

APPENDIX D
Preliminary Horizontal and Vertical Route Alignment
and List of Chainage and Distance of All Options

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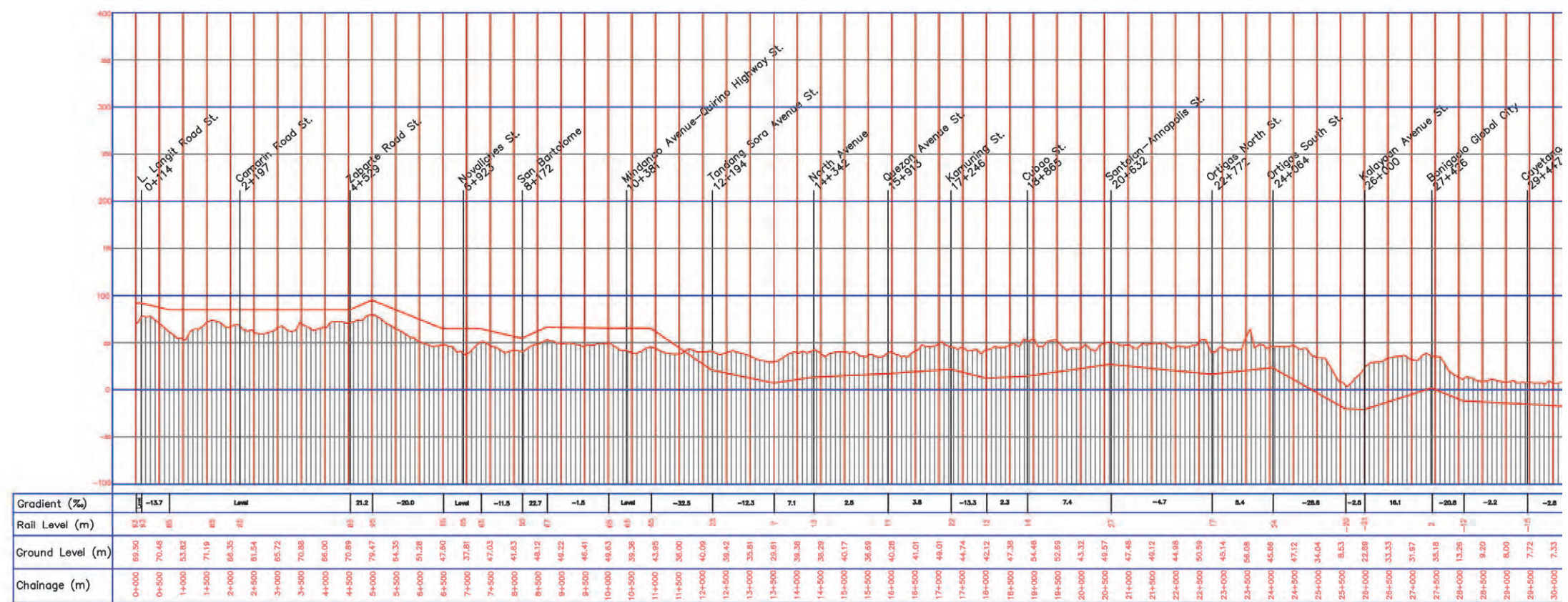
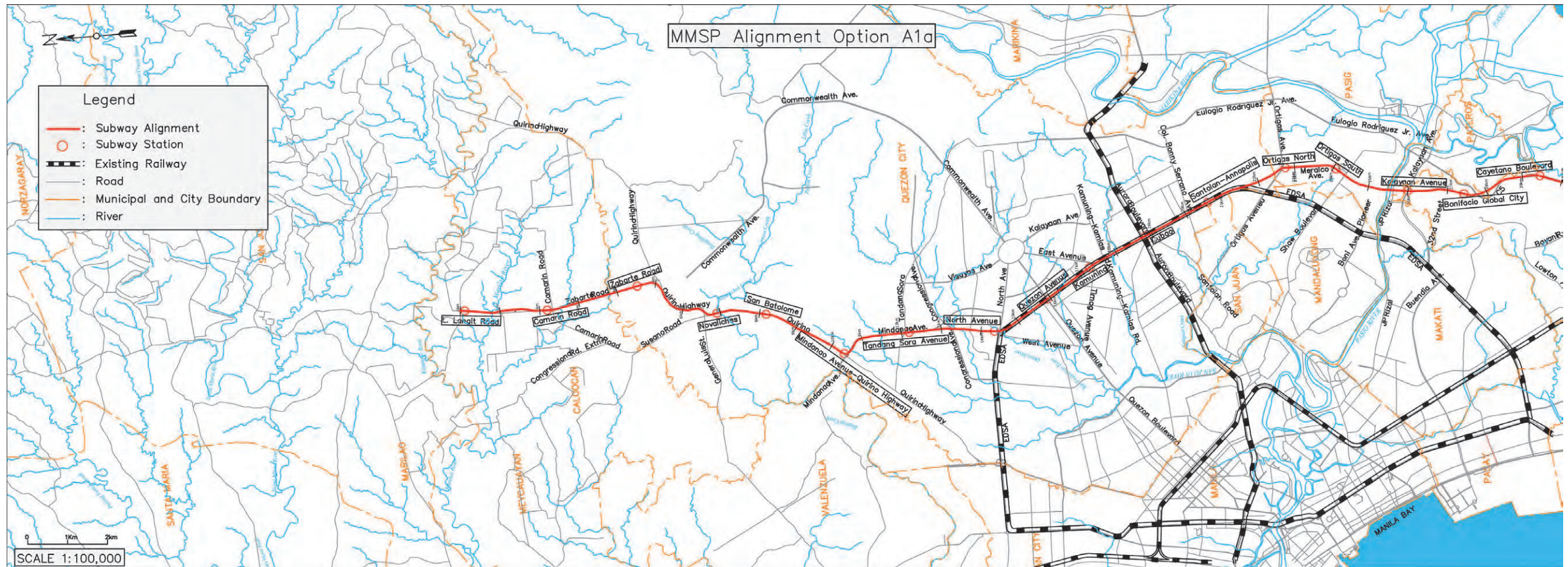


Figure App-D (1) Preliminary Horizontal and Vertical Route Alignment of Option A1a (1)

Source: JICA Study Team

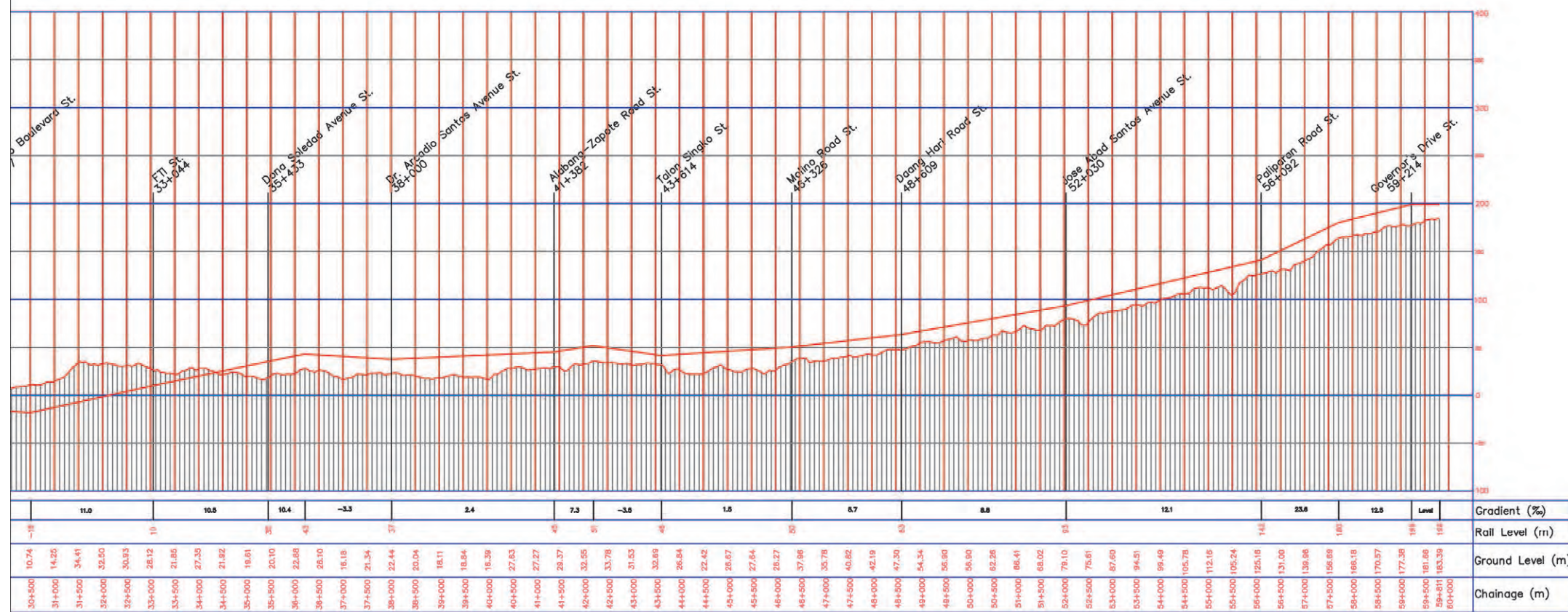
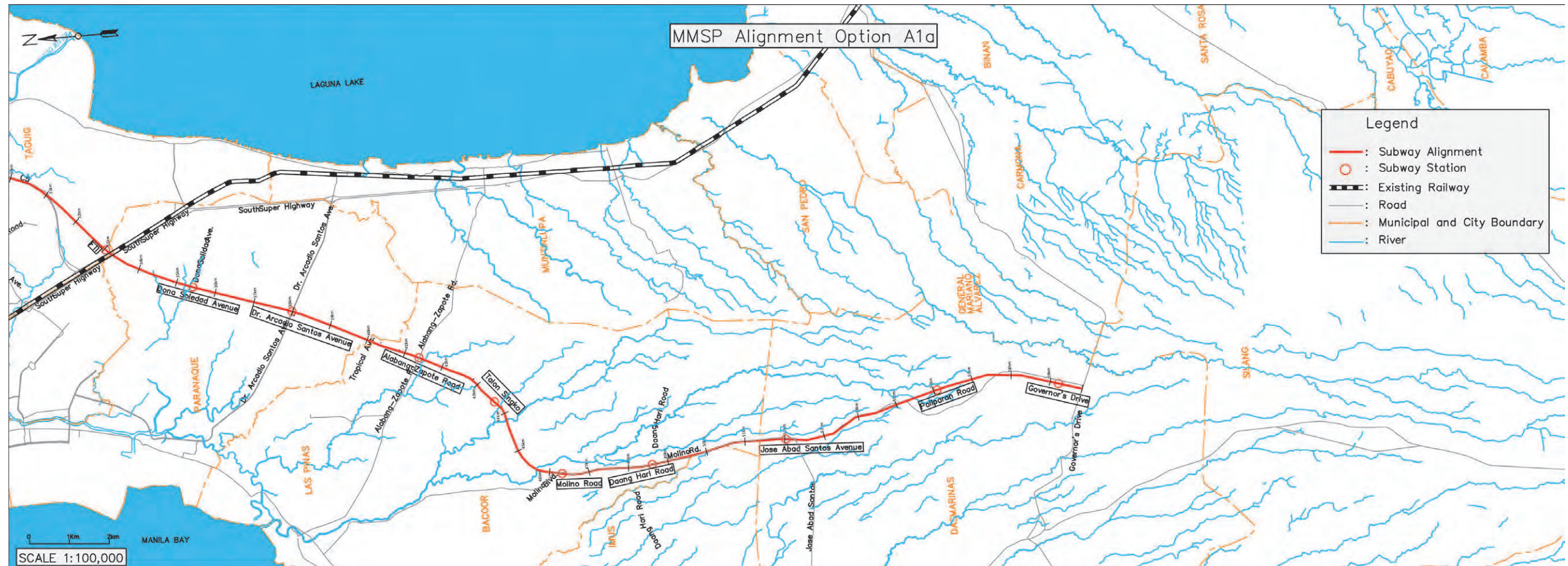


Figure App-D (2) Preliminary Horizontal and Vertical Route Alignment of Option A1a (2)

Source: JICA Study Team

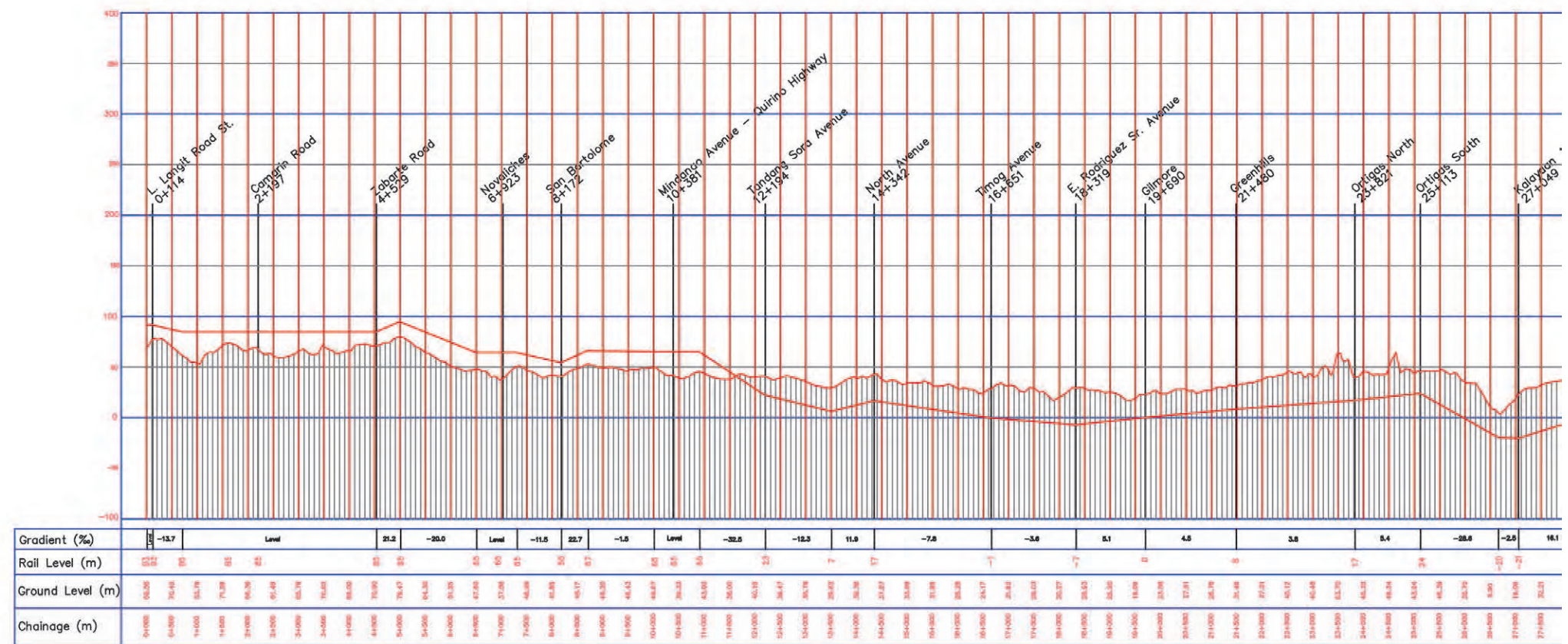
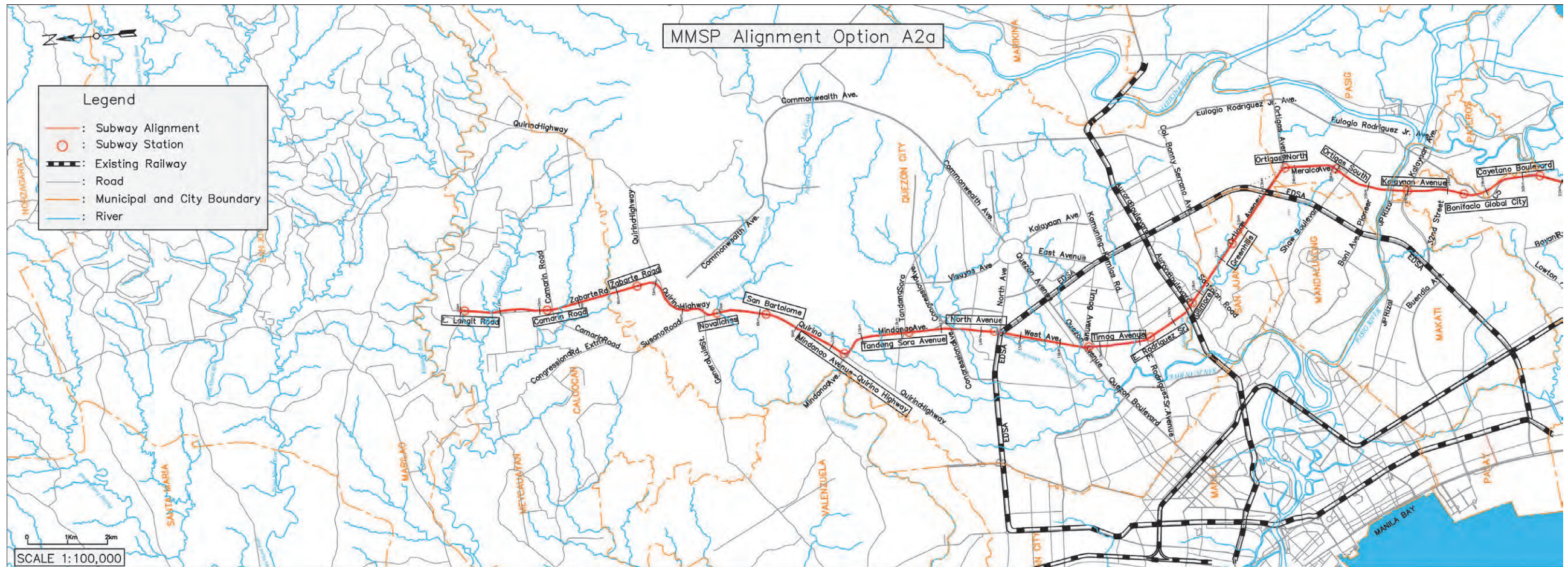


Figure App-D (3) Preliminary Horizontal and Vertical Route Alignment of Option A2a (1)

