APPENDIX 4.1-1

TRAFFIC ZONING SYSTEM

Table A4.1-1 Traffic Zoning Code and Name of Barangay, Municipality, City, and Province (1)

No.	Zone Code	Barangay	City, Municipality	Province
1	1001	**City Proper 1** Arsenal Aduana, Baybay Tanza ,Bonifacio Tanza Danao, Delgado-Jalandoni-Bagumbayan, Edganzon, Flores, Gloria, Hipodromo, Inday, Jalandoni-Wilson, Kahirupan ,Kauswagan, Liberation, Mabolo-Delgado, Magsaysay, Malipayon-Delgado, Muelle Loney-Montes, Nonoy Osmeña, President Roxas, Rima-Rizal, Rizal Estanzuela, Rizal Ibarra, Rizal Palapala I, Rizal Palapala II, Roxas Village, Sampaguita, San Agustin, San Felix, San Jose (City Proper), Tanza-Esperanza, Timawa Tanza I, Timawa Tanza II, Villa Anita, Yulo-Arroyo	ILOILO CITY	ILOILO
2	1002	**City Proper 2** Concepcion-Montes, General Hughes-Montes, Legaspi dela Rama, Maria Clara, Monica Blumentritt, Ortiz, Santo Rosario-Duran, Veterans Village, Zamora-Melliza,		
3	1003	**MOLO** Calumpang, Cochero, Compania, East Baluarte, East Timawa, Habog-habog Salvacion, Infante, Kasingkasing, Katilingban, Molo Boulevard, North Avanceña, North Baluarte, North Fundidor, North San Jose, Poblacion Molo, San Antonio, San Juan, San Pedro (Molo), South Baluarte, South Fundidor, South San Jose, Taal, Tap-oc, West Habog-habog, West Timawa		
4	1004	**AREVALO** Bonifacio (Arevalo), Calaparan, Dulonan, Mohon, Quezon, San Jose (Arevalo), Santa Cruz, Santa Filomena, Santo Domingo, Santo Niño Norte, Santo Niño Sur, So-oc, Yulo Drive		
5	1005	**MANDURALO1** Navais		

Table A4.1-1 Traffic Zoning Code and Name of Barangay, Municipality, City, and Province (2)

No.	Zone Code	Barangay	City, Municipality	Province
6	1006	**MANDURALO2** Bakhaw, Bolilao, Buhang Taft North, San Rafael, Tabucan	ILOILO CITY	ILOILO
7	1007	**MANDURALO3** Abeto Mirasol Taft South (Quirino Abeto), Airport (Tabucan Airport), Guzman-Jesena, Oñate de Leon, Pale Benedicto Rizal (Mandurriao), PHHC Block 17, PHHC Block 22 NHA, Santa Rosa		
8	1008	**MANDURALO4** Calahunan, Dungon, Hibao-an Norte, Hibao-an Sur		
9	1009	**LAPAZ1** Aguinaldo, Alalasan Lapuz, Baldoza, Bantud, Caingin, Divinagracia, Don Esteban-Lapuz, Gustilo, Jalandoni Estate-Lapuz, Jereos, Laguda, Lapuz Norte, Lapuz Sur, Libertad-Lapuz, Luna (La Paz), Macarthur, Magdalo, Magsaysay Village, Nabitasan, Progreso-Lapuz, Punong-Lapuz, Railway, Rizal (La Paz), San Nicolas, Sinikway (Bangkerohan Lapuz)		
10	1010	**LAPAZ2** Ingore, Loboc-Lapuz, Lopez Jaena Norte, Lopez Jaena Sur, Mansaya-Lapuz, Obrero-Lapuz		
11	1011	**LAPAZ3** Banuyao, Burgos-Mabini-Plaza, Hinactacan, San Isidro (La Paz), Tabuc Suba (La Paz), Ticud (La Paz)		
12	1012	**JARO1** Arguelles, Benedicto (Jaro), Calubihan, Cuartero, Democracia, Desamparados, Dungon A, Dungon B, El 98 Castilla (Claudio Lapez), Fajardo, Javellana, Libertad, Santa Isabel, Lopez Jaena (Jaro) ,Luna (Jaro), Marcelo H. del Pilar, Maria Cristina, Montinola, Our Lady Of Fatima,		

Table A4.1-1 Traffic Zoning Code and Name of Barangay, Municipality, City, and Province (3)

No.	Zone Code	Barangay	City, Municipality	Province
12	1012 Conti.	**JARO1** Our Lady of Lourdes, Sambag, San Isidro (Jaro), San Jose (Jaro), San Pedro (Jaro), San Roque, San Vicente, Seminario (Burgos Jalandoni) , Simon Ledesma, Taytay Zone II, Ungka	ILOILO CITY	ILOILO
13	1013	**JARO2** Cubay, Quintin Salas, Tabuc Suba (Jaro)		
14	1014	**JARO3** Balabago, Buhang, M. V. Hechanova, Tacas		
15	1015	**JARO4** Balantang, Bito-on, Buntatala, Camalig, Lanit, Tagbac		
16	1016	Airprot		
17	1101	Alegre, Buray, Cagbang, Lambuyao, Poblacion East, Poblacion North, Poblacion South, Poblacion West, San Antonio, San Nicolas ,Tagbac Sur, Trapiche	OTON	
18	1102	Abilay Sur, Pakiad, Polo Maestra Bita		
19	1103	Abilay Norte, Bita Norte, Bita Sur, Caboloan Norte, Caboloan Sur, Mambog, Tagbac Norte, Tuburan		
20	1104	Batuan Ilaud, Batuan Ilaya, Botong, Cabanbanan, Cadinglian, Calam-isan, Galang, Rizal, Salngan, Sambaludan, Santa Clara, Santa Monica, Santa Rita, Turog-Turog		
21	1201	Bgy. 1 Pob. (Roxas St.), Bgy. 2 Pob. (Savilla Sto. Rosario), Bgy. 3 Pob. (A.S.Suarez St. Zone I), Bgy. 4 Pob. (A.S.Suarez East), Bgy. 5 Pob. (Santiago St. North), Bgy. 6 Pob. (Santiago St. South), Bgy. 7 Pob. (San Roque St. South), Bgy. 8 Pob. (Montano - San Roque), Bgy. 9 Pob. (Salazar San Jose),	SAN MIGUEL	

Table A4.1-1 Traffic Zoning Code and Name of Barangay, Municipality, City, and Province (4)

No.	Zone Code	Barangay	City, Municipality	Province
21	1201	Bgy. 10 Pob. (R.V.Sanchez St. South), Bgy. 11 Pob. (R.V.Sanchez St. North), Bgy. 12 Pob. (Sales Malaga Saliedo), Bgy. 13 Pob. (Sta.Rita-Saclauso St.), Bgy. 14 Pob. (San Miguel North), Bgy. 15 Pob. (San Miguel South), Bgy. 16 Pob. (San Agustin St.), San Jose	SAN MIGUEL	ILOILO
22	1202	Igtambo, San Antonio, Santo Angel		
23	1203	Santa Cruz		
24	1204	Consolacion, Santa Teresa, Santo Niño		
25	1301	Amparo, Anilao, Cabugao Sur, Mali-ao, Pal-agon Purok I (Pob.), Purok II (Pob.), Purok III (Pob.), Purok IV (Pob.)	PAVIA	
26	1302	Aganan, Balabag, Ungka I, Ungka II		
27	1303	Jibao-an, Pandac		
28	1304	Cabugao Norte, Pagsanga-an, Tigum		
29	1401	Buntatala, Cagamutan Sur, Cari Minor, Guihaman Guinobatan, Guintas, Poblacion	LEGANES	
30	1402	Bigke, Camangay, Gua-an, M.V. Hechanova (Balagon), Nabitasan, Napnud		
31	1403	Cagamutan Norte, Cari Mayor		
32	1404	Calaboa, Lapayon, San Vicente		
33	1501	Poblacion(Barangay Zone I -VI), Bolong Este, Bolong Oeste, Duyanduyan, Gen. Martin T. Delgado, Inangayan, San Sebastian	SANTA BARBARA	
34	1502	Balabag, Balibagan Este, Cabugao Sur, Pal-Agon		
35	1503	Balibagan Oeste, Buyo, Cadagmayan Norte, Cadagmayan Sur, Jibao-an, Malawog, Nasugban, Tagsing, Talongadian		
36	1504	Bagumbayan, Ban-ag, Bantay, Buayahon, Camambugan, Lacadon, Manhayang, Pungsod, Talanghauan, Tugas		
37	1505	Agutayan, Barasan Este, Barasan Oeste, Binangkilan, Café, Daga, Dalid, Guno, Lanag, Miraga-Guibuangan, ,Sangcate, Tungay		

Table A4.1-1 Traffic Zoning Code and Name of Barangay, Municipality, City, and Province (5)

