

MINISTRY OF SETTLEMENT AND REGIONAL DEVELOPMENT
THE REPUBLIC OF INDONESIA

FLOOD CONTROL, URBAN DRAINAGE AND
WATER RESOURCES DEVELOPMENT IN SEMARANG

COMPONENT B: CONSTRUCTION OF THE JATIBARANG MULTIPURPOSE DAM

BIDDING DOCUMENTS

PACKAGE 1:

JATIBARANG MULTIPURPOSE DAM
INCLUDING APPURTENANT STRUCTURES

VOLUME 3

DRAWINGS

AUGUST 2000

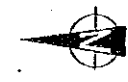
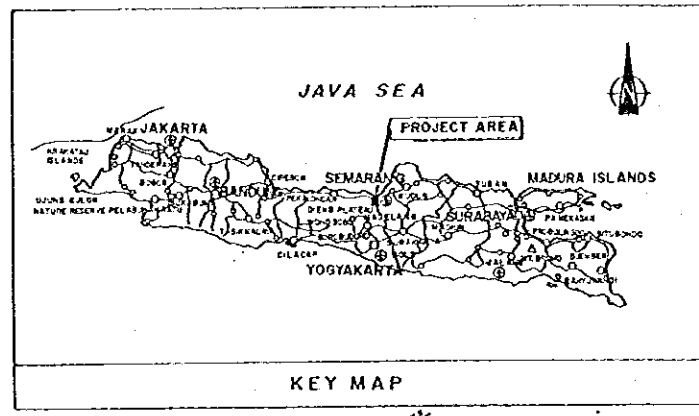


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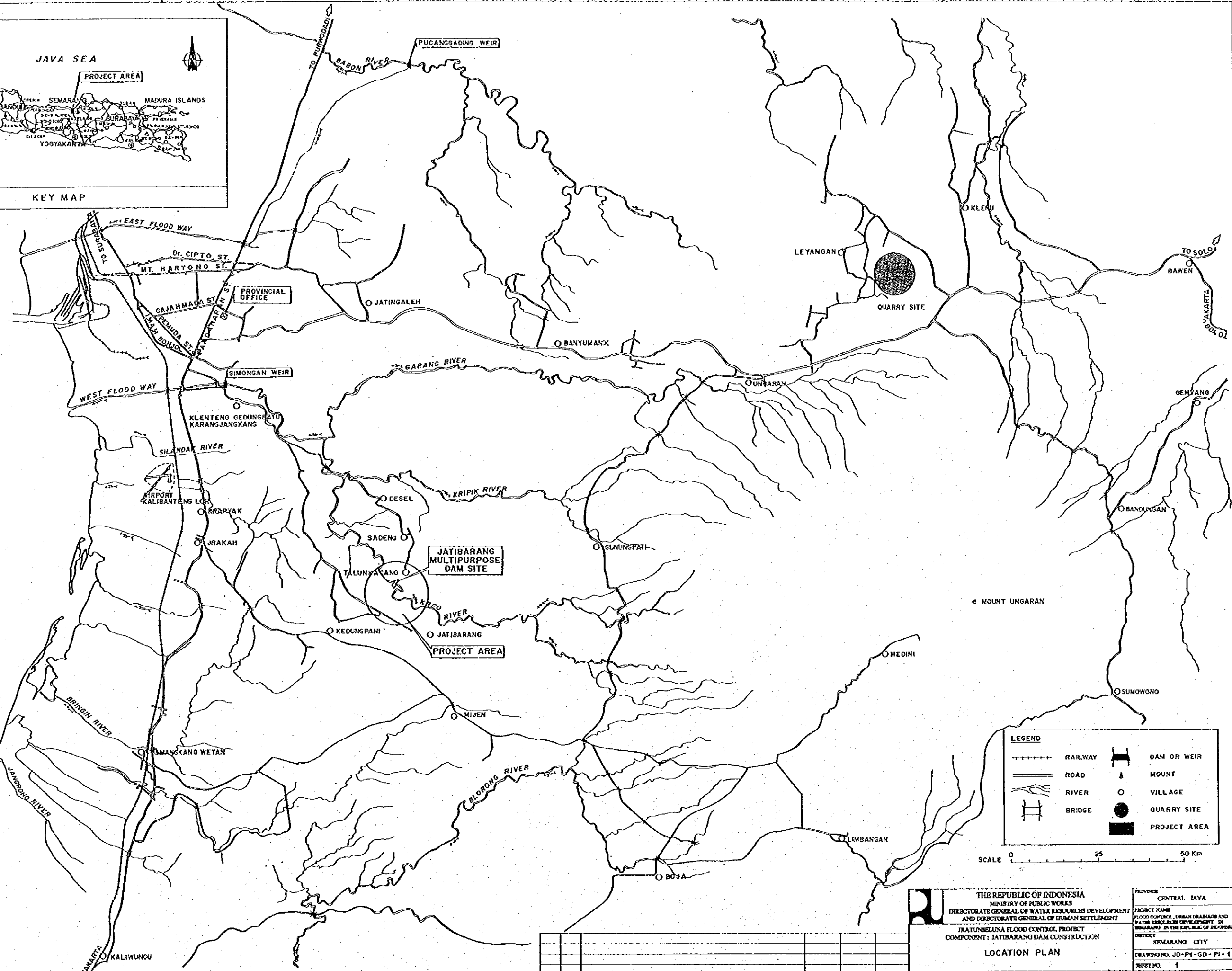
PACKAGE - 1 : JATIBARANG MULTIPURPOSE DAM INCLUDING APPURTENANT STRUCTURES

