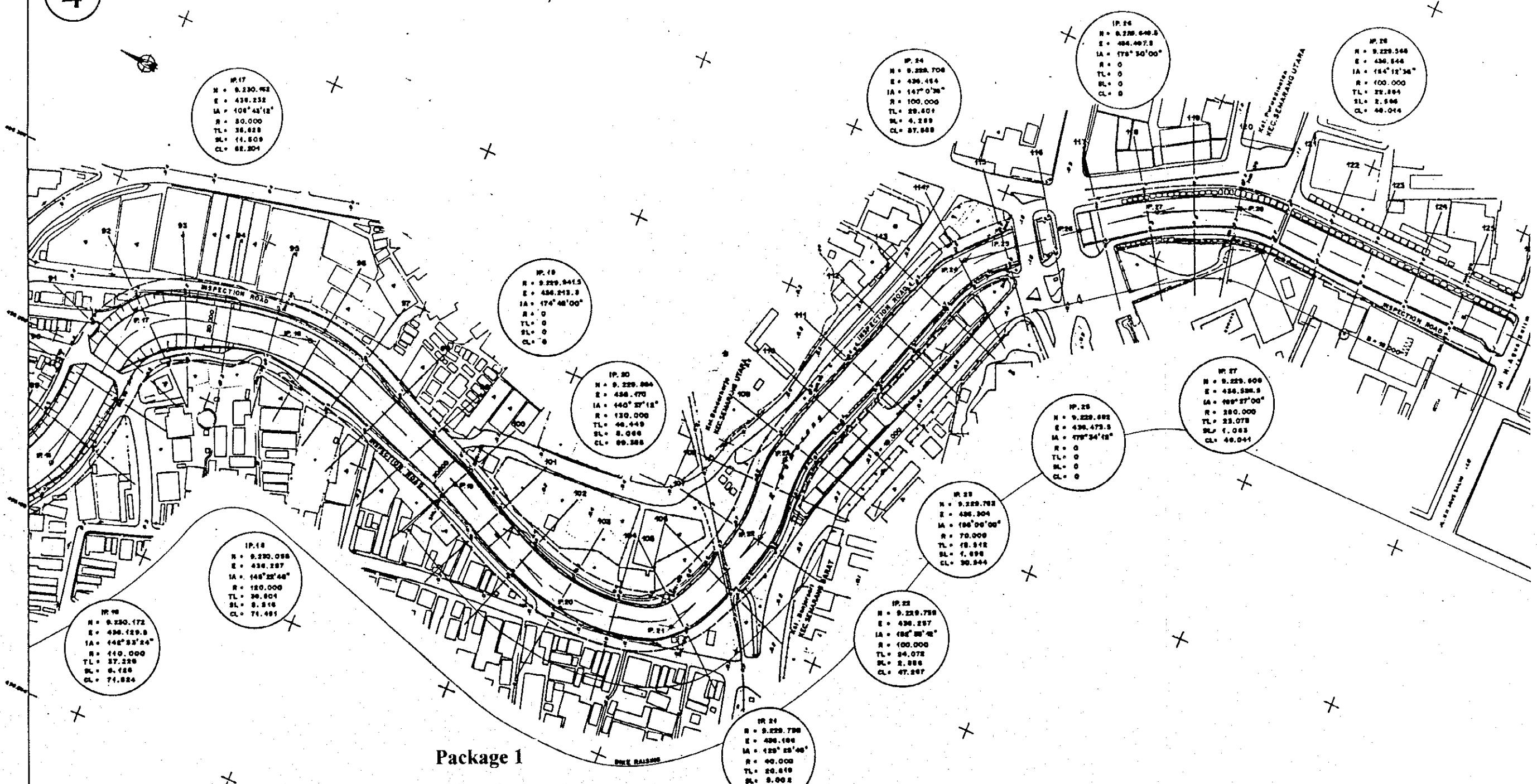
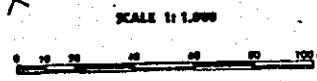


4

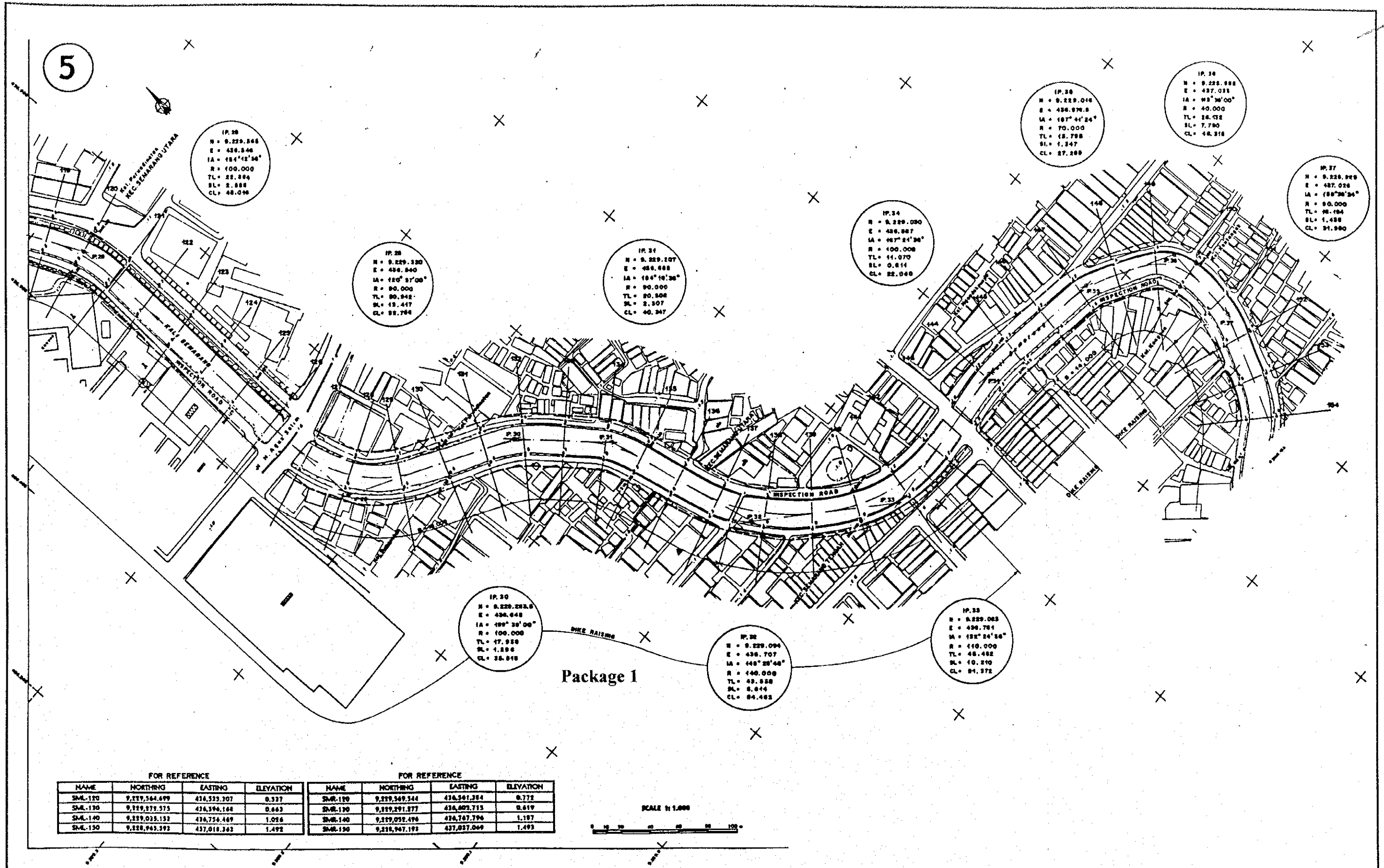


FOR REFERENCE				FOR REFERENCE			
NAME	NORTHING	EASTING	ELEVATION	NAME	NORTHING	EASTING	ELEVATION
SM-L-90	9,220,131.674	426,179.274	0.914	SM-L-90	9,220,190.877	426,196.384	0.500
SM-L-100	9,219,947.205	426,203.807	0.233	SM-L-100	9,219,926.999	426,222.946	0.172
SM-L-110	9,219,739.313	426,237.607	0.486	SM-L-110	9,219,763.692	426,246.672	0.664
SM-L-120	9,219,564.699	426,335.207	0.327	SM-L-120	9,219,569.544	426,361.264	0.772

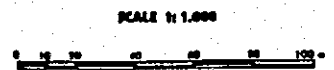


THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
 JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 6.2.2 (3/7)
 SEMARANG RIVER PLAN (3/7)



FOR REFERENCE				FOR REFERENCE			
NAME	NORTHING	EASTING	ELEVATION	NAME	NORTHING	EASTING	ELEVATION
SMR-120	9,229,364.699	426,523.207	0.527	SMR-120	9,229,349.344	426,561.384	0.772
SMR-130	9,229,279.575	426,596.148	0.663	SMR-130	9,229,291.577	426,602.715	0.619
SMR-140	9,229,033.132	426,756.469	1.026	SMR-140	9,229,052.496	426,767.796	1.187
SMR-150	9,228,963.392	427,018.262	1.492	SMR-150	9,228,947.192	427,037.069	1.493



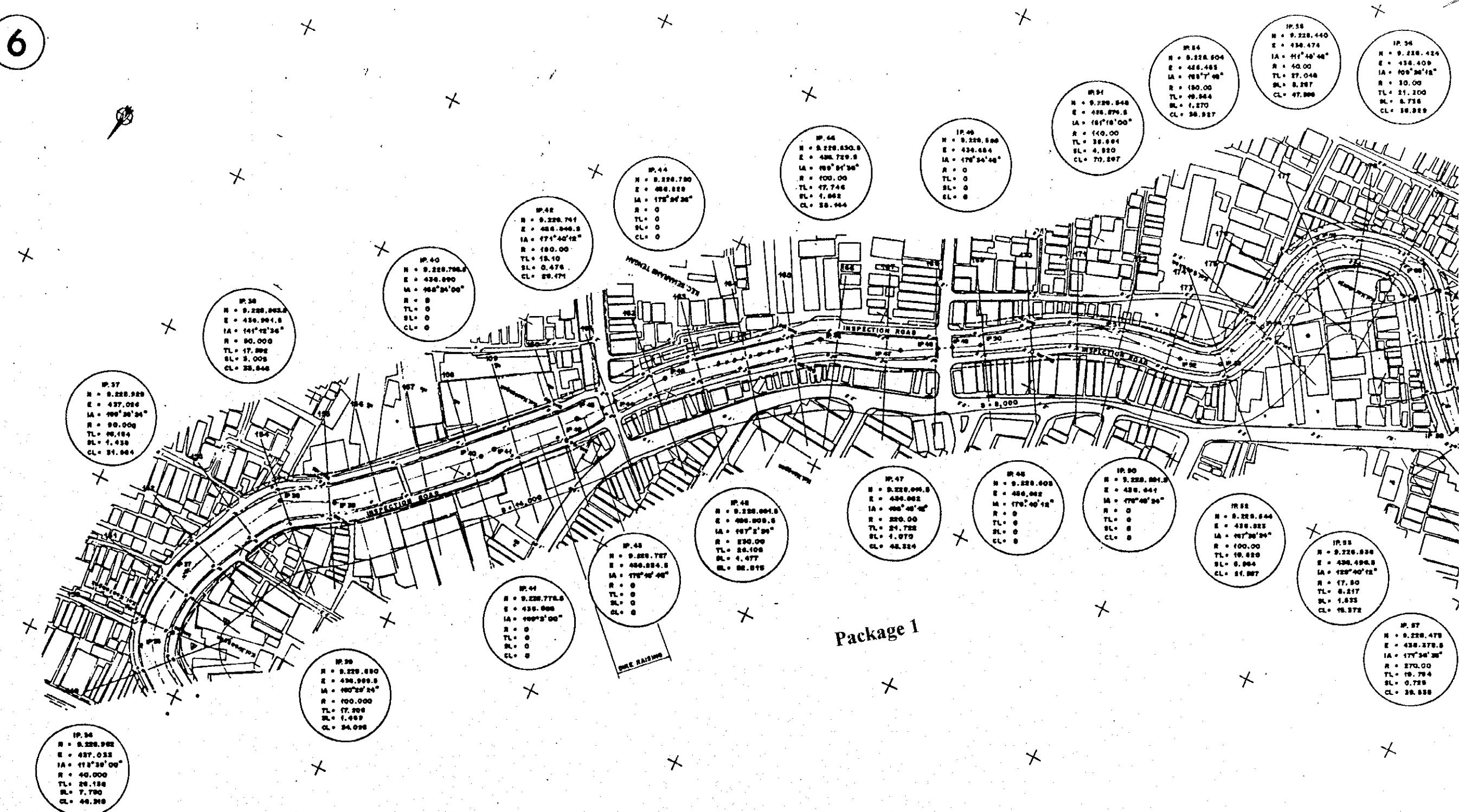
THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

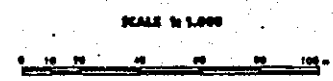
Fig. 6.2.2 (4/7)

SEMARANG RIVER PLAN (4/7)

6



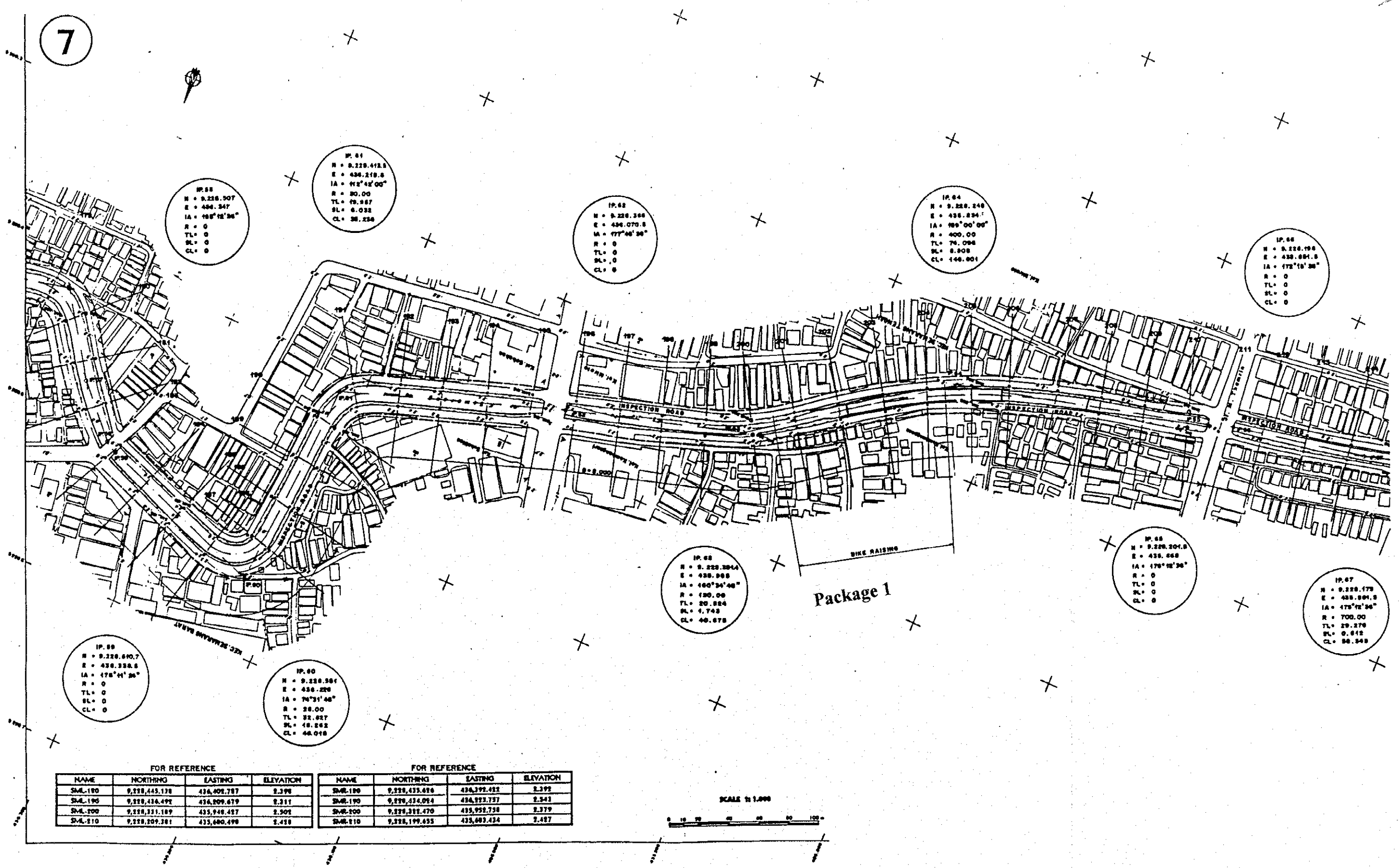
FOR REFERENCE				FOR REFERENCE			
NAME	NORTHING	EASTING	ELEVATION	NAME	NORTHING	EASTING	ELEVATION
SM-130	9,229,945.393	437,619.343	1.492	SM-130	9,229,947.193	437,637.669	1.492
SM-140	9,229,733.001	436,646.474	1.647	SM-140	9,229,746.903	436,639.763	1.703
SM-170	9,229,377.918	436,609.199	1.924	SM-170	9,229,349.614	436,613.130	1.931
SM-190	9,229,443.178	436,407.787	2.398	SM-190	9,229,423.626	436,392.422	2.392