No.	Zone Code	Barangay	City, Municipality	Province
38	1506	Agusipan, Bitaog-Taytay, Cabugao Norte, Calaboa Este, Calaboa Oeste, Canipayan, Conaynay, Lupa, Magancina, Mambuyo, Omambog, Tigtig, Tuburan	SANTA BARBARA	ILOILO
39	1601	Gines, Ilawod Poblacion, Ilaya Poblacion, Malunang, Pajo, Sambag, Sigangao, Tuburan, Tuburan Sulbod	ZARRAGA	
40	1602	Dawis Centro, Dawis Norte, Dawis Sur, Inagdangan Centro, Inagdangan Norte, Inagdangan Sur, Talibong		
41	1603	Balud I, Balud II, Balud Lilo-an, Jalaud Norte, Jalaud Sur, Libongcogon, Talauguis, Tubigan		
42	1701	Poblacion(ZONE I - XI) Amerang, Amurao, Ayaman, Bacan, Banguit, Leong, Pamul-Ogan, Pamuringao Garrido, Salacay	CABATUAN	
43	1702	Duyanduyan, Gaub, Manguna, Tabucan, Talanghauan, Tiring		
44	1703	Acao, Calayo, Inabasan, Inaca, Ito Norte, Ito Sur, Lag-an, Morubuan, Pamuringao Proper, Tinio-an, Tupol Central, Tupol Este, Tupol Oeste		
45	1704	Anuang, Cadoldolan, Cagban, Guibuangan Tigbauan, Janipaan Central, Janipaan Este, Jelicuon Montinola, Lutac, Maraguit, Pungtod, Puyas		
46	1705	Ayong, Balabag, Baluyan, Bulay, Calawagan, Gines Interior, Gines Patag, Inaladan, Ingas, Janipaan Oeste, Janipaan Olo, Jelicuon Lusaya, Pacatin, Pagotpot, Sulanga, Tacdangan, Tigbauan Road, Tuy-an		
47	1910		GUIMBAL, IGBARAS LEON , MIAGAO, SAN JOAQUIN, TIGBAUAN, TUBUNGAN	

Table A4.1-1 Traffic Zoning Code and Name of Barangay, Municipality, City, and Province (6)

No.	Zone Code	Barangay	City, Municipality	Province
48	1920		ALIMODIAN , BADIANGAN, BINGAWAN, CALINOG, JANIUAY, LAMBUNAO, MAASIN	ILOILO
49	1930		CITY OF PASSI, DINGLE, DUEÑAS, LEMERY, MINA, NEW LUCENA, POTOTAN, SAN ENRIQUE, SAN RAFAEL	
50	1940		AJUY, ANILAO, BALASAN, BANATE BAROTAC NUEVO, BAROTAC VIEJO, BATAD, CARLES, CONCEPCION, DUMANGAS, ESTANCIA, SAN DIONISIO ,SARA	
51	1911		-	ANTIGUE
52	1922		-	AKLAN
53	1921		JAMINDAN, TAPAZ	CAPIZ-1

Table A4.1-1 Traffic Zoning Code and Name of Barangay, Municipality, City, and Province (7)

No.	Zone Code	Barangay	City, Municipality	Province
54	1931		SAPIAN, MAMBUSAO, DUMALAG, DUMARAO, CUARTERO, DAO, SIGMA, MA-AYON, PANIT-AN, IVISAN, CULASI, ROXAS, PANAY, PONTEVEDRA, PRESIDENT ROXAS, PILAR	CAPIZ-2
55	1950			GUIMARAS
56	1960			NEGROS OCCIDENTAL
57	1970			NEGROS ORIENTAL
58	1980			OTHER SOUTHERN ISLANDS (CEBU, MINDANAO ETC.)
59	1990			OTHER NORTHERN ISLANDS (MANILA ETC.)
60	1999			FOREIGN COUNTRIES

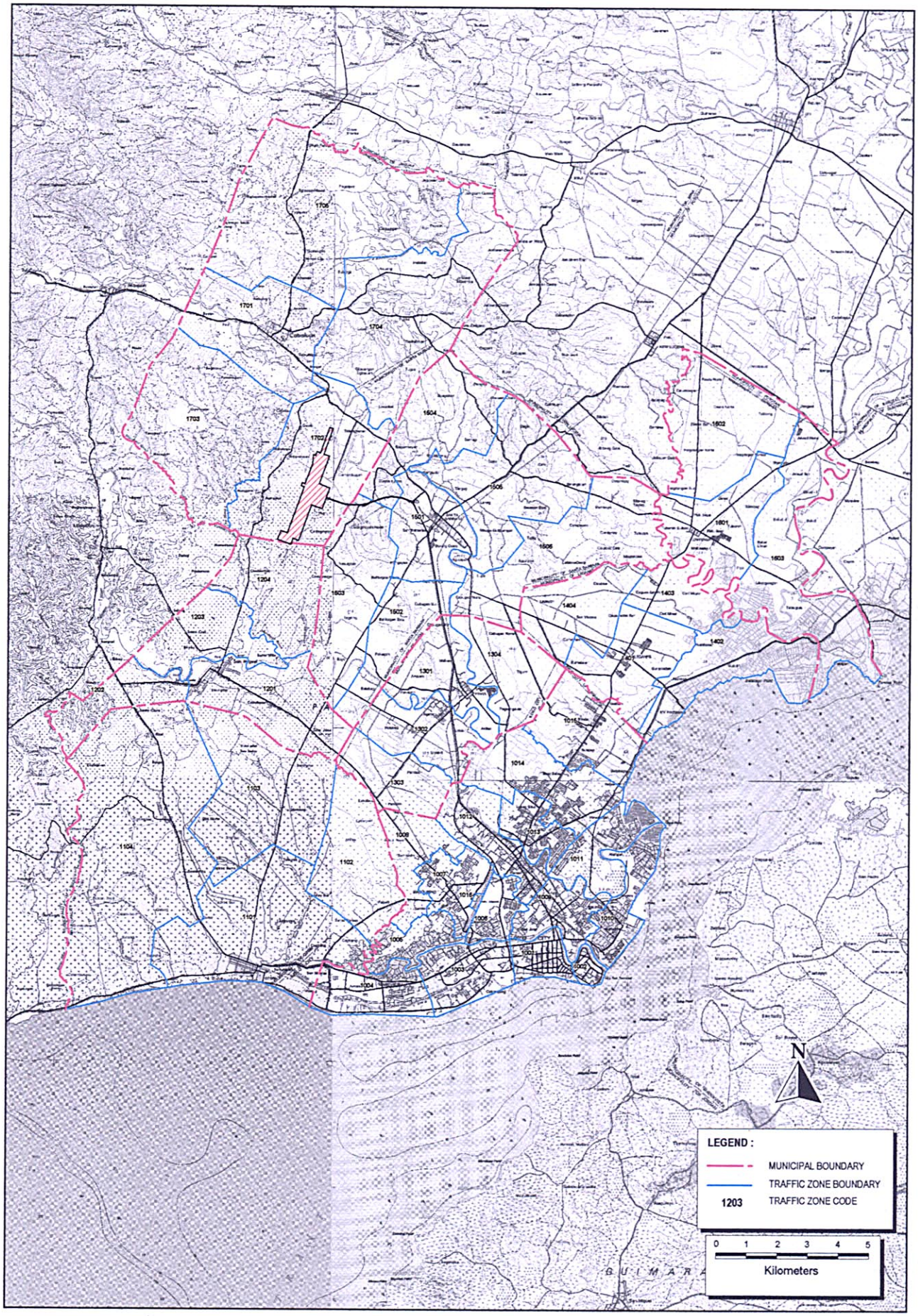


FIGURE A4.1-1 TRAFFIC ZONE MAP (METRO ILOILO)