Source: JICA Study Team

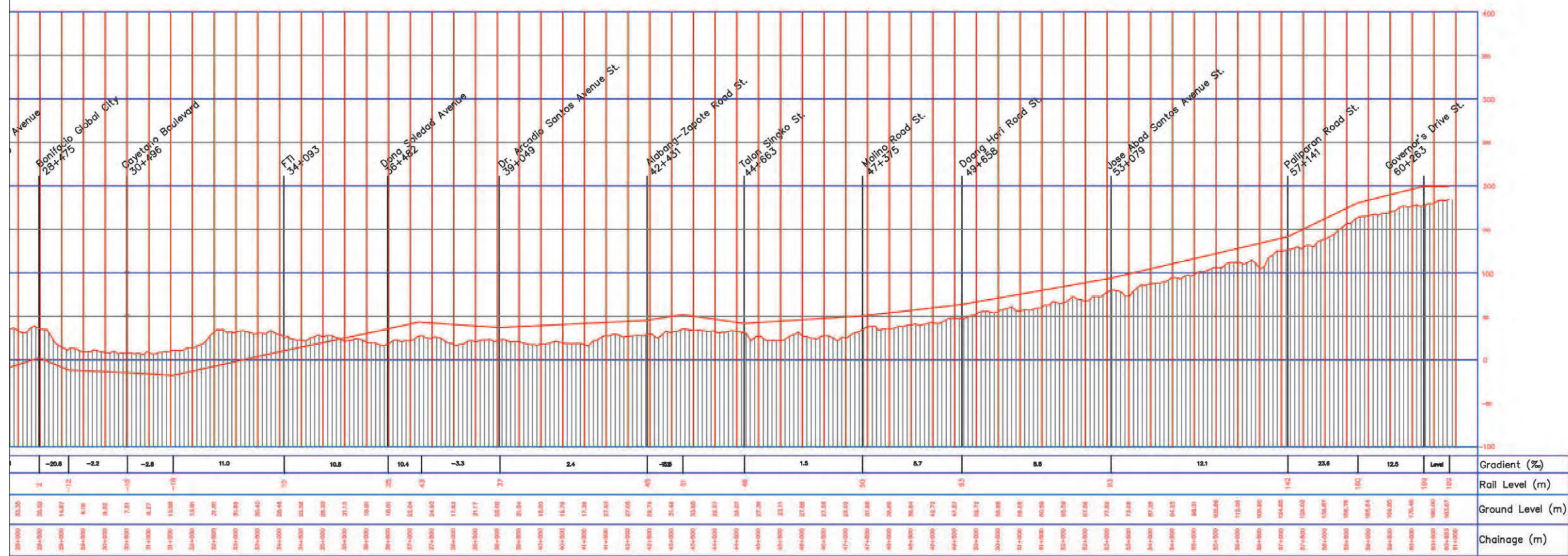
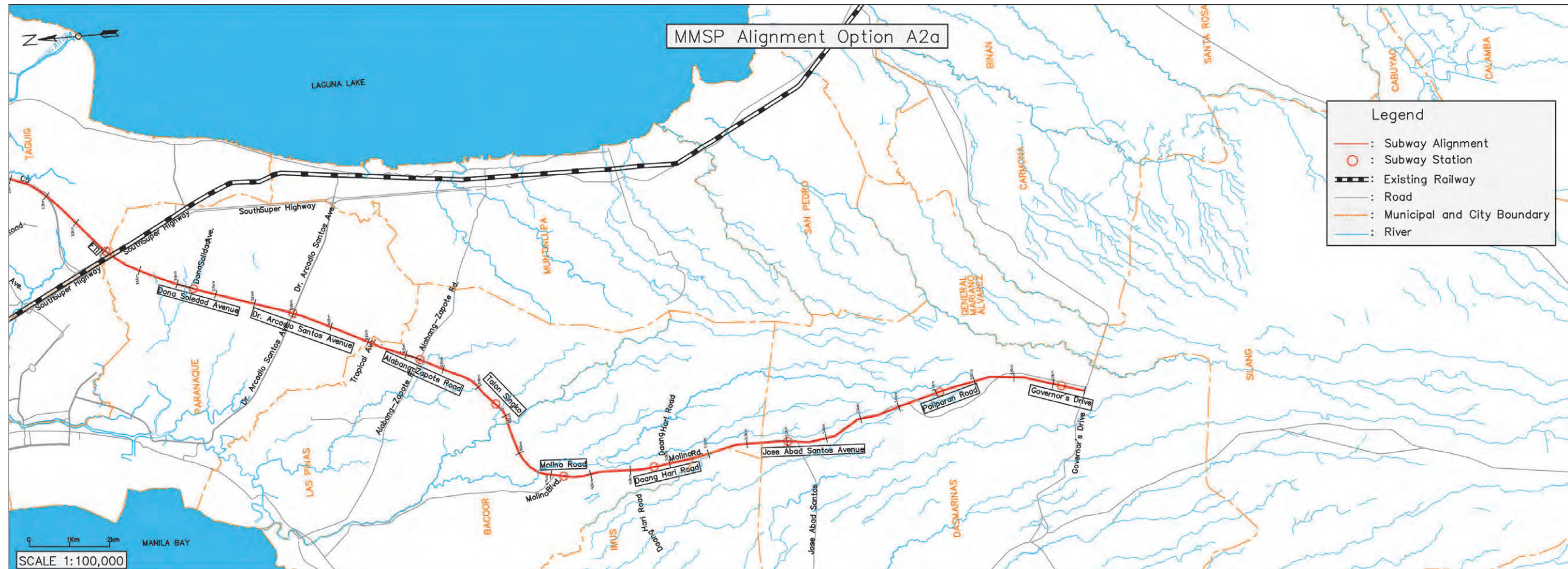
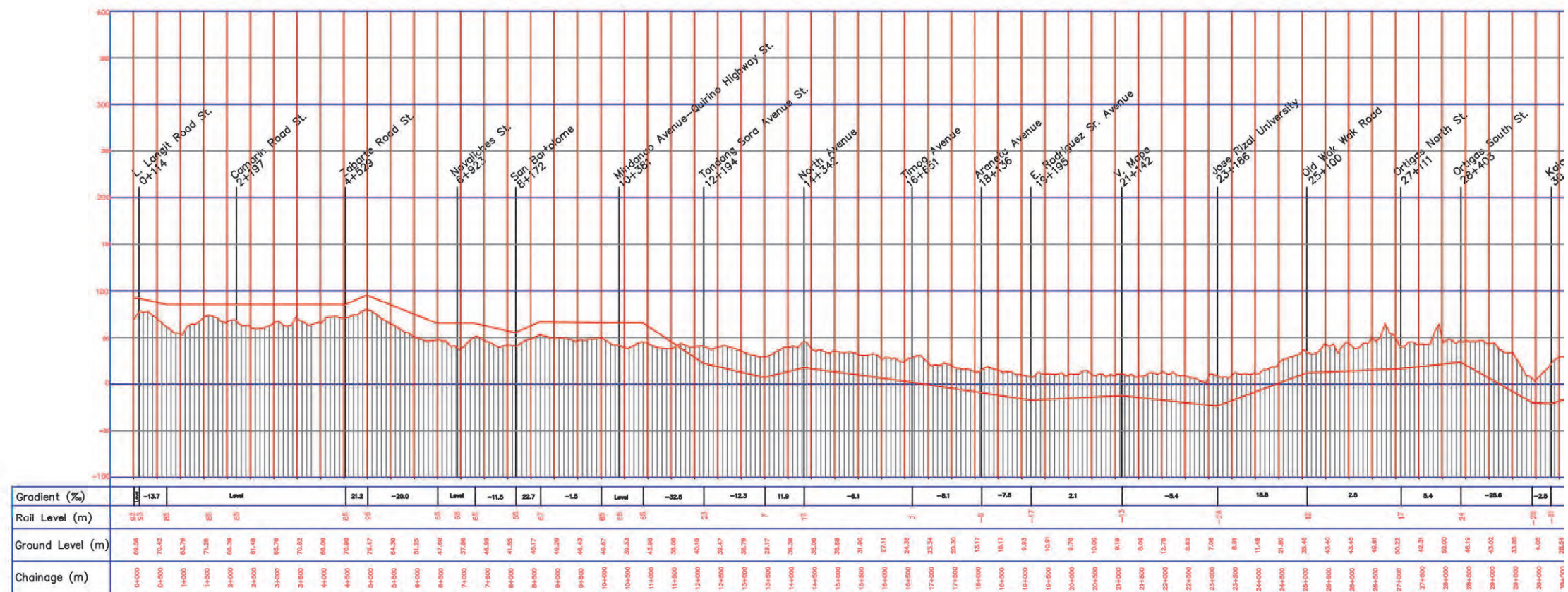
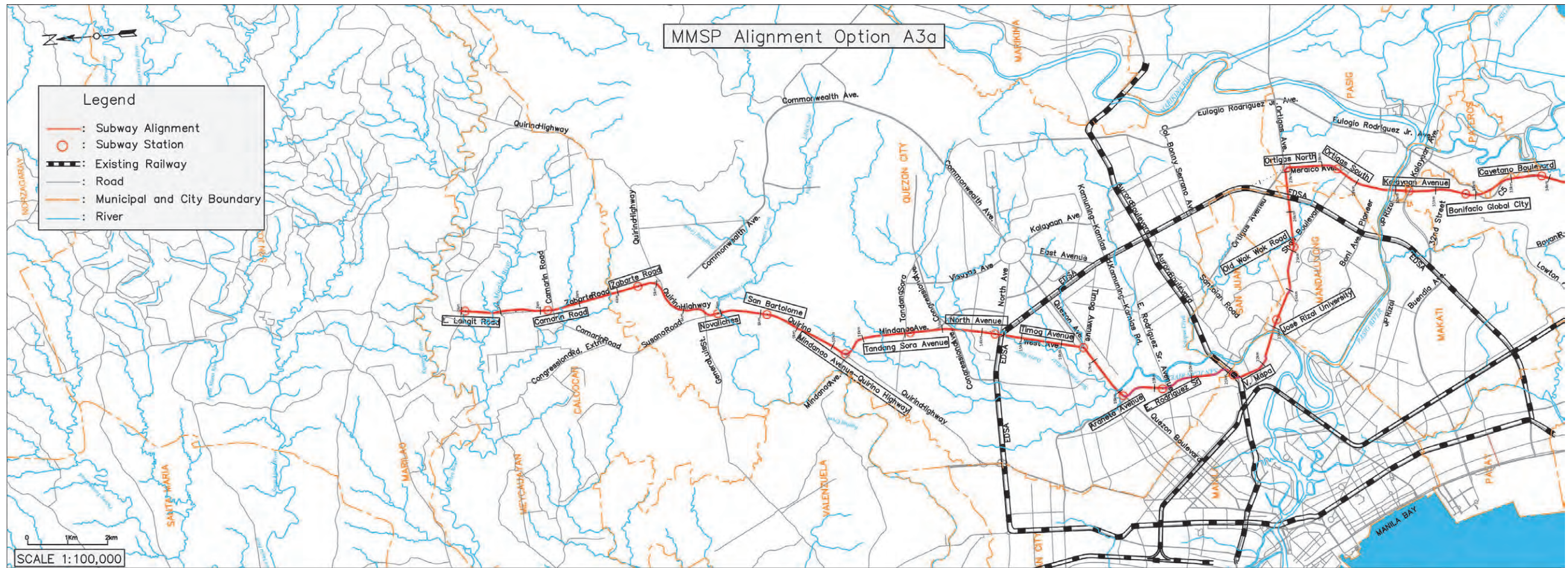


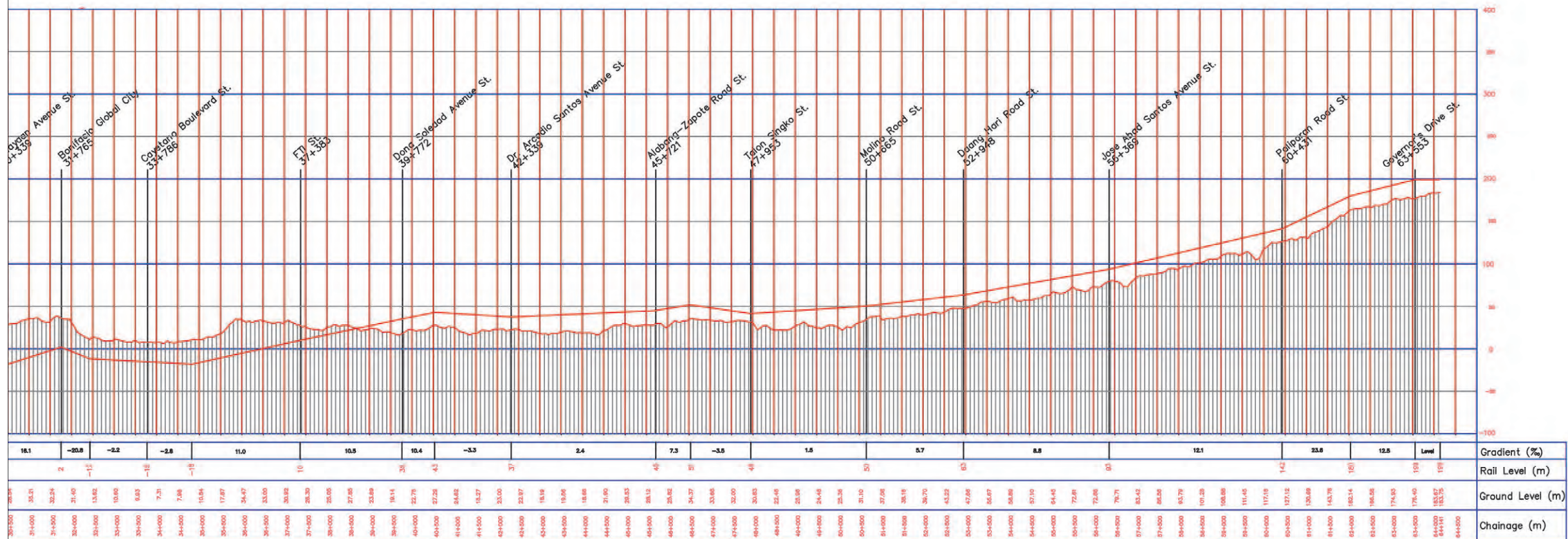
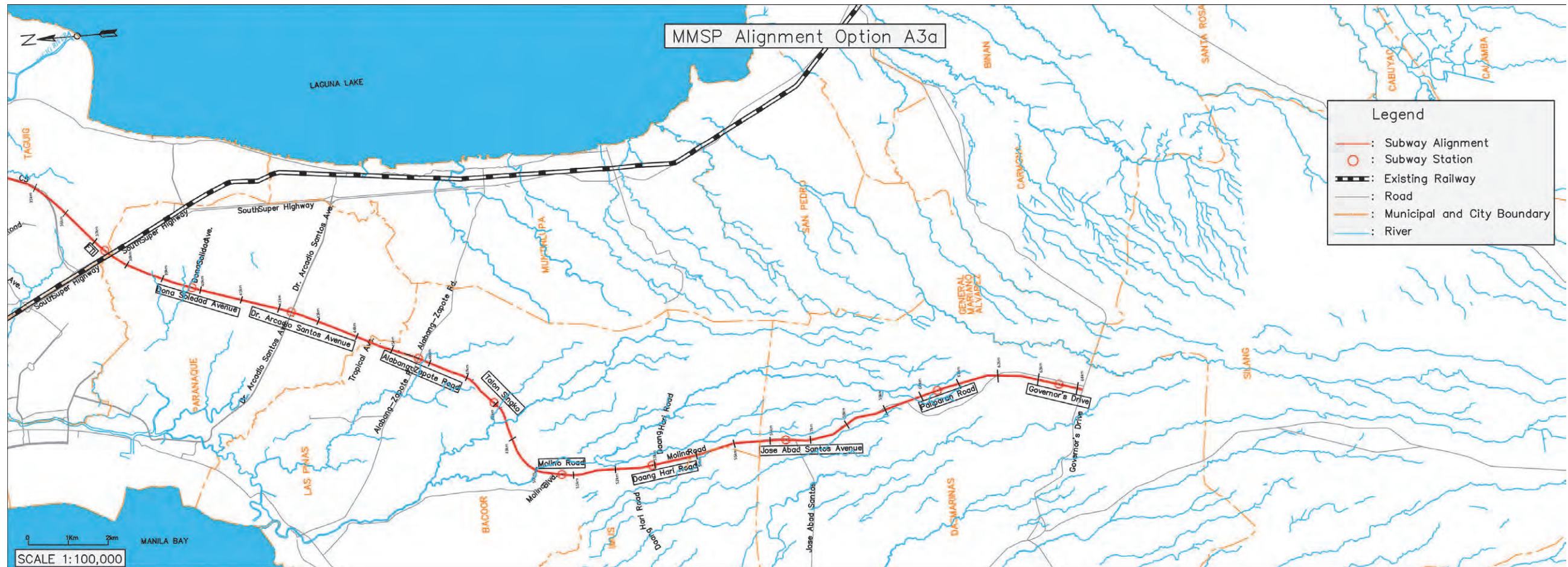
Figure App-D (4) Preliminary Horizontal and Vertical Route Alignment of Option A2a (2)

Source: JICA Study Team



Source: JICA Study Team

Figure App-D (5) Preliminary Horizontal and Vertical Route Alignment of Option A3a (1)



Source: JICA Study Team

Figure App-D (6) Preliminary Horizontal and Vertical Route Alignment of Option A3a (2)

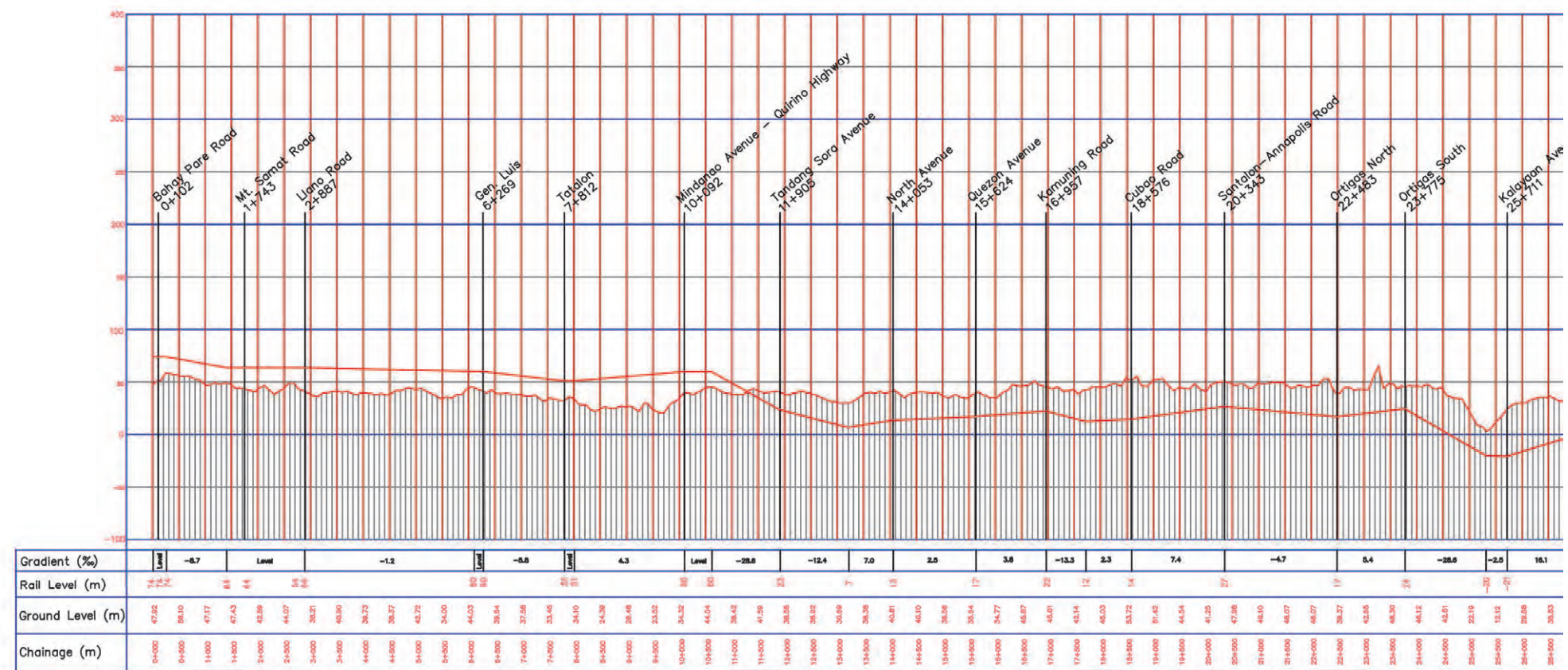
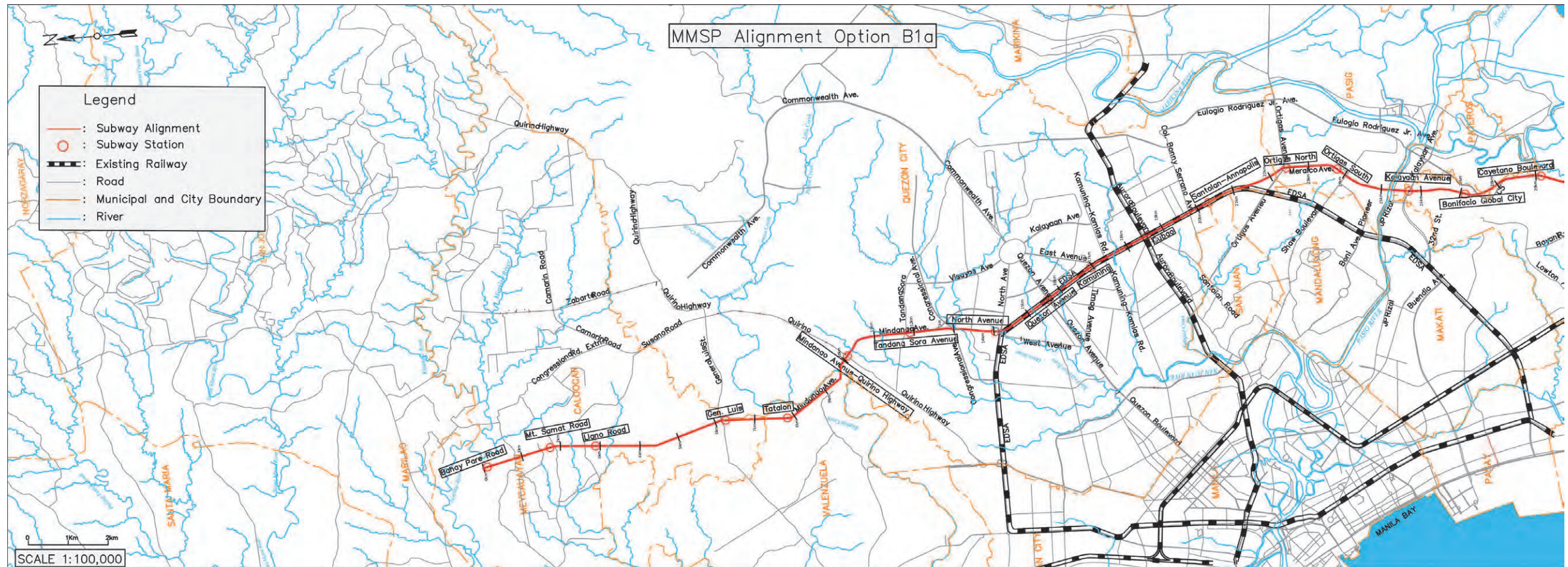


Figure App-D (7) Preliminary Horizontal and Vertical Route Alignment of Option B1a (1)

Source: JICA Study Team

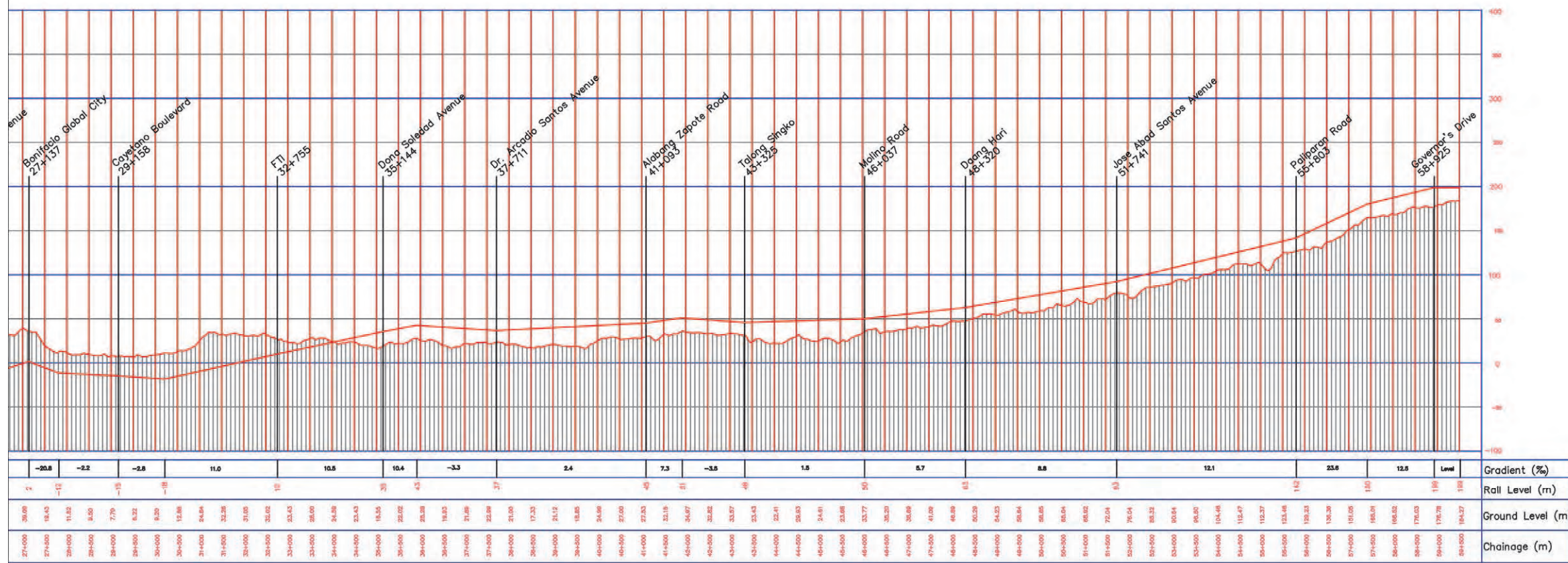
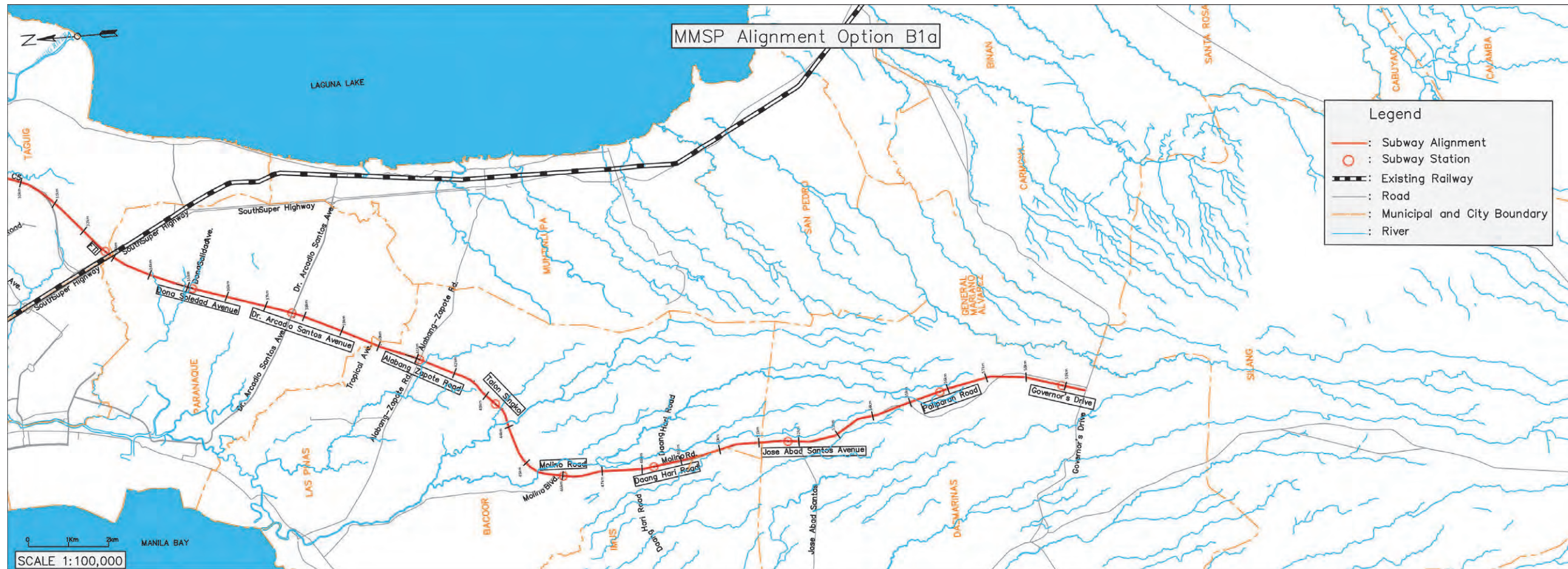


