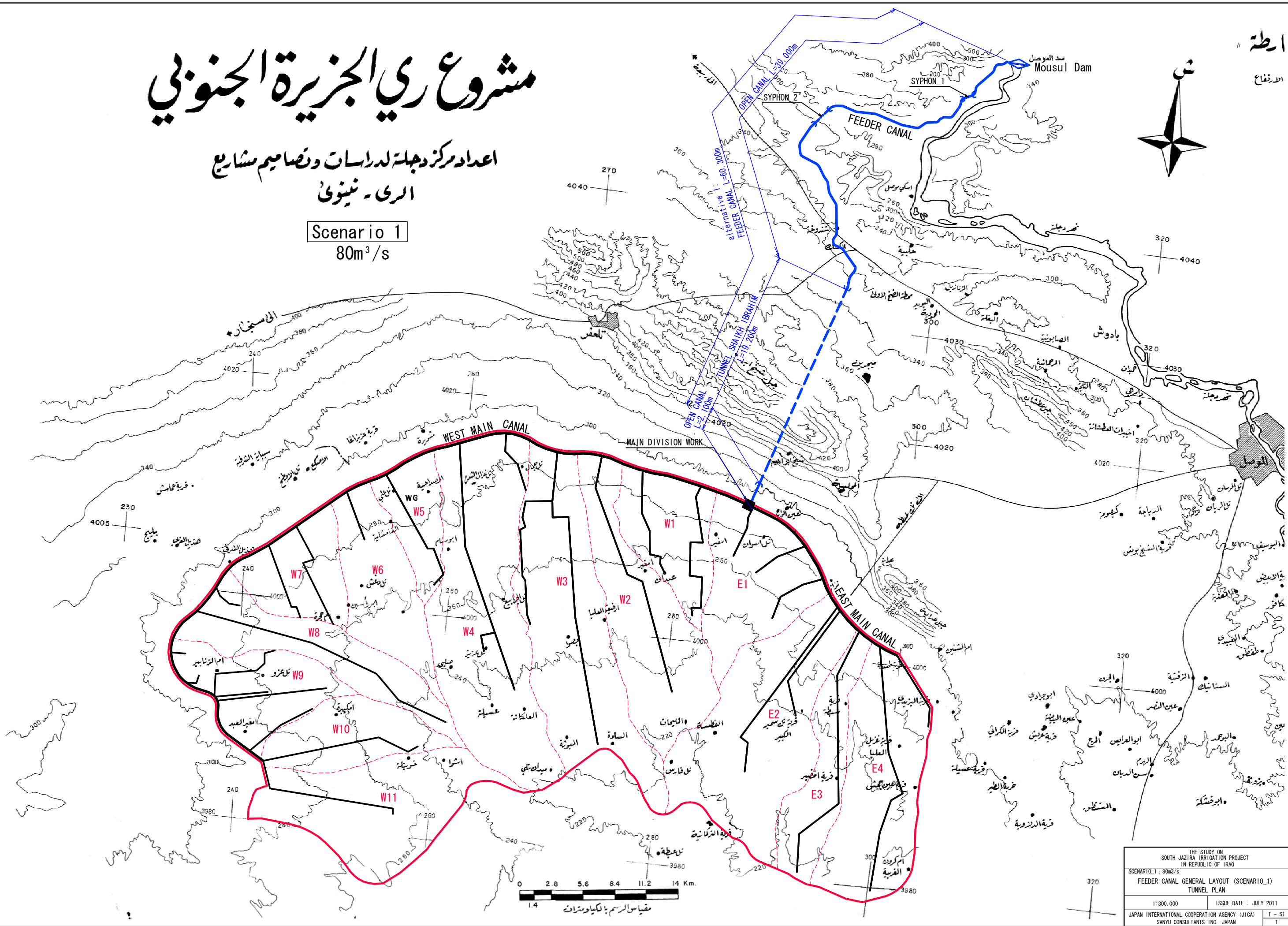
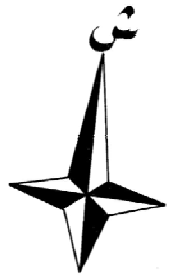


مشروع الري الجزيرة الجنوبي

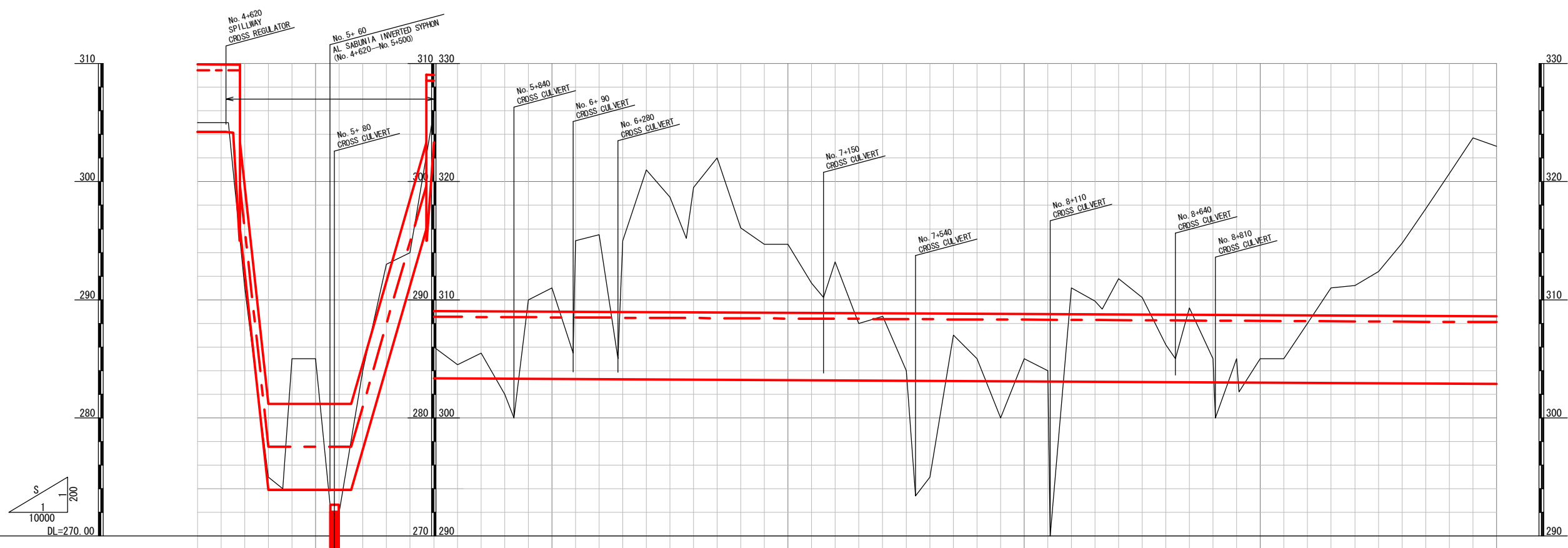
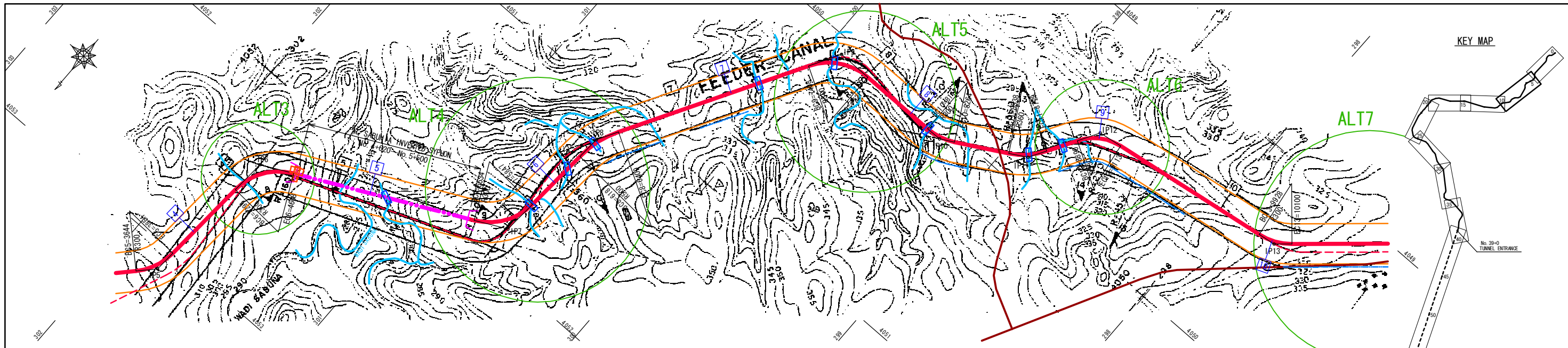
اعداد مركز دجلة لدراسات وتصاميم مشاريع
الري - نينوى

Scenario 1
80m³/s

ارطة
الارتفاع



THE STUDY ON SOUTH JAZIRA IRRIGATION PROJECT IN REPUBLIC OF IRAQ	
SCENARIO 1 : 80m ³ /s	
FEEDER CANAL GENERAL LAYOUT (SCENARIO 1) TUNNEL PLAN	
1:300,000	ISSUE DATE : JULY 2011
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	T - S1
SANYU CONSULTANTS INC. JAPAN	1