APPENDIX 4.2
OD MATRIX IN 2003, 2010, 2016 & 2022

Table A4.2-1 OD Matrix in 2003

ALL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	TOTAL
1	38	16,545	942	82	49	1,327	66	48	3,844	2,853	185	838	2,730	1,772	72	17	390	42	22	267	48	8	62	16	124	172	18	7	158	21	4	2	614	26	16	16	20	5	1,024	18	90	120	12	3	4	34	743	78	318	14	88	384	153	834	1,006	52	18	8	10	36	38,513
2	16,545	24	2,441	2,178	100	2,712	1,006	72	6,107	413	306	272	728	532	20	59	58	83	9	15	6	0	8	2	24	18	8	2	8	2	0	0	4	2	2	0	2	2	12	4	2	6	0	0	0	0	58	33	12	2	2	21	9	73	202	4	2	4	0	20	34,236
3	942	2,441	114	3,001	115	2,251	165	47	2,873	110	58	57	202	156	14	80	73	135	12	36	13	6	10	4	65	38	18	4	8	10	0	0	26	2	2	0	2	8	12	4	2	9	8	4	0	0	139	102	33	41	7	140	26	51	172	24	2	8	0	20	13,902
4	82	2,178	3,001	114	20	125	99	25	2,540	818	176	19	43	39	6	33	59	107	6	28	4	0	4	0	12	8	4	0	4	0	0	0	2	0	0	0	0	3	6	0	0	4	0	2	0	0	31	4	16	12	2	19	8	22	50	2	4	6	2	10	9,759
5	49	100	115	20	10	44	2,305	167	62	38	13	550	30	30	9	13	6	59	0	2	5	0	4	4	33	11	5	2	22	0	0	0	5	0	0	0	0	0	6	0	0	2	2	0	0	0	20	2	12	1	0	10	4	21	10	0	0	0	0	10	3,813
6	1,327	2,712	2,251	125	44	24	1,903	104	1,236	172	188	347	377	51	23	317	50	7	9	15	39	84	124	8	308	182	38	15	84	3	4	2	174	2	4	16	2	52	90	2	2	52	8	8	0	4	85	5	125	65	12	51	18	74	136	10	4	6	4	24	13,208
7	66	1,006	165	99	2,305	1,903	32	2,873	1,354	58	23	42	147	27	13	39	12	597	4	6	11	3	9	3	27	27	18	3	8	2	0	0	4	2	2	0	2	3	8	0	2	6	1	3	0	0	29	7	11	7	6	15	6	39	22	0	0	0	0	16	11,073
8	48	72	47	25	167	104	2,873	14	99	42	20	422	44	14	10	8	8	4	5	5	19	3	21	3	43	38	174	2	6	0	0	0	4	2	2	0	2	2	8	0	2	8	0	3	4	0	16	3	19	4	2	15	4	20	12	0	0	0	0	14	4,486
9	3,844	6,107	2,873	2,540	62	1,236	1,354	99	68	250	32	4,930	1,697	716	72	272	27	28	4	20	5	1	6	4	64	34	8	45	102	12	0	0	294	4	34	0	2	55	70	0	3	38	2	1	0	0	37	14	29	3	4	184	21	358	254	14	125	6	2	18	28,084
10	2,853	413	110	818	38	172	58	42	250	36	338	76	81	28	27	8	30	17	14	15	10	6	18	4	44	36	16	4	18	41	4	2	30	4	4	16	4	4	22	2	4	8	6	2	0	0	46	12	26	4	4	35	17	65	106	245	2	4	4	38	6,341
11	185	306	58	176	13	188	23	20	32	338	32	98	124	175	165	4	10	1	0	4	4	0	10	2	38	16	6	17	32	465	0	0	29	2	14	0	2	6	44	4	2	4	0	0	0	0	24	7	17	2	2	28	14	85	75	2	0	0	0	16	2,921
12	838	272	57	19	550	347	42	422	4,930	76	98	84	2,518	846	22	55	32	119	0	24	228	60	590	168	72	38	16	2	130	2	0	18	406	2	22	12	2	2	532	4	2	96	4	2	0	4	214	17	248	4	14	408	84	994	382	24	10	6	4	20	16,194
13	2,730	728	202	43	30	377	147	44	1,697	81	124	2,518	22	8,181	342	64	9	1	6	3	10	0	6	2	396	76	6	162	18	5	0	0	11	2	2	0	0	81	12	0	2	2	5	0	0	0	15	3	29	38	4	47	12	40	72	4	6	0	0	14	18,431
14	1,772	532	156	39	30	51	27	14	716	28	175	846	8,181	30	3,909	68	4	2	18	3	4	0	4	0	341	56	4	109	54	145	1	7	9	0	0	0	0	17	87	1	3	2	4	0	0	0	9	4	23	36	3	35	6	86	0	0	0	0	0	8	17,659
15	72	20	14	6	9	23	13	10	72	27	165	22	342	3,909	32	2	12	1	11	2	2	0	4	0	48	8	4	4	861	518	6	20	26	0	0	0	0	2	16	1	6	2	0	0	0	0	16	4	6	0	0	45	9	48	10	0	0	0	0	10	6,440
16	17	59	80	33	13	317	39	8	272	8	4	55	64	68	2	48	7	8	4	7	1	0	0	0	9	2	0	6	0	0	0	0	0	0	0	0	0	8	0	0	0	2	2	1	2	0	11	1	17	24	2	4	2	11	16	2	0	0	0	0	1,236
17	390	58	73	59	6	50	12	8	27	30	10	32	9	4	12	7	66	55	440	960	4	4	5	1	12	8	4	0	2	0	0	0	2	0	0	0	0	3	4	0	0	6	0	1	0	0	57	2	25	17	1	10	6	15	66	12	4	10	2	8	2,599
18	42	83	135	107	59	7	597	4	28	17	1	119	1	2	1	8	55	0	0	0	1	0	0	0	10	0	0	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	1,287
19	22	9	12	6	0	9	4	5	4	14	0	0	6	18	11	4	440	0	0	7	236	3	3	3	34	6	9	0	0	0	0	0	137	86	35	0	0	0	0	0	0	0	0	3	0	0	0	0	3	7	0	4	0	0	0	0	0	0	1,151
20	267	15	36	28	2	15	6	5	20	15	4	24	3	3	2	7	960	0	7	0	48	257	19	1	14	10	6	0	0	0	0	0	8	0	0	0	0	0	2	0	0	0	0	1	0	0	68	20	19	1	0	5	3	6	8	4	0	0	0	4	1,923
21	48	6	13	4	5	39	11	19	5	10	4	228	10	4	2	1	4	1	236	48	0	1,360	1,499	1,274	14	12	18	0	2	0	0	0	19	19	10	4	0	19	12	0	0	2	25	67	0	0	10	3	22	9	0	27	8	31	32	0	4	0	2	4	5,206
22	8	0	6	0	0	84	3	3	1	6	0	60	0	0	0	0	4	0	3	257	1,360	0	3	5	10	3	3	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	1	1	0	0	9	2	3	0	0	0	0	9	2	0	0	0	0	0	1,854
23	62	8	10	4	4	124	9	21	6	18	10	590	6	4	4	0	5	0	3	19	1,499	3	0	23	10	8	4	0	2	0	0	0	9	0	0	0	0	0	4	0	0	2	1	2	0	0	8	3	8	0	0	6	2	10	0	0	0	0	0	8	2,519
24	16	2	4	0	4	8	3	3	4	4	2	168	2	0	0	0	1	0	3	1	1,274	5	23	0	2	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	141	195	0	0	2	1	3	1	0	2	0	4	0	0	0	0	0	2	1,886
25	124	24	65	12	33	308	27	43	64	44	38	72	396	341	48	9	12	10	34	14	14	10	10	2	0	954	25	477	12	2	0	2	23	4	4	4	3	6	14	4	2	6	9	0	0	0	40	12	31	13	2	25	7	28	38	10	6	2	0	16	3,535
26	172	18	38	8	11	182	27	38	34	36	16	38	76	56	8	2	8	0	6	10	12	3	8	2	954	0	329	35	8	0	0	0	7	2	2	0	2	3	10	0	2	4	0	2	0	0	24	3	12	3	2	13	4	22	40	2	2	0	0	14	2,310
27	18	8	18	4	5	38	18	174	8	16	6	16	6	4	4	0	4	0	9	6	18	3	4	0	25	329	0	0	4	2	0	0	2	0	0	0	0	0	4	0	0	2	0	0	0	8	8	0	8	1	0	6	2	8	14	2	0	0	6	818
28	7	2	4	0	2	15	3	2	45	4	17	2	162	109	4	6	0	0	0	0	0	0	0	0	477	35	0	0	2	0	0	0	78	0	0	0	2	9	2	0	0	1	1	0	0	0	2	0	7	1	0	4	0	2	42	6	2	2	0	2	1,061
29	158	8	8	4	22	84	8	6	102	18	32	130	18	54	861	0	2	2	0	0	2	0	2	0	12	8	4	2	0	642	49	1,202	2	0	8	0	0	0	29	1	4	2	0	0	0	0	6	2	8	0	0	35	3	27	134	16	16	24	8	8	3,773