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

Fig. 6.2.2 (5/7)
 SEMARANG RIVER PLAN (5/7)

7

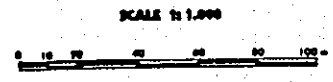


FOR REFERENCE

NAME	NORTHING	EASTING	ELEVATION
SM-L-180	9,228,443.138	434,409.787	2.398
SM-L-190	9,228,436.492	434,209.679	2.311
SM-L-200	9,228,331.189	433,948.437	2.301
SM-L-210	9,228,209.381	433,680.498	2.418

FOR REFERENCE

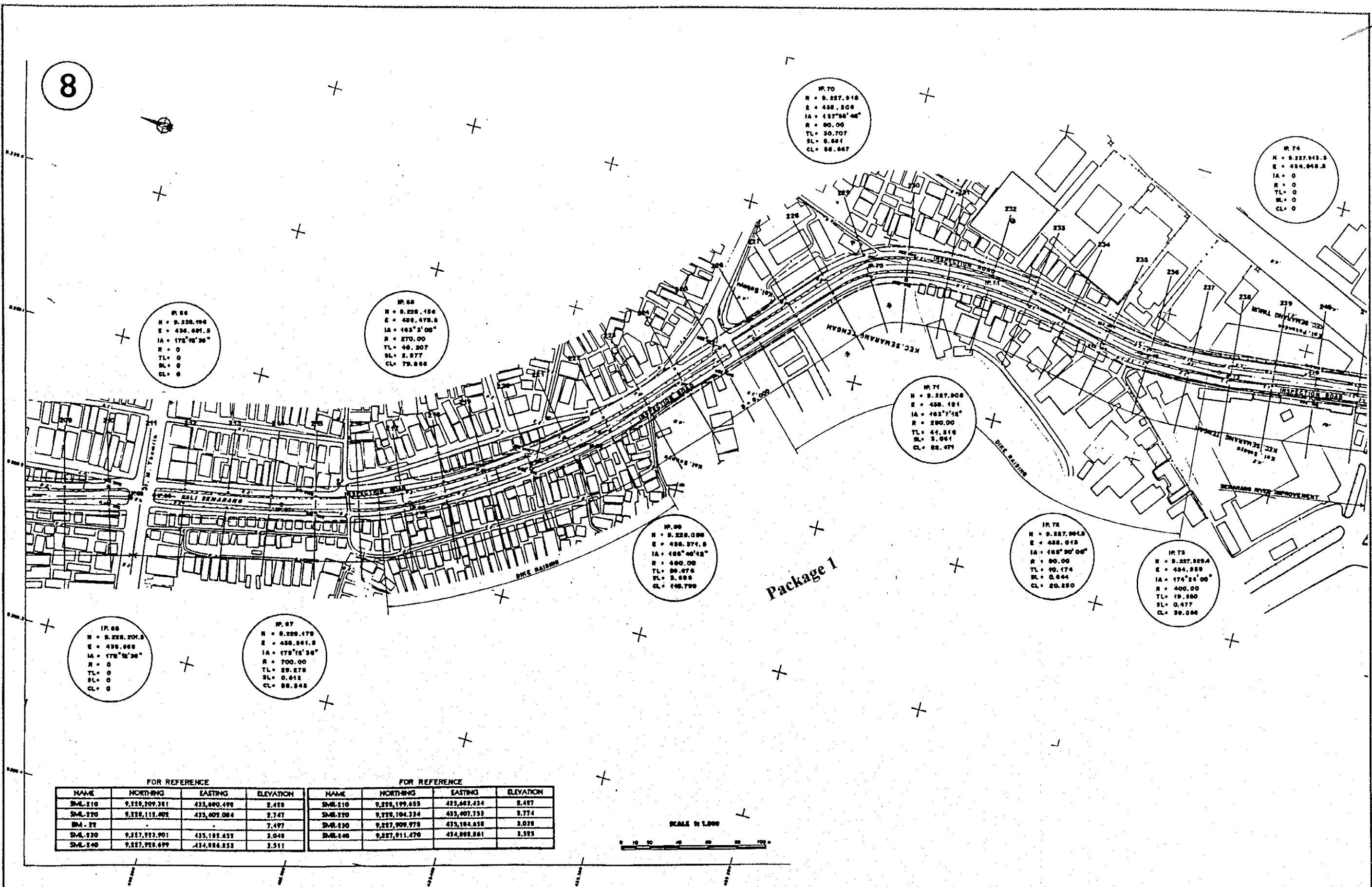
NAME	NORTHING	EASTING	ELEVATION
SM-R-180	9,228,433.674	434,392.432	2.392
SM-R-190	9,228,434.094	434,333.737	2.343
SM-R-200	9,228,333.470	433,952.738	2.379
SM-R-210	9,228,199.633	433,687.434	2.427



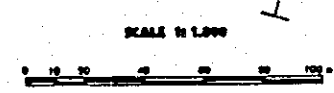
THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
 JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 6.2.2 (6/7)
 SEMARANG RIVER PLAN (6/7)

8

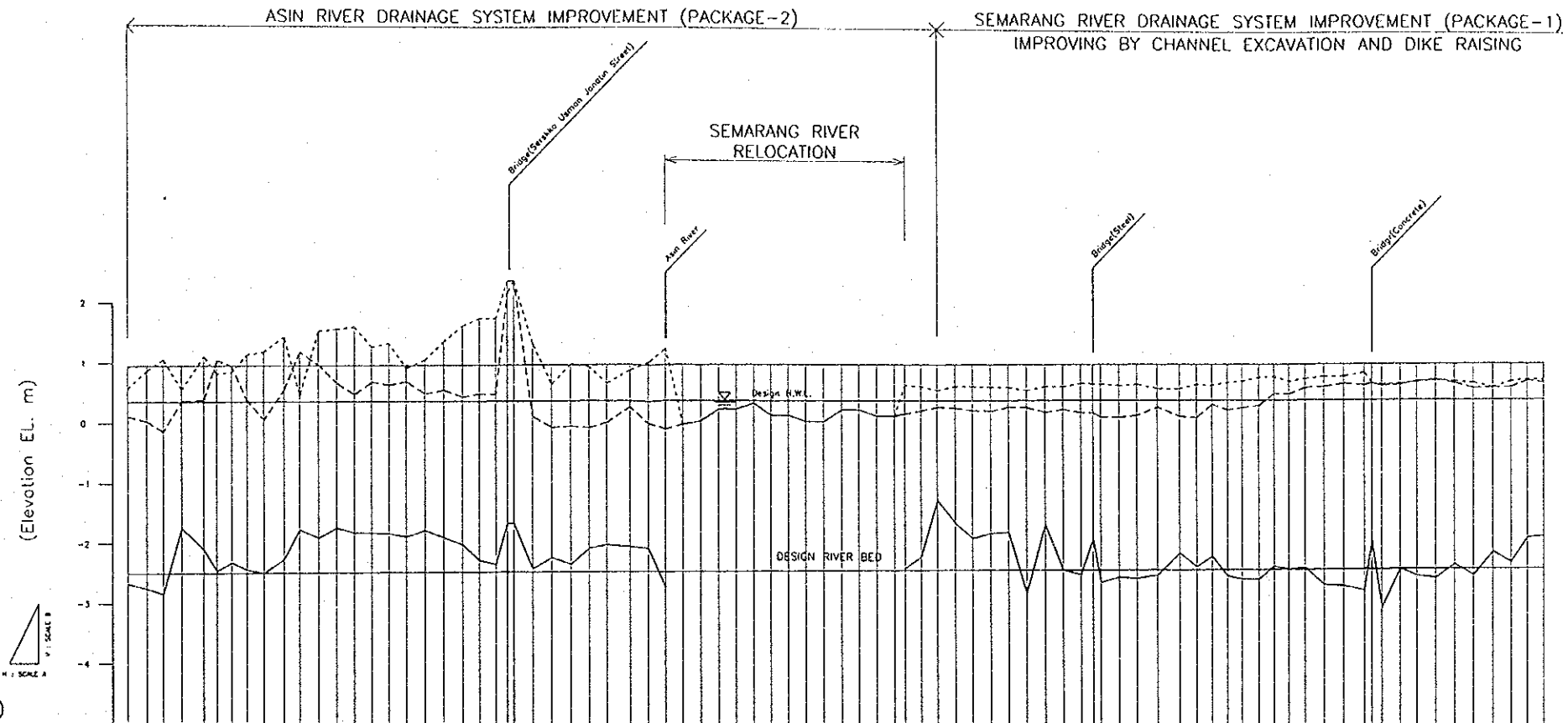


FOR REFERENCE				FOR REFERENCE			
NAME	NORTHING	EASTING	ELEVATION	NAME	NORTHING	EASTING	ELEVATION
SMB-118	9,228,209.381	433,680.498	2.428	SMB-110	9,228,199.853	433,682.434	2.487
SMB-119	9,228,111.802	433,402.084	2.747	SMB-111	9,228,104.334	433,407.733	2.774
BM-22			2.497	SMB-120	9,227,909.978	433,184.638	2.028
SMB-120	9,227,922.901	433,182.632	2.048	SMB-140	9,227,911.470	434,888.861	2.525
SMB-140	9,227,928.699	434,886.833	2.511				

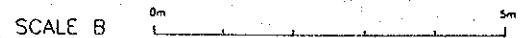


THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
 JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 6.2.2 (7/7)
 SEMARANG RIVER PLAN (7/7)



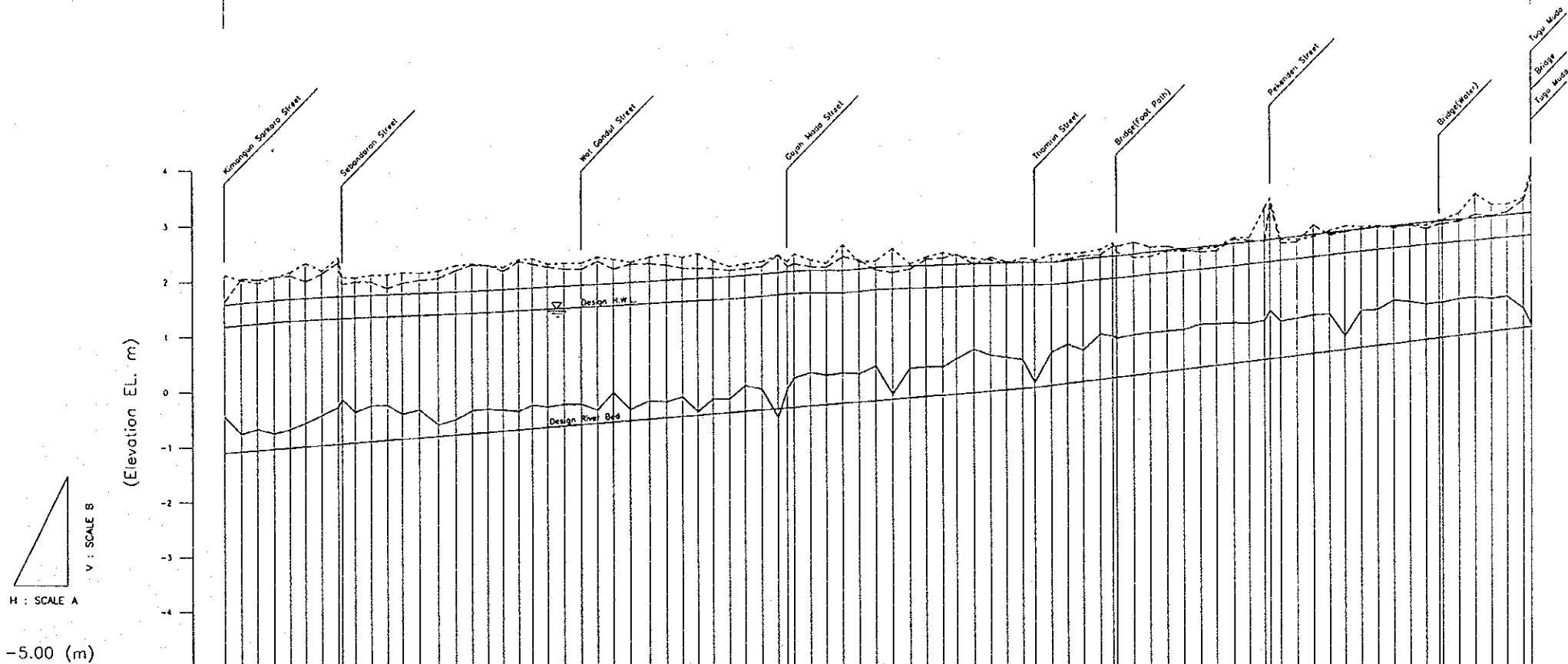
GRADIENT OF DESIGN RIVER BED		1:10,000	
DESIGN ELEVATION (EL. m)	DIKE CROWN	0.950	1.145
	HIGH WATER LEVEL (H.W.L.)	0.350	0.546
	RIVER BED	-2.500	-2.260
EXISTING ELEVATION (EL. m)	RIGHT BANK	0.580	0.830
	LEFT BANK	0.110	0.670
	LOWEST RIVER BED	-2.670	-1.720
DISTANCE (m)	ACCUMULATED	0.000	2400.97
	PARTIAL	31.846	28.215
STATION NO. (SMR-)		0	79



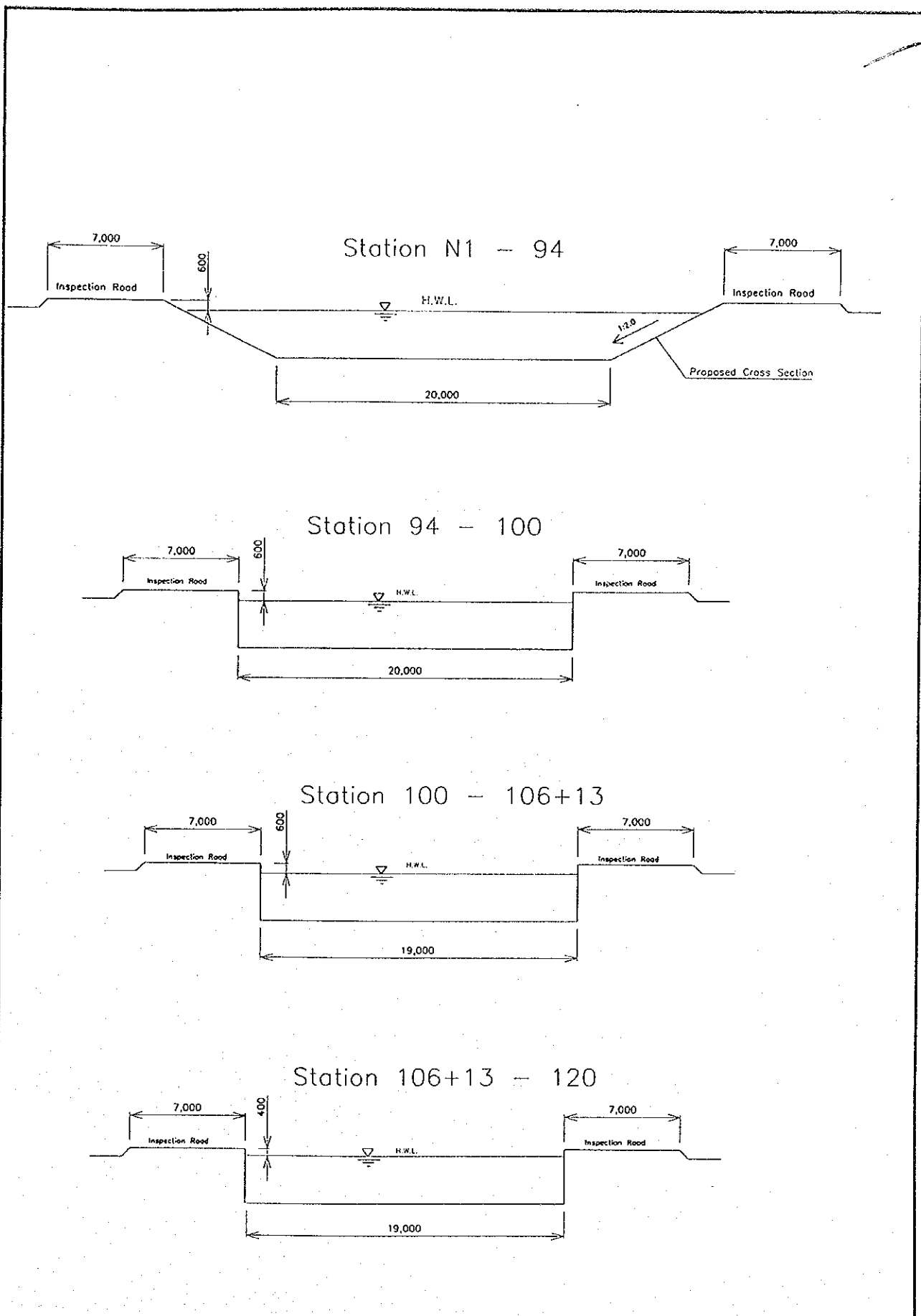
THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
 JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 6.2.3 (1/3)
 SEMARANG RIVER LONGITUDINAL PROFILE (1/3)