LIST OF DRAWINGS (1/3)

SHEET No.	DRAWING No.	TITLE OF DRAWING	SHEET No.	DRAWING No.	TITLE OF DRAWING
01 - GENERAL DRAWINGS (GD)			01 - GENERAL DRAWINGS (GD)		
1	JD-P1-GD-P1-1	LOCATION PLAN	45	JD-P1-ED-Ga-5	GALLERY - STRUCTURAL DETAILS (4/4)
2	JD-P1-GD-P1-2	GENERAL PROJECT PLAN	46	JD-P1-ED-Ga-6	GALLERY - LEFT ENTRANCE
3	JD-P1-GD-P1-3	RESERVOIR AREA MAP AND STORAGE CAPACITY CURVE	47	JD-P1-ED-Ga-7	GALLERY - RIGHT ENTRANCE
4	JD-P1-GD-P1-4	GENERAL PLAN OF DAMSITE	48	JD-P1-ED-Re-1	GALLERY - REINFORCEMENT DETAILS (1/24)
4-2	JD-P1-GD-P1-5	QUARRY AREA MAP	49	JD-P1-ED-Re-2	GALLERY - REINFORCEMENT DETAILS (2/24)
02 - GEOLOGY (GE)			50	JD-P1-ED-Re-3	GALLERY - REINFORCEMENT DETAILS (3/24)
5	JD-P1-GE-P1-1	RESERVOIR AND REGIONAL GEOLOGY	51	JD-P1-ED-Re-4	GALLERY - REINFORCEMENT DETAILS (4/24)
6	JD-P1-GE-P1-2	GEOLOGICAL MAP AT DAMSITE	52	JD-P1-ED-Re-5	GALLERY - REINFORCEMENT DETAILS (5/24)
7	JD-P1-GE-Pr-1	GEOLOGICAL PROFILE ALONG DAM AXIS	53	JD-P1-ED-Re-6	GALLERY - REINFORCEMENT DETAILS (6/24)
8	JD-P1-GE-Pr-2	GEOLOGICAL PROFILE ALONG A-A LINE (60 m UPSTREAM OF DAM AXIS)	54	JD-P1-ED-Re-7	GALLERY - REINFORCEMENT DETAILS (7/24)
9	JD-P1-GE-Pr-3	GEOLOGICAL PROFILE ALONG B-B LINE (60 m DOWNSTREAM OF DAM AXIS)	55	JD-P1-ED-Re-8	GALLERY - REINFORCEMENT DETAILS (8/24)
10	JD-P1-GE-Pr-4	GEOLOGICAL PROFILE ALONG CENTER LINE OF SPILLWAY	56	JD-P1-ED-Re-9	GALLERY - REINFORCEMENT DETAILS (9/24)
11	JD-P1-GE-Pr-5	GEOLOGICAL PROFILE ALONG CENTER LINE OF DIVERSION TUNNEL	57	JD-P1-ED-Re-10	GALLERY - REINFORCEMENT DETAILS (10/24)
12	JD-P1-GE-Pr-6	GEOLOGICAL PROFILE ALONG CENTER LINE OF OUTLET TUNNEL	58	JD-P1-ED-Re-11	GALLERY - REINFORCEMENT DETAILS (11/24)
13	JD-P1-GE-Cr-1	GEOLOGICAL CROSS SECTION (STA. 90)	59	JD-P1-ED-Re-12	GALLERY - REINFORCEMENT DETAILS (12/24)
14	JD-P1-GE-Cr-2	GEOLOGICAL CROSS SECTION (STA. 140)	60	JD-P1-ED-Re-13	GALLERY - REINFORCEMENT DETAILS (13/24)
15	JD-P1-GE-Cr-3	GEOLOGICAL CROSS SECTION (STA. 210)	61	JD-P1-ED-Re-14	GALLERY - REINFORCEMENT DETAILS (14/24)
16	JD-P1-GE-Qu-1	LOCATION MAP OF DRILLINGS AND GEOLOGICAL PROFILE AT QUARRY	62	JD-P1-ED-Re-15	GALLERY - REINFORCEMENT DETAILS (15/24)
16-2	JD-P1-GE-Qu-2	GEOLOGICAL PROFILE AT QUARRY	63	JD-P1-ED-Re-16	GALLERY - REINFORCEMENT DETAILS (16/24)
03 - DIVERSION FACILITIES (DF)			64	JD-P1-ED-Re-17	GALLERY - REINFORCEMENT DETAILS (17/24)
17	JD-P1-DF-P1-1	LAYOUT PLAN	65	JD-P1-ED-Re-18	GALLERY - REINFORCEMENT DETAILS (18/24)
18	JD-P1-DF-Tu-1	TUNNEL - PROFILE AND TYPICAL CROSS SECTIONS	66	JD-P1-ED-Re-19	GALLERY - REINFORCEMENT DETAILS (19/24)
19	JD-P1-DF-Tu-2	TUNNEL - REINFORCEMENT DETAILS AND STEEL RIB SUPPORT	67	JD-P1-ED-Re-20	GALLERY - REINFORCEMENT DETAILS (20/24)
20	JD-P1-DF-Up-1	UPSTREAM PORTAL - LAYOUT PLAN	68	JD-P1-ED-Re-21	GALLERY - REINFORCEMENT DETAILS (21/24)