30	21	2	10	0	0	3	2	0	12	41	465	2	5	145	518	0	0	0	0	0	0	0	0	0	2	0	2	0	642	0	3	19	0	0	0	0	0	0	18	1	2	0	0	0	0	0	2	0	2	0	0	5	0	262	38	0	0	16	8	2	2,250
31	4	0	0	0	0	4	0	0	0	4	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	49	3	0	0	0	0	0	0	0	0	282	1	10	0	0	0	0	0	0	0	0	0	0	5	0	11	24	0	0	0	0	0	404
32	2	0	0	0	0	2	0	0	0	2	0	18	0	7	20	0	0	0	0	0	0	0	0	0	2	0	0	0	1,202	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	16	0	0	0	0	0	1,296
33	614	4	26	2	5	174	4	4	294	30	29	406	11	9	26	0	2	4	137	8	19	8	9	1	23	7	2	78	2	0	0	0	0	247	18	11	681	424	4	0	0	56	60	8	2	2	8	14	62	26	0	45	5	22	42	12	6	6	2	4	3,705
34	26	2	2	0	0	2	2	2	4	4	2	2	2	0	0	0	0	0	86	0	19	0	0	0	4	2	0	0	0	0	0	0	247	0	576	0	1	7	0	0	0	1	1	0	0	0	7	2	7	1	0	4	0	3	14	0	0	2	0	2	1,036
35	16	2	2	0	0	4	2	2	34	4	14	22	2	0	0	0	0	0	35	0	10	0	0	0	4	2	0	0	8	0	0	0	18	576	0	0	0	5	2	0	0	1	1	0	0	0	3	3	11	2	0	4	1	10	0	12	0	0	0	2	814
36	16	0	0	0	0	16	0	0	0	16	0	12	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	11	0	0	0	258	7	1	0	0	1	0	0	387	0	0	1	5	1	0	10	0	6	6	0	0	8	0	0	770
37	20	2	2	0	0	2	2	2	2	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	2	0	0	0	0	681	1	0	258	0	124	6	0	1	2	2	0	8	0	6	2	6	3	0	26	1	7	2	2	0	0	0	2	1,187
38	5	2	8	3	0	52	3	2	55	4	6	2	81	17	2	8	3	0	0	0	19	0	0	0	6	3	0	9	0	0	0	0	424	7	5	7	124	0	10	0	1	7	3	0	2	0	2	1	3	1	0	6	1	7	6	0	0	0	0	2	909
39	1,024	12	12	6	6	90	8	8	70	22	44	532	12	87	16	0	4	0	0	2	12	0	4	0	14	10	4	2	29	18	282	0	4	0	2	1	6	10	54	238	1,005	2	0	0	0	0	18	3	9	3	0	87	6	85	121	16	8	0	16	12	4,036
40	18	4	4	0	0	2	0	0	0	2	4	4	0	1	1	0	0	0	0	0	0	0	0	0	4	0	0	0	1	1	1	0	0	0	0	0	0	0	238	0	2	0	0	0	0	0	0	0	0	2	0	66	1	7	16	0	0	8	0	2	389
41	90	2	2	0	0	2	2	2	3	4	2	2	2	3	6	0	0	0	0	0	0	0	0	0	2	2	0	0	4	2	10	0	0	0	0	0	0	1	1	1,005	2	0	0	0	0	0	2	0	0	1	0	8	1	16	8	0	0	0	2	1,189
42	120	6	9	4	2	52	6	8	38	8	4	96	2	2	2	2	6	0	0	0	2	0	2	3	6	4	2	1	2	0	0	0	56	1	1	1	2	7	2	0	0	0	929	14	20	668	5	6	119	33	0	17	3	13	4	238	0	0	0	4	2,532
43	12	0	8	0	2	8	1	0	2	6	0	4	5	4	0	2	0	0	0	0	25	1	1	141	9	0	0	1	0	0	0	0	60	1	1	0	2	3	0	0	0	929	0	75	2	3	0	1	4	3	0	1	1	7	0	2	0	0	0	0	1,327
44	3	0	4	2	0	8	3	3	1	2	0	2	0	0	0	1	1	0	3	1	67	1	2	195	0	2	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	14	75	0	0	0	0	1	1	1	0	1	0	2	0	0	0	0	0	0	404
45	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	387	8	2	0	0	0	20	2	0	0	1	0	1	2	3	0	5	1	17	0	0	0	0	0	0	461
46	34	0	0	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	668	3	0	1	0	1	100	119	0	21	3	5	4	0	0	0	0	0	977
47	743	58	139	31	20	85	29	16	37	46	24	214	15	9	16	11	57	0	0	68	10	9	8	2	40	24	8	2	6	2	0	0	8	7	3	0	6	2	18	0	2	5	0	0	0	0	12	478	16	8	3	21	7	32	85	12	2	8	16	22	2,502
48	78	33	102	4	2	5	7	3	14	12	7	17	3	4	4	1	2	0	0	20	3	2	3	1	12	3	0	0	2	0	0	0	14	2	3	1	2	1	3	0	0	6	1	1	1	1	478	6,474	12	1	4	7	3	7	22	4	4	4	0	8	7,408
49	318	12	33	16	12	125	11	19	29	26	17	248	29	23	6	17	25	0	3	19	22	3	8	3	31	12	8	7	8	2	0	0	62	7	11	5	6	3	9	0	0	119	4	1	2	100	16	12	12	618	5	31	9	30	44	12	4	4	2	18	2,238
50	14	2	41	12	1	65	7	4	3	4	2	4	38	36	0	24	17	1	7	1	9	0	0	1	13	3	1	1	0	0	0	0	26	1	2	1	3	1	3	2	1	33	3	1	3	119	8	1	618	169	6	50	1	4	2	2	0	2	0	2	1,375
51	88	2	7	2	0	12	6	2	4	4	2	14	4	3	0	2	1	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	5	6	13,622	3	2	4	6	0	0	0	0	6	13,818
52	384	21	140	19	10	51	15	15	184	35	28	408	47	35	45	4	10	0	4	5	27	0	6	2	25	13	6	4	35	5	5	2	45	4	4	10	26	6	87	66	8	17	1	1	5	21	21	7	31	50	3	16	54	260	60	8	8	6	10	24	2,449
53	153	9	26	8	4	18	6	4	21	17	14	84	12	6	9	2	6	0	0	3	8	0	2	0	7	4	2	0	3	0	0	0	5	0	1	0	1	1	6	1	1	3	1	0	1	3	7	3	9	1	2	54	16,211	23	8	2	4	0	0	18	16,794
54	834	73	51	22	21	74	39	20	358	65	85	994	40	86	48	11	15	1	7	6	31	9	10	4	28	22	8	2	27	262	11	4	22	3	10	6	7	7	85	7	16	13	7	2	17	5	32	7	30	4	4	260	23	951	164	24	14	22	12	48	5,070
55	1,006	202	172	50	10	136	22	12	254	106	75	382	72	0	10	16	66	2	4	8	32	2	0	0	38	40	14	42	134	38	24	16	42	14	0	6	2	6	121	16	8	4	0	0	0	4	85	22	44	2	6	60	8	164	0	4	4	0	4	2	3,613
56	52	4	24	2	0	10	0	0	14	245	2	24	4	0	0	2	12	0	0	4	0	0	0	0	10	2	2	6	16	0	0	0	12	0	12	0	2	0	16	0	0	238	2	0	0	0	12	4	12	2	0	8	2	24	4	2	0	0	0	6	793
57	18	2	2	4	0	4	0	0	125	2	0	10	6	0	0	0	4	0	0	0	4	0	0	0	6	2	0	2	16	0	0	0	6	0	0	0	0	0	8	0	0	0	0	0	0	0	2	4	4	0	0	8	4	14	4	0	0	0	0	4	265
58	8	4	8	6	0	6	0	0	6	4	0	6	0	0	0	0	10	0	0	0	0	0	0	0	2	0	0	2	24	16	0	0	6	2	0	8	0	0	0	8	0	0	0	0	0	0	8	4	4	2	0	6	0	22	0	0	0	0	0	16	188
59	10	0	0	2	0	4	0	0	2	4	0	4	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	8	8	0	0	2	0	0	8	0	0	16	0	0	0	0	0	0	0	16	0	2	0	0	10	0	12	4	0	0	0	0	18	126
60	36	20	20	10	10	24	16	14	18	38	16	20	14	8	10	0	8	0	0	4	4	0	8	2	16	14	6	2	8	2	0	0	4	2	2	0	2	2	12	2	2	4	0	0	0	0	22	8	18	2	6	24	18	48	2	6	4	16	18	0	572
TOTAL	38,513	34,236	13,902	9,759	3,813	13,208	11,073	4,486	28,084	6,341	2,921	16,194	18,431	17,659	6,440	1,236	2,599	1,287	1,151	1,923	5,206	1,854	2,519	1,886	3,535	2,310	818	1,061	3,773	2,250	404	1,296	3,705	1,036	814	770	1,187	909	4,036	389	1,189	2,532	1,327	404	461	977	2,502	7,408	2,238	1,375	13,818	2,449	16,794	5,070	3,613	793	265	188	126	572	337,115