IMPROVEMENT BY CHANNEL EXCAVATION AND DIKE RAISING



GRADIENT OF DESIGN RIVER BED		1=1/1,200		1=1/800																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
DESIGN ELEVATION (EL. m)	DIKE CROWN	1.554	1.623	1.651	1.680	1.709	1.726	1.744	1.762	1.780	1.797	1.815	1.832	1.849	1.866	1.883	1.900	1.917	1.934	1.951	1.968	1.985	2.002	2.019	2.036	2.053	2.070	2.087	2.104	2.121	2.138	2.155	2.172	2.189	2.206	2.223	2.240	2.257	2.274	2.291	2.308	2.325	2.342	2.359	2.376	2.393	2.410	2.427	2.444	2.461	2.478	2.495	2.512	2.529	2.546	2.563	2.580	2.597	2.614	2.631	2.648	2.665	2.682	2.699	2.716	2.733	2.750	2.767	2.784	2.801	2.818	2.835	2.852	2.869	2.886	2.903	2.920	2.937	2.954	2.971	2.988	3.005	3.022	3.039	3.056	3.073	3.090	3.107	3.124	3.141	3.158	3.175	3.192	3.209	3.226	3.243	3.260	3.277	3.294	3.311	3.328	3.345	3.362	3.379	3.396	3.413	3.430	3.447	3.464	3.481	3.498	3.515	3.532	3.549	3.566	3.583	3.600	3.617	3.634	3.651	3.668	3.685	3.702	3.719	3.736	3.753	3.770	3.787	3.804	3.821	3.838	3.855	3.872	3.889	3.906	3.923	3.940	3.957	3.974	3.991	4.008	4.025	4.042	4.059	4.076	4.093	4.110	4.127	4.144	4.161	4.178	4.195	4.212	4.229	4.246	4.263	4.280	4.297	4.314	4.331	4.348	4.365	4.382	4.399	4.416	4.433	4.450	4.467	4.484	4.501	4.518	4.535	4.552	4.569	4.586	4.603	4.620	4.637	4.654	4.671	4.688	4.705	4.722	4.739	4.756	4.773	4.790	4.807	4.824	4.841	4.858	4.875	4.892	4.909	4.926	4.943	4.960	4.977	4.994	5.011	5.028	5.045	5.062	5.079	5.096	5.113	5.130	5.147	5.164	5.181	5.198	5.215	5.232	5.249	5.266	5.283	5.300	5.317	5.334	5.351	5.368	5.385	5.402	5.419	5.436	5.453	5.470	5.487	5.504	5.521	5.538	5.555	5.572	5.589	5.606	5.623	5.640	5.657	5.674	5.691	5.708	5.725	5.742	5.759	5.776	5.793	5.810	5.827	5.844	5.861	5.878	5.895	5.912	5.929	5.946	5.963	5.980	5.997	6.014	6.031	6.048	6.065	6.082	6.099	6.116	6.133	6.150	6.167	6.184	6.201	6.218	6.235	6.252	6.269	6.286	6.303	6.320	6.337	6.354	6.371	6.388	6.405	6.422	6.439	6.456	6.473	6.490	6.507	6.524	6.541	6.558	6.575	6.592	6.609	6.626	6.643	6.660	6.677	6.694	6.711	6.728	6.745	6.762	6.779	6.796	6.813	6.830	6.847	6.864	6.881	6.898	6.915	6.932	6.949	6.966	6.983	7.000	7.017	7.034	7.051	7.068	7.085	7.102	7.119	7.136	7.153	7.170	7.187	7.204	7.221	7.238	7.255	7.272	7.289	7.306	7.323	7.340	7.357	7.374	7.391	7.408	7.425	7.442	7.459	7.476	7.493	7.510	7.527	7.544	7.561	7.578	7.595	7.612	7.629	7.646	7.663	7.680	7.697	7.714	7.731	7.748	7.765	7.782	7.799	7.816	7.833	7.850	7.867	7.884	7.901	7.918	7.935	7.952	7.969	7.986	8.003	8.020	8.037	8.054	8.071	8.088	8.105	8.122	8.139	8.156	8.173	8.190	8.207	8.224	8.241	8.258	8.275	8.292	8.309	8.326	8.343	8.360	8.377	8.394	8.411	8.428	8.445	8.462	8.479	8.496	8.513	8.530	8.547	8.564	8.581	8.598	8.615	8.632	8.649	8.666	8.683	8.700	8.717	8.734	8.751	8.768	8.785	8.802	8.819	8.836	8.853	8.870	8.887	8.904	8.921	8.938	8.955	8.972	8.989	9.006	9.023	9.040	9.057	9.074	9.091	9.108	9.125	9.142	9.159	9.176	9.193	9.210	9.227	9.244	9.261	9.278	9.295	9.312	9.329	9.346	9.363	9.380	9.397	9.414	9.431	9.448	9.465	9.482	9.499	9.516	9.533	9.550	9.567	9.584	9.601	9.618	9.635	9.652	9.669	9.686	9.703	9.720	9.737	9.754	9.771	9.788	9.805	9.822	9.839	9.856	9.873	9.890	9.907	9.924	9.941	9.958	9.975	9.992	10.009	10.026	10.043	10.060	10.077	10.094	10.111	10.128	10.145	10.162	10.179	10.196	10.213	10.230	10.247	10.264	10.281	10.298	10.315	10.332	10.349	10.366	10.383	10.400	10.417	10.434	10.451	10.468	10.485	10.502	10.519	10.536	10.553	10.570	10.587	10.604	10.621	10.638	10.655	10.672	10.689	10.706	10.723	10.740	10.757	10.774	10.791	10.808	10.825	10.842	10.859	10.876	10.893	10.910	10.927	10.944	10.961	10.978	10.995	11.012	11.029	11.046	11.063	11.080	11.097	11.114	11.131	11.148	11.165	11.182	11.199	11.216	11.233	11.250	11.267	11.284	11.301	11.318	11.335	11.352	11.369	11.386	11.403	11.420	11.437	11.454	11.471	11.488	11.505	11.522	11.539	11.556	11.573	11.590	11.607	11.624	11.641	11.658	11.675	11.692	11.709	11.726	11.743	11.760	11.777	11.794	11.811	11.828	11.845	11.862	11.879	11.896	11.913	11.930	11.947	11.964	11.981	11.998	12.015	12.032	12.049	12.066	12.083	12.100	12.117	12.134	12.151	12.168	12.185	12.202	12.219	12.236	12.253	12.270	12.287	12.304	12.321	12.338	12.355	12.372	12.389	12.406	12.423	12.440	12.457	12.474	12.491	12.508	12.525	12.542	12.559	12.576	12.593	12.610	12.627	12.644	12.661	12.678	12.695	12.712	12.729	12.746	12.763	12.780	12.797	12.814	12.831	12.848	12.865	12.882	12.899	12.916	12.933	12.950	12.967	12.984	12.999	13.016	13.033	13.050	13.067	13.084	13.101	13.118	13.135	13.152	13.169	13.186	13.203	13.220	13.237	13.254	13.271	13.288	13.305	13.322	13.339	13.356	13.373	13.390	13.407	13.424	13.441	13.458	13.475	13.492	13.509	13.526	13.543	13.560	13.577	13.594	13.611	13.628	13.645	13.662	13.679	13.696	13.713	13.730	13.747	13.764	13.781	13.798	13.815	13.832	13.849	13.866	13.883	13.900	13.917	13.934	13.951	13.968	13.985	14.002	14.019	14.036	14.053	14.070	14.087	14.104	14.121	14.138	14.155	14.172	14.189	14.206	14.223	14.240	14.257	14.274	14.291	14.308	14.325	14.342	14.359	14.376	14.393	14.410	14.427	14.444	14.461	14.478	14.495	14.512	14.529	14.546	14.563	14.580	14.597	14.614	14.631	14.648	14.665	14.682	14.699	14.716	14.733	14.750	14.767	14.784	14.801	14.818	14.835	14.852	14.869	14.886	14.903	14.920	14.937	14.954	14.971	14.988	15.005	15.022	15.039	15.056	15.073	15.090	15.107	15.124	15.141	15.158	15.175	15.192	15.209	15.226	15.243	15.260	15.277	15.294	15.311	15.328	15.345	15.362	15.379	15.396	15.413	15.430	15.447	15.464	15.481	15.498	15.515	15.532	15.549	15.566	15.583	15.600	15.617	15.634	15.651	15.668	15.685	15.702	15.719	15.736	15.753	15.770	15.787	15.804	15.821	15.838	15.855	15.872	15.889	15.906	15.923	15.940	15.957	15.974	15.991	16.008	16.025	16.042	16.059	16.076	16.093	16.110	16.127	16.144	16.161	16.178	16.195	16.212	16.229	16.246	16.263	16.280	16.297	16.314	16.331	16.348	16.365	16.382	16.399	16.416	16.433	16.450	16.467	16.484	16.501	16.518	16.535	16.552	16.569	16.586	16.603	16.620	16.637	16.654	16.671	16.688	16.705	16.722	16.739	16.756	16.773	16.790	16.807	16.824	16.841	16.858	16.875	16.892	16.909	16.926	16.943	16.960	16.977	16.994	17.011	17.028	17.045	17.062	17.079	17.096	17.113	17.130	17.147	17.164	17.181	17.198	17.215	17.232	17.249	17.266	17.283	17.300	17.317	17.334	17.351	17.368	17.385	17.402	17.419	17.436	17.453	17.470	17.487	17.504	17.521	17.538	17.555	17.572	17.589	17.606	17.623	17.640	17.657	17.674	17.691	17.708	17.725	17.742	17.759	17.776	17.793	17.810	17.827	17.844	17.861	17.878	17.895	17.912	17.929	17.946	17.963	17.980	17.997	18.014	18.031	18.048	18.065	18.082	18.099	18.116	18.133	18.150	18.167	18.184	18.201	18.218	18.235	18.252	18.269	18.286	18.303	18.320	18.337	18.354	18.371	18.388	18.405	18.422	18.439	18.456	18.473	18.490	18.507	18.524	18.541	18.558	18.575	18.592	18.609	18.626	18.643	18.660	18.677	18.694	18.711	18.728	18.745	18.762	18.779	18.796	18.813	18.830	18.847	18.864	18.881	18.898	18.915	18.932	18.949	18.966	18.983	19.000	19.017	19.034	19.051	19.068	19.085	19.102	19.119	19.136	19.153	19.170	19.187	19.204	19.221	19.238	19.255	19.272	19.289	19.306	19.323	19.340	19.357	19.374	19.391	19.408	19.425	19.442	19.459	19.476	19.493	19.510	19.527	19.544	19.561	19.578	19.595	19.612	19.629	19.646	19.663	19.680	19.697	19.714	19.731	19.748	19.765	19.782	19.799	19.816	19.833	19.850	19.867	19.884	19.901	19.918	19.935	19.952	19.969	19.986	20.003	20.020	20.037	20.054	20.071	20.088	20.105	20.122	20.139	20.156	20.173	20.190	20.207	20.224	20.241	20.258	20.275	20.292	20.309	20.326	20.343	20.360	20.377	20.394	20.411	20.428	20.445	20.462	20.479	20.496	20.513	20.530	20.547	20.564	20.581	20.598	20.615	20.632	20.649	20.666	20.683	20.700	20.717	20.734	20.751	20.768	20.785	20.802	20.819	20.836	20.853	20.870	20.887	20.904	20.921	20.938	20.955	20.972	20.989</



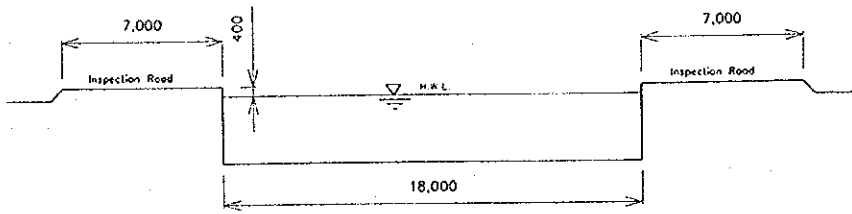
THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

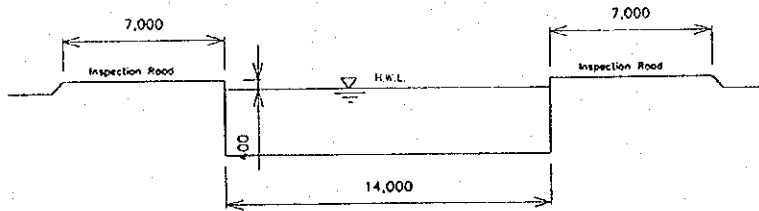
Fig. 6.2.4 (1/2)

SEMARANG RIVER CROSS SECTION (1/2)

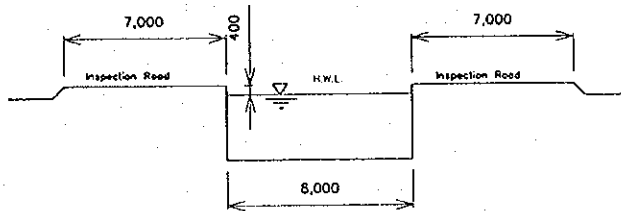
Station 120 - 137+14



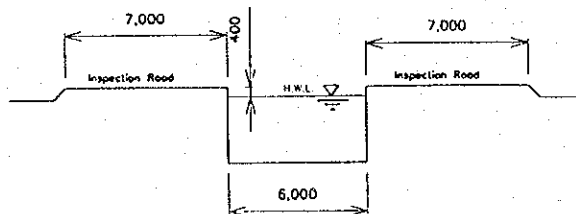
Station 137+14 - 161



Station 161 - 211



Station 211 - 241+13

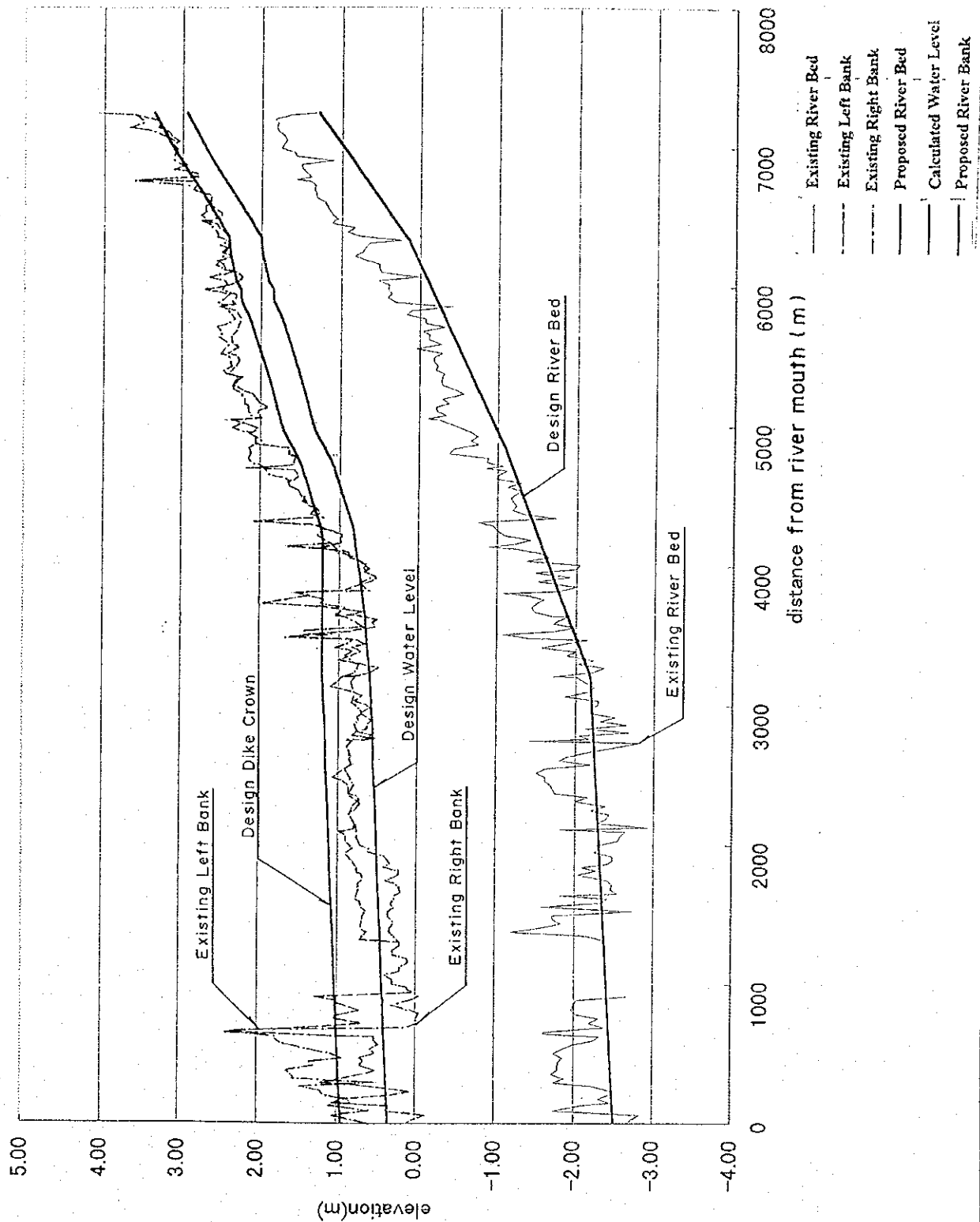


THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 6.2.4 (2/2)

