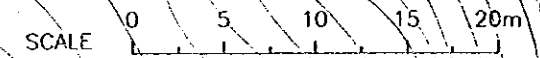


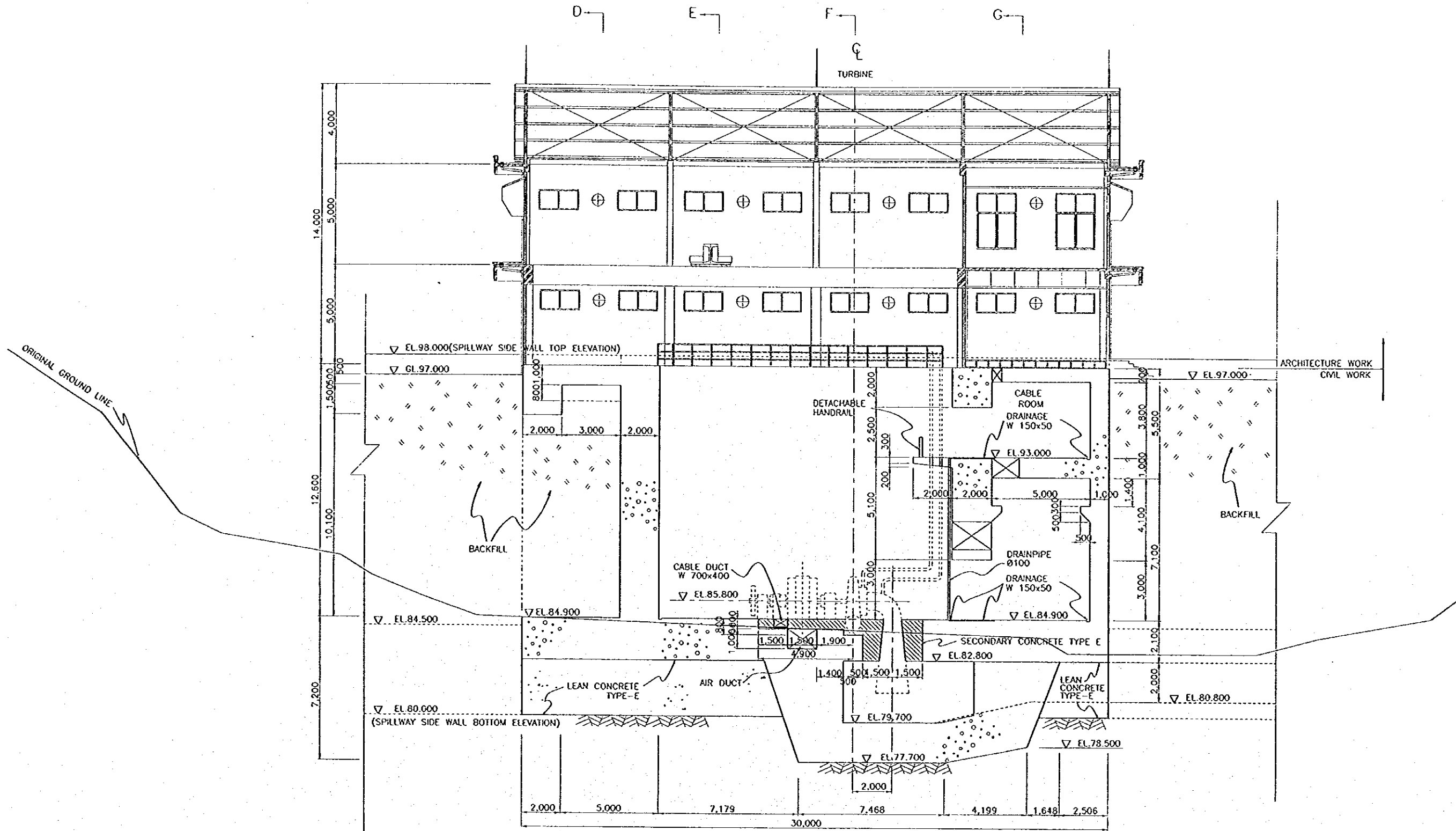
NOTES

- 1. ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE NOTED.
- 2. CONCRETE OF POWERHOUSE SHALL BE OF TYPE B AS PER SPECIFICATION.

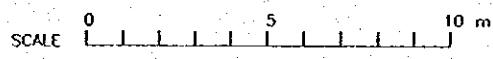


NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

<p>THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT</p>		<p>PROVIDER CENTRAL JAVA</p>
<p>FRATUNSEIINA FLOOD CONTROL PROJECT COMPONENT - JATIBARANG DAM CONSTRUCTION HYDROPOWER STATION GENERAL PLAN OF POWERHOUSE AREA</p>		<p>PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG, IN THE REPUBLIC OF INDONESIA</p>
<p>JAPAN INTERNATIONAL COOPERATION AGENCY CITY ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL PANCO INTERNATIONAL INC.</p>		<p>DISTRICT SEMARANG CITY</p>
<p>DESIGNED CHECKED CHIEF OF PLANNING AND DESIGN PROJECT MANAGER</p>		<p>DRAWING NO. JD-P1-HS-Ge-1 SHEET NO. 184</p>
<p>APPROVED</p>		<p>DATE CONTRACT NO.</p>



SECTION A-A



NOTES

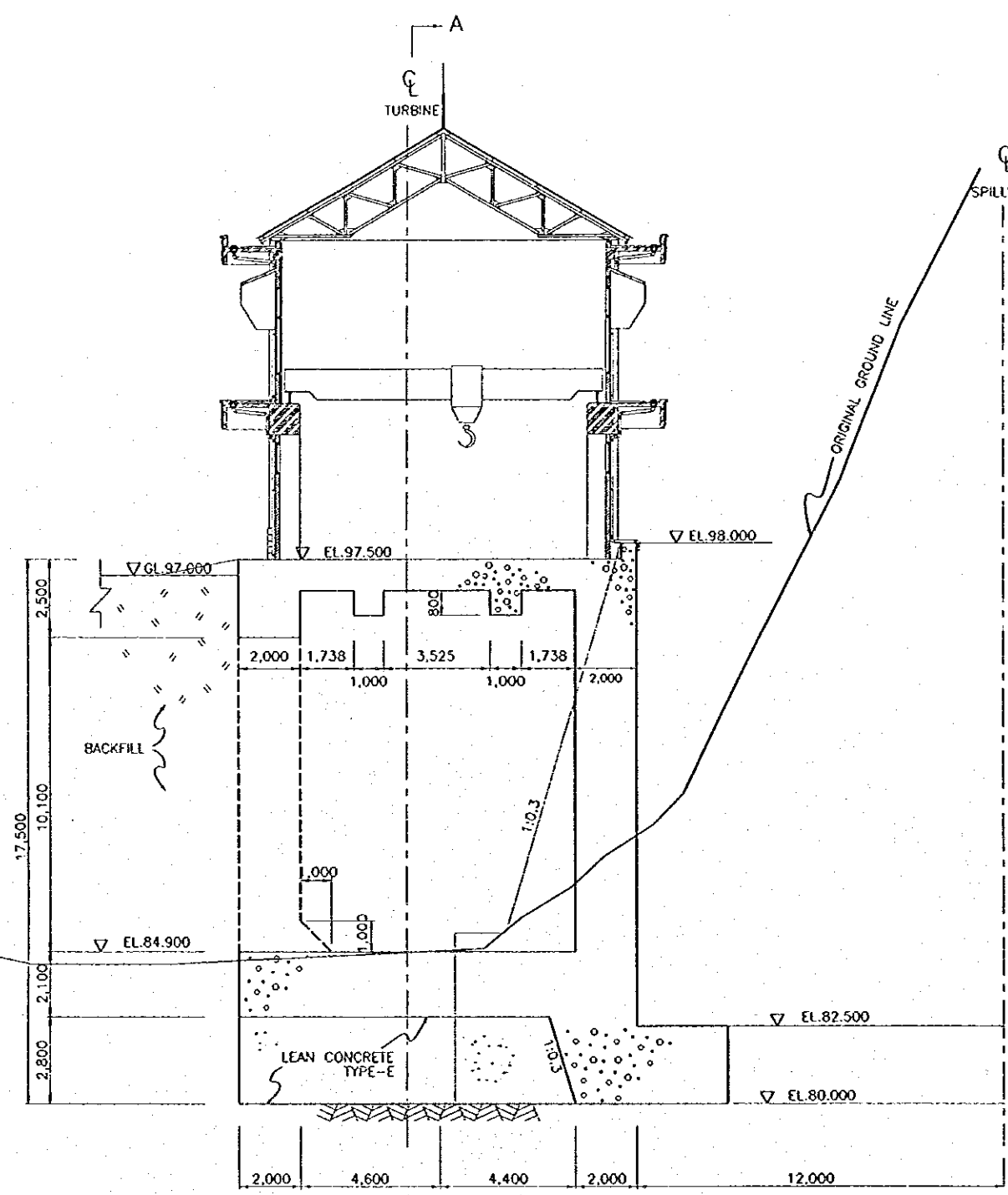
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS IN METERS UNLESS OTHERWISE STATED.
2. CONCRETE SHALL BE OF TYPE-B AS PER SPECIFICATIONS UNLESS OTHERWISE DESIGNATED IN THE DRAWING.
3. THE TURBINE, GENERATOR AND ACCESSORIES SHOWN IN THIS DRAWING ARE SUPPLIED BY OTHER CONTRACTOR AND INSTALLED BY THE CIVIL CONTRACTOR.
4. FLOOR ELEVATIONS INCLUDE THICKNESS OF FLOOR FINISHES. FOR DRAINAGE PURPOSES, FLOOR SHALL BE SLOPED AS REQUIRED AND DIRECTED BY THE ENGINEER.
5. ALL EXPOSED EDGES AND CORNERS SHALL BE CHAMFERED BY 2 CENTIMETERS UNLESS OTHERWISE NOTED.
6. SURFACES OF THE OUTER WALLS BELOW EL.96.70 SHALL RECEIVE CLASS1 SURFACE FINISH AND OF THE INNER WALLS CLASS2 SURFACE FINISH.
7. THE FLOORS OF CIVIL WORK SHALL BE COLORED WITH IVORY BY DUST-TIGHT PAINT AND THE BATTERY ROOM'S FLOOR AND INNER WALLS SHALL BE COATED WITH ANTI-ACID PAINT FROM EL.93.00 TO EL.94.00

REFERENCE DRAWINGS

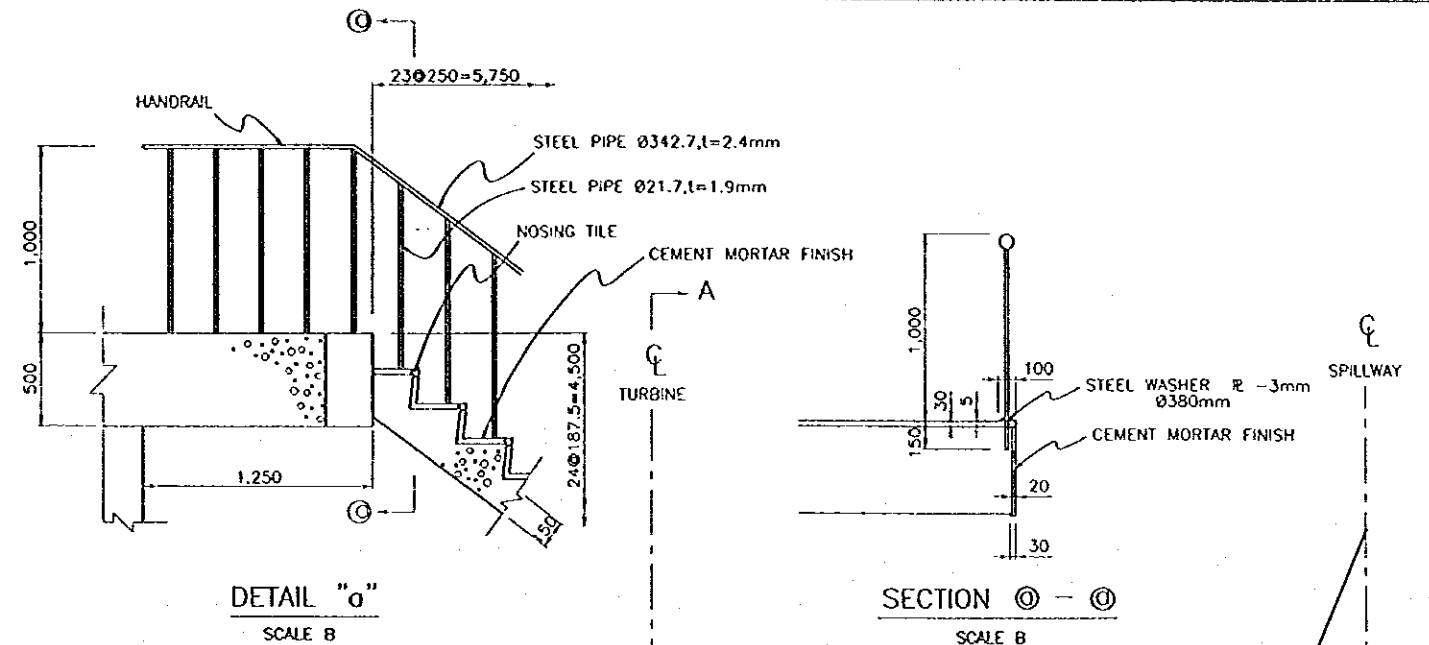
- JD-P1-HS-SI-1 GENERAL PLAN OF POWERHOUSE AREA
- JD-P1-HS-SI-3 POWERHOUSE-CONCRETE OUTLINE-SECTIONS(1/2)
- JD-P1-HS-SI-4 POWERHOUSE-CONCRETE OUTLINE-SECTIONS(2/2)
- JD-P1-HS-SI-5 POWERHOUSE-CONCRETE OUTLINE-PLAN

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

	THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT	PROVINCE CENTRAL JAVA
	IRATUNSELUNA FLOOD CONTROL PROJECT COMPONENT : JATIBARANG DAM CONSTRUCTION HYDROPOWER STATION POWERHOUSE CONCRETE OUTLINE-PROFILE	PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
	LOCAL INTERNATIONAL COOPERATION AGENCY CIE ENGINEERING CO. LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL PAKO INTERNATIONAL S.A.S.	DIBANGUN ONSKOP
	CENTER OF PLANNING AND DESIGN PROJECT MANAGER	DATE CONTRACT NO.

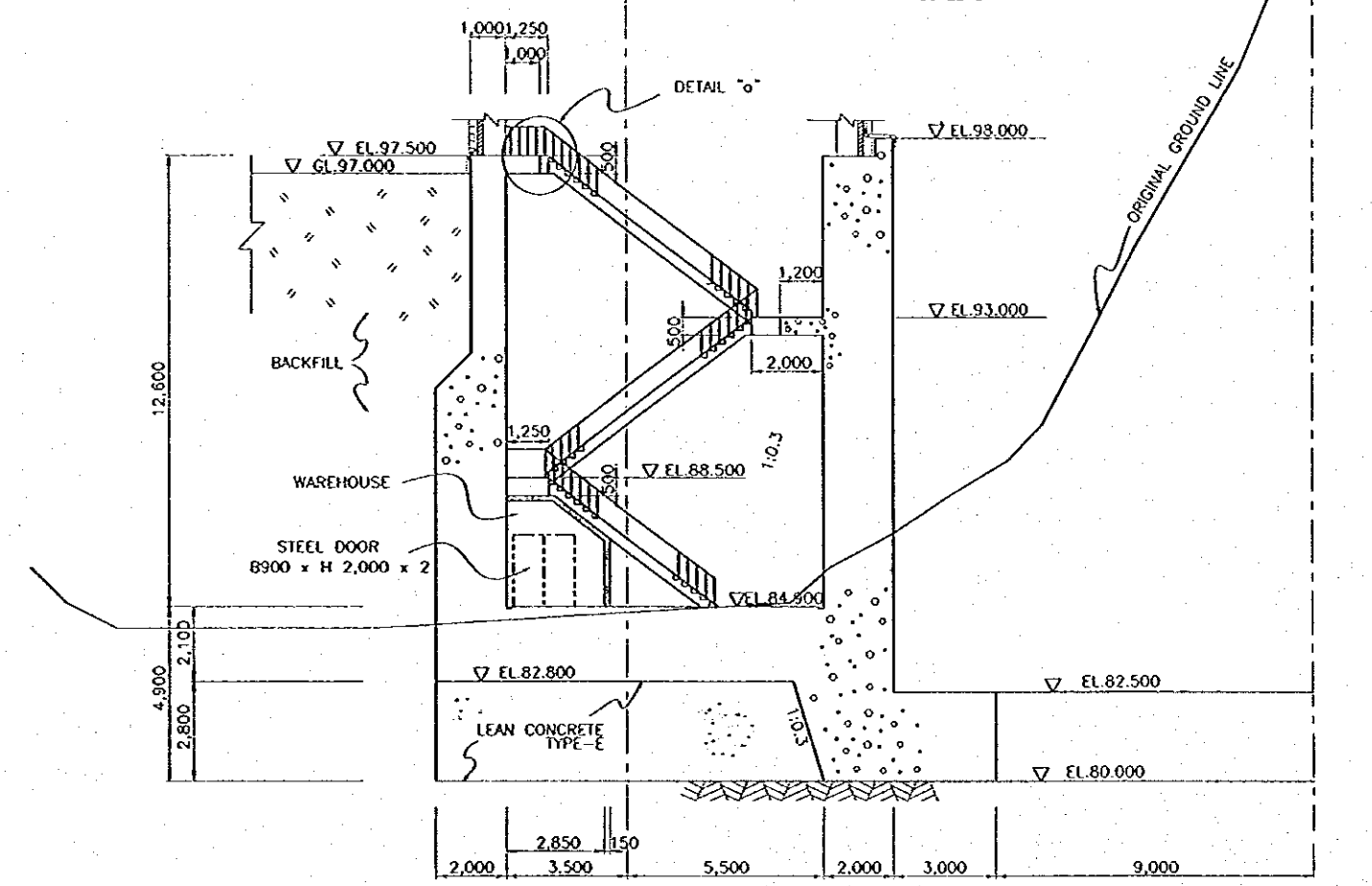


SECTION D-D
SCALE A



DETAIL "a"
SCALE B

SECTION @ - @
SCALE B



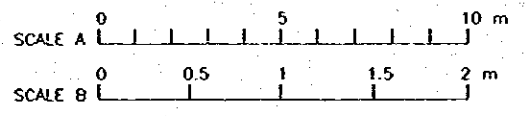
SECTION E-E
SCALE A

NOTES

- 1. HANDRAILS, STEEL DOORS FOR WAREHOUSE AND OTHER STEEL MEMBERS SHALL BE PAINTED BY THE PAINT MATERIAL SPECIFIED IN THE TECHNICAL SPECIFICATION.

