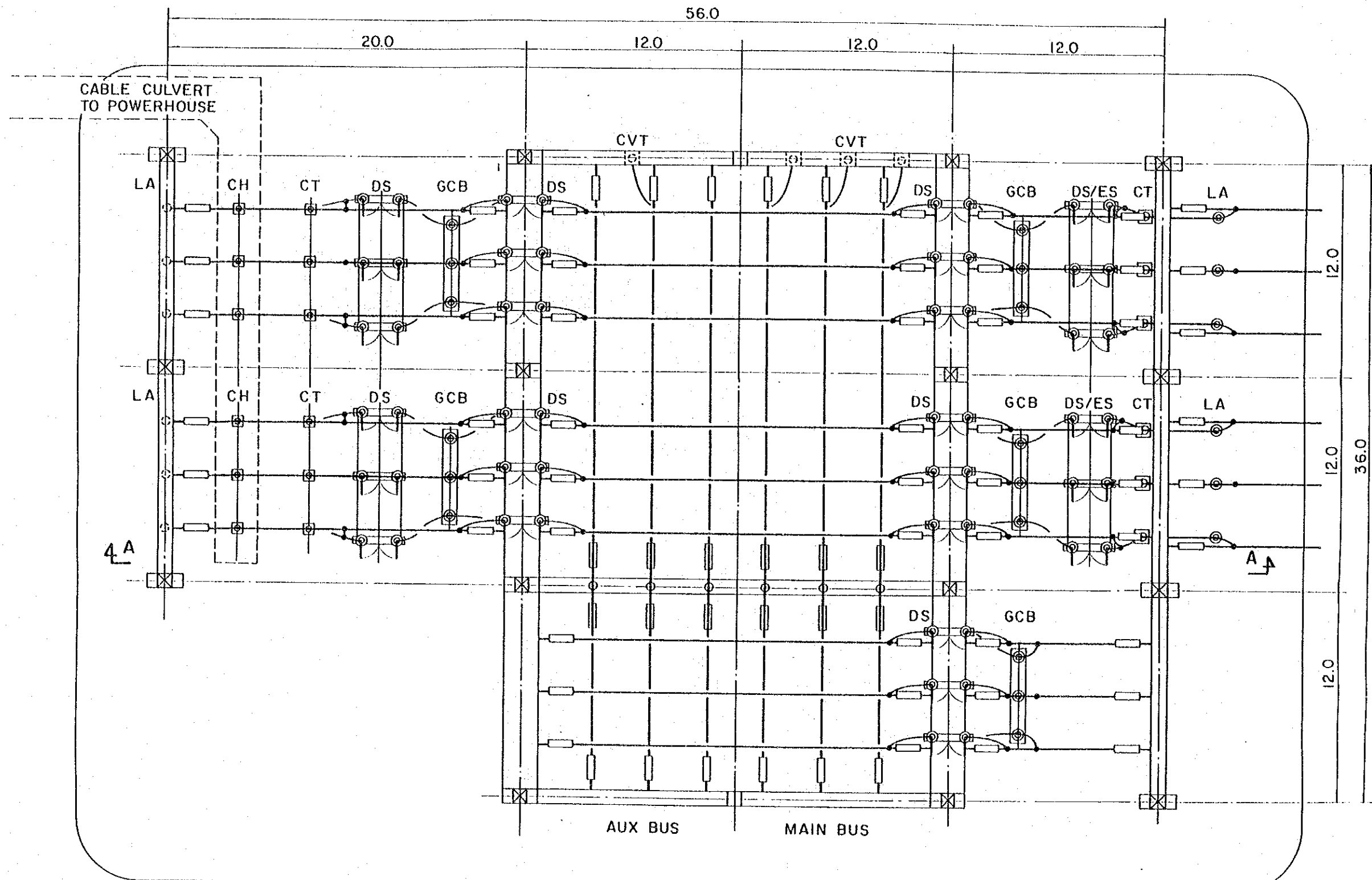


JAPAN INTERNATIONAL COOPERATION AGENCY CENTRAIS ELÉTRICAS DE SANTA CATARINA S. A., BRAZIL SALTO PILO HYDROELECTRIC POWER DEVELOPMENT PROJECT	<b>Fig 9.8</b> Powerhouse - Floor Plans Transverse Section and Longitudinal Section
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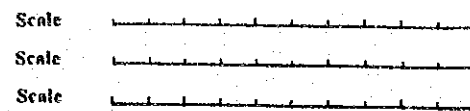


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Fig 9.9  
Tailrace - Profile and Typical Cross Section