Part-B (Metro Iloilo)

—493～494—

Table A4.2-2 OD Matrix in 2010

ALL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	TOTAL
1	28	18,231	963	115	58	2,282	65	62	3,246	2,760	242	748	2,798	1,650	104	18	410	53	19	298	52	6	102	16	138	216	20	6	176	28	4	2	618	34	18	14	18	6	1,356	18	106	112	10	4	4	14	803	90	306	14	100	399	172	928	1,016	46	16	10	6	32	41,186
2	18,231	30	2,730	3,125	141	6,225	992	134	6,474	498	492	308	944	630	34	78	74	109	12	18	8	2	16	2	32	28	12	2	12	2	0	0	6	2	2	0	2	2	16	2	2	6	2	0	0	0	75	42	14	0	2	28	12	98	246	4	2	2	2	20	41,984
3	963	2,730	84	3,442	147	4,041	206	62	2,365	106	80	52	204	144	20	101	78	170	14	40	16	7	19	5	76	49	21	5	10	14	0	0	26	2	2	0	2	10	16	2	2	10	11	5	0	0	152	117	38	50	8	158	33	63	160	22	2	6	2	16	16,186
4	115	3,125	3,442	196	34	358	131	59	3,193	1,207	344	32	72	56	16	50	84	143	12	43	6	2	14	2	24	22	10	2	8	2	0	0	4	2	2	0	2	6	12	0	2	6	0	3	0	0	58	8	28	16	5	34	13	42	72	4	6	10	4	16	13,159
5	58	141	147	34	24	102	3,041	385	85	48	26	705	51	47	20	20	8	78	0	4	6	0	12	6	47	22	10	4	41	2	0	0	8	2	2	0	0	2	10	0	0	2	4	0	0	0	32	2	20	2	2	16	4	36	14	2	0	2	0	14	5,350
6	2,282	6,225	4,041	358	102	106	3,311	199	2,057	307	322	500	555	100	62	749	122	12	6	36	90	136	498	16	452	333	67	20	222	8	4	2	416	6	8	26	4	70	236	4	6	122	10	10	10	20	208	12	261	92	26	108	39	174	304	22	10	12	4	44	25,564
7	65	992	206	131	3,041	3,311	24	4,220	1,151	61	42	47	158	30	22	43	17	759	5	7	15	6	22	4	38	40	25	4	10	2	0	0	4	4	4	0	2	4	14	0	2	6	2	4	0	0	36	10	16	9	6	20	9	50	20	2	0	2	2	16	14,742
8	62	134	62	59	385	199	4,220	44	160	58	43	760	82	26	24	18	12	7	11	6	28	6	70	6	84	69	247	4	12	2	0	2	8	4	4	0	2	2	16	2	2	12	2	6	8	0	26	6	38	5	2	28	8	32	24	2	0	2	2	20	7,165
9	3,246	6,474	2,365	3,193	85	2,057	1,151	160	62	260	45	4,858	2,013	732	107	306	31	36	5	25	6	2	12	4	78	42	8	57	124	17	0	0	324	6	44	0	0	70	94	0	4	40	2	2	0	0	41	20	32	4	4	222	27	429	263	14	157	8	2	16	29,386
10	2,760	498	106	1,207	48	307	61	58	260	46	451	72	90	31	38	11	35	19	13	18	12	2	30	4	54	46	20	4	20	53	4	2	36	4	6	16	2	4	30	2	4	10	2	2	0	0	55	16	30	4	4	42	22	77	132	311	4	6	4	36	7,241
11	242	492	80	344	26	322	42	43	45	451	70	152	169	230	302	7	15	4	0	4	8	2	32	2	72	32	14	24	47	599	4	2	50	4	28	0	2	7	98	2	2	4	2	0	0	0	47	13	30	3	4	48	25	133	114	2	0	2	2	24	4,524
12	748	308	52	32	705	500	47	760	4,858	72	152	90	3,042	924	32	72	40	154	0	30	294	52	1,178	192	92	54	22	2	170	2	0	18	482	2	30	12	2	2	832	2	2	108	8	2	0	4	266	22	284	4	18	520	104	1,278	425	26	10	4	6	18	19,167
13	2,798	944	204	72	51	555	158	82	2,013	90	169	3,042	30	10,368	634	88	10	2	8	6	14	0	12	2	507	102	8	207	24	6	0	0	13	2	2	0	0	103	16	0	2	4	7	0	0	0	20	4	37	48	5	60	16	54	92	8	8	0	0	12	22,719
14	1,650	630	144	56	47	100	30	26	732	31	230	924	10,368	34	5,939	88	4	3	23	4	6	0	8	0	435	74	4	140	69	187	2	9	11	0	0	0	0	21	142	2	4	2	5	0	0	0	12	5	29	46	4	45	9	112	0	0	0	0	0	8	22,454
15	104	34	20	16	20	62	22	24	107	38	302	32	634	5,939	82	6	22	2	14	2	4	0	10	2	70	18	8	6	1,110	663	12	25	44	2	2	0	2	2	27	4	7	4	0	0	0	0	31	5	10	0	2	64	13	69	18	2	0	0	0	12	9,730
16	18	78	101	50	20	749	43	18	306	11	7	72	88	88	6	66	10	10	6	14	2	0	2	0	13	4	2	8	0	0	0	0	0	0	0	0	0	10	2	0	0	2	3	2	2	0	16	2	22	31	3	7	3	15	20	2	0	0	0	2	1,936
17	410	74	78	84	8	122	17	12	31	35	15	40	10	4	22	10	98	82	564	1,238	7	5	10	2	18	10	4	0	4	0	0	0	2	2	2	0	0	4	6	0	0	8	0	2	0	0	86	2	33	21	2	13	9	19	84	16	6	12	2	8	3,353
18	53	109	170	143	78	12	759	7	36	19	4	154	2	3	2	10	82	0	0	0	2	0	0	0	14	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	4	4	0	0	0	0	0	1,681
19	19	12	14	12	0	6	5	11	5	13	0	0	8	23	14	6	564	0	0	9	302	4	4	4	48	12	12	0	0	0	0	0	175	110	45	0	0	0	0	0	0	0	0	4	0	0	4	0	4	9	0	5	0	13	6	0	0	0	0	0	1,482
20	298	18	40	43	4	36	7	6	25	18	4	30	6	4	2	14	1,238	0	9	0	61	329	46	2	19	20	8	0	2	0	0	0	10	0	0	0	0	0	2	0	0	0	0	2	0	0	91	26	29	2	0	8	6	9	12	6	0	0	0	4	2,496
21	52	8	16	6	6	90	15	28	6	12	8	294	14	6	4	2	7	2	302	61	0	1,740	1,927	1,631	19	18	26	0	4	0	0	0	23	27	16	4	0	24	24	0	0	2	33	86	0	0	15	4	29	12	0	39	10	43	44	0	6	0	2	6	6,753
22	6	2	7	2	0	136	6	6	2	2	2	52	0	0	0	0	5	0	4	329	1,740	0	6	7	7	6	4	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	2	2	0	0	6	3	4	0	0	0	0	6	2	0	0	0	0	0	2,366
23	102	16	19	14	12	498	22	70	12	30	32	1,178	12	8	10	2	10	0	4	46	1,927	6	0	31	24	22	10	2	8	2	0	0	13	2	2	0	2	2	10	0	2	4	4	5	0	0	20	6	17	0	2	16	6	24	0	2	0	2	2	14	4,286
24	16	2	5	2	6	16	4	6	4	4	2	192	2	0	2	0	2	0	4	2	1,631	7	31	0	4	4	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	4	181	249	0	0	2	2	4	2	0	2	0	4	0	0	0	0	0	2	2,406
25	138	32	76	24	47	452	38	84	78	54	72	92	507	435	70	13	18	14	48	19	19	7	24	4	0	1,239	38	609	18	2	0	2	31	6	6	4	6	9	22	2	2	9	6	2	0	0	67	21	46	14	2	35	10	42	56	14	8	4	2	20	4,719
26	216	28	49	22	22	333	40	69	42	46	32	54	102	74	18	4	10	2	12	20	18	6	22	4	1,239	0	431	44	12	2	0	2	10	6	4	4	2	4	16	2	2	4	2	3	0	0	42	6	27	4	2	22	8	34	64	6	4	2	2	16	3,273
27	20	12	21	10	10	67	25	247	8	20	14	22	8	4	8	2	4	0	12	8	26	4	10	2	38	431	0	2	4	4	0	0	4	2	2	0	0	0	6	0	0	2	0	0	0	10	14	2	12	2	0	8	4	12	20	2	0	0	8	1,153
28	6	2	5	2	4	20	4	4	57	4	24	2	207	140	6	8	0	0	0	0	0	0	2	0	609	44	2	0	2	0	0	0	100	0	0	0	3	12	2	0	0	2	2	0	0	0	2	0	12	2	0	5	0	4	44	6	2	2	0	2	1,356
29	176	12	10	8	41	222	10	12	124	20	47	170	24	69	1,110	0	4	3	0	2	4	0	8	0	18	12	4	2	0	824	61	1,538	4	2	14	0	0	2	50	2	5	2	0	0	0	0	10	5	14	0	0	54	6	39	186	22	20	30	10	8	5,020