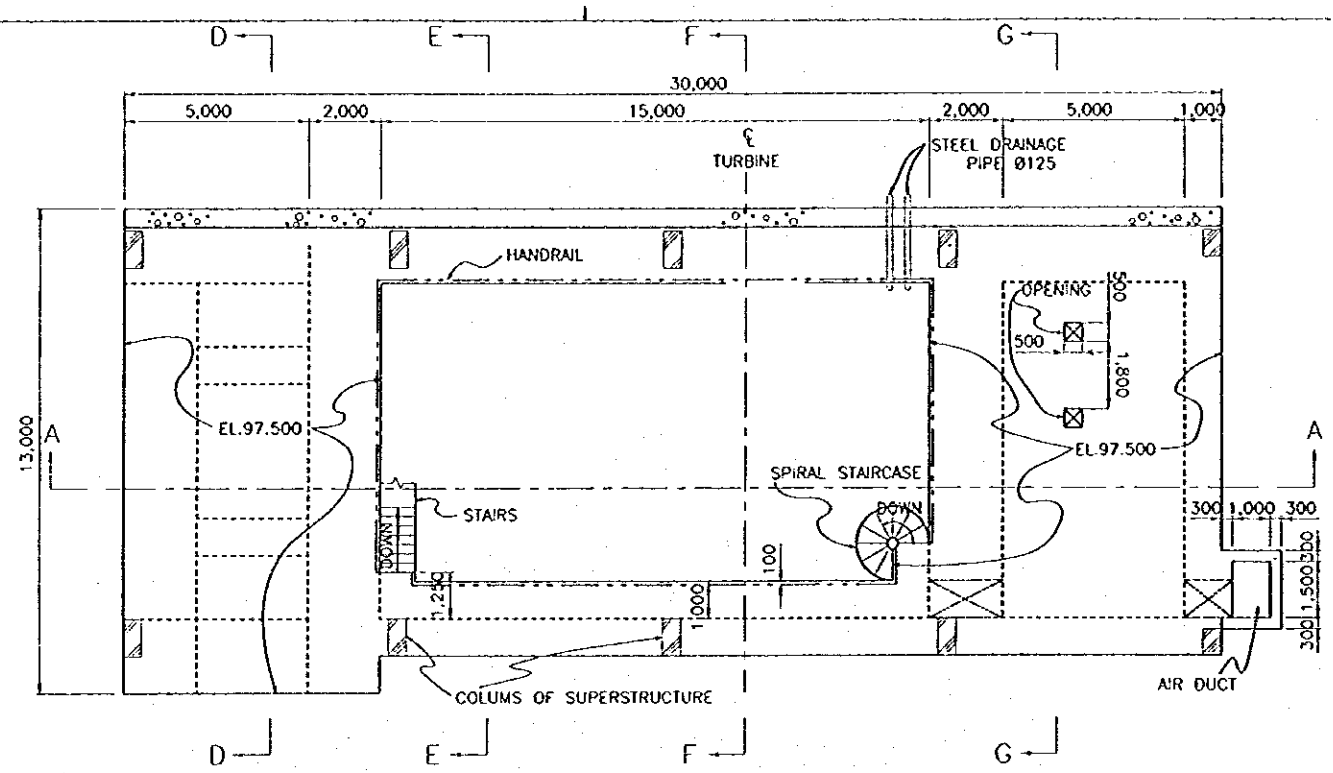
REFERENCE DRAWINGS

- JD-P1-HS-Ge-1 GENERAL PLAN OF POWERHOUSE AREA
- JD-P1-HS-St-1 POWERHOUSE-CONCRETE OUTLINE-PROFILE
- JD-P1-HS-St-2 POWERHOUSE-CONCRETE OUTLINE-SECTIONS(2/2)
- JD-P1-HS-St-3 POWERHOUSE-CONCRETE OUTLINE-PLAN
- JD-P1-HS-St-4 POWERHOUSE AND TAILRACE-GENERAL PLAN

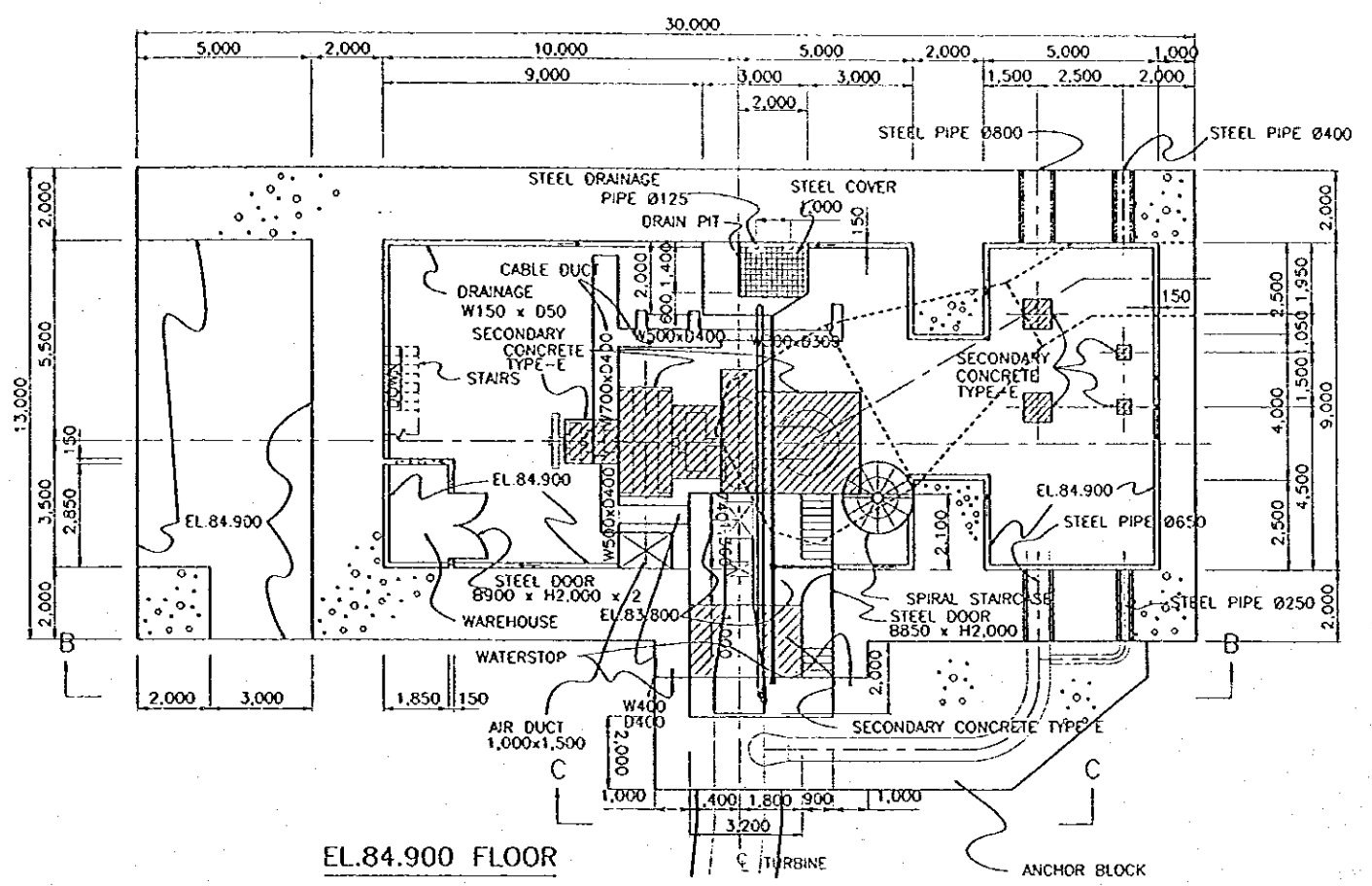


NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

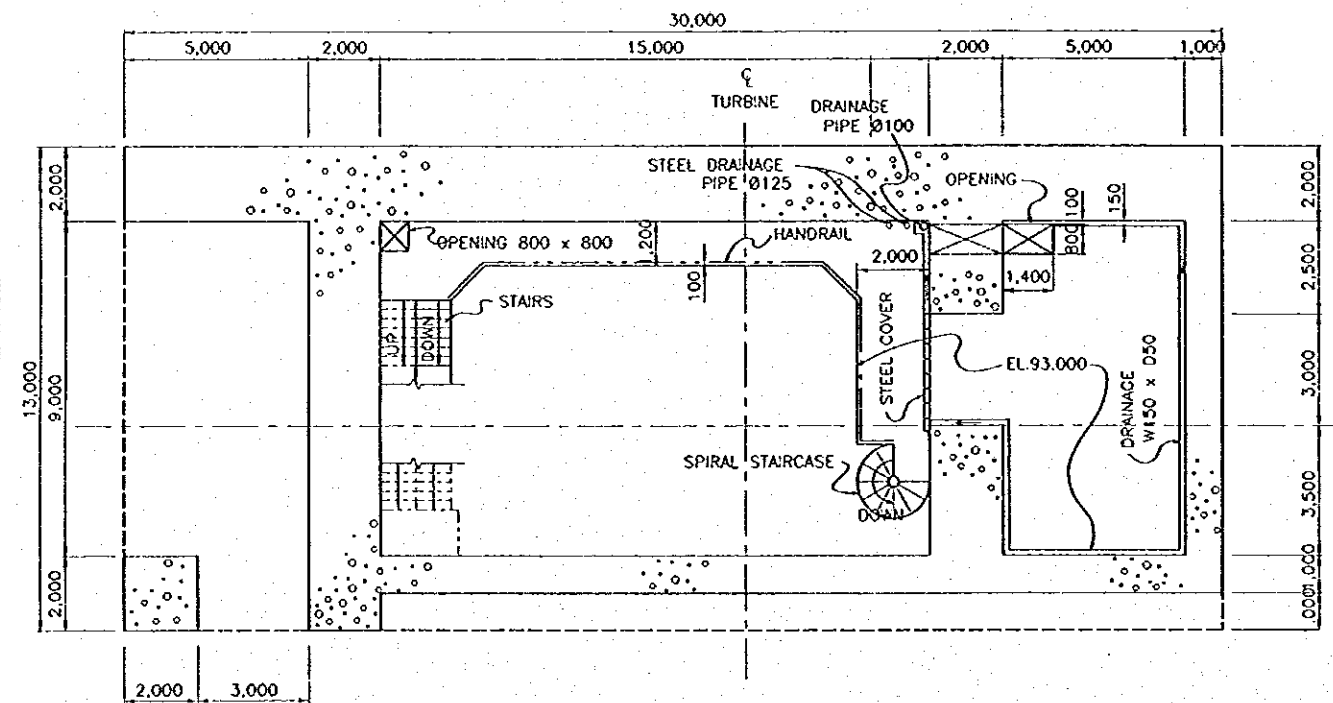
	THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAVA
	JATUNGLA FLOOD CONTROL PROJECT COMPONENT: JATIBARANG DAM CONSTRUCTION HYDROPOWER STATION CONCRETE OUTLINE - SECTIONS (1/2)		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
	JAPAN INTERNATIONAL COOPERATION AGENCY CITY ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL PAKO INTERNATIONAL, INC.		DISTRICT SEMARANG CITY
	DESIGNED CHECKED CORDED BY PLANNING AND DESIGN PROJECT MANAGER		DRAWING NO. JD-P1-HS-St-2 SHEET NO. 186 DATE CONTRACT NO.



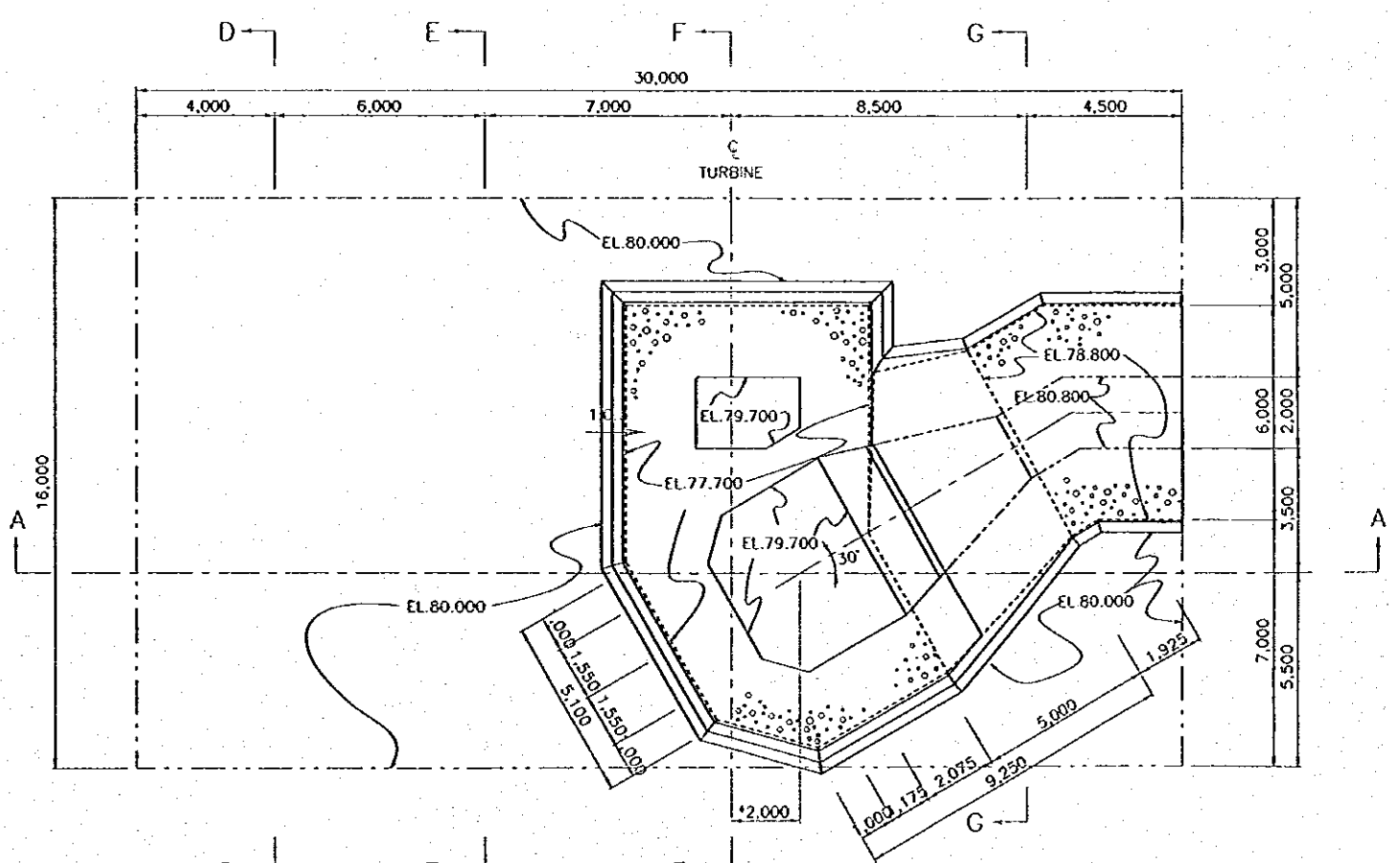
EL. 97.500 FLOOR



EL. 84.900 FLOOR



EL. 93.000 FLOOR



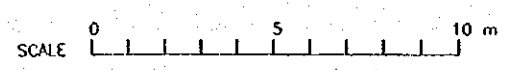
EL. 80.000 FLOOR

NOTES

1. THE DIMENSION MARKED WITH * AND RELATED DIMENSIONS MAY BE CHANGED DEPENDING ON THE SIZE OF A TURBINE.
2. THE STEEL PIPES SHOWN IN EL. 84.900 FLOOR SHALL BE EMBEDDED AT THE EL. 85.900.

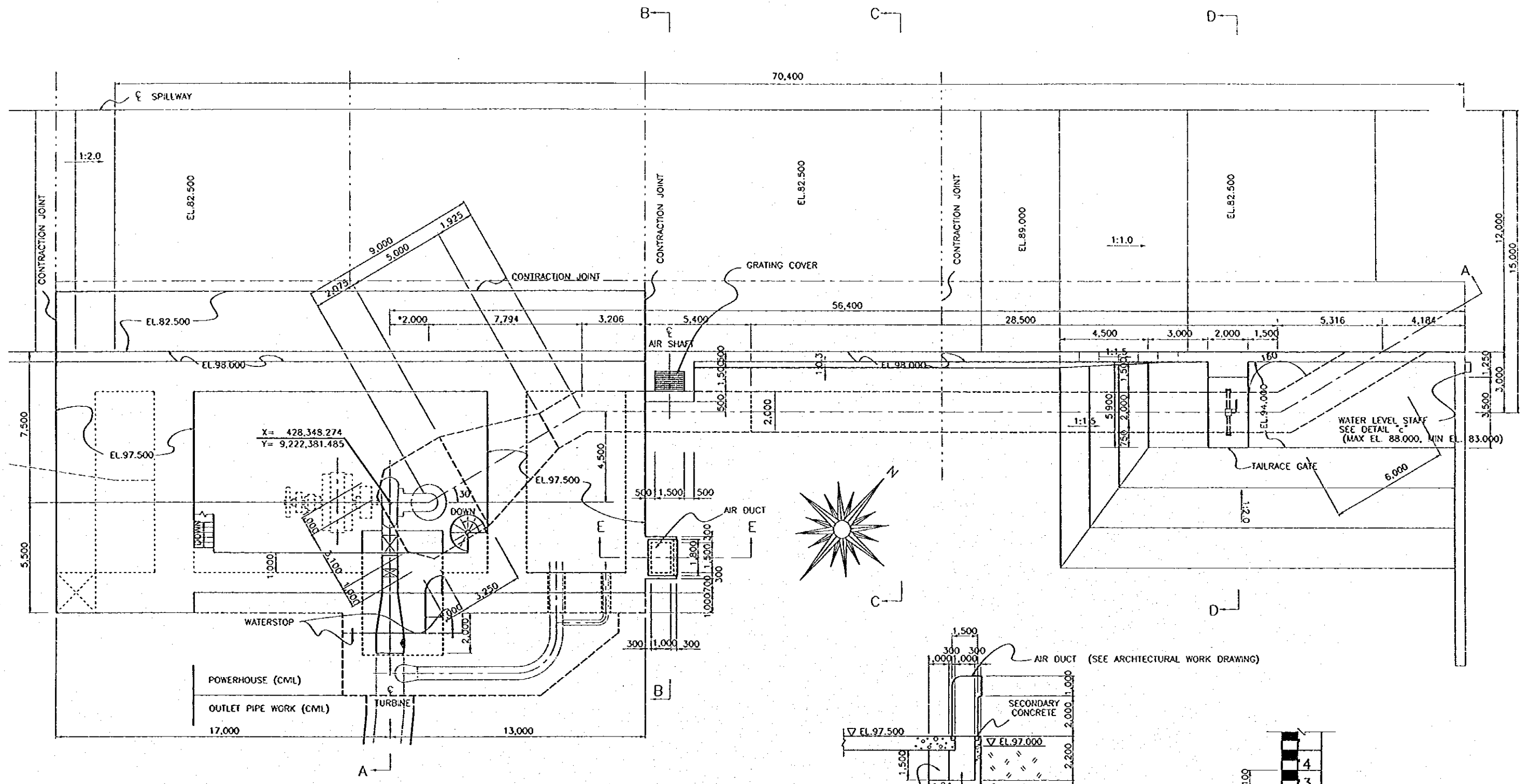
REFERENCE DRAWINGS

- JD-P1-HS-Ge-1 GENERAL PLAN OF POWERHOUSE AREA
- JD-P1-HS-Sl-1 POWERHOUSE-CONCRETE OUTLINE-PROFILE
- JD-P1-HS-Sl-2 POWERHOUSE-CONCRETE OUTLINE-SECTIONS(1/2)
- JD-P1-HS-Sl-3 POWERHOUSE-CONCRETE OUTLINE-SECTIONS(2/2)
- JD-P1-HS-Sl-4 POWERHOUSE AND TAILRACE-GENERAL PLAN

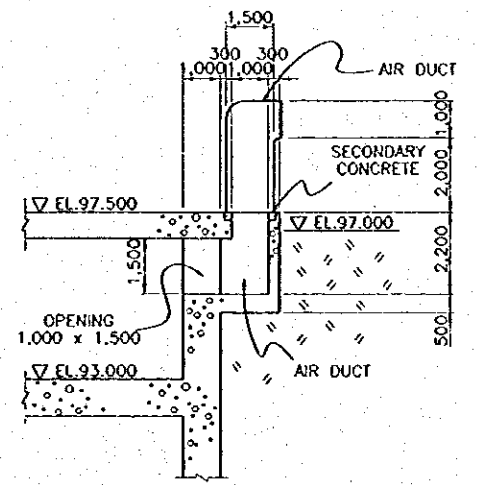
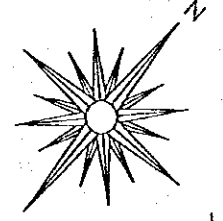
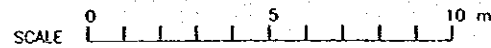


NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

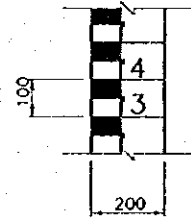
THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAVA
PRATUNSELUNA FLOOD CONTROL PROJECT COMPONENT : JATIBARANG DAM CONSTRUCTION HYDROPOWER STATION POWERHOUSE CONCRETE OUTLINE - PLAN		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
JAPAN INTERNATIONAL COOPERATION AGENCY CITY ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL JAPAN INTERNATIONAL INC.		CITY SEMARANG CITY
DESIGNED CHECKED CITY OF PLANING AND DESIGN PROJECT MANAGER		DRAWING NO. JD-P1-HS-Sl-4 SHEET NO. 188 DATE CONTRACTING



GENERAL PLAN



SECTION E-E



STAINLESS WATER LEVEL STAFF
(MAX WL. 88.000, MIN WL. 83.000)

NOTES

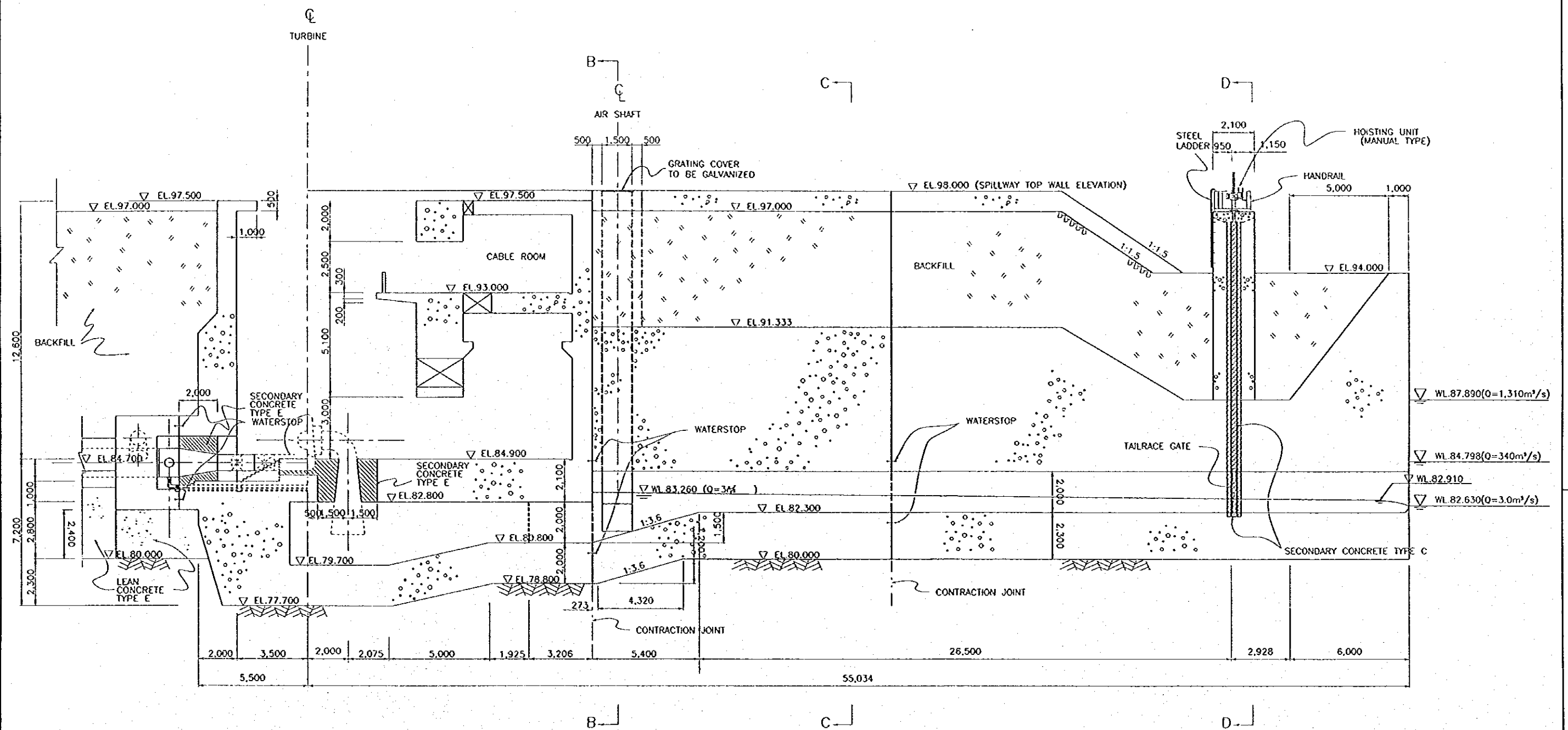
1. THE ARCHITECTURAL WORK OF THE POWERHOUSE IS NOT SHOWN IN THIS DRAWING.
2. BACKFILL TO BE FILLED UP TO EL.97.000 IS NOT SHOWN IN THIS DRAWING.
3. THE DIMENSIONS MARKED WITH * AND RELATED DIMENSIONS MAY BE CHANGED DEPENDING ON THE SIZE OF A TURBINE.