Figure App-D (8) Preliminary Horizontal and Vertical Route Alignment of Option B1a (2)

Source: JICA Study Team

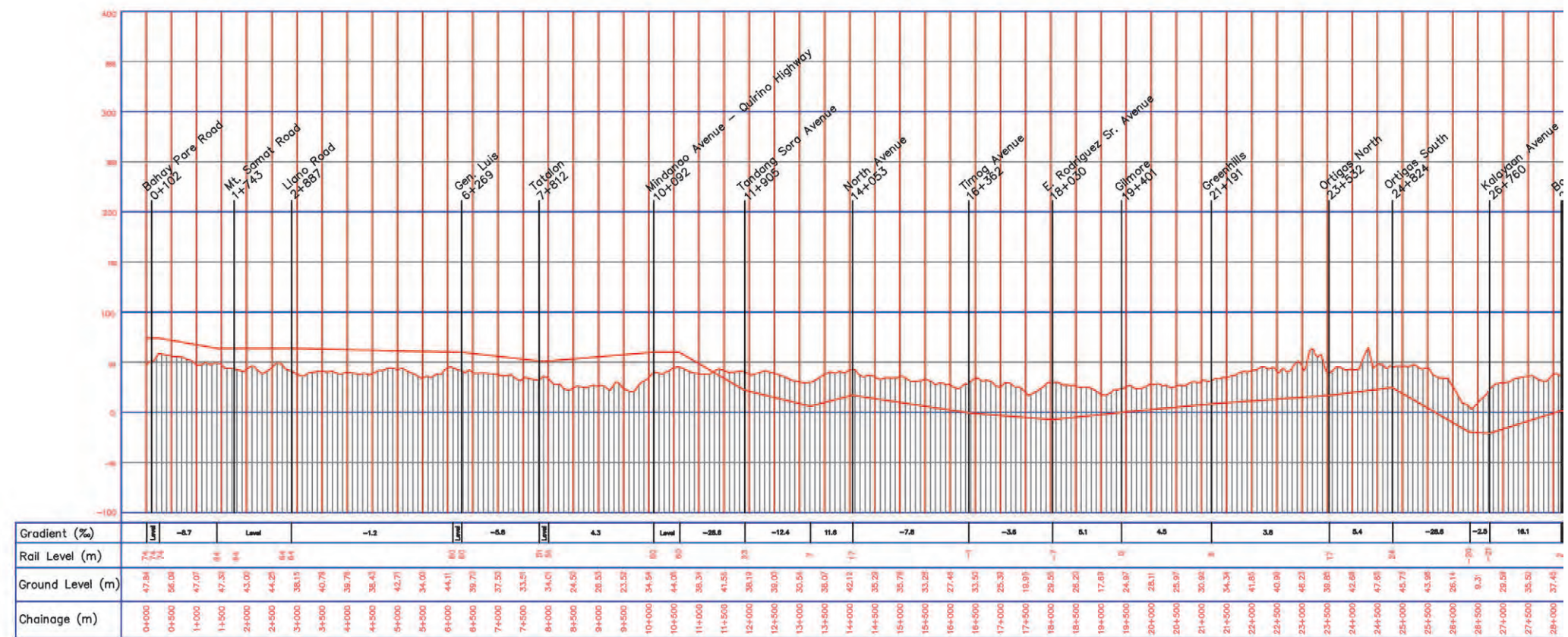
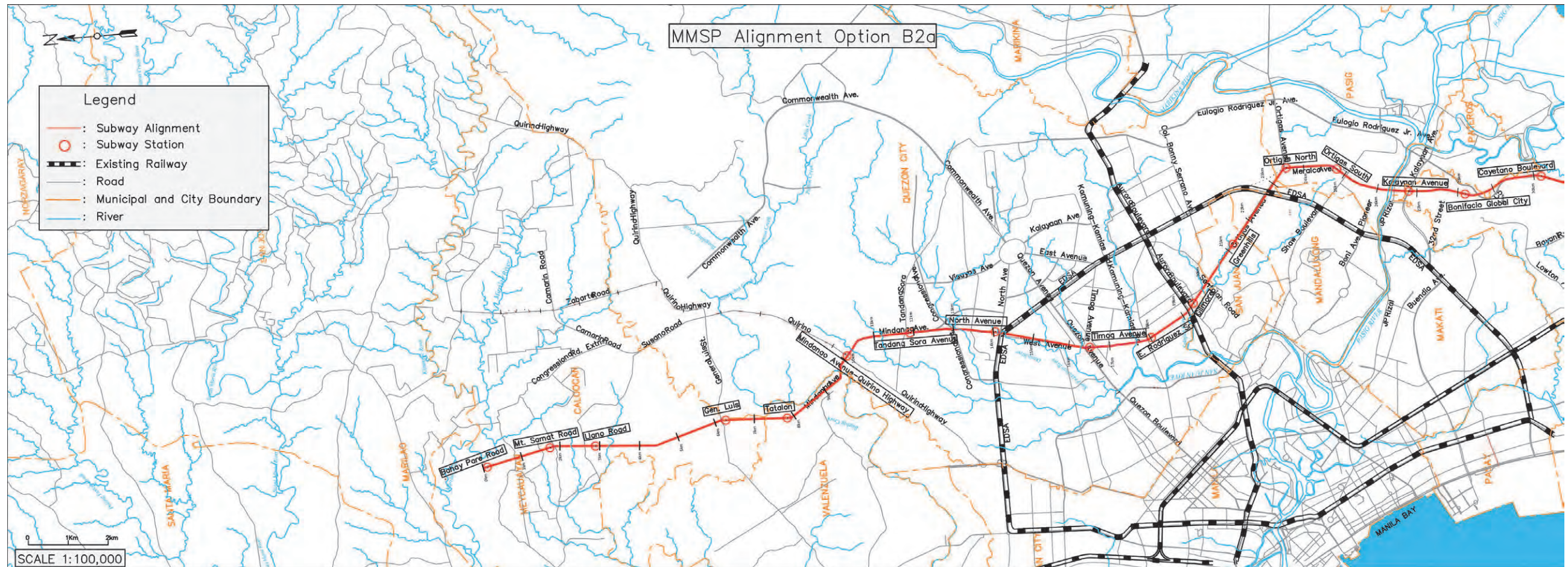


Figure App-D (9) Preliminary Horizontal and Vertical Route Alignment of Option B2a (1)

Source: JICA Study Team

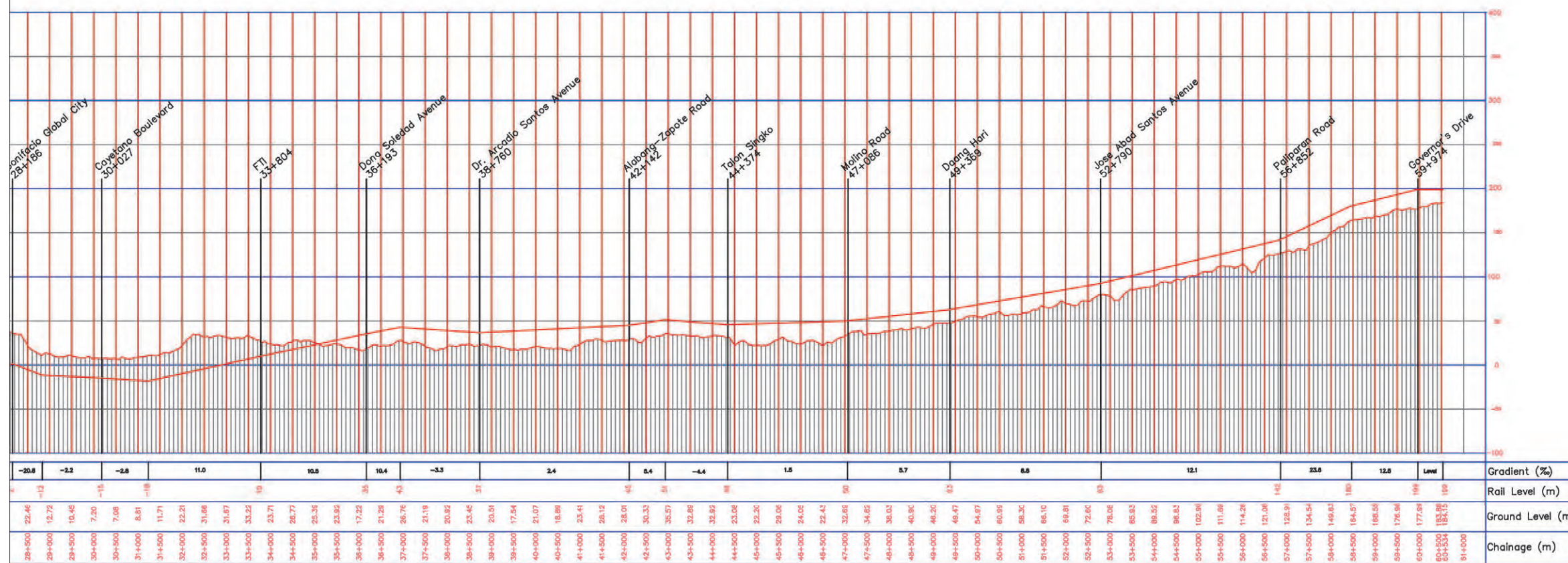
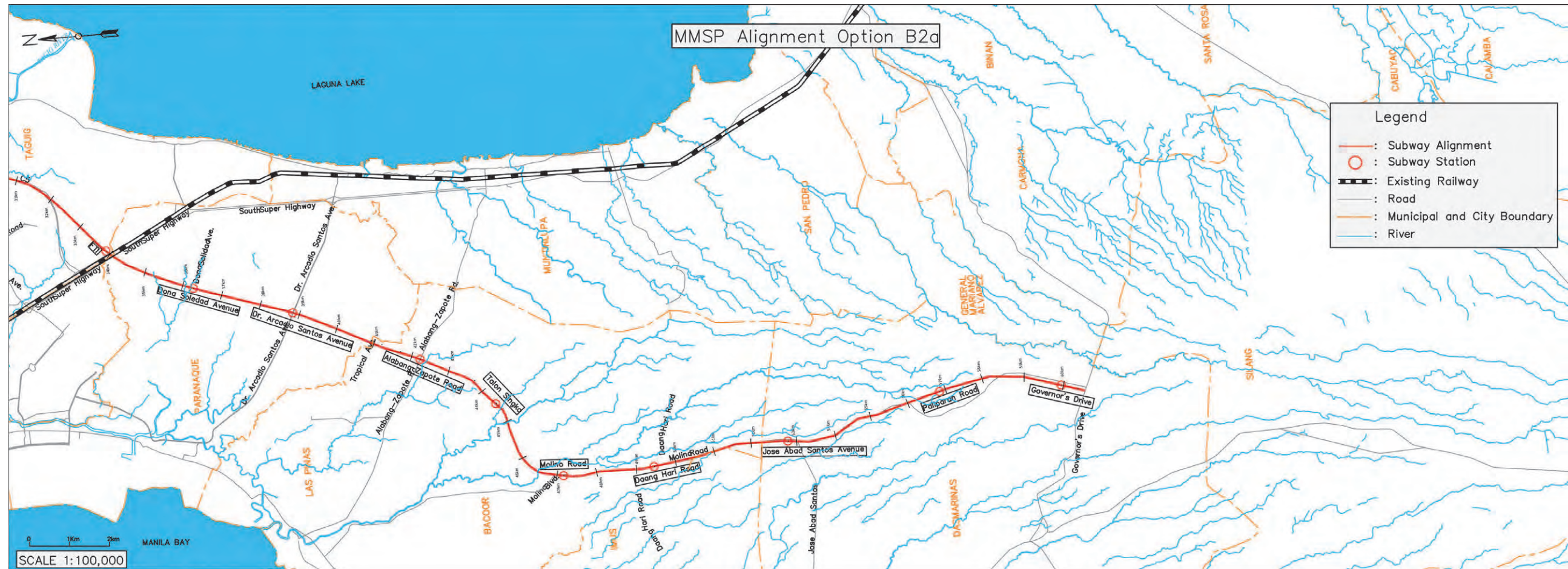


Figure App-D (10) Preliminary Horizontal and Vertical Route Alignment of Option B2a (2)

Source: JICA Study Team

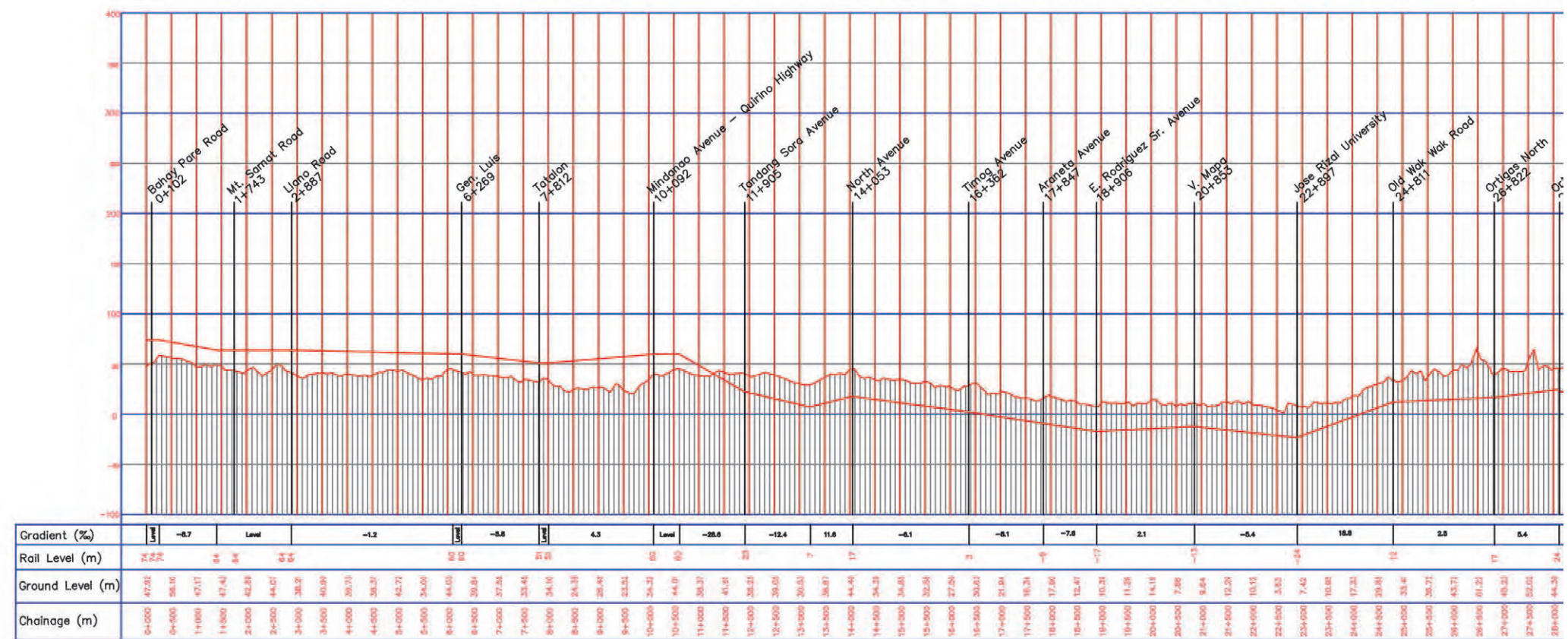
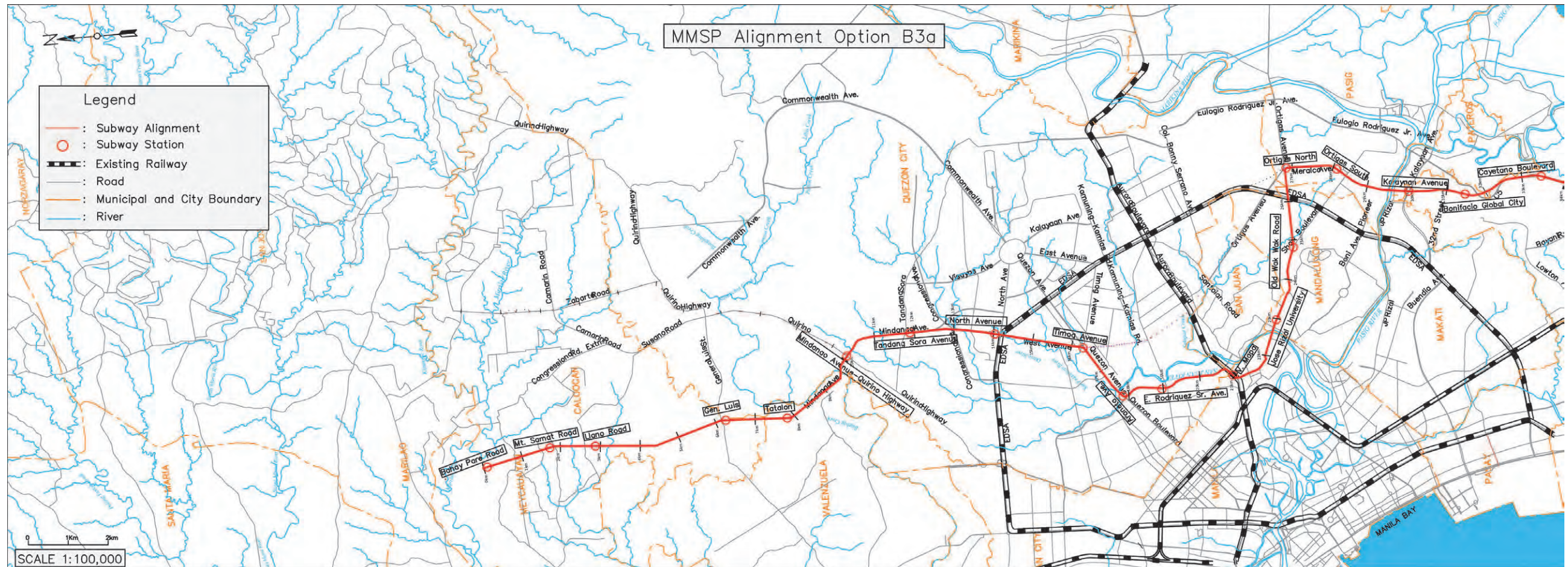


Figure App-D (11) Preliminary Horizontal and Vertical Route Alignment of Option B3a (1)

Source: JICA Study Team

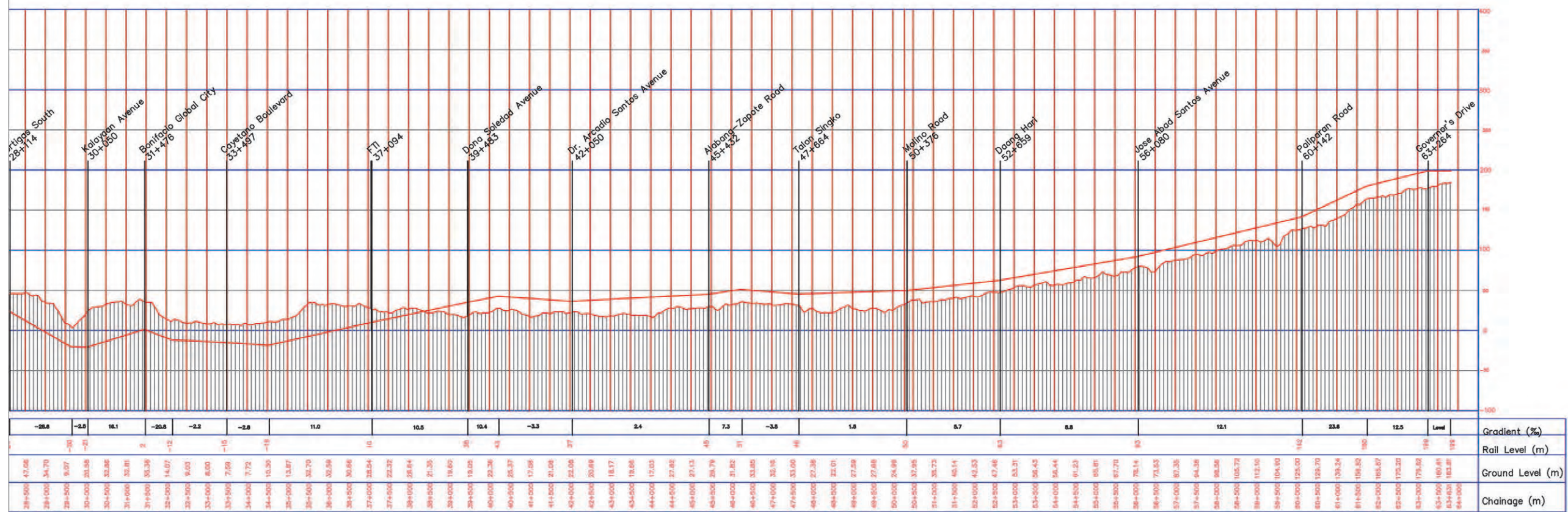
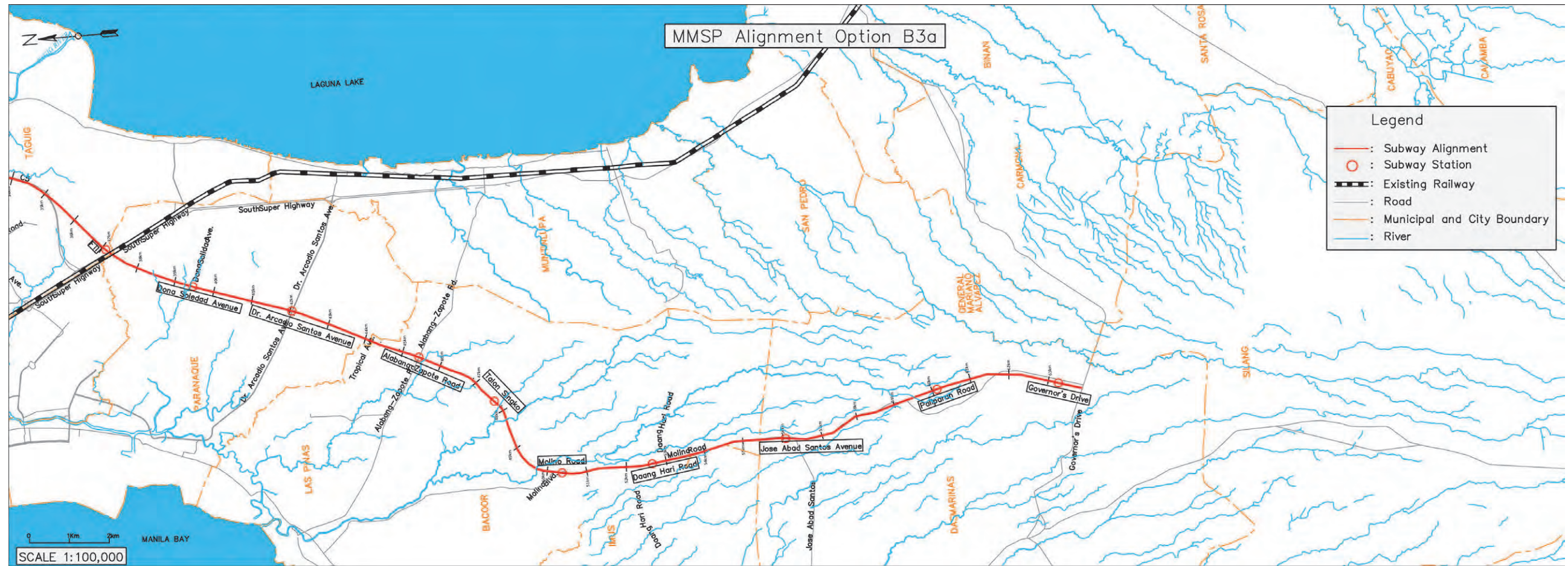