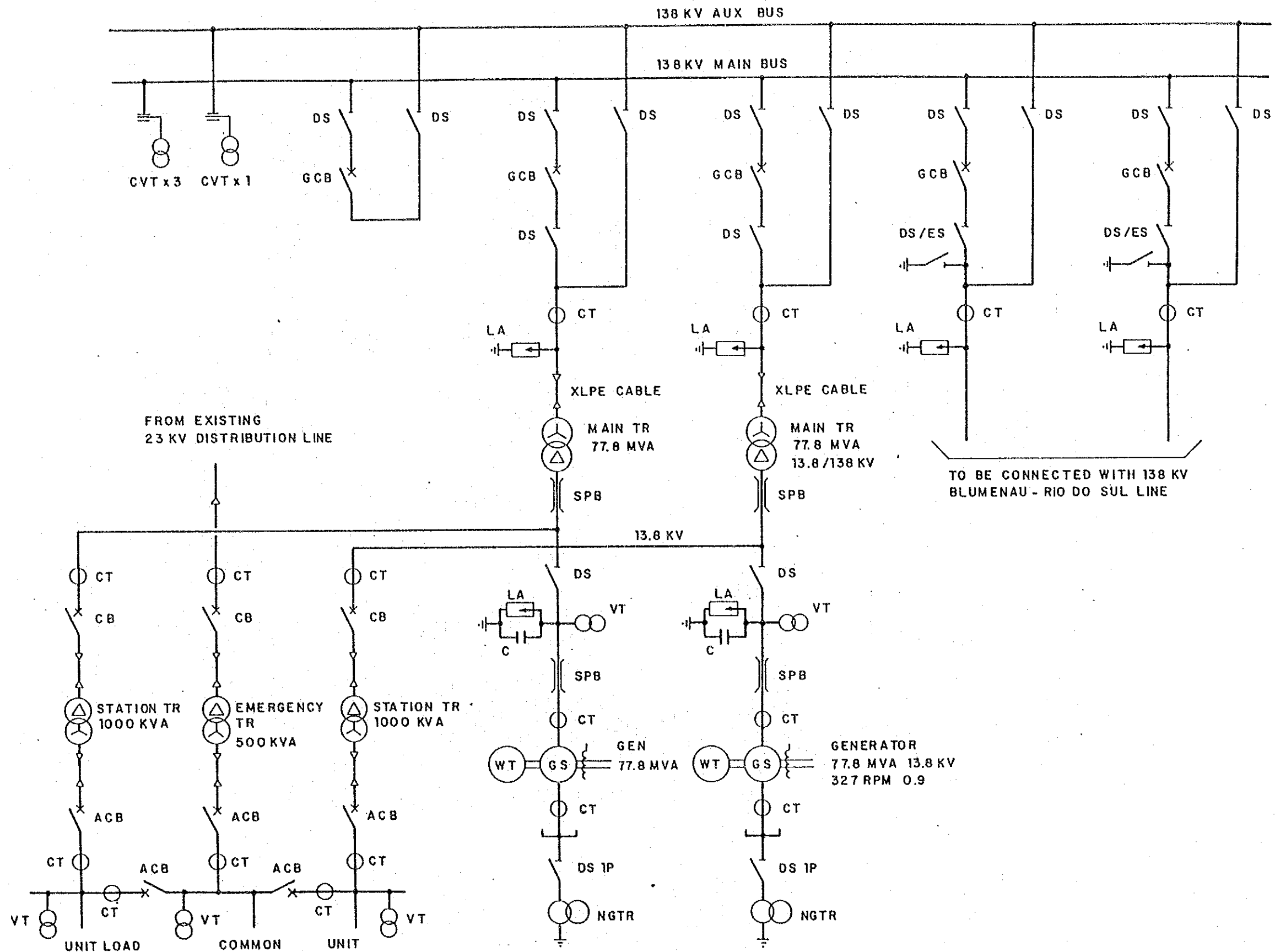
No Scale



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Fig 9.10

Outdoor Switchyard - Plan

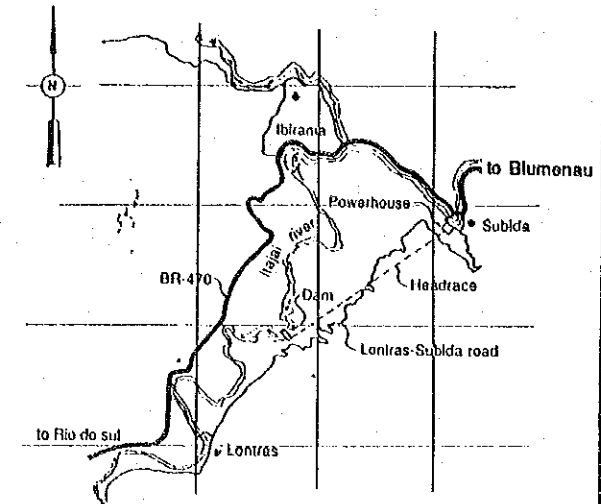
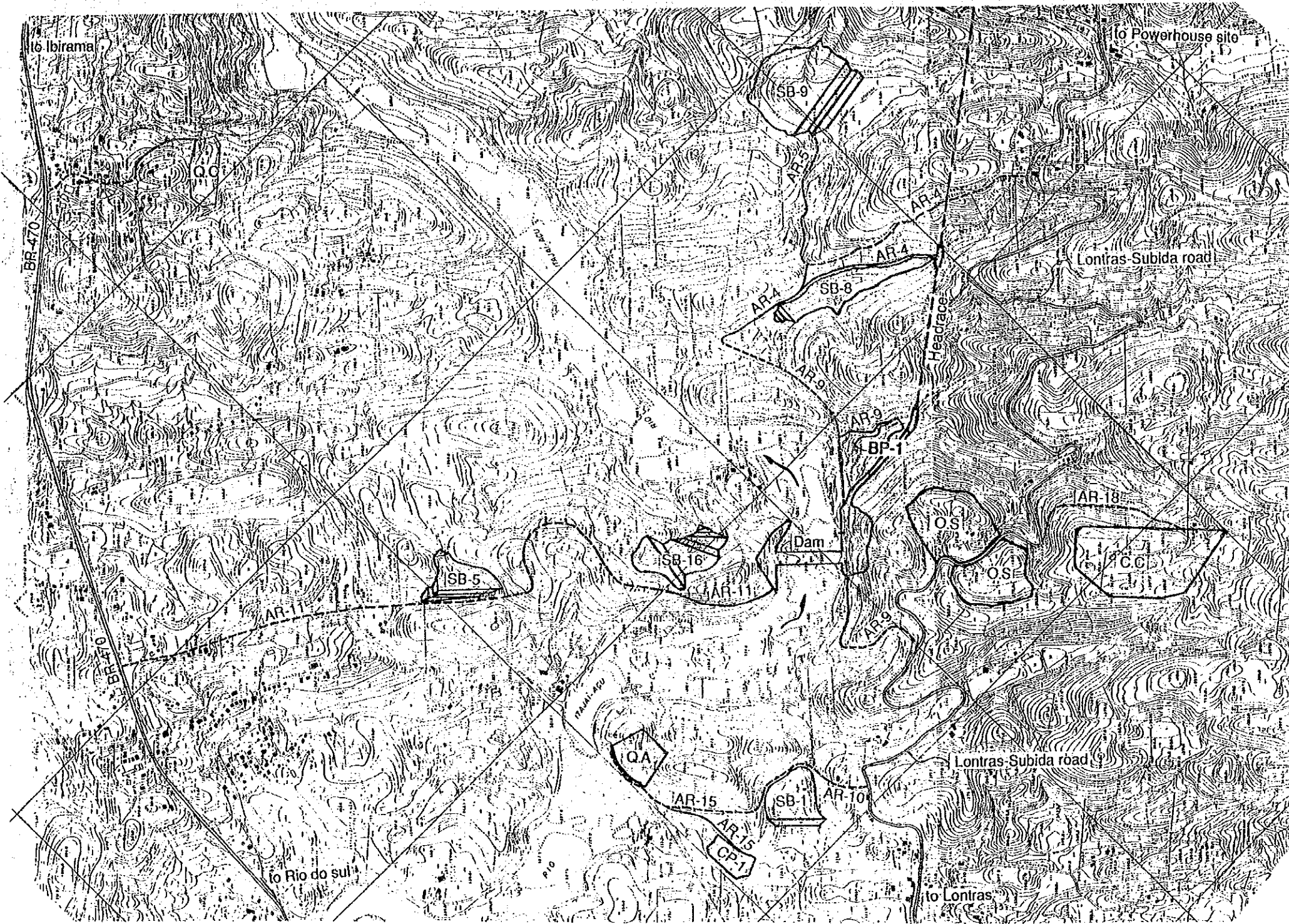


Scale \_\_\_\_\_  
 Scale \_\_\_\_\_  
 Scale \_\_\_\_\_

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Fig 9.11  
 Single Line Diagram





- CP-1 : Crushing plant (100t/h)
- BP-1 : Concrete plant (60m3/h)
- QA : Quarry site (for concrete)
- QC : Quarry site (for rockfill dam)
- CC : Camping site
- OS : Office & Work shop

**Spoil Bank**

Spoil bank No.	Volume (m3)
SB-1	135,000
SB-5	12,000
SB-8	116,000
SB-9	454,000
SB-16	150,000

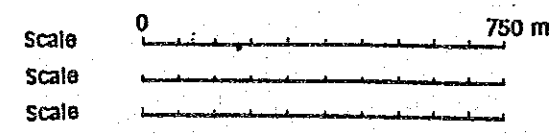
**(1) Permanent Roads**

Access road No.	New Construction (km)	Improvement of Existing road (km)	Sites to access
AR-1	0.20	-	Lontras-Subida road - Work adit No.1
AR-4	0.80	0.80	SB-8,9, Headrace tunnel
AR-5	-	0.70	SB-9
AR-9	0.40	1.00	Dam site right bank
AR-10	-	0.20	Quarry site-
AR-11	-	2.50	Dam site left bank
AR-15	0.20	0.90	Quarry site-
AR-18	-	0.80	Camping site
Lontras-Subida	-	23.15	BR-470-Dam right side -Powerhouse site
<b>Total</b>	<b>1.60</b>	<b>30.55</b>	