REFERENCE DRAWINGS

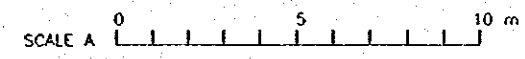
- JD-P1-HS-G2-1 GENERAL PLAN OF POWERHOUSE AREA
- JD-P1-HS-SI-6 POWERHOUSE AND TAILRACE-CONCRETE OUTLINE-PROFILE
- JD-P1-HS-SI-7 POWERHOUSE AND TAILRACE-CONCRETE OUTLINE-SECTIONS
- JD-P1-HS-SI-8 POWERHOUSE AND TAILRACE-TAILRACE GATE

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAWA
IRATUNSELURA FLOOD CONTROL PROJECT COMPONENT : JATIBARANG DAM CONSTRUCTION HYDROPOWER STATION POWERHOUSE AND TAILRACE GENERAL PLAN		PROJECT NAME FLOOD CONTROL, URBAN DEVELOPMENT AND WATER RESOURCES DEVELOPMENT BY SEMARANG IN THE REPUBLIC OF INDONESIA DISTRICT SEMARANG CITY
JAPAN INTERNATIONAL COOPERATION AGENCY JICA ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL PARTNERSHIP JOINT VENTURE		DRAWING NO. JD-P1-HS-SI-5 SHEET NO. 189
DESIGNED <i>Tsune</i>	CHECKED <i>Stoyan</i>	DATE CONTRACTING
APPROVED CHIEF OF PLANNING AND DESIGN PROJECT MANAGER		



SECTION A-A
SCALE A

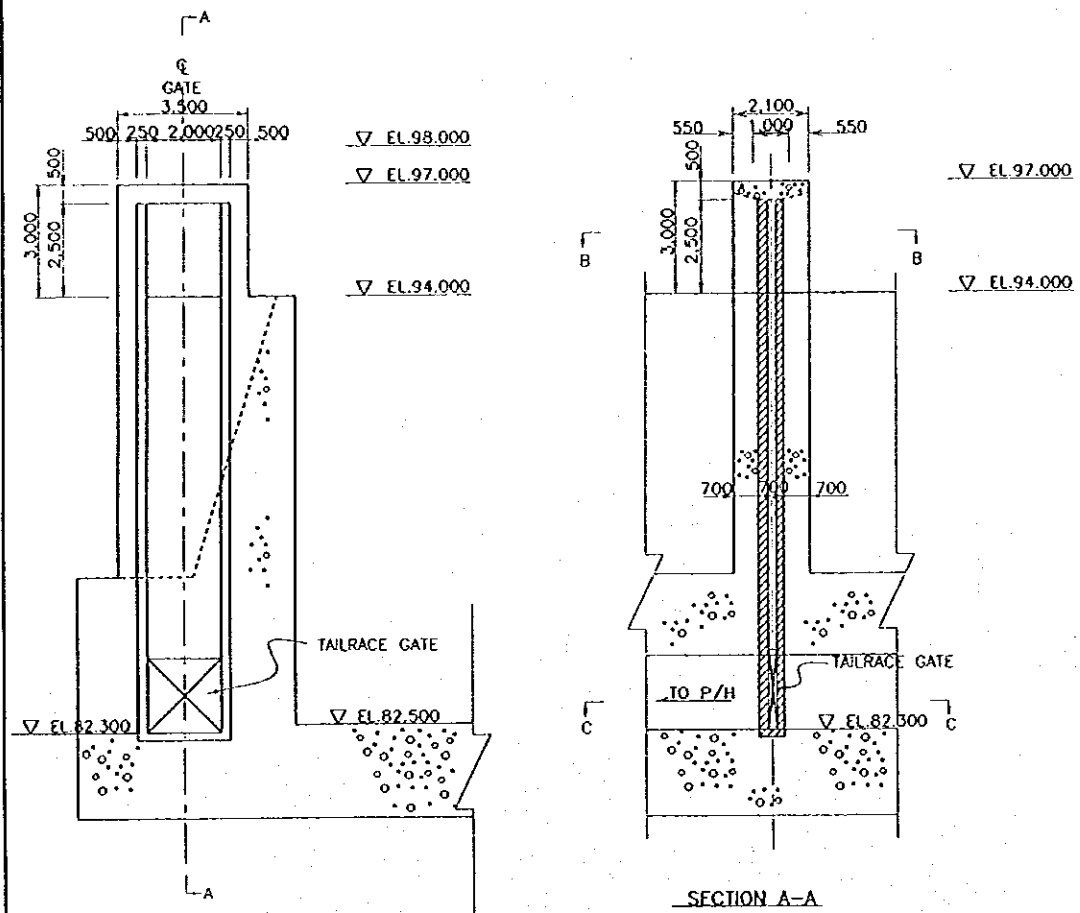


REFERENCE DRAWINGS

- JD-P1-HS-SI-5 POWERHOUSE AND TAILRACE-GENERAL PLAN
- JD-P1-HS-SI-7 POWERHOUSE AND TAILRACE-CONCRETE OUTLINE-SECTIONS
- JD-P1-HS-SI-8 POWERHOUSE AND TAILRACE-TAILRACE GATE

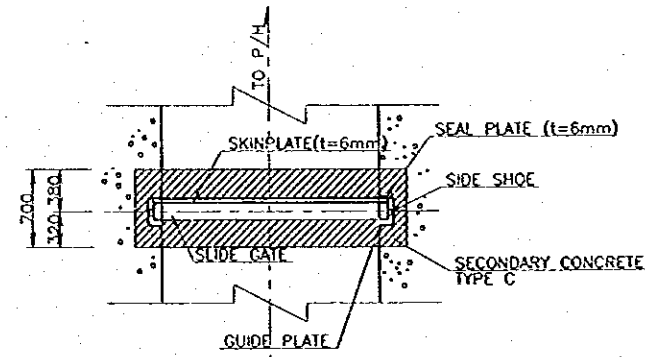
NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED	APPROVED

THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROJECT CENTRAL JAVA
JAWA TENGAH FLOOD CONTROL PROJECT COMPONENT : JATIBARANG DAM CONSTRUCTION		PROJECT NAME FLOOD CONTROL, LEAN DAM AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
HYDROPOWER POWERHOUSE AND TAILRACE CONCRETE OUTLINE - PROFILE		DISTRICT SEMARANG CITY
JAPAN INTERNATIONAL COOPERATION AGENCY CITY ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL PAKO INTERNATIONAL INC.		DRAWING NO. JD-P1-HS-SI-6 SHEET NO. 190
DESIGNED <i>Tsuru</i>	CHECKED <i>A. H.</i>	DATE CONTRACT NO.
CHIEF OF PLANNING AND DESIGN PROJECT MANAGER		

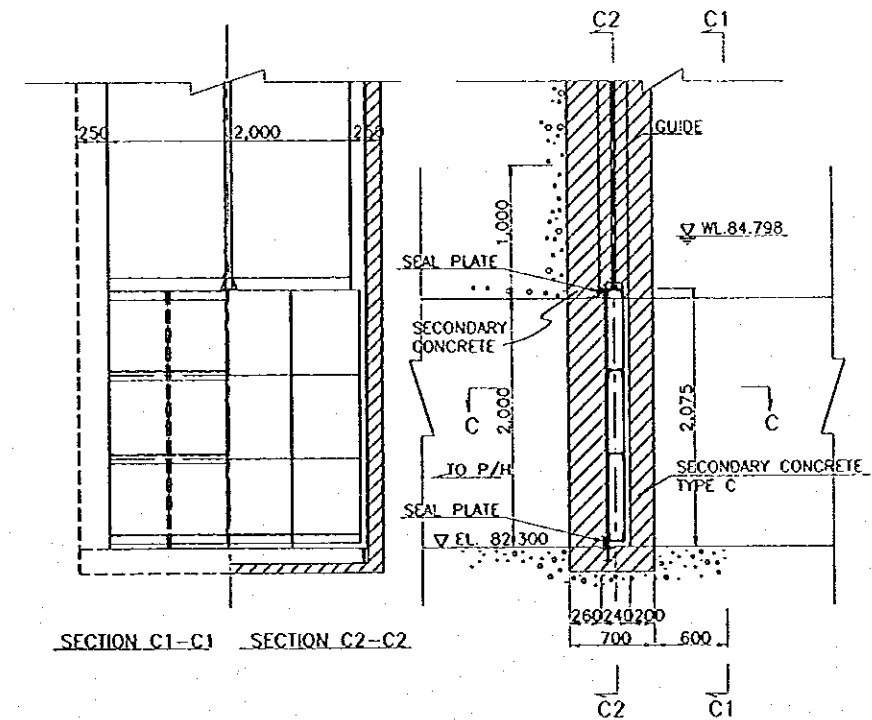


PROFILE AND SECTION OF TAILRACE GATE TOWER
SCALE A

DESIGN CONDITION	
TYPE	STEEL SLIDE GATE
QUANTITY	1 GATE
CLEAR SPAN	2.000 m
CLEAR HEIGHT	2.000 m
GATE WIDTH	2.150 m
GATE HEIGHT	2.075 m
DESIGN HEAD	2.438 m (100 YEAR RETURN PERIOD FLOOD)
	5.430 m
HOISTING SYSTEM	MANUAL OPERATION

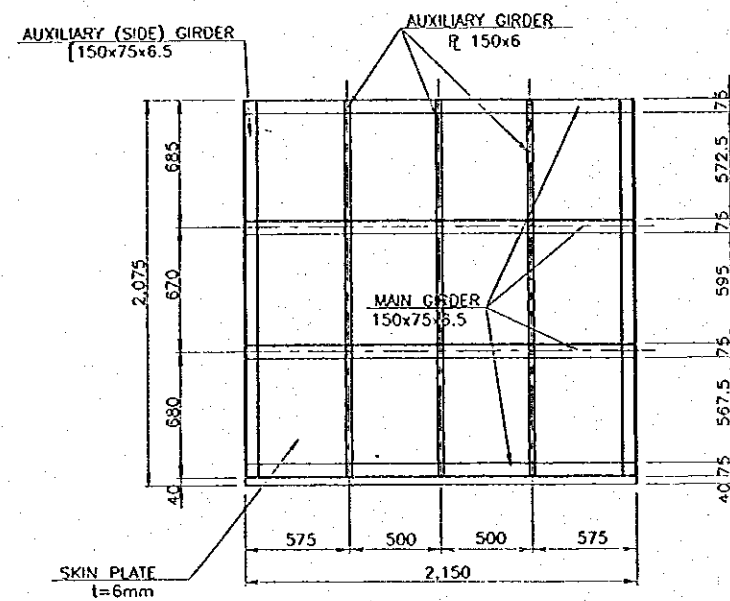


SECTION C-C

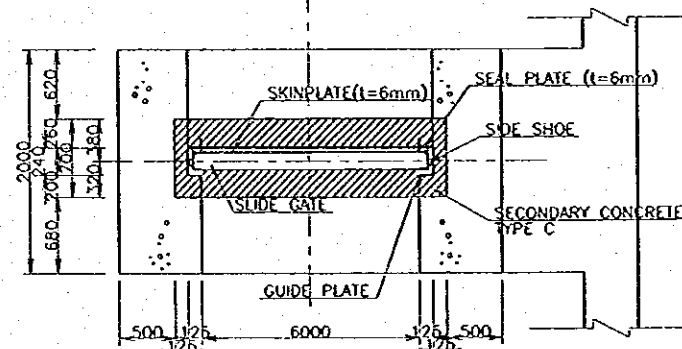


SECTION C1-C1 SECTION C2-C2

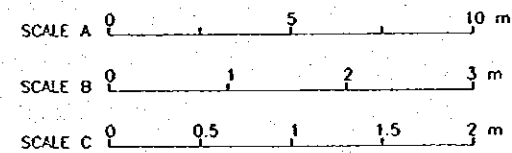
TAILRACE GATE
SCALE B



DIMENSION OF TAILRACE GATE
SCALE C



SECTION B-B



NOTES

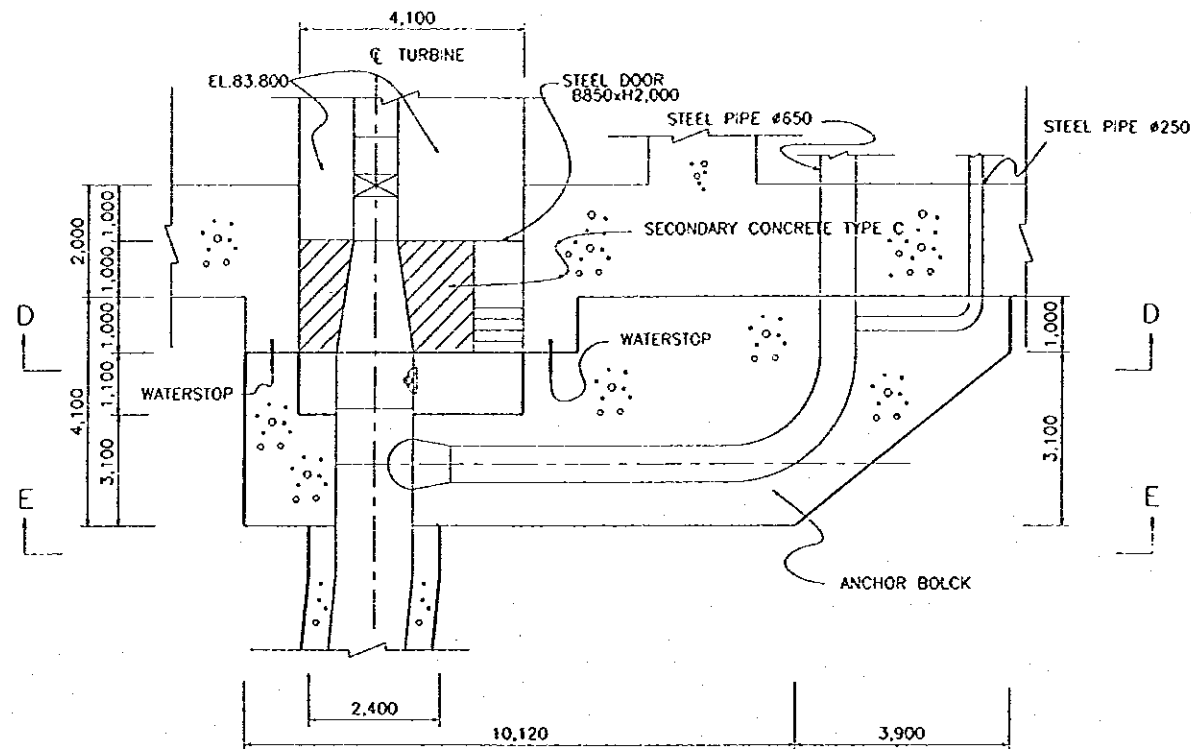
- ANCHOR BARS TO FIX THE SEAL PLATES ARE NOT SHOWN IN THIS DRAWING.

REFERENCE DRAWINGS

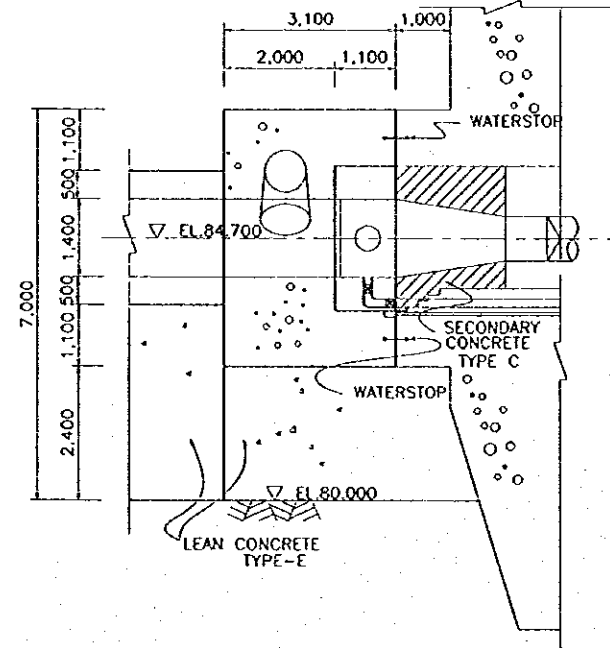
- JD-P1-HS-S1-5 POWERHOUSE AND TAILRACE-GENERAL PLAN
- JD-P1-HS-S1-6 POWERHOUSE AND TAILRACE-CONCRETE OUTLINE-PROFILE
- JD-P1-HS-S1-7 POWERHOUSE AND TAILRACE-CONCRETE OUTLINE-SECTIONS

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

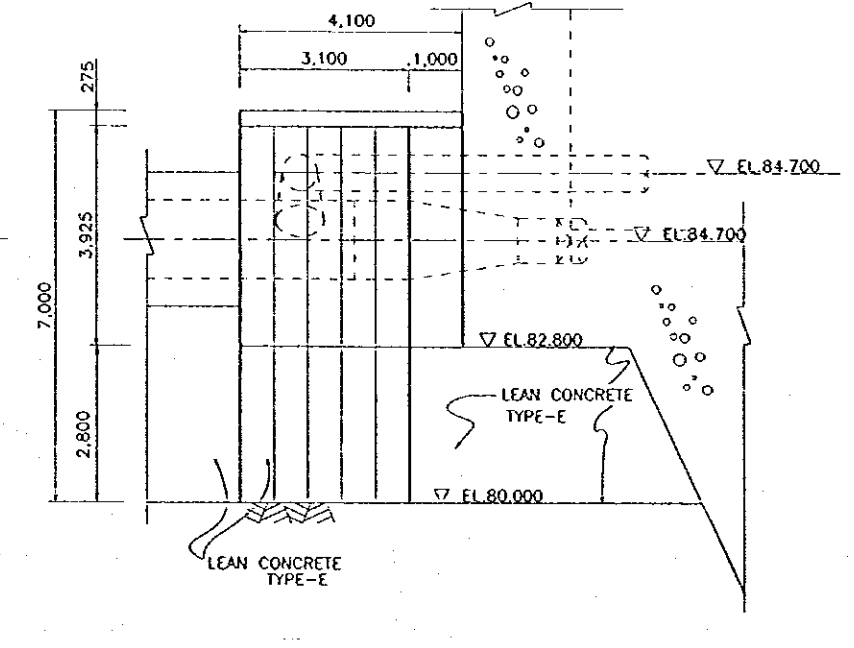
THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT PEKONCELUNTA FLOOD CONTROL PROJECT COMPONENT : JATIBARANG DAM CONSTRUCTION HYDROPOWER STATION POWERHOUSE AND TAILRACE TAILRACE GATE		PROVINCE CENTRAL JAWA PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA DISTRICT SEMARANG CITY DRAWING NO. JD-P1-HS-S1-8 SHEET NO. 192 DATE CONTRACT NO.
DESIGNED <i>Teung</i>	CHECKED <i>[Signature]</i>	DATE <i>[Date]</i>
CRIEF OF PLANNING AND DESIGN PROJECT MANAGER		APPROVED <i>[Signature]</i>