Figure App-D (12) Preliminary Horizontal and Vertical Route Alignment of Option B3a (a)

Source: JICA Study Team

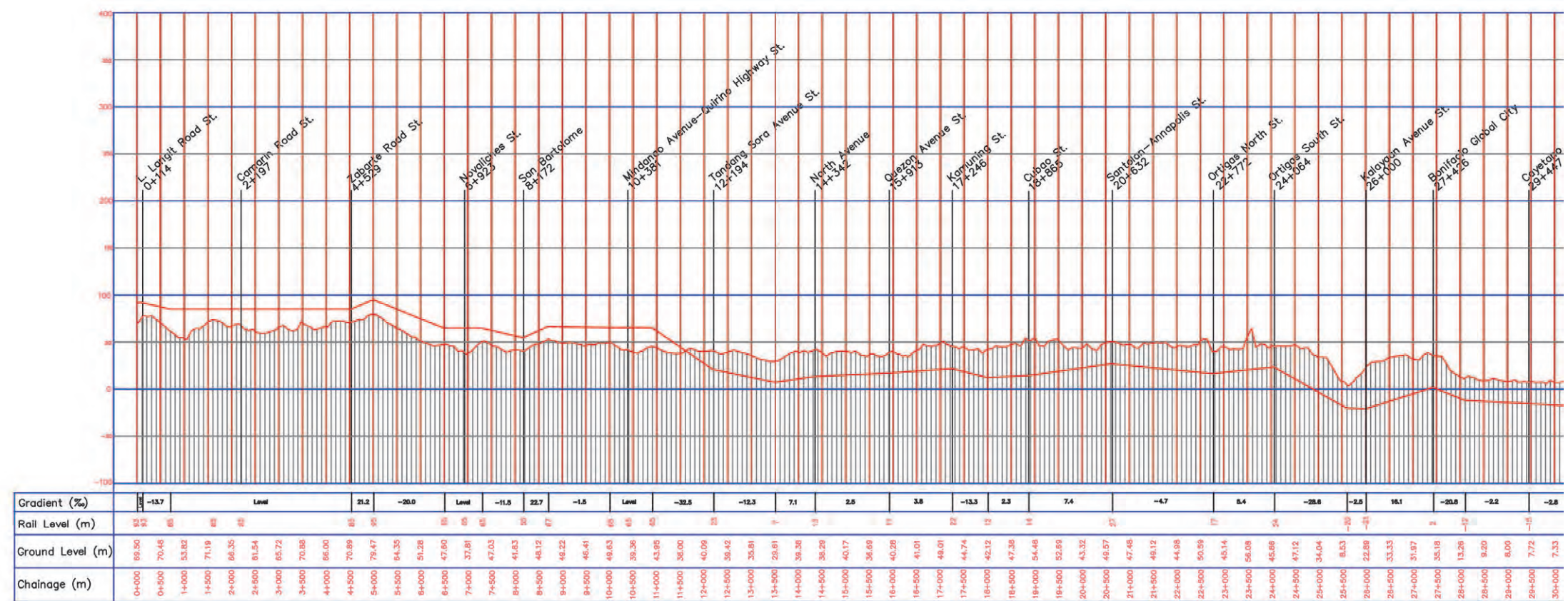
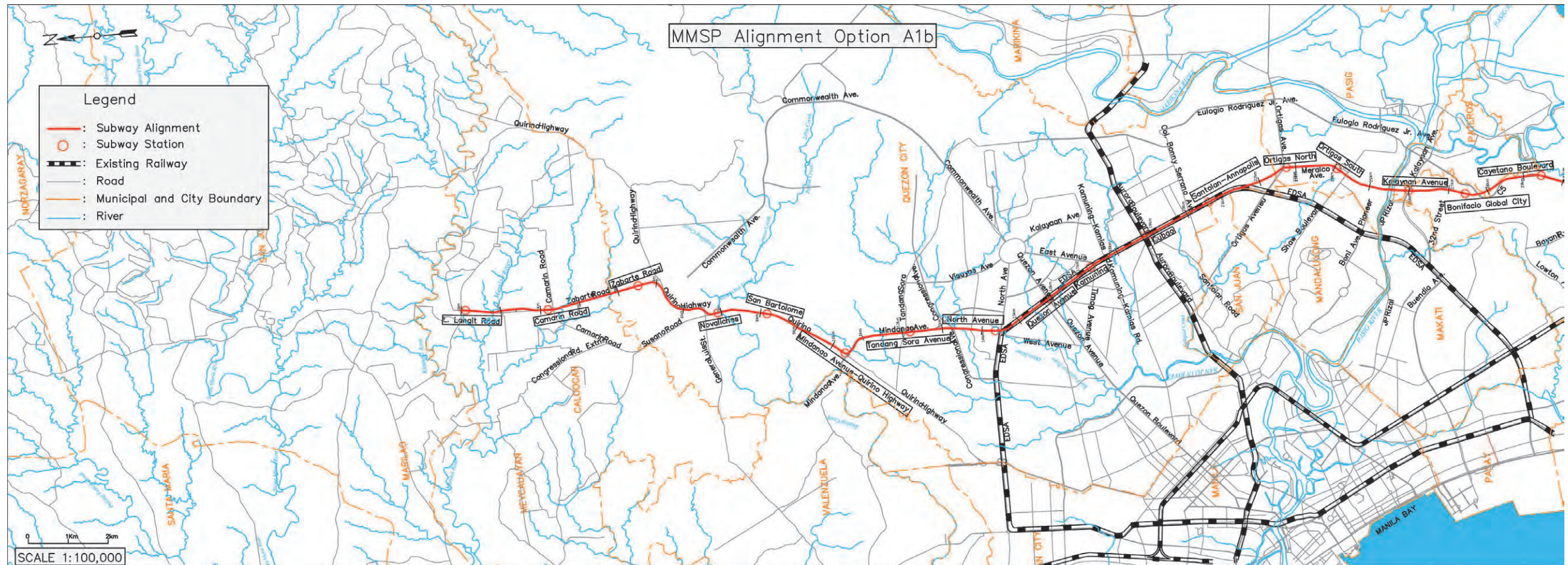


Figure App-D (13) Preliminary Horizontal and Vertical Route Alignment of Option A1b (1)

Source: JICA Study Team

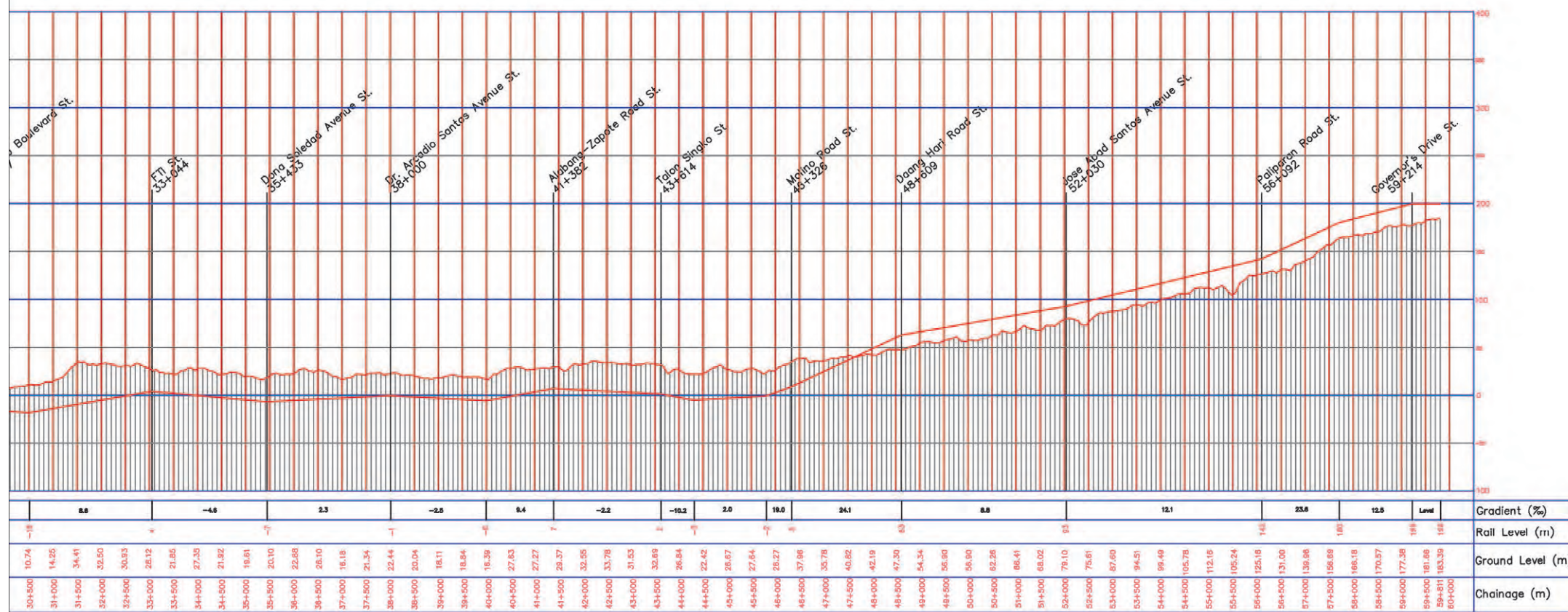
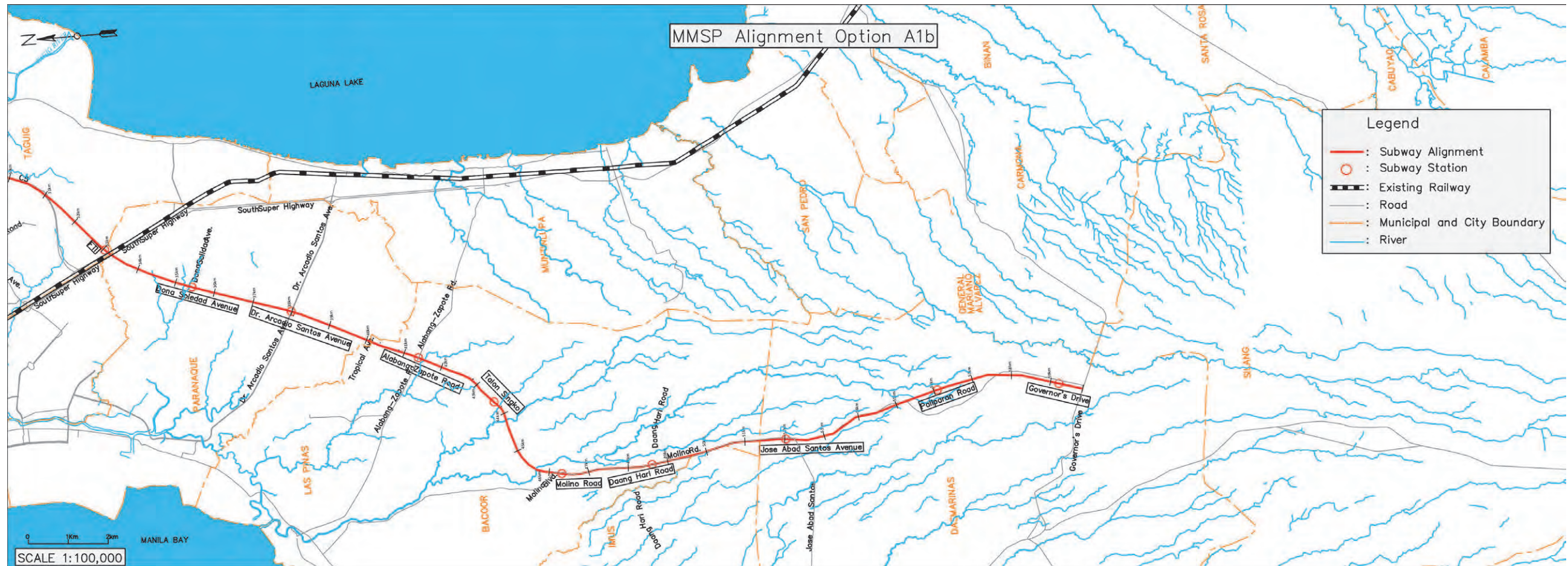


Figure App-D (14) Preliminary Horizontal and Vertical Route Alignment of Option A1b (2)

Source: JICA Study Team

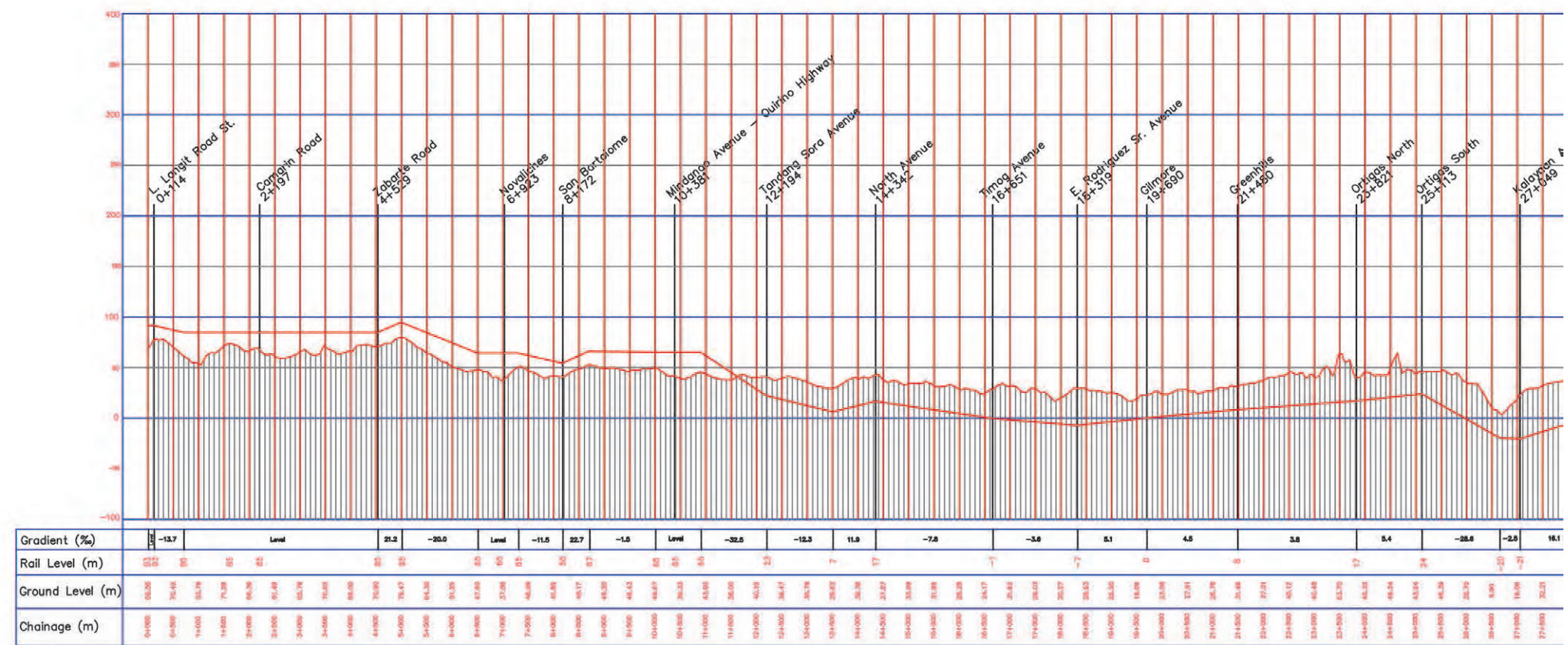
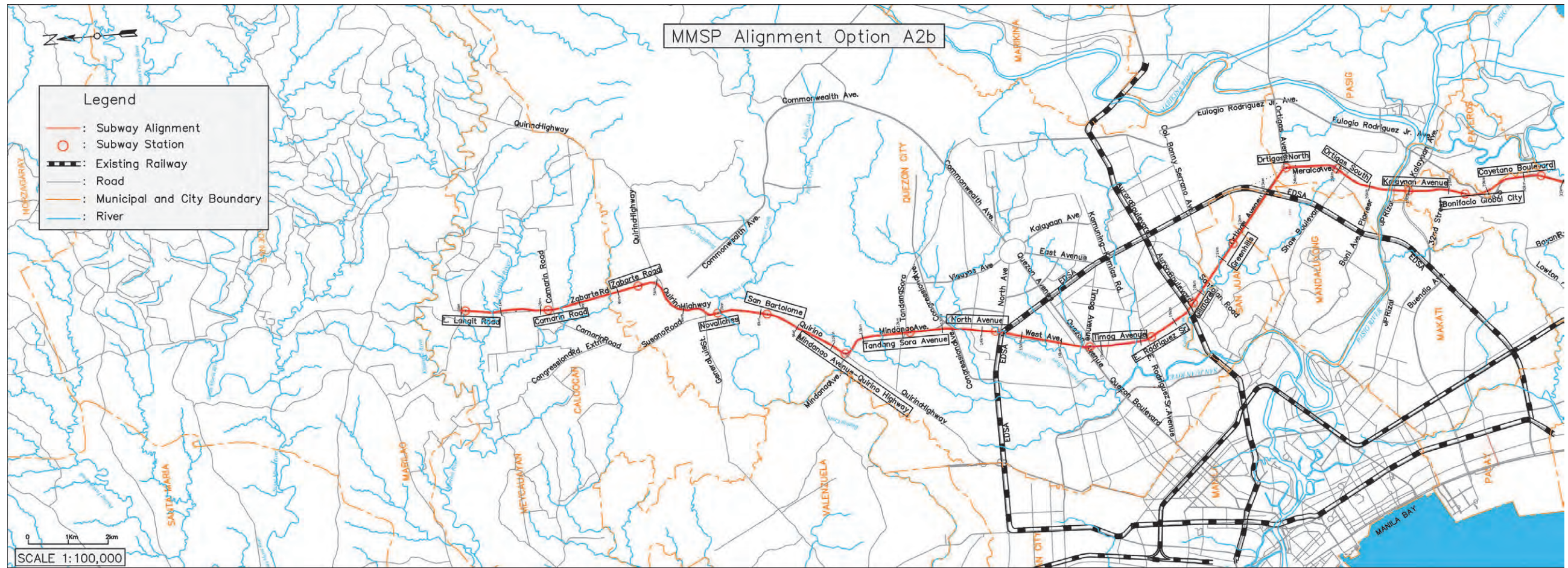


Figure App-D (15) Preliminary Horizontal and Vertical Route Alignment of Option A2b (1)