SEMARANG RIVER CROSS SECTION (2/2)

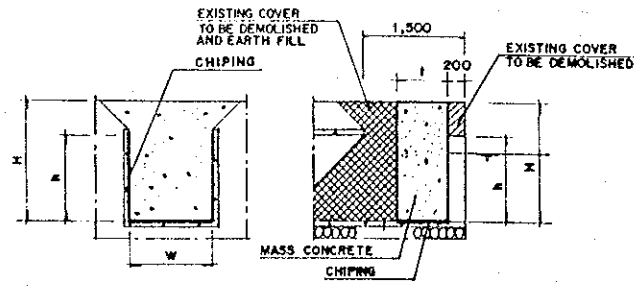


THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

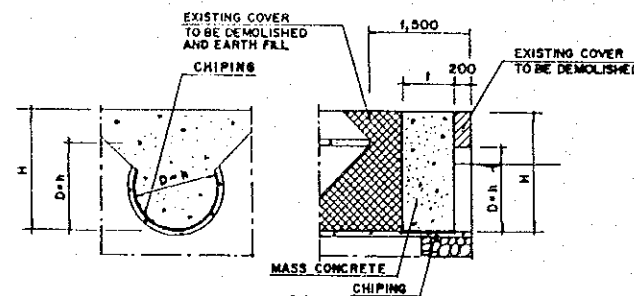
Fig. 6.2.5

SEMARANG RIVER CALCULATED WATER LEVEL

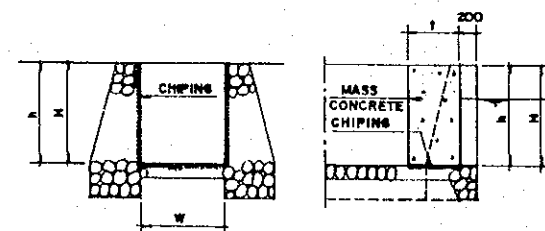
JAPAN INTERNATIONAL COOPERATION AGENCY



TYPE I



TYPE II

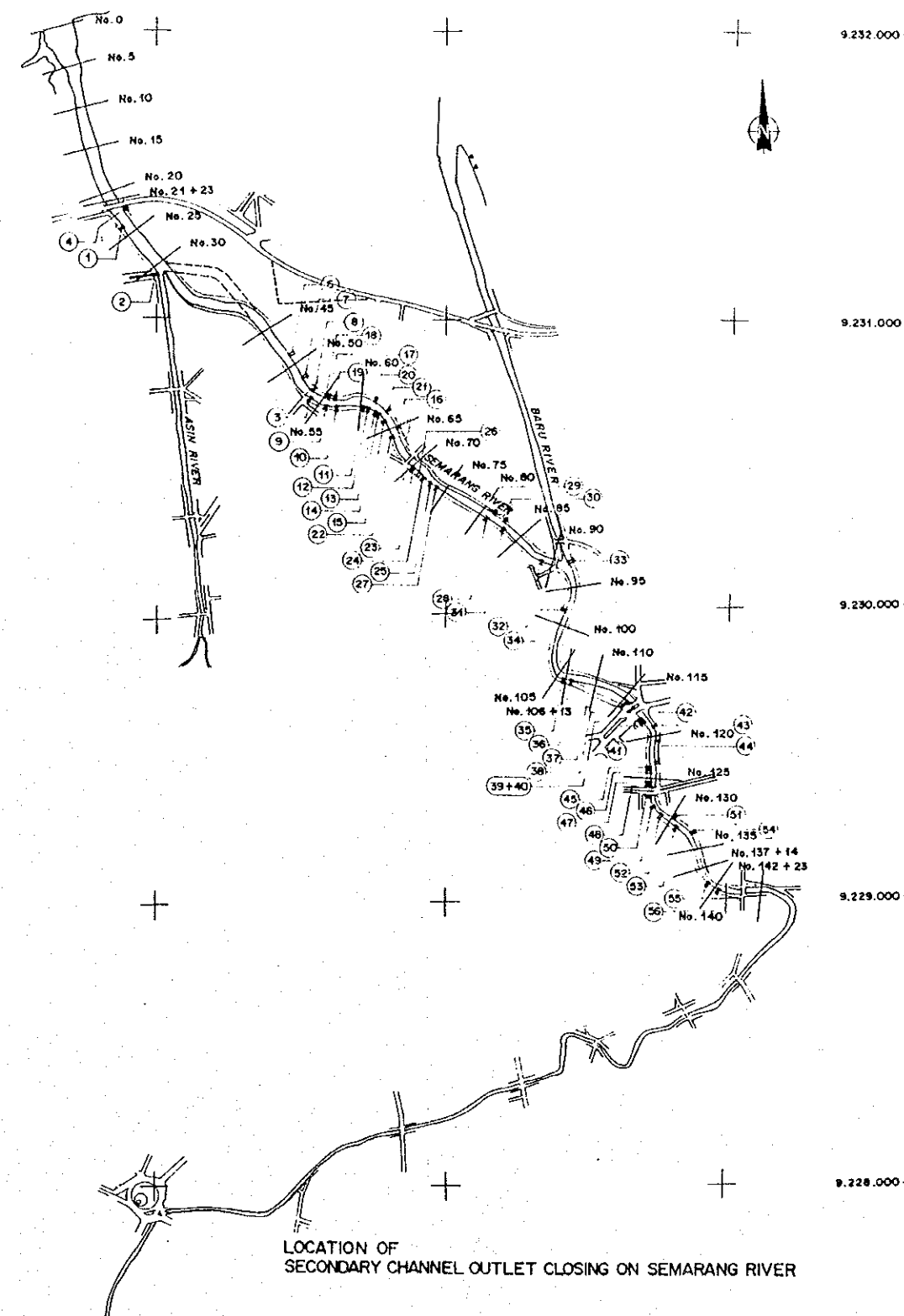


TYPE III

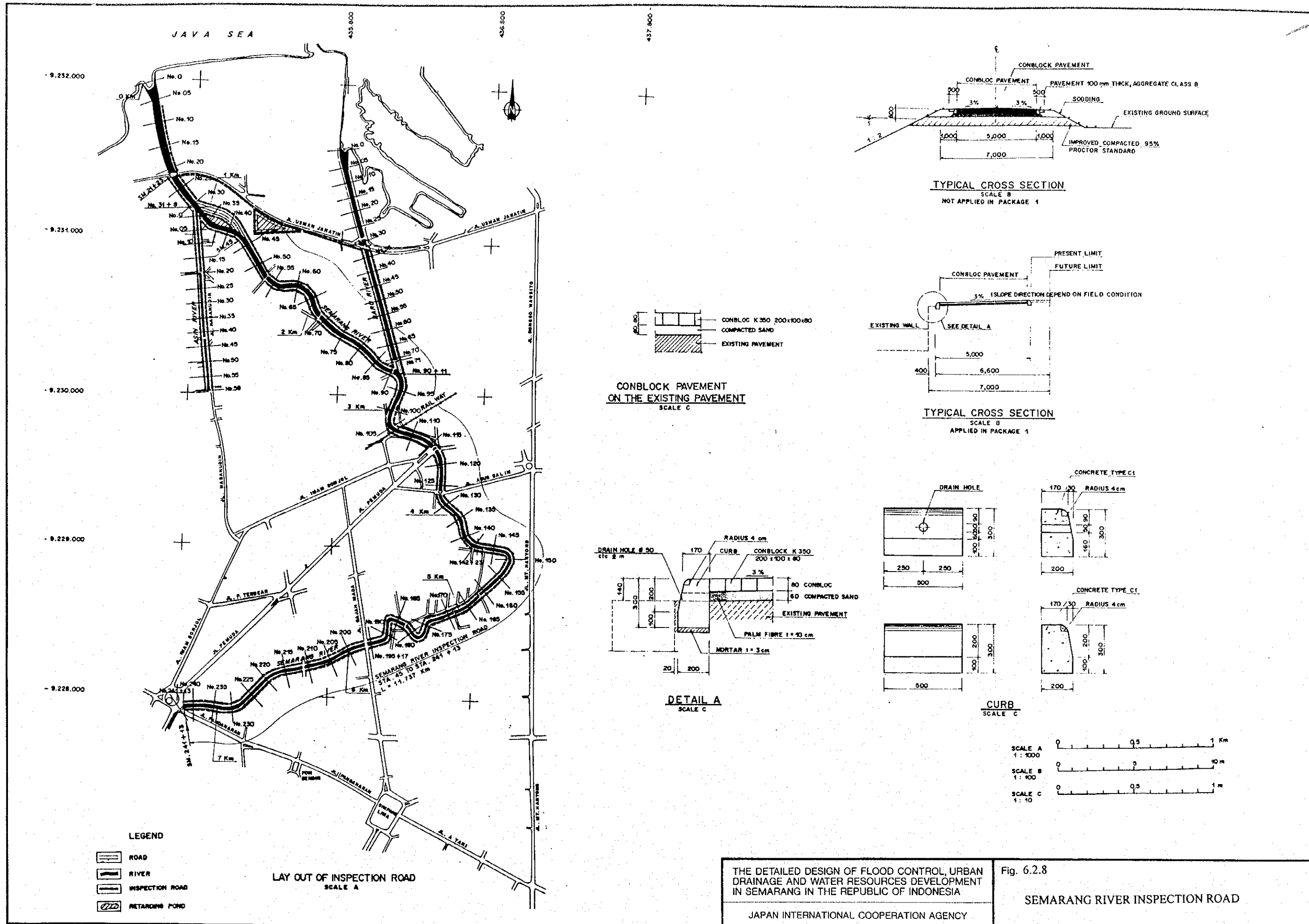
TABLE OF SECONDARY CHANNEL OUTLET CLOSING ON SEMARANG RIVER

NO.	POSITION OF STRUCTURE	TYPE	DIMENSION				WORK VOLUME					
			W (mm)	h (mm)	H (mm)	L (mm)	CHIPPING (m ²)	FORM (m ²)	MASS CONCRETE (m ³)	STRUCTURE EXCAVATION (m ³)	EARTH FILL (m ³)	
1	SML. 24+5	I	1,500	950	1,300	500	1.70	4.15	1.04	1.11	2.47	
2	SML. 31+5	II	-	-	270	1,490	500	0.64	7.38	1.85	4.74	3.35
3	SML. 54+17	I	1,810	1,230	2,550	900	3.84	12.72	5.72	10.07	7.79	
4	SMR. 22+20	II	4,000	1,060	1,060	500	6.12	6.48	2.12	-	5.51	
5	SMR. 42+6	II	-	250	840	500	0.59	2.08	0.52	0.99	0.61	
6	SMR. 49+11	I	1,000	1,000	1,730	650	1.95	4.53	1.47	2.55	2.63	
7	SMR. 52+29	I	-	-	-	-	-	-	-	-	-	
8	SMR. 54+10	II	-	480	1,180	500	1.08	3.73	0.93	1.77	1.12	
9	SML. 56+30	II	-	100	350	500	0.24	0.32	0.08	0.13	0.07	
10	SML. 57+31	I	480	240	730	500	0.48	1.18	0.30	0.69	0.66	
11	SML. 60+12	I	510	80	550	500	0.32	1.04	0.26	0.91	0.60	
12	SML. 61+5	I	750	500	1,310	500	0.88	3.28	0.82	2.67	2.18	
13	SML. 62+0	II	-	120	140	500	0.28	0.56	0.14	0.01	0.01	
14	SML. 62+26	I	630	990	1,490	500	0.91	3.50	0.88	3.05	2.49	
15	SML. 64+15	I	680	500	1,430	500	0.84	3.67	0.92	3.34	2.65	
16	SMR. 65+11	II	-	170	630	500	0.40	1.20	0.50	0.55	0.33	
17	SMR. 55+11	II	-	370	1,150	500	0.87	3.80	0.95	1.93	1.24	
18	SMR. 55+5	I	850	390	1,120	500	0.82	2.97	0.74	2.35	1.87	
19	SMR. 57+0	I	-	-	-	-	-	-	-	-	-	
20	SMR. 61+22	II	-	120	870	500	0.28	2.63	0.66	1.43	0.97	
21	SMR. 63+15	II	-	160	510	500	0.38	0.75	0.19	0.32	0.18	
22	SML. 66+26	I	890	530	1,380	500	0.98	3.90	0.98	3.15	2.62	
23	SML. 70+11	I	2,000	1,100	2,280	800	3.35	11.90	4.76	8.66	7.22	
24	SML. 72+19	I	970	850	1,880	650	1.74	5.65	1.84	4.52	3.71	
25	SML. 73+29	II	-	170	830	500	0.40	2.24	0.56	1.15	0.73	
26	SML. 72+28	I	600	1,720	2,840	1,080	4.24	5.92	3.11	4.67	3.22	
27	SML. 74+33	I	480	1,340	2,270	850	2.69	3.91	1.66	2.99	2.32	
28	SML. 81+17	I	720	1,720	2,650	1,000	4.16	5.55	2.78	3.42	3.01	
29	SMR. 81+19	I	510	1,780	2,810	1,050	4.23	5.07	2.66	3.90	2.86	
30	SMR. 83+8	I	540	1,710	2,770	1,050	4.16	5.24	2.75	4.04	2.94	
31	SML. 83+13	I	2,780	1,230	2,480	850	4.45	16.70	7.10	11.56	9.82	
32	SML. 89+27	I	1,600	1,220	2,210	800	3.23	9.03	3.61	5.60	5.20	
33	SMR. 91+3	I	2,720	2,000	4,160	1,350	10.42	31.96	24.77	52.23	20.86	
34	SML. 98+6	I	730	870	1,370	500	1.24	2.50	0.63	1.14	1.49	
35	SML. 106+6	I	2,450	1,440	2,840	1,000	5.33	17.84	8.92	13.23	10.36	
36	SML. 107+22	I	1,990	820	1,800	600	2.46	9.08	2.72	6.28	6.43	
37	SML. 115+22	II	-	600	1,380	500	1.41	4.70	1.17	2.19	1.39	
38	SML. 115+24	I	2,320	1,700	2,680	1,000	5.72	7.00	3.50	6.68	7.13	
39	SML. 116+32	II	-	1,000	1,910	700	2.36	6.51	2.96	3.77	2.36	
40	SML. 116+32	I	910	820	950	500	1.08	1.95	0.49	0.70	1.04	
41	SML. 116+33	II	-	280	610	500	0.66	0.93	0.23	0.35	0.20	
42	SMR. 119+14	I	800	500	640	500	0.80	0.81	0.20	0.16	0.41	
43	SMR. 120+22	I	1,172	500	610	500	1.09	1.45	0.36	0.22	0.74	
44	SMR. 123+2	II	-	600	1,170	500	0.65	3.23	0.81	1.28	0.81	
45	SML. 123+11	I	500	650	910	500	0.90	1.05	0.26	0.33	0.86	
46	SML. 124+29	I	810	1,100	1,110	500	1.41	1.35	0.34	0.11	0.91	
47	SML. 126+1	I	610	730	1,130	500	1.04	1.70	0.43	0.72	0.95	
48	SML. 126+2	II	-	800	840	500	0.66	1.24	0.31	0.28	0.21	
49	SML. 126+1	II	-	1,000	1,670	700	2.36	6.07	2.62	3.48	2.18	
50	SML. 126+29	II	-	130	690	500	0.31	2.73	0.68	1.48	1.00	
51	SMR. 130+18	II	-	800	1,530	550	1.88	5.47	1.50	2.28	1.48	
52	SML. 128+33	II	-	1,000	2,080	700	2.36	10.28	3.60	5.05	3.16	
53	SML. 131+2	II	-	1,000	1,830	650	2.36	7.64	2.48	3.19	2.08	
54	SMR. 133+20	II	-	800	1,290	500	1.88	3.33	0.88	1.16	0.82	
55	SML. 139+11	II	-	800	1,090	500	1.88	2.28	0.57	0.53	0.46	
56	SML. 140+32	II	-	800	1,130	500	1.88	2.49	0.62	0.64	0.51	
TOTAL VOLUME							106.13	216.28	112.97	179.71	152.93	