21	JD-P1-DF-Up-2	UPSTREAM PORTAL - CONCRETE OUTLINE	69	JD-P1-ED-Re-22	GALLERY - REINFORCEMENT DETAILS (22/24)
22	JD-P1-DF-Up-3	UPSTREAM PORTAL - REINFORCEMENT DETAILS (1/3)	70	JD-P1-ED-Re-23	GALLERY - REINFORCEMENT DETAILS (23/24)
23	JD-P1-DF-Up-4	UPSTREAM PORTAL - REINFORCEMENT DETAILS (2/3)	71	JD-P1-ED-Re-24	GALLERY - REINFORCEMENT DETAILS (24/24)
24	JD-P1-DF-Up-5	UPSTREAM PORTAL - REINFORCEMENT DETAILS (3/3)	72	JD-P1-ED-Gr-1	ARRANGEMENT OF FOUNDATION GROUTING (1/3)
25	JD-P1-DF-Pg-1	PLUG WORKS IN DIVERSION TUNNEL - CONCRETE PLUG DETAILS	73	JD-P1-ED-Gr-2	ARRANGEMENT OF FOUNDATION GROUTING (2/3)
26	JD-P1-DF-Pg-2	PLUG WORKS IN DIVERSION TUNNEL - GROUT PLAN	73-2	JD-P1-ED-Gr-3	ARRANGEMENT OF FOUNDATION GROUTING (3/3)
04 - EMBANKMENT DAM (ED)			74	JD-P1-ED-In-1	INSTRUMENTATION - LAYOUT PLAN AND PROFILE
27	JD-P1-ED-Ge-1	LAYOUT PLAN	75	JD-P1-ED-In-2	INSTRUMENTATION - SECTIONS
28	JD-P1-ED-Ga-2	PROFILE ALONG DAM AXIS	76	JD-P1-ED-EI-1	ELECTRICAL WORKS - GENERAL LIGHTING PLAN AND DETAILS (1/2)
29	JD-P1-ED-Ge-3	TYPICAL CROSS SECTION	77	JD-P1-ED-EI-2	ELECTRICAL WORKS - GENERAL LIGHTING PLAN AND DETAILS (2/2)
30	JD-P1-ED-Ge-4	EXCAVATION PLAN	78	JD-P1-ED-EI-3	ELECTRICAL WORKS - GALLERY LIGHTING KEY PLAN
31	JD-P1-ED-Cr-1	CROSS SECTION (1/10)	79	JD-P1-ED-EI-4	ELECTRICAL WORKS - GALLERY LIGHTING DETAILS (1/2)
32	JD-P1-ED-Cr-2	CROSS SECTION (2/10)	80	JD-P1-ED-EI-5	ELECTRICAL WORKS - GALLERY LIGHTING DETAILS (2/2)
33	JD-P1-ED-Cr-3	CROSS SECTION (3/10)	81	JD-P1-ED-EI-6	ELECTRICAL WORKS - ONE LINE ELECTRICAL DIAGRAM AND DISTRIBUTION PANEL
34	JD-P1-ED-Cr-4	CROSS SECTION (4/10)	82	JD-P1-ED-EI-7	ELECTRICAL WORKS - GALLERY AND GENERAL LIGHTING INSTALLATION
35	JD-P1-ED-Cr-5	CROSS SECTION (5/10)	82-2	JD-P1-ED-Ad-1	TREATMENT OF EXISTING ADITS
36	JD-P1-ED-Cr-6	CROSS SECTION (6/10)	82-3	JD-P1-ED-Dr-1	DRAINAGE SYSTEM DETAILS (1/2)
37	JD-P1-ED-Cr-7	CROSS SECTION (7/10)	82-4	JD-P1-ED-Dr-2	DRAINAGE SYSTEM DETAILS (2/2)
38	JD-P1-ED-Cr-8	CROSS SECTION (8/10)	05 - SPILLWAY (SP)		
39	JD-P1-ED-Cr-9	CROSS SECTION (9/10)	83	JD-P1-SP-Ge-1	GENERAL PLAN
40	JD-P1-ED-Cr-10	CROSS SECTION (10/10)	84	JD-P1-SP-Ge-2	PROFILE ALONG CENTER LINE OF SPILLWAY
41	JD-P1-ED-Ga-1	GALLERY - LAYOUT PLAN AND PROFILE	85	JD-P1-SP-Ge-3	STRUCTURAL PLAN
42	JD-P1-ED-Ga-2	GALLERY - STRUCTURAL DETAILS (1/4)	86	JD-P1-SP-Ge-4	EXCAVATION PLAN
43	JD-P1-ED-Ga-3	GALLERY - STRUCTURAL DETAILS (2/4)	87	JD-P1-SP-Cr-1	CROSS SECTION (1/10)
44	JD-P1-ED-Ga-4	GALLERY - STRUCTURAL DETAILS (3/4)	88	JD-P1-SP-Cr-2	CROSS SECTION (2/10)
			89	JD-P1-SP-Cr-3	CROSS SECTION (3/10)
			90	JD-P1-SP-Cr-4	CROSS SECTION (4/10)
			91	JD-P1-SP-Cr-5	CROSS SECTION (5/10)
			92	JD-P1-SP-Cr-6	CROSS SECTION (6/10)