Source: JICA Study Team

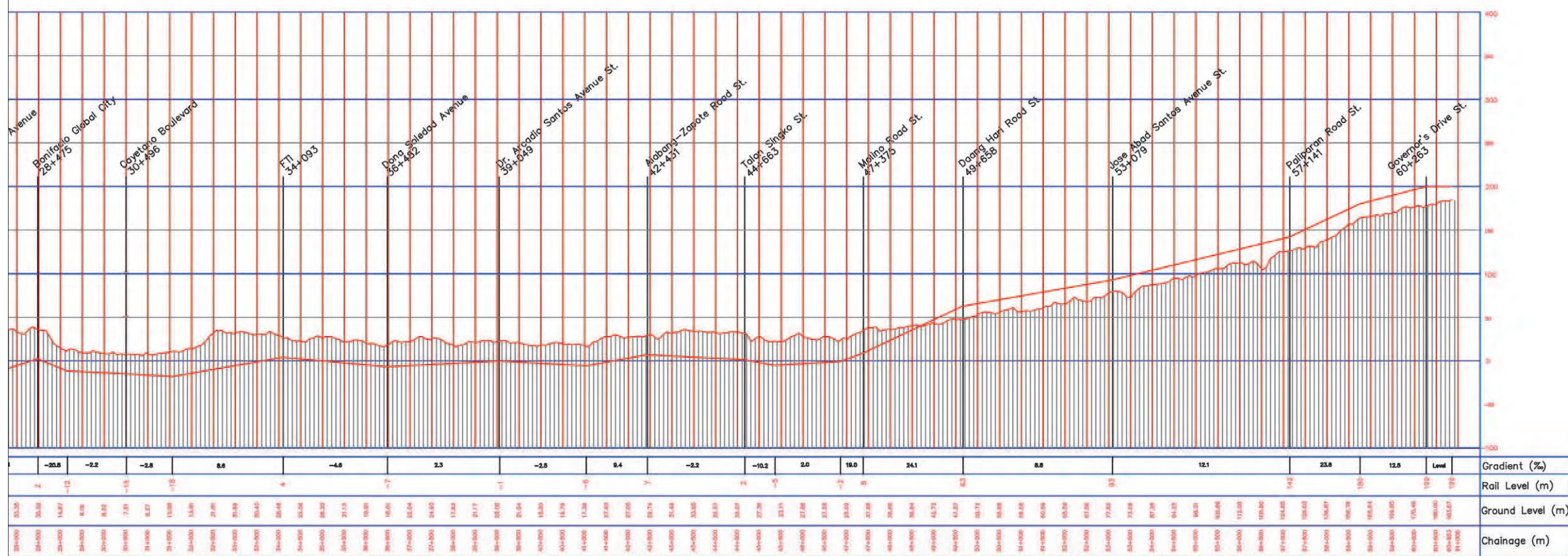
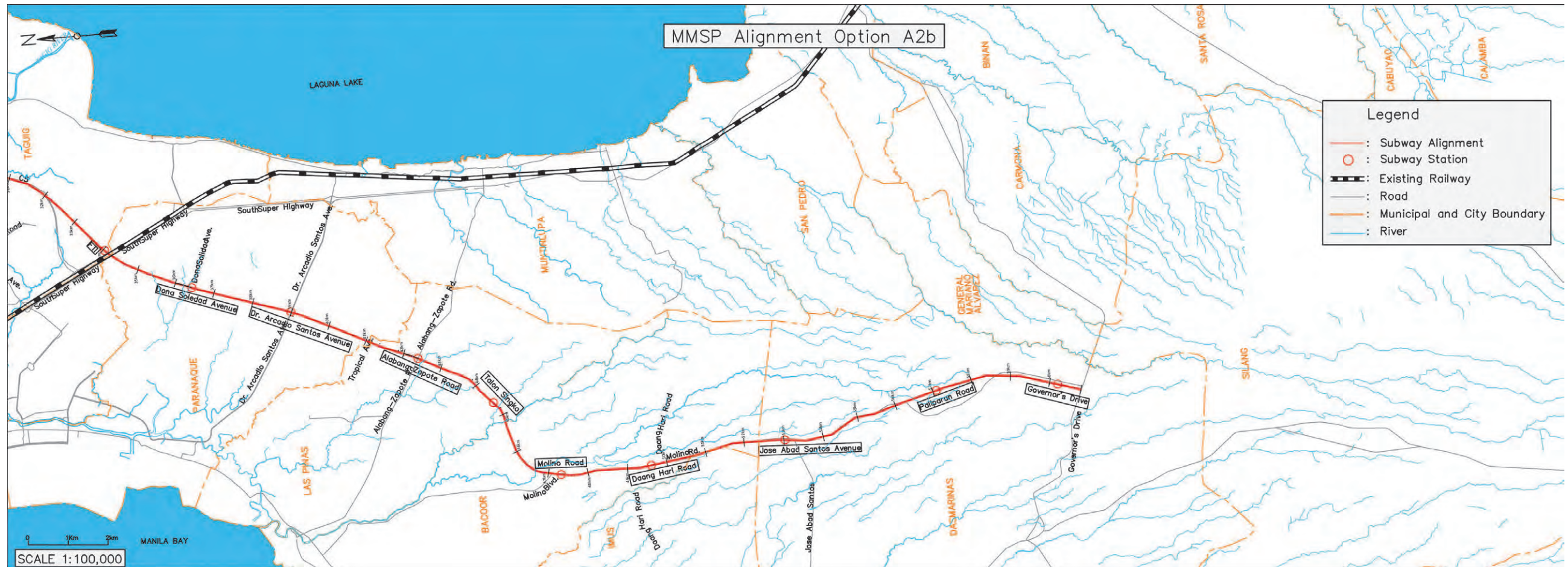
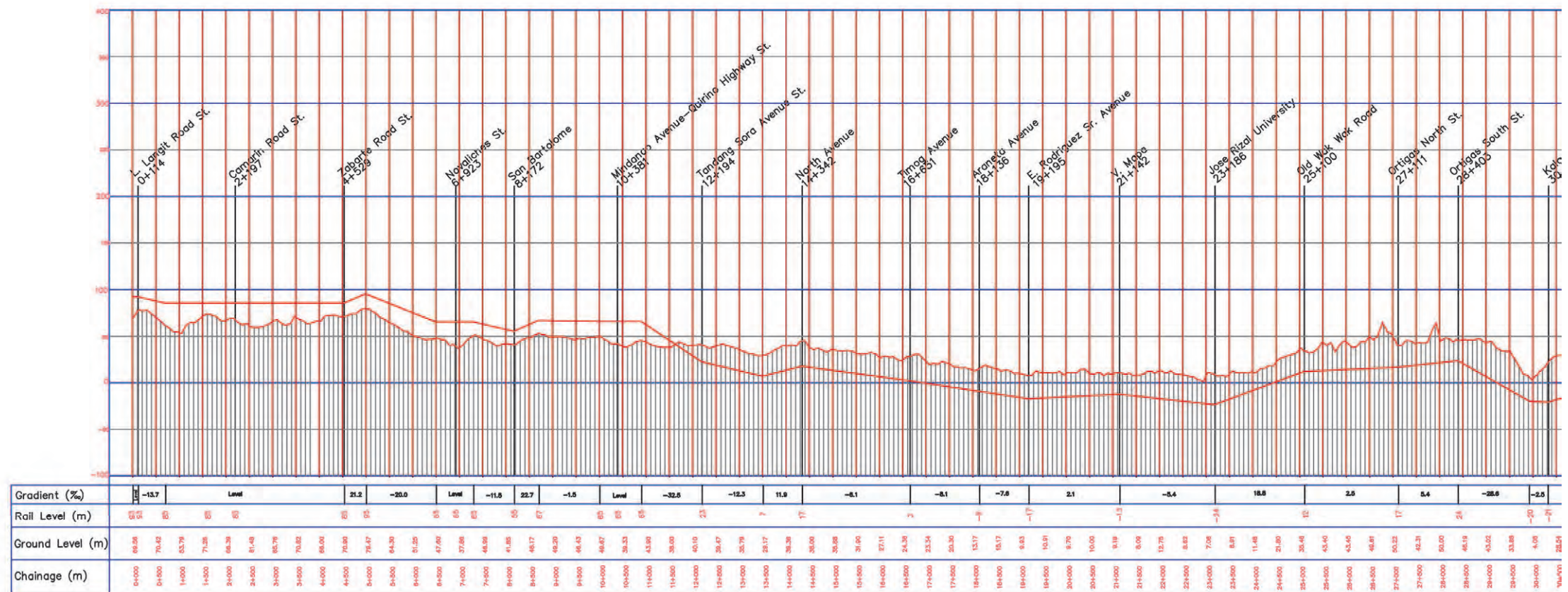
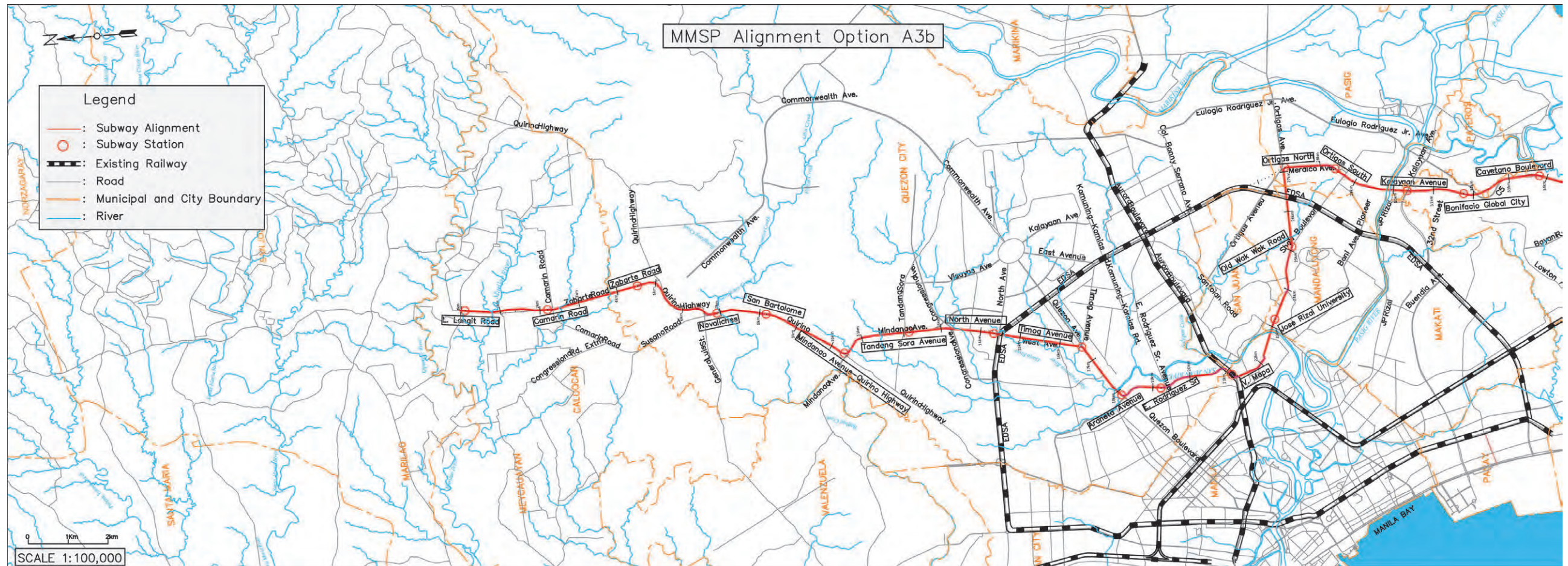


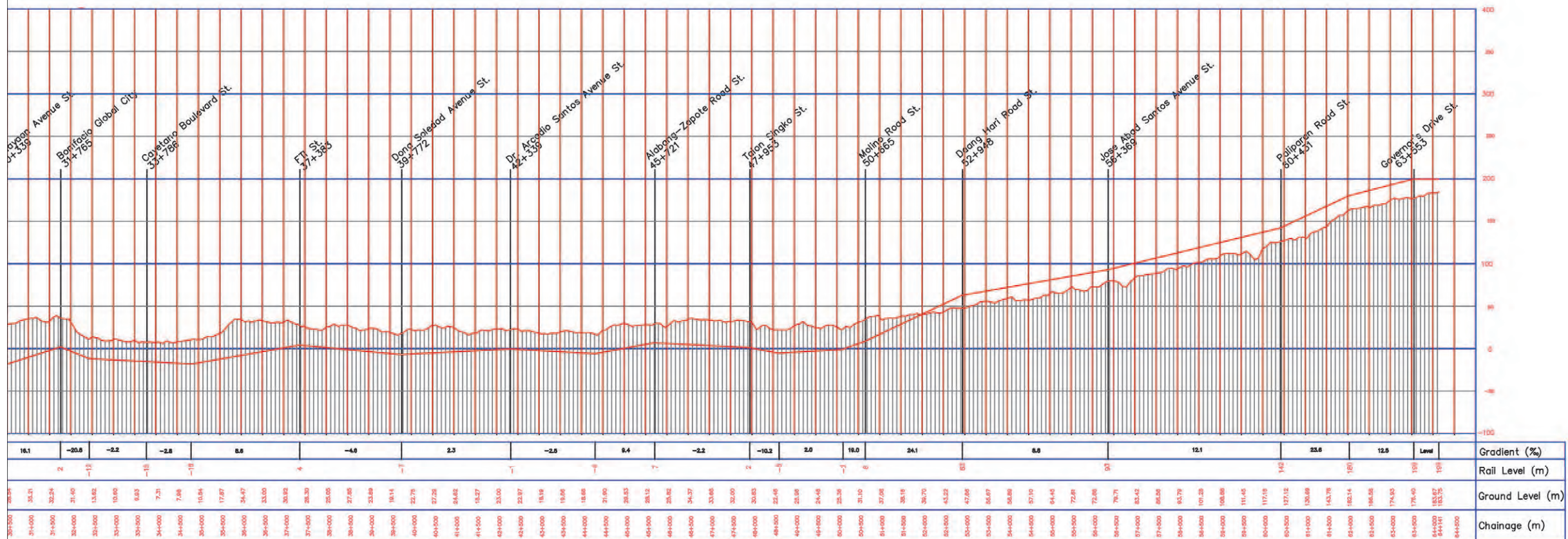
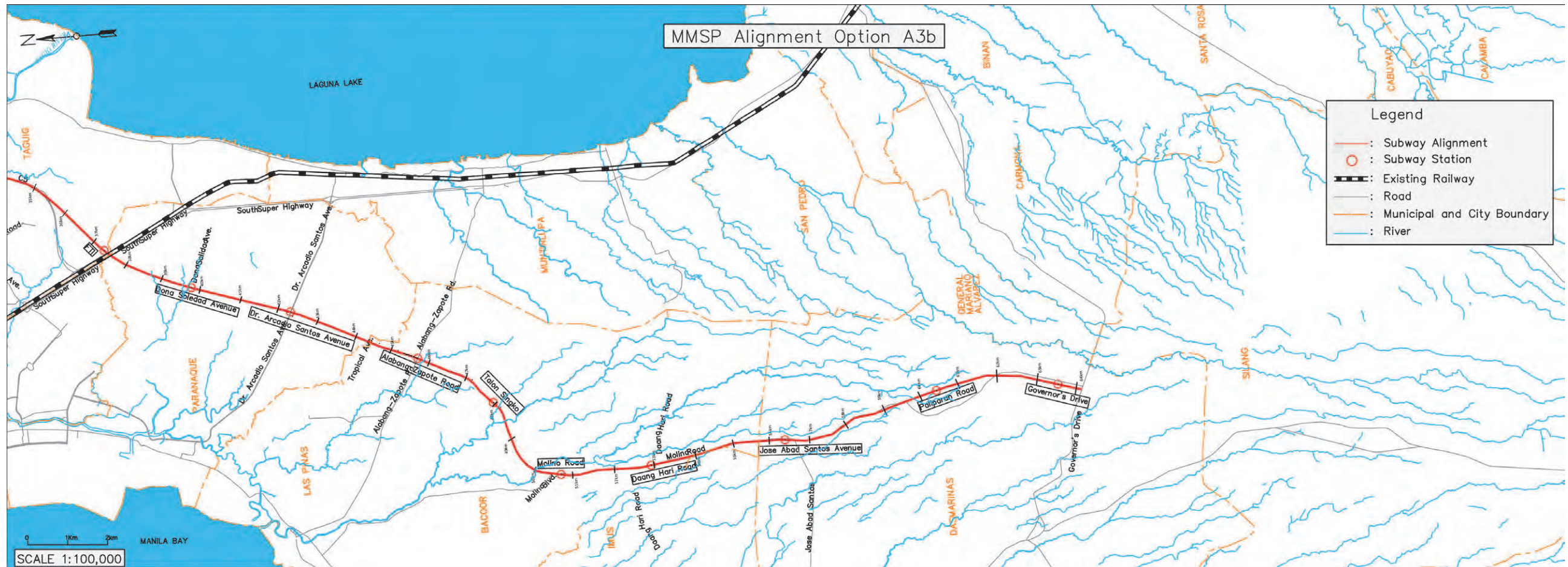
Figure App-D (16) Preliminary Horizontal and Vertical Route Alignment of Option A2b (2)

Source: JICA Study Team



Source: JICA Study Team

Figure App-D (17) Preliminary Horizontal and Vertical Route Alignment of Option A3b (1)



Source: JICA Study Team

Figure App-D (18) Preliminary Horizontal and Vertical Route Alignment of Option A3b (2)

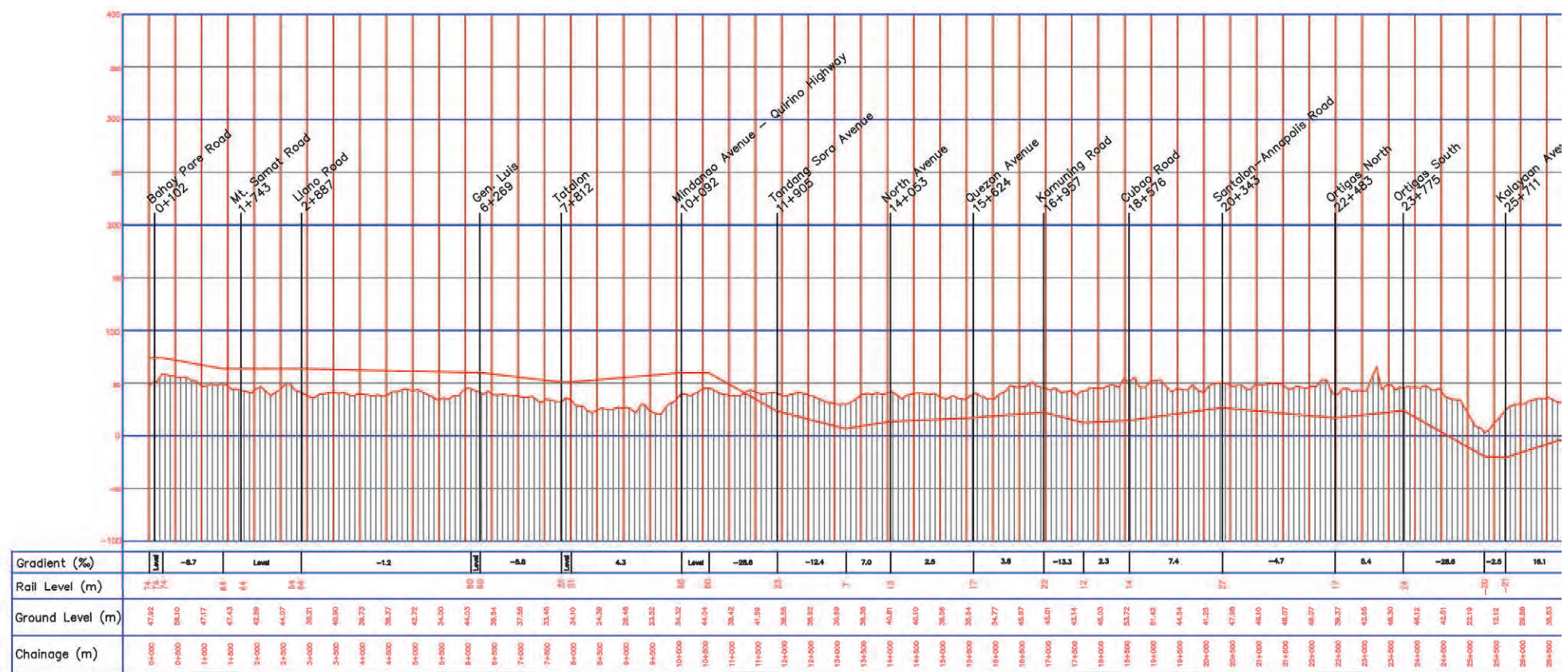
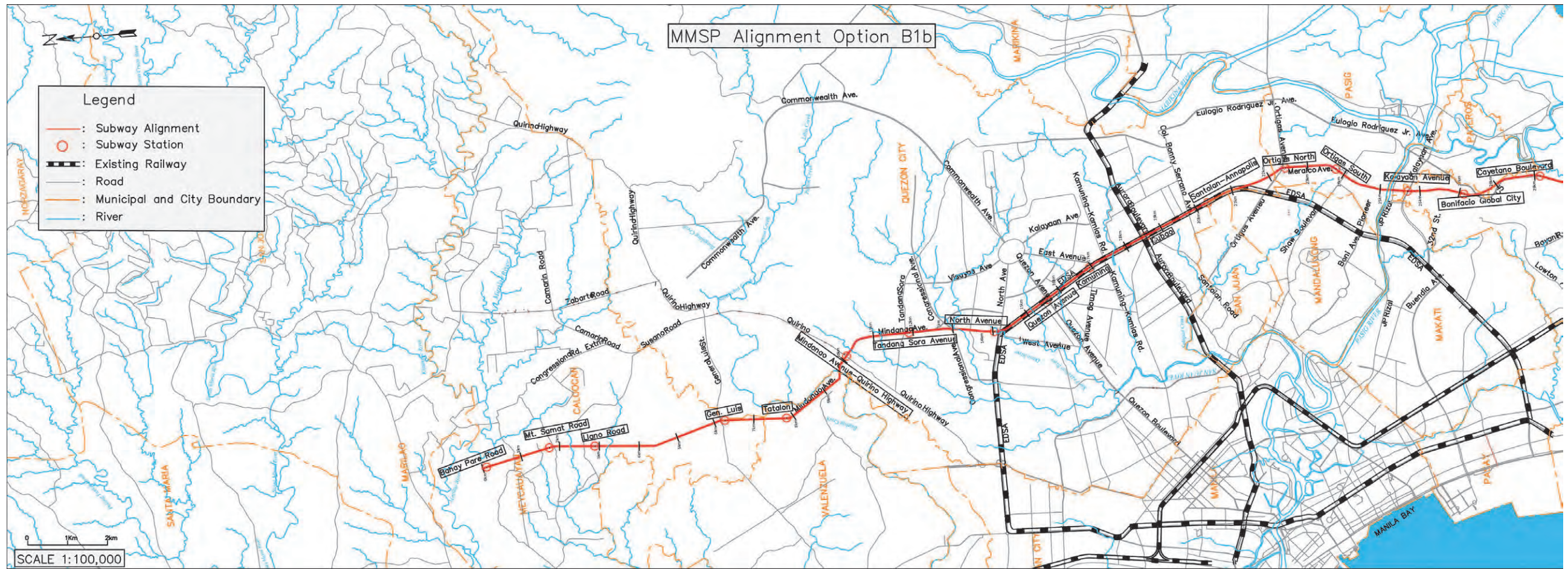
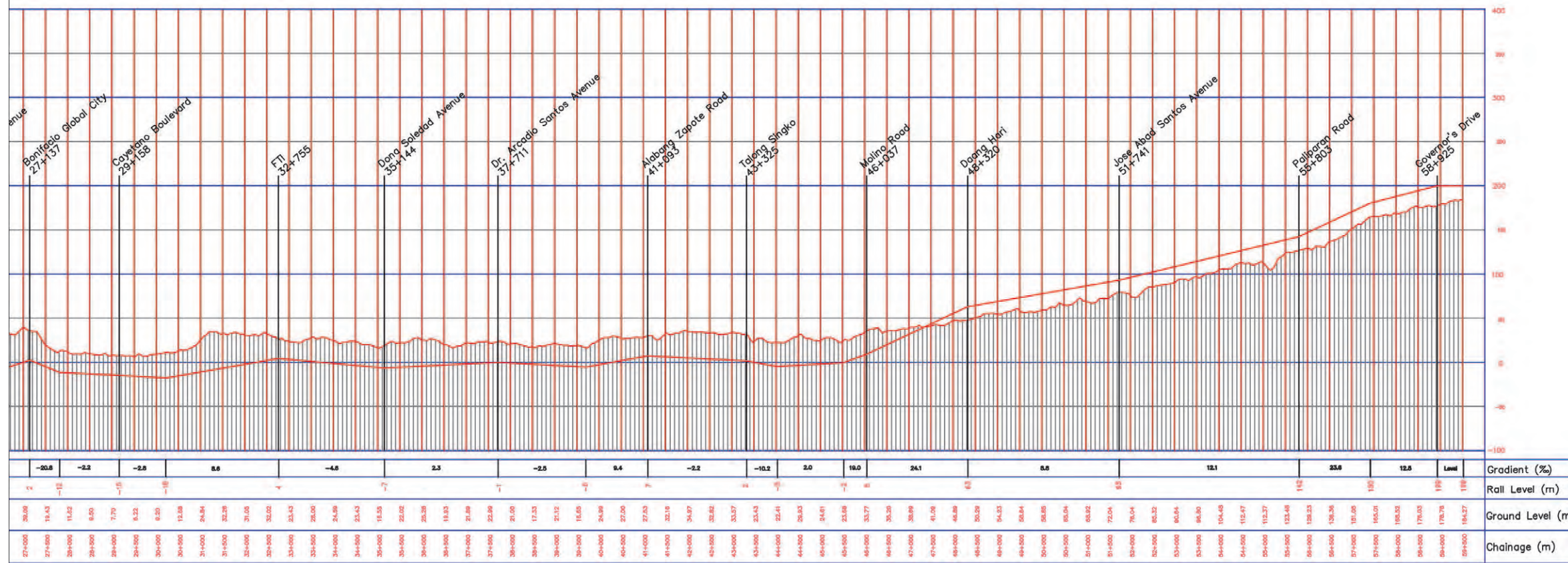
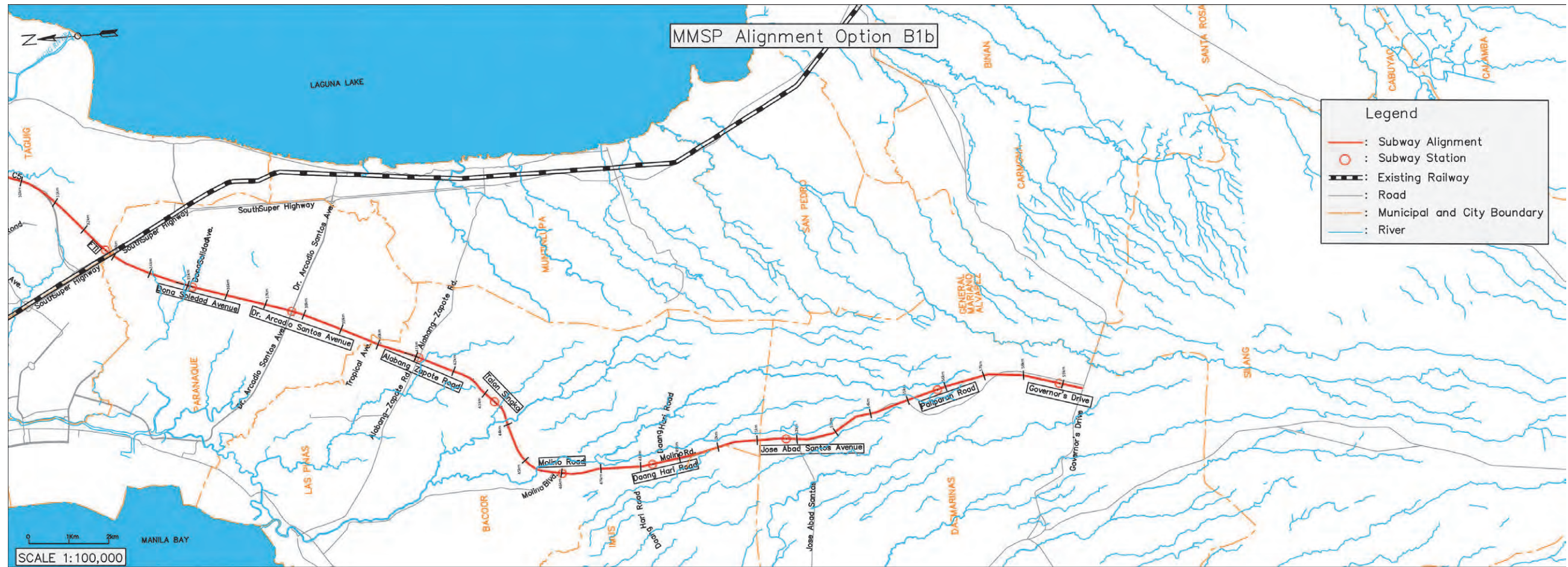