NOTE:
② NUMBER OF CLOSED STRUCTURE

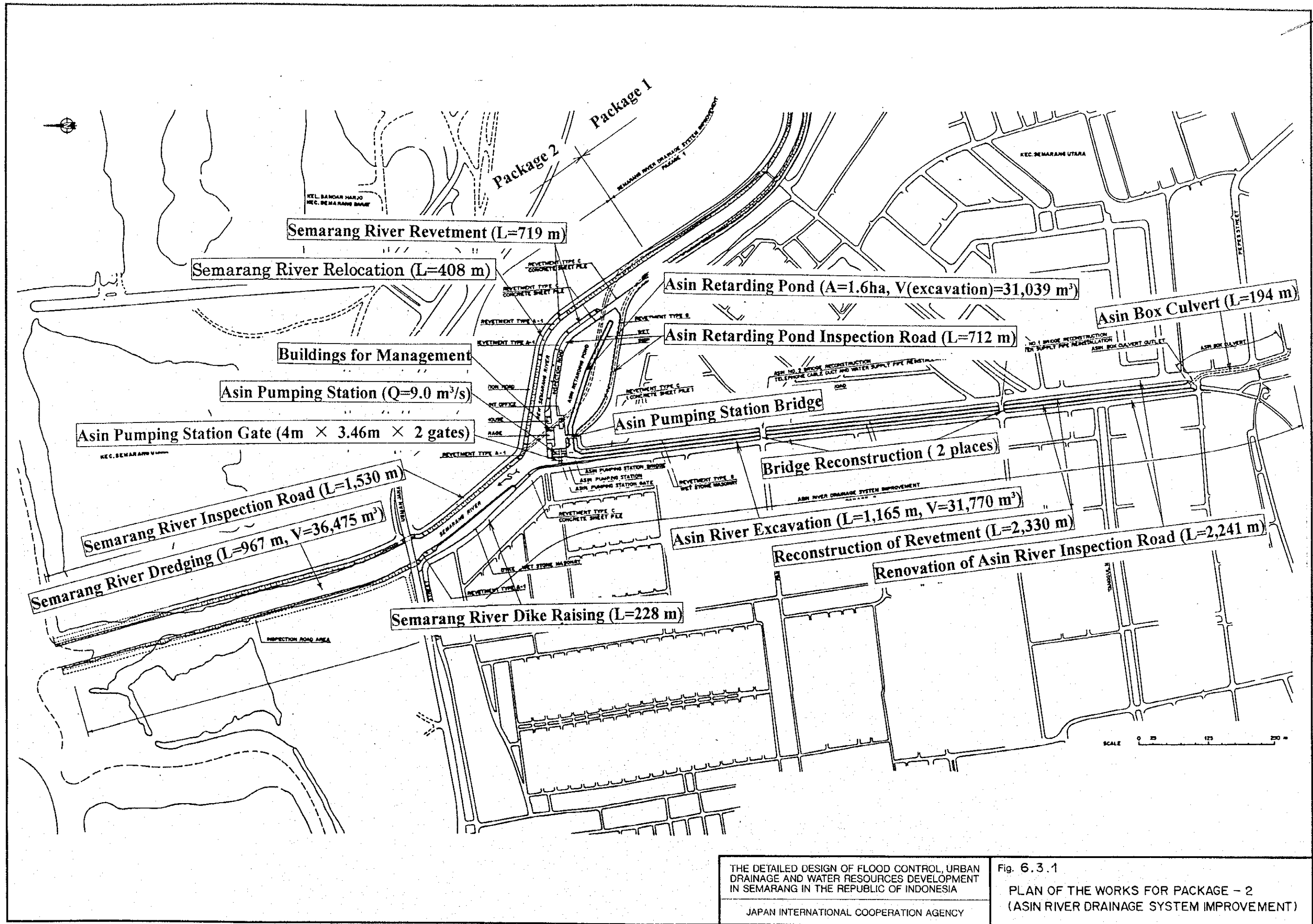


THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
JAPAN INTERNATIONAL COOPERATION AGENCY
Fig. 6.2.7
SEMARANG RIVER SECONDARY CHANNEL OUTLET CLOSURES



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

Fig. 6.2.8
 SEMARANG RIVER INSPECTION ROAD



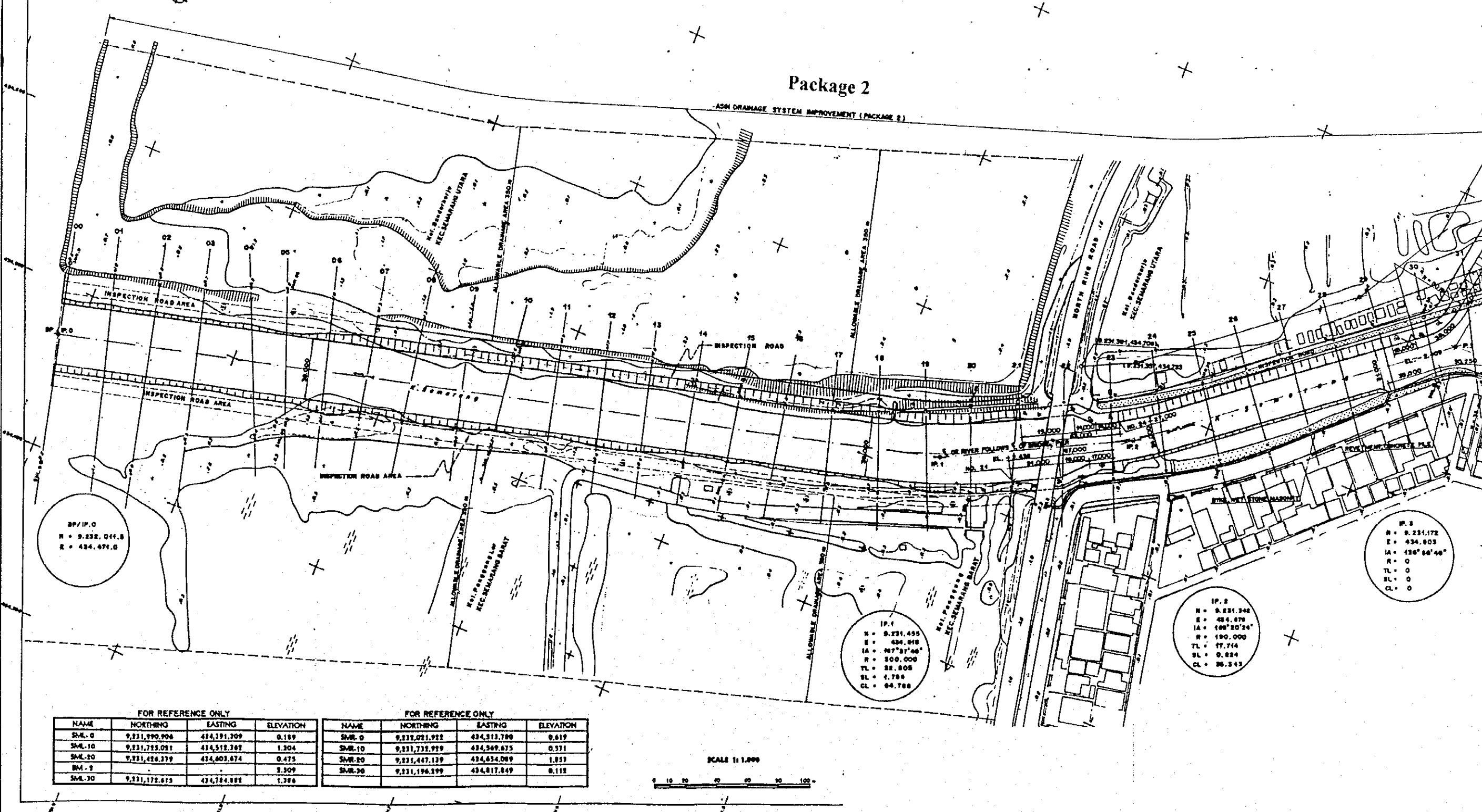
THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA
 JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 6.3.1
 PLAN OF THE WORKS FOR PACKAGE - 2
 (ASIN RIVER DRAINAGE SYSTEM IMPROVEMENT)

1

Package 2

ASH DRAINAGE SYSTEM IMPROVEMENT (PACKAGE 2)



IP.0
N = 9.232.044.8
E = 434.474.0

IP.1
N = 9.231.450
E = 434.948
IA = 107°37'48"
R = 500.000
TL = 32.808
SL = 4.788
CL = 64.788

IP.2
N = 9.231.348
E = 434.878
IA = 108°20'24"
R = 190.000
TL = 17.714
SL = 0.824
CL = 30.343

IP.3
N = 9.231.172
E = 434.803
IA = 138°00'46"
R = 0
TL = 0
SL = 0
CL = 0

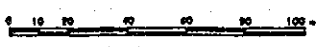
FOR REFERENCE ONLY

NAME	NORTHING	EASTING	ELEVATION
SML-0	9,231,990.908	434,391.309	0.189
SML-10	9,231,715.021	434,515.382	1.304
SML-20	9,231,436.379	434,402.674	0.475
BM-7			3.309
SML-30	9,231,172.613	434,784.888	1.386

FOR REFERENCE ONLY

NAME	NORTHING	EASTING	ELEVATION
SML-0	9,232,021.922	434,312.790	0.619
SML-10	9,231,732.929	434,349.875	0.571
SML-20	9,231,447.129	434,434.089	1.823
SML-30	9,231,196.399	434,817.849	0.118

SCALE 1:1,000



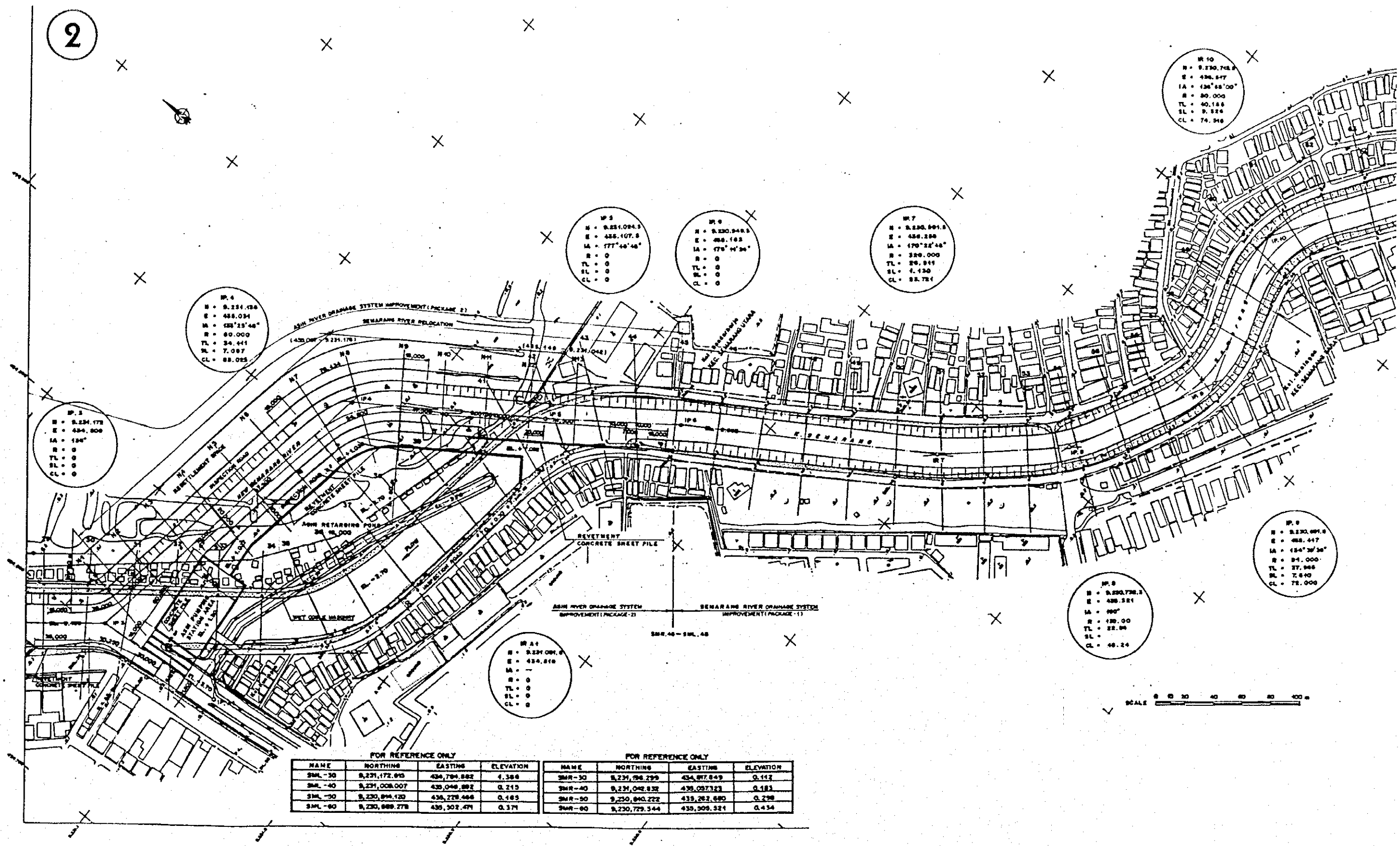
THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 6.3.2 (1/2)

SEMARANG RIVER PLAN (1/2)

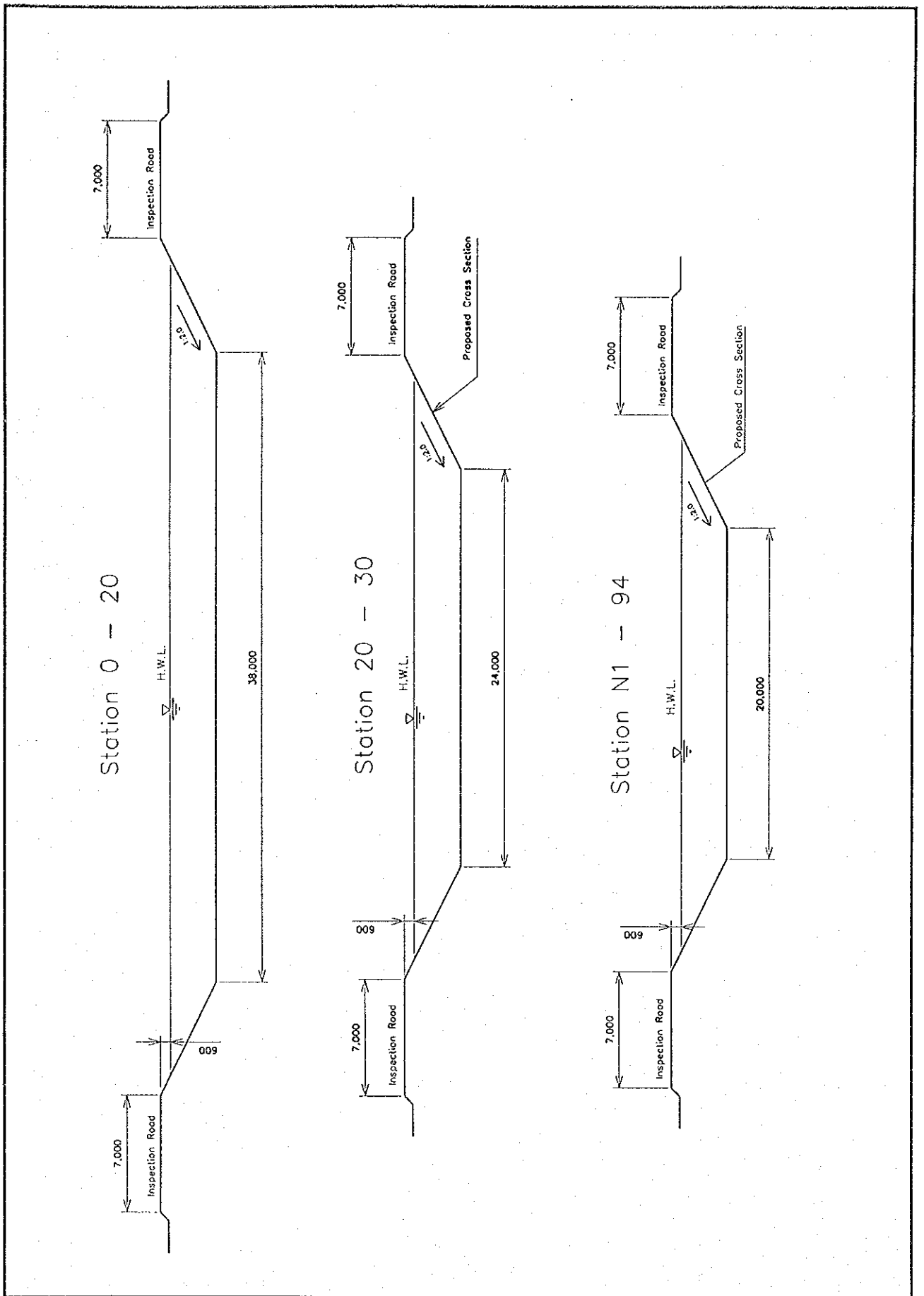
2



FOR REFERENCE ONLY				FOR REFERENCE ONLY			
NAME	NORTHING	EASTING	ELEVATION	NAME	NORTHING	EASTING	ELEVATION
SMR-30	9,231,172.693	436,794.882	0.366	SMR-30	9,231,042.290	436,977.849	0.112
SMR-40	9,231,008.007	436,046.882	0.243	SMR-40	9,231,042.838	436,037.323	0.183
SMR-50	9,230,994.120	436,228.466	0.465	SMR-50	9,230,840.222	436,262.680	0.298
SMR-60	9,230,989.778	436,302.471	0.371	SMR-60	9,230,729.344	436,306.324	0.434