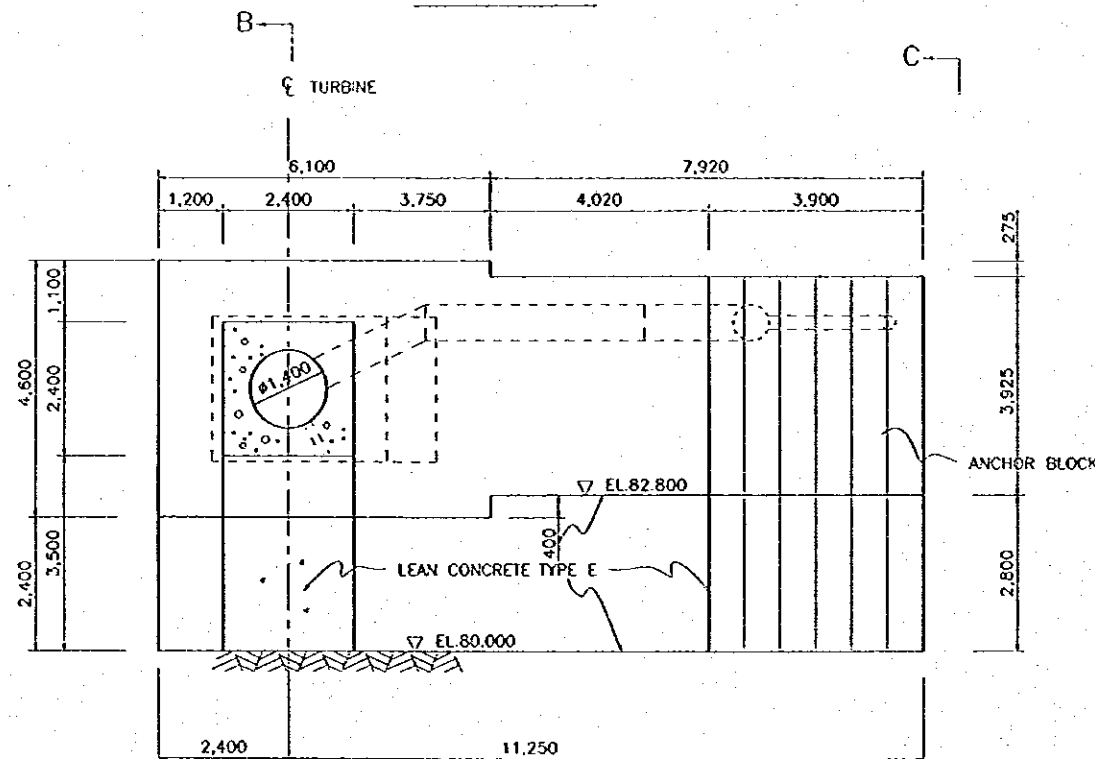
SECTION A-A



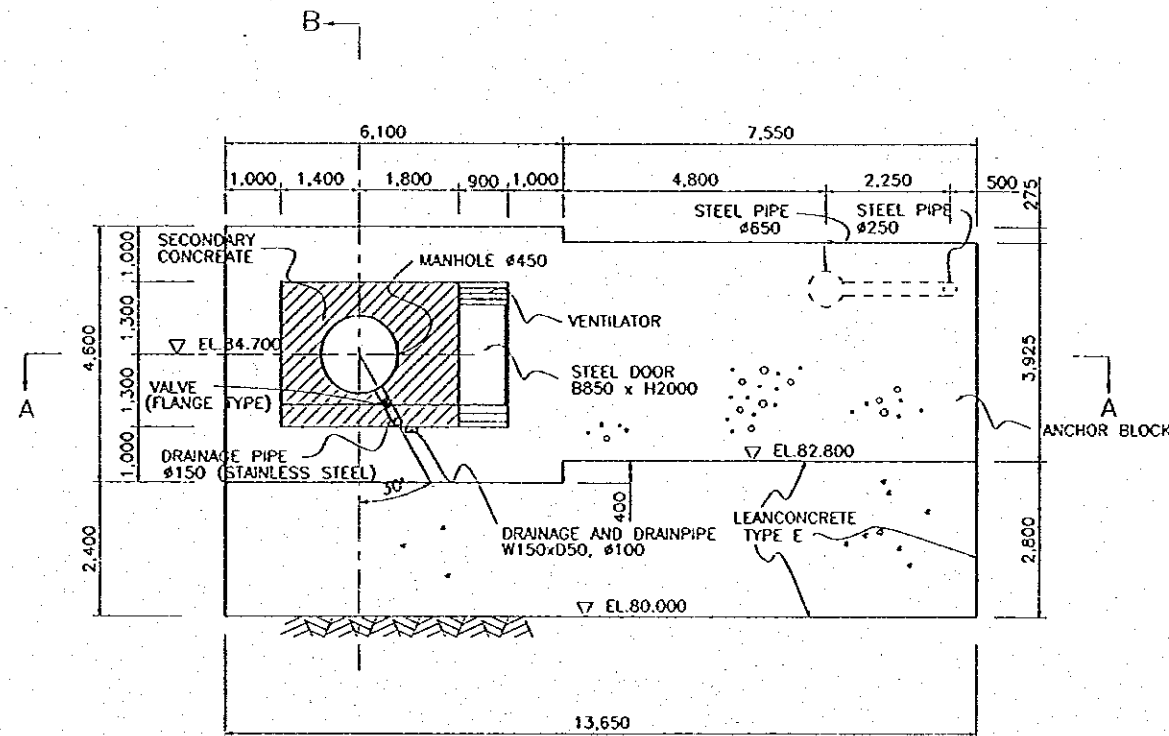
SECTION B-B



SECTION C-C



SECTION E-E



SECTION D-D

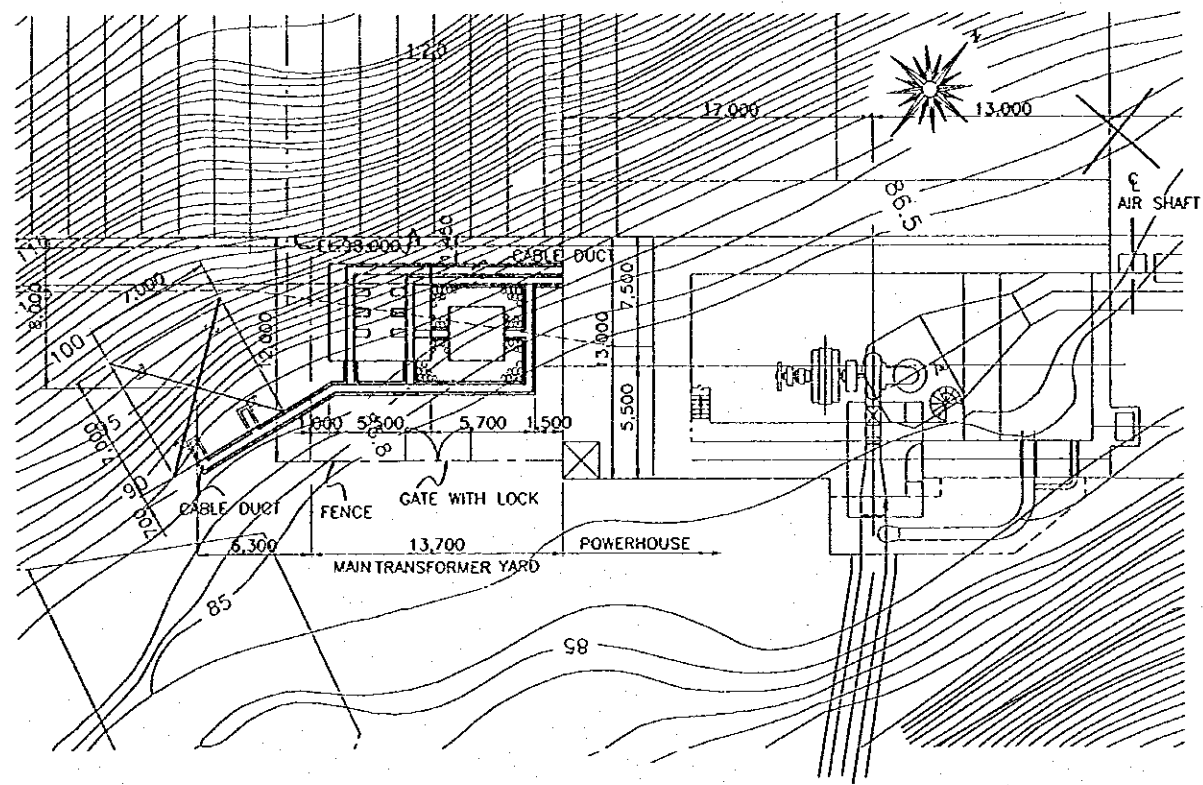


REFERENCE DRAWINGS

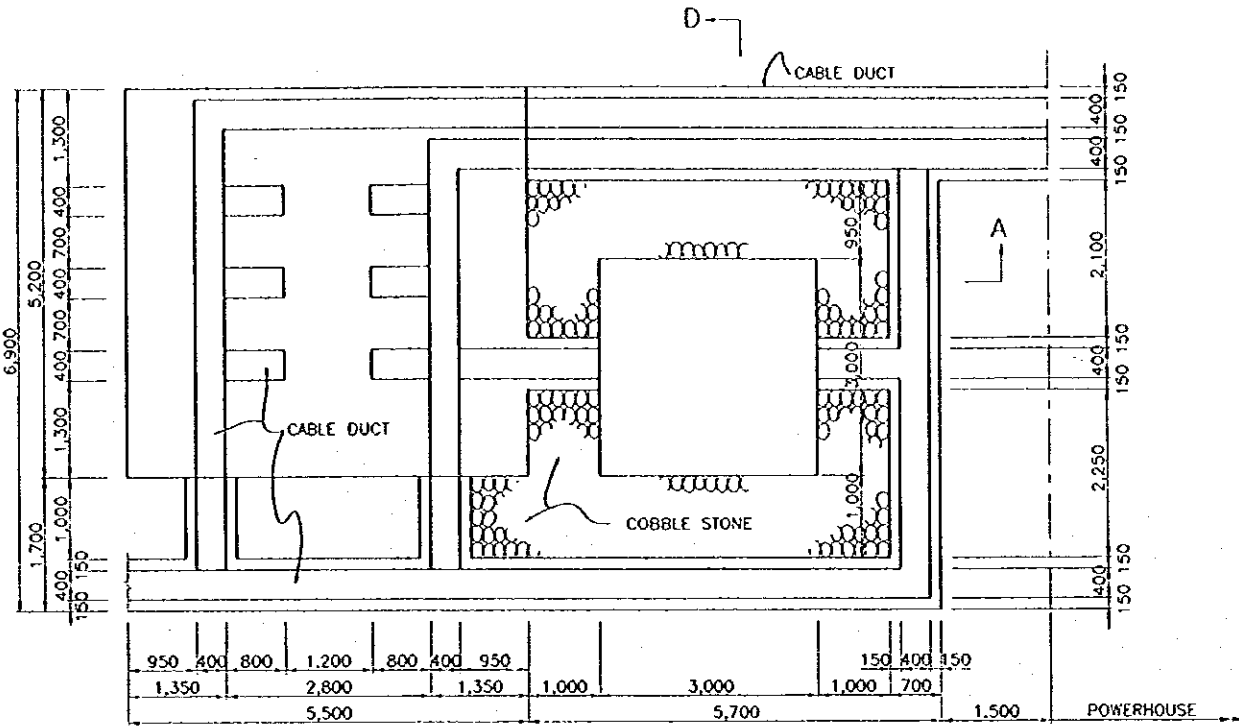
- JD-P1-HS-Ge-1 GENERAL PLAN OF POWERHOUSE AREA
- JD-P1-HS-SI-2 POWERHOUSE-CONCRETE OUTLINE-SECTIONS(1/2)
- JD-P1-HS-SI-3 POWERHOUSE-CONCRETE OUTLINE-SECTIONS(2/2)
- JD-P1-HS-SI-4 POWERHOUSE-CONCRETE OUTLINE-PLAN

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

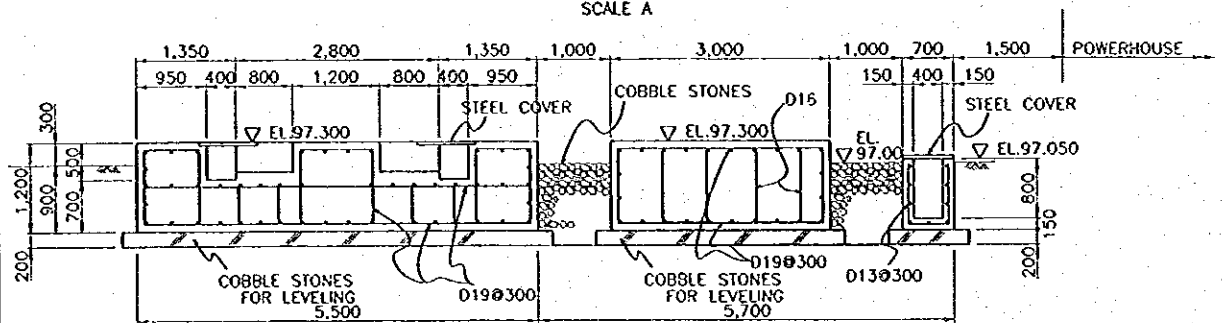
THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT TRATUNSELUNA FLOOD CONTROL PROJECT COMPONENT : JATIBARANO DAM CONSTRUCTION HYDROPOWER STATION ANCHOR BLOCK PROFILE		PROVINCE CENTRAL JAVA PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND R/A IN THE KENDUWATI DEVELOPMENT OF SEMARANG IN THE REPUBLIC OF INDONESIA DISTRICT SEMARANG CITY DRAWING NO. JD-P1-HS-SI-9 SHEET NO. 193 DATE CONTRACT NO.
JAPAN INTERNATIONAL COOPERATION AGENCY CTE ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL PACOY INTERNATIONAL, INC. CHIEF OF PLANNING AND DESIGN	DESIGNED CHECKED 	DATE



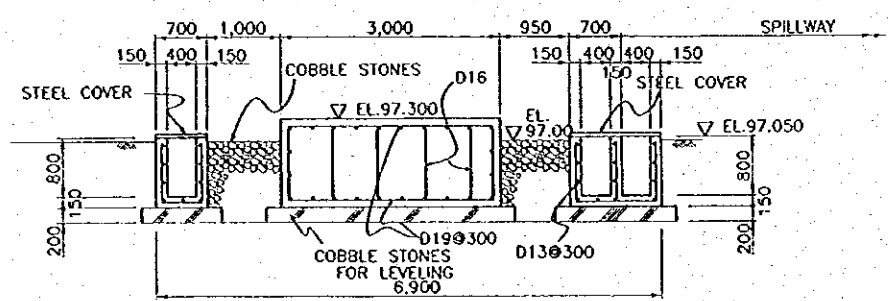
GENERAL PLAN
SCALE A



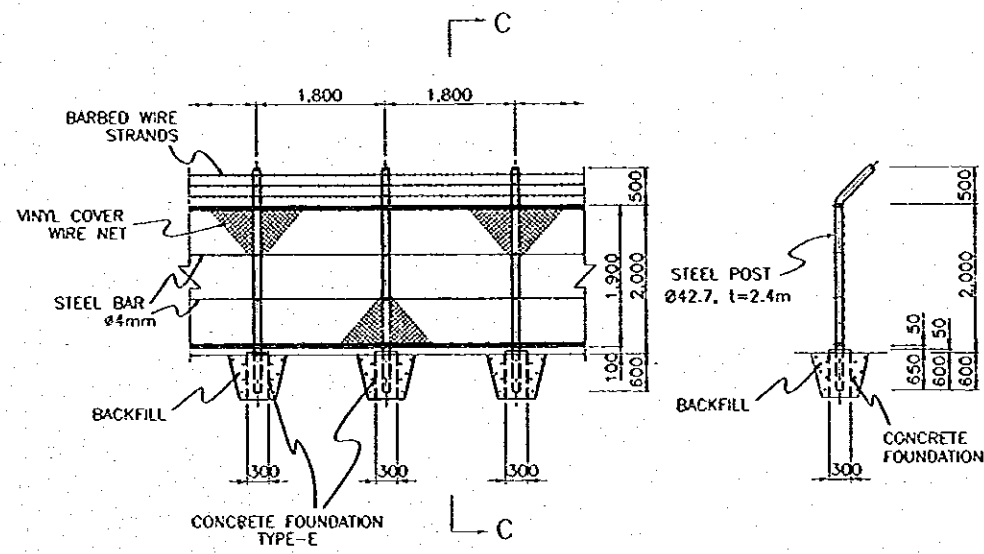
PLAN
SCALE B



SECTION A-A
SCALE B



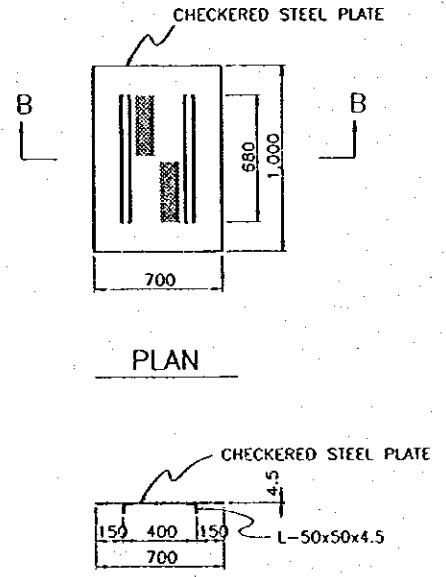
SECTION D-D
SCALE B



ELEVATION

SECTION C-C

WIRE NET FENCE
SCALE B



PLAN

SECTION B-B
STEEL COVER

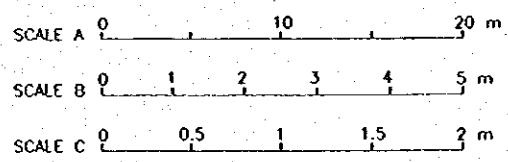
CABLE DUCT
SCALE C

NOTES

1. ALL CABLE DUCTS SHALL BE COVERED WITH STEEL COVERS EXCEPT THE PART UNDER THE CUBICLES.
2. THE CABLE DUCT SHALL HAVE SLOPES FOR DRAINAGE TOWARD THE DRAINAGE SYSTEM IN THE POWERHOUSE AREA.
3. STEEL FOUNDATIONS AND OTHER MATERIALS FOR INSTALLATION OF THE TRANSFORMER AND THE CUBICLES ARE NOT SHOWN IN THIS DRAWING.
4. THE AREA WITHIN THE FENCE SHALL BE PAVED WITH GRAVEL OR CRUSHED AGGREGATES. (THICKNESS : 0.10 m)

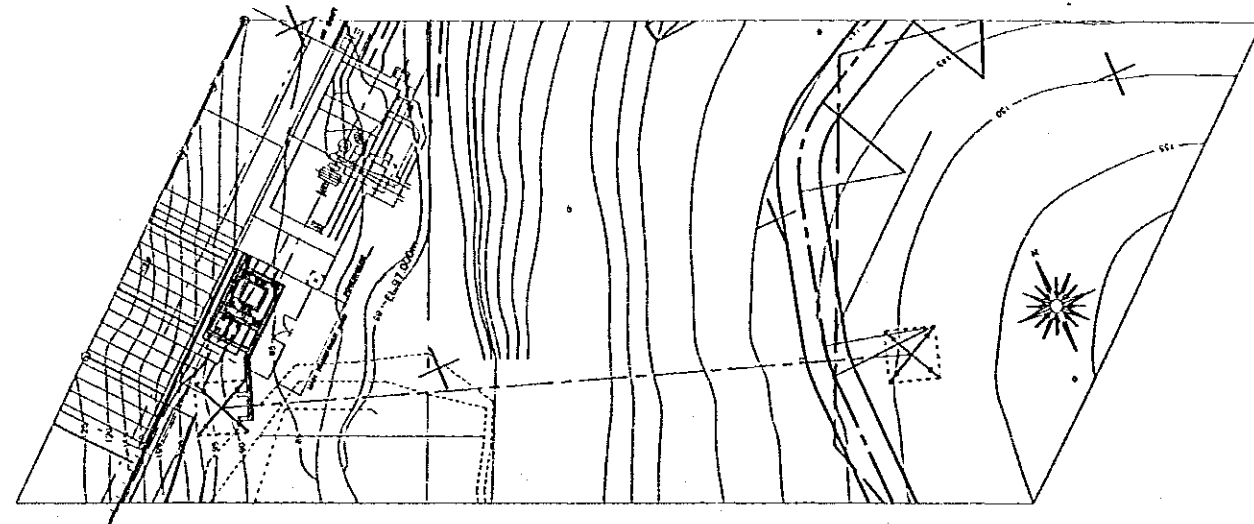
REFERENCE DRAWINGS

- JD-P1-HS-Ge-1 GENERAL PLAN OF POWERHOUSE AREA
- JD-P1-HS-SI-11 TRANSMISSION LINE TOWER FOUNDATION

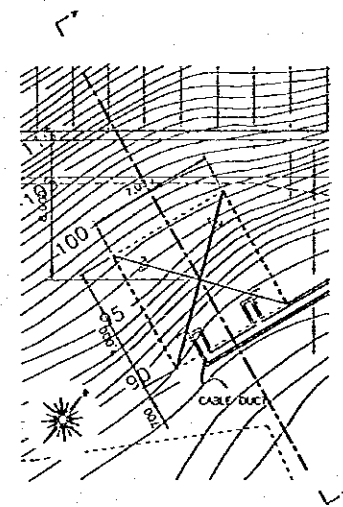


NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

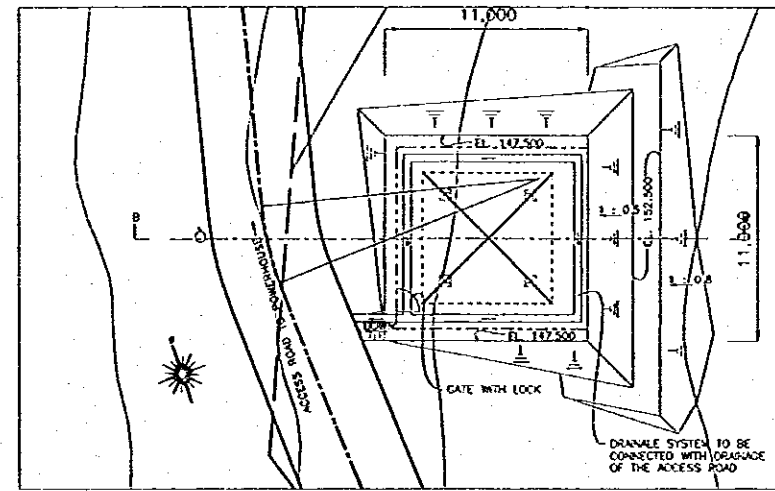
THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAWA
BRATUNSELUNA FLOOD CONTROL PROJECT COMPONENT : JATIBARANG DAM CONSTRUCTION HYDROPOWER STATION MAIN TRANSFORMER YARD FOUNDATION PLAN AND DETAILS		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT OF SEMARANG IN THE PROVINCE OF JAWA MIDDLE
JAWA INTERNATIONAL COOPERATION AGENCY CIBI ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL PAKO INTERNATIONAL INC.		DRAWING NO. JD-P1-HS-SI-10 SHEET NO. 194 DATE CONTRACTING
DESIGNED CHECKED DATE	PROJECT MANAGER	APPROVED