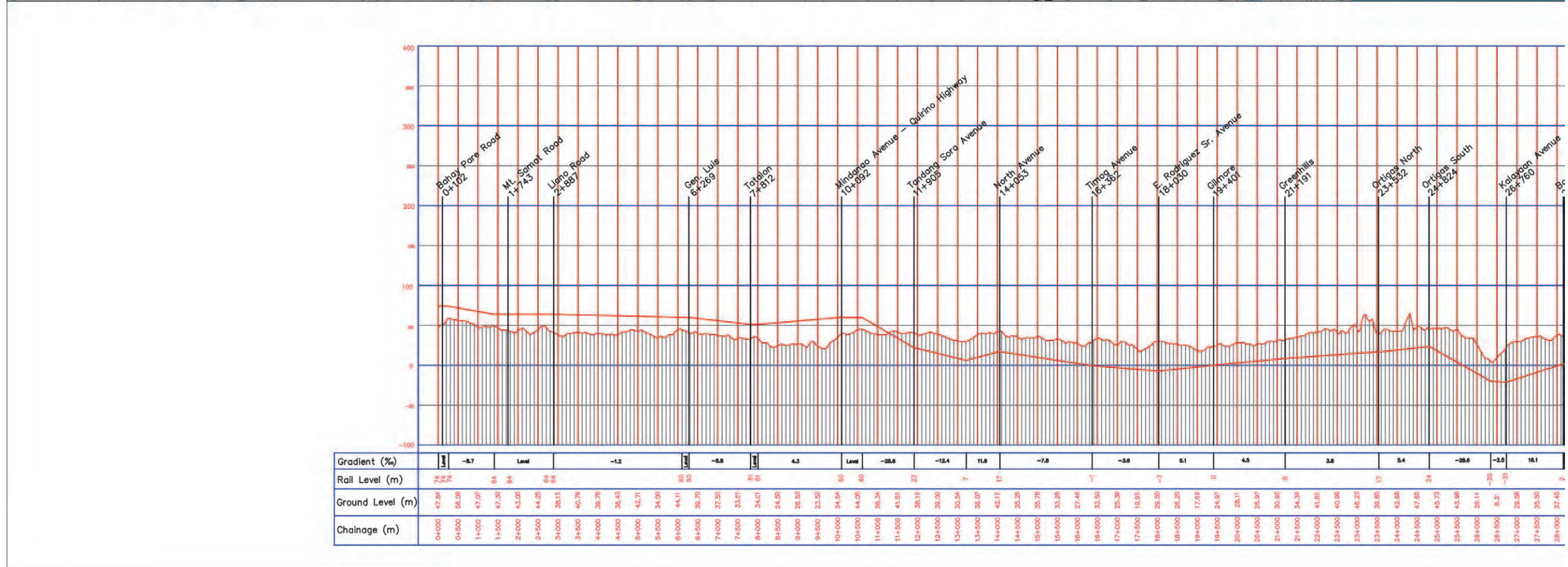
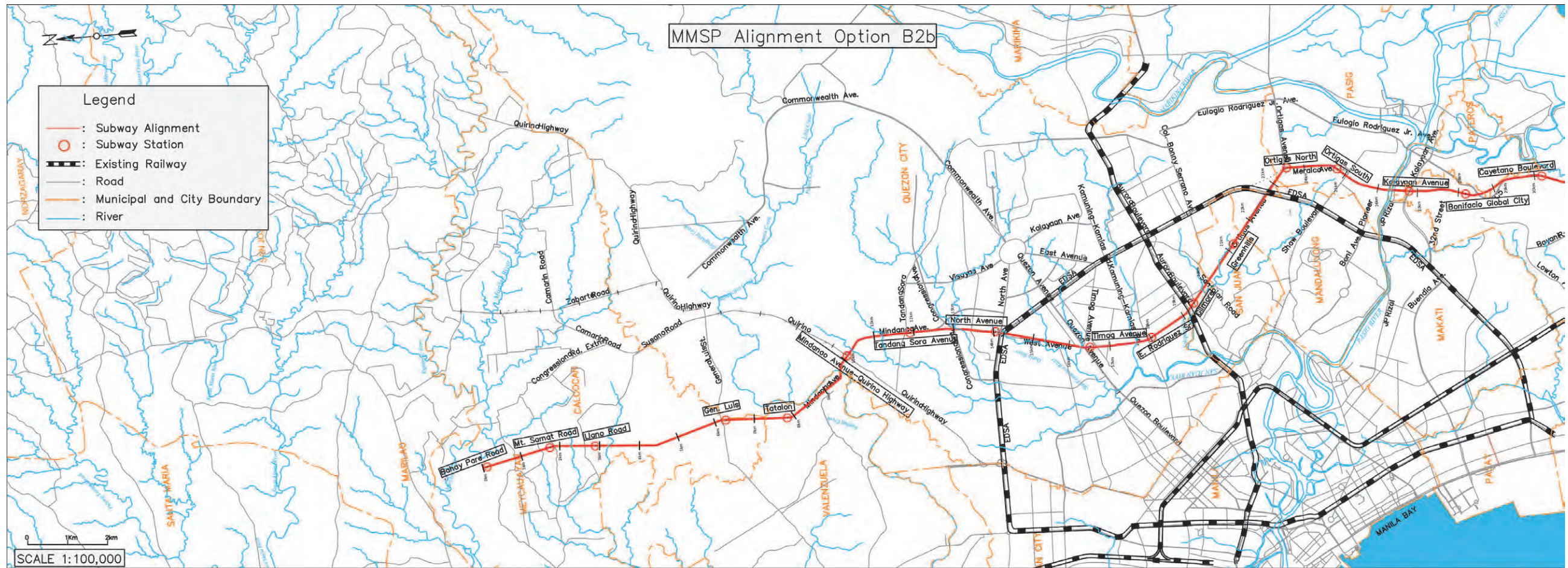
Figure App-D (19) Preliminary Horizontal and Vertical Route Alignment of Option B1b (1)

Source: JICA Study Team



Source: JICA Study Team

Figure App-D (20) Preliminary Horizontal and Vertical Route Alignment of Option B1b (2)



Source: JICA Study Team

Figure App-D (21) Preliminary Horizontal and Vertical Route Alignment of Option B2b (1)

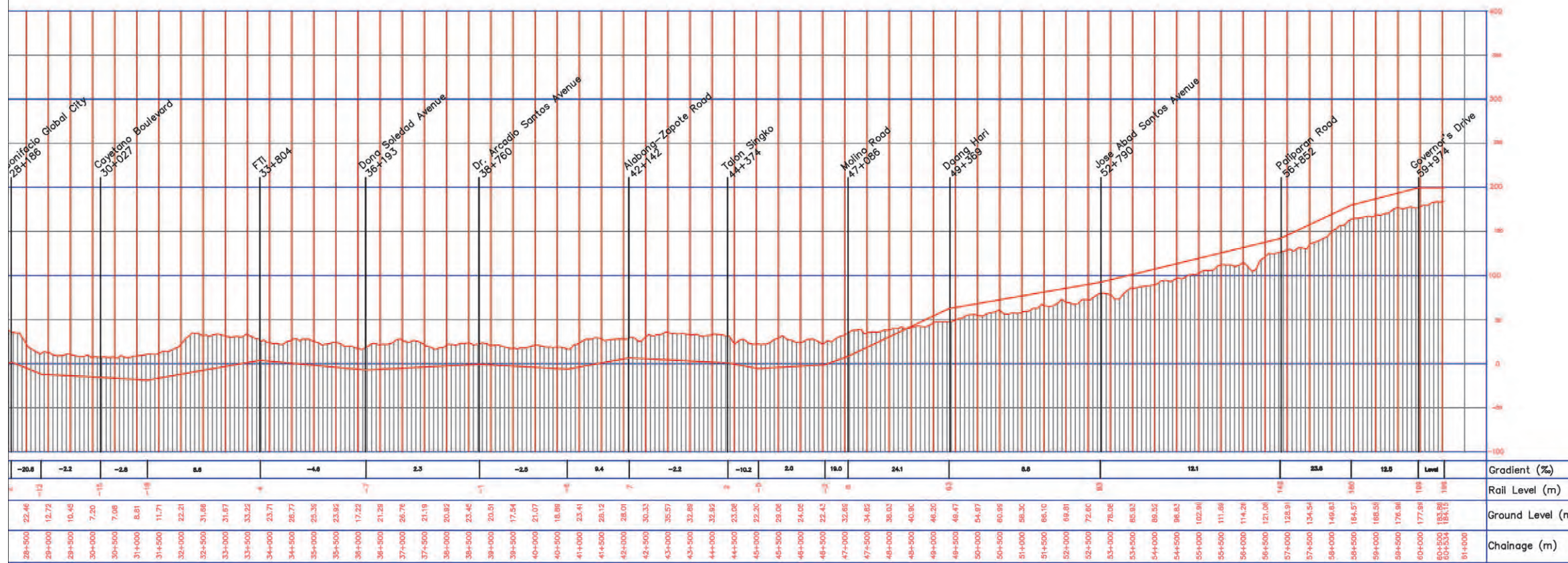
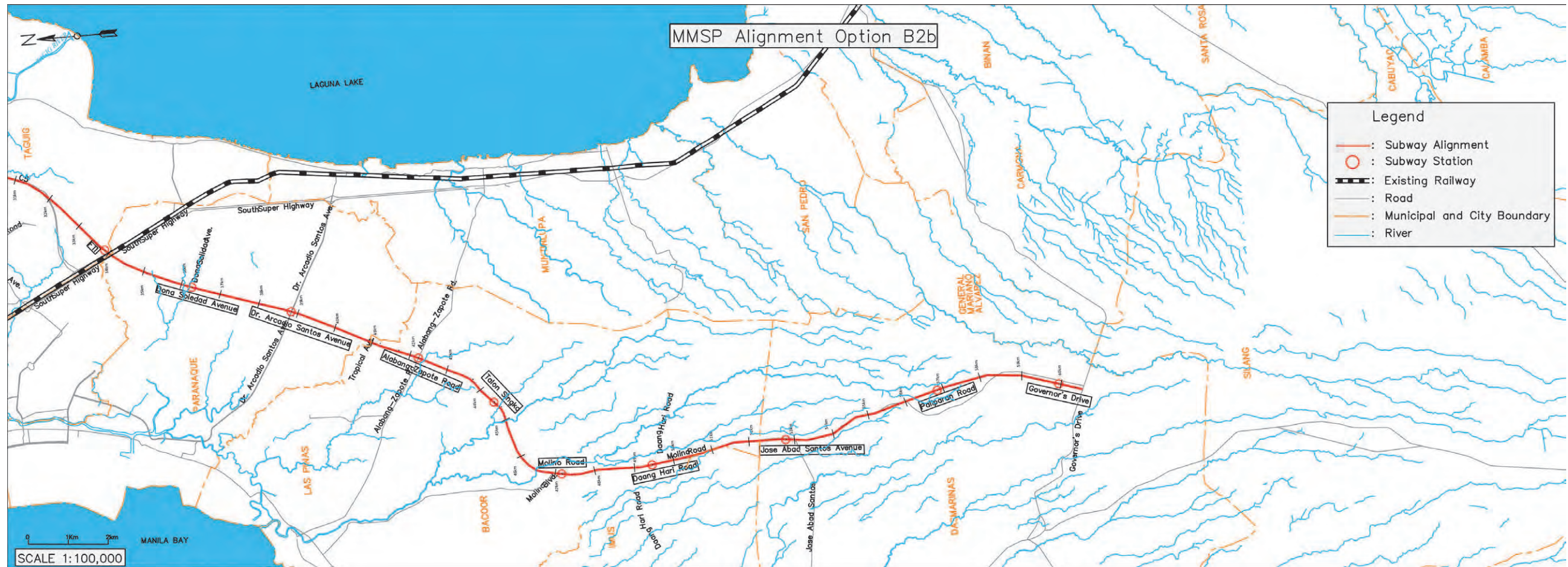


Figure App-D (22) Preliminary Horizontal and Vertical Route Alignment of Option B2b (2)

Source: JICA Study Team

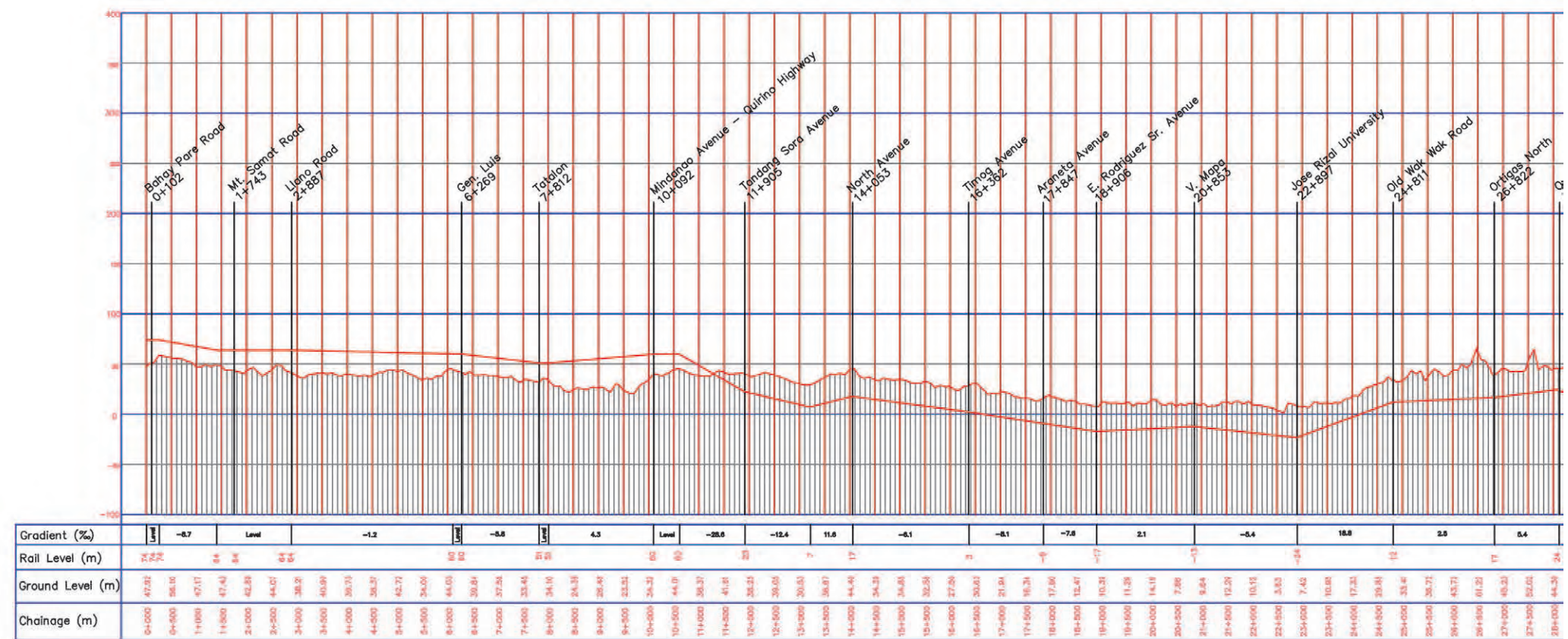
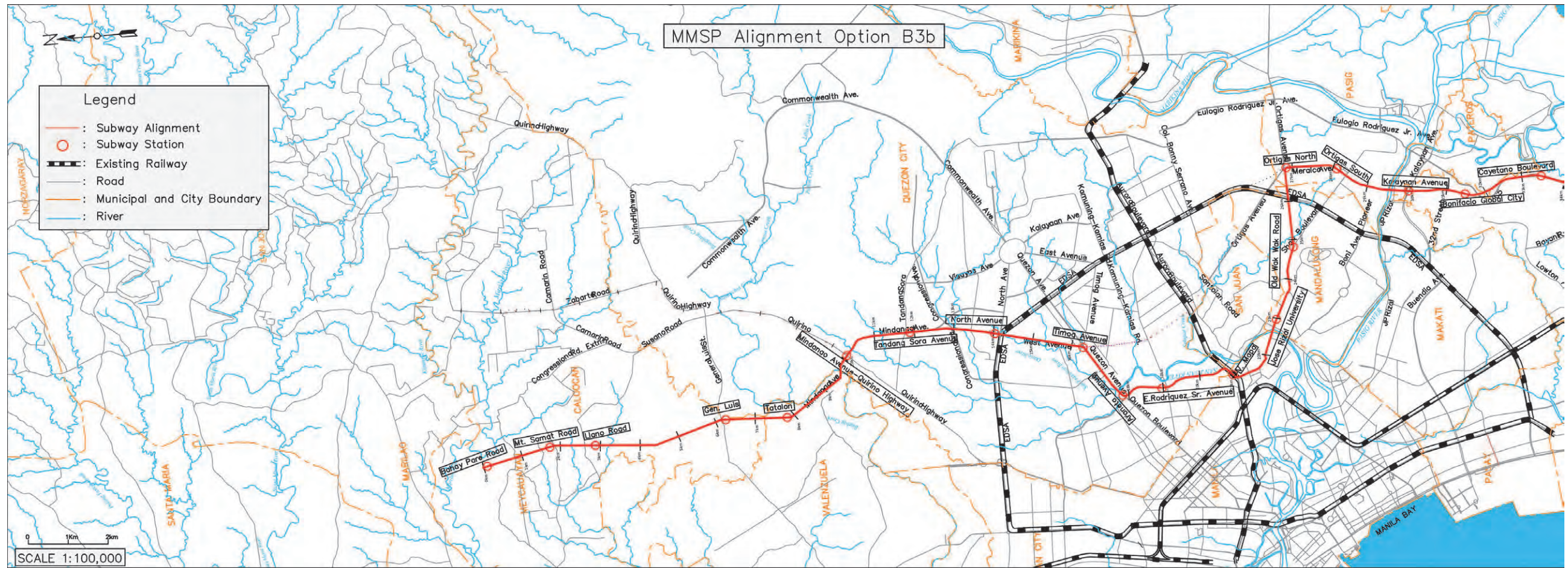


Figure App-D (23) Preliminary Horizontal and Vertical Route Alignment of Option B3b (1)