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

Fig. 6.3.2 (2/2)
 SEMARANG RIVER PLAN (2/2)



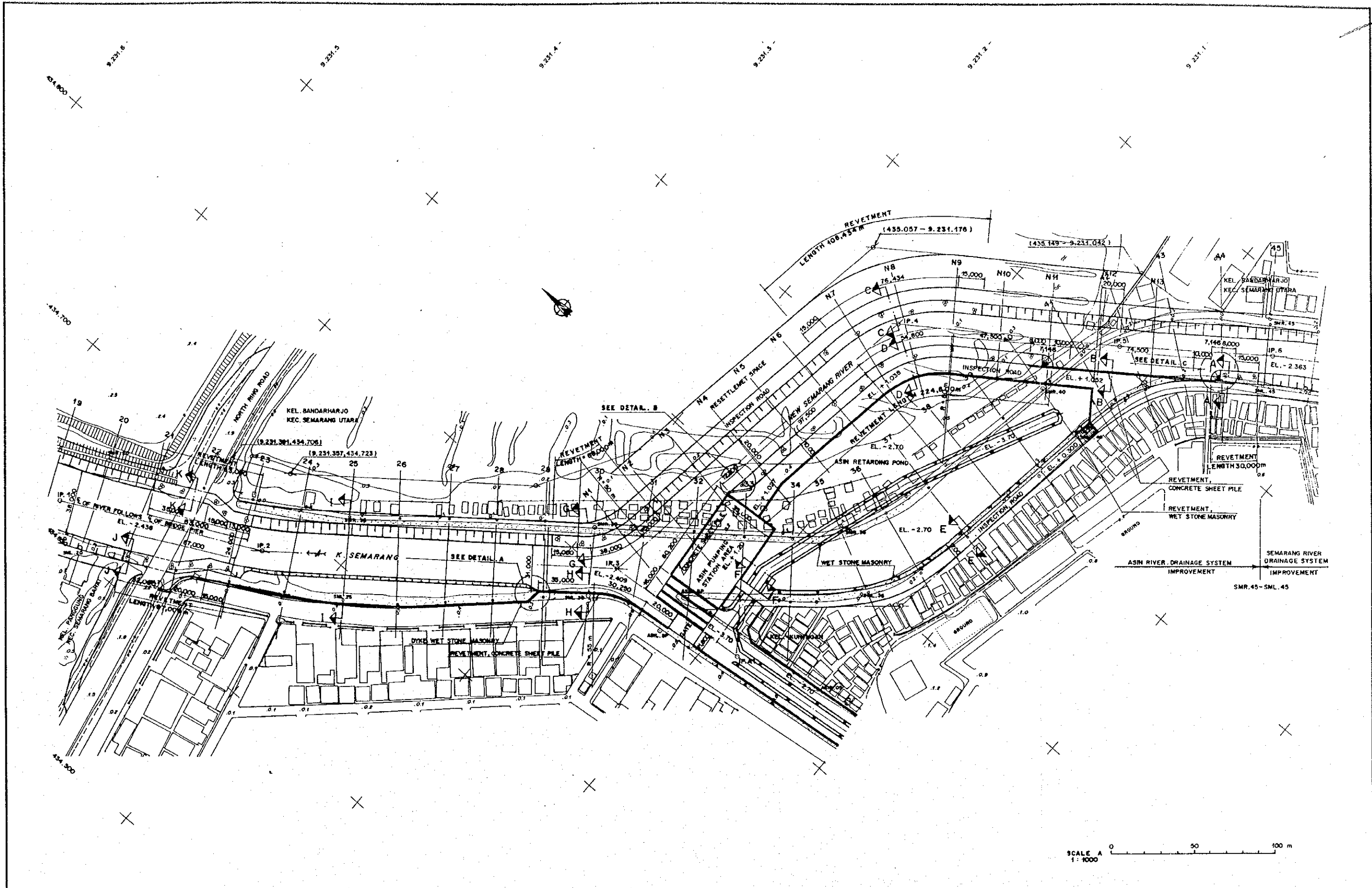
THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

Fig. 6.3.3

SEMARANG RIVER DESIGN CROSS SECTION

JAPAN INTERNATIONAL COOPERATION AGENCY



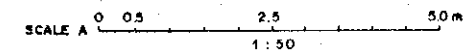
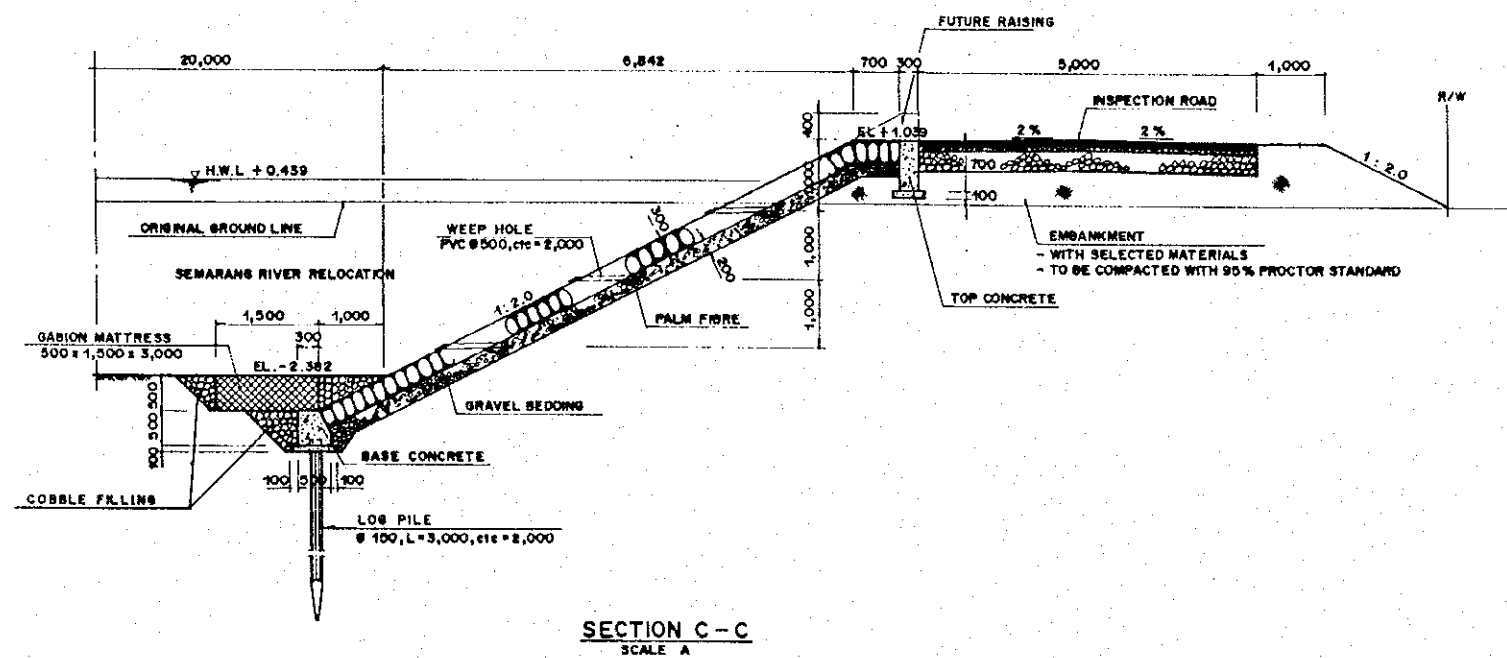
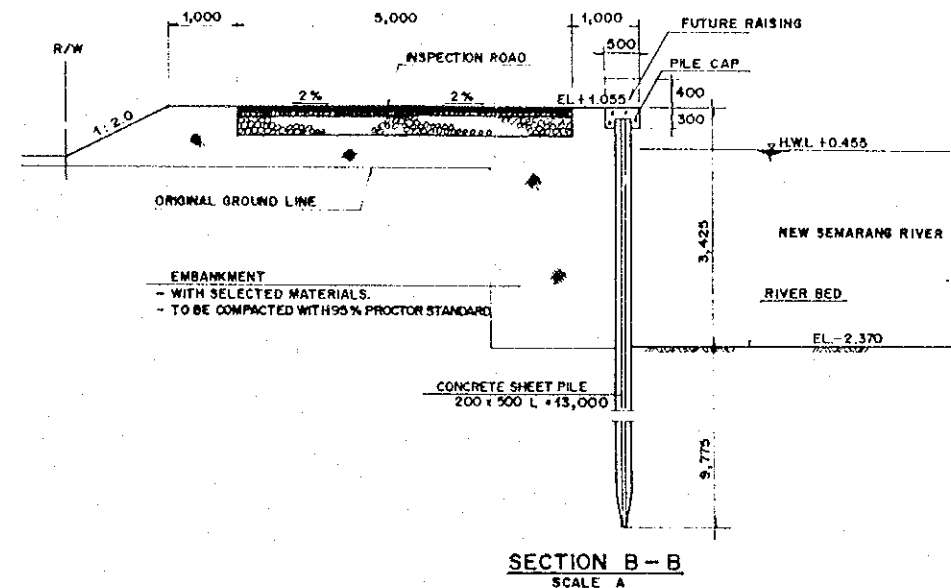
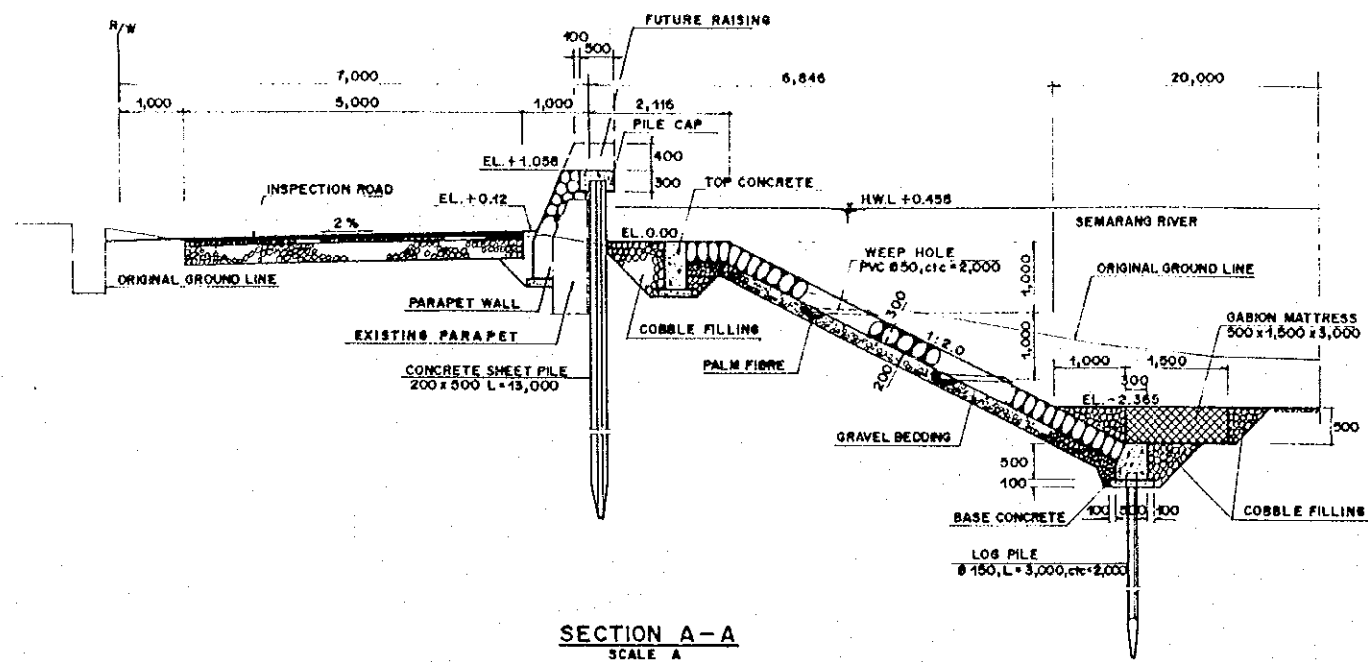


THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 6.3.4 (1/6)

SEMARANG RIVER REVETMENT (1/6)

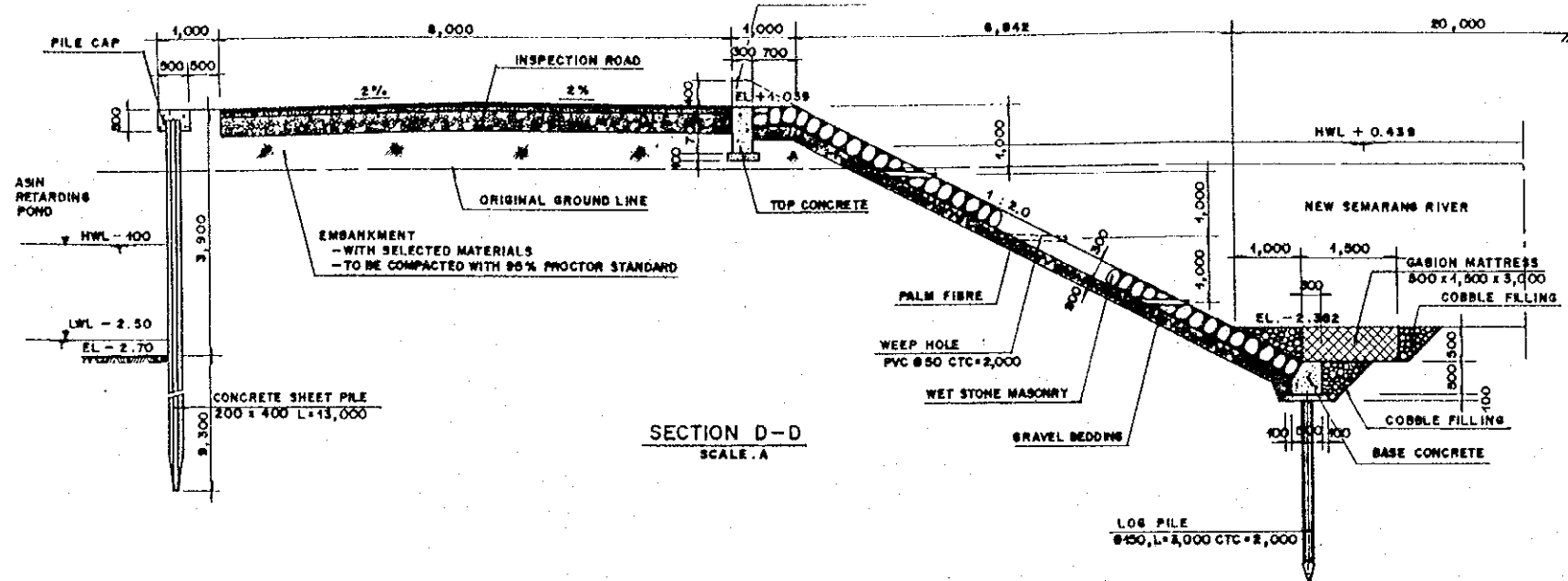


THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

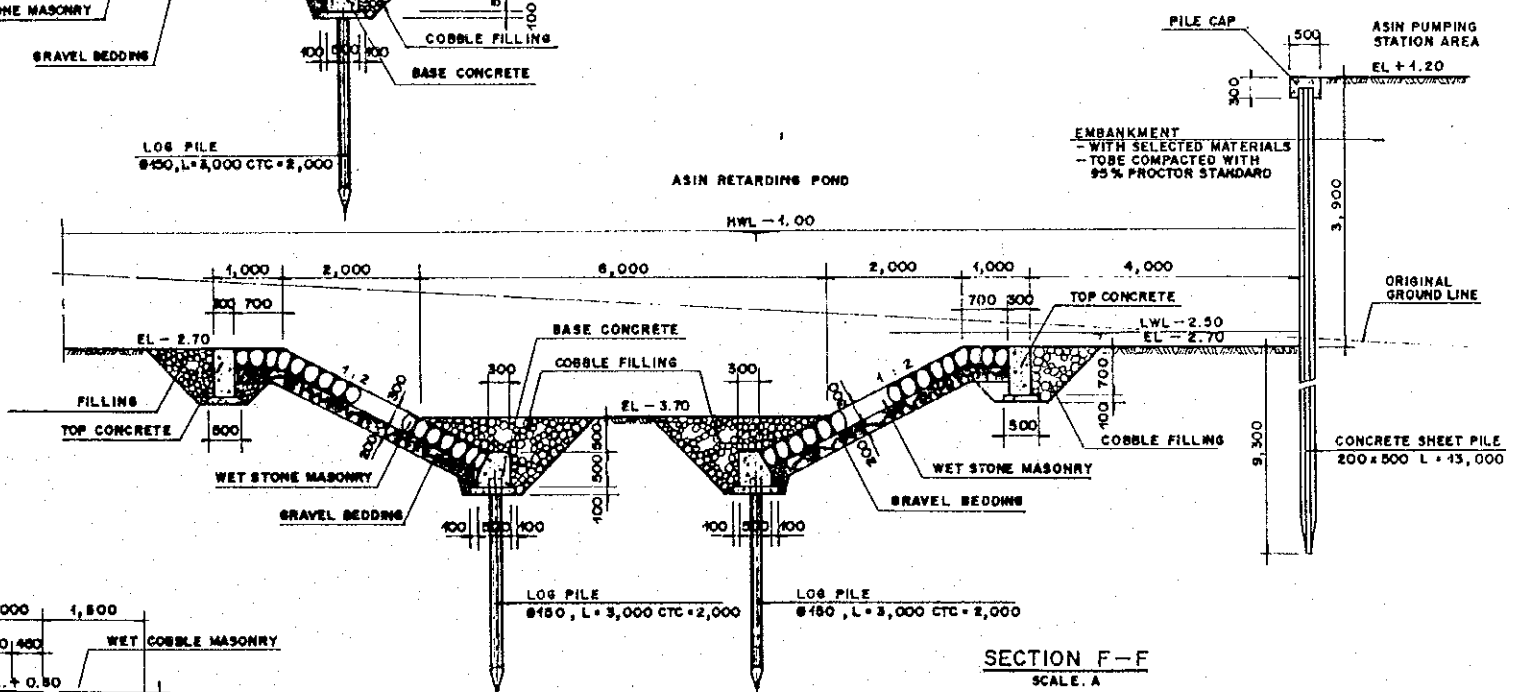
Fig. 6.3.4 (2/6)

