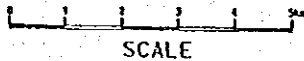
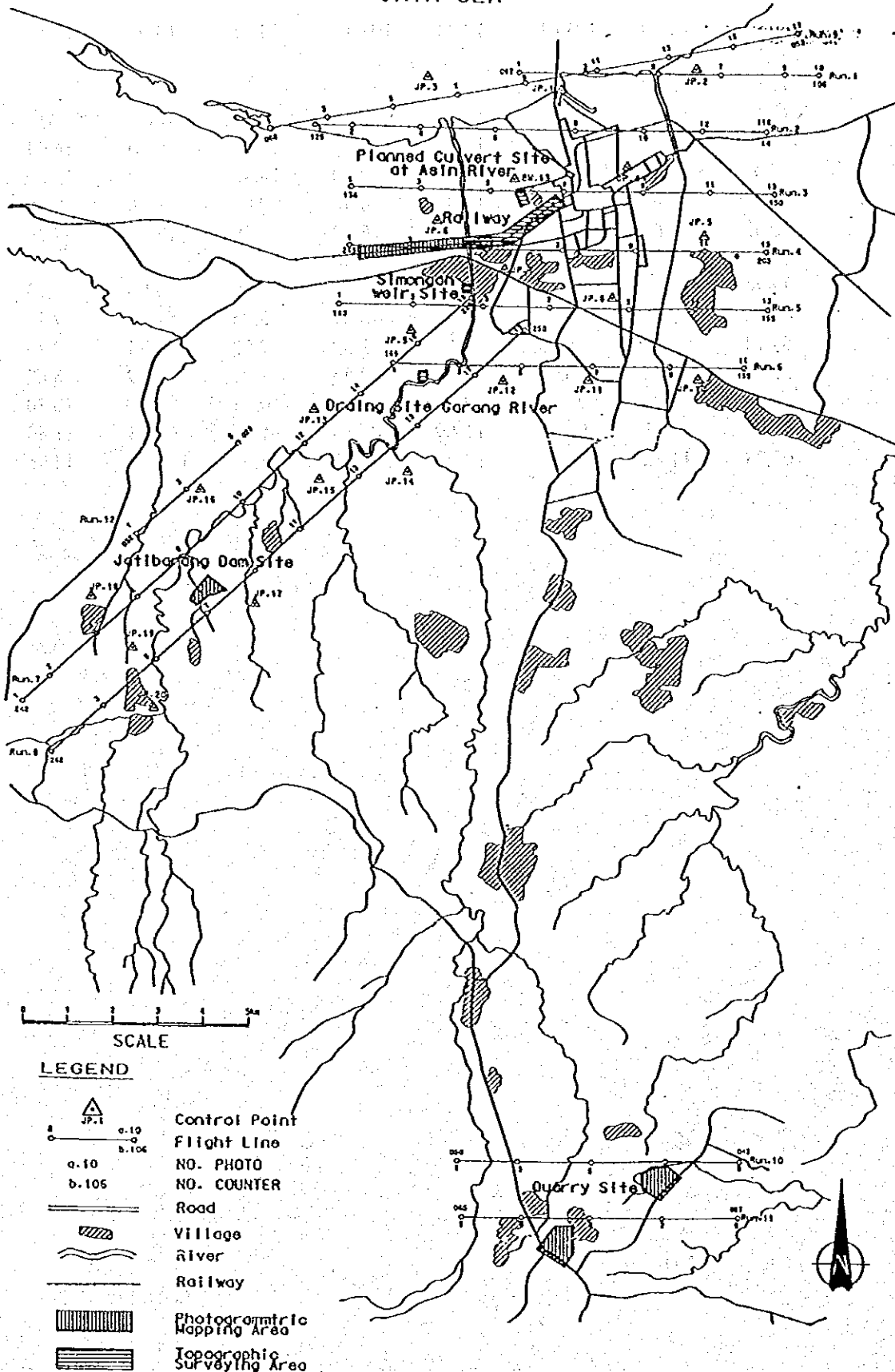


JAVA SEA



LEGEND

- Control Point
- Flight Line
- NO. PHOTO
- NO. COUNTER
- Road
- Village
- River
- Railway
- Photogramtric Mapping Area
- Topographic Surveying Area