30	28	2	14	2	2	8	2	2	17	53	599	2	6	187	663	0	0	0	0	0	0	0	2	0	2	2	4	0	824	0	4	25	0	0	0	0	0	0	23	2	3	0	0	0	0	0	2	0	6	0	0	6	0	338	64	0	0	26	12	2	2,934
31	4	0	0	0	0	4	0	0	0	4	4	0	0	2	12	0	0	0	0	0	0	0	0	0	0	0	0	0	61	4	0	0	0	0	0	0	0	0	360	2	12	0	0	0	0	0	0	0	0	0	0	7	0	13	28	0	0	0	0	0	517
32	2	0	0	0	0	2	0	2	0	2	2	18	0	9	25	0	0	0	0	0	0	0	0	0	2	2	0	0	1,538	25	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	18	0	0	0	0	0	1,659
33	618	6	26	4	8	416	4	8	324	36	50	482	13	11	44	0	2	5	175	10	23	10	13	2	31	10	4	100	4	0	0	0	0	316	25	14	872	543	4	0	0	71	79	9	3	3	11	18	78	33	0	59	6	29	54	14	8	6	2	4	4,700
34	34	2	2	2	2	6	4	4	6	4	4	2	2	0	2	0	2	0	110	0	27	0	2	0	6	6	2	0	2	0	0	0	316	0	737	0	0	2	9	2	0	0	2	2	0	0	0	12	3	14	2	0	5	0	6	24	0	0	4	0	2	1,375
35	18	2	2	2	2	8	4	4	44	6	28	30	2	0	2	0	2	0	45	0	16	0	2	0	6	4	2	0	14	0	0	0	25	737	0	0	0	7	2	0	0	2	2	0	0	0	6	4	16	3	0	5	2	13	0	18	0	0	0	2	1,089
36	14	0	0	0	0	26	0	0	0	16	0	12	0	0	0	0	0	0	0	0	4	0	0	0	4	4	0	0	0	0	0	0	14	0	0	0	330	9	6	0	0	2	0	0	496	0	0	2	6	2	0	12	0	7	6	0	0	6	0	0	978
37	18	2	2	2	0	4	2	2	0	2	2	2	0	0	2	0	0	0	0	0	0	0	2	0	6	2	0	3	0	0	0	0	872	2	0	330	0	159	7	0	2	3	3	0	10	0	8	3	11	4	0	33	2	11	2	2	0	0	0	2	1,519
38	6	2	10	6	2	70	4	2	70	4	7	2	103	21	2	10	4	0	0	0	24	0	2	0	9	4	0	12	2	0	0	0	543	9	7	9	159	0	12	0	2	9	4	0	3	0	2	2	4	2	0	7	2	8	6	0	0	0	0	2	1,170
39	1,356	16	16	12	10	236	14	16	94	30	98	832	16	142	27	2	6	0	0	2	24	0	10	2	22	16	6	2	50	23	360	2	4	2	2	6	7	12	128	303	1,293	4	0	0	0	0	30	4	14	4	2	137	9	123	198	28	12	2	24	14	5,804
40	18	2	2	0	0	4	0	2	0	2	2	2	0	2	4	0	0	0	0	0	0	0	0	0	2	2	0	0	2	2	2	0	0	0	0	0	0	0	303	0	3	0	0	0	0	0	2	0	0	3	0	82	2	11	20	0	0	10	0	2	488
41	106	2	2	2	0	6	2	2	4	4	2	2	2	4	7	0	0	0	0	0	0	0	0	0	2	0	2	0	0	5	3	12	0	0	0	0	0	2	2	1,293	3	0	0	0	0	0	2	0	2	2	0	12	2	20	12	0	0	0	0	2	1,527
42	112	6	10	6	2	122	6	12	40	10	4	108	4	2	4	2	8	0	0	0	2	0	4	4	9	4	2	2	2	0	0	0	71	2	2	2	3	9	4	0	0	0	1,190	18	26	855	6	11	151	42	0	27	4	17	4	303	0	0	0	4	3,238
43	10	2	11	0	4	10	2	2	2	2	2	8	7	5	0	3	0	0	0	0	33	2	4	181	6	2	0	2	0	0	0	0	79	2	2	0	3	4	0	0	0	1,190	0	97	3	4	2	2	7	4	0	4	2	4	0	4	0	0	0	0	1,713
44	4	0	5	3	0	10	4	6	2	2	0	2	0	0	0	2	2	0	4	2	86	2	5	249	2	3	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	18	97	0	0	0	0	2	2	2	0	2	0	2	0	0	0	0	0	0	529
45	4	0	0	0	0	10	0	8	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	496	10	3	0	0	0	26	3	0	0	2	0	2	3	4	0	7	2	14	0	0	0	0	0	0	599
46	14	0	0	0	0	20	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	3	0	0	0	0	0	0	0	0	855	4	0	2	0	0	2	128	152	0	26	6	19	2	0	0	0	0	0	1,247
47	803	75	152	58	32	208	36	26	41	55	47	266	20	12	31	16	86	2	4	91	15	6	20	2	67	42	14	2	10	2	0	0	11	12	6	0	8	2	30	2	2	6	2	0	0	0	19	616	23	8	6	30	12	45	110	16	2	8	16	26	3,259
48	90	42	117	8	2	12	10	6	20	16	13	22	4	5	5	2	2	0	0	26	4	3	6	2	21	6	2	0	5	0	0	0	18	3	4	2	3	2	4	0	0	11	2	2	2	2	616	8,287	16	2	6	8	4	10	32	6	6	6	0	8	9,513
49	306	14	38	28	20	261	16	38	32	30	30	284	37	29	10	22	33	0	4	29	29	4	17	4	46	27	12	12	14	6	0	0	78	14	16	6	11	4	14	0	2	151	7	2	3	128	23	16	16	789	6	43	12	39	54	16	4	6	4	20	2,916
50	14	0	50	16	2	92	9	5	4	4	3	4	48	46	0	31	21	2	9	2	12	0	0	2	14	4	2	2	0	0	0	0	33	2	3	2	4	2	4	3	2	42	4	2	4	152	8	2	789	216	8	62	2	13	2	2	0	2	0	0	1,763
51	100	2	8	5	2	26	6	2	4	4	4	18	5	4	2	3	2	0	0	0	0	0	2	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	6	6	6	8	17,436	6	2	6	10	0	0	0	0	10	17,701
52	399	28	158	34	16	108	20	28	222	42	48	520	60	45	64	7	13	0	5	8	39	0	16	2	35	22	8	5	54	6	7	5	59	5	5	12	33	7	137	82	12	27	4	2	7	26	30	8	43	62	6	40	71	341	82	10	10	4	10	26	3,185
53	172	12	33	13	4	39	9	8	27	22	25	104	16	9	13	3	9	0	0	6	10	0	6	0	10	8	4	0	6	0	0	0	6	0	2	0	2	2	9	2	2	4	2	0	2	6	12	4	12	2	2	71	20,750	33	12	4	4	2	2	20	21,537
54	928	98	63	42	36	174	50	32	429	77	133	1,278	54	112	69	15	19	4	13	9	43	6	24	4	42	34	12	4	39	338	13	5	29	6	13	7	11	8	123	11	20	17	4	2	14	19	45	10	39	13	6	341	33	1,218	228	28	20	26	12	54	6,556
55	1,016	246	160	72	14	304	20	24	263	132	114	425	92	0	18	20	84	4	6	12	44	2	0	0	56	64	20	44	186	64	28	18	54	24	0	6	2	6	198	20	12	4	0	0	0	2	110	32	54	2	10	82	12	228	0	4	4	0	4	0	4,422
56	46	4	22	4	2	22	2	2	14	311	2	26	8	0	2	2	16	0	0	6	0	0	2	0	14	6	2	6	22	0	0	0	14	0	18	0	2	0	28	0	0	303	4	0	0	0	16	6	16	2	0	10	4	28	4	2	0	0	0	4	1,004
57	16	2	2	6	0	10	0	0	157	4	0	10	8	0	0	0	6	0	0	0	6	0	0	0	8	4	0	2	20	0	0	0	8	0	0	0	0	0	12	0	0	0	0	0	0	0	2	6	4	0	0	10	4	20	4	0	0	0	0	2	333
58	10	2	6	10	2	12	2	2	8	6	2	4	0	0	0	0	12	0	0	0	0	0	2	0	4	2	0	2	30	26	0	0	6	4	0	6	0	0	2	10	0	0	0	0	0	0	8	6	6	2	0	4	2	26	0	0	0	0	0	14	240
59	6	2	2	4	0	4	2	2	2	4	2	6	0	0	0	0	2	0	0	0	2	0	2	0	2	2	0	0	10	12	0	0	2	0	0	0	0	0	24	0	0	0	0	0	0	0	16	0	4	0	0	10	2	12	4	0	0	0	0	14	156
60	32	20	16	16	14	44	16	20	16	36	24	18	12	8	12	2	8	0	0	4	6	0	14	2	20	16	8	2	8	2	0	0	4	2	2	0	2	2	14	2	2	4	0	0	0	0	26	8	20	0	10	26	20	54	0	4	2	14	14	0	628
TOTAL	41,186	41,984	16,186	13,159	5,350	25,564	14,742	7,165	29,386	7,241	4,524	19,167	22,719	22,454	9,730	1,936	3,353	1,681	1,482	2,496	6,753	2,366	4,286	2,406	4,719	3,273	1,153	1,356	5,020	2,934	517	1,659	4,700	1,375	1,089	978	1,519	1,170	5,804	488	1,527	3,238	1,713	529	599	1,247	3,259	9,513	2,916	1,763	17,701	3,185	21,537	6,556	4,422	1,004	333	240