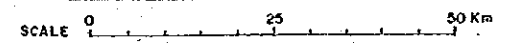


JAVA SEA



LEGEND

+++++	RAILWAY	▬	DAM OR WEIR
— — —	ROAD	▲	MOUNT
~~~~~	RIVER	○	VILLAGE
⊥	BRIDGE	●	QUARRY SITE
		■	PROJECT AREA



NOTE: QUARRY SITE DESIGNATED ON THE DRAWING WILL BE USED BY PACKAGE 110E1 CONTRACTOR.

NO.	DATE	REVISIONS	DESIGNED	CHECKED	APPROVED

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

JRATUNSELUNA FLOOD CONTROL PROJECT  
 COMPONENT: JATIBARANG DAM CONSTRUCTION

**LOCATION PLAN**

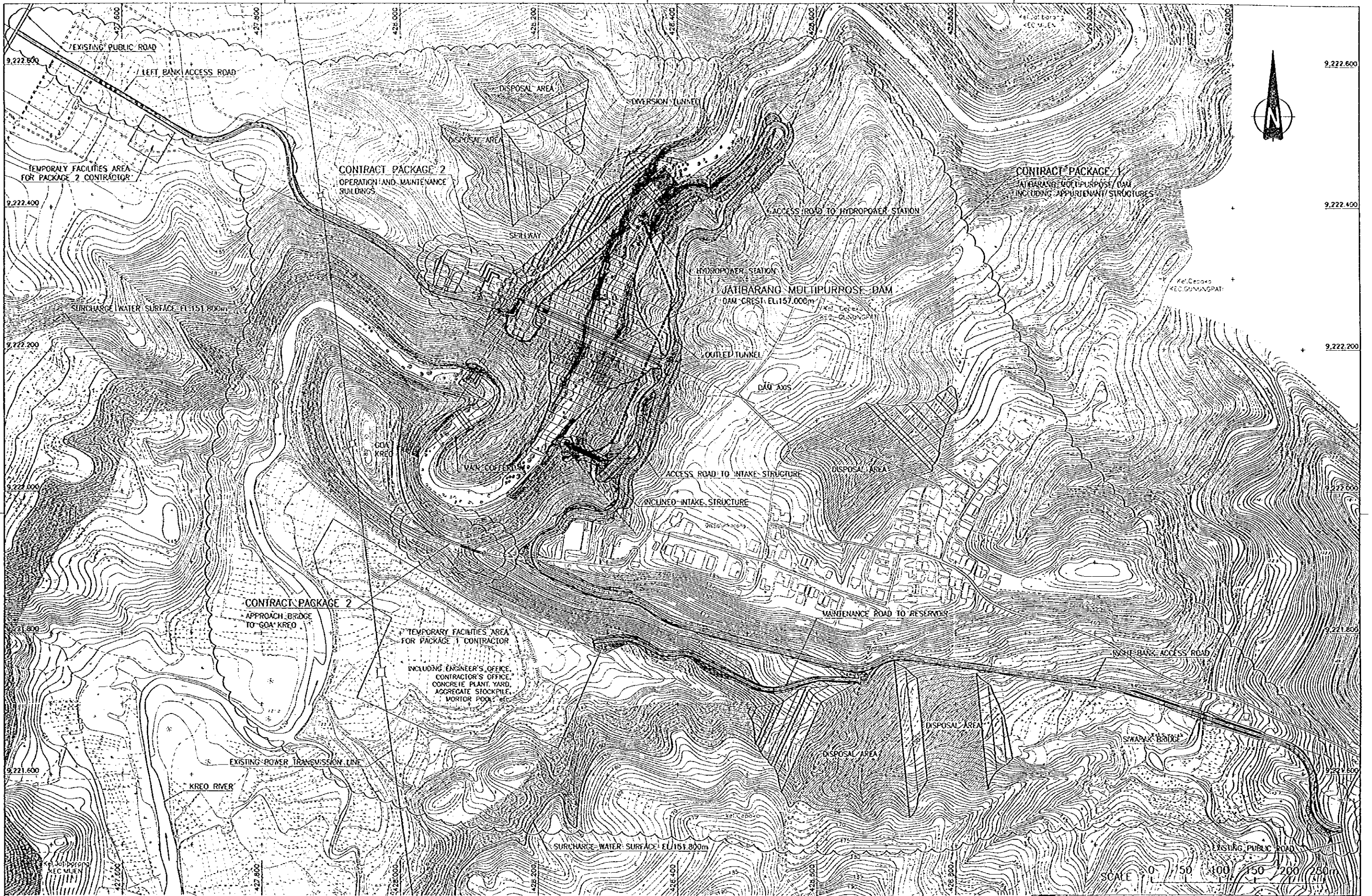
JAWA BARAT COORDINATION AGENCY  
 PT. BIRUPANINGGI, LTD. IN ASSOCIATION WITH  
 PACIFIC CONSULTANTS INTERNATIONAL AND  
 TAIPOD INTERNATIONAL, INC.

DESIGNED	CHECKED	APPROVED

CHIEF OF PLANNING AND DESIGN  
 PROJECT MANAGER

PROVINCE	CENTRAL JAWA
PROJECT NAME	FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT OF SEMARANG IN THE REPUBLIC OF INDONESIA
DIRECTOR	SEMARANG CITY
DRAWING NO.	JO-PI-GD-PI-1
SECRET NO.	1
DATE	
CONTRACT NO.	



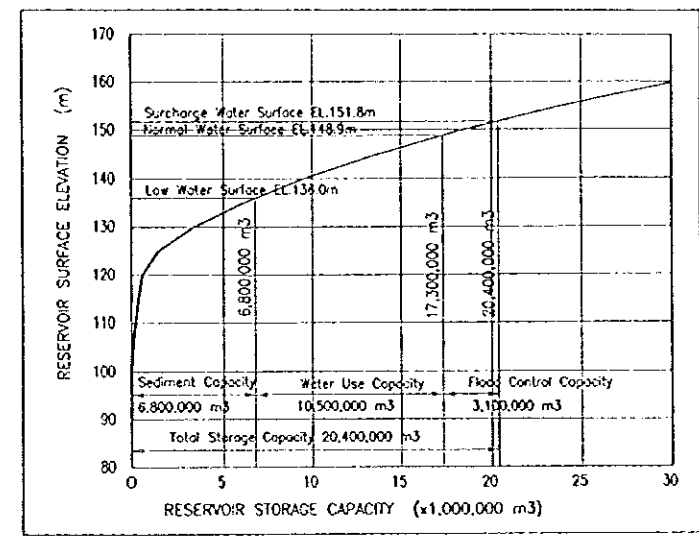