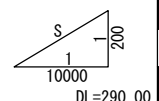
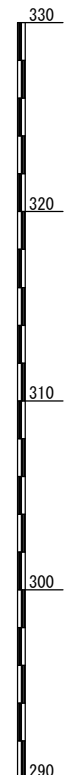
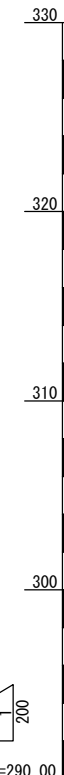
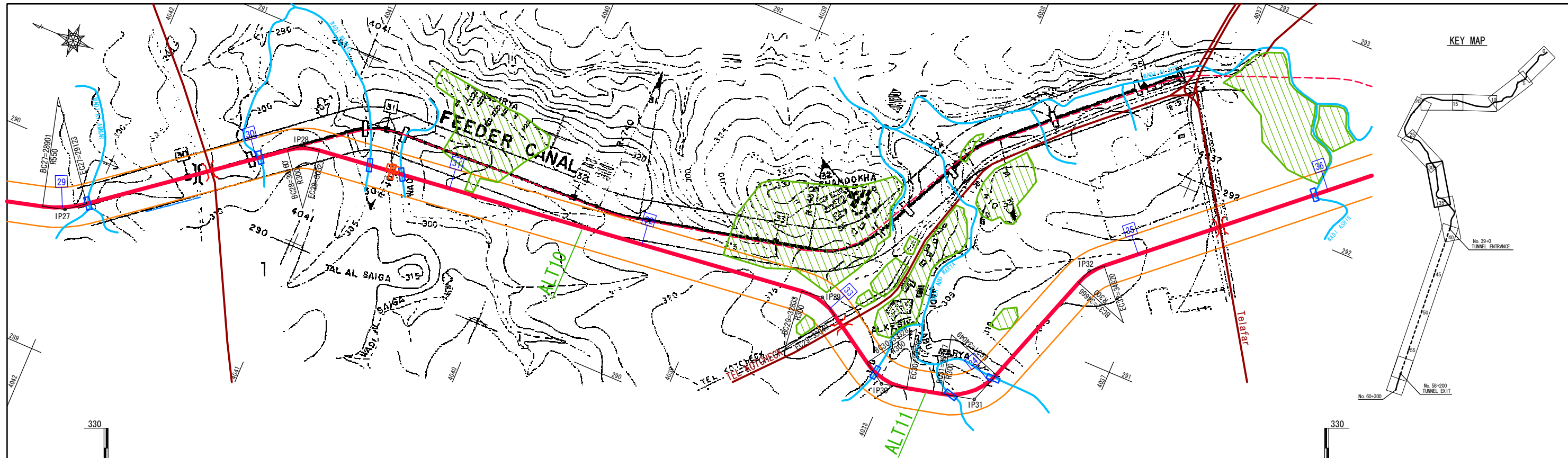


PLAN	WATER SURFACE LEVEL (W.S.L) m	304.21	309.43	303.34	308.56	303.29	308.51	303.19	308.41	303.09	308.31	302.99	308.21	302.89	308.11
	BED LEVEL (B.L) m	270.00	272.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00	270.00
	CANAL SLOPE	AL SABUNIYA INVERTED SYPHON													
NATURAL GROUND LEVEL (N.G.L) m	305.00	305.00	291.00	275.00	274.00	285.00	285.00	285.00	285.00	285.00	285.00	285.00	285.00	285.00	285.00
ADDITIONAL DISTANCE (m)	4.500	600	700	800	800	800	800	800	800	800	800	800	800	800	800
BLOCK DISTANCE (m)	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00
SURVEY POINT		No.5					No.6		No.7		No.8		No.9		No.10
CURVE	IP6						IP7	IP8		IP9		IP10	IP11	IP12	IP13

- GENERAL NOTES**
- CHANGE
 - WADI
 - DIVERSION CHANNEL
 - OPEN CANAL
 - CROSS REGULATOR
 - SPILLWAY REGULATOR
 - SPILLWAY
 - CROSS CULVERT
 - SYPHON
 - TUNNEL
 - RAILWAY CROSSING
 - VEHICLE BRIDGE
 - OIL PIPE CROSSING
 - PUMP STATION
 - FOOT BRIDGE
 - AQUEDUCT

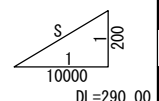
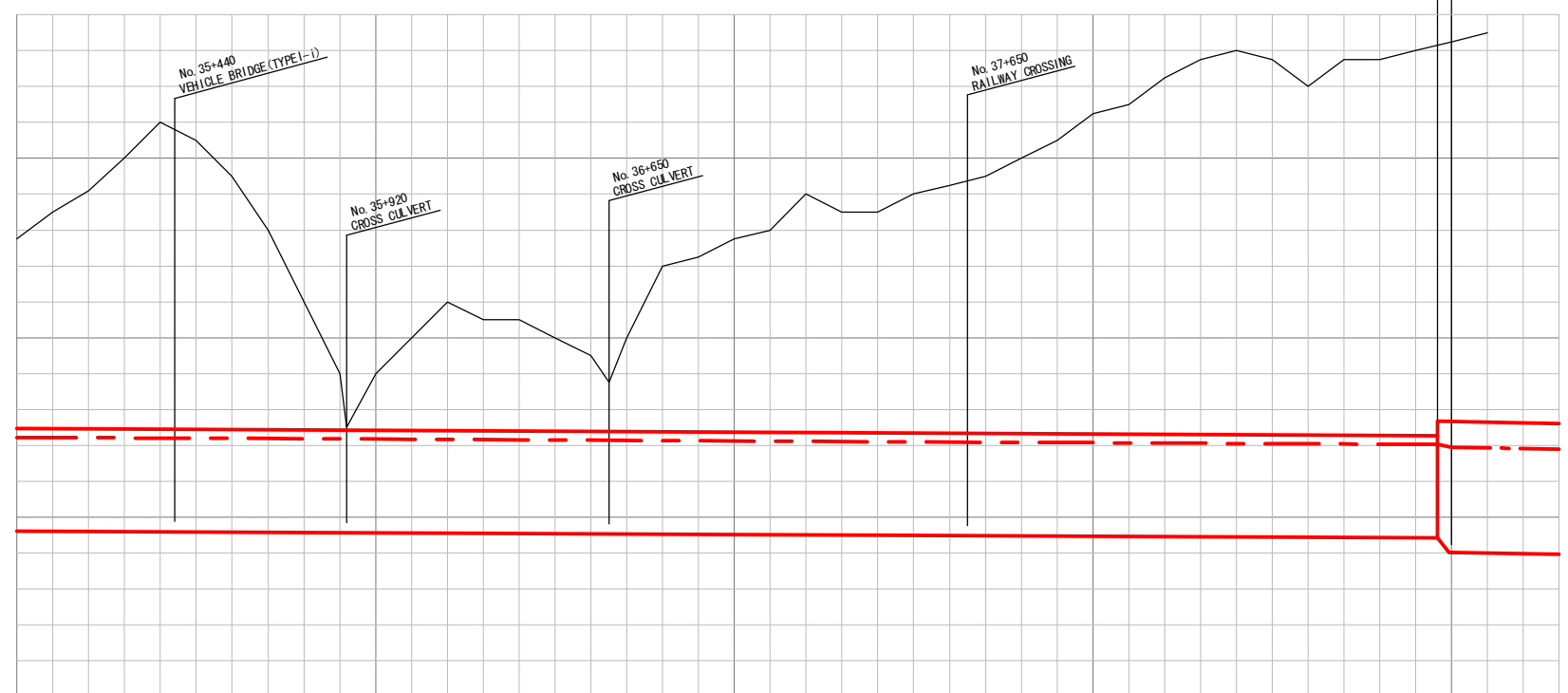
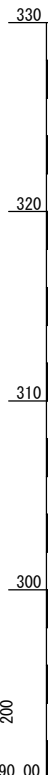
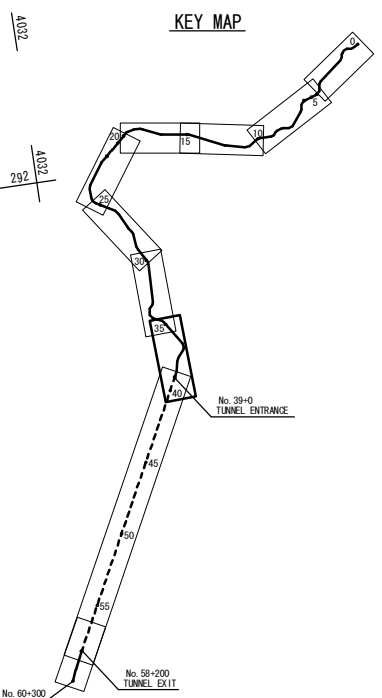
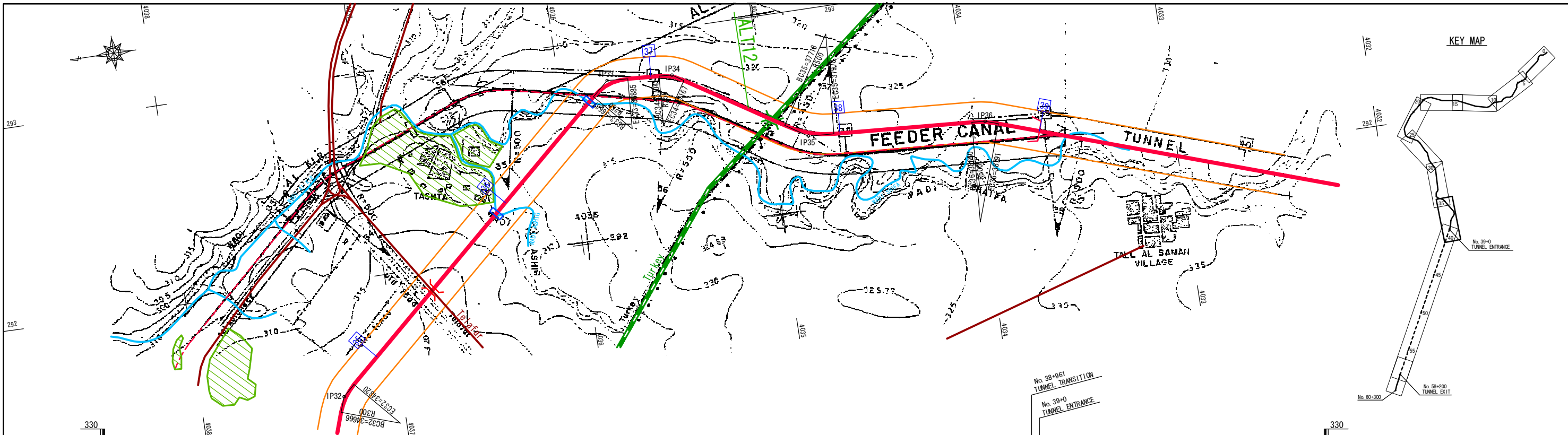
THE STUDY ON
SOUTH JAZIRA IRRIGATION PROJECT
IN REPUBLIC OF IRAQ
SCENARIO 1 : 80m³/s
FEEDER CANAL
PLAN AND PROFILE (4.5km-10.0km)

SCALE V 1 : 200 H 1 : 10000 ISSUE DATE : JULY 2011
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) T - S1
SANYU CONSULTANTS INC. JAPAN 3