**(2) Temporary roads**

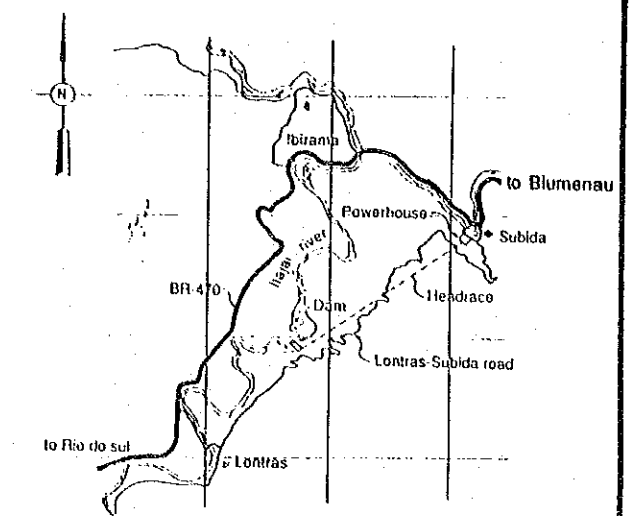
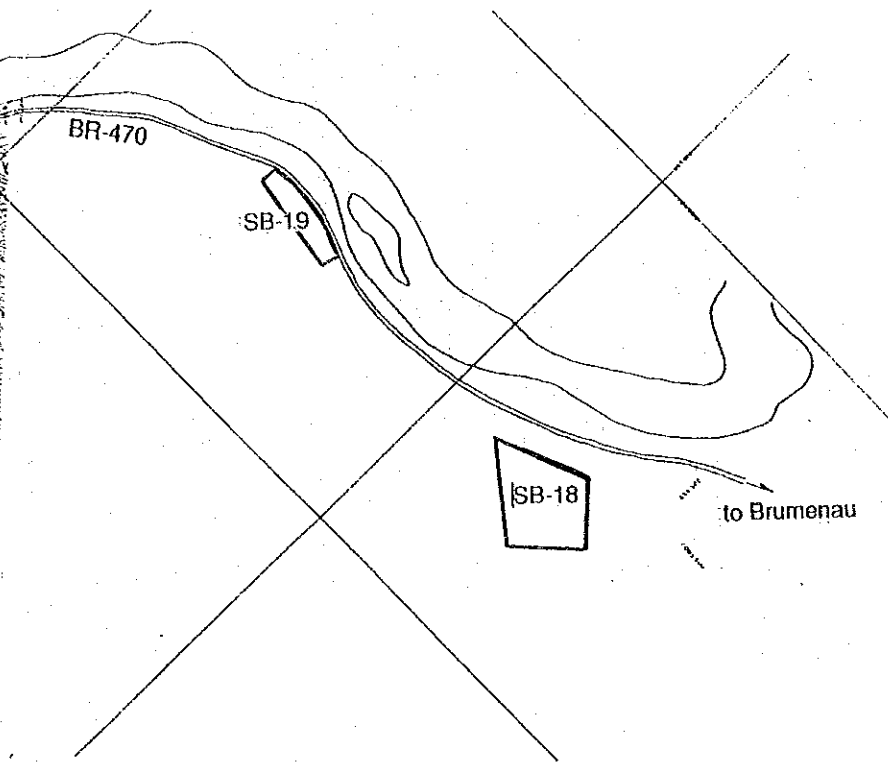
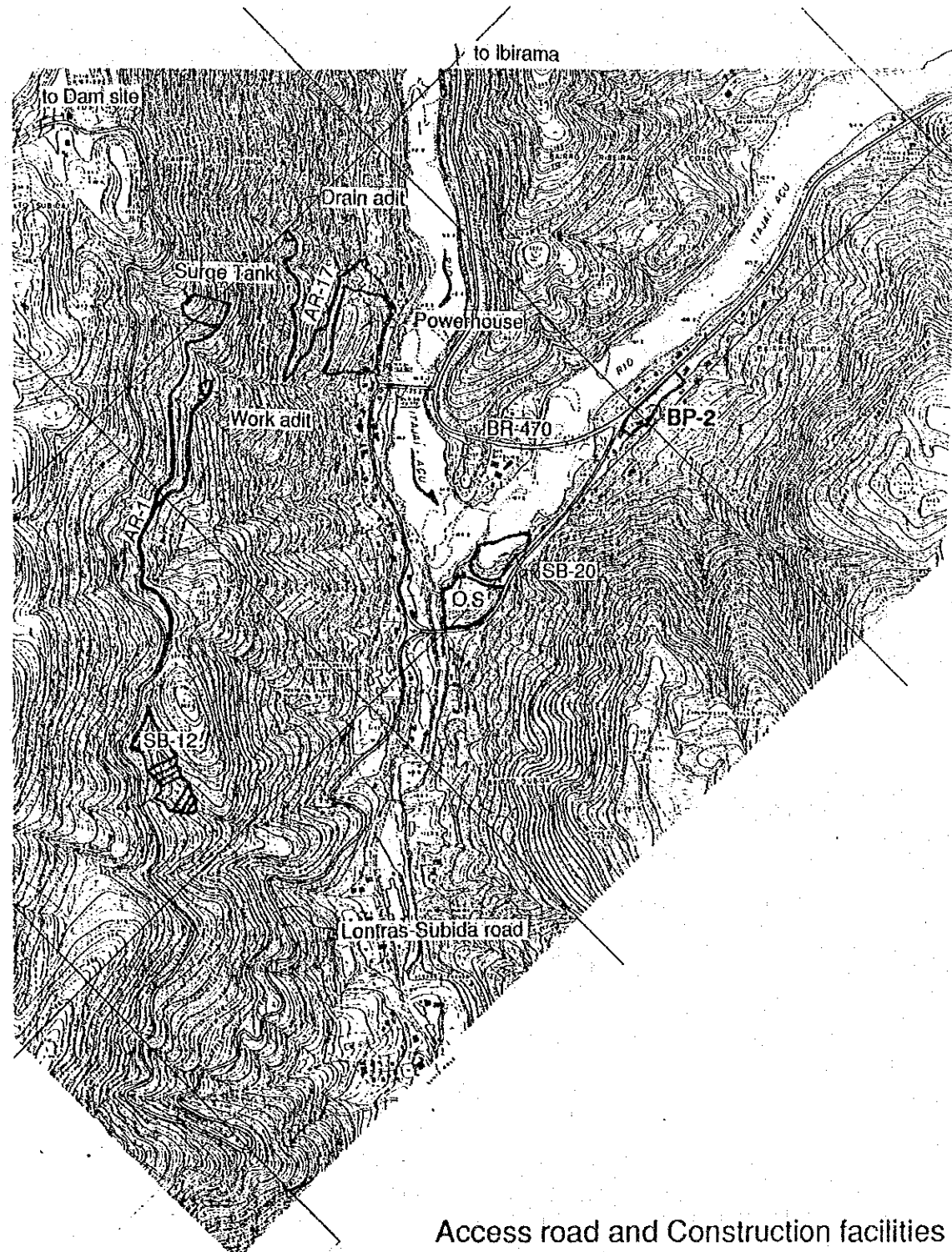
Access road No.	New Construction (km)	Improvement of Existing road (km)	Sites to access
AR-1	1.30	-	Surge tank, Drain adit
AR-9	0.30	0.25	Dam right side
AR-11	0.35	0.60	Dam left side
AR-17	0.80	-	Powerhouse, Drain adit
<b>Total</b>	<b>2.75</b>	<b>1.05</b>	

Access road and Construction facilities ( Dam site )



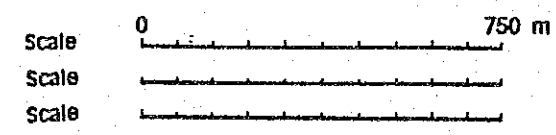
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 SALTO PILÃO HYDROELECTRIC POWER DEVELOPMENT PROJECT

Fig 10.1  
 Access Road and Construction Facilities (1/2)



- BP-2 : Concrete plant (60m<sup>3</sup>/h)
- O.S : Office & Work shop
- AR- 1 : Access road (1.5km)
- AR-17 : Access road (0.8km)
- SB-12 : Spoil bank (248,000m<sup>3</sup>)
- SB-18 : Spoil bank ( 50,000m<sup>3</sup>)
- SB-19 : Spoil bank (371,000m<sup>3</sup>)
- SB-20 : Spoil bank ( 10,000m<sup>3</sup>)

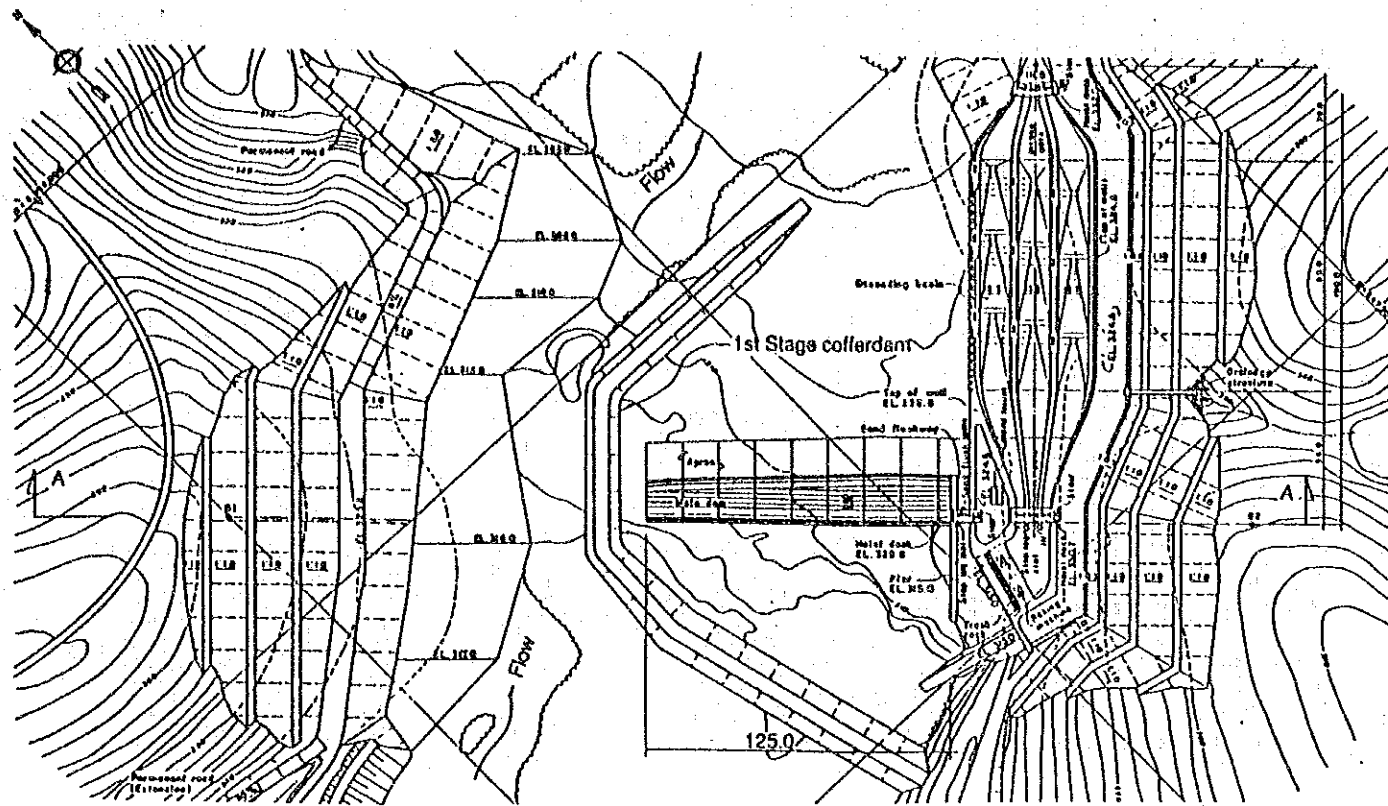
Access road and Construction facilities ( Powerhouse site )