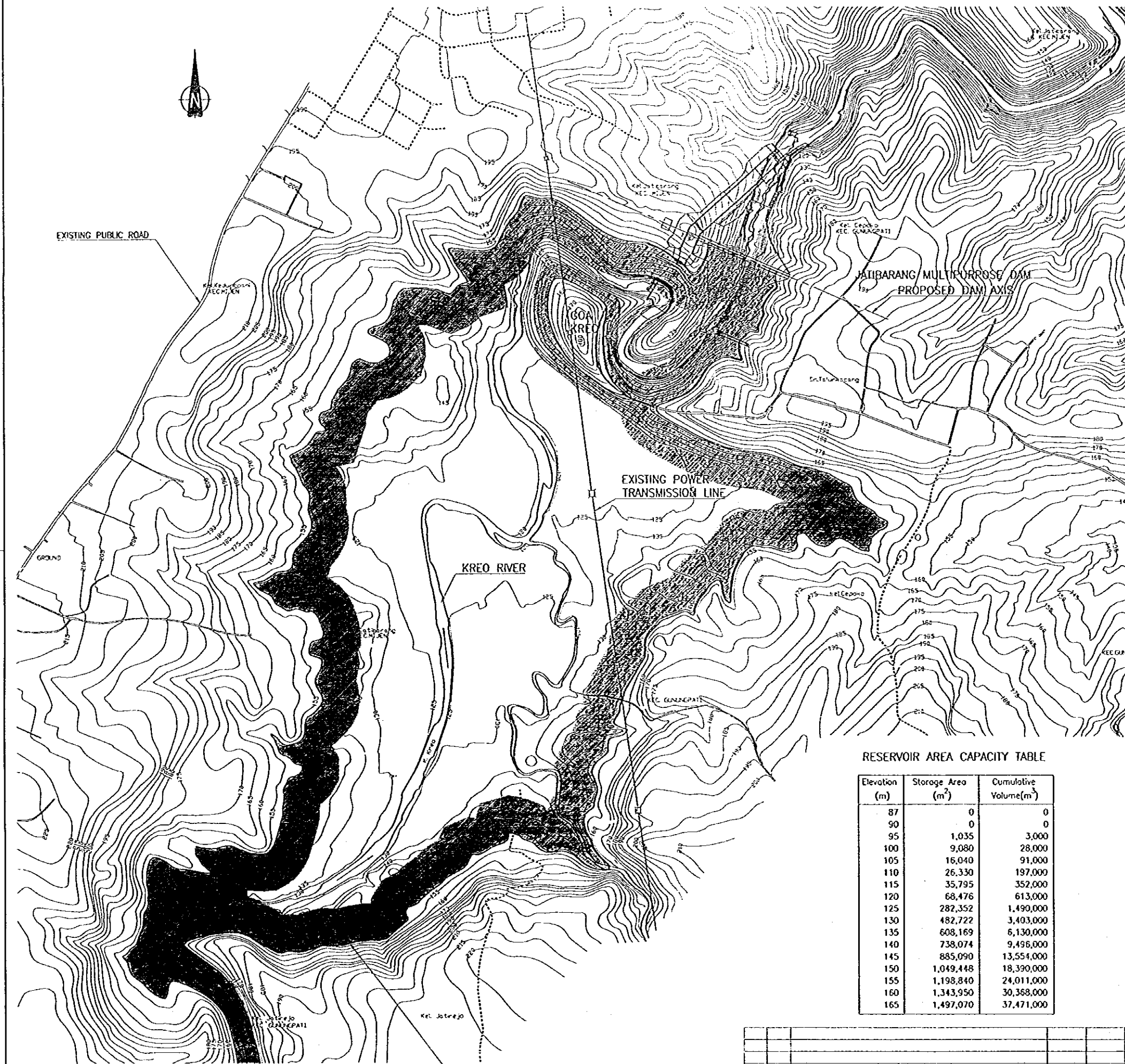


**NOTES**

1. THE MAJOR WORKS TO BE CARRIED OUT UNDER THE CONTRACT PACKAGE 1 SHALL CONSIST OF, BUT NOT BE LIMITED TO, THE CONSTRUCTION OF JATIBARANG MULTIPURPOSE DAM INCLUDING THE APPURTENANT STRUCTURES SUCH AS SPILLWAY, OUTLET FACILITIES, DIVERSION FACILITIES, HYDROPOWER STATION, ACCESS ROADS AND RELOCATION OF EXISTING POWER TRANSMISSION LINE.
2. THE MAJOR WORKS TO BE CARRIED OUT UNDER THE CONTRACT PACKAGE 2 SHALL CONSIST OF, BUT NOT BE LIMITED TO, THE CONSTRUCTION OF THE OPERATION AND MAINTENANCE BUILDINGS AND EXTERNAL WORKS IN THE DAM MANAGEMENT COMPLEX, AND THE APPROACH BRIDGE TO GOA KREO.
3. THE EXCAVATION WORKS OF THE DAM MANAGEMENT COMPLEX AREA SHALL BE CARRIED OUT BY THE PACKAGE 1 CONTRACTOR.

NO.	DATE	REVISERS	ORIGINATED	DESIGNED	APPROVED

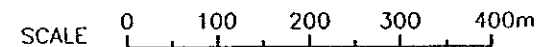
<b>THE REPUBLIC OF INDONESIA</b> MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT AND DIRECTORATE GENERAL OF HUMAN SETTLEMENT TRATUNSELUNA FLOOD CONTROL PROJECT COMPONENT : JATIBARANG DAM CONSTRUCTION		PROVINCE CENTRAL JAVA