Source: JICA Study Team

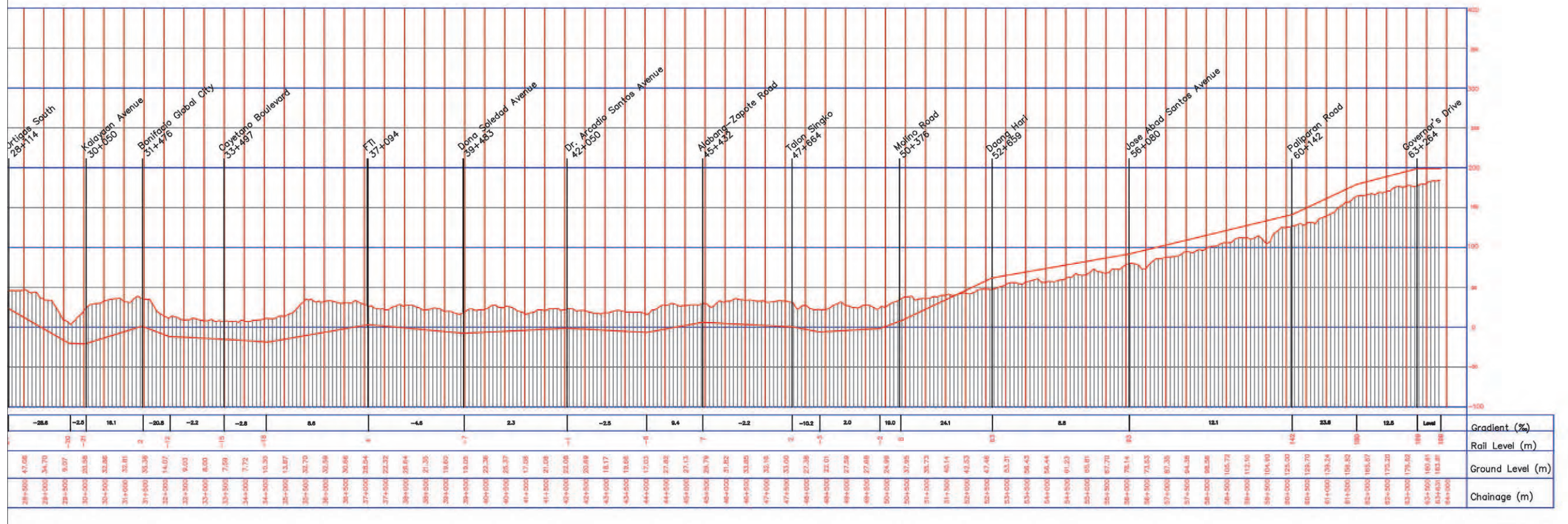
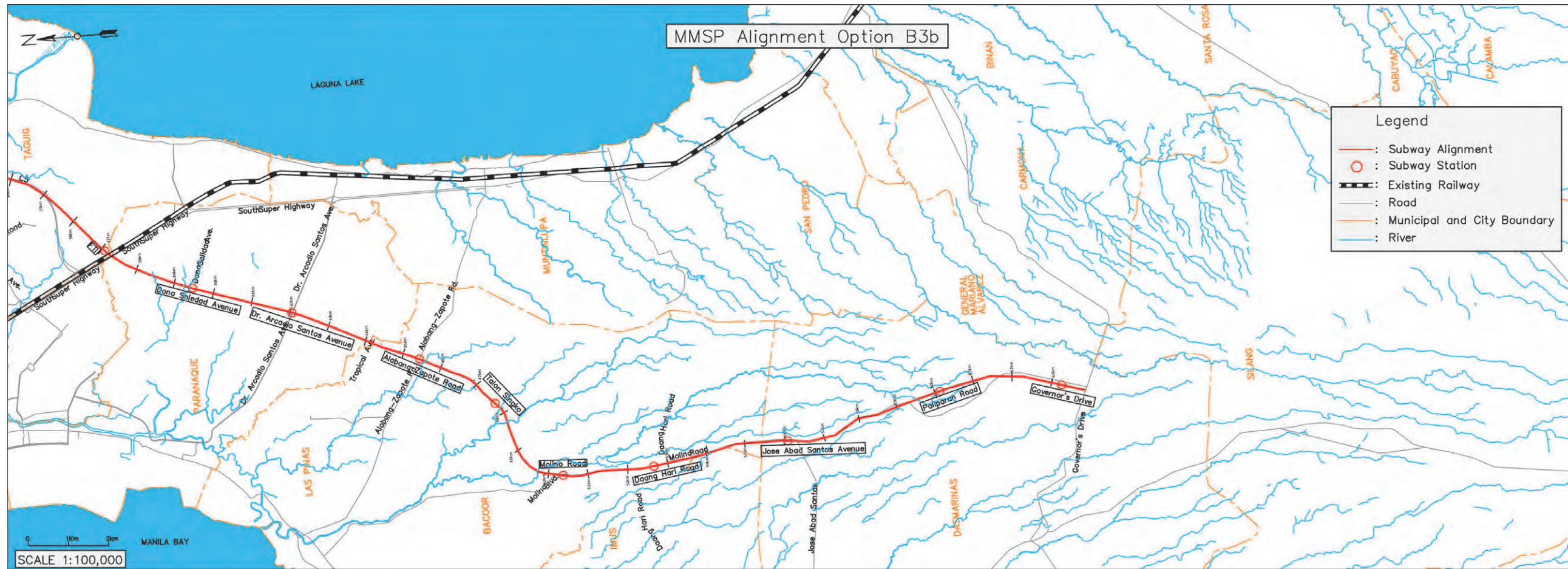


Figure App-D (24) Preliminary Horizontal and Vertical Route Alignment of Option B3b (2)

Source: JICA Study Team

Table App-D (1) Chainage and Distance of Option A1a

Station No.	Station Name	Chainage (km)	Distance (km)	Distance excl. stations	Structure Type	Distance by Struct. Type	Station Type	Distance by Phase	
1	L. Langit Road	0.114					Elevated	10.267	
2	Camarin Road	2.197	2.083	1.883	Elevated	5.112	Elevated		
3	Zabarte Road	4.529	2.332	2.132	Elevated		Elevated		
4	Novaliches	6.923	2.394	2.194	Elevated / High Elev.	1.622	Elevated	Phase 2	
5	San Bartolome	8.172	1.249	1.049	High Elev. / Elevated		1.529		High Elev.
6	Mindanao Avenue - Quirino Highway	10.381	2.209	2.009	Elevated / High Elev.	0.807	High Elev.	Phase 1	
7	Tandang Sora Avenue	12.194	1.813	1.613	High Elev. / Underground		19.457		Underground
8	North Avenue	14.342	2.148	1.948	Underground / Deep UDG	19.457	Deep UDG	22.663	
9	Quezon Avenue	15.913	1.571	1.371	Underground		Underground		
10	Kamuning	17.246	1.333	1.133	Underground	Underground			
11	Cubao	18.865	1.619	1.419	Underground	Deep UDG			
12	Santolan-Annapolis	20.632	1.767	1.567	Underground	Underground			
13	Ortigas North	22.772	2.140	1.940	Underground	Underground			
14	Ortigas South	24.064	1.292	1.092	Underground	Underground			
15	Kalayaan Avenue	26.000	1.936	1.736	Underground	Deep UDG			
16	Bonifacio Global City	27.426	1.426	1.226	Underground	Deep UDG			
17	Cayetano Boulevard	29.447	2.021	1.821	Underground	Underground			
18	FTI	33.044	3.597	3.397	Underground	Underground			
19	Dona Soledad Avenue	35.433	2.389	2.189	Underground / Elevated	1.095	High Elev.		Phase 2
20	Dr. Arcadio Santos Avenue	38.000	2.567	2.367	Elevated		21.815	Elevated	
21	Alabang-Zapote Road	41.382	3.382	3.182	Elevated	Elevated			
22	Talon Singko	43.614	2.232	2.032	Elevated	Elevated			
23	Molino Road	46.326	2.712	2.512	Elevated	Elevated			
24	Daang Hari	48.609	2.283	2.083	Elevated	Elevated			
25	Jose Abad Santos Avenue	52.030	3.421	3.221	Elevated	Elevated			
26	Paliparan Road	56.092	4.062	3.862	Elevated	Elevated			
27	Governor's Drive	59.214	3.122	2.922	Elevated / High Elev.	1.461		Elevated	
								High Elev.	
Total			59.100	53.900		53.900			59.100

Source: JICA Study Team

Table App-D (2) Chainage and Distance of Option A2a

Station No.	Station Name	Chainage (km)	Distance (km)	Distance excl. stations	Structure Type	Distance by Struct. Type	Station Type	Distance by Phase	
1	L. Langit Road	0.114					Elevated	10.267	
2	Camarin Road	2.197	2.083	1.883	Elevated	5.112	Elevated		
3	Zabarte Road	4.529	2.332	2.132	Elevated		Elevated		
4	Novaliches	6.923	2.394	2.194	Elevated / High Elev.	1.622	High Elev.	Phase 2	
5	San Bartolome	8.172	1.249	1.049	High Elev. / Elevated		1.529		Elevated
6	Mindanao Avenue - Quirino Highway	10.381	2.209	2.009	Elevated / High Elev.	1.005	High Elev.	Phase 1	
7	Tandang Sora Avenue	12.194	1.813	1.613	High Elev. / Underground	0.807			
8	North Avenue	14.342	2.148	1.948	Underground	20.506	Underground	23.712	
9	Timog Avenue	16.651	2.309	2.109	Underground		Deep UDG		
10	E. Rodriguez Sr. Avenue	18.319	1.668	1.468	Underground		Deep UDG		
11	Gilmore	19.690	1.371	1.171	Underground		Underground		
12	Greenhills	21.480	1.790	1.590	Underground		Underground		
13	Ortigas North	23.821	2.341	2.141	Underground		Underground		
14	Ortigas South	25.113	1.292	1.092	Underground		Underground		
15	Kalayaan Avenue	27.049	1.936	1.736	Underground		Deep UDG		
16	Bonifacio Global City	28.475	1.426	1.226	Underground		Deep UDG		
17	Cayetano Boulevard	30.496	2.021	1.821	Underground		Underground		
18	FTI	34.093	3.597	3.397	Underground		Underground		
19	Dona Soledad Avenue	36.482	2.389	2.189	Underground / Elevated		1.095		Elevated
20	Dr. Arcadio Santos Avenue	39.049	2.567	2.367	Elevated	21.815	Elevated		
21	Alabang-Zapote Road	42.431	3.382	3.182	Elevated		Elevated		
22	Talon Singko	44.663	2.232	2.032	Elevated		Elevated		
23	Molino Road	47.375	2.712	2.512	Elevated		Elevated		
24	Daang Hari	49.658	2.283	2.083	Elevated		Elevated		
25	Jose Abad Santos Avenue	53.079	3.421	3.221	Elevated		Elevated		
26	Paliparan Road	57.141	4.062	3.862	Elevated		Elevated		
27	Governor's Drive	60.263	3.122	2.922	Elevated		1.461	High Elev.	
			60.149	54.949			54.949		60.149

Source: JICA Study Team

Table App-D (3) Chainage and Distance of Option A3a

Station No.	Station Name	Chainage (km)	Distance (km)	Distance excl. stations	Structure Type	Distance by Struct. Type	Station Type	Distance by Phase		
1	L. Langit Road	0.114					Elevated	10.267		
2	Camarin Road	2.197	2.083	1.883	Elevated	5.112	Elevated			
3	Zabarte Road	4.529	2.332	2.132	Elevated		Elevated			
4	Novaliches	6.923	2.394	2.194	Elevated / High Elev.		1.622		High Elev.	
5	San Bartolome	8.172	1.249	1.049	High Elev. / Elevated	1.529	Elevated		Phase 2	
6	Mindanao Avenue - Quirino Highway	10.381	2.209	2.009	Elevated / High Elev.	1.005	High Elev.	Phase 1		
7	Tandang Sora Avenue	12.194	1.813	1.613	High Elev. / Underground	23.396	Underground	27.002		
8	North Avenue	14.342	2.148	1.948	Underground		Underground			
9	Timog Avenue	16.651	2.309	2.109	Underground		Underground			
10	Araneta Avenue	18.136	1.485	1.285	Underground		Underground			
11	E. Rodriguez Sr. Avenue	19.195	1.059	0.859	Underground		Deep UDG			
12	V. Mapa	21.142	1.947	1.747	Underground		Underground			
13	Jose Rizal University	23.186	2.044	1.844	Underground		Deep UDG			
14	Old Wak Wak Road	25.100	1.914	1.714	Underground		Underground			
15	Ortigas North	27.111	2.011	1.811	Underground		Underground			
16	Ortigas South	28.403	1.292	1.092	Underground		Underground			
17	Kalayaan Avenue	30.339	1.936	1.736	Underground		Deep UDG			
18	Bonifacio Global City	31.765	1.426	1.226	Underground		Deep UDG			
19	Cayetano Boulevard	33.786	2.021	1.821	Underground		Underground			
20	FTI	37.383	3.597	3.397	Underground		Underground		Phase 1	
21	Dona Soledad Avenue	39.772	2.389	2.189	Underground / Elevated		1.095		Elevated	Phase 2
22	Dr. Arcadio Santos Avenue	42.339	2.567	2.367	Elevated		21.815		Elevated	
23	Alabang-Zapote Road	45.721	3.382	3.182	Elevated				Elevated	
24	Talon Singko	47.953	2.232	2.032	Elevated				Elevated	
25	Molino Road	50.665	2.712	2.512	Elevated				Elevated	
26	Daang Hari	52.948	2.283	2.083	Elevated	Elevated				
27	Jose Abad Santos Avenue	56.369	3.421	3.221	Elevated	Elevated				
28	Paliparan Road	60.431	4.062	3.862	Elevated	Elevated				
29	Governor's Drive	63.553	3.122	2.922	Elevated / High Elev.	1.461		High Elev.		
			63.439	57.839		57.839		63.439		

Source: JICA Study Team

Table App-D (4) Chainage and Distance of Option B1a

Station No.	Station Name	Chainage (km)	Distance (km)	Distance excl. stations	Structure Type	Distance by Struct. Type	Station Type	Distance by Phase	
1	Bahay Pare Road	0.102					High Elev.	9.990	
2	Mt. Samat Road	1.743	1.641	1.441	High Elev.	8.990	High Elev.		
3	Llano Road	2.887	1.144	0.944	High Elev.		High Elev.		
4	Gen. Luis	6.269	3.382	3.182	High Elev.		High Elev.		
5	Tatalon	7.812	1.543	1.343	High Elev.		High Elev.		
6	Mindanao Avenue - Quirino Highway	10.092	2.280	2.080	High Elev.		High Elev.		
7	Tandang Sora Avenue	11.905	1.813	1.613	High Elev. / Underground		0.807	High Elev.	Phase 2 Phase 1
8	North Avenue	14.053	2.148	1.948	Underground / Deep UDG	Underground			
9	Quezon Avenue	15.624	1.571	1.371	Underground	Deep UDG			
10	Kamuning	16.957	1.333	1.133	Underground	Underground			
11	Cubao	18.576	1.619	1.419	Underground	Underground			
12	Santolan-Annapolis	20.343	1.767	1.567	Underground	Deep UDG			
13	Ortigas North	22.483	2.140	1.940	Underground	19.457	Underground		
14	Ortigas South	23.775	1.292	1.092	Underground		Underground		
15	Kalayaan Avenue	25.711	1.936	1.736	Underground		Underground		
16	Bonifacio Global City	27.137	1.426	1.226	Underground		Deep UDG		
17	Cayetano Boulevard	29.158	2.021	1.821	Underground		Deep UDG		
18	FTI	32.755	3.597	3.397	Underground		Underground		
19	Dona Soledad Avenue	35.144	2.389	2.189	Underground / Elevated	1.095	Underground	Phase 1 Phase 2	
20	Dr. Arcadio Santos Avenue	37.711	2.567	2.367	Elevated		Elevated		
21	Alabang-Zapote Road	41.093	3.382	3.182	Elevated		Elevated		
22	Talon Singko	43.325	2.232	2.032	Elevated		Elevated		
23	Molino Road	46.037	2.712	2.512	Elevated		Elevated		
24	Daang Hari	48.320	2.283	2.083	Elevated		Elevated		
25	Jose Abad Santos Avenue	51.741	3.421	3.221	Elevated	21.815	Elevated		
26	Paliparan Road	55.803	4.062	3.862	Elevated		Elevated		
27	Governor's Drive	58.925	3.122	2.922	Elevated / High Elev.		Elevated		
			3.122	2.922	Elevated / High Elev.		1.461	High Elev.	
			58.823	53.623			53.623		58.823

Source: JICA Study Team

Table App-D (5) Chainage and Distance of Option B2a

Station No.	Station Name	Chainage (km)	Distance (km)	Distance excl. stations	Structure Type	Distance by Struct. Type	Station Type	Distance by Phase				
1	Bahay Pare Road	0.102					High Elev.	9.990				
2	Mt. Samat Road	1.743	1.641	1.441	High Elev.	8.990	High Elev.					
3	Llano Road	2.887	1.144	0.944	High Elev.		High Elev.					
4	Gen. Luis	6.269	3.382	3.182	High Elev.		High Elev.					
5	Tatalon	7.812	1.543	1.343	High Elev.		High Elev.					
6	Mindanao Avenue - Quirino Highway	10.092	2.280	2.080	High Elev.		0.807	High Elev.	Phase 1			
7	Tandang Sora Avenue	11.905	1.813	1.613	High Elev. / Underground	20.506		Underground				
8	North Avenue	14.053	2.148	1.948	Underground / Deep UDG			Underground				
9	Timog Avenue	16.362	2.309	2.109	Underground			Deep UDG				
10	E. Rodriguez Sr. Avenue	18.030	1.668	1.468	Underground			Deep UDG				
11	Gilmore	19.401	1.371	1.171	Underground			Underground				
12	Greenhills	21.191	1.790	1.590	Underground			Underground				
13	Ortigas North	23.532	2.341	2.141	Underground			Underground				
14	Ortigas South	24.824	1.292	1.092	Underground			Underground				
15	Kalayaan Avenue	26.760	1.936	1.736	Underground			Deep UDG				
16	Bonifacio Global City	28.186	1.426	1.226	Underground			Deep UDG				
17	Cayetano Boulevard	30.207	2.021	1.821	Underground			Underground				
18	FTI	33.804	3.597	3.397	Underground			Underground				
19	Dona Soledad Avenue	36.193	2.389	2.189	Underground / Elevated			1.095		Elevated	Phase 2	
20	Dr. Arcadio Santos Avenue	38.760	2.567	2.367	Elevated					21.815		Elevated
21	Alabang-Zapote Road	42.142	3.382	3.182	Elevated							Elevated
22	Talon Singko	44.374	2.232	2.032	Elevated							Elevated
23	Molino Road	47.086	2.712	2.512	Elevated							Elevated
24	Daang Hari	49.369	2.283	2.083	Elevated		Elevated					
25	Jose Abad Santos Avenue	52.790	3.421	3.221	Elevated	Elevated						
26	Paliparan Road	56.852	4.062	3.862	Elevated	Elevated						
27	Governor's Drive	59.974	3.122	2.922	Elevated / High Elev.	1.461	Elevated					
							High Elev.					
			59.872	54.672		54.672			59.872			

Source: JICA Study Team

Table App-D (6) Chainage and Distance of Option B3a

Station No.	Station Name	Chainage (km)	Distance (km)	Distance excl. stations	Structure Type	Distance by Struct. Type	Station Type	Distance by Phase	
1	Bahay Pare Road	0.102					High Elev.	9.990	
2	Mt. Samat Road	1.743	1.641	1.441	High Elev.	8.990	High Elev.		
3	Llano Road	2.887	1.144	0.944	High Elev.		High Elev.		
4	Gen. Luis	6.269	3.382	3.182	High Elev.		High Elev.		
5	Tatalon	7.812	1.543	1.343	High Elev.		High Elev.		
6	Mindanao Avenue - Quirino Highway	10.092	2.280	2.080	High Elev.		0.807	High Elev.	Phase 2
7	Tandang Sora Avenue	11.905	1.813	1.613	High Elev. / Underground	23.396	Underground	27.002	
8	North Avenue	14.053	2.148	1.948	Underground		Underground		
9	Timog Avenue	16.362	2.309	2.109	Underground		Underground		
10	Araneta Avenue	17.847	1.485	1.285	Underground		Underground		
11	E. Rodriguez Sr. Avenue	18.906	1.059	0.859	Underground		Underground		
12	V. Mapa	20.853	1.947	1.747	Underground		Deep UDG		
13	Jose Rizal University	22.897	2.044	1.844	Underground		Underground		
14	Old Wak Wak Road	24.811	2.044	1.844	Underground		Deep UDG		
15	Ortigas North	26.822	1.914	1.714	Underground		Underground		
16	Ortigas South	28.114	2.011	1.811	Underground		Underground		
17	Kalayaan Avenue	30.050	1.292	1.092	Underground		Underground		
18	Bonifacio Global City	31.476	1.936	1.736	Underground		Deep UDG		
19	Cayetano Boulevard	33.497	1.426	1.226	Underground		Deep UDG		
20	FTI	37.094	2.021	1.821	Underground		Underground		
21	Dona Soledad Avenue	39.483	3.597	3.397	Underground	Underground	Phase 1		
22	Dr. Arcadio Santos Avenue	42.050	2.389	2.189	Underground / Elevated	1.095	Elevated	26.170	
23	Alabang-Zapote Road	45.432	2.567	2.367	Elevated	21.815	Elevated		
24	Talon Singko	47.664	3.382	3.182	Elevated		Elevated		
25	Molino Road	50.376	2.232	2.032	Elevated		Elevated		
26	Daang Hari	52.659	2.712	2.512	Elevated		Elevated		
27	Jose Abad Santos Avenue	56.080	2.283	2.083	Elevated		Elevated		
28	Paliparan Road	60.142	3.421	3.221	Elevated		Elevated		
29	Governor's Drive	63.264	4.062	3.862	Elevated		Elevated		
			3.122	2.922	Elevated / High Elev.		1.461		High Elev.
			63.162	57.562			57.562		

Source: JICA Study Team

Table App-D (7) Chainage and Distance of Option A1b

Station No.	Station Name	Chainage (km)	Distance (km)	Distance excl. stations	Structure Type	Distance by Struct. Type	Station Type	Distance by Phase
1	L. Langit Road	0.114					Elevated	10.267
2	Camarin Road	2.197	2.083	1.883	Elevated	5.112	Elevated	
3	Zabarte Road	4.529	2.332	2.132	Elevated		Elevated	
4	Novaliches	6.923	2.394	2.194	Elevated / High Elev.	1.622	High Elev.	Phase 2
5	San Bartolome	8.172	1.249	1.049	High Elev. / Elevated		1.529	
6	Mindanao Avenue - Quirino Highway	10.381	2.209	2.009	Elevated / High Elev.	1.005	High Elev.	Phase 1
7	Tandang Sora Avenue	12.194	1.813	1.613	High Elev. / Underground	0.807		
8	North Avenue	14.342	2.148	1.948	Underground	19.457	Underground	22.663
9	Quezon Avenue	15.913	1.571	1.371	Underground		Deep UDG	
10	Kamuning	17.246	1.333	1.133	Underground		Underground	
11	Cubao	18.865	1.619	1.419	Underground		Underground	
12	Santolan-Annapolis	20.632	1.767	1.567	Underground		Deep UDG	
13	Ortigas North	22.772	2.140	1.940	Underground		Underground	
14	Ortigas South	24.064	1.292	1.092	Underground		Underground	
15	Kalayaan Avenue	26.000	1.936	1.736	Underground		Deep UDG	
16	Bonifacio Global City	27.426	1.426	1.226	Underground		Deep UDG	
17	Cayetano Boulevard	29.447	2.021	1.821	Underground		Underground	
18	FTI	33.044	3.597	3.397	Underground		Underground	
19	Dona Soledad Avenue	35.433	2.389	2.189	Underground	13.324	Deep UDG	Phase 2
20	Dr. Arcadio Santos Avenue	38.000	2.567	2.367	Underground		Underground	
21	Alabang-Zapote Road	41.382	3.382	3.182	Underground		Underground	
22	Talon Singko	43.614	2.232	2.032	Underground	9.586	Deep UDG	26.170
23	Molino Road	46.326	2.712	2.512	Underground		Deep UDG	
24	Daang Hari	48.609	2.283	2.083	Underground / Elevated	Elevated	Elevated	
25	Jose Abad Santos Avenue	52.030	3.421	3.221	Elevated			
26	Paliparan Road	56.092	4.062	3.862	Elevated	Elevated	Elevated	
27	Governor's Drive	59.214	3.122	2.922	Elevated / High Elev.			1.461
Total			59.100	53.900		53.900		59.100