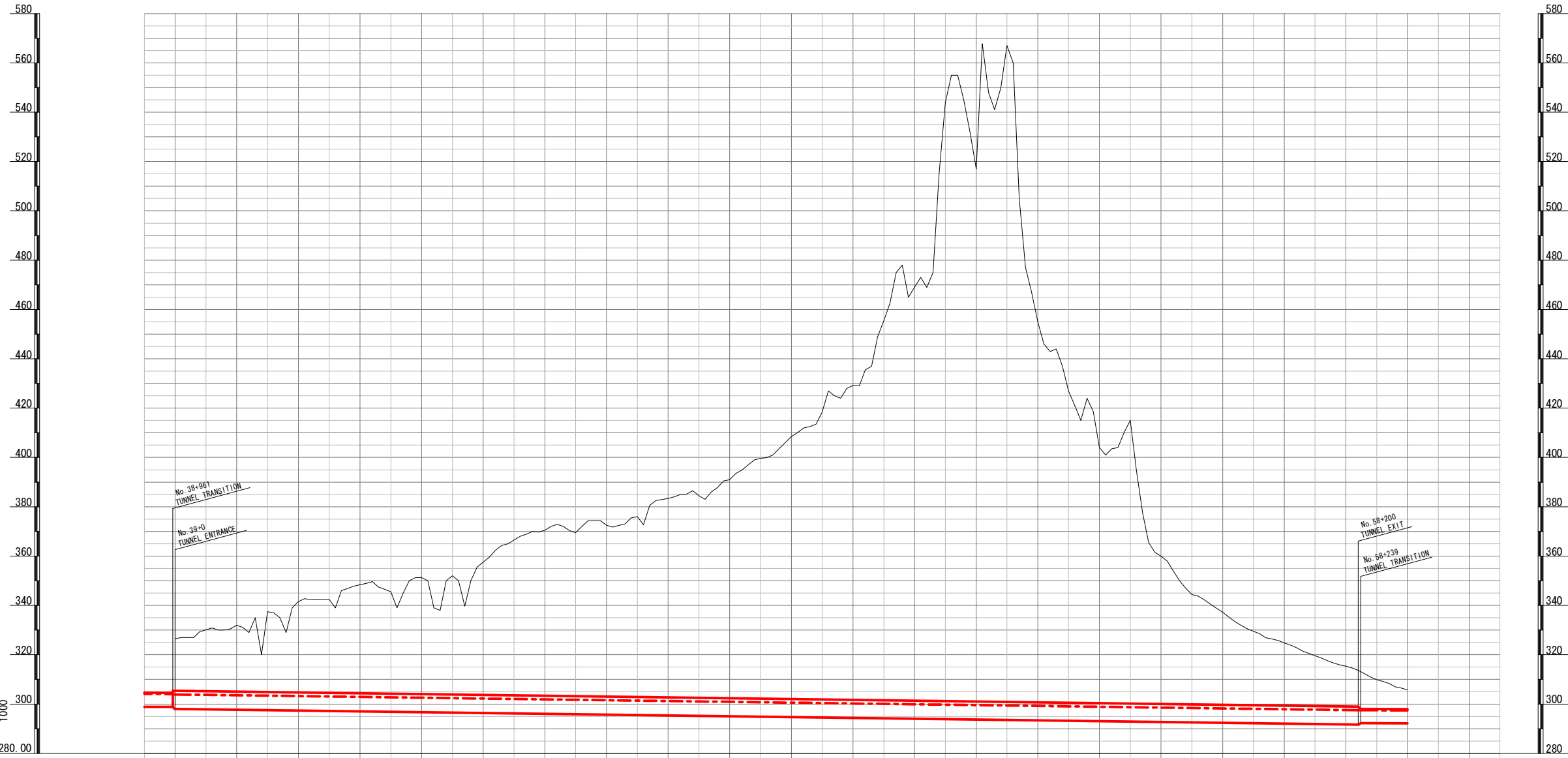
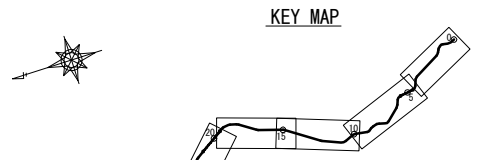
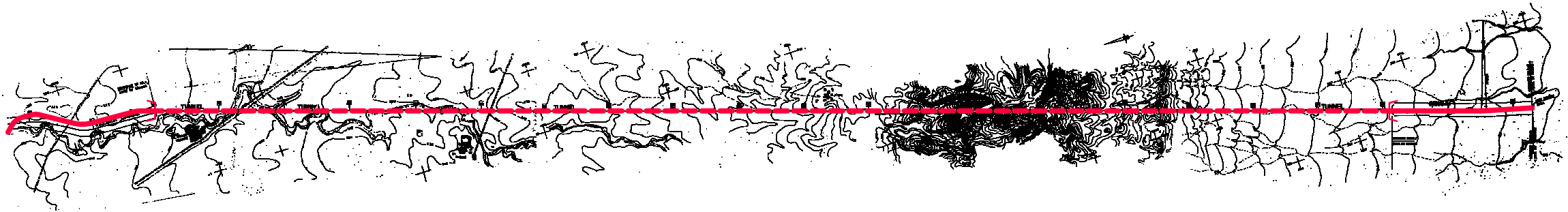
PLAN	WATER SURFACE LEVEL (W. S. L.) m	299.66	305.08	299.79	304.87	299.62	304.85	299.55	304.75	299.43	304.65	299.33	304.55	299.23	304.45
	BED LEVEL (B. L.) m	299.66	305.08	299.79	304.87	299.62	304.85	299.55	304.75	299.43	304.65	299.33	304.55	299.23	304.45
	CANAL SLOPE	1/10000		1/2000		1/10000		1/10000		1/10000		1/10000		1/10000	
NATURAL GROUND LEVEL (N. G. L.) m	303.50	306.10	307.50	307.50	305.00	303.00	300.50	305.00	305.00	308.00	309.00	310.50	313.00	315.20	316.00
ADDITIONAL DISTANCE (m)	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400
BLOCK DISTANCE (m)	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00
SURVEY POINT	No. 29														
CURVE															

- GENERAL NOTES**
- CHANGE
 - WADI
 - DIVERSION CHANNEL
 - OPEN CANAL
 - CROSS REGULATOR
 - SPILLWAY REGULATOR
 - SPILLWAY
 - CROSS CULVERT
 - SYPHON
 - TUNNEL
 - RAILWAY CROSSING
 - VEHICLE BRIDGE
 - OIL PIPE CROSSING
 - PUMP STATION
 - FOOT BRIDGE
 - AQUEDUCT



PLAN	WATER SURFACE LEVEL (W. S. L.) m	2997.23 - 304.45	2997.13 - 304.35	2997.03 - 304.25	2996.93 - 304.15	2996.83 - 304.05	2996.73 - 303.95	2996.63 - 303.85																																			
	BED LEVEL (B. L.) m	2997.23	2997.13	2997.03	2996.93	2996.83	2996.73	2996.63																																			
	CANAL SLOPE																																										
NATURAL GROUND LEVEL (N. G. L.) m	315.50	317.00	318.20	320.00	322.00	321.00	319.00	316.00	308.00	308.00	310.00	312.00	311.00	311.00	310.00	309.00	307.50	310.00	314.00	314.50	315.50	316.00	318.00	317.00	317.00	318.00	318.50	319.00	320.00	324.50	325.50	326.00	325.50	325.50	326.00	326.00	326.50	326.50					
ADDITIONAL DISTANCE (m)	35.000	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000	3100	3200	3300	3400	3500	3600	3700	3800	3900	4000		
BLOCK DISTANCE (m)	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00		
SURVEY POINT	No. 35										No. 36											No. 37																			No. 38		
CURVE																																											