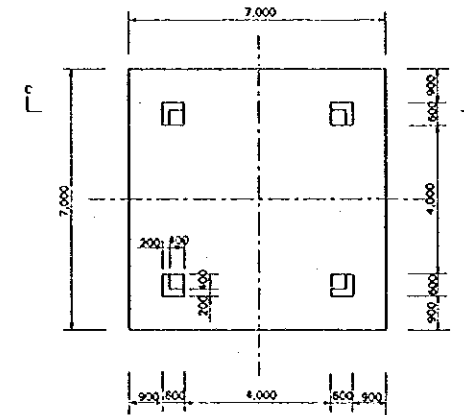
PLAN
SCALE C



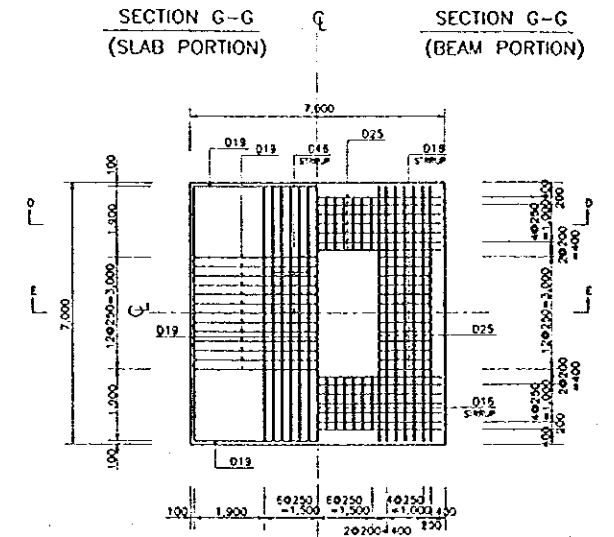
PLAN



PLAN

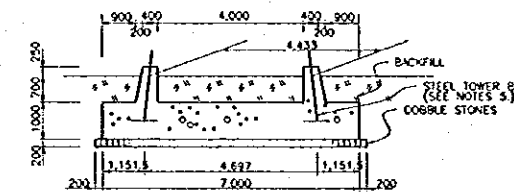


PLAN



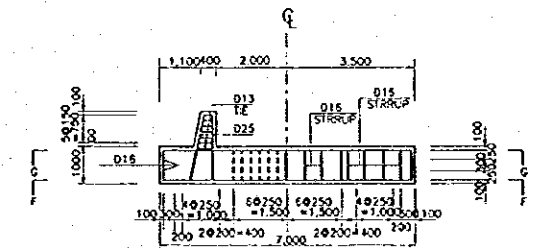
SECTION F-F
(SLAB PORTION)

SECTION F-F
(BEAM PORTION)



SECTION C-C

CONCRETE OUTLINE
SCALE A



SECTION D-D

SECTION E-E

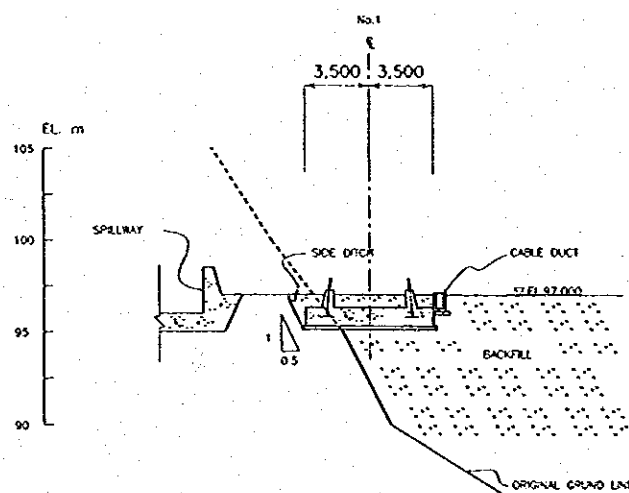
REINFORCEMENT
SCALE A

REFERENCE DRAWINGS

JD-P1-HS-SI-10 MAIN TRANSFORMER YARD - FOUNDATION PLAN AND DETAILS

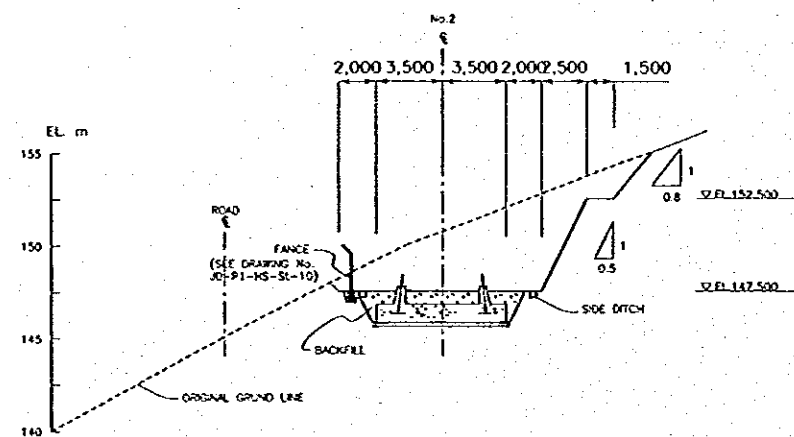
NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS IN METERS UNLESS OTHERWISE STATED.
2. CONCRETE SHALL BE OF TYPE-B AS PER SPECIFICATIONS UNLESS OTHERWISE DESIGNATED IN THE DRAWING.
3. ALL EXPOSED EDGES AND CORNERS SHALL BE CHAMFERED BY 2 CENTIMETERS UNLESS OTHERWISE NOTED.
4. SURFACES OF THE FOUNDATION SHALL RECEIVE CLASS 1 SURFACE FINISH



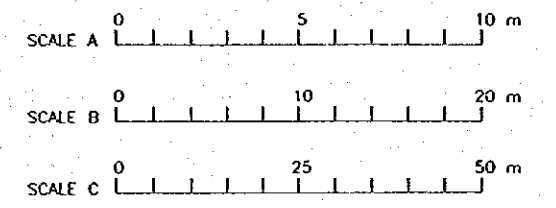
SECTION A-A

FOUNDATION No.1
SCALE B



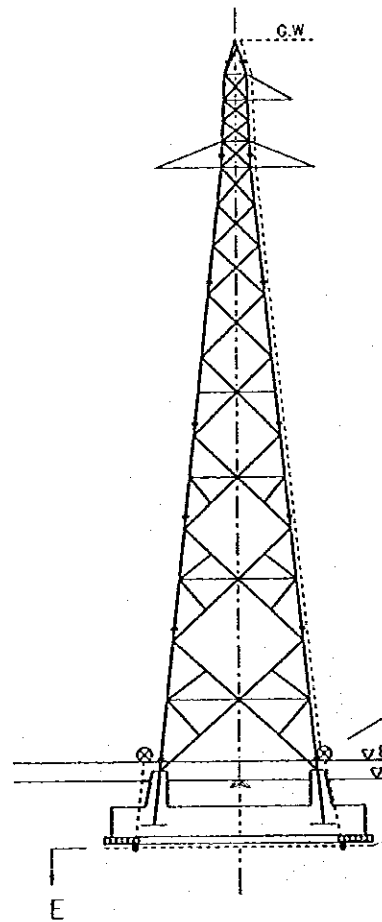
SECTION B-B

FOUNDATION No.2
SCALE B

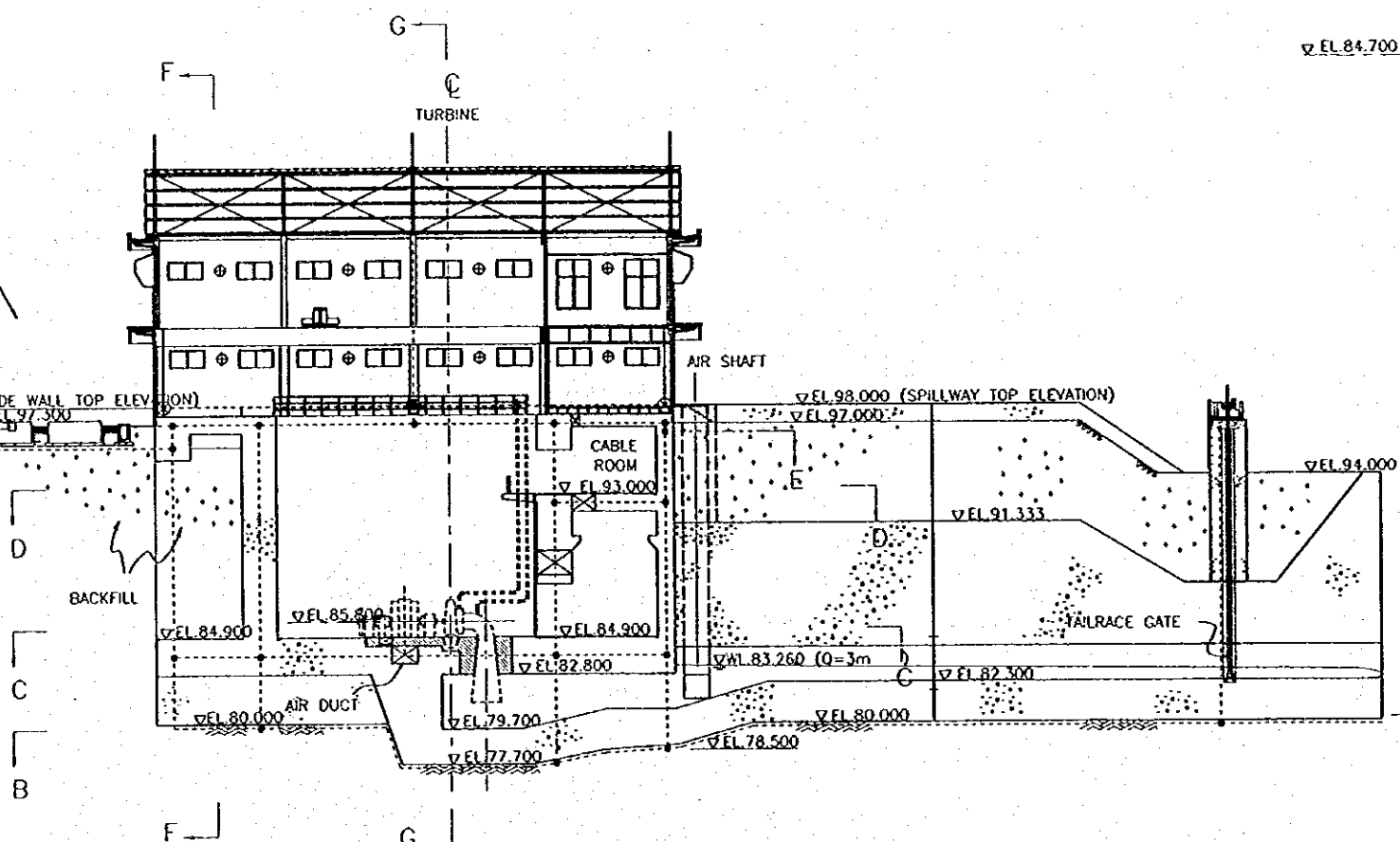


NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

	THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAVA
	JRATUNSELUNA FLOOD CONTROL PROJECT COMPONENT : JATIBARANG DAM CONSTRUCTION		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND PLATS DEVELOPMENT BY SEMARANG IN THE REPUBLIC OF INDONESIA
	HYDROPOWER STATION TRANSMISSION LINE TOWER FOUNDATION		DISTRICT SEMARANG CITY
	PT INDOBARANG CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL PAKO INTERNATIONAL INC.		DRAWING NO. JD-P1-HS-SI-11 SHEET NO. 195
CHIEF OF PLANNING AND DESIGN		DATE	CONTRACTING NO.
PROJECT MANAGER			



E/M WORK
CIVIL WORK



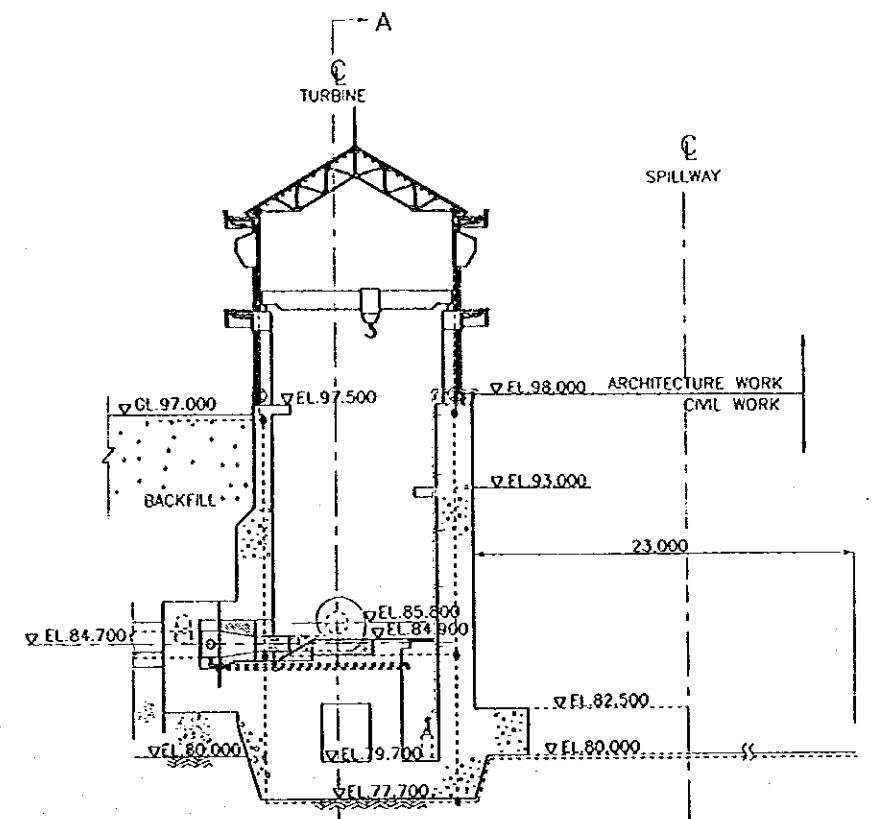
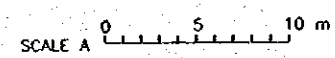
SECTION A-A
SCALE A

LEGEND

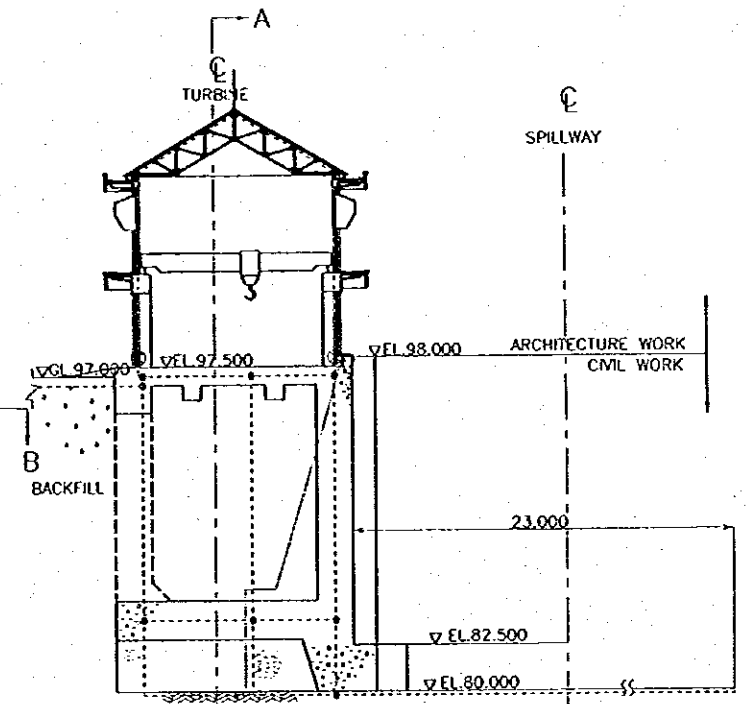
- GROUND CABLE EMBEDDED (HDCC 60 mm²)
- GROUND CABLE RISER (UP)
- GROUND CABLE RISER (DOWN)
- ⊗ CRAMP-STYLE CONNECTION
- ⊗ GROUND CABLE TO BE CONNECTED TO GROUND SYSTEM IN ARCHITECTURAL WORK OR/AND E/M WORK

REFERENCE DRAWINGS

- JD-P1-HS-SI-13 POWERHOUSE AREA GROUNDING WORK (SHEET 2 OF 3)
- JD-P1-HS-SI-14 POWERHOUSE AREA GROUNDING WORK (SHEET 3 OF 3)
- E1-500 JATIBARANG DAM HYDROPOWER STATION COMPLEX LIGHTING CONDUCTOR PLAN AND DETAIL HYDROPOWER STATION



SECTION G-G
SCALE A



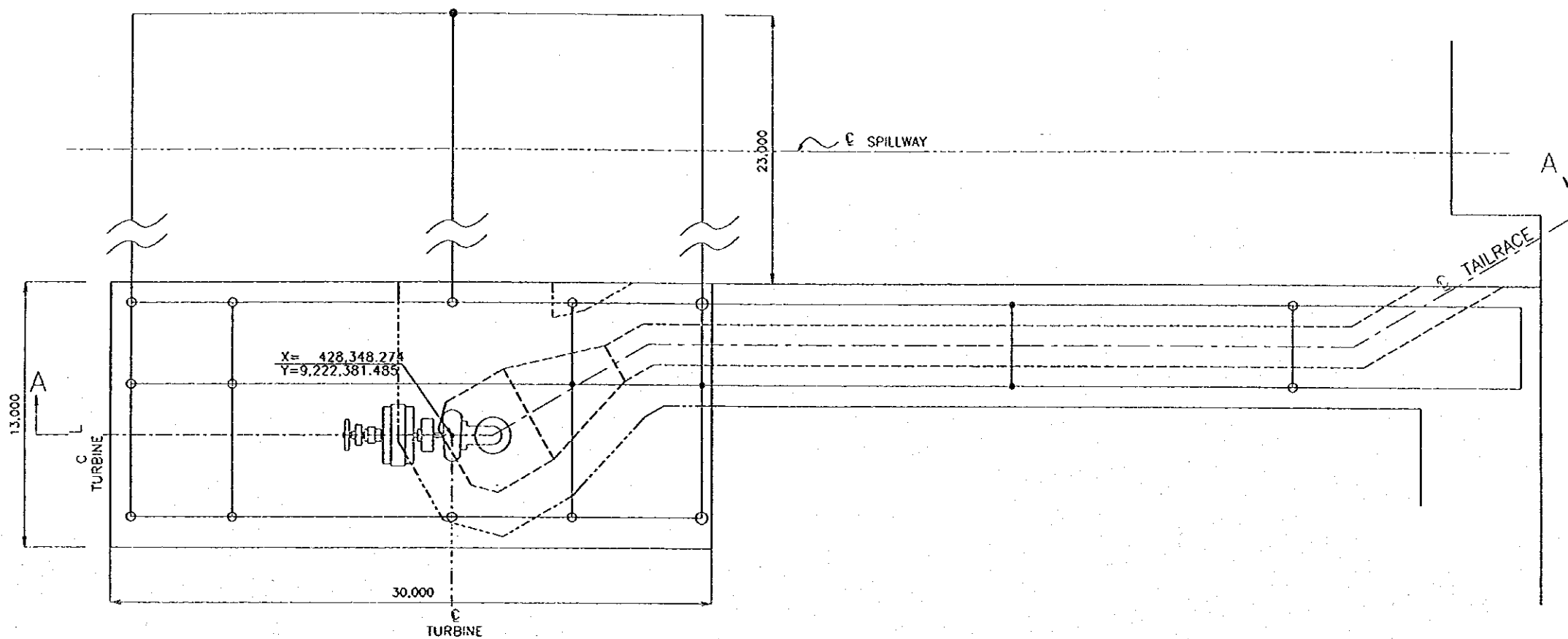
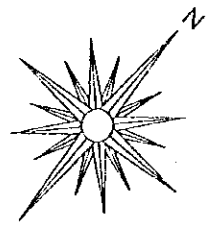
SECTION F-F
SCALE A

NOTES

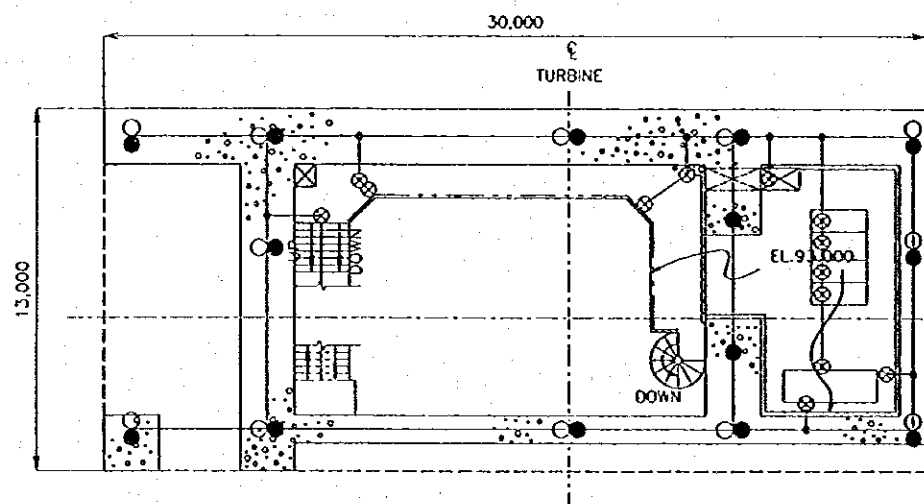
1. ALL GROUNDING CONDUCTORS AND CONNECTIONS SHALL BE EMBEDDED IN OR COVERED BY CONCRETE.
2. JOINTS SHALL BE BRAZED USING ALLOY CPI TO BS 1845-1966 (15 % Ag : 5 % P : CU)
3. CURRENT AND VOLTAGE TRANSFORMERS, CAPACITORS, MOTOR STARTER CUBICLES AND CONTROL PANELS TO BE CONNECTED TO THE NEAREST EARTHING BUSBAR WITH NOT LESS THAN 70 mm² COPPER CONDUCTOR. OTHER SEPARATELY MOUNTED EQUIPMENT SHALL BE EARTHED BY COPPER CONDUCTOR AS REQUIRED BY TABLE 27 OF AS 3000 PART 1-1976 EXCEPT THAT WHERE A WIRE IS USED IT SHALL CONSIST OF AT LEAST 7 STRANDS.
4. ALL METAL SUCH AS PIPES, DOOR FRAMES AND HANDRAILS, WHICH ARE READILY ACCESSIBLE TO HAND CONTACT SHALL BE CONNECTED TO THE EARTH GRID. ITEMS EMBEDDED SUCH AS DOOR FRAMES, SHALL BE CONNECTED DIRECTLY TO THE EMBEDDED EARTHING GRID. TO ENSURE ADEQUATE MECHANICAL STRENGTH, THE CONNECTIONS BETWEEN METALWORK AND THE COPPER EARTHING BUSBARS SHALL BE LOCATED IN POSITIONS WHERE THEY ARE PROTECTED FROM DAMAGE AND SHALL BE MADE USING COPPER WIRE OF NOT LESS THAN 4 mm² AND NOT LESS THAN 7 STRANDS OR COPPER STRIP NOT LESS THAN 25 mm X 3 mm.
5. ITEMS NOT MARKED * ARE SUPPLIED AND INSTALLED BY THE CML CONTRACTOR.