Table A4.2-3 OD Matrix in 2016

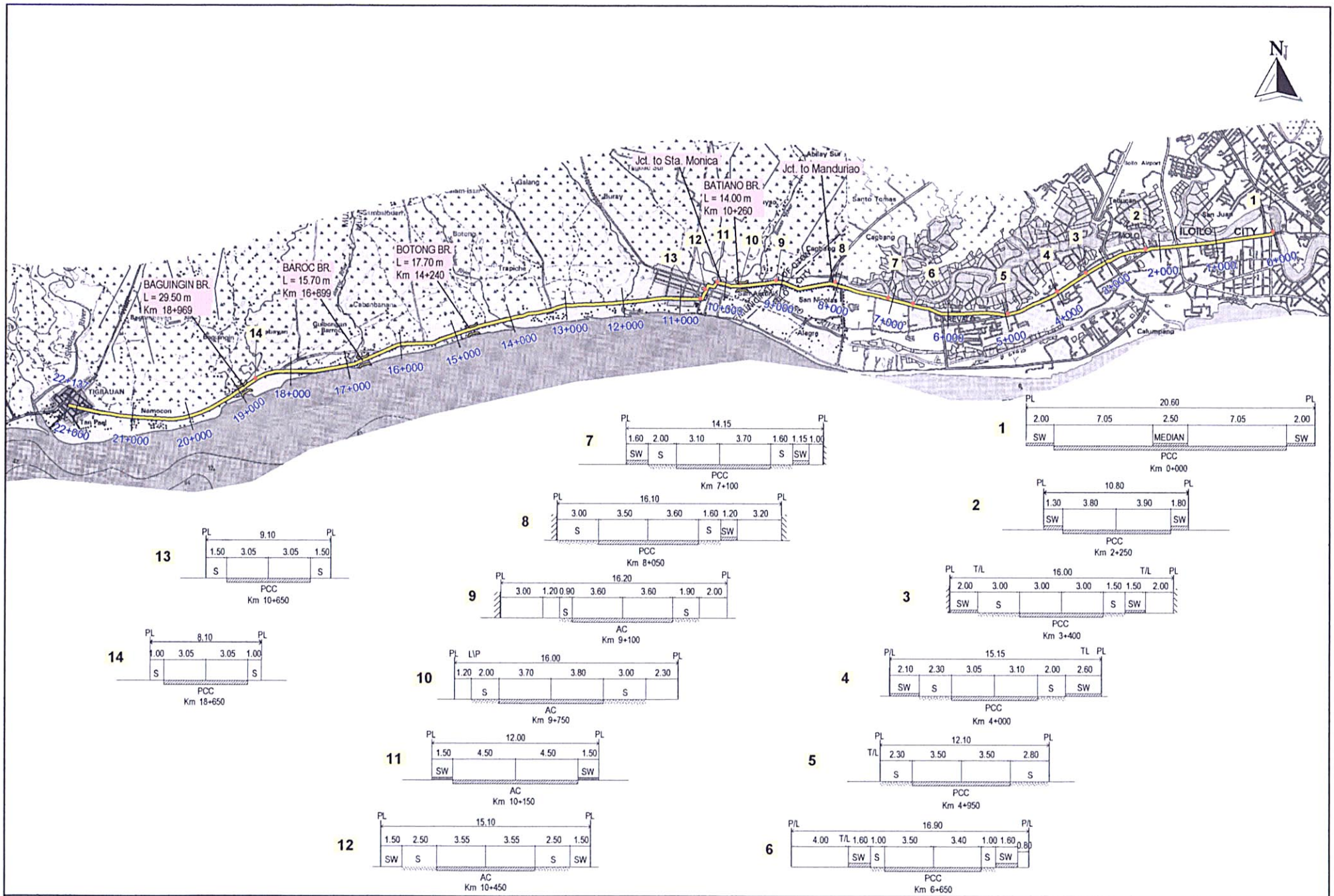
ALL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	TOTAL
1	32	21,468	1,146	139	71	2,672	80	76	3,770	3,212	287	870	3,244	1,912	122	22	478	62	24	345	60	6	120	20	164	252	24	8	204	34	6	2	718	40	22	18	20	8	1,572	20	124	130	12	4	4	16	935	106	356	16	118	464	198	1,076	1,186	54	18	14	6	40	48,227
2	21,468	34	3,227	3,632	167	7,219	1,152	158	7,499	589	577	360	1,094	732	40	92	89	130	14	23	10	2	20	2	40	34	14	2	14	2	0	0	8	2	2	0	2	2	20	2	2	8	2	0	0	0	89	51	18	0	2	34	14	117	288	4	2	2	2	24	49,133
3	1,146	3,227	98	4,005	176	4,693	249	75	2,743	130	96	64	238	168	24	122	93	203	16	49	19	8	24	6	89	58	26	6	12	16	0	0	32	2	2	0	2	12	20	2	2	12	14	6	0	0	177	138	47	60	9	184	40	74	186	26	2	6	2	20	18,956
4	139	3,632	4,005	228	41	422	156	70	3,701	1,403	402	38	84	66	20	59	100	171	16	52	8	2	18	2	30	28	12	2	10	2	0	0	6	2	2	0	2	7	14	0	2	8	0	4	0	0	70	10	32	19	6	41	16	50	84	4	8	12	4	20	15,342
5	71	167	176	41	28	123	3,591	450	101	58	32	842	62	56	24	23	10	93	0	6	8	0	14	6	56	26	12	4	50	2	0	0	11	2	2	0	0	2	12	0	0	2	4	0	0	0	40	2	24	2	2	18	6	44	18	2	0	2	0	18	6,345
6	2,672	7,219	4,693	422	123	122	3,862	242	2,418	374	390	603	664	121	76	872	144	15	8	42	106	158	580	20	543	399	81	25	260	10	6	2	484	8	10	32	6	85	276	6	8	142	12	12	12	24	246	14	306	109	32	129	46	208	354	26	12	16	6	54	29,947
7	80	1,152	249	156	3,591	3,862	28	4,937	1,336	74	51	58	184	34	26	51	20	907	6	10	18	7	26	4	46	48	30	4	12	2	0	0	6	6	6	0	2	4	18	0	2	8	2	5	0	0	45	13	19	11	6	25	12	59	24	2	0	2	2	20	17,308
8	76	158	75	70	450	242	4,937	52	186	72	54	882	98	32	30	22	14	8	14	8	32	7	82	8	100	84	297	6	14	2	0	2	10	6	6	0	2	2	20	2	2	16	2	7	10	0	32	8	44	6	2	34	10	40	28	2	0	2	2	24	8,433
9	3,770	7,499	2,743	3,701	101	2,418	1,336	186	72	314	56	5,626	2,367	848	126	354	36	43	6	30	8	2	14	4	92	50	10	68	144	20	0	0	376	6	50	0	0	83	110	0	4	48	2	2	0	0	49	26	38	4	4	261	32	503	305	16	188	10	2	20	34,183
10	3,212	589	130	1,403	58	374	74	72	314	54	544	88	110	38	46	14	44	22	18	23	14	2	36	6	66	56	24	6	24	64	6	2	42	6	8	20	2	6	36	2	6	12	2	2	0	0	68	20	36	4	6	50	26	94	154	374	4	8	6	44	8,571
11	287	577	96	402	32	390	51	54	56	544	82	180	205	276	356	10	18	4	0	6	10	2	38	2	88	40	18	27	57	717	6	2	58	6	34	0	2	8	116	2	2	6	2	0	0	0	58	16	36	4	6	58	30	159	133	2	0	2	2	30	5,405
12	870	360	64	38	842	603	58	882	5,626	88	180	104	3,526	1,070	40	87	46	184	0	36	340	60	1,366	222	112	64	28	2	198	2	0	20	560	2	34	14	2	2	964	2	2	126	10	2	0	4	312	26	330	4	22	602	122	1,482	493	30	12	4	6	22	22,309
13	3,244	1,094	238	84	62	664	184	98	2,367	110	205	3,526	34	12,213	736	102	12	2	10	8	18	0	14	2	607	122	10	247	28	7	0	0	17	2	2	0	0	123	20	0	2	6	8	0	0	0	24	4	45	57	6	72	20	65	106	10	10	0	0	14	26,661
14	1,912	732	168	66	56	121	34	32	848	38	276	1,070	12,213	40	6,960	102	6	4	28	4	8	0	10	0	521	88	6	167	83	223	2	11	13	0	0	0	0	25	164	2	5	2	6	0	0	0	14	6	35	55	5	54	12	135	0	0	0	0	0	10	26,372
15	122	40	24	20	24	76	26	30	126	46	356	40	736	6,960	96	6	26	2	17	2	6	0	12	2	85	22	10	6	1,328	792	16	30	52	2	2	0	2	2	34	4	8	6	0	0	0	0	38	6	12	0	2	76	16	83	20	2	0	0	0	14	11,465
16	22	92	122	59	23	872	51	22	354	14	10	87	102	102	6	76	13	12	8	18	2	0	2	0	17	6	2	10	0	0	0	0	0	0	0	0	0	12	2	0	0	2	4	2	2	0	18	2	27	37	4	8	4	17	24	2	0	0	0	2	2,273
17	478	89	93	100	10	144	20	14	36	44	18	46	12	6	26	13	114	98	675	1,478	10	6	12	2	22	12	6	0	6	0	0	0	2	2	2	0	0	5	8	0	0	10	0	2	0	0	100	2	39	25	2	16	12	22	100	18	8	14	2	10	3,991
18	62	130	203	171	93	15	907	8	43	22	4	184	2	4	2	12	98	0	0	0	2	0	0	0	16	2	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	4	4	0	0	0	0	0	2,002
19	24	14	16	16	0	8	6	14	6	18	0	0	10	28	17	8	675	0	0	11	361	5	5	5	59	16	14	0	0	0	0	0	209	132	54	0	0	0	0	0	0	0	0	5	0	0	6	0	5	11	0	6	0	17	8	0	0	0	0	0	1,789
20	345	23	49	52	6	42	10	8	30	23	6	36	8	4	2	18	1,478	0	11	0	73	393	54	2	24	24	10	0	2	0	0	0	12	0	0	0	0	0	2	0	0	0	0	2	0	0	109	31	34	2	0	11	7	12	14	8	0	0	0	6	2,983
21	60	10	19	8	8	106	18	32	8	14	10	340	18	8	6	2	10	2	361	73	0	2,080	2,305	1,950	22	22	31	0	6	0	0	0	27	31	18	4	0	29	30	0	0	2	40	103	0	0	18	5	35	14	0	46	12	52	52	0	8	0	2	8	8,065
22	6	2	8	2	0	158	7	7	2	2	2	60	0	0	0	0	6	0	5	393	2,080	0	7	8	8	7	5	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	2	2	0	0	7	4	5	0	0	0	0	7	2	0	0	0	0	0	2,816
23	120	20	24	18	14	580	26	82	14	36	38	1,366	14	10	12	2	12	0	5	54	2,305	7	0	38	30	28	12	2	10	2	0	0	17	2	2	0	2	2	12	0	2	6	4	6	0	0	24	8	22	0	2	20	8	30	0	2	0	2	2	18	5,074
24	20	2	6	2	6	20	4	8	4	6	2	222	2	0	2	0	2	0	5	2	1,950	8	38	0	6	6	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	5	216	298	0	0	2	2	4	2	0	2	0	6	0	0	0	0	0	2	2,868
25	164	40	89	30	56	543	46	100	92	66	88	112	607	521	85	17	22	16	59	24	22	8	30	6	0	1,485	46	729	22	2	0	2	38	8	8	6	8	12	28	2	2	12	7	2	0	0	80	26	54	17	2	43	12	50	66	16	10	4	2	24	5,668
26	252	34	58	28	26	399	48	84	50	56	40	64	122	88	22	6	12	2	16	24	22	7	28	6	1,485	0	516	54	14	2	0	2	12	8	6	6	2	4	20	2	2	6	2	4	0	0	50	8	34	5	2	26	10	40	74	6	4	2	2	20	3,924
27	24	14	26	12	12	81	30	297	10	24	18	28	10	6	10	2	6	0	14	10	31	5	12	2	46	516	0	2	6	4	0	0	6	2	2	0	0	0	8	0	0	2	0	0	0	12	16	2	16	2	0	10	6	14	24	2	0	0	0	10	1,392
28	8	2	6	2	4	25	4	6	68	6	27	2	247	167	6	10	0	0	0	0	0	0	2	0	729	54	2	0	2	0	0	0	120	0	0	0	4	14	2	0	0	2	2	0	0	0	2	0	12	2	0	6	0	6	52	8	2	2	0	2	1,617
29	204	14	12	10	50	260	12	14	144	24	57	198	28	83	1,328	0	6	4	0	2	6	0	10	0	22	14	6	2	0	985	74	1,838	6	2	16	0	0	2	59	2	6	2	0	0	0	0	12	6	18	0	0	62	8	46	216	26	24	34	12	10	5,976