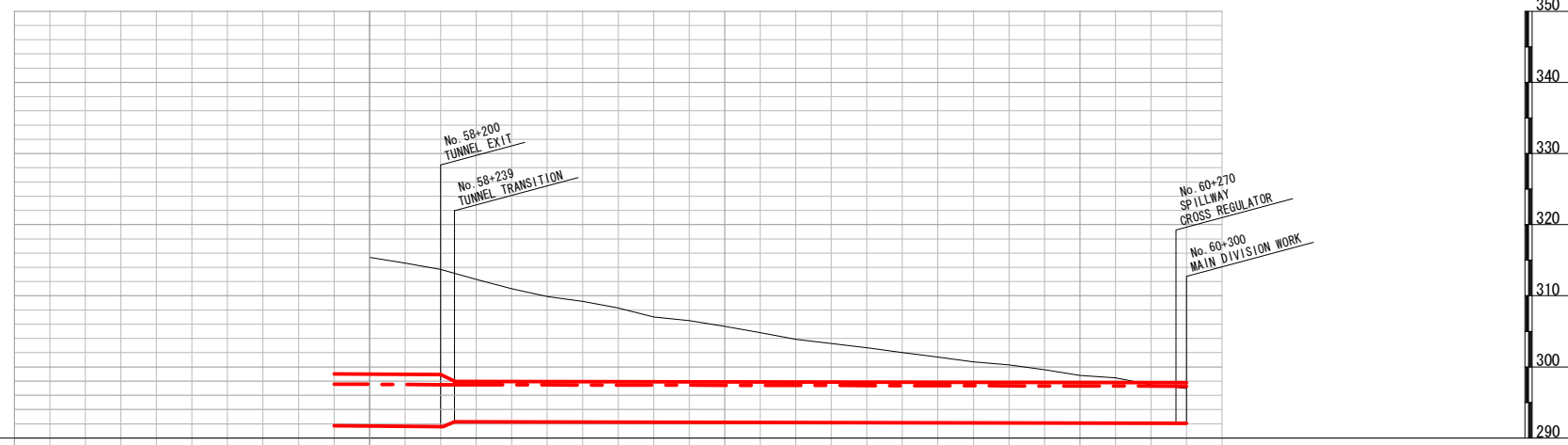
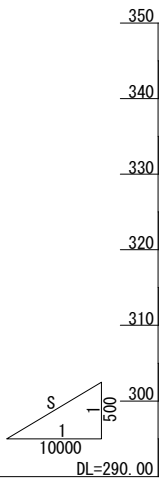
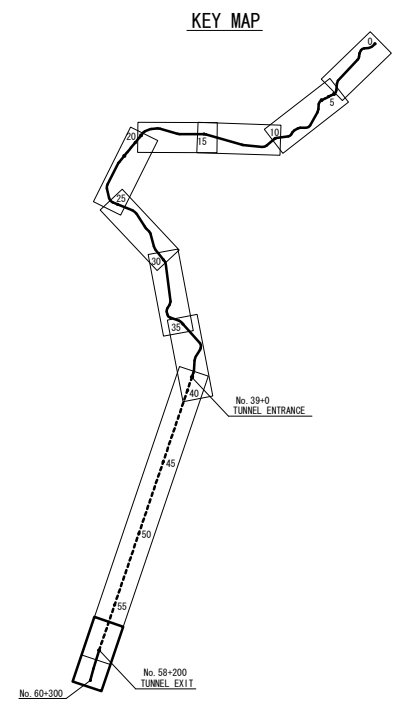
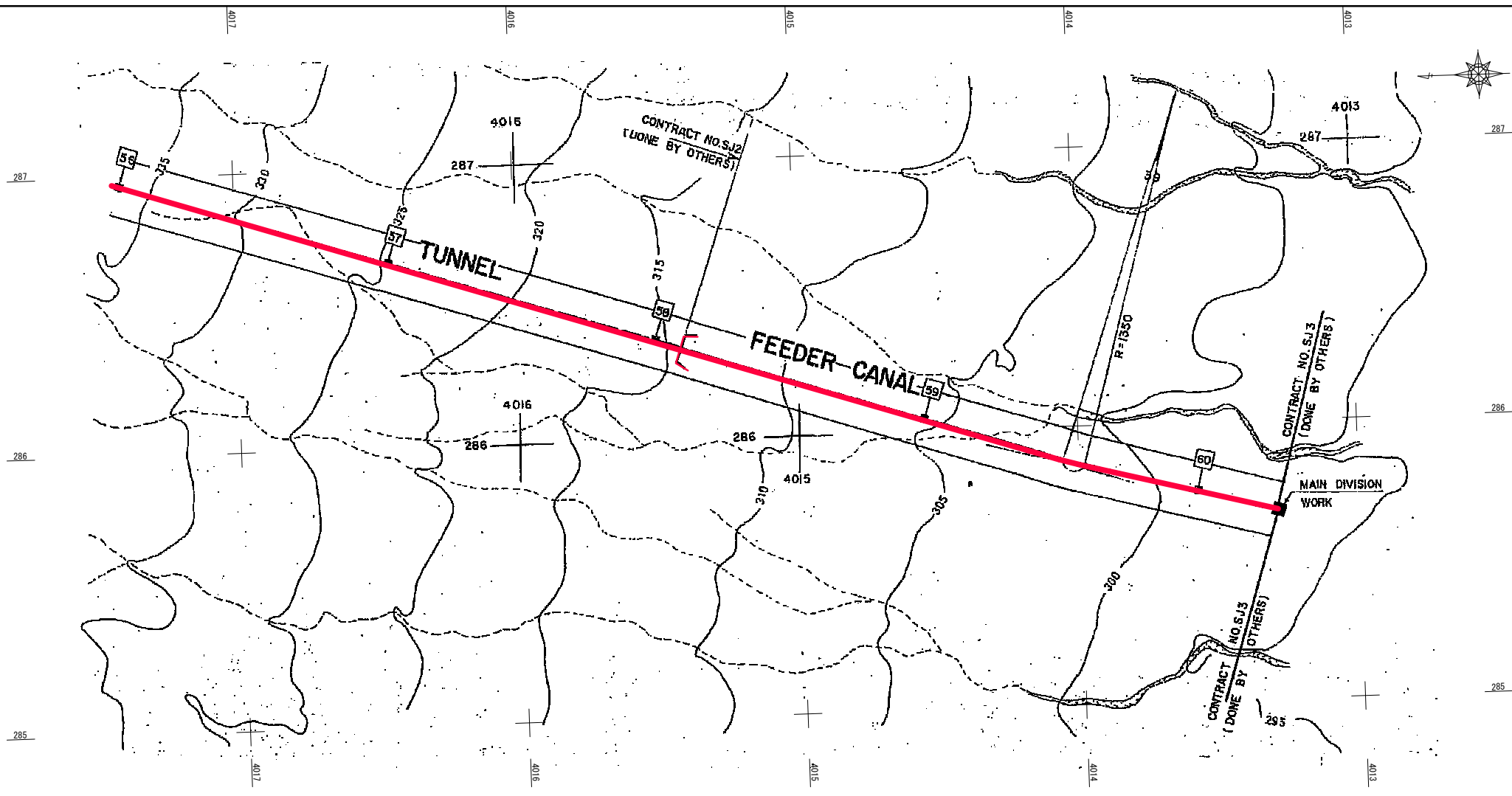
- GENERAL NOTES**
- CHANGE
 - WADI
 - DIVERSION CHANNEL
 - OPEN CANAL
 - CROSS REGULATOR
 - SPILLWAY REGULATOR
 - SPILLWAY
 - CROSS CULVERT
 - SYPHON
 - TUNNEL
 - RAILWAY CROSSING
 - VEHICLE BRIDGE
 - OIL PIPE CROSSING
 - PUMP STATION
 - FOOT BRIDGE
 - AQUEDUCT



GENERAL NOTES

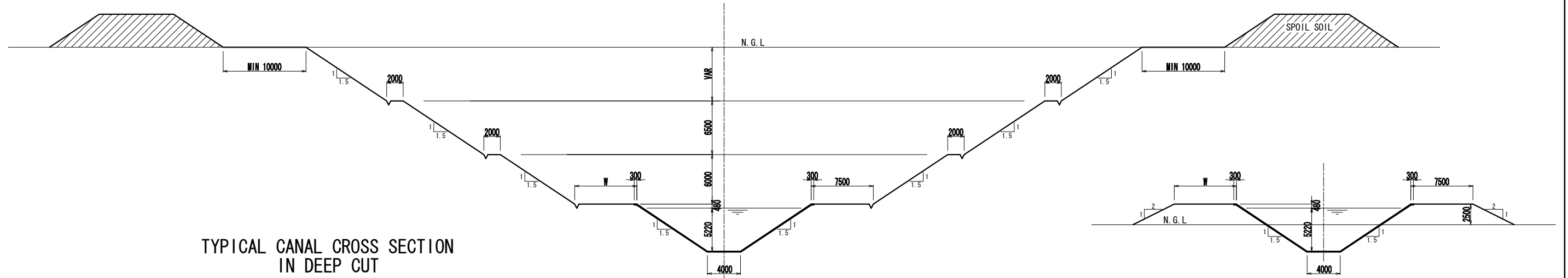
- CHAINAGE
- WADI
- DIVERSION CHANNEL
- OPEN CANAL
- CROSS REGULATOR
- SPILLWAY REGULATOR
- SPILLWAY
- CROSS CULVERT
- SYPHON
- TUNNEL
- RAILWAY CROSSING
- VEHICLE BRIDGE
- OIL PIPE CROSSING
- PUMP STATION
- FOOT BRIDGE
- AQUEDUCT