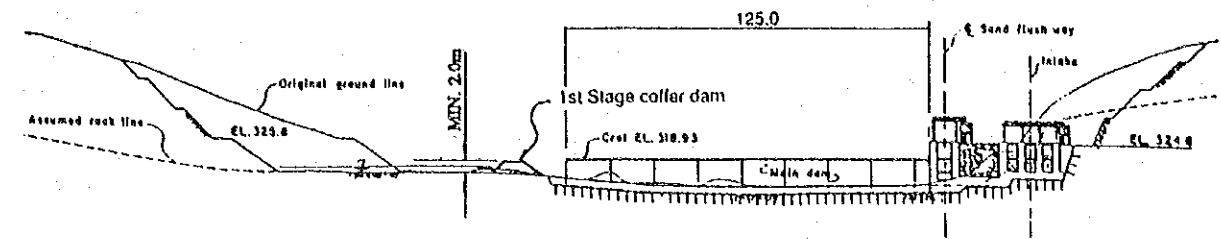
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Fig 10.1  
 Access Road and Construction Facilities (2/2)

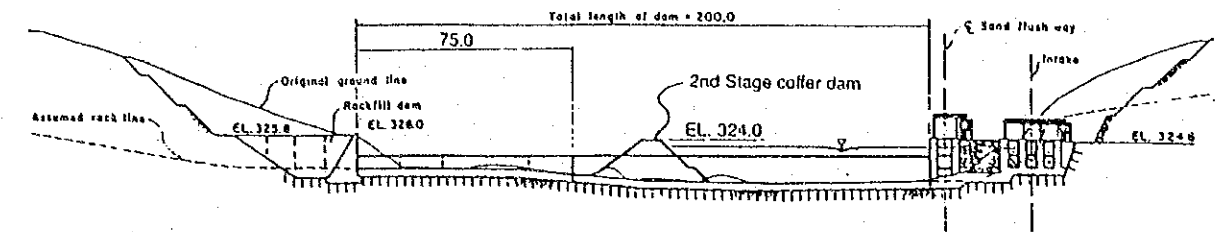




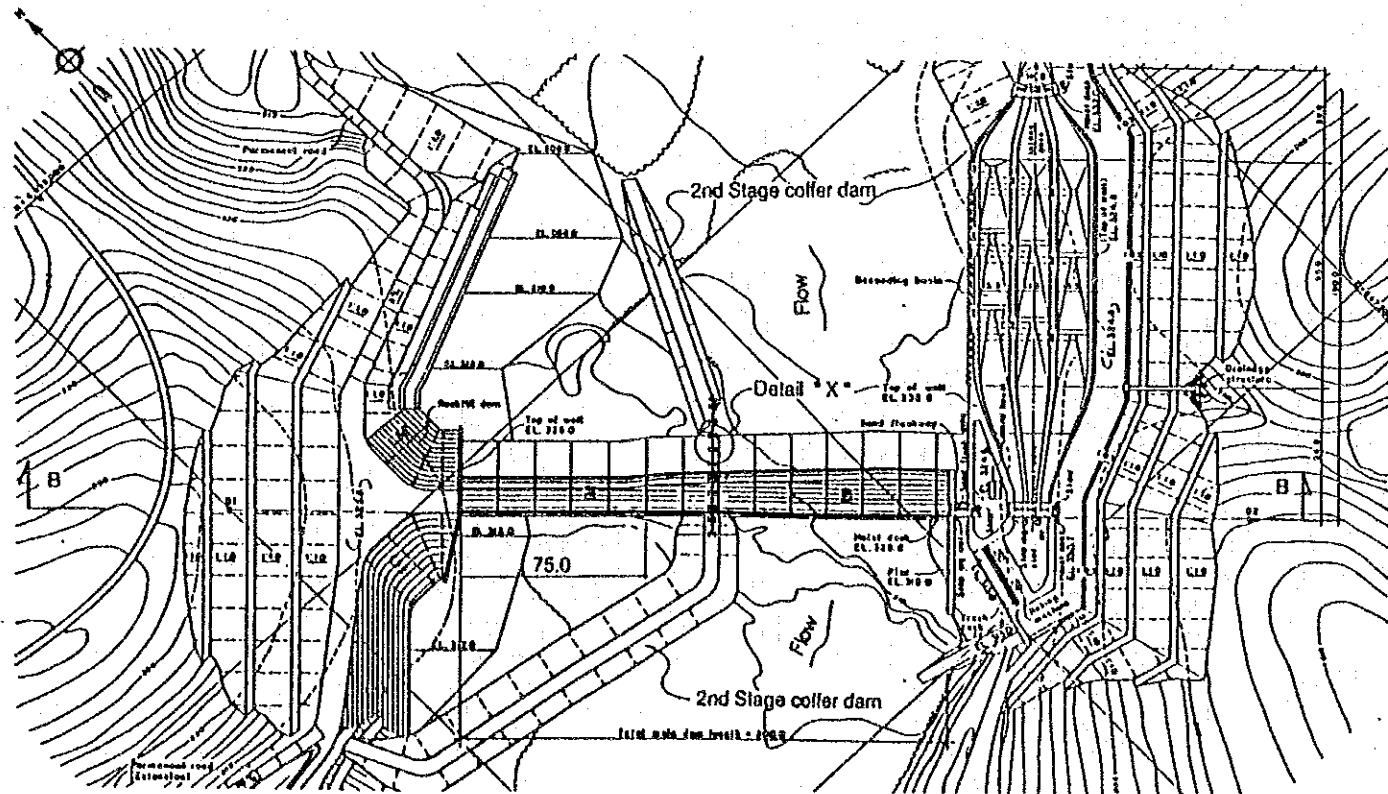
1st Stage Diversion No scale



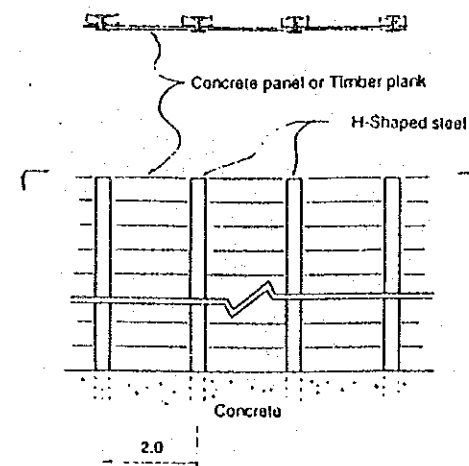
Section A - A No scale



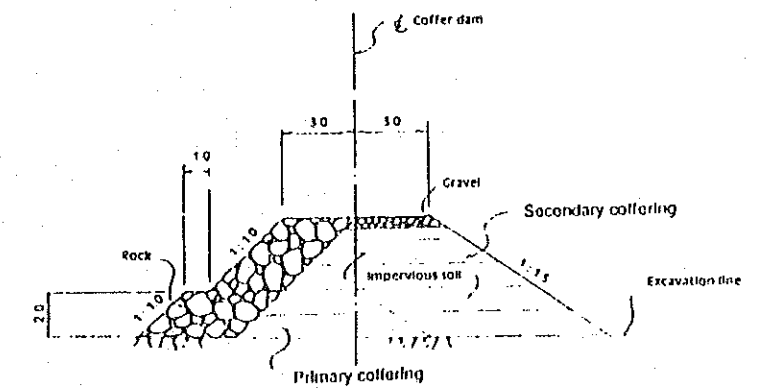
Section B - B No scale



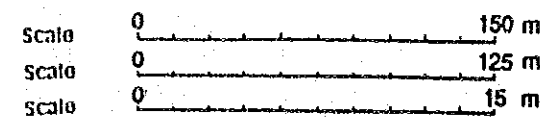
2nd Stage Diversion No scale



Detail of "X" Scale

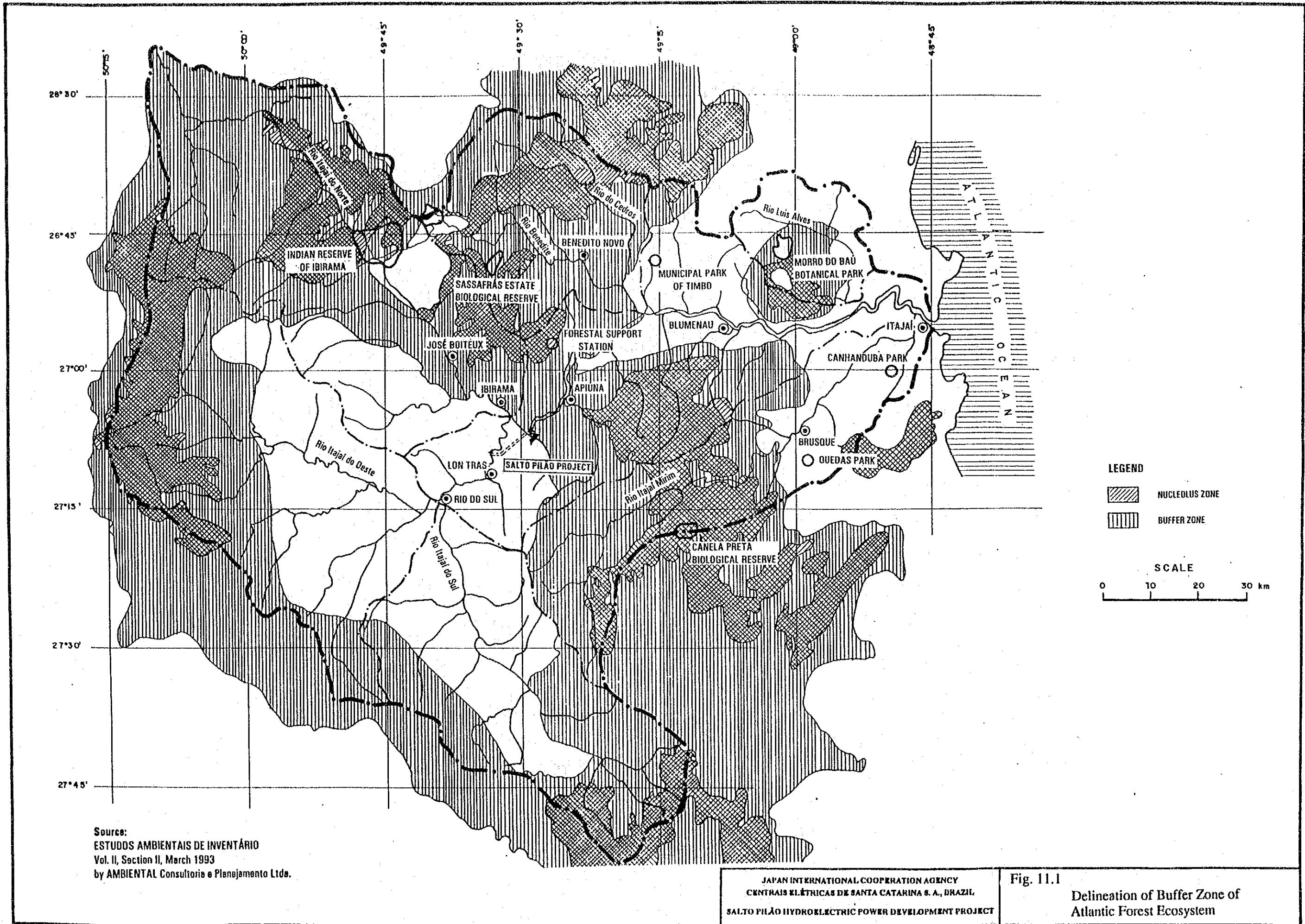


Typical Cross Section of Cofferdam Scale



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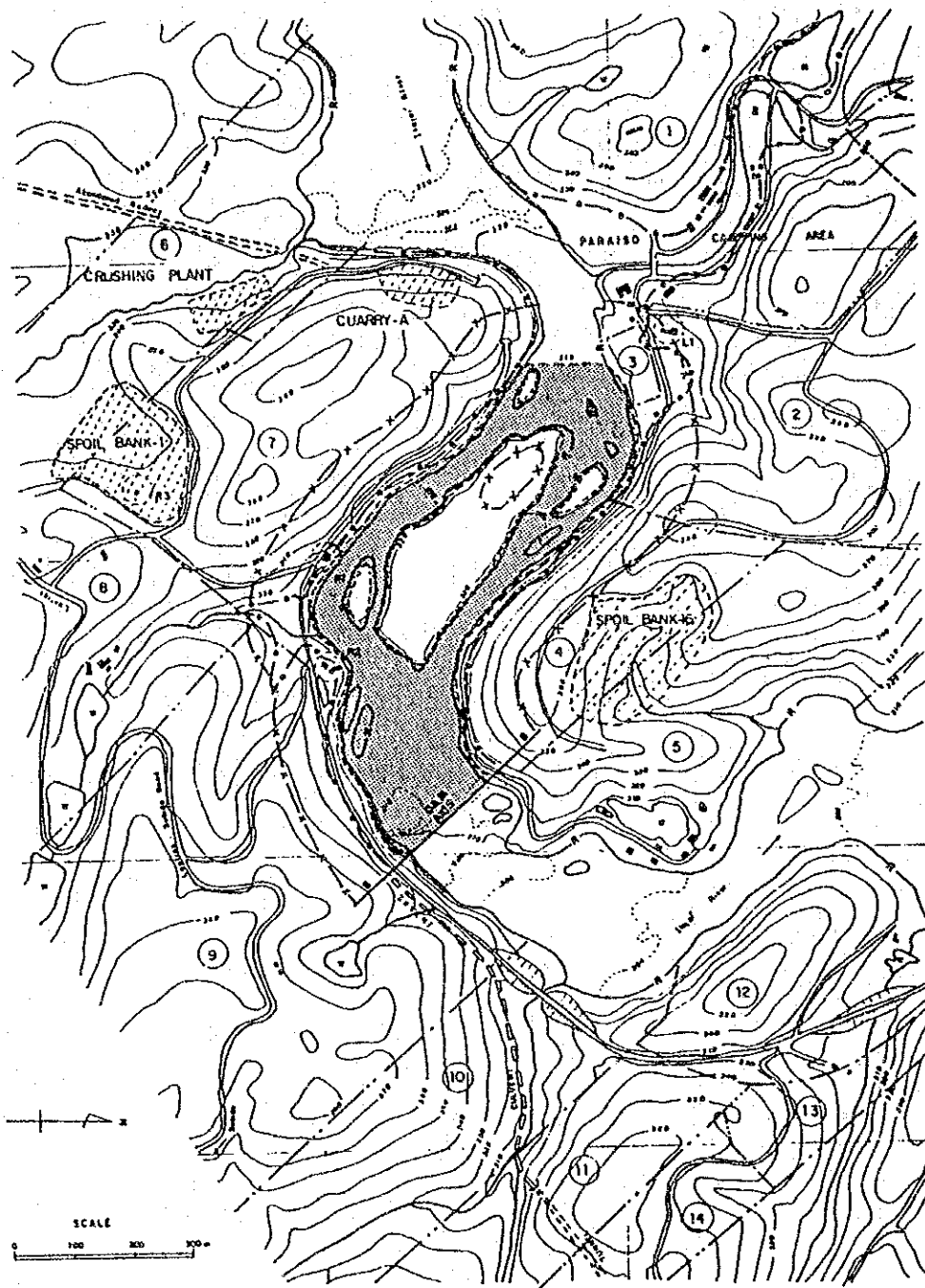
Fig.10.2  
 River Diversion Scheme



Source:  
 ESTUDOS AMBIENTAIS DE INVENTÁRIO  
 Vol. II, Section II, March 1993  
 by AMBIENTAL Consultoria e Planejamento Ltda.

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Fig. 11.1  
 Delineation of Buffer Zone of  
 Atlantic Forest Ecosystem



**LEGEND**

- A— River Level (100 cms) without Project
- River Level (100 cms) with Project : FSL = 319 m
- .-.- River Level at 5,300 cms with Project
- x-x- 100m Protection (Buffer) Zone around Reservoir
- ..... Approximate Estate Boundary (1 No of Estate)
- : Building
- : Building to be Relocated

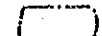

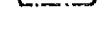









JAPAN INTERNATIONAL COOPERATION AGENCY  
 CENTRAIS ELÉTRICAS DE SANTA CATARINA S.A., BRAZIL  
 SALTO PILÃO HYDROELECTRIC POWER DEVELOPMENT PROJECT

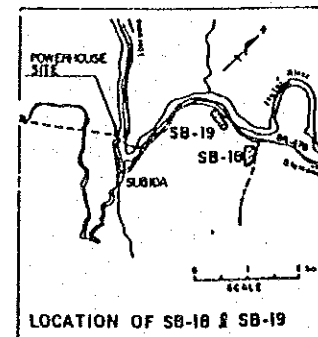
Fig.11.2  
 Location Map of Affected Estates