<b>GENERAL DRAWINGS</b> <b>GENERAL PROJECT PLAN</b>		PROJECT NAME URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA DISTRICT SEMARANG CITY
JAPAN INTERNATIONAL COOPERATION AGENCY JICA PACIFIC CONSULTANTS INTERNATIONAL PARTNERSHIP COMPANY, LTD. CHIEF OF PLANNING AND DESIGN PROJECT MANAGER		DRAWING NO. JD-P1-GO-P1-2 SHEET NO. 2 DATE CONTRACT NO.
DESIGNED	CHECKED	APPROVED



RESERVOIR AREA CAPACITY CURVE

RESERVOIR AREA CAPACITY TABLE

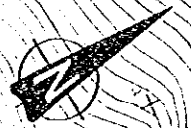
Elevation (m)	Storage Area (m ² )	Cumulative Volume (m ³ )
87	0	0
90	0	0
95	1,035	3,000
100	9,080	28,000
105	16,040	91,000
110	26,330	197,000
115	35,795	352,000
120	68,476	613,000
125	282,352	1,490,000
130	482,722	3,403,000
135	608,169	6,130,000
140	738,074	9,496,000
145	885,090	13,554,000
150	1,049,448	18,390,000
155	1,198,840	24,011,000
160	1,343,950	30,368,000
165	1,497,070	37,471,000



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		PROJECT NAME FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