PLAN	TUNNEL TYPE	TYPE 3 L=1,800m												TYPE 1 L=12,300m												TYPE 2 L=1,900m												TYPE 3 L=3,200m																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	WATER SURFACE LEVEL (W.S.L) m	304.052												304.22												296.56												297.89																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
BED LEVEL (B.L) m	297.69												297.35												296.69												296.02																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
CANAL SLOPE	1/10000												1/3000												1/10000												1/10000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
NATURAL GROUND LEVEL (N.G.L) m	38.961	39.000	39.10	39.20	39.30	39.40	39.50	39.60	39.70	39.80	39.90	40.00	40.10	40.20	40.30	40.40	40.50	40.60	40.70	40.80	40.90	41.00	41.10	41.20	41.30	41.40	41.50	41.60	41.70	41.80	41.90	42.00	42.10	42.20	42.30	42.40	42.50	42.60	42.70	42.80	42.90	43.00	43.10	43.20	43.30	43.40	43.50	43.60	43.70	43.80	43.90	44.00	44.10	44.20	44.30	44.40	44.50	44.60	44.70	44.80	44.90	45.00	45.10	45.20	45.30	45.40	45.50	45.60	45.70	45.80	45.90	46.00	46.10	46.20	46.30	46.40	46.50	46.60	46.70	46.80	46.90	47.00	47.10	47.20	47.30	47.40	47.50	47.60	47.70	47.80	47.90	48.00	48.10	48.20	48.30	48.40	48.50	48.60	48.70	48.80	48.90	49.00	49.10	49.20	49.30	49.40	49.50	49.60	49.70	49.80	49.90	50.00	50.10	50.20	50.30	50.40	50.50	50.60	50.70	50.80	50.90	51.00	51.10	51.20	51.30	51.40	51.50	51.60	51.70	51.80	51.90	52.00	52.10	52.20	52.30	52.40	52.50	52.60	52.70	52.80	52.90	53.00	53.10	53.20	53.30	53.40	53.50	53.60	53.70	53.80	53.90	54.00	54.10	54.20	54.30	54.40	54.50	54.60	54.70	54.80	54.90	55.00	55.10	55.20	55.30	55.40	55.50	55.60	55.70	55.80	55.90	56.00	56.10	56.20	56.30	56.40	56.50	56.60	56.70	56.80	56.90	57.00	57.10	57.20	57.30	57.40	57.50	57.60	57.70	57.80	57.90	58.00	58.10	58.20	58.30	58.40	58.50	58.60	58.70	58.80	58.90	59.00	59.10	59.20	59.30	59.40	59.50	59.60	59.70	59.80	59.90	60.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
ADDITIONAL DISTANCE (m)	0.00	500.00	1000.00	1500.00	2000.00	2500.00	3000.00	3500.00	4000.00	4500.00	5000.00	5500.00	6000.00	6500.00	7000.00	7500.00	8000.00	8500.00	9000.00	9500.00	10000.00	10500.00	11000.00	11500.00	12000.00	12500.00	13000.00	13500.00	14000.00	14500.00	15000.00	15500.00	16000.00	16500.00	17000.00	17500.00	18000.00	18500.00	19000.00	19500.00	20000.00	20500.00	21000.00	21500.00	22000.00	22500.00	23000.00	23500.00	24000.00	24500.00	25000.00	25500.00	26000.00	26500.00	27000.00	27500.00	28000.00	28500.00	29000.00	29500.00	30000.00	30500.00	31000.00	31500.00	32000.00	32500.00	33000.00	33500.00	34000.00	34500.00	35000.00	35500.00	36000.00	36500.00	37000.00	37500.00	38000.00	38500.00	39000.00	39500.00	40000.00	40500.00	41000.00	41500.00	42000.00	42500.00	43000.00	43500.00	44000.00	44500.00	45000.00	45500.00	46000.00	46500.00	47000.00	47500.00	48000.00	48500.00	49000.00	49500.00	50000.00	50500.00	51000.00	51500.00	52000.00	52500.00	53000.00	53500.00	54000.00	54500.00	55000.00	55500.00	56000.00	56500.00	57000.00	57500.00	58000.00	58500.00	59000.00	59500.00	60000.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
BLOCK DISTANCE (m)	0.00	500.00	1000.00	1500.00	2000.00	2500.00	3000.00	3500.00	4000.00	4500.00	5000.00	5500.00	6000.00	6500.00	7000.00	7500.00	8000.00	8500.00	9000.00	9500.00	10000.00	10500.00	11000.00	11500.00	12000.00	12500.00	13000.00	13500.00	14000.00	14500.00	15000.00	15500.00	16000.00	16500.00	17000.00	17500.00	18000.00	18500.00	19000.00	19500.00	20000.00	20500.00	21000.00	21500.00	22000.00	22500.00	23000.00	23500.00	24000.00	24500.00	25000.00	25500.00	26000.00	26500.00	27000.00	27500.00	28000.00	28500.00	29000.00	29500.00	30000.00	30500.00	31000.00	31500.00	32000.00	32500.00	33000.00	33500.00	34000.00	34500.00	35000.00	35500.00	36000.00	36500.00	37000.00	37500.00	38000.00	38500.00	39000.00	39500.00	40000.00	40500.00	41000.00	41500.00	42000.00	42500.00	43000.00	43500.00	44000.00	44500.00	45000.00	45500.00	46000.00	46500.00	47000.00	47500.00	48000.00	48500.00	49000.00	49500.00	50000.00	50500.00	51000.00	51500.00	52000.00	52500.00	53000.00	53500.00	54000.00	54500.00	55000.00	55500.00	56000.00	56500.00	57000.00	57500.00	58000.00	58500.00	59000.00	59500.00	60000.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
SURVEY POINT	No.39	No.40	No.41	No.42	No.43	No.44	No.45	No.46	No.47	No.48	No.49	No.50	No.51	No.52	No.53	No.54	No.55	No.56	No.57	No.58	No.59	No.60	No.61	No.62	No.63	No.64	No.65	No.66	No.67	No.68	No.69	No.70	No.71	No.72	No.73	No.74	No.75	No.76	No.77	No.78	No.79	No.80	No.81	No.82	No.83	No.84	No.85	No.86	No.87	No.88	No.89	No.90	No.91	No.92	No.93	No.94	No.95	No.96	No.97	No.98	No.99	No.100	No.101	No.102	No.103	No.104	No.105	No.106	No.107	No.108	No.109	No.110	No.111	No.112	No.113	No.114	No.115	No.116	No.117	No.118	No.119	No.120	No.121	No.122	No.123	No.124	No.125	No.126	No.127	No.128	No.129	No.130	No.131	No.132	No.133	No.134	No.135	No.136	No.137	No.138	No.139	No.140	No.141	No.142	No.143	No.144	No.145	No.146	No.147	No.148	No.149	No.150	No.151	No.152	No.153	No.154	No.155	No.156	No.157	No.158	No.159	No.160	No.161	No.162	No.163	No.164	No.165	No.166	No.167	No.168	No.169	No.170	No.171	No.172	No.173	No.174	No.175	No.176	No.177	No.178	No.179	No.180	No.181	No.182	No.183	No.184	No.185	No.186	No.187	No.188	No.189	No.190	No.191	No.192	No.193	No.194	No.195	No.196	No.197	No.198	No.199	No.200	No.201	No.202	No.203	No.204	No.205	No.206	No.207	No.208	No.209	No.210	No.211	No.212	No.213	No.214	No.215	No.216	No.217	No.218	No.219	No.220	No.221	No.222	No.223	No.224	No.225	No.226	No.227	No.228	No.229	No.230	No.231	No.232	No.233	No.234	No.235	No.236	No.237	No.238	No.239	No.240	No.241	No.242	No.243	No.244	No.245	No.246	No.247	No.248	No.249	No.250	No.251	No.252	No.253	No.254	No.255	No.256	No.257	No.258	No.259	No.260	No.261	No.262	No.263	No.264	No.265	No.266	No.267	No.268	No.269	No.270	No.271	No.272	No.273	No.274	No.275	No.276	No.277	No.278	No.279	No.280	No.281	No.282	No.283	No.284	No.285	No.286	No.287	No.288	No.289	No.290	No.291	No.292	No.293	No.294	No.295	No.296	No.297	No.298	No.299	No.300	No.301	No.302	No.303	No.304	No.305	No.306	No.307	No.308	No.309	No.310	No.311	No.312	No.313	No.314	No.315	No.316	No.317	No.318	No.319	No.320	No.321	No.322	No.323	No.324	No.325	No.326	No.327	No.328	No.329	No.330	No.331	No.332	No.333	No.334	No.335	No.336	No.337	No.338	No.339	No.340	No.341	No.342	No.343	No.344	No.345	No.346	No.347	No.348	No.349	No.350	No.351	No.352	No.353	No.354	No.355	No.356	No.357	No.358	No.359	No.360	No.361	No.362	No.363	No.364	No.365	No.366	No.367	No.368	No.369	No.370	No.371	No.372	No.373	No.374	No.375	No.376	No.377	No.378	No.379	No.380	No.381	No.382	No.383	No.384	No.385	No.386	No.387	No.388	No.389	No.390	No.391	No.392	No.393	No.394	No.395	No.396	No.397	No.398	No.399	No.400	No.401	No.402	No.403	No.404	No.405	No.406	No.407	No.408	No.409	No.410	No.411	No.412	No.413	No.414	No.415	No.416	No.417	No.418	No.419	No.420	No.421	No.422	No.423	No.424	No.425	No.426	No.427	No.428	No.429	No.430	No.431	No.432	No.433	No.434	No.435	No.436	No.437	No.438	No.439	No.440	No.441	No.442	No.443	No.444	No.445	No.446	No.447	No.448	No.449	No.450	No.451	No.452	No.453	No.454	No.455	No.456	No.457	No.458	No.459	No.460	No.461	No.462	No.463	No.464	No.465	No.466	No.467	No.468	No.469	No.470	No.471	No.472	No.473	No.474	No.475	No.476	No.477	No.478	No.479	No.480	No.481	No.482	No.483	No.484	No.485	No.486	No.487	No.488	No.489	No.490	No.491	No.492	No.493	No.494	No.495	No.496	No.497	No.498	No.499	No.500	No.501	No.502	No.503	No.504	No.505	No.506	No.507	No.508	No.509	No.510	No.511	No.512	No.513	No.514	No.515	No.516	No.517	No.518	No.519	No.520	No.521	No.522	No.523	No.524	No.525	No.526	No.527	No.528	No.529	No.530	No.531	No.532	No.533	No.534	No.535	No.536	No.537	No.538	No.539	No.540	No.541	No.542	No.543	No.544	No.545	No.546	No.547	No.548	No.549	No.550	No.551	No.552	No.553	No.554	No.555	No.556	No.557	No.558	No.559	No.560	No.561	No.562	No.563	No.564	No.565	No.566	No.567	No.568	No.569	No.570	No.571	No.572	No.573	No.574	No.575	No.576	No.577	No.578	No.579	No.580	No.581	No.582	No.583	No.584	No.585	No.586	No.587	No.588	No.589	No.590	No.591	No.592	No.593	No.594	No.595	No.596	No.597	No.598	No.599	No.600	No.601	No.602	No.603	No.604	No.605	No.606	No.607	No.608	No.609	No.610	No.611	No.612	No.613	No.614	No.615	No.616	No.617	No.618	No.619	No.620	No.621	No.622	No.623	No.624	No.625	No.626	No.627	No.628	No.629	No.630	No.631	No.632	No.633	No.634	No.635	No.636	No.637	No.638	No.639	No.640	No.641	No.642	No.643	No.644	No.645	No.646	No.647	No.648	No.649	No.650	No.651	No.652	No.653	No.654	No.655	No.656	No.657	No.658	No.659	No.660	No.661	No.662	No.663	No.664	No.665	No.666	No.667	No.668	No.669	No.670	No.671	No.672	No.673	No.674	No.675	No.676	No.677	No.678	No.679	No.680	No.681	No.682	No.683	No.684	No.685	No.686	No.687	No.688	No.689	No.690	No.691	No.692	No.693	No.694	No.695	No.696	No.697	No.698	No.699	No.700	No.701	No.702	No.703	No.704	No.



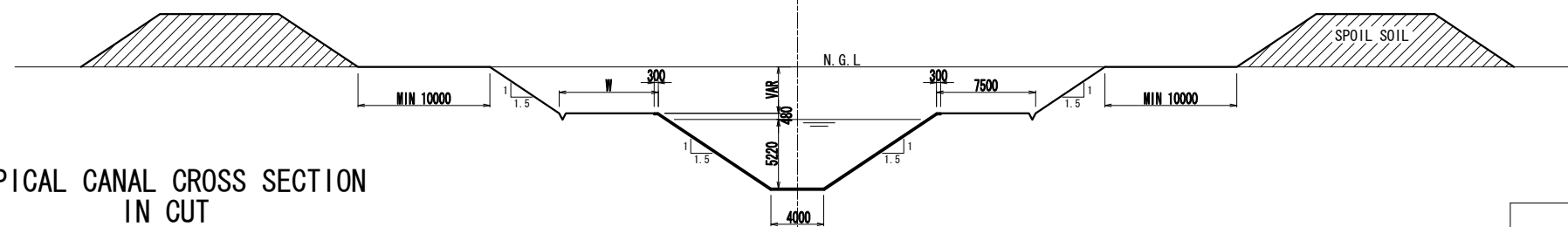
PLAN	WATER SURFACE LEVEL (W.S.L) m	291.623 - 297.402
	BED LEVEL (B.L) m	291.623 - 297.406
	CANAL SLOPE	1/3000 C.T. 0.1 1/10000
NATURAL GROUND LEVEL (N.G.L) m		319.70, 318.70, 317.70, 316.70, 315.70, 314.70, 313.70, 312.30, 311.00, 309.90, 308.90, 308.30, 307.00, 306.50, 306.50, 305.70, 304.80, 303.90, 303.30, 303.30, 302.70, 302.00, 301.40, 300.70, 300.30, 299.60, 299.60, 298.80, 298.48, 297.50, 297.00
ADDITIONAL DISTANCE (m)		200, 200, 200, 300, 400, 500, 600, 700, 800, 900, 100, 200, 300, 400, 500, 600, 700, 800, 900, 100, 200, 300
BLOCK DISTANCE (m)		500.00, 500.00, 300.00
SURVEY POINT		No. 59, No. 60
CURVE		