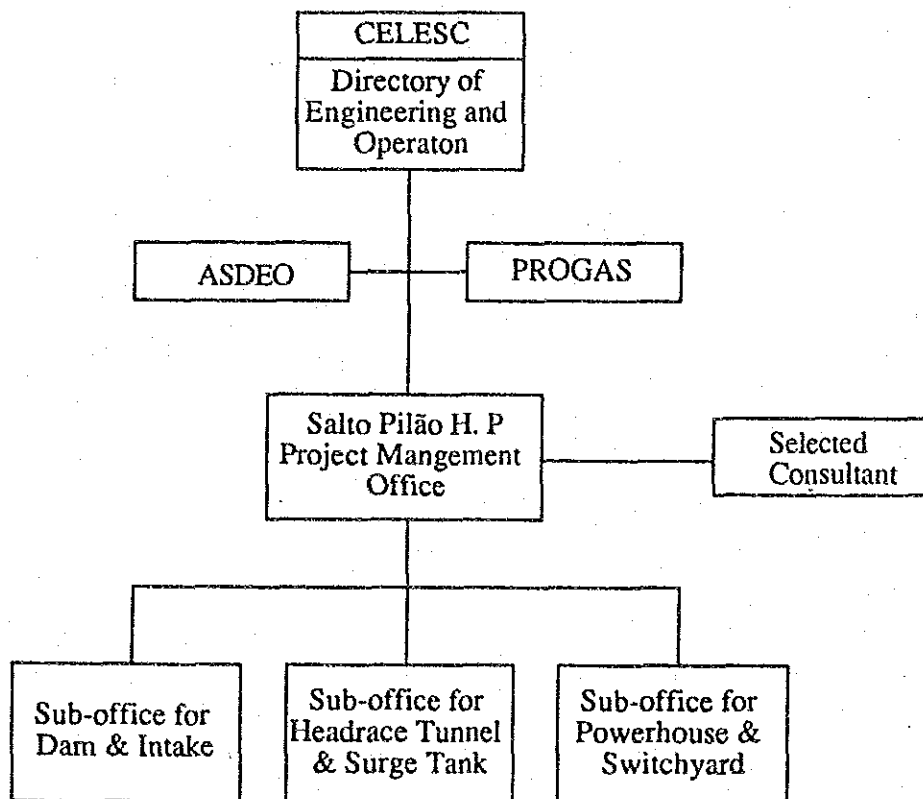
**LEGEND**

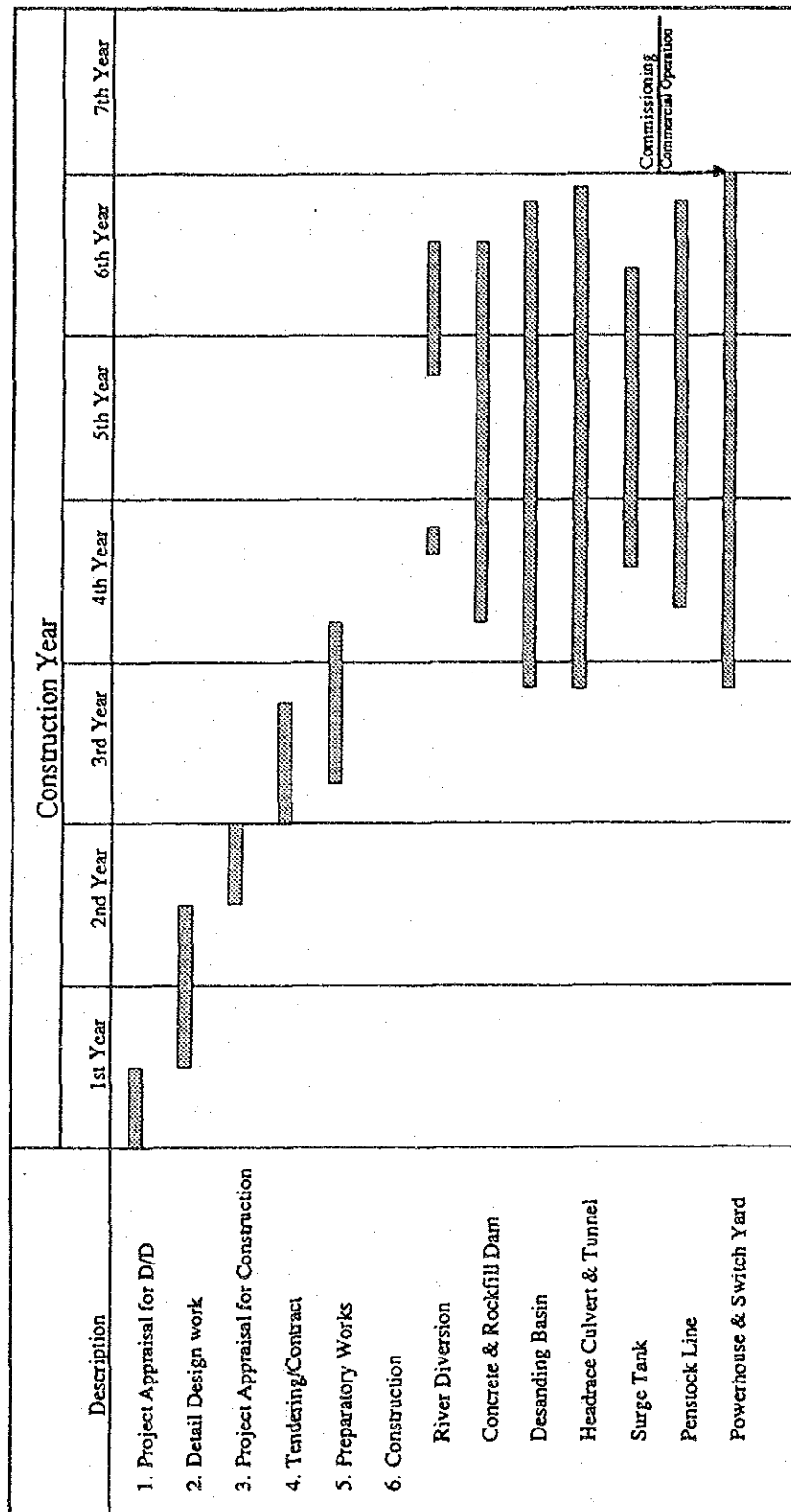
- |   |                             |   |                                    |
|---|-----------------------------|---|------------------------------------|
|  | Temporary Facility Area     |  | Existing Highway or Municipal Road |
|  | CC: Construction Camp       |  | Existing Rural Road                |
|  | OS: Office and Storage      |  | Access Road, to be improved        |
|  | BP: Batching Plant          |  | Access Road, to be constructed     |
|  | CP: Crushing Plant          |   |                                    |
|  | OA: Office Area             |   |                                    |
|  | Quarry Site (Q-A, Q-B, Q-C) |   |                                    |
|  | Spill Bank (SB)             |   |                                    |



JAPAN INTERNATIONAL COOPERATION AGENCY  
 CENTRAIS ELÉTRICAS DE SANTA CATARINA S. A., BRAZIL  
 SALTO PILÃO HYDROELECTRIC POWER DEVELOPMENT PROJECT

Fig. 11.3  
 Location of Project Facilities





JAPAN INTERNATIONAL COOPERATION AGENCY  
 CENTRAIS ELÉTRICAS DE SANTA CATARINA S.A., BRAZIL  
 SALTO PILÃO HYDROELECTRIC POWER DEVELOPMENT PROJECT

Fig. 13.2  
 Overall Project Implementation Schedule







# **Attachment 1**

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## **Attachment 2**

### **Project Cost Table in ELETROBRAS Form**



## Project Cost

- Salto Pilão Hydropower Scheme - Installed capacity : 142 MW  
 - Price Level : December 1992 - 1US\$=11,163.33Cr\$