NO.	DATE	REVISION	ORIGINATOR	DESIGNER	APPROVED

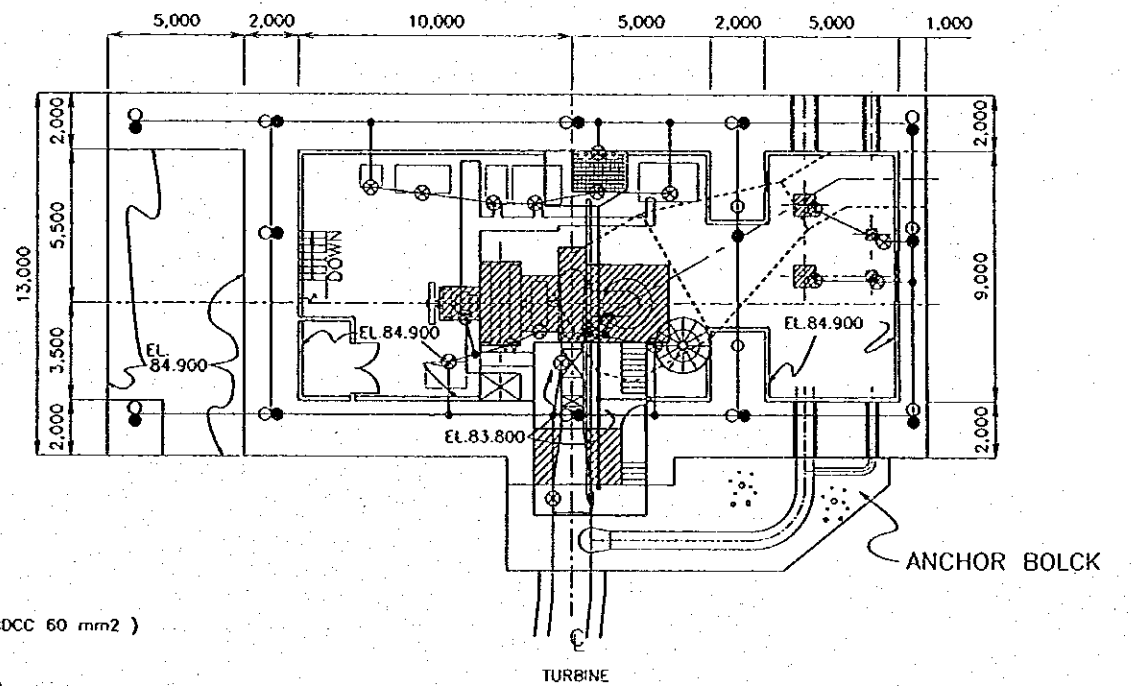
	THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT	PROVINCE CENTRAL JAVA
	PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA	DISTRICT SEMARANG CITY
PROJECT BATUNUSUNDA FLOOD CONTROL PROJECT COMPONENT : JATIBARANG DAM CONSTRUCTION HYDROPOWER STATION POWERHOUSE AREA GROUNDING WORK (1/3)		DRAWING NO. JD-P1-HS-G-1 SHEET NO. 196
LAPAN INTERNATIONAL COOPERATION AGENCY CIL INCORPORATED CO. LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL PAKO INTERNATIONAL INC.	DESIGNED CHECKED CRISP OF PLANNING AND DESIGN PROJECT MANAGER	DATE CONTRACT NO.



SECTION B-B
(BOTTOM ELEVATION)



SECTION D-D
(EL.93.000 FLOOR)



SECTION C-C
(EL.84.900 FLOOR)

SCALE A 0 5 10 m

LEGEND

- GROUND CABLE EMBEDDED (HDCC 60 mm²)
- GROUND CABLE RISER (UP)
- GROUND CABLE RISER (DOWN)
- CRAMP-STYLE CONNECTION
- ⊗ GROUND CABLE TO BE CONNECTED TO GROUND SYSTEM IN ARCHITECTURAL WORK AND/OR E/M WORK

REFERENCE DRAWINGS

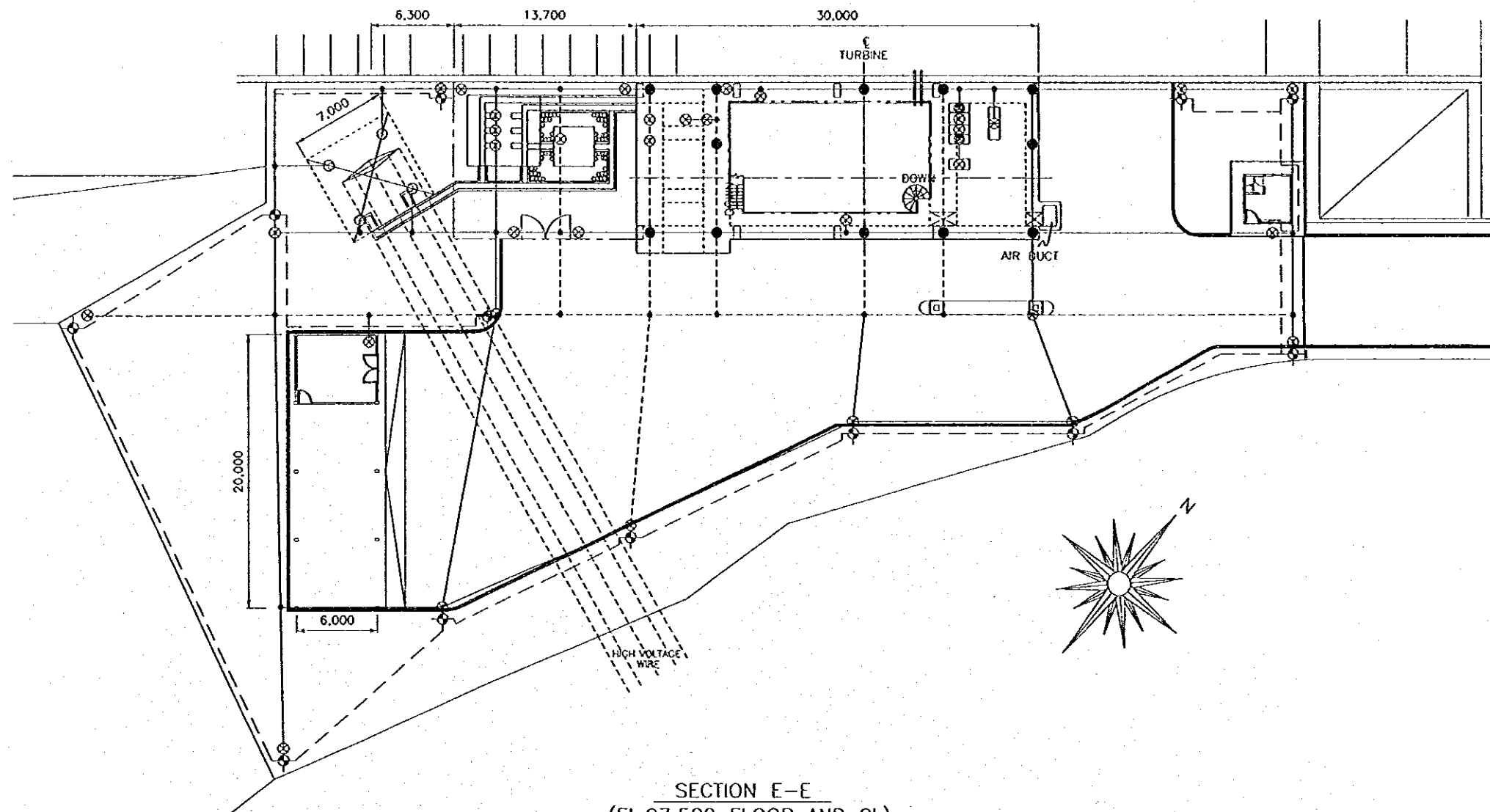
JD-P1-HS-Gr-1 POWERHOUSE AREA GROUNDING WORK (SHEET 1/3)

NOTES

1. ALL GROUNDING CONDUCTORS AND CONNECTIONS SHALL BE EMBEDDED IN OR COVERED BY CONCRETE.
2. JOINTS SHALL BE BRAZED USING ALLOY CPI TO BS 1845-1966 (15 % Ag : 5 % P : CU)
3. CURRENT AND VOLTAGE TRANSFORMERS, CAPACITORS, MOTOR STATER CUBICLES AND CONTROL PANELS TO BE CONNECTED TO THE NEAREST EARTHING BUSBAR WITH NOT LESS THAN 70 mm² COPPER CONDUCTOR. OTHER SEPARATELY MOUNTED EQUIPMENT SHALL BE EARTHED BY COPPER CONDUCTOR AS REQUIRED BY TABLE 27 OF AS 3000 PART 1-1978 EXCEPT THAT WHERE A WIRE IS USED IT SHALL CONSIST OF AT LEAST 7 STRANDS.
4. ALL METAL SUCH AS PIPES, DOOR FRAMES AND HANDRAILS, WHICH ARE READILY ACCESSIBLE TO HAND CONTACT SHALL BE CONNECTED TO THE EARTH GRID. ITEMS EMBEDDED SUCH AS DOOR FRAMES, SHALL BE CONNECTED DIRECTLY TO THE EMBEDDED EARTHING GRID. TO ENSURE ADEQUATE MECHANICAL STRENGTH, THE CONNECTIONS BETWEEN METALWORK AND THE COPPER EARTHING BUSBARS SHALL BE LOCATED IN POSITIONS WHERE THEY ARE PROTECTED FROM DAMAGE AND SHALL BE MADE USING COPPER WIRE OF NOT LESS THAN 4 mm² AND NOT LESS THAN 7 STRANDS OR COPPER STRIP NOT LESS THAN 25 mm X 3 mm.

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT JATUNSELUNA FLOOD CONTROL PROJECT COMPONENT : JATIBARANG DAM CONSTRUCTION HYDROPOWER STATION POWERHOUSE AREA GROUNDING WORK (2/3)		PROVINCE CENTRAL JAVA PROJECT NAME FLOOD CONTROL, DAM, DRAGAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA DISTRICT SEMARANG CITY DRAWING NO. JD-P1-HS-Gr-2 SHEET NO. 197 DATE CONTRACTING
LAYAN PERKAWAJIAN COOPERATIF CTE ENGINEERING CO., LTD. 38 ANGGREK PUSAT PACIFIC CENTRAL ASIA INTERNATIONAL JALAN PERKAWAJIAN NO. 105 SURABAYA 60132	DESIGNED CHECKED CHIEF OF PLANNING AND DESIGN	DATE CONTRACTING



SECTION E-E
(EL.97.500 FLOOR AND GL)

NOTES

1. ALL GROUNDING CONDUCTORS AND CONNECTIONS SHALL BE EMBEDDED IN OR COVERED BY CONCRETE.
2. JOINTS SHALL BE BRAZED USING ALLOY CPI TO BS 1845-1966 (15 % Ag : 5 % P : CU)
3. CURRENT AND VOLTAGE TRANSFORMERS, CAPACITORS, MOTOR STATER CUBICLES AND CONTROL PANELS TO BE CONNECTED TO THE NEAREST EARTHING BUSBAR WITH NOT LESS THAN 70 mm² COPPER CONDUCTOR. OTHER SEPARATELY MOUNTED EQUIPMENT SHALL BE EARTHED BY COPPER CONDUCTOR AS REQUIRED BY TABLE 27 OF AS 3000 PART 1-1976 EXCEPT THAT WHERE A WIRE IS USED IT SHALL CONSIST OF AT LEAST 7 STRANDS.
4. ALL METAL SUCH AS PIPES, DOOR FRAMES AND HANDRAILS, WHICH ARE READILY ACCESSIBLE TO HAND CONTACT SHALL BE CONNECTED TO THE EARTH GRID. ITEMS EMBEDDED SUCH AS DOOR FRAMES, SHALL BE CONNECTED DIRECTLY TO THE EMBEDDED EARTHING GRID. TO ENSURE ADEQUATE MECHANICAL STRENGTH, THE CONNECTIONS BETWEEN METALWORK AND THE COPPER EARTHING BUSBARS SHALL BE LOCATED IN POSITIONS WHERE THEY ARE PROTECTED FROM DAMAGE AND SHALL BE MADE USING COPPER WIRE OF NOT LESS THAN 4 mm² AND NOT LESS THAN 7 STRANDS OR COPPER STRIP NOT LESS THAN 25 mm X 3 mm.

REFERENCE DRAWINGS

JD-P1-HS-Tr-1 POWERHOUSE AREA GROUNDING WORK (SHEET 1/3)

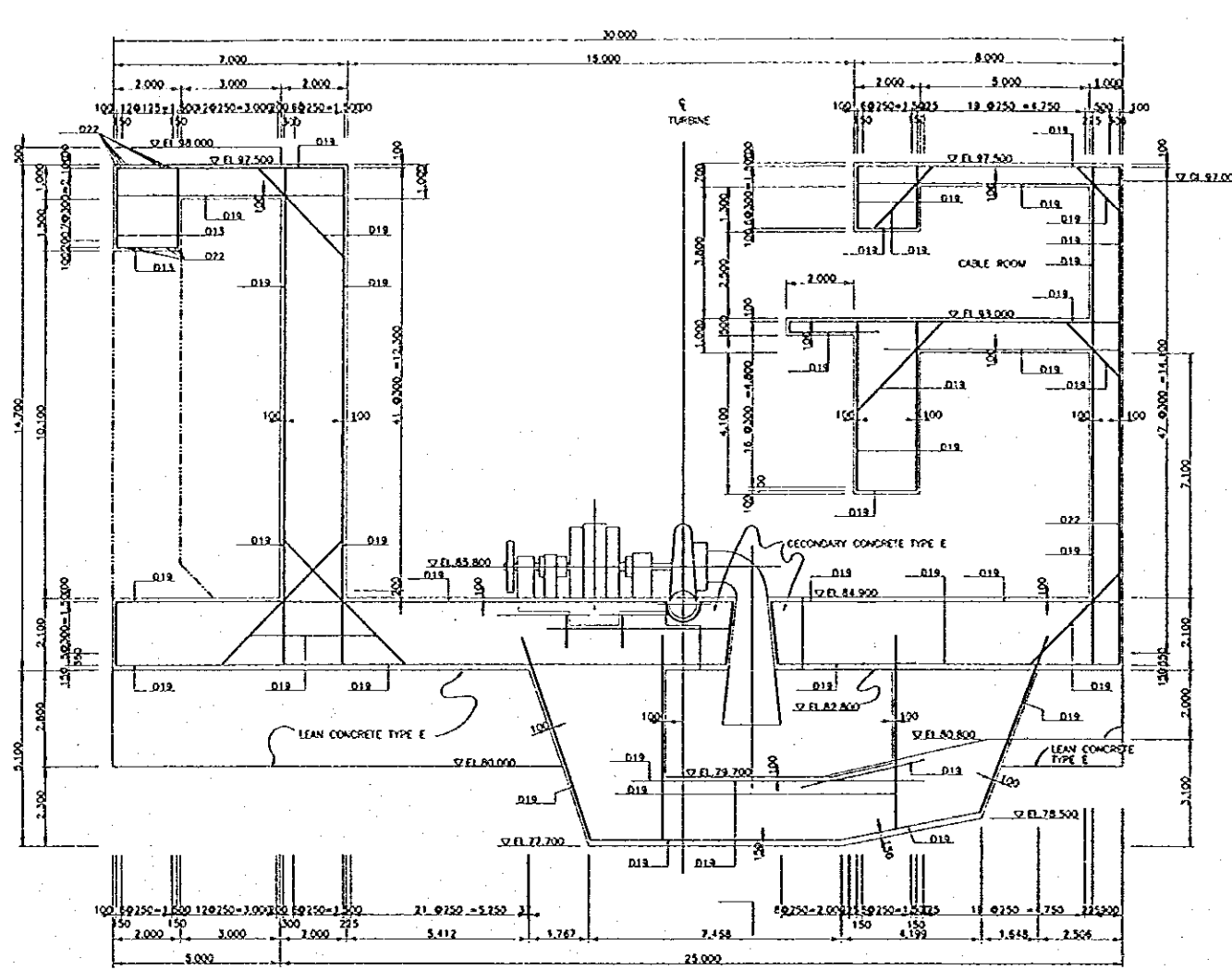
SCALE A 0 5 10 m

LEGEND

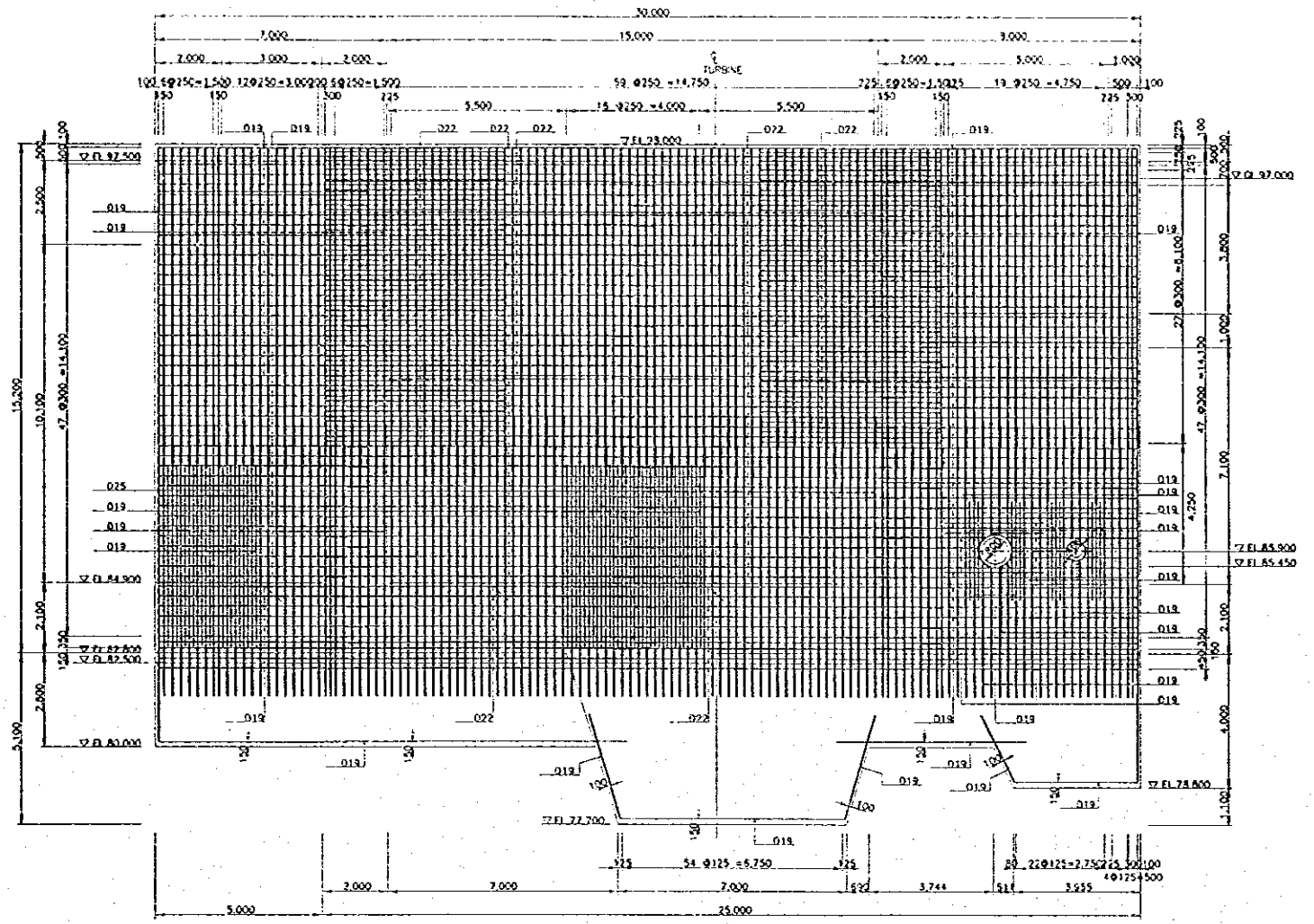
- GROUND CABLE EMBEDDED (HDCC 60 mm²)
- GROUND CABLE RISER (UP)
- GROUND CABLE RISER (DOWN)
- CRAMP-STYLE CONNECTION
- ⊗ GROUND CABLE TO BE CONNECTED TO GROUND SYSTEM IN ARCHITECTURAL WORK AND/OR E/M WORK