Source: JICA Study Team

Table App-D (8) Chainage and Distance of Option A2b

Station No.	Station Name	Chainage (km)	Distance (km)	Distance excl. stations	Structure Type	Distance by Struct. Type	Station Type	Distance by Phase
1	L. Langit Road	0.114					Elevated	10.267
2	Camarin Road	2.197	2.083	1.883	Elevated	5.112	Elevated	
3	Zabarte Road	4.529	2.332	2.132	Elevated		Elevated	
4	Novaliches	6.923	2.394	2.194	Elevated / High Elev.	1.622	High Elev.	Phase 2
5	San Bartolome	8.172	1.249	1.049	High Elev. / Elevated		1.529	
6	Mindanao Avenue - Quirino Highway	10.381	2.209	2.009	Elevated / High Elev.	1.005	High Elev.	Phase 1
7	Tandang Sora Avenue	12.194	1.813	1.613	High Elev. / Underground	0.807		
8	North Avenue	14.342	2.148	1.948	Underground	20.506	Underground	23.712
9	Timog Avenue	16.651	2.309	2.109	Underground		Deep UDG	
10	E. Rodriguez Sr. Avenue	18.319	1.668	1.468	Underground		Deep UDG	
11	Gilmore	19.690	1.371	1.171	Underground		Underground	
12	Greenhills	21.480	1.790	1.590	Underground		Underground	
13	Ortigas North	23.821	2.341	2.141	Underground		Underground	
14	Ortigas South	25.113	1.292	1.092	Underground		Underground	
15	Kalayaan Avenue	27.049	1.936	1.736	Underground		Deep UDG	
16	Bonifacio Global City	28.475	1.426	1.226	Underground		Deep UDG	
17	Cayetano Boulevard	30.496	2.021	1.821	Underground		Underground	
18	FTI	34.093	3.597	3.397	Underground	Underground	Phase 1	
19	Dona Soledad Avenue	36.482	2.389	2.189	Underground	13.324	Deep UDG	Phase 2
20	Dr. Arcadio Santos Avenue	39.049	2.567	2.367	Underground		Underground	
21	Alabang-Zapote Road	42.431	3.382	3.182	Underground		Underground	
22	Talon Singko	44.663	2.232	2.032	Underground	9.586	Deep UDG	26.170
23	Molino Road	47.375	2.712	2.512	Underground		Deep UDG	
24	Daang Hari	49.658	2.283	2.083	Underground / Elevated	Elevated	Elevated	
25	Jose Abad Santos Avenue	53.079	3.421	3.221	Elevated		Elevated	
26	Paliparan Road	57.141	4.062	3.862	Elevated	1.461	Elevated	
27	Governor's Drive	60.263	3.122	2.922	Elevated / High Elev.		High Elev.	
			60.149	54.949		54.949		60.149

Source: JICA Study Team

Table App-D (9) Chainage and Distance of Option A3b

Station No.	Station Name	Chainage (km)	Distance (km)	Distance excl. stations	Structure Type	Distance by Struct. Type	Station Type	Distance by Phase
1	L. Langit Road	0.114					Elevated	10.267
2	Camarin Road	2.197	2.083	1.883	Elevated	5.112	Elevated	
3	Zabarte Road	4.529	2.332	2.132	Elevated		Elevated	
4	Novaliches	6.923	2.394	2.194	Elevated / High Elev.		1.622	
5	San Bartolome	8.172	1.249	1.049	High Elev. / Elevated	1.529	Elevated	
6	Mindanao Avenue - Quirino Highway	10.381	2.209	2.009	Elevated / High Elev.	1.005	High Elev.	Phase 1
7	Tandang Sora Avenue	12.194	1.813	1.613	High Elev. / Underground	0.807		27.002
8	North Avenue	14.342	2.148	1.948	Underground	23.396	Underground	
9	Timog Avenue	16.651	2.309	2.109	Underground		Underground	
10	Araneta Avenue	18.136	1.485	1.285	Underground		Underground	
11	E. Rodriguez Sr. Avenue	19.195	1.059	0.859	Underground		Underground	
12	V. Mapa	21.142	1.947	1.747	Underground		Deep UDG	
13	Jose Rizal University	23.186	2.044	1.844	Underground		Underground	
14	Old Wak Wak Road	25.100	1.914	1.714	Underground		Deep UDG	
15	Ortigas North	27.111	2.011	1.811	Underground		Underground	
16	Ortigas South	28.403	1.292	1.092	Underground		Underground	
17	Kalayaan Avenue	30.339	1.936	1.736	Underground		Underground	
18	Bonifacio Global City	31.765	1.426	1.226	Underground		Deep UDG	
19	Cayetano Boulevard	33.786	2.021	1.821	Underground		Deep UDG	
20	FTI	37.383	2.021	1.821	Underground		Underground	
21	Dona Soledad Avenue	39.772	3.597	3.397	Underground		Underground	Phase 2
22	Dr. Arcadio Santos Avenue	42.339	2.389	2.189	Underground	13.324	Deep UDG	26.170
23	Alabang-Zapote Road	45.721	2.567	2.367	Underground		Underground	
24	Talon Singko	47.953	3.382	3.182	Underground		Underground	
25	Molino Road	50.665	2.232	2.032	Underground		Deep UDG	
26	Daang Hari	52.948	2.712	2.512	Underground		Deep UDG	
27	Jose Abad Santos Avenue	56.369	2.283	2.083	Underground / Elevated	9.586	Elevated	
28	Paliparan Road	60.431	3.421	3.221	Elevated		Elevated	
29	Governor's Drive	63.553	4.062	3.862	Elevated		Elevated	
			3.122	2.922	Elevated / High Elev.	1.461	High Elev.	
			63.439	57.839		57.839		63.439

Source: JICA Study Team

Table App-D (10) Chainage and Distance of Option B1b

Station No.	Station Name	Chainage (km)	Distance (km)	Distance excl. stations	Structure Type	Distance by Struct. Type	Station Type	Distance by Phase		
1	Bahay Pare Road	0.102					High Elev.	9.990		
2	Mt. Samat Road	1.743	1.641	1.441	High Elev.	8.990	High Elev.			
3	Llano Road	2.887	1.144	0.944	High Elev.		High Elev.			
4	Gen. Luis	6.269	3.382	3.182	High Elev.		High Elev.			
5	Tatalon	7.812	1.543	1.343	High Elev.		High Elev.			
6	Mindanao Avenue - Quirino Highway	10.092	2.280	2.080	High Elev.		0.807	High Elev.	Phase 2 Phase 1	
7	Tandang Sora Avenue	11.905	1.813	1.613	High Elev. / Underground	19.457		Underground		
8	North Avenue	14.053	2.148	1.948	Underground			Deep UDG		
9	Quezon Avenue	15.624	1.571	1.371	Underground			Underground		
10	Kamuning	16.957	1.333	1.133	Underground			Underground		
11	Cubao	18.576	1.619	1.419	Underground			Deep UDG		
12	Santolan-Annapolis	20.343	1.767	1.567	Underground			Underground		22.663
13	Ortigas North	22.483	2.140	1.940	Underground			Underground		
14	Ortigas South	23.775	1.292	1.092	Underground			Underground		
15	Kalayaan Avenue	25.711	1.936	1.736	Underground			Deep UDG		
16	Bonifacio Global City	27.137	1.426	1.226	Underground			Deep UDG		
17	Cayetano Boulevard	29.158	2.021	1.821	Underground			Deep UDG		
18	FTI	32.755	3.597	3.397	Underground			Underground		Phase 1
19	Dona Soledad Avenue	35.144	2.389	2.189	Underground			13.324		
20	Dr. Arcadio Santos Avenue	37.711	2.567	2.367	Underground					Underground
21	Alabang-Zapote Road	41.093	3.382	3.182	Underground					Underground
22	Talon Singko	43.325	2.232	2.032	Underground					Deep UDG
23	Molino Road	46.037	2.712	2.512	Underground					Deep UDG
24	Daang Hari	48.320	2.283	2.083	Underground / Elevated		9.586		Elevated	26.170
25	Jose Abad Santos Avenue	51.741	3.421	3.221	Elevated	Elevated				
26	Paliparan Road	55.803	4.062	3.862	Elevated	Elevated				
27	Governor's Drive	58.925	3.122	2.922	Elevated / High Elev.	1.461			Elevated	
					High Elev.					
			58.823	53.623		53.623		58.823		

Source: JICA Study Team

Table App-D (11) Chainage and Distance of Option B2b

Station No.	Station Name	Chainage (km)	Distance (km)	Distance excl. stations	Structure Type	Distance by Struct. Type	Station Type	Distance by Phase		
1	Bahay Pare Road	0.102					High Elev.	9.990		
2	Mt. Samat Road	1.743	1.641	1.441	High Elev.	8.990	High Elev.			
3	Llano Road	2.887	1.144	0.944	High Elev.		High Elev.			
4	Gen. Luis	6.269	3.382	3.182	High Elev.		High Elev.			
5	Tatalon	7.812	1.543	1.343	High Elev.		High Elev.			
6	Mindanao Avenue - Quirino Highway	10.092	2.280	2.080	High Elev.		0.807	High Elev.	Phase 1	
7	Tandang Sora Avenue	11.905	1.813	1.613	High Elev. / Underground	20.506		Underground		
8	North Avenue	14.053	2.148	1.948	Underground			Underground		
9	Timog Avenue	16.362	2.309	2.109	Underground			Deep UDG		
10	E. Rodriguez Sr. Avenue	18.030	1.668	1.468	Underground			Deep UDG		
11	Gilmore	19.401	1.371	1.171	Underground			Underground		
12	Greenhills	21.191	1.790	1.590	Underground			Underground		
13	Ortigas North	23.532	2.341	2.141	Underground			Underground		
14	Ortigas South	24.824	1.292	1.092	Underground			Underground		
15	Kalayaan Avenue	26.760	1.936	1.736	Underground			Deep UDG		
16	Bonifacio Global City	28.186	1.426	1.226	Underground			Deep UDG		
17	Cayetano Boulevard	30.207	2.021	1.821	Underground			Underground		
18	FTI	33.804	3.597	3.397	Underground			Underground		
19	Dona Soledad Avenue	36.193	2.389	2.189	Underground			13.324	Deep UDG	Phase 2
20	Dr. Arcadio Santos Avenue	38.760	2.567	2.367	Underground				Underground	
21	Alabang-Zapote Road	42.142	3.382	3.182	Underground				Underground	
22	Talon Singko	44.374	2.232	2.032	Underground				Deep UDG	
23	Molino Road	47.086	2.712	2.512	Underground				Deep UDG	
24	Daang Hari	49.369	2.283	2.083	Underground / Elevated		9.586		Elevated	
25	Jose Abad Santos Avenue	52.790	3.421	3.221	Elevated	Elevated				
26	Paliparan Road	56.852	4.062	3.862	Elevated	Elevated				
27	Governor's Drive	59.974	3.122	2.922	Elevated / High Elev.	1.461			Elevated	
									High Elev.	
			59.872	54.672		54.672			59.872	

Source: JICA Study Team

Table App-D (12) Chainage and Distance of Option B3b

Station No.	Station Name	Chainage (km)	Distance (km)	Distance excl. stations	Structure Type	Distance by Struct. Type	Station Type	Distance by Phase	
1	Bahay Pare Road	0.102					High Elev.	9.990	
2	Mt. Samat Road	1.743	1.641	1.441	High Elev.	8.990	High Elev.		
3	Llano Road	2.887	1.144	0.944	High Elev.		High Elev.		
4	Gen. Luis	6.269	3.382	3.182	High Elev.		High Elev.		
5	Tatalon	7.812	1.543	1.343	High Elev.		High Elev.		
6	Mindanao Avenue - Quirino Highway	10.092	2.280	2.080	High Elev.		0.807	High Elev.	Phase 2
7	Tandang Sora Avenue	11.905	1.813	1.613	High Elev. / Underground	23.396	Underground	27.002	
8	North Avenue	14.053	2.148	1.948	Underground		Underground		
9	Timog Avenue	16.362	2.309	2.109	Underground		Underground		
10	Araneta Avenue	17.847	1.485	1.285	Underground		Underground		
11	E. Rodriguez Sr. Avenue	18.906	1.059	0.859	Underground		Underground		
12	V. Mapa	20.853	1.947	1.747	Underground		Deep UDG		
13	Jose Rizal University	22.897	2.044	1.844	Underground		Underground		
14	Old Wak Wak Road	24.811	1.914	1.714	Underground		Deep UDG		
15	Ortigas North	26.822	2.011	1.811	Underground		Underground		
16	Ortigas South	28.114	1.292	1.092	Underground		Underground		
17	Kalayaan Avenue	30.050	1.936	1.736	Underground		Underground		
18	Bonifacio Global City	31.476	1.426	1.226	Underground		Deep UDG		
19	Cayetano Boulevard	33.497	2.021	1.821	Underground		Deep UDG		
20	FTI	37.094	3.597	3.397	Underground		Underground		Underground
21	Dona Soledad Avenue	39.483	2.389	2.189	Underground	13.324	Underground	Phase 1	
22	Dr. Arcadio Santos Avenue	42.050	2.567	2.367	Underground		Deep UDG	26.170	
23	Alabang-Zapote Road	45.432	3.382	3.182	Underground		Underground		
24	Talon Singko	47.664	2.232	2.032	Underground		Underground		
25	Molino Road	50.376	2.712	2.512	Underground		Deep UDG		
26	Daang Hari	52.659	2.283	2.083	Underground / Elevated	Deep UDG			
27	Jose Abad Santos Avenue	56.080	3.421	3.221	Elevated	9.586	Elevated	Phase 2	
28	Paliparan Road	60.142	4.062	3.862	Elevated		Elevated		
29	Governor's Drive	63.264	3.122	2.922	Elevated / High Elev.		Elevated		
			63.162	57.562		1.461	High Elev.		
			63.162	57.562		57.562			63.162

Source: JICA Study Team

Table App-D (13) Summary of Distance by Structure/Trackwork, Number of Station by Type and Average Distance between Stations (Options A1a, A2a and A3a)

A1a			A2a			A3a		
Civil Works			Civil Works			Civil Works		
Structure			Structure			Structure		
Phase 1	Elevated	0.000	Phase 1	Elevated	0.000	Phase 1	Elevated	0.000
	High Elevated	0.807		High Elevated	0.807		High Elevated	0.807
	Underground	19.457		Underground	20.506		Underground	23.396
Phase 2	Elevated	28.456	Phase 2	Elevated	28.456	Phase 2	Elevated	28.456
	High Elevated	4.087		High Elevated	4.087		High Elevated	4.087
	Underground	1.095		Underground	1.095		Underground	1.095
Total		53.900	Total		54.949	Total		57.839
Phase 1	Station (ELV)	0	Phase 1	Station (ELV)	0	Phase 1	Station (ELV)	0
	Station (High ELV)	1		Station (High ELV)	1		Station (High ELV)	1
	Station (UDG)	8		Station (UDG)	8		Station (UDG)	10
	Station (D-UDG)	4		Station (D-UDG)	4		Station (D-UDG)	4
Phase 2	Station (ELV)	12	Phase 2	Station (ELV)	12	Phase 2	Station (ELV)	12
	Station (High ELV)	2		Station (High ELV)	2		Station (High ELV)	2
	Station (UDG)	0		Station (UDG)	0		Station (UDG)	0
	Station (D-UDG)	0		Station (D-UDG)	0		Station (D-UDG)	0
Total		27	Total		27	Total		29
Trackwork			Trackwork			Trackwork		
Phase 1	Elevated	0.907	Phase 1	Elevated	0.907	Phase 1	Elevated	0.907
	UDG	21.757		UDG	22.806		UDG	26.096
Phase 2	Elevated	35.243	Phase 2	Elevated	35.243	Phase 2	Elevated	35.243
	UDG	1.195		UDG	1.195		UDG	1.195
Total		59.100	Total		60.149	Total		63.439
Average distance between stations			Average distance between stations			Average distance between stations		
Phase 1		1.89	Phase 1		1.98	Phase 1		1.93
Phase 2		2.27	Phase 2		2.31	Phase 2		2.27

Source: JICA Study Team

Table App-D (14) Summary of Distance by Structure/Trackwork, Number of Station by Type and Average Distance between Stations (Options B1a, B2a and B3a)

B1a			B2a			B3a		
Civil Works			Civil Works			Civil Works		
Structure			Structure			Structure		
Phase 1	Elevated	0.000	Phase 1	Elevated	0.000	Phase 1	Elevated	0.000
	High Elevated	0.807		High Elevated	0.807		High Elevated	0.807
	Underground	19.457		Underground	20.506		Underground	23.396
Phase 2	Elevated	21.815	Phase 2	Elevated	21.815	Phase 2	Elevated	21.815
	High Elevated	10.451		High Elevated	10.451		High Elevated	10.451
	Underground	1.095		Underground	1.095		Underground	1.095
Total		53.623	Total		54.672	Total		57.562
Phase 1	Station (ELV)	0	Phase 1	Station (ELV)	0	Phase 1	Station (ELV)	0
	Station (High ELV)	1		Station (High ELV)	1		Station (High ELV)	1
	Station (UDG)	8		Station (UDG)	8		Station (UDG)	10
	Station (D-UDG)	4		Station (D-UDG)	4		Station (D-UDG)	4
Phase 2	Station (ELV)	8	Phase 2	Station (ELV)	8	Phase 2	Station (ELV)	8
	Station (High ELV)	6		Station (High ELV)	6		Station (High ELV)	6
	Station (UDG)	0		Station (UDG)	0		Station (UDG)	0
	Station (D-UDG)	0		Station (D-UDG)	0		Station (D-UDG)	0
Total		27	Total		27	Total		29
Trackwork			Trackwork			Trackwork		
Phase 1	Elevated	0.907	Phase 1	Elevated	0.907	Phase 1	Elevated	0.907
	UDG	21.757		UDG	22.806		UDG	26.096
Phase 2	Elevated	34.966	Phase 2	Elevated	34.966	Phase 2	Elevated	34.966
	UDG	1.195		UDG	1.195		UDG	1.195
Total		58.823	Total		59.872	Total		63.162
Average distance between stations			Average distance between stations			Average distance between stations		
Phase 1		1.89	Phase 1		1.98	Phase 1		1.93
Phase 2		2.26	Phase 2		2.30	Phase 2		2.26

Source: JICA Study Team

Table App-D (15) Summary of Distance by Structure/Trackwork, Number of Station by Type and Average Distance between Stations (Options B1a, B2a and B3a)

A1b

Civil Works		
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Structure		
Phase 1	Elevated	0.000
	High Elevated	0.807
	Underground	19.457
Phase 2	Elevated	16.227
	High Elevated	4.087
	Underground	13.324
Total		53.900

Phase 1	Station (ELV)	0
	Station (High ELV)	1
	Station (UDG)	8
	Station (D-UDG)	4
Phase 2	Station (ELV)	7
	Station (High ELV)	2
	Station (UDG)	2
	Station (D-UDG)	3
Total		27

Trackwork		
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Phase 1	Elevated	0.907
	UDG	21.757
Phase 2	Elevated	22.014
	UDG	14.424
Total		59.100

Average distance between stations		
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Phase 1	1.89
Phase 2	2.27

A2b

Civil Works		
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Structure		
Phase 1	Elevated	0.000
	High Elevated	0.807
	Underground	20.506
Phase 2	Elevated	16.227
	High Elevated	4.087
	Underground	13.324
Total		54.949

Phase 1	Station (ELV)	0
	Station (High ELV)	1
	Station (UDG)	8
	Station (D-UDG)	4
Phase 2	Station (ELV)	7
	Station (High ELV)	2
	Station (UDG)	2
	Station (D-UDG)	3
Total		27

Trackwork		
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Phase 1	Elevated	0.907
	UDG	22.806
Phase 2	Elevated	22.014
	UDG	14.424
Total		60.149

Average distance between stations		
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Phase 1	1.98
Phase 2	2.31

A3b

Civil Works		
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Structure		
Phase 1	Elevated	0.000
	High Elevated	0.807
	Underground	23.396
Phase 2	Elevated	16.227
	High Elevated	4.087
	Underground	13.324
Total		57.839

Phase 1	Station (ELV)	0
	Station (High ELV)	1
	Station (UDG)	10
	Station (D-UDG)	4
Phase 2	Station (ELV)	7
	Station (High ELV)	2
	Station (UDG)	2
	Station (D-UDG)	3
Total		29

Trackwork		
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Phase 1	Elevated	0.907
	UDG	26.096
Phase 2	Elevated	22.014
	UDG	14.424
Total		63.439

Average distance between stations		
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Phase 1	1.93
Phase 2	2.27

Source: JICA Study Team

Table App-D (16) Summary of Distance by Structure/Trackwork, Number of Station by Type and Average Distance between Stations (Options B1a, B2a and B3a)

B1b

Civil Works		
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Structure		
Phase 1	Elevated	0.000
	High Elevated	0.807
	Underground	19.457
Phase 2	Elevated	9.586
	High Elevated	10.451
	Underground	13.324
Total		53.623
Phase 1	Station (ELV)	0
	Station (High ELV)	1
	Station (UDG)	8
	Station (D-UDG)	4
Phase 2	Station (ELV)	3
	Station (High ELV)	6
	Station (UDG)	2
	Station (D-UDG)	3
Total		27

Trackwork		
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Phase 1	Elevated	0.907
	UDG	21.757
Phase 2	Elevated	21.737
	UDG	14.424
Total		58.823

Average distance between stations		
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Phase 1	1.89
Phase 2	2.26

B2b

Civil Works		
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Structure		
Phase 1	Elevated	0.000
	High Elevated	0.807
	Underground	20.506
Phase 2	Elevated	9.586
	High Elevated	10.451
	Underground	13.324
Total		54.672
Phase 1	Station (ELV)	0
	Station (High ELV)	1
	Station (UDG)	8
	Station (D-UDG)	4
Phase 2	Station (ELV)	3
	Station (High ELV)	6
	Station (UDG)	2
	Station (D-UDG)	3
Total		27

Trackwork		
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Phase 1	Elevated	0.907
	UDG	22.806
Phase 2	Elevated	21.737
	UDG	14.424
Total		59.872

Average distance between stations		
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Phase 1	1.98
Phase 2	2.30

B3b

Civil Works		
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Structure		
Phase 1	Elevated	0.000
	High Elevated	0.807
	Underground	23.396
Phase 2	Elevated	9.586
	High Elevated	10.451
	Underground	13.324
Total		57.562
Phase 1	Station (ELV)	0
	Station (High ELV)	1
	Station (UDG)	10
	Station (D-UDG)	4
Phase 2	Station (ELV)	3
	Station (High ELV)	6
	Station (UDG)	2
	Station (D-UDG)	3
Total		29

Trackwork		
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Phase 1	Elevated	0.907
	UDG	26.096
Phase 2	Elevated	21.737
	UDG	14.424
Total		63.162

Average distance between stations		
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Phase 1	1.93
Phase 2	2.26

Source: JICA Study Team