Account No.	Work Item	Unit	Quantity	National		Imported	
				Unit Price	Amount	Unit Price	Amount
				Cr\$x10 <sup>3</sup>	Cr\$x10 <sup>6</sup>	Cr\$x10 <sup>3</sup>	Cr\$x10 <sup>6</sup>
<b>10.</b>	<b>LAND AND FACILITIES</b>						
10. 10.	Acquisition of Land & Improvement						
10. 10. 11.	Rural Land & Properties						
10. 10. 11. 10.	Land Areas	L.S.			3,952.49		0
10. 10. 12.	Legal Charges & Purchase	L.S.			590.99		0
10. 27.	Contingence of Account 10				681.52		0
	<b>TOTAL OF ACCOUNT 10</b>				5,225.00		0
<b>11.</b>	<b>STRUCTURES &amp; OTHER IMPROVEMENT</b>						
11. 12.	Improvement in Powerhouse Area	L.S.			8,604.86		0
11. 13.	Powerhouse						
11. 13. 00. 12.	Excavation for Powerhouse						
11. 13. 00. 12. 10.	Common Excavation	m3	248000	65	16,120.00		0
11. 13. 00. 12. 11.	Open-air Excavation in Rock	m3	35600	143	5,090.80		0
11. 13. 00. 14.	Concrete for Powerhouse						
11. 13. 00. 14. 13.	Cement	t	6728	2,120	14,263.36		0
11. 13. 00. 14. 14.	Concrete (Cement cost excluded)	m3	24310	1,520	36,951.20		0
11. 13. 00. 14. 15.	Reinforcement bar	t	861	15,929	13,714.87		0
11. 13. 00. 15.	Interior Finish Work	L.S.			2,129.09		0
11. 13. 00. 17.	Other Costs	L.S.			10,696.04		0
11. 27.	Contingence of Account 11				16,135.78		0
	<b>TOTAL OF ACCOUNT 11</b>				123,706.00		0
<b>12.</b>	<b>RESERVOIR, DAM &amp; WATERWAYS</b>						
12. 15.	RESEVOIR						
12. 15. 00. 18.	Cleaning of Reservoir	ha			145.12		0
12. 15. 21.	Environment	L.S.			8,149.23		0
12. 15. 13.	Other Costs	L.S.			414.72		0
12. 16.	RIVER DIVERSION						
12. 16. 22.	Cofferdams						
12. 16. 22. 19.	Rock & Earth Fill Cofferdam	m3	71000	103	7,313.00		0
12. 16. 22. 21.	Removal of Cofferdams	L.S.			2,060.75		0
12. 16. 22. 22.	Dewatering & Other Costs	L.S.			1,396.49		0
12. 16. 24.	Diversion Channel						
12. 16. 24. 12.	Excavation						
12. 16. 24. 12. 10.	Common Excavation	m3	155800	65	10,127.00		0
12. 16. 24. 12. 11.	Open-air Excavation in Rock	m3	8200	143	1,172.60		0
12. 16. 24. 17.	Other Cost	L.S.			753.95		0
12. 17.	DAM & EMBANKMENT						
12. 17. 25.	Rockfill Dam						
12. 17. 25. 25.	Rockfill & Filter	m3	7600	209	1,588.40		0
12. 17. 25. 26.	Soil Core	m3	6000	123	738.00		0
12. 17. 25. 17.	Other Costs	L.S.			116.00		0
12. 17. 26.	Concrete Dam						
12. 17. 26. 12.	Excavation						
12. 17. 26. 12. 11.	Open-air Excavation in Rock	m3	10000	143	1,430.00		0
12. 17. 26. 13.	Cleaning & Foundation Treatment	L.S.			1,234.11		0
12. 17. 26. 14.	Concrete						
12. 17. 26. 14. 13.	Cement	t	5622	2,120	11,918.64		0
12. 17. 26. 14. 14.	Concrete (cement cost excluded)	m3	35400	1,169	41,382.60		0
12. 17. 26. 14. 15.	Reinforcement Bars	t	280	15,929	4,460.12		0
12. 17. 26. 17.	Other Costs	L.S.			9,436.73		0
12. 18.	SPILLWAY						
12. 18. 28.	Main Spillway (Sand flush)						
12. 18. 28. 23.	Equipment						
12. 18. 28. 23. 16.	Gates & Winches (hs = 12.8 m)						
12. 18. 28. 23. 16. 10.	FOB Cost (L= 5.0 m)	unit	1	3,414,863	3,414.86		0
12. 18. 28. 23. 16. 11.	Transport & Securities (H= 7.3 m)	L.S.			204.89		0
12. 18. 28. 23. 16. 12.	Erection & Test	L.S.			546.38		0



Account No.	Work Item	Unit	Quantity	National		Imported	
				Unit Price	Amount	Unit Price	Amount
				Cr\$x10 <sup>3</sup>	Cr\$x10 <sup>6</sup>	Cr\$x10 <sup>3</sup>	Cr\$x10 <sup>6</sup>
12. 18. 28. 23. 17.	Stoplogs (p= 4 ; t= 0.5m )						
12. 18. 28. 23. 17. 10.	FOB Cost (ha = 1.8 m)	L.S.			2,175.47		0
12. 18. 28. 23. 17. 11.	Transport & Securities (L= 5 m)	L.S.			130.53		0
12. 18. 28. 23. 17. 12.	Erection & Test (H = 7.2 m)	L.S.			348.07		0
12. 18. 28. 23. 20.	Winch (C= 8.0 t)						
12. 18. 28. 23. 20. 10.	FOB Cost (L= m)	unit	1	284,660	284.66		0
12. 18. 28. 23. 20. 11.	Transport & Securities (H = m)	L.S.			17.08		0
12. 18. 28. 23. 20. 12.	Erection & Test	L.S.			45.55		0
12. 18. 28. 17.	Other Costs	L.S.			341.00		0
12. 19.	<b>INTAKE &amp; HEADRACE</b>						
12. 19. 30.	<b>Intake &amp; Desanding Basin</b>						
12. 19. 30. 12.	Excavation						
12. 19. 30. 12. 10.	Common Excavation	m3	140000	65	9,100.00		0
12. 19. 30. 12. 11.	Open-air Excavation in Rock	m3	170000	143	24,310.00		0
12. 19. 30. 14.	Concrete						
12. 19. 30. 14. 13.	Cement	t	16821	2,120	35,660.52		0
12. 19. 30. 14. 14.	Concrete ( cement cost excluded)	m3	62300	1,520	94,696.00		0
12. 19. 30. 14. 15.	Reinforcement Bars	t	2492	15,929	39,695.07		0
12. 19. 30. 23.	Equipment						
12. 19. 30. 23. 16.	Inlet Gates & Winches (ha = 4.3 m)						
12. 19. 30. 23. 16. 10.	FOB Cost (L= 3.7 m)	unit	4	2,399,838	9,599.35		0
12. 19. 30. 23. 16. 11.	Transport & Securities (H = 4.4 m)	L.S.			575.96		0
12. 19. 30. 23. 16. 12.	Erection & Test	L.S.			1,535.90		0
12. 19. 30. 23. 17.	Stoplogs (p= 3 ; t= 0.4m )						
12. 19. 30. 23. 17. 10.	FOB Cost (ha = 1.5 m)	L.S.			1,786.13		0
12. 19. 30. 23. 17. 11.	Transport & Securities (L= 3.7 m)	L.S.			107.17		0
12. 19. 30. 23. 17. 12.	Erection & Test (H = 4.5 m)	L.S.			285.78		0
12. 19. 30. 23. 21.	Screens & Rakes ( Cpf = )						
12. 19. 30. 23. 21. 10.	FOB Cost	L.S.			8,737.76		0
12. 19. 30. 23. 21. 11.	Transport & Securities (L = 5.7 m)	L.S.			524.26		0
12. 19. 30. 23. 21. 12.	Erection & Test (H= 9.8 m)	L.S.			1,398.05		0
12. 19. 30. 16.	Monitoring Apparatus	L.S.					
12. 19. 30. 17.	Other Costs	L.S.			20,991.20		0
12. 19. 32.	<b>Headrace Culvert &amp; Tunnel</b>						
12. 19. 32. 12.	Excavation						
12. 19. 32. 12. 10.	Common Excavation	m3	105000	65	6,825.00		0
12. 19. 32. 12. 11.	Open-air Excavation in Rock	m3	11900	143	1,701.70		0
12. 19. 32. 12. 12.	Underground Excavation in Rock	m3	164500	836	137,522.00		0
12. 19. 32. 14a	Concrete for structure						
12. 19. 32. 14a 13.	Cement	t	8274	2,120	17,540.88		0
12. 19. 32. 14a 14.	Concrete ( cement cost excluded)	m3	26700	1,747	46,644.90		0
12. 19. 32. 14a 15.	Reinforcement Bars	t	284	15,929	4,523.84		0
12. 19. 32. 23. 22.	Steel Culvert						
12. 19. 32. 23. 22. 10.	FOB Cost	L.S.			11,413.72		0
12. 19. 32. 23. 22. 11.	Transport & Securities	L.S.			2,511.02		0
12. 19. 32. 23. 22. 12.	Erection & Test	L.S.			7,989.61		0
12. 19. 32. 17.	Other Costs	L.S.			25,764.68		0
12. 19. 33.	<b>Surge Tank</b>						
12. 19. 33. 12.	Excavation						
12. 19. 33. 12. 10.	Common Excavation	m3	70600	65	4,589.00		0
12. 19. 33. 12. 11.	Open-air Excavation in Rock	m3	29700	143	4,247.10		0
12. 19. 33. 12. 12.	Underground Excavation in Rock	m3	12500	1,111	13,887.50		0
12. 19. 33. 14.	Concrete						
12. 19. 33. 14. 13.	Cement	t	650	2,120	1,378.00		0
12. 19. 33. 14. 14.	Concrete ( cement cost excluded)	m3	2600	1,667	4,334.20		0
12. 19. 33. 14. 15.	Reinforcement Bars	t	1	15,929	15.93		0
12. 19. 33. 17.	Other Costs	L.S.			6,159.81		0
12. 19. 34.	<b>Penstock Tunnel &amp; Penstock Lane</b>						
12. 19. 34. 12.	Excavation						
12. 19. 34. 12. 12.	Underground Excavation in Rock	m3	17500	1,105	19,337.50		0