- GENERAL NOTES**
- CHAINING
 - WADI
 - DIVERSION CHANNEL
 - OPEN CANAL
 - CROSS REGULATOR
 - SPILLWAY REGULATOR
 - SPILLWAY
 - CROSS CULVERT
 - SYPHON
 - TUNNEL
 - RAILWAY CROSSING
 - VEHICLE BRIDGE
 - OIL PIPE CROSSING
 - PUMP STATION
 - FOOT BRIDGE
 - AQUEDUCT

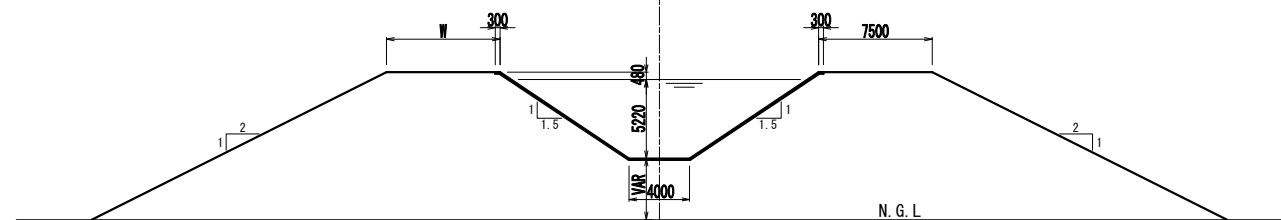
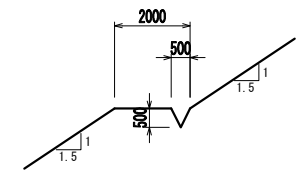


TYPICAL CANAL CROSS SECTION
IN DEEP CUT

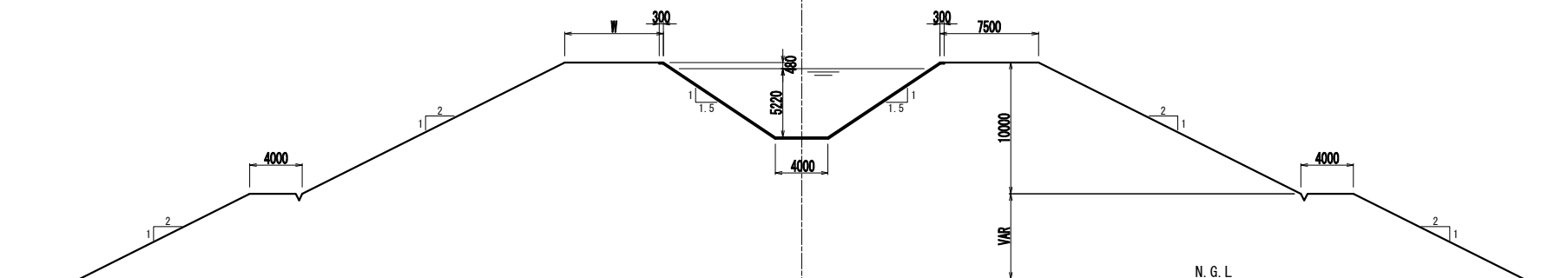
TYPICAL CANAL CROSS SECTION
IN CUT & FILL



TYPICAL CANAL CROSS SECTION
IN CUT



TYPICAL CANAL CROSS SECTION
IN FILL



TYPICAL CANAL CROSS SECTION
IN HIGH FILL

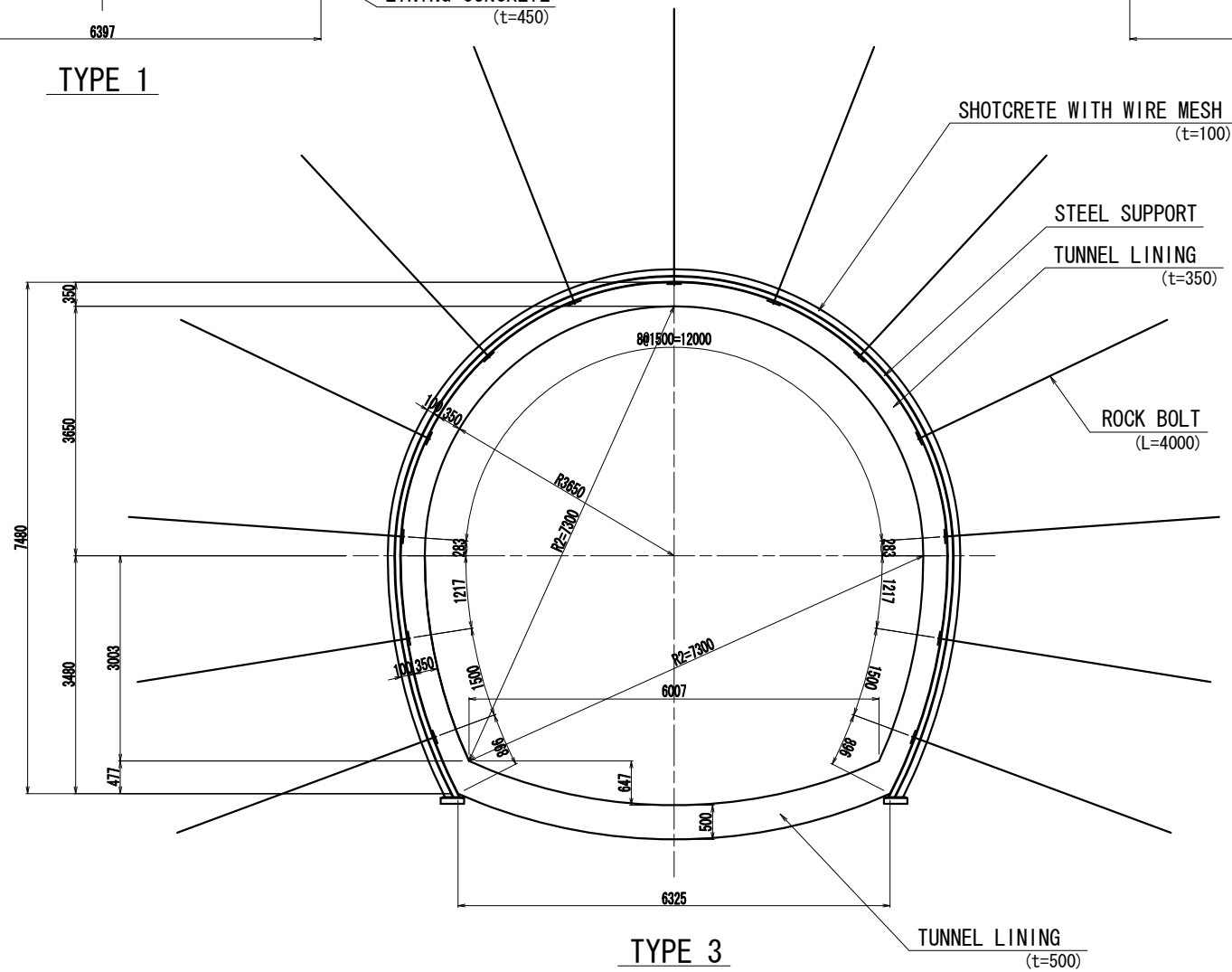
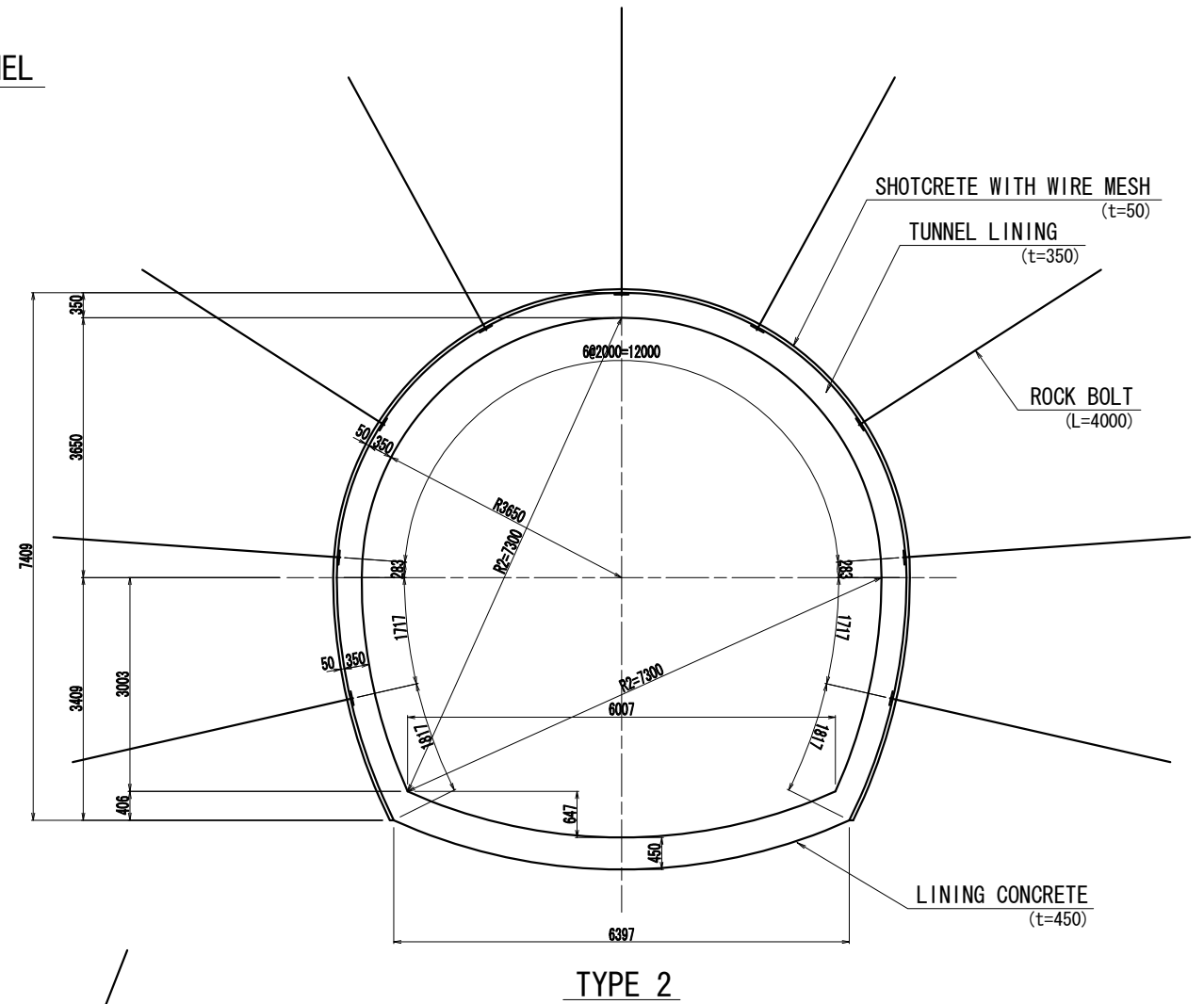
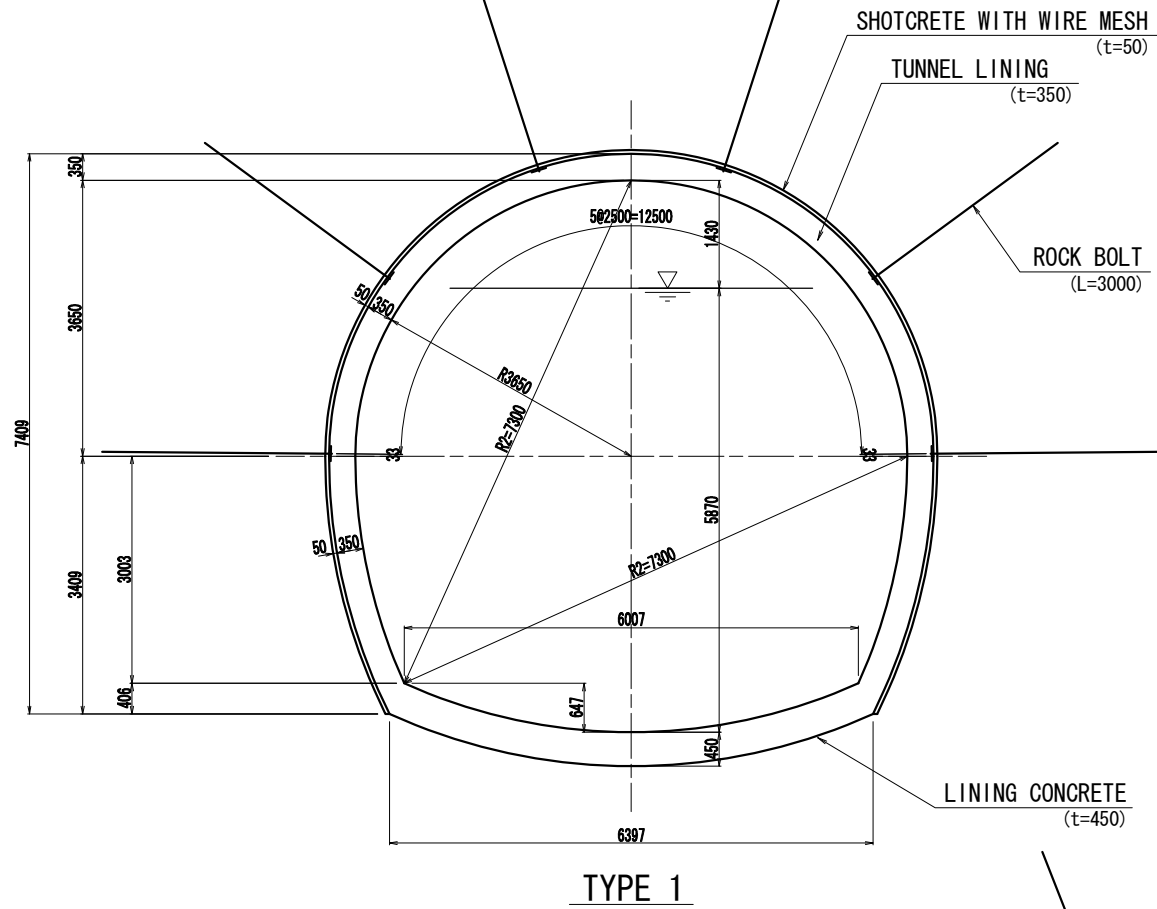
TYPE	HYDRAULIC DATA					GEOMETRICAL DATA		
	Q m ³ /sec	S m/m	n	V m/sec	F	B m	h m	C.LINED FREE BOARD
SCENARIO 1	80	0.0001	0.015	1.295	0.18	4.00	5.22	0.48