JAPAN INTERNATIONAL COOPERATION AGENCY

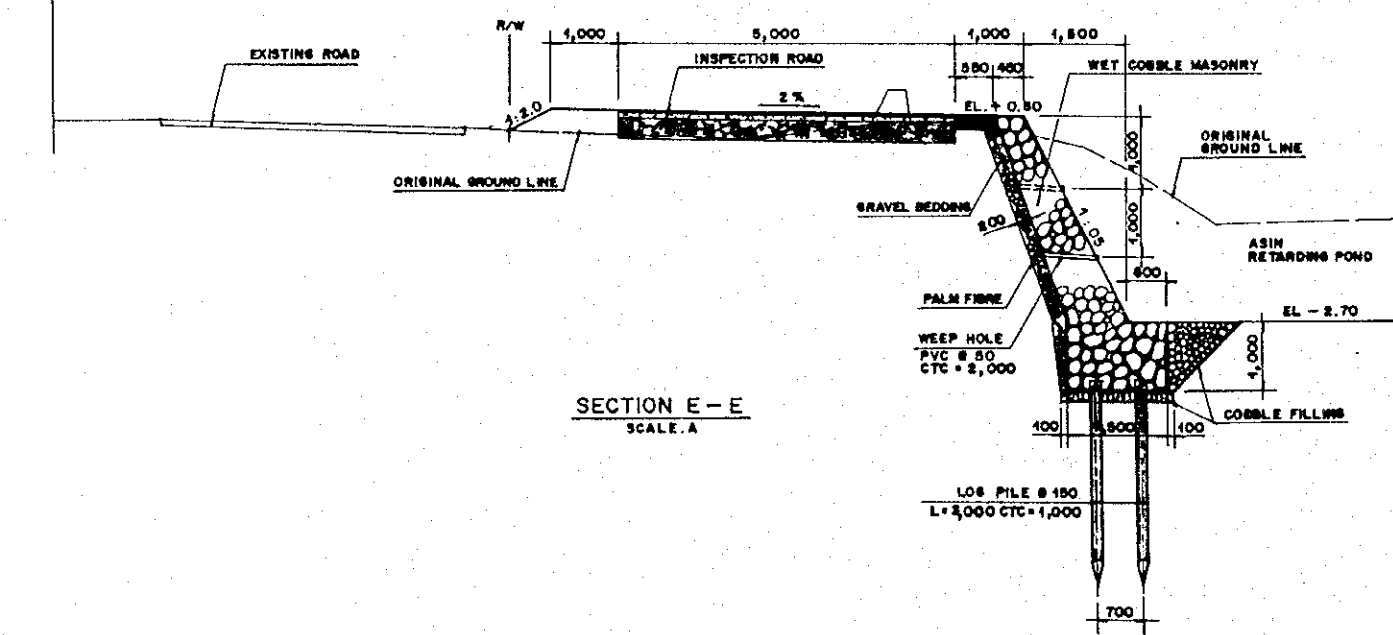
SEMARANG RIVER REVETMENT (2/6)



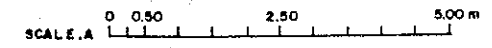
SECTION D-D
SCALE .A



SECTION F-F
SCALE .A

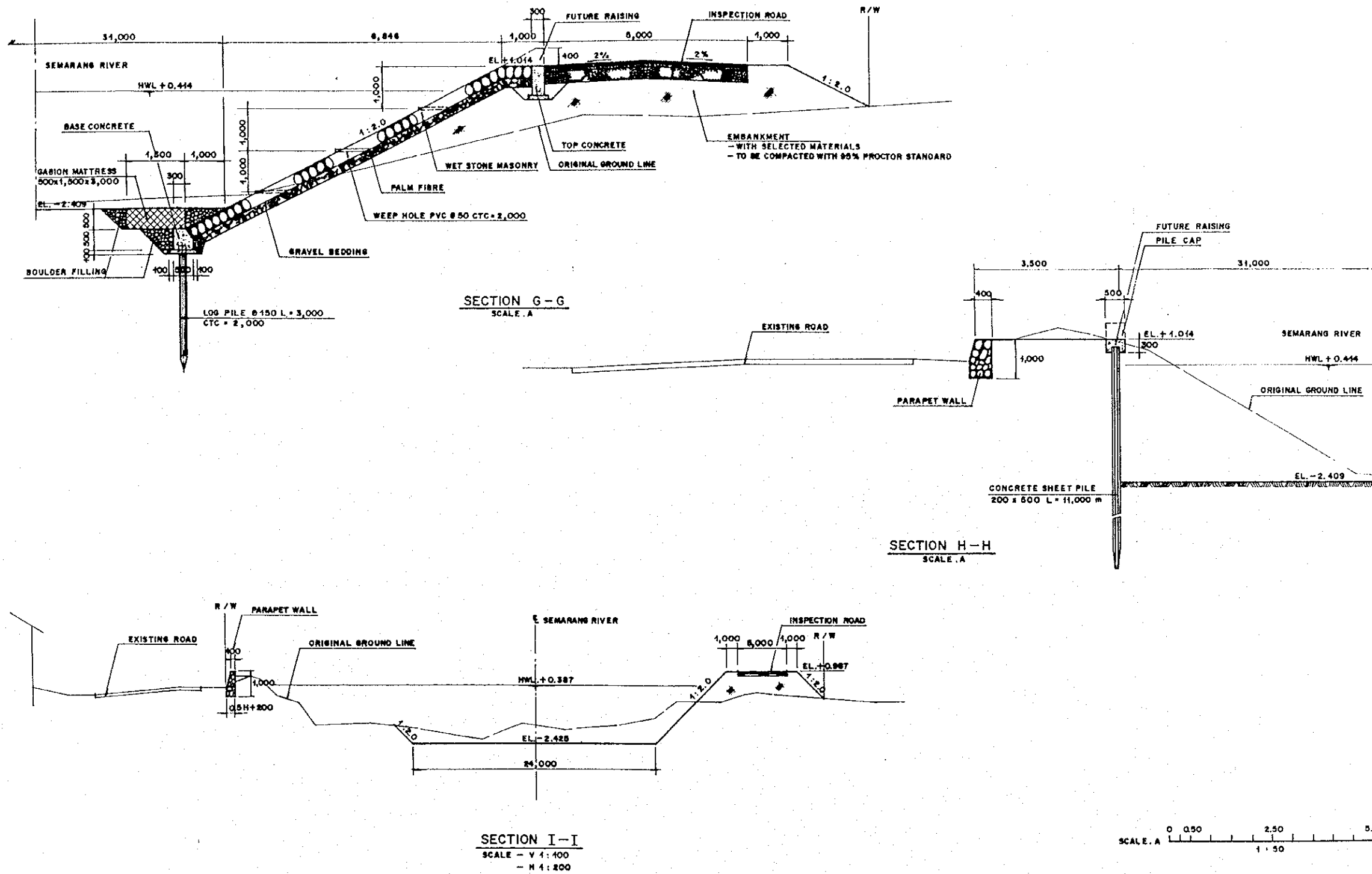


SECTION E-E
SCALE .A



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

Fig. 6.3.4 (3/6)
SEMARANG RIVER REVETMENT (3/6)

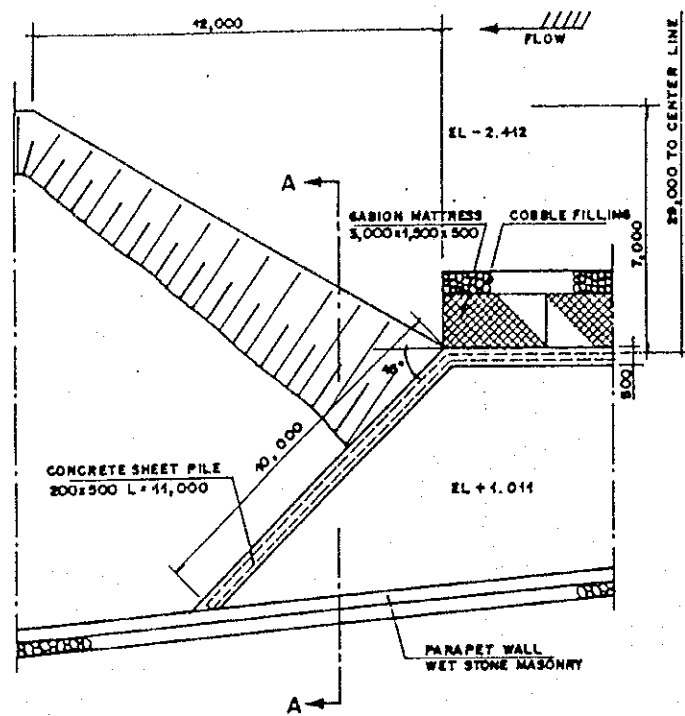


THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

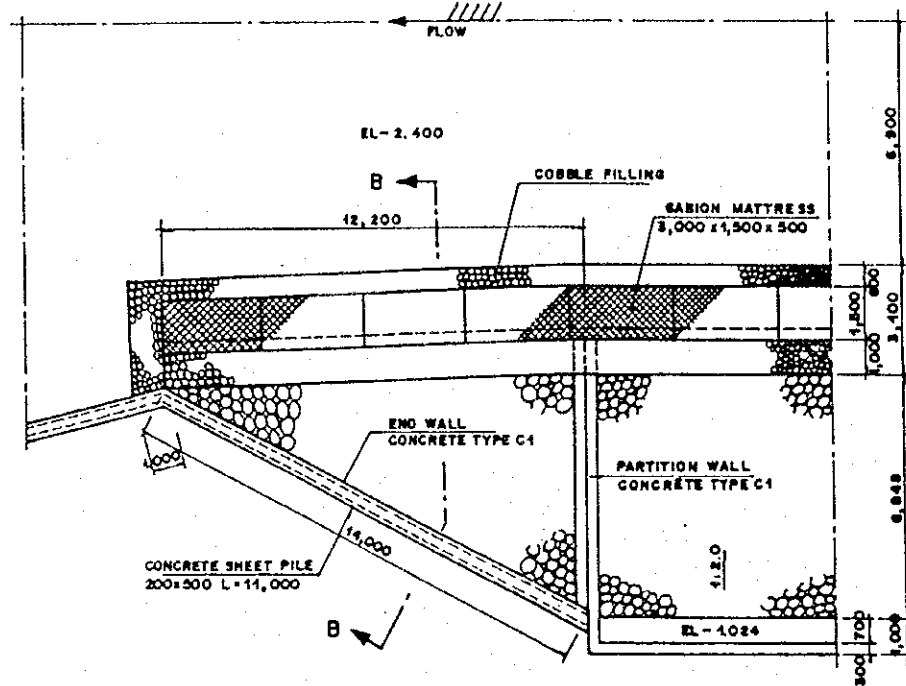
JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 6.3.4 (4/6)

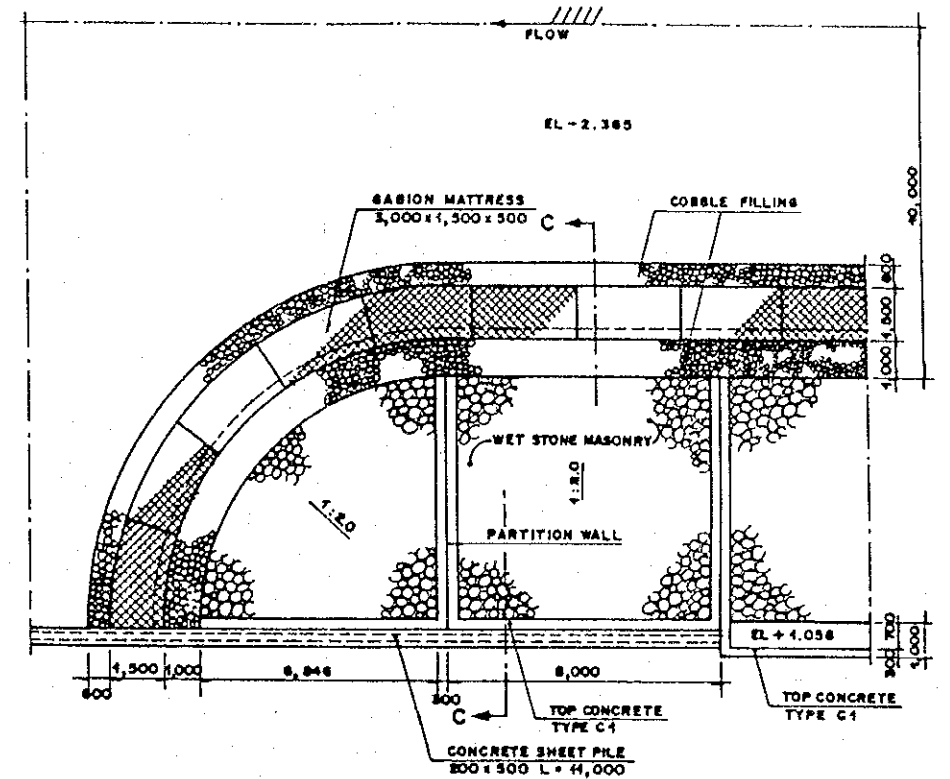
SEMARANG RIVER REVETMENT (4/6)