Account No.	Work Item	Unit	Quantity	National		Imported	
				Unit Price	Amount	Unit Price	Amount
				Cr\$x10 <sup>3</sup>	Cr\$x10 <sup>6</sup>	Cr\$x10 <sup>3</sup>	Cr\$x10 <sup>6</sup>
12. 19. 34. 14.	Concrete						
12. 19. 34. 14. 13.	Cement	t	2315	2,120	4,907.80		0
12. 19. 34. 14. 14.	Concrete (cement cost excluded)	m3	9260	1,568	14,519.68		0
12. 19. 34. 14. 15.	Reinforcement Bars	t	96	15,929	1,529.18		0
12. 19. 34. 23. 23.	Steel Lining						
12. 19. 34. 23. 23. 10.	FOB Cost	L.S.			33,314.17		0
12. 19. 34. 23. 23. 11.	Transport & Securities	L.S.			7,329.12		0
12. 19. 34. 23. 23. 12.	Erection & Test	L.S.			23,319.92		0
12. 19. 34. 17.	Other Costs	L.S.			24,305.33		0
12. 19. 35.	<b>Tallrace Channel &amp; Tunnel</b>						
12. 19. 35. 12.	Excavation						
12. 19. 35. 12. 10.	Common Excavation	m3	20300	65	1,319.50		0
12. 19. 35. 12. 11.	Open-air Excavation in Rock	m3	8800	143	1,258.40		0
12. 19. 35. 14.	Concrete						
12. 19. 35. 14. 13.	Cement	t	484	2,120	1,026.08		0
12. 19. 35. 14. 14.	Concrete (cement cost excluded)	m3	2200	1,520	3,344.00		0
12. 19. 35. 14. 15.	Reinforcement Bars	t	44	15,929	700.88		0
12. 19. 35. 17.	Other Costs	L.S.			1,541.47		0
12. 20.	<b>SPECIAL WORK</b>						
12. 20. 37.	Other Special Works	L.S.			12,279.66		0
12. 27.	Contingence of Account 12				116,790.88		0
	<b>TOTAL OF ACCOUNT 12</b>				924,222.00		0
13.	<b>TURBINES &amp; GENERATORS</b>						
13. 13. 00. 23. 28.	<b>Turbines (Type: Francis )</b>						
13. 13. 00. 23. 28. 10.	FOB Cost (P= 72,600 kw)	unit	2	40,193,570	80,387.14		0
13. 13. 00. 23. 28. 11.	Transportation & Security (n=327.3 rpm)	L.S.			3,215.49		0
13. 13. 00. 23. 28. 12.	Erection & Test (H= 207.5 m)	L.S.			16,077.43		0
13. 13. 00. 23. 28. 13.	Other Costs	L.S.			4,984.00		0
13. 13. 00. 23. 16.	<b>Draft Tube Gate (p = 2.0 )</b>						
13. 13. 00. 23. 16. 10.	FOB Cost (t = 0.4 m )	unit	2	1,997,120	3,994.24		0
13. 13. 00. 23. 16. 11.	Transportation & Security (h = 23 m)	L.S.			239.65		0
13. 13. 00. 23. 16. 12.	Erection & Test (L = 3.4 m)	L.S.			639.08		0
13. 13. 00. 23. 16. 13.	Other Costs (H = 3.1 m)	L.S.			244.00		0
13. 13. 00. 23. 20.	<b>Winch of Draft Tube (C= 18 t)</b>						
13. 13. 00. 23. 20. 10.	FOB Cost (L = 7.0 m)	unit	1	3,590,127	3,590.13		0
13. 13. 00. 23. 20. 11.	Transportation & Security (H= 6.7 m)	L.S.			143.61		0
13. 13. 00. 23. 20. 12.	Erection & Test	L.S.			718.03		0
13. 13. 00. 23. 20. 13.	Other Costs	L.S.			223.00		0
13. 13. 00. 23. 29.	<b>Generator n= 327.3 (P= 78,900 kVA)</b>						
13. 13. 00. 23. 29. 10.	FOB Cost	unit	2	47,265,539	94,531.08		0
13. 13. 00. 23. 29. 11.	Transportation & Security	L.S.			3,781.24		0
13. 13. 00. 23. 29. 12.	Erection & Test	L.S.			18,906.22		0
13. 13. 00. 23. 29. 13.	Other Costs	L.S.			5,861.00		0
13. 27.	Contingence of Account 13				23,753.66		0
	<b>TOTAL OF ACCOUNT 13</b>				261,289.00		0
14.	<b>ACCESSORY ELECTRICAL EQUIPMENT</b>						
14. 00. 00. 23. 30.	<b>Accessory Electrical Equipment</b>						
14. 00. 00. 23. 30. 10.	FOB Cost	L.S.			82,117.46		0
14. 00. 00. 23. 30. 11.	Transportation & Security	L.S.			3,284.70		0
14. 00. 00. 23. 30. 12.	Erection & Test	L.S.			16,423.49		0
14. 00. 00. 23. 30. 13.	Other Costs	L.S.			5,091.28		0
14. 27.	Contingence of Account 14				10,692.07		0
	<b>TOTAL OF ACCOUNT 14</b>				117,609.00		0

Account No.	Work Item	Unit	Quantity	National		Imported	
				Unit Price	Amount	Unit Price	Amount
				Cr\$10 <sup>3</sup>	Cr\$10 <sup>6</sup>	Cr\$10 <sup>3</sup>	Cr\$10 <sup>6</sup>
<b>15.</b>	<b>OTHER EQUIPMENT OF POWERHOUSE</b>						
15. 13. 00 23. 20.	Overhead Travelling Crane ( C= 160 t)						
15. 13. 00 23. 20. 10.	FOB Cost (L= 16.0 m)	unit	1	10,158,630	10,158.63		0
15. 13. 00 23. 20. 11.	Transportation & Security (H = m)	L.S.			406.35		0
15. 13. 00 23. 20. 12.	Erection & Test	L.S.			2,031.73		0
15. 13. 00 23. 20. 13.	Other Costs	L.S.			630.00		0
15. 00 00 23. 21.	Other Equipment						
15. 00 00 23. 21. 10.	FOB Cost	L.S.			37,765.55		0
15. 00 00 23. 21. 11.	Transportation & Security	L.S.			1,510.62		0
15. 00 00 23. 21. 12.	Erection & Test	L.S.			7,553.11		0
15. 00 00 23. 21. 13.	Other Costs	L.S.			2,341.00		0
15. 27.	Contingence of Account 15				6,240.01		0
	<b>TOTAL OF ACCOUNT 15</b>				<b>68,637.00</b>		<b>0</b>
<b>16.</b>	<b>ACCESS ROAD/RAILWAY &amp; BRIDGES</b>						
16. 00. 14.	Roadways	km	4	4,144,386	16,577.54		0
16. 00. 16.	Bridges	m	50	78,143	3,907.15		0
16. 27.	Contingence of Account 16				3,072.31		0
	<b>TOTAL OF ACCOUNT 16</b>				<b>23,557.00</b>		<b>0</b>
	<b>TOTAL OF ACCOUNT 10 to 16 (CDT)</b>				<b>1,524,245.00</b>		<b>0</b>
<b>17.</b>	<b>INDIRECT COST</b>						
17. 21.	Construction Site & Camping						
17. 21. 38.	Works of Construction Site & Camping	L.S.			107,347.00		0
17. 21. 38. 33.	Residential Units	L.S.					0
17. 21. 38. 34.	Community Plant	L.S.					0
17. 21. 38. 35.	Infra-structure						
17. 21. 38. 35. 32.	Edifications	L.S.					0
17. 21. 38. 35. 33.	Systems	L.S.					0
17. 21. 38. 17.	Other Cost	L.S.					0
17. 21. 39.	Maintenance & Operation of Works/Camps	L.S.					0
17. 22.	Engineering & Administration of Proprietor						
17. 22. 40.	Engineering						
17. 22. 40. 36.	Basic Engineering	L.S.			107,347.00		0
17. 22. 40. 37.	Special Works of Engineering	L.S.					0
17. 22. 41.	Administration of Properties	L.S.			230,043.00		0
17. 22. 41. 38.	Administration of Works	L.S.					0
17. 22. 41. 39.	General Administration	L.S.					0
17. 27.	Contingence of Account 17						0
	<b>TOTAL OF ACCOUNT 17</b>				<b>444,737.00</b>		<b>0</b>
.10 to .17	<b>TOTAL COST WITHOUT INTEREST</b>				<b>1,968,982.00</b>		<b>0</b>
18.	<b>INTEREST DURING CONSTRUCTION</b>				<b>426,875.00</b>		<b>0</b>
.10 to .18	<b>TOTAL COST WITH INTEREST</b>				<b>2,395,857.00</b>		<b>0</b>



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