S: SLOPE OF BOTTOM OF CANALS
n: MANNING COEFFICIENT
F: FROUDE NUMBER

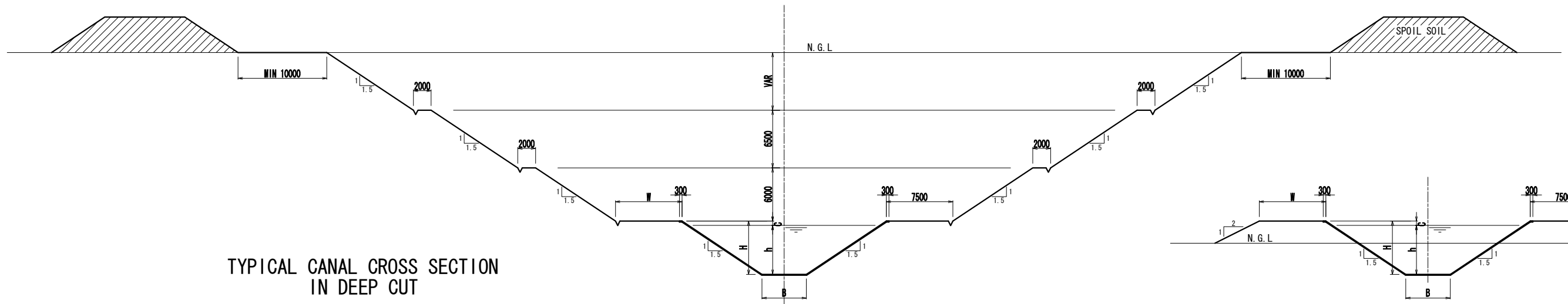
V: DESIGN VELOCITY
Q: DESIGN DISCHARGE
W: WIDTH OF ROAD

TYPICAL TUNNEL

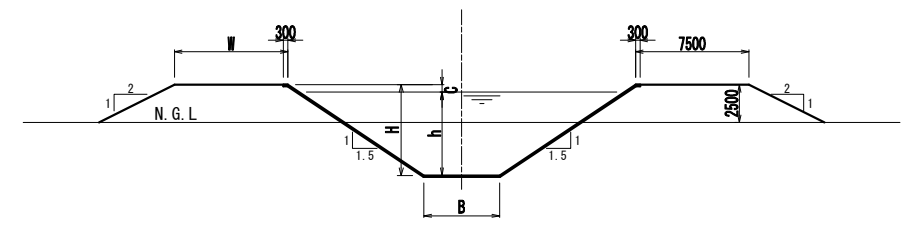
SCALE 1:50



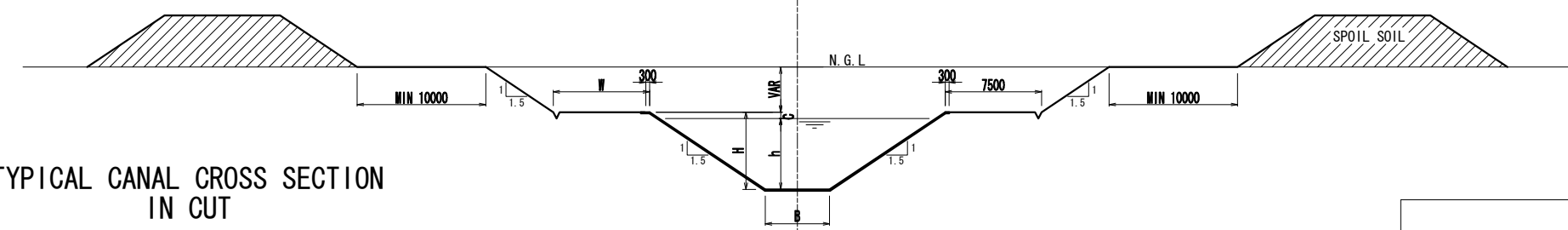
THE STUDY ON SOUTH JAZIRA IRRIGATION PROJECT IN REPUBLIC OF IRAQ	
SCENARIO_1 : 80m ³ /s FEEDER CANAL TYPICAL CROSS SECTIONS (TUNNEL)	
SCALE 1 : 50	ISSUE DATE : JULY 2011
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	T - S1
SANYU CONSULTANTS INC. JAPAN	13



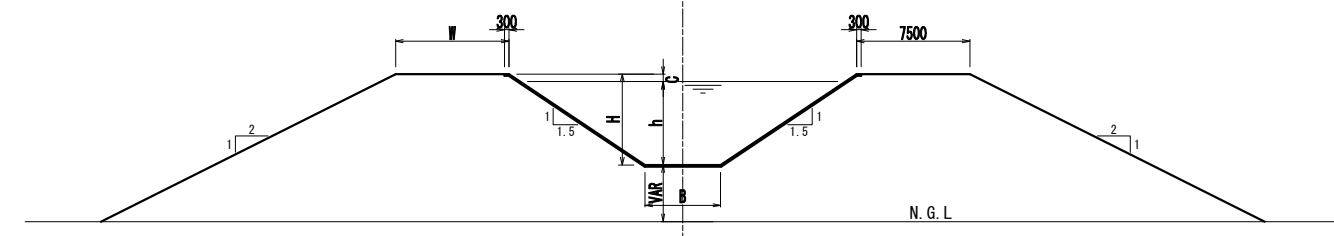
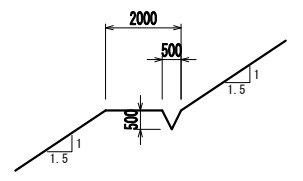
TYPICAL CANAL CROSS SECTION
IN DEEP CUT