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

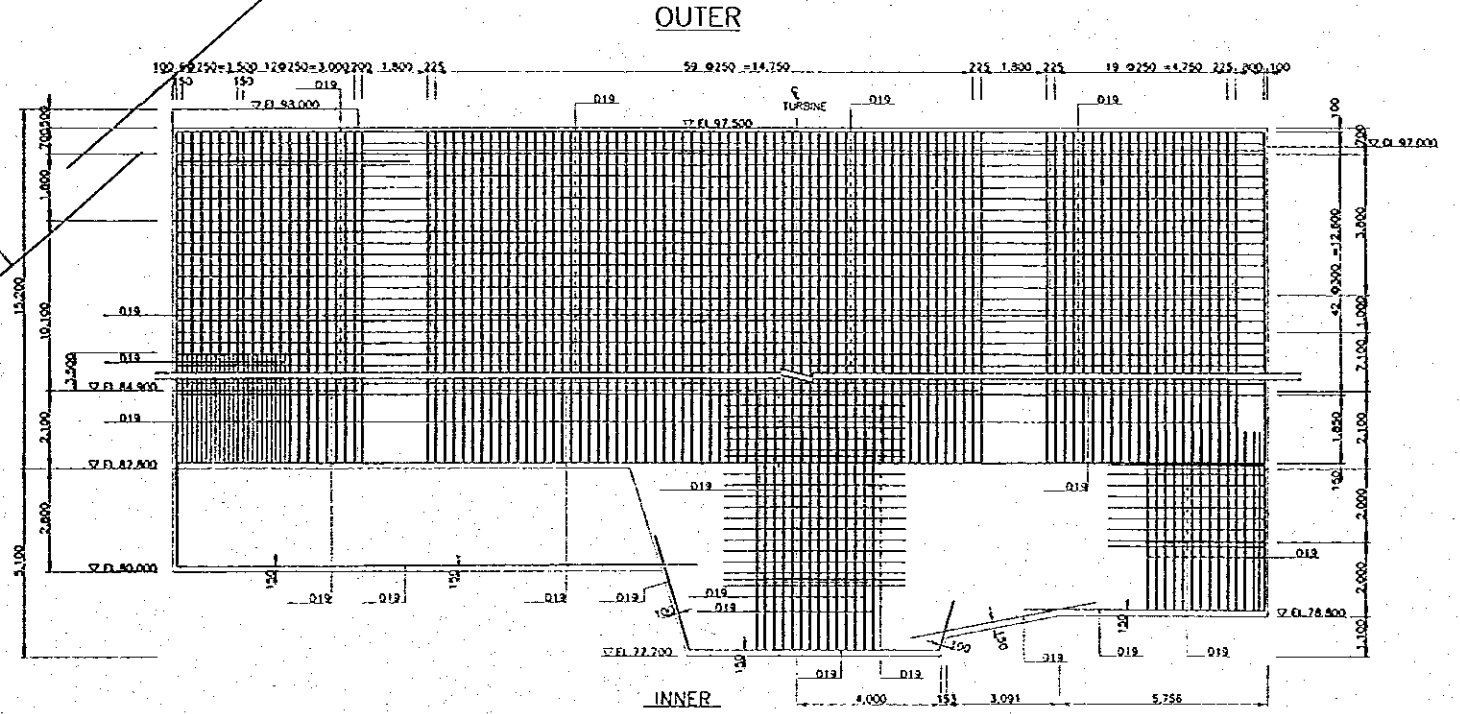
THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAWA
IRATUNSELUVA FLOOD CONTROL PROJECT COMPONENT : JATIBARANG DAM CONSTRUCTION HYDROPOWER STATION POWERHOUSE AREA GROUNDING WORK (3/3)		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA DISTRICT SEMARANG CITY
JAPAN INTERNATIONAL COOPERATION AGENCY JICA ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL JAWA INTERNATIONAL P.T.		DRAWING NO. JD-P1-HS-Gr-3 SHEET NO. 198 DATE CONTRACT NO.
DESIGNED CHECKED PROJECT MANAGER	APPROVED CHIEF OF PLANNING AND DESIGN	DATE CONTRACT NO.



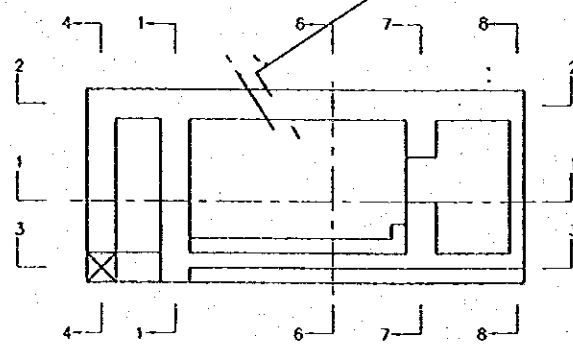
1 - 1



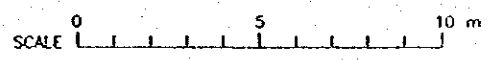
OUTER



INNER

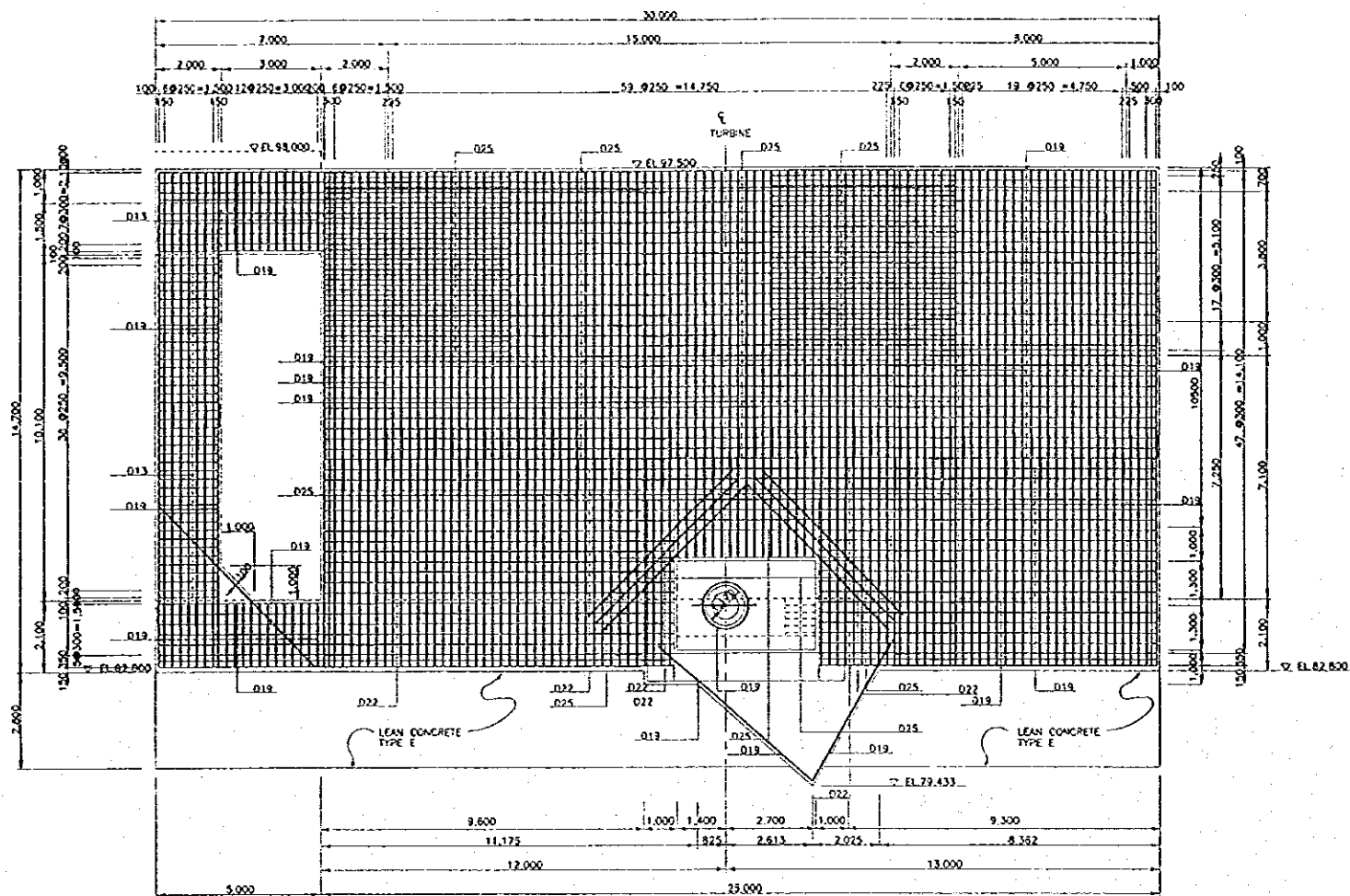


KEY PLAN

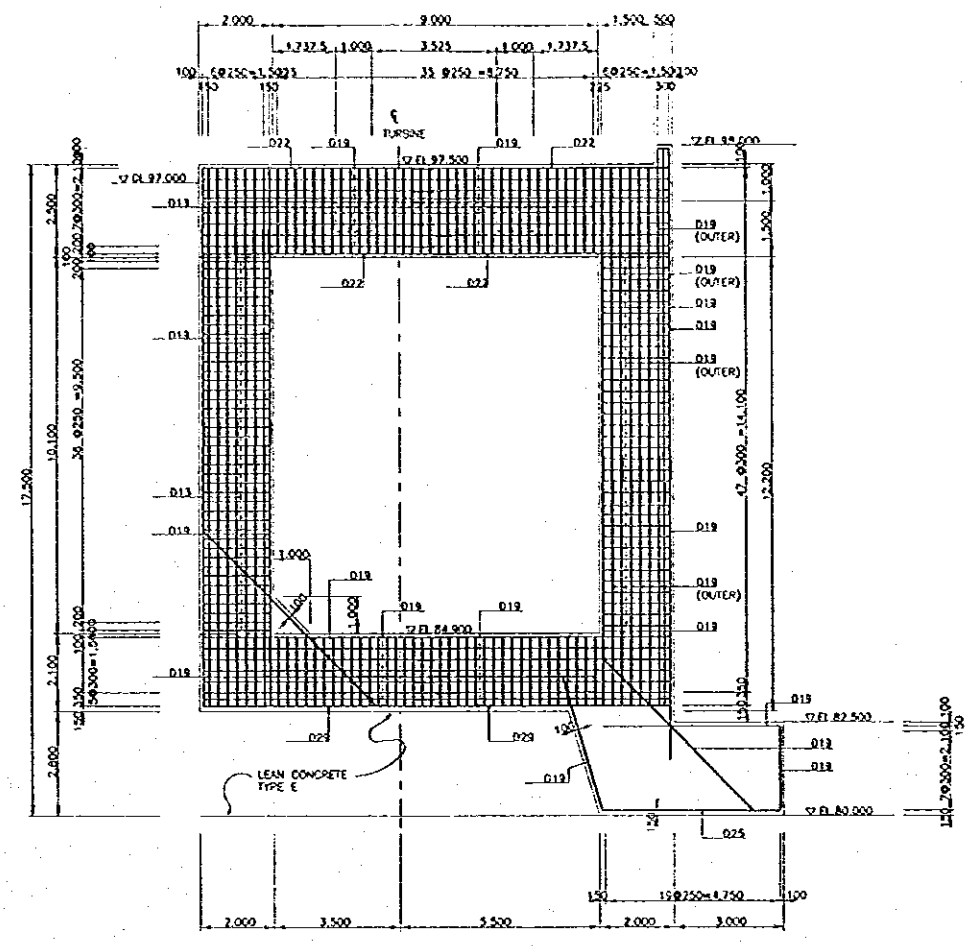


NO.	DATE	REVISIONS	PREPARED	DESIGNED	APPROVED

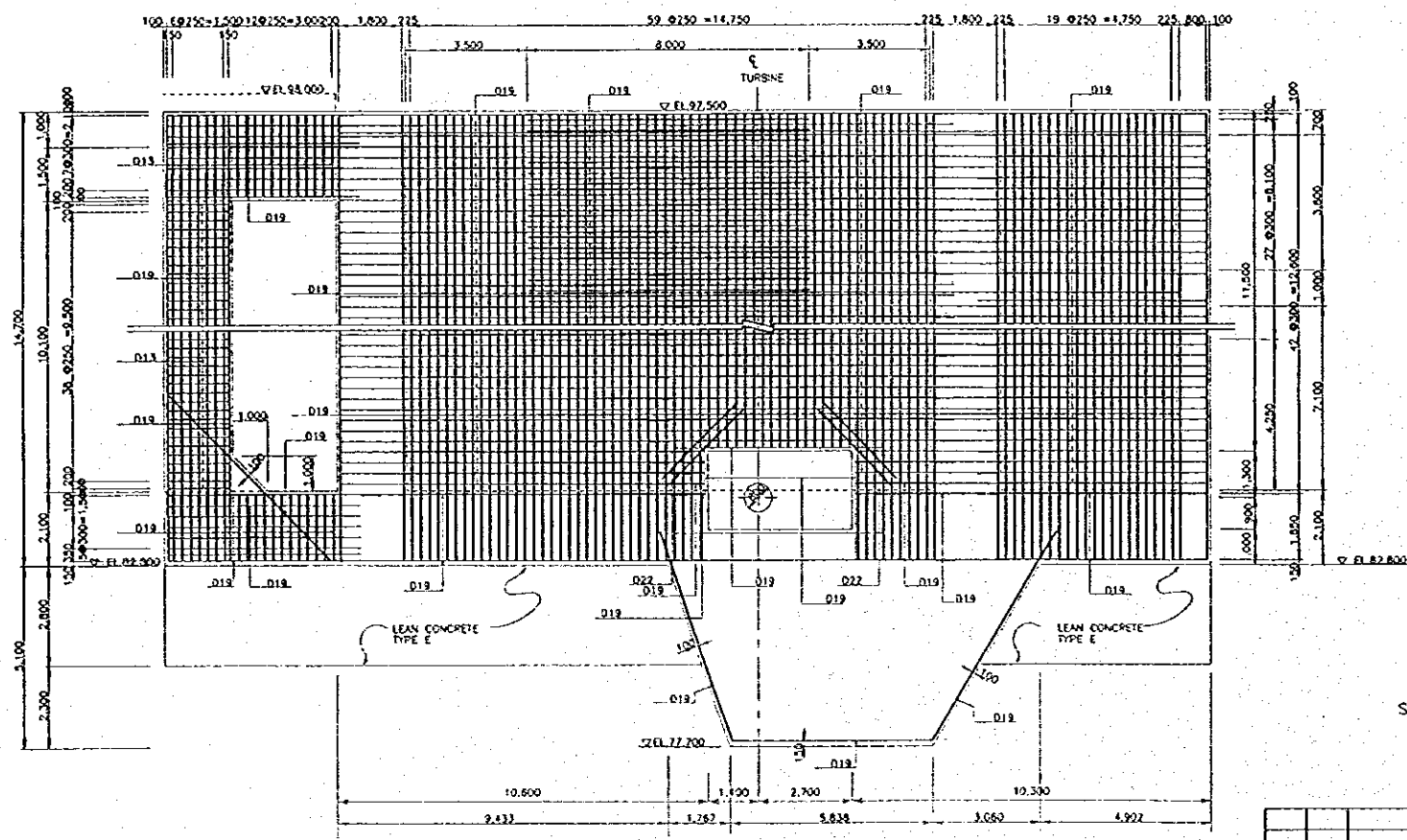
THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAVA
PROJECT NAME FLOOD CONTROL, SEWER DRAINAGE AND WATER SUPPLY DEVELOPMENT OF SEMARANG IN THE REPUBLIC OF INDONESIA		PROJECT NO. JD-P1-HS-Re-1
PROJECT COMPONENT JATIBARANG DAM CONSTRUCTION HYDROPOWER STATION POWERHOUSE REINFORCEMENT SECTION (1/4)		DRAFT NO. 199
DESIGNED <i>T. Suman</i> CHECKED <i>[Signature]</i> GRIP OF PLANNING AND DESIGN PROJECT MANAGER		DATE CONTRACT NO.



OUTER

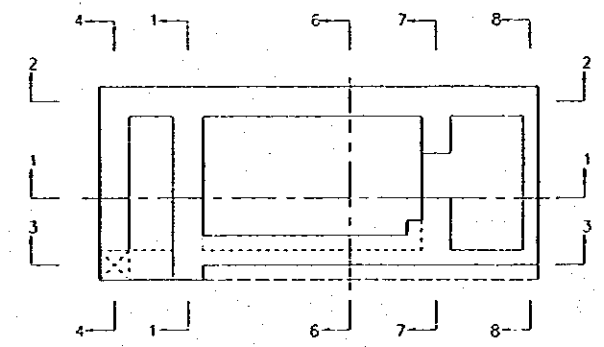


4-4

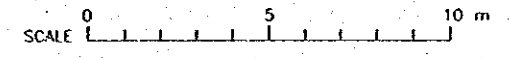


INNER

3-3

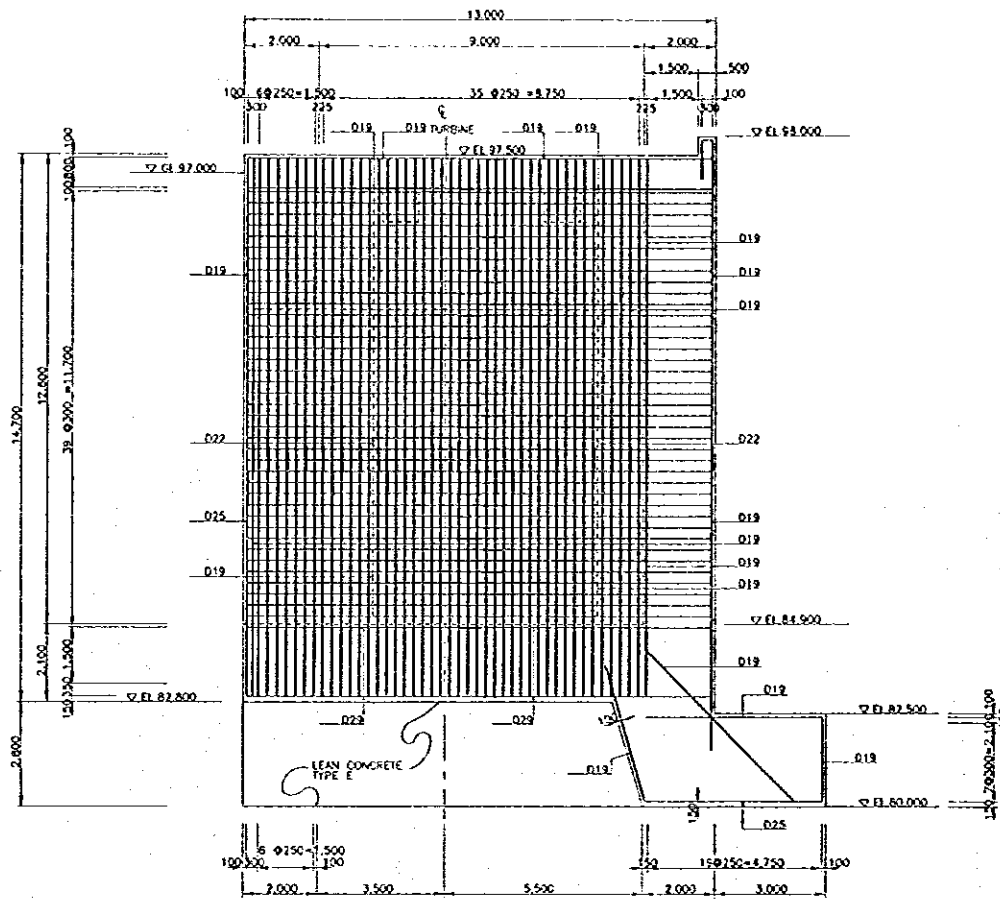


KEY PLAN

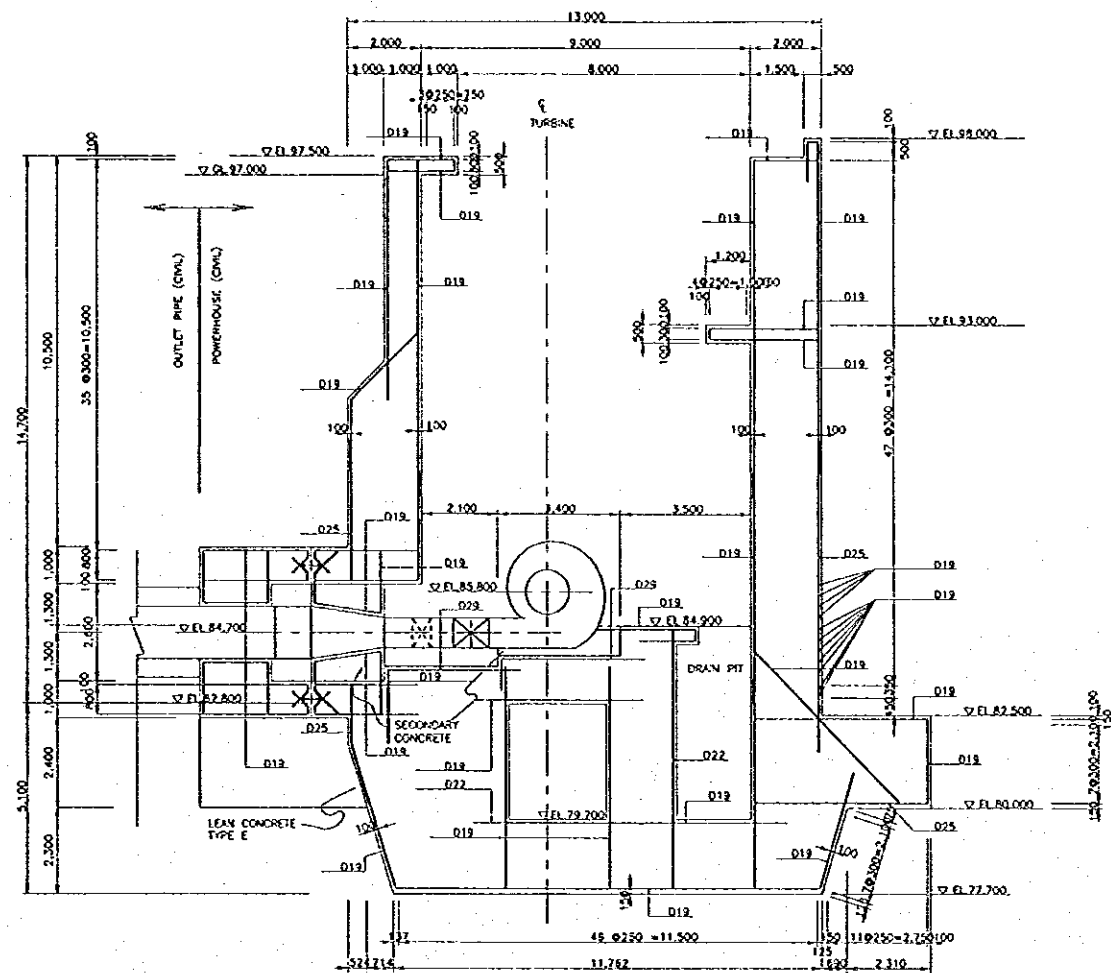


NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED

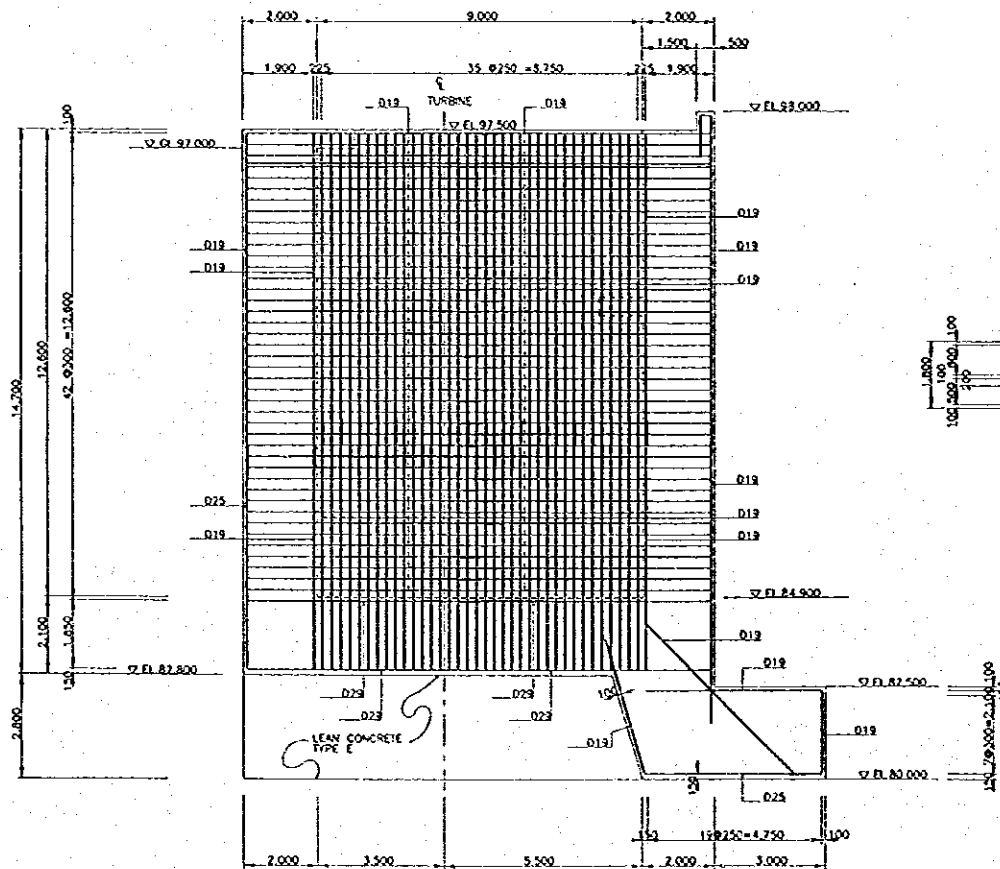
THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF SEAMAN SETTLEMENT		PROVINCE CENTRAL JAVA
TRATUNSELUNA FLOOD CONTROL PROJECT COMPONENT: JATIBARANG DAM CONSTRUCTION HYDROPOWER STATION POWERHOUSE REINFORCEMENT SECTION (2/4)		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA DISTRICT SEMARANG CITY
JAPAN INTERNATIONAL COOPERATION AGENCY CTE ENGINEERING CO. LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL PARCO INTERNATIONAL INC.		DRAWING NO. JD-PI-HS-Pe-2 SHEET NO. 200
DESIGNED Tsune CHECKED [Signature] CHIEF OF PLANNING AND DESIGN	APPROVED [Signature] PROJECT MANAGER	DATE [Blank] CONTRACT NO.



OUTER

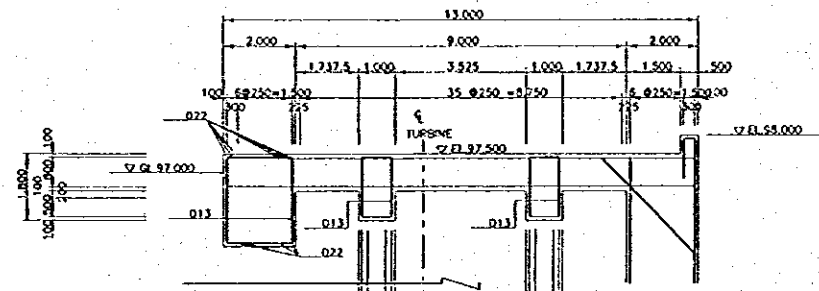


6 - 6

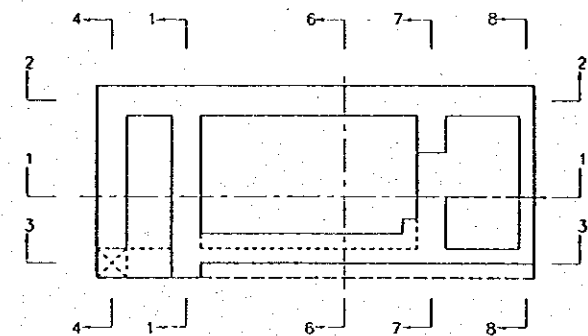


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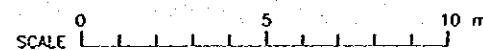
5 - 5



4' - 4'

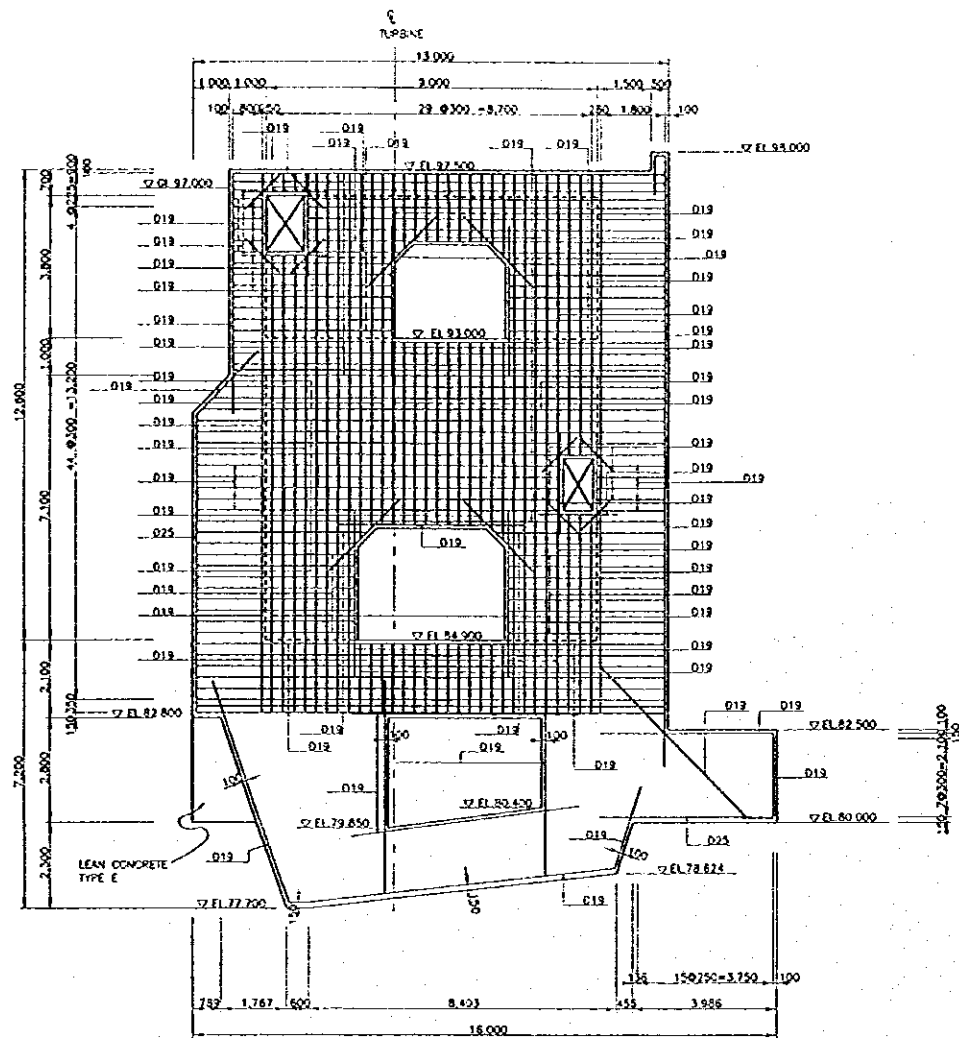


KEY PLAN

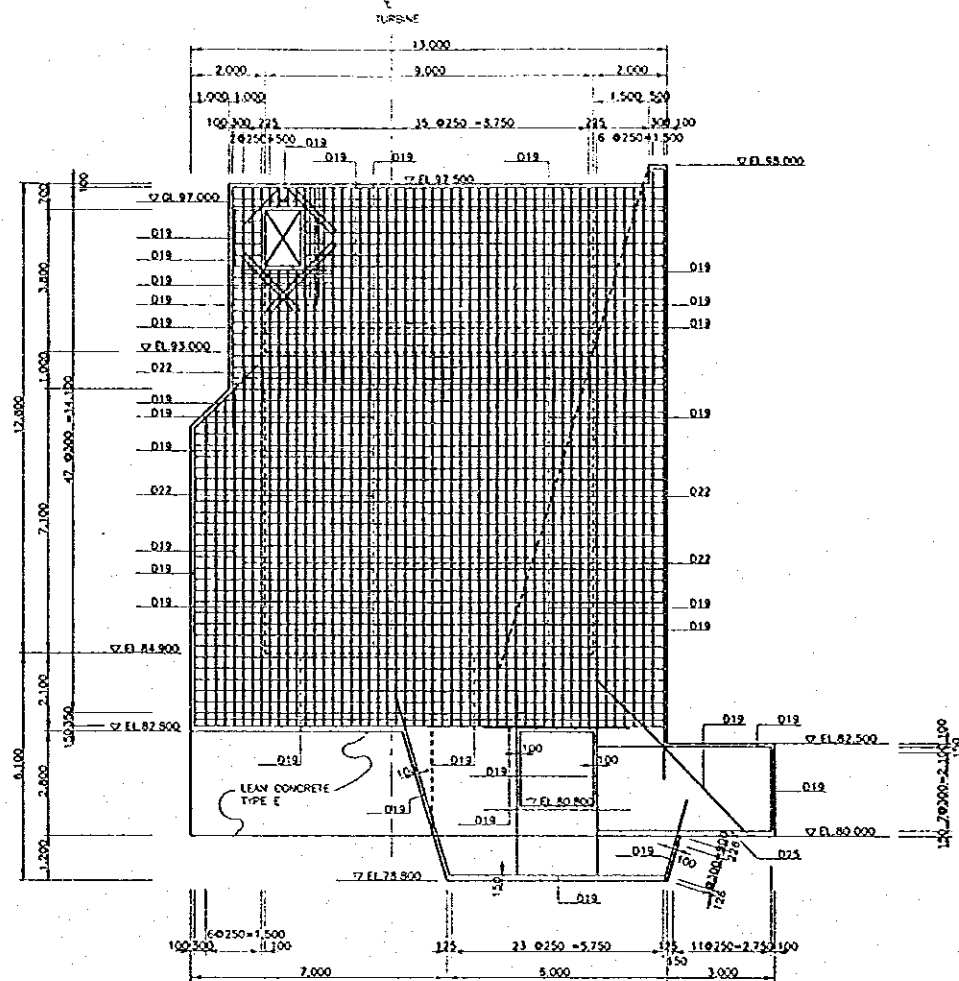


NO.	DATE	REVISIONS	ORIGINATOR	DESIGNED	APPROVED

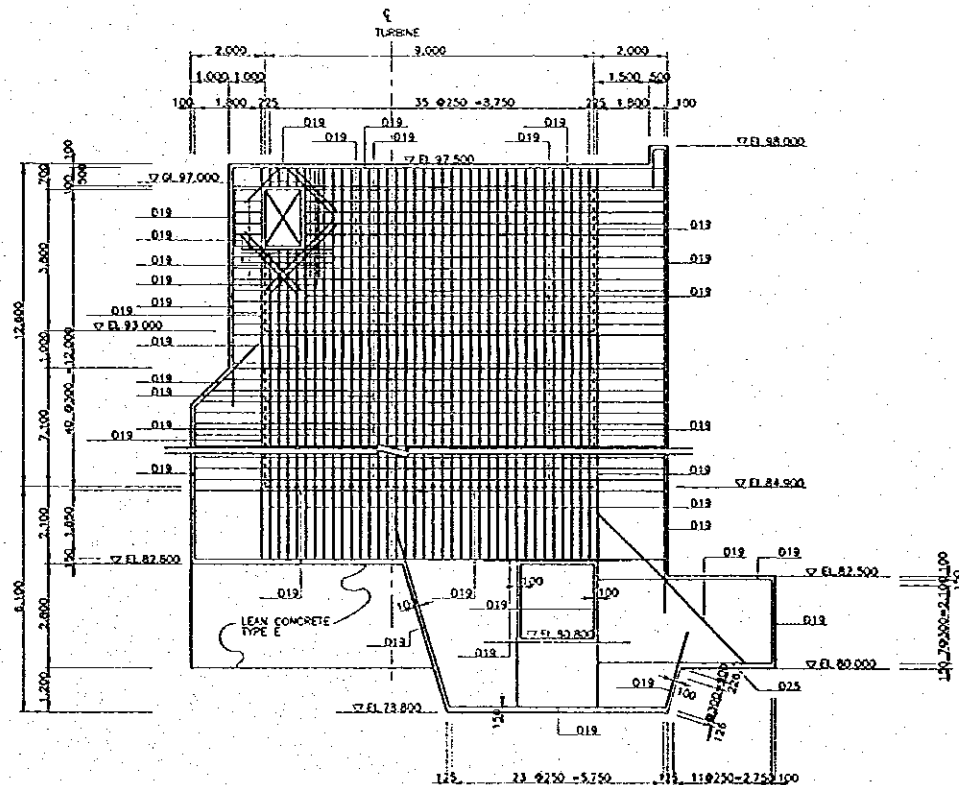
THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT JAWA TUNGGUH FLOOD CONTROL PROJECT COMPONENT: JATIBARANG DAM CONSTRUCTION HYDROPOWER STATION POWERHOUSE REINFORCEMENT SECTION (3/4)		PROVINCE CENTRAL JAVA PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEKARANG IN THE REPUBLIC OF INDONESIA DETAIL CITY SEKARANG CITY DRAWING NO. JD-P1-HS-R8-3 SUBSET NO. 201 DATE CONTRACT NO.
JAPAN INTERNATIONAL COOPERATION AGENCY CHE ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL PANCO INTERNATIONAL INC.	DESIGNED <i>Tsune</i> CHECKED <i>Almond</i> APPROVED <i>[Signature]</i> CHIEF OF PLANNING AND DESIGN PROJECT MANAGER	DATE CONTRACT NO.



7 - 7

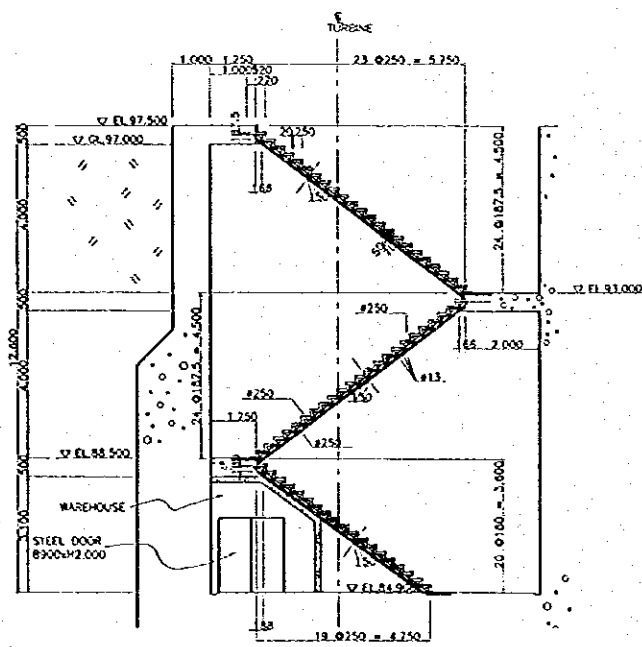


OUTER



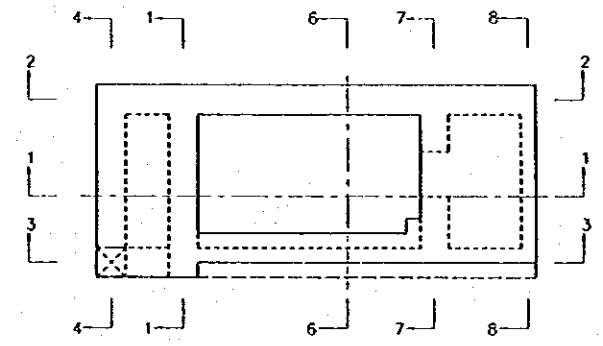
INNER

8 - 8



DETAIL OF STAIRS

SCALE 1:100



KEY PLAN

SCALE 0 5 10 m

NO.	DATE	REVISIONS	ORIGINATED	DISBURD	APPROVED

THE REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT		PROVINCE CENTRAL JAYA
IAIN TUNJUNGA FLOOD CONTROL PROJECT COMPONENT : IATIBARANG DAM CONSTRUCTION POWERHOUSE REINFORCEMENT SECTION (1/4)		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT BY REMEDIATION IN THE REPUBLIC OF INDONESIA
IAIN INTERNATIONAL COOPERATION AGENCY CIBI ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL JABCO INTERNATIONAL INC.		PROJECT SEMARANG CITY
DESIGNED CHECKED DATE		DRAWING NO. JD-P1-HS-Re-4 SHEET NO. 202
CHIEF OF PLANNING AND DESIGN PROJECT MANAGER		CONTRACT NO.