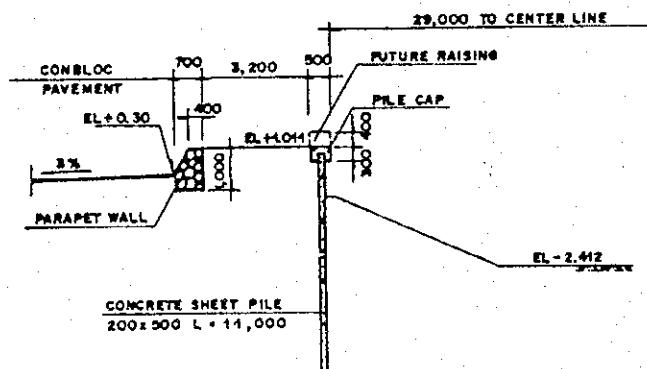
DETAIL A
SCALE A



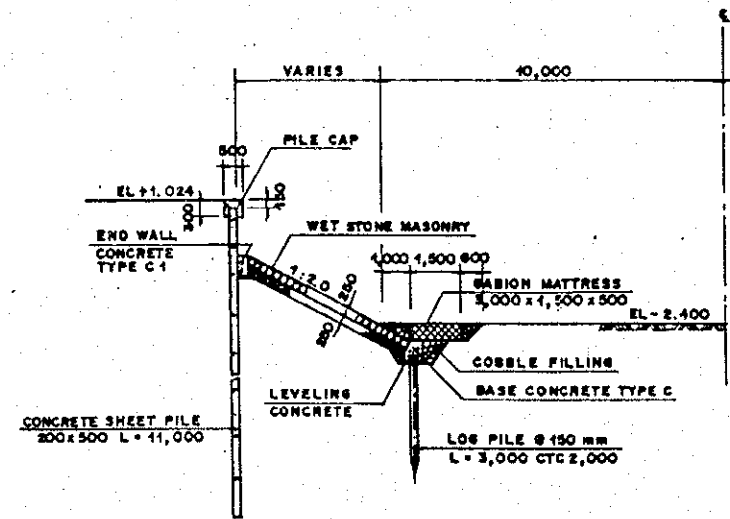
DETAIL B
SCALE A



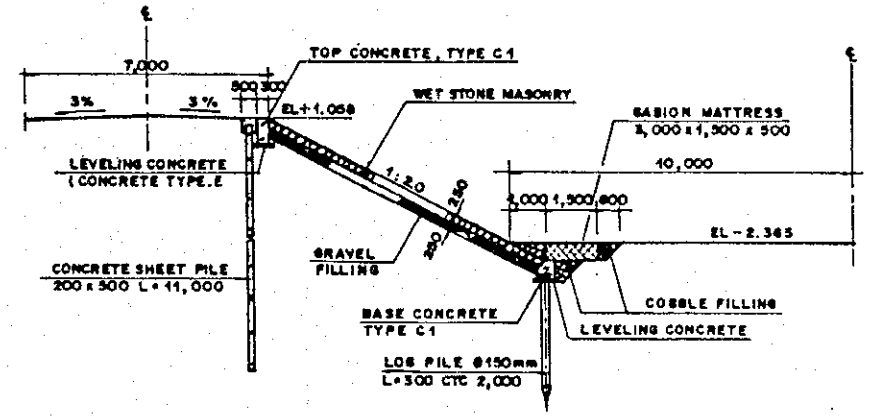
DETAIL C
SCALE A



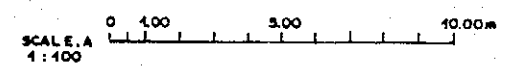
SECTION A-A
SCALE A



SECTION B-B
SCALE A

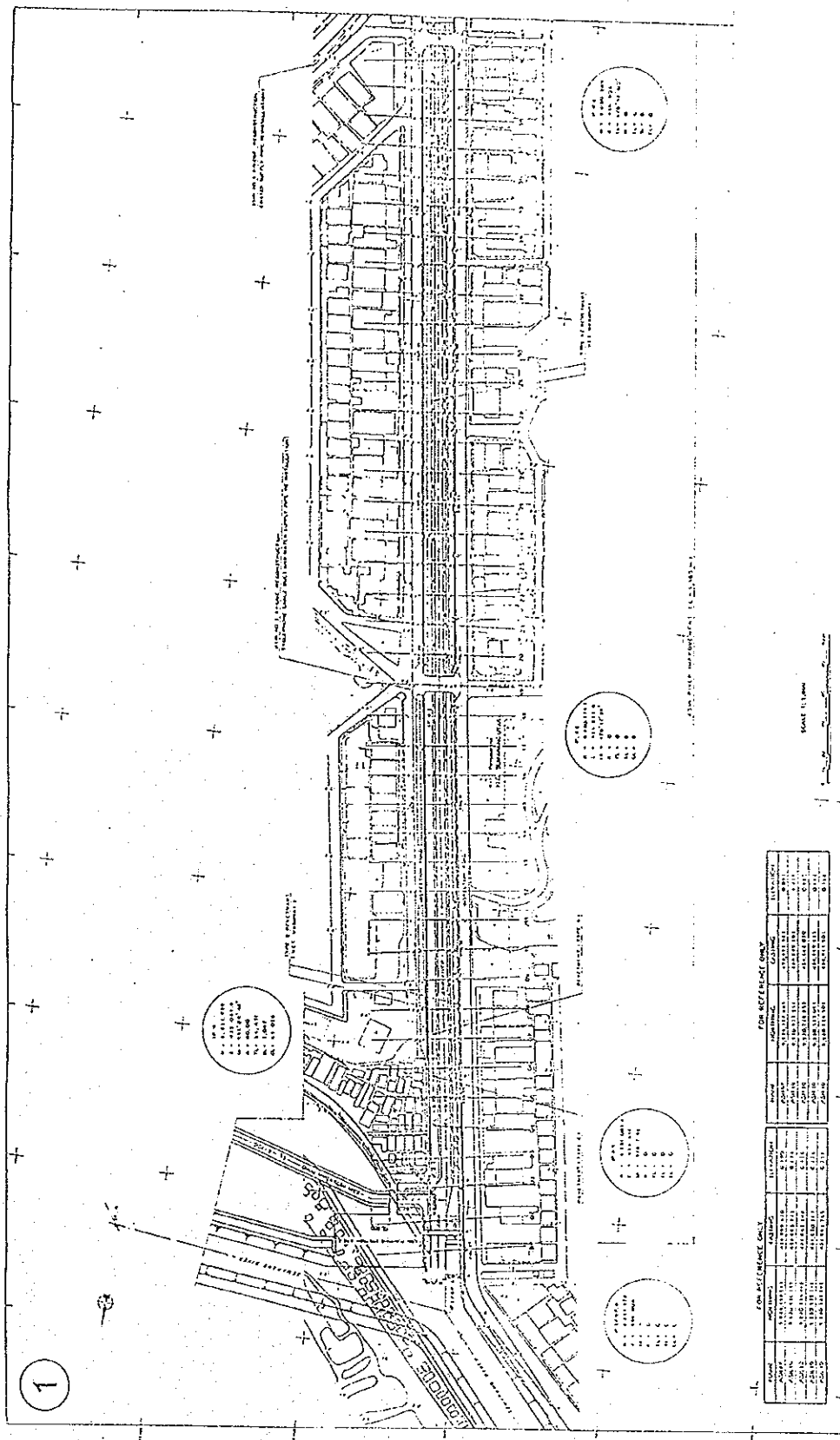


SECTION C-C
SCALE A



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

Fig. 6.3.4 (6/6)
SEMARANG RIVER REVETMENT (6/6)



FOR REFERENCE ONLY

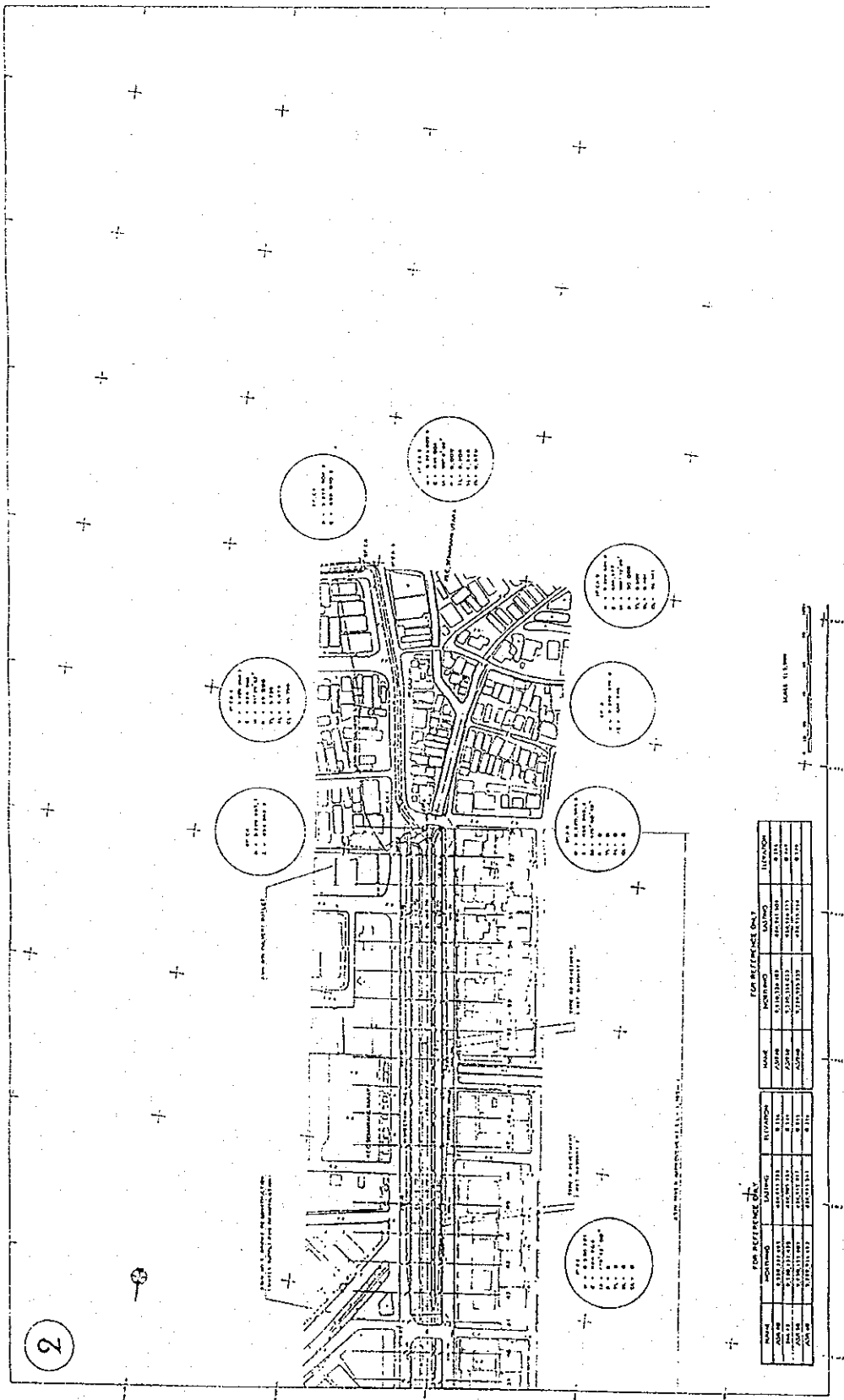
SECTION	NO.	DESCRIPTION	DATE
1	1	ASIN RIVER PLAN (1/2)	1971
2	2	ASIN RIVER PLAN (2/2)	1971
3	3	ASIN RIVER PLAN (3/2)	1971
4	4	ASIN RIVER PLAN (4/2)	1971
5	5	ASIN RIVER PLAN (5/2)	1971
6	6	ASIN RIVER PLAN (6/2)	1971
7	7	ASIN RIVER PLAN (7/2)	1971
8	8	ASIN RIVER PLAN (8/2)	1971
9	9	ASIN RIVER PLAN (9/2)	1971
10	10	ASIN RIVER PLAN (10/2)	1971
11	11	ASIN RIVER PLAN (11/2)	1971
12	12	ASIN RIVER PLAN (12/2)	1971
13	13	ASIN RIVER PLAN (13/2)	1971
14	14	ASIN RIVER PLAN (14/2)	1971
15	15	ASIN RIVER PLAN (15/2)	1971
16	16	ASIN RIVER PLAN (16/2)	1971
17	17	ASIN RIVER PLAN (17/2)	1971
18	18	ASIN RIVER PLAN (18/2)	1971
19	19	ASIN RIVER PLAN (19/2)	1971
20	20	ASIN RIVER PLAN (20/2)	1971

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

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 6.3.5 (1/2)

ASIN RIVER PLAN (1/2)



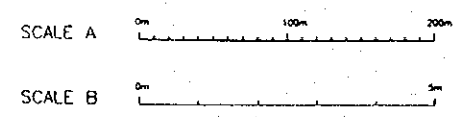
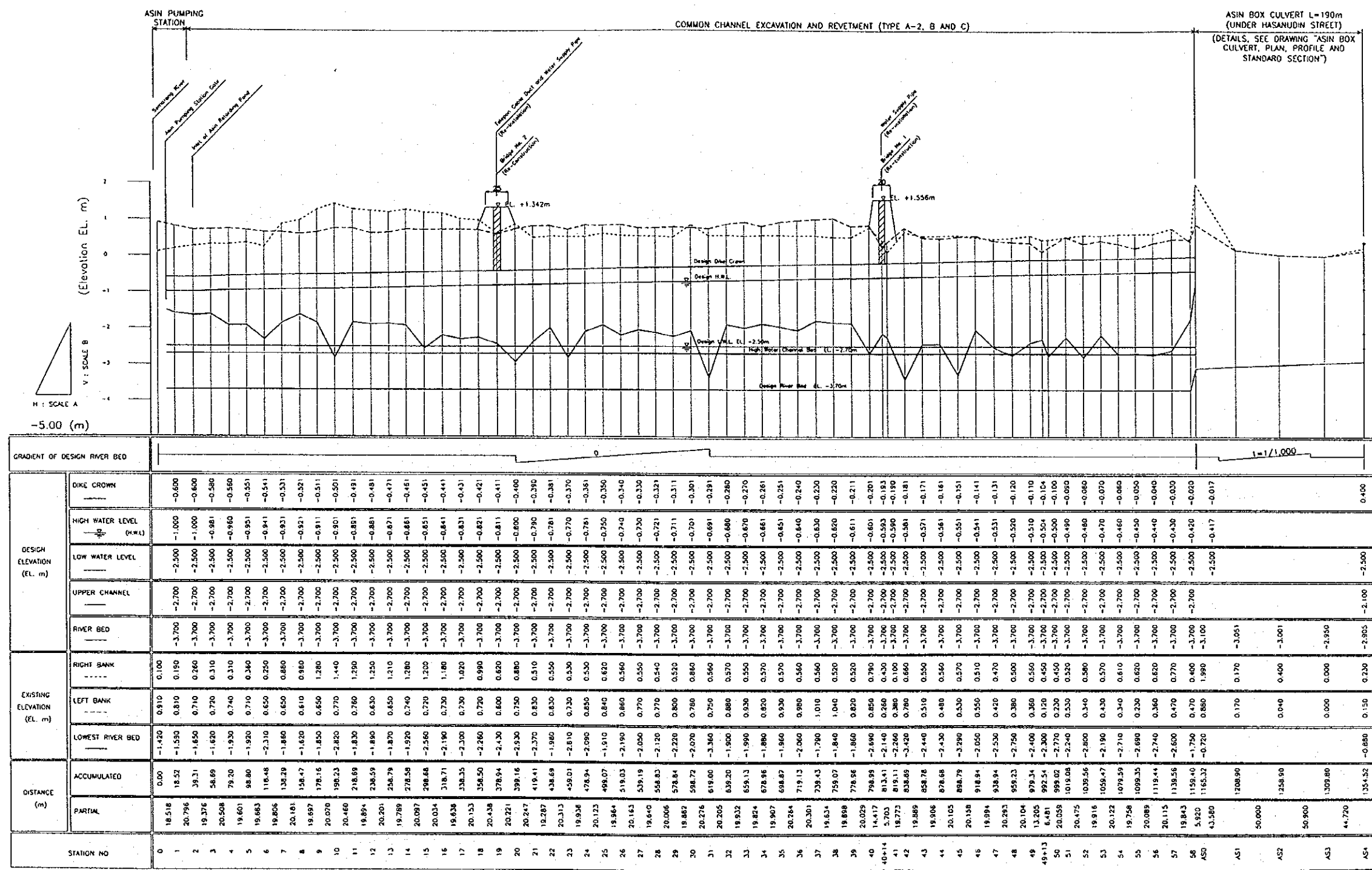
THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

Fig. 6.3.5 (2/2)

ASIN RIVER PLAN (2/2)

JAPAN INTERNATIONAL COOPERATION AGENCY

1

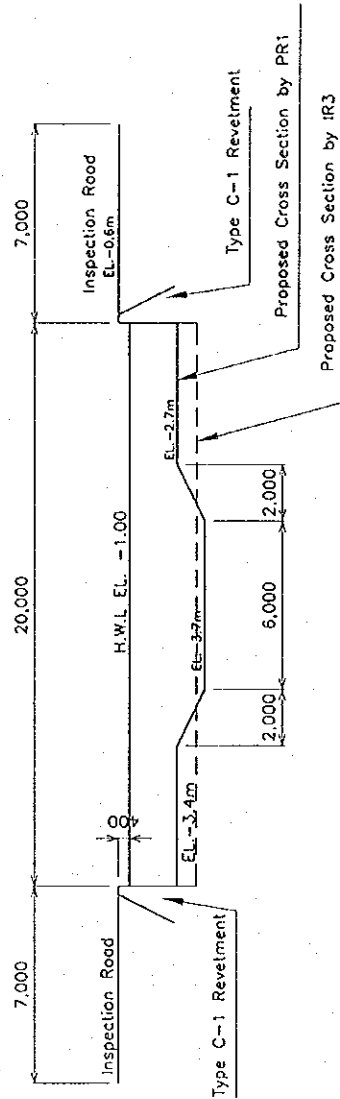


THE DETAILED DESIGN OF FLOOD CONTROL, URBAN DRAINAGE AND WATER RESOURCES DEVELOPMENT IN SEMARANG IN THE REPUBLIC OF INDONESIA

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 6.3.6 ASIN RIVER LONGITUDINAL PROFILE

Proposed Cross Section of Asin River



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

JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 6.3.7

ASIN RIVER DESIGN CROSS SECTION

1