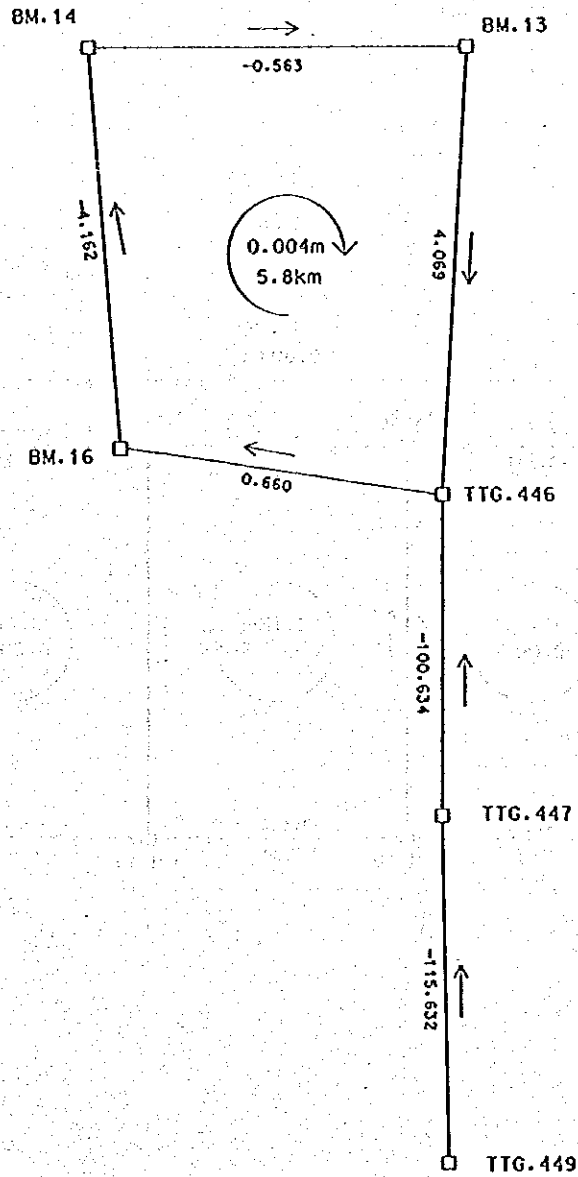
THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

Fig. 3.1

Field Verification

JAPAN INTERNATIONAL COOPERATION AGENCY

LEVELING NETWORK (SUBSIDENCE CHECKING)



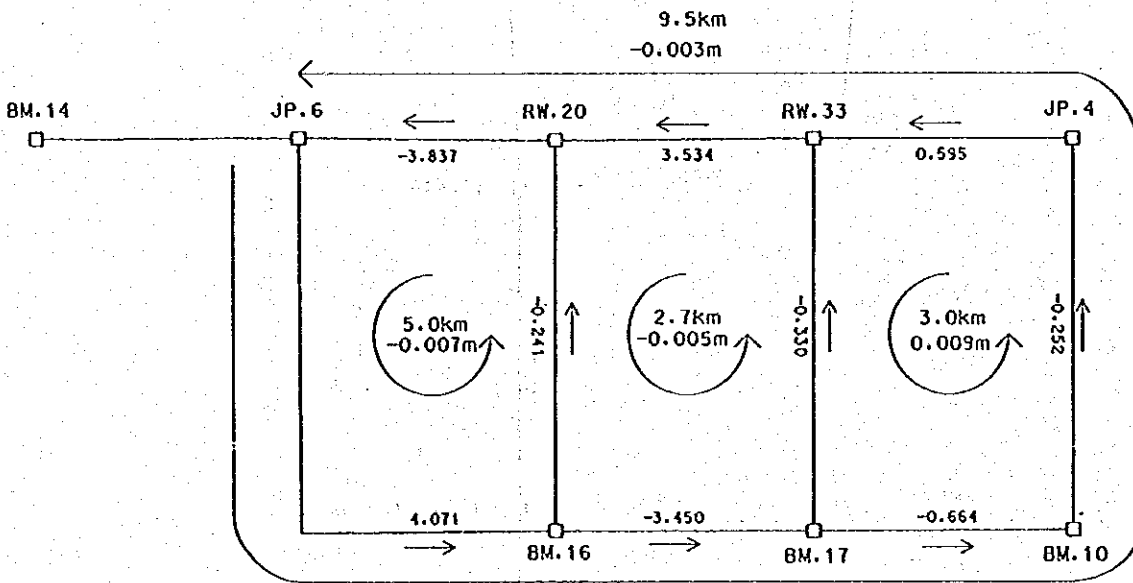
THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