TYPICAL CANAL CROSS SECTION
IN CUT & FILL



TYPICAL CANAL CROSS SECTION
IN CUT

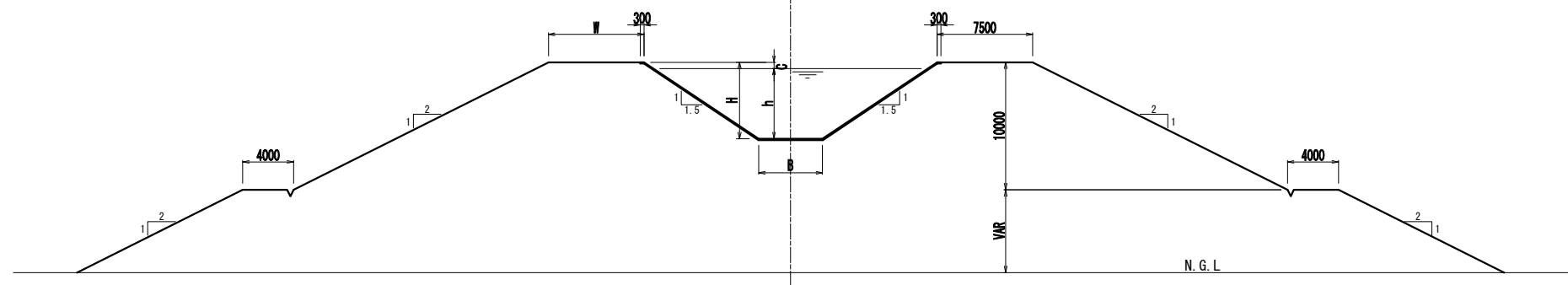


TYPICAL CANAL CROSS SECTION
IN FILL

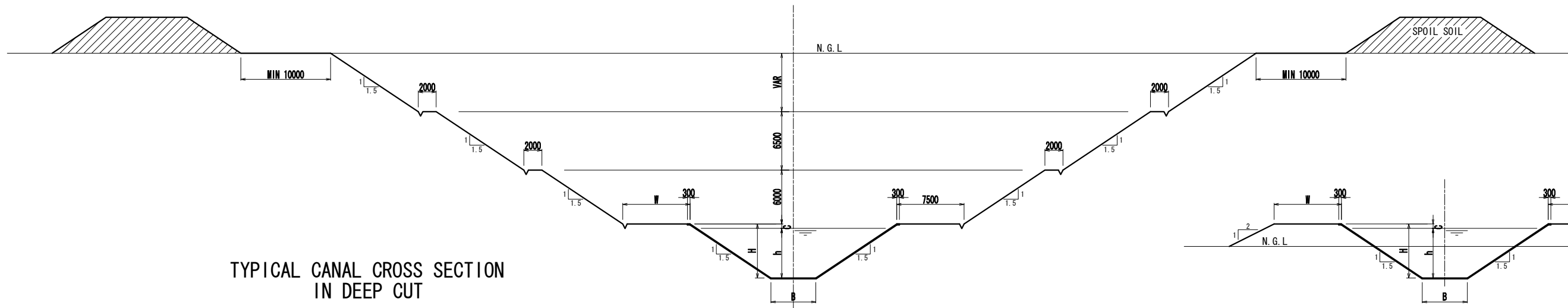
TYPE	HYDRAULIC DATA					GEOMETRICAL DATA				
	Q m ³ /sec	S m/m	n	V m/sec	F	B m	h m	C.LINED FREE BOARD	H m	
EAST MAIN CANAL	EMC_01	23	0.0005	0.015	1.729	0.37	2.50	2.26	0.34	2.60
	EMC_02	19	0.0005	0.015	1.647	0.37	2.50	2.06	0.34	2.40
	EMC_03	11	0.0005	0.015	1.431	0.36	2.40	1.60	0.30	1.90
	EMC_04	8	0.0005	0.015	1.328	0.34	1.70	1.52	0.28	1.80

S: SLOPE OF BOTTOM OF CANALS
n: MANNING COEFFICIENT
F: FROUDE NUMBER

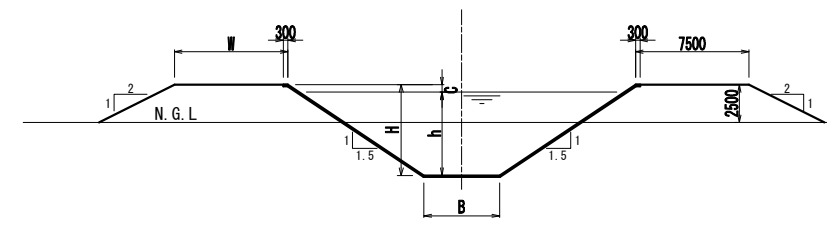
V: DESIGN VELOCITY
Q: DESIGN DISCHARGE
W: WIDTH OF ROAD



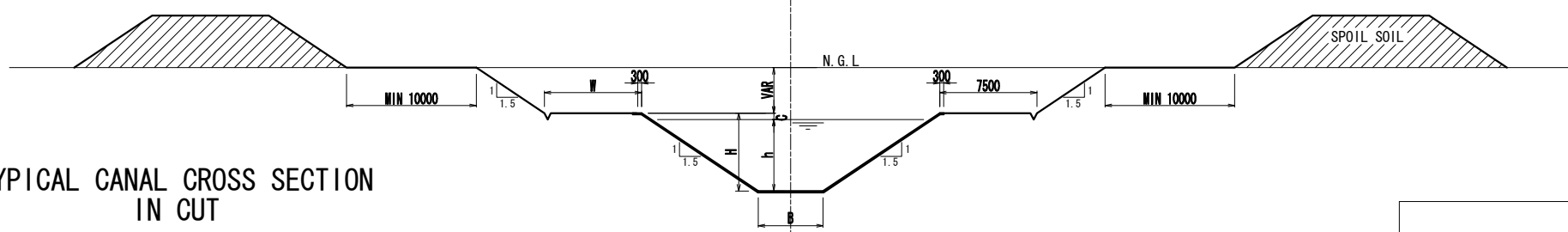
TYPICAL CANAL CROSS SECTION
IN HIGH FILL



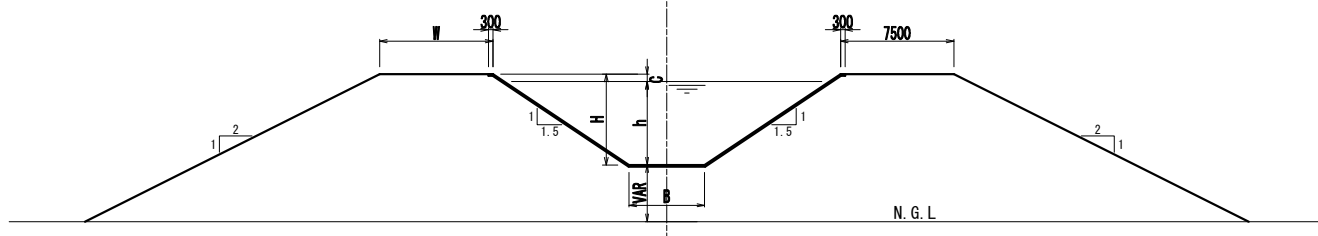
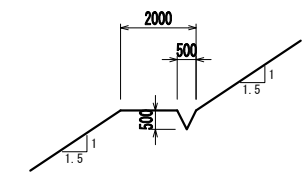
TYPICAL CANAL CROSS SECTION
IN DEEP CUT



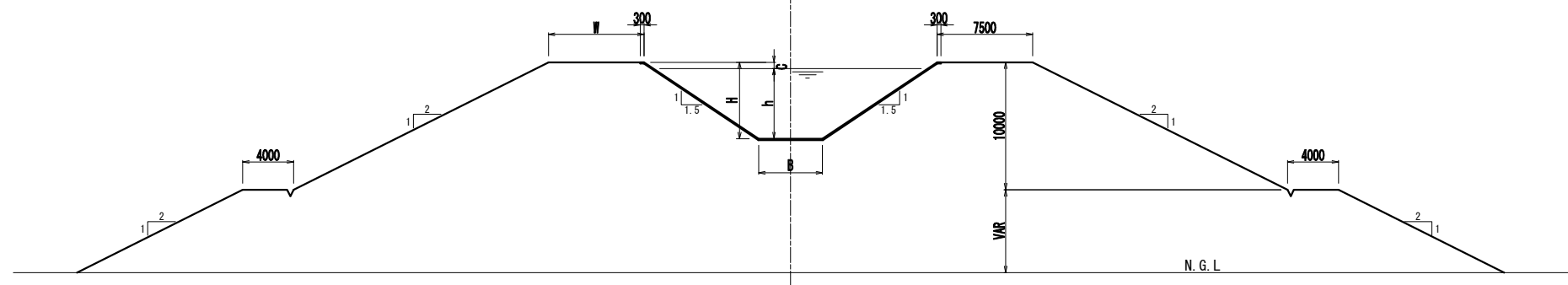
TYPICAL CANAL CROSS SECTION
IN CUT & FILL



TYPICAL CANAL CROSS SECTION
IN CUT



TYPICAL CANAL CROSS SECTION
IN FILL



TYPICAL CANAL CROSS SECTION
IN HIGH FILL

TYPE	HYDRAULIC DATA					GEOMETRICAL DATA				
	Q m ³ /sec	S m/m	n	V m/sec	F	B m	h m	C.LINED FREE BOARD	H m	
WMC_01	57	0.00005	0.015	0.902	0.14	8.70	4.21	0.39	4.60	
WMC_02	53	0.00005	0.015	0.886	0.14	8.40	4.11	0.39	4.50	
WMC_03	47	0.00005	0.015	0.860	0.14	8.00	3.93	0.37	4.30	
WMC_04	38	0.00005	0.015	0.816	0.14	7.30	3.65	0.35	4.00	
WMC_05	28	0.00005	0.015	0.756	0.13	6.50	3.25	0.35	3.60	
WMC_06	26	0.00005	0.015	0.742	0.13	6.30	3.17	0.33	3.50	
WMC_07	22	0.00005	0.015	0.712	0.13	5.90	2.98	0.32	3.30	
WMC_08	19	0.00005	0.015	0.691	0.13	4.80	2.97	0.33	3.30	
WMC_09	15	0.00005	0.015	0.652	0.12	4.10	2.78	0.32	3.10	
WMC_10	11	0.00005	0.015	0.602	0.12	4.00	2.40	0.30	2.70	
WMC_11	7	0.00005	0.015	0.540	0.12	2.90	2.13	0.27	2.40	

S: SLOPE OF BOTTOM OF CANALS
n: MANNING COEFFICIENT
F: FROUDE NUMBER

V: DESIGN VELOCITY
Q: DESIGN DISCHARGE
W: WIDTH OF ROAD