GEOLOGY RESERVOIR AREA MAP AND STORAGE CAPACITY CURVE		DISTRICT SEMARANG CITY
DRAWING NO. JD-P1-GD-P1-3 SHEET NO. 3		DATE CONTRACT NO.
DAPAN INTERNATIONAL COOPERATION AGENCY CTE ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL PAKO INTERNATIONAL INC.		DESIGNED CHECKED
CHIEF OF PLANNING AND DESIGN PROJECT MANAGER		APPROVED

NO.	DATE	REVISIONS	ORIGINATED	DESIGNED	APPROVED





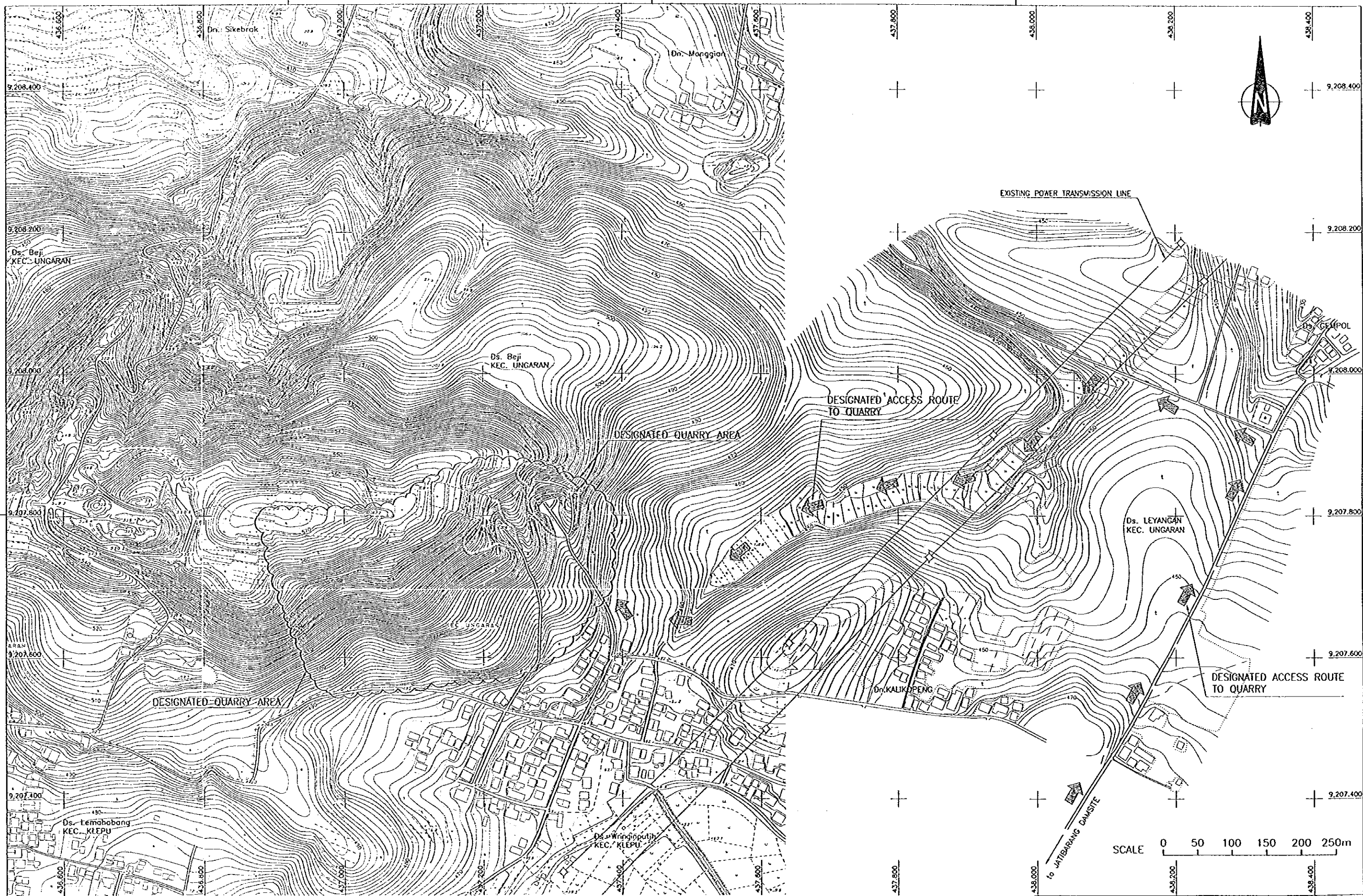
**NOTES**

1. ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE NOTED.

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>PROVINCE          CENTRAL JAVA</p>
<p>FRATUNSELUNA FLOOD CONTROL PROJECT          COMPONENT: JATIBARANG DAM CONSTRUCTION</p>		<p>PROJECT NAME          FLOOD CONTROL, URBAN DRAINAGE AND          WATER RESOURCES DEVELOPMENT IN          SEMARANG IN THE REPUBLIC OF INDONESIA</p>
<p>GENERAL DRAWING          GENERAL PLAN OF DAMSITE</p>		<p>DISTRICT          SEMARANG CITY</p>