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Fig. 3.2.2

Leveling Quality Control (Subsidence)

LEVELING NETWORK (SETTING UP RAILWAY)

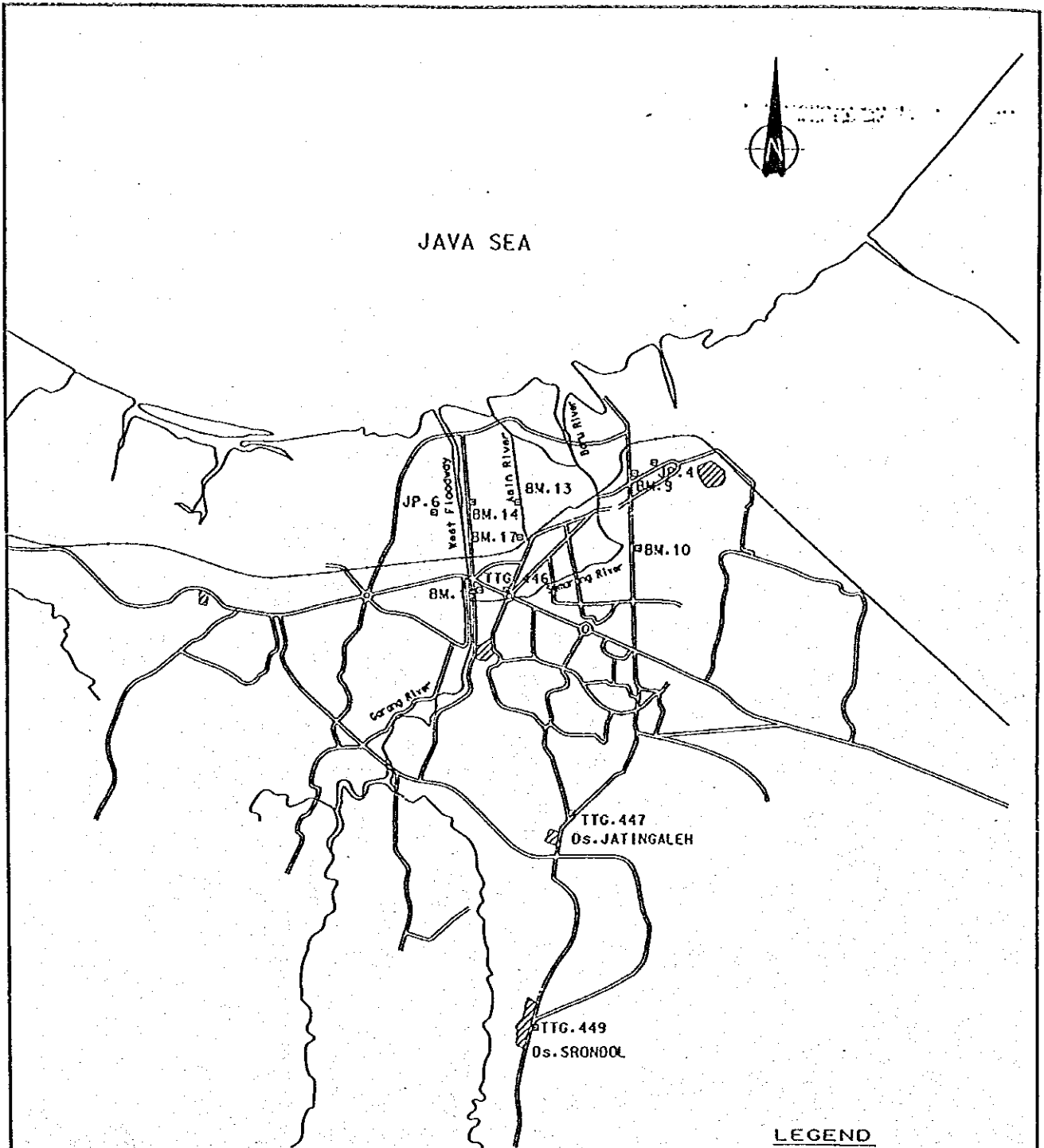


THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

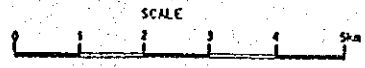
Fig. 3.3.3

Leveling Quality Control (Railway)



LEGEND

- TTG.449 Benchmark
- ==== Road
- ▨ Village
- ~~~~ River
- +—+— Railway



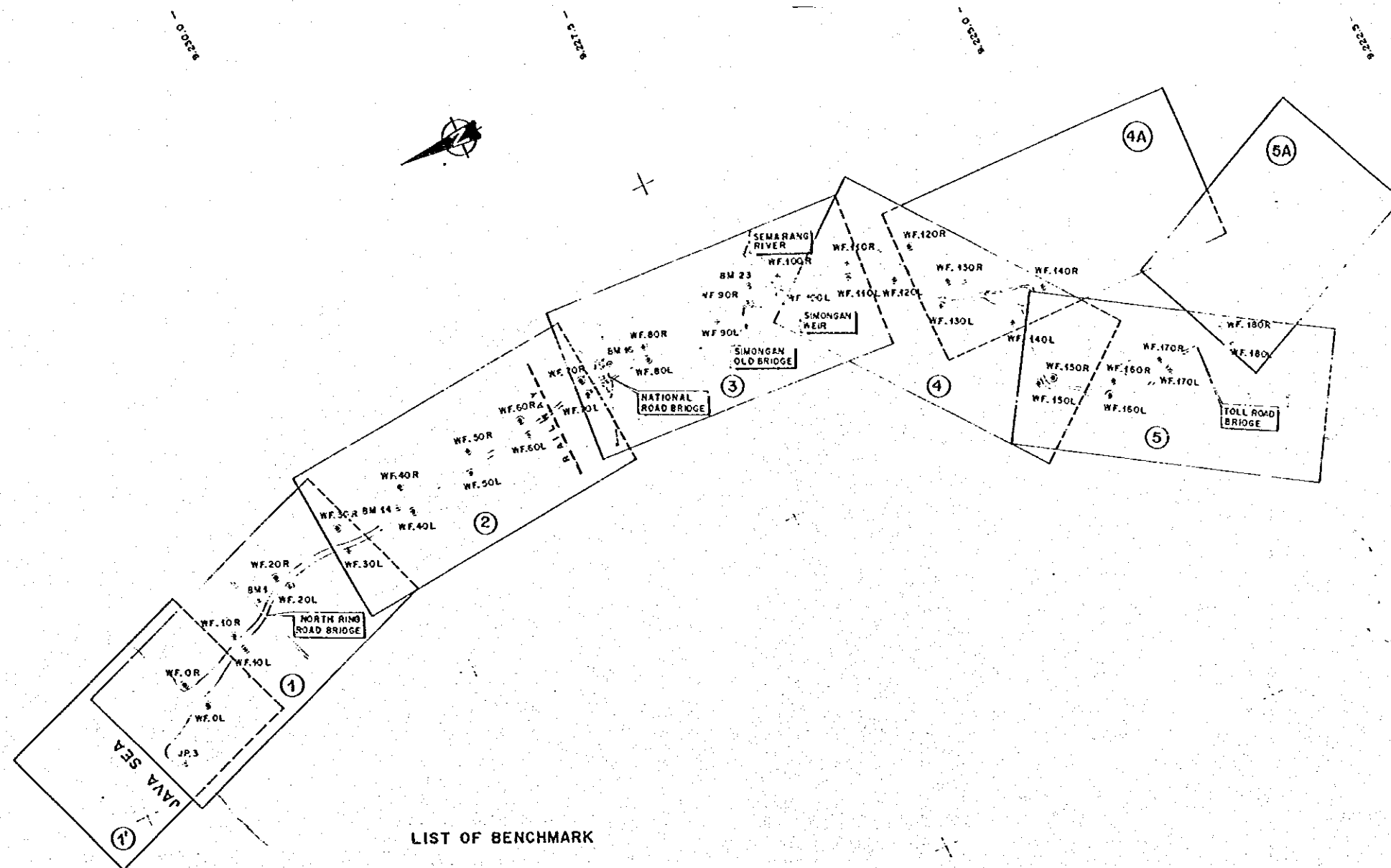
Station	Established	Elevation			Difference (1998-1997)
		BAKOSURTAMAL	JICA Study Team (1997)	JICA Study Team (1998)	
TTG.447	Mar. 1983	104.987 (Sep. 1983)	104.987 (Aug. 1997)	104.987 (Aug. 1998)	Fix
TTG.446	Feb. 1983	4.563 (Sep. 1983)	4.362 (Aug. 1997)	4.353 (Aug. 1998)	-0.009
BM.9	Jul. 1997		0.287 (Aug. 1997)	0.197 (Aug. 1998)	-0.090
BM.10	Jul. 1997		0.968 (Aug. 1997)	0.897 (Aug. 1998)	-0.071
BM.13	Jul. 1997		0.343 (Aug. 1997)	0.285 (Aug. 1998)	-0.058
BM.14	Jul. 1997		0.892 (Aug. 1997)	0.849 (Aug. 1998)	-0.043
BM.16	Jul. 1997		5.023 (Aug. 1997)	5.012 (Aug. 1998)	-0.012
BM.17	Jul. 1997		1.604 (Aug. 1997)	1.564 (Aug. 1998)	-0.040
JP.4	Jul. 1997		0.744 (Aug. 1997)	0.644 (Aug. 1998)	-0.100
JP.6	Jul. 1997		0.386 (Aug. 1997)	0.338 (Aug. 1998)	-0.048

THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

Fig. 3.4

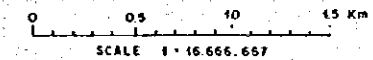
Subsidence

JAPAN INTERNATIONAL COOPERATION AGENCY



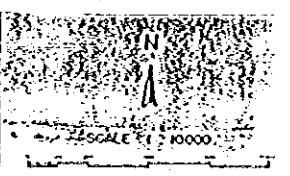
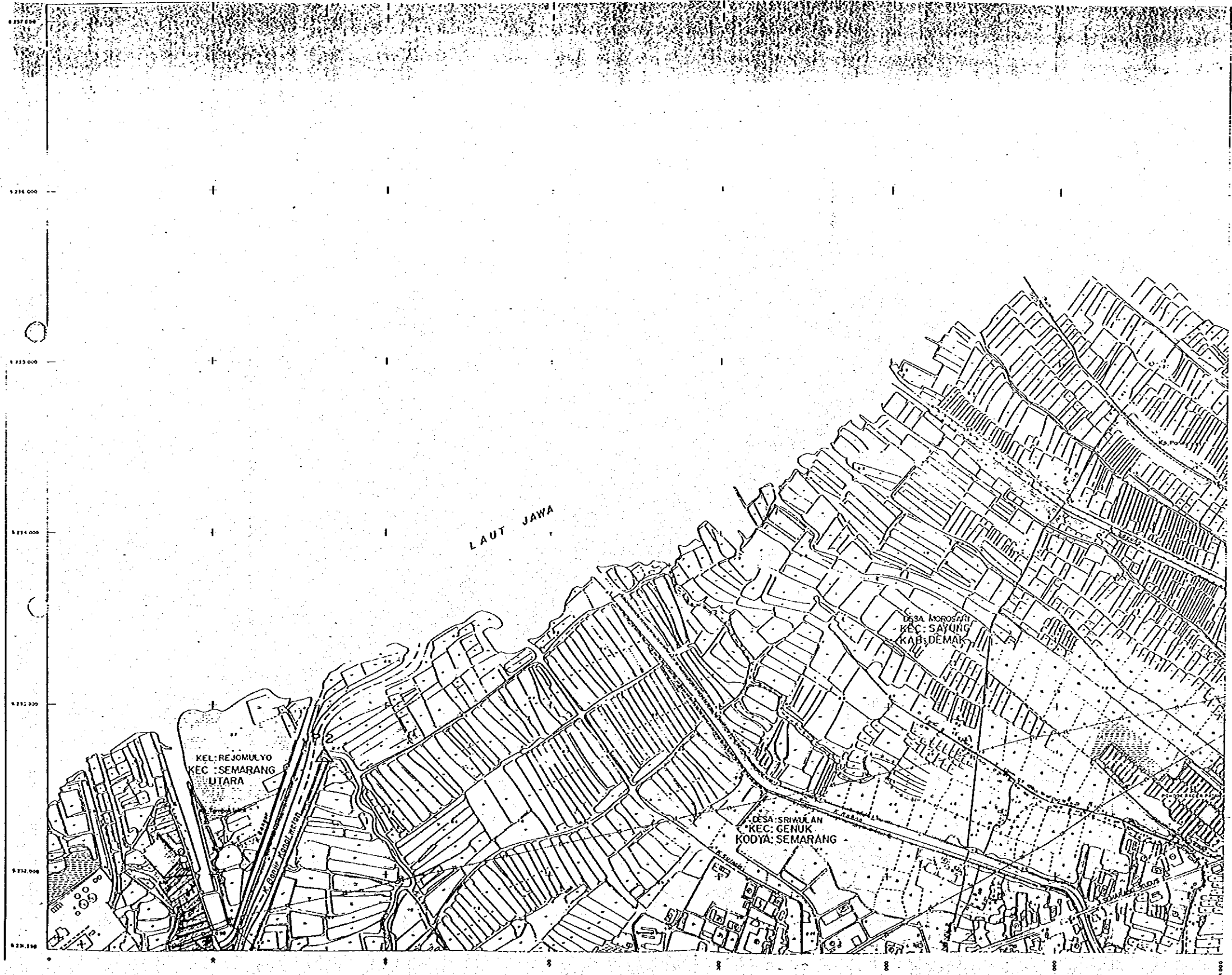
LIST OF BENCHMARK

BENCHMARK	NORTHING	EASTING	ELEVATION	BENCHMARK	NORTHING	EASTING	ELEVATION
WF.0L	9,231,815.846	433,108.376	0.452	WF.0R	9,231,907.759	433,291.856	0.214
WF.10L	9,231,377.243	433,347.574	0.662	WF.10R	9,231,427.865	433,481.435	2.565
WF.20L	9,230,916.892	433,541.171	1.274	WF.20R	9,230,953.067	433,660.524	1.041
JP-3	9,232,127.943	432,853.829	0.926	BM.1	-	-	0.593
WF.30L	9,230,431.588	433,658.313	0.608	WF.30R	9,230,460.330	433,821.239	1.070
WF.40L	9,229,932.472	433,694.915	1.060	WF.40R	9,229,961.498	433,883.901	1.126
WF.50L	9,229,438.130	433,768.858	2.028	WF.50R	9,229,449.531	433,899.152	1.274
WF.60L	9,228,942.315	433,827.275	2.668	WF.60R	9,228,947.972	433,914.895	2.237
BM.14	-	-	0.892	WF.70R	9,228,450.046	433,962.260	3.742
WF.70L	9,228,442.951	433,871.323	4.994	WF.80R	9,227,945.059	434,006.242	5.578
BM.16	-	-	5.023	WF.90R	9,227,447.129	434,039.912	5.924
WF.80L	9,227,942.940	433,921.077	4.185	BM.23	-	-	6.672
WF.90L	9,227,443.775	433,956.295	5.707	WF.100R	9,226,939.702	434,036.468	8.602
WF.100L	9,226,945.269	433,949.563	8.634	WF.110R	9,226,445.572	433,895.695	12.604
WF.110L	9,226,455.004	433,839.899	14.000	WF.120R	9,226,015.528	433,820.669	11.046
WF.120L	9,226,200.718	433,650.883	11.122	WF.130R	9,225,865.354	433,478.685	11.209
WF.130L	9,225,971.448	433,360.744	10.450	WF.140R	9,225,315.852	433,174.392	9.960
WF.140L	9,225,806.343	433,048.607	13.213	WF.150R	9,225,506.446	432,584.507	11.184
WF.150L	9,225,585.447	432,570.587	11.190	WF.160R	9,225,113.825	432,406.006	14.492
WF.160L	9,225,184.233	432,336.425	9.321	WF.170R	9,224,758.219	432,403.999	14.260
WF.170L	9,225,736.620	432,329.047	9.475	WF.180R	9,224,291.145	432,405.201	11.827
WF.180L	9,224,250.068	432,311.727	12.149				



THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
 JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 3.5
 LOCATION OF BENCHMARK



LEGEND

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
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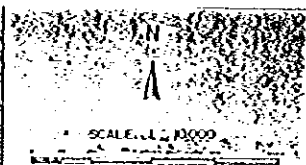
INDEX OF ADJOINING SHEETS

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
				19	20

THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 3.6 (2/5)
TOPOGRAPHIC MAP



INDEX TO TOPOGRAPHIC SHEETS

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24

THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 3.6 (3/5)
TOPOGRAPHIC MAP



SCALE 1:10000

LEGEND

■	▲	▤
▥	▦	▧
▨	▩	◌
◐	◑	◒
◓	◔	◕
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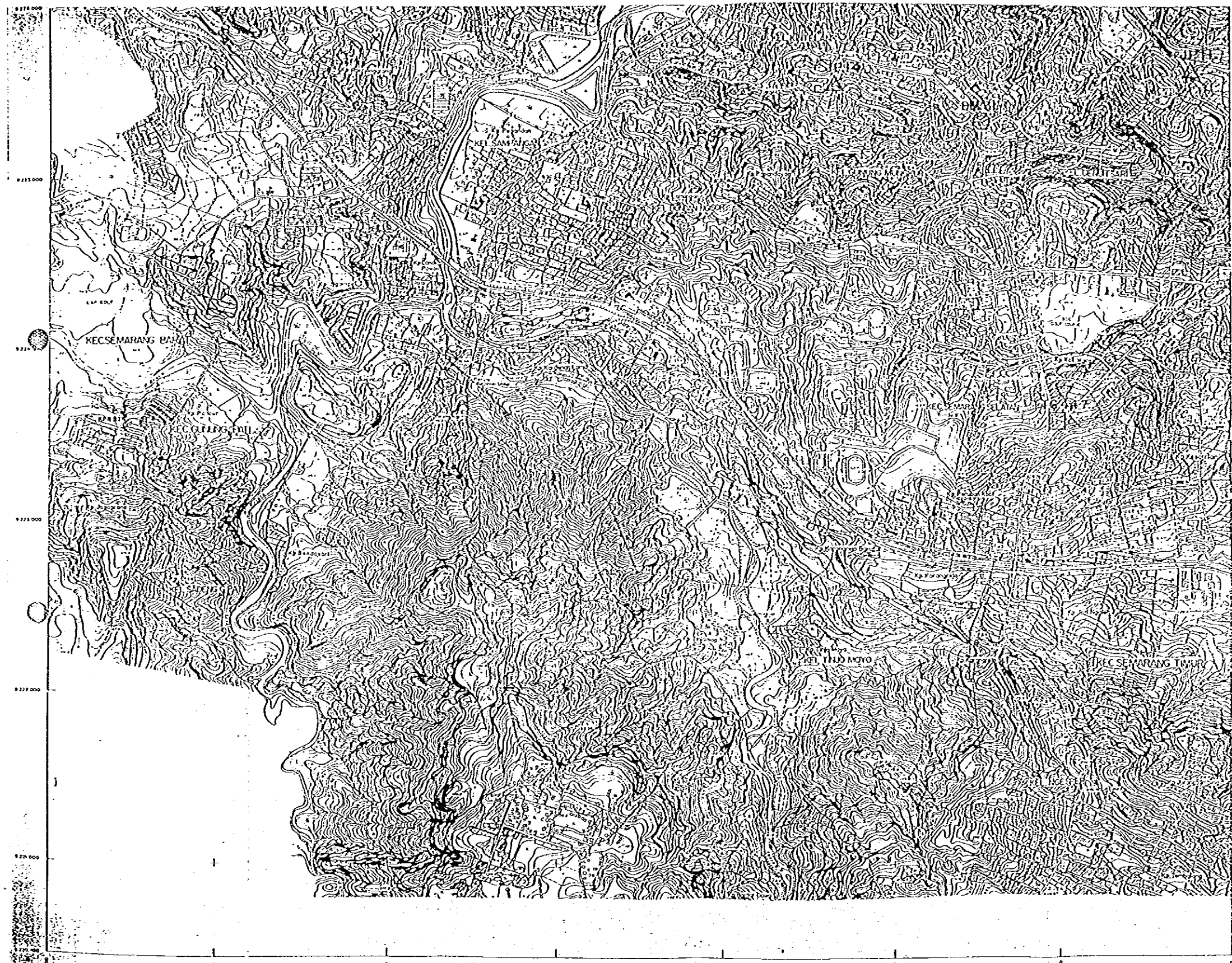
NO. OF ADJACENT SHEETS

1	2	3	4	5	6
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13	14	15	16	17	18
19					

THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 3.6 (4/5) TOPOGRAPHIC MAP



SCALE 1:10000

LEGEND

05	Contour lines	Symbol
06	Water	Symbol
07	Urban area	Symbol
08	Open area	Symbol
09	Forest	Symbol
10	Plantation	Symbol
11	Road	Symbol
12	Railway	Symbol
13	Canal	Symbol
14	Ditch	Symbol
15	Well	Symbol
16	Public building	Symbol
17	Religious building	Symbol
18	Industrial building	Symbol
19	Other building	Symbol

INDEX

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18

THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 3.6 (5/5)
TOPOGRAPHIC MAP









JICA