30	34	2	16	2	2	10	2	2	20	64	717	2	7	223	792	0	0	0	0	0	0	0	2	0	2	2	4	0	985	0	5	29	0	0	0	0	0	0	27	2	4	0	0	0	0	0	2	0	6	0	0	7	0	405	74	0	0	30	14	2	3,497
31	6	0	0	0	0	6	0	0	0	6	6	0	0	2	16	0	0	0	0	0	0	0	0	0	0	0	0	0	74	5	0	0	0	0	0	0	0	0	432	2	14	0	0	0	0	0	0	0	0	0	0	8	0	17	32	0	0	0	0	0	626
32	2	0	0	0	0	2	0	2	0	2	2	20	0	11	30	0	0	0	0	0	0	0	0	0	2	2	0	0	1,838	29	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	6	0	6	20	0	0	0	0	0	1,976
33	718	8	32	6	11	484	6	10	376	42	58	560	17	13	52	0	2	6	209	12	27	12	17	2	38	12	6	120	6	0	0	0	0	377	30	17	1,043	649	6	0	0	85	95	10	4	4	14	22	93	40	0	72	7	35	62	16	10	8	2	6	5,569
34	40	2	2	2	2	8	6	6	6	6	6	2	2	0	2	0	2	0	132	0	31	0	2	0	8	8	2	0	2	0	0	0	377	0	881	0	2	11	2	0	0	2	2	0	0	0	14	4	16	2	0	6	0	8	28	0	0	4	0	2	1,640
35	22	2	2	2	2	10	6	6	50	8	34	34	2	0	2	0	2	0	54	0	18	0	2	0	8	6	2	0	16	0	0	0	30	881	0	0	0	8	2	0	0	2	2	0	0	0	8	5	18	4	0	6	2	18	0	20	0	0	0	2	1,298
36	18	0	0	0	0	32	0	0	0	20	0	14	0	0	0	0	0	0	0	0	4	0	0	0	6	6	0	0	0	0	0	0	17	0	0	0	395	11	8	0	0	2	0	0	593	0	0	2	6	2	0	16	0	10	8	0	0	8	0	0	1,178
37	20	2	2	2	0	6	2	2	0	2	2	2	0	0	2	0	0	0	0	0	0	0	2	0	8	2	0	4	0	0	0	0	1,043	2	0	395	0	190	8	0	2	4	4	0	12	0	10	4	14	5	0	39	2	14	2	2	0	0	0	2	1,814
38	8	2	12	7	2	85	4	2	83	6	8	2	123	25	2	12	5	0	0	0	29	0	2	0	12	4	0	14	2	0	0	0	649	11	8	11	190	0	14	0	2	11	5	0	4	0	2	2	4	2	0	8	2	11	8	0	0	0	0	2	1,397
39	1,572	20	20	14	12	276	18	20	110	36	116	964	20	164	34	2	8	0	0	2	30	0	12	2	28	20	8	2	59	27	432	2	6	2	2	8	8	14	148	363	1,546	6	0	0	0	0	36	4	16	5	2	163	12	147	231	32	14	2	28	18	6,843
40	20	2	2	0	0	6	0	2	0	2	2	2	0	2	4	0	0	0	0	0	0	0	0	0	2	2	0	0	2	2	2	0	0	0	0	0	0	0	363	0	4	0	0	0	0	0	2	0	0	4	0	98	2	14	24	0	0	12	0	2	579
41	124	2	2	2	0	8	2	2	4	6	2	2	2	5	8	0	0	0	0	0	0	0	2	0	2	2	0	0	6	4	14	0	0	0	0	0	2	2	1,546	4	0	0	0	0	0	0	2	0	2	2	0	16	2	25	14	0	0	0	0	2	1,820
42	130	8	12	8	2	142	8	16	48	12	6	126	6	2	6	2	10	0	0	0	2	0	6	5	12	6	2	2	2	0	0	0	85	2	2	2	4	11	6	0	0	0	1,423	22	31	1,022	8	14	182	50	0	35	4	21	4	362	0	0	0	6	3,877
43	12	2	14	0	4	12	2	2	2	2	2	10	8	6	0	4	0	0	0	0	40	2	4	216	7	2	0	2	0	0	0	0	95	2	2	0	4	5	0	0	0	1,423	0	116	4	5	2	2	8	5	0	4	2	4	0	4	0	0	0	0	2,042
44	4	0	6	4	0	12	5	7	2	2	0	2	0	0	0	2	2	0	5	2	103	2	6	298	2	4	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	22	116	0	0	0	0	2	2	0	2	0	0	0	0	0	0	0	0	0	628
45	4	0	0	0	0	12	0	10	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	593	12	4	0	0	0	31	4	0	0	2	0	2	4	5	0	8	2	17	0	0	0	0	0	716
46	16	0	0	0	0	24	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	4	0	0	0	0	0	0	0	0	1,022	5	0	2	0	0	2	153	182	0	31	6	22	2	0	0	0	0	1,487
47	935	89	177	70	40	246	45	32	49	68	58	312	24	14	38	18	100	2	6	109	18	7	24	2	80	50	16	2	12	2	0	0	14	14	8	0	10	2	36	2	2	8	2	0	0	0	22	738	28	10	8	38	14	56	127	18	2	10	18	32	3,864
48	106	51	138	10	2	14	13	8	26	20	16	26	4	6	6	2	2	0	0	31	5	4	8	2	26	8	2	0	6	0	0	0	22	4	5	2	4	2	4	0	0	14	2	2	2	2	738	9,908	20	2	8	11	4	12	38	8	8	8	0	10	11,382
49	356	18	47	32	24	306	19	44	38	36	36	330	45	35	12	27	39	0	5	34	35	5	22	4	54	34	16	12	18	6	0	0	93	16	18	6	14	4	16	0	2	182	8	2	4	153	28	20	19	943	7	53	15	48	62	18	4	6	4	24	3,458
50	16	0	60	19	2	109	11	6	4	4	4	4	57	55	0	37	25	2	11	2	14	0	0	2	17	5	2	2	0	0	0	0	40	2	4	2	5	2	5	4	2	50	5	2	5	182	10	2	943	258	10	74	2	16	2	2	0	2	0	0	2,101
51	118	2	9	6	2	32	6	2	4	6	6	22	6	5	2	4	2	0	0	0	0	0	2	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	8	8	7	10	20,846	8	2	8	12	0	0	0	0	12	21,163
52	464	34	184	41	18	129	25	34	261	50	58	602	72	54	76	8	16	0	6	11	46	0	20	2	43	26	10	6	62	7	8	6	72	6	6	16	39	8	163	98	16	35	4	2	8	31	38	11	53	74	8	47	86	409	94	12	12	4	10	32	3,773
53	198	14	40	16	6	46	12	10	32	26	30	122	20	12	16	4	12	0	0	7	12	0	8	0	12	10	6	0	8	0	0	0	7	0	2	0	2	2	12	2	2	4	2	0	2	6	14	4	15	2	2	86	24,808	41	14	4	4	2	2	24	25,744
54	1,076	117	74	50	44	208	59	40	503	94	159	1,482	65	135	83	17	22	4	17	12	52	7	30	6	50	40	14	6	46	405	17	6	35	8	18	10	14	11	147	14	25	21	4	2	17	22	56	12	48	16	8	409	41	1,456	266	34	22	32	16	66	7,770
55	1,186	288	186	84	18	354	24	28	305	154	133	493	106	0	20	24	100	4	8	14	52	2	0	0	66	74	24	52	216	74	32	20	62	28	0	8	2	8	231	24	14	4	0	0	0	2	127	38	62	2	12	94	14	266	0	4	4	0	4	0	5,151
56	54	4	26	4	2	26	2	2	16	374	2	30	10	0	2	2	18	0	0	8	0	0	2	0	16	6	2	8	26	0	0	0	16	0	20	0	2	0	32	0	0	362	4	0	0	0	18	8	18	2	0	12	4	34	4	2	0	0	0	6	1,186
57	18	2	2	8	0	12	0	0	188	4	0	12	10	0	0	0	8	0	0	0	8	0	0	0	10	4	0	2	24	0	0	0	10	0	0	0	0	0	14	0	0	0	0	0	0	0	2	8	4	0	0	12	4	22	4	0	0	0	0	2	394
58	14	2	6	12	2	16	2	2	10	8	2	4	0	0	0	0	14	0	0	0	0	0	2	0	4	2	0	2	34	30	0	0	8	4	0	8	0	0	2	12	0	0	0	0	0	0	10	8	6	2	0	4	2	32	0	0	0	0	0	18	284
59	6	2	2	4	0	6	2	2	2	6	2	6	0	0	0	0	2	0	0	0	2	0	2	0	2	2	0	0	12	14	0	0	2	0	0	0	0	0	28	0	0	0	0	0	0	0	18	0	4	0	0	10	2	16	4	0	0	0	0	18	178
60	40	24	20	20	18	54	20	24	20	44	30	22	14	10	14	2	10	0	0	6	8	0	18	2	24	20	10	2	10	2	0	0	6	2	2	0	2	2	18	2	2	6	0	0	0	0	32	10	24	0	12	32	24	66	0	6	2	18	18	0	774
TOTAL	48,227	49,133	18,956	15,342	6,345	29,947	17,308	8,433	34,183	8,571	5,405	22,309	26,661	26,372	11,465	2,273	3,991	2,002	1,789	2,983	8,065	2,816	5,074	2,868	5,668	3,924	1,392	1,617	5,976	3,497	626	1,976	5,569	1,640	1,298	1,178	1,814	1,397	6,843	579	1,820	3,877	2,042	628	716	1,487	3,864	11,382	3,458	2,101	21,163	3,773	25,744	7,770	5

Table A4.2-4 OD Matrix in 2022