<p>JAPAN INTERNATIONAL COOPERATION AGENCY          CITY ENGINEERING CO., LTD. IN ASSOCIATION WITH          PACIFIC CONSULTANTS INTERNATIONAL          TAIKO INTERNATIONAL INC.</p>		<p>DRAWING NO. JO-P1-GD-P1-4          SHEET NO. 4</p>
<p>DESIGNED          CHECKED          CHIEF OF PLANNING AND DESIGN          PROJECT MANAGER</p>		<p>DATE          CONTRACT NO.</p>





**NOTES**

1. LOCATION IS REFERRED FROM DRAWING NO. JD-P1-GD-PI-1.
2. AREA TO BE EXCAVATED SHALL BE APPROVED BY THE ENGINEER.

**REFERENCE DRAWINGS**

- JD-P1-GD-PI-1 LOCATION PLAN
- JD-P1-GE-QU-1 GEOLOGY - LOCATION MAP OF DRILLINGS AND GEOLOGICAL PROFILE AT QUARRY

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 GENERAL DRAWINGS QUARRY AREA MAP		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-GD-PI-5 SHEET NO. 4-2 DATE CONTRACTING
JAPAN INTERNATIONAL COOPERATION AGENCY CIL ENGINEERING CO., LTD. IN ASSOCIATION WITH PACIFIC CONSULTANTS INTERNATIONAL PACIFIC INTERNATIONAL INC.	DESIGNED CHECKED CHIEF OF PLANNING AND DESIGN PROJECT MANAGER	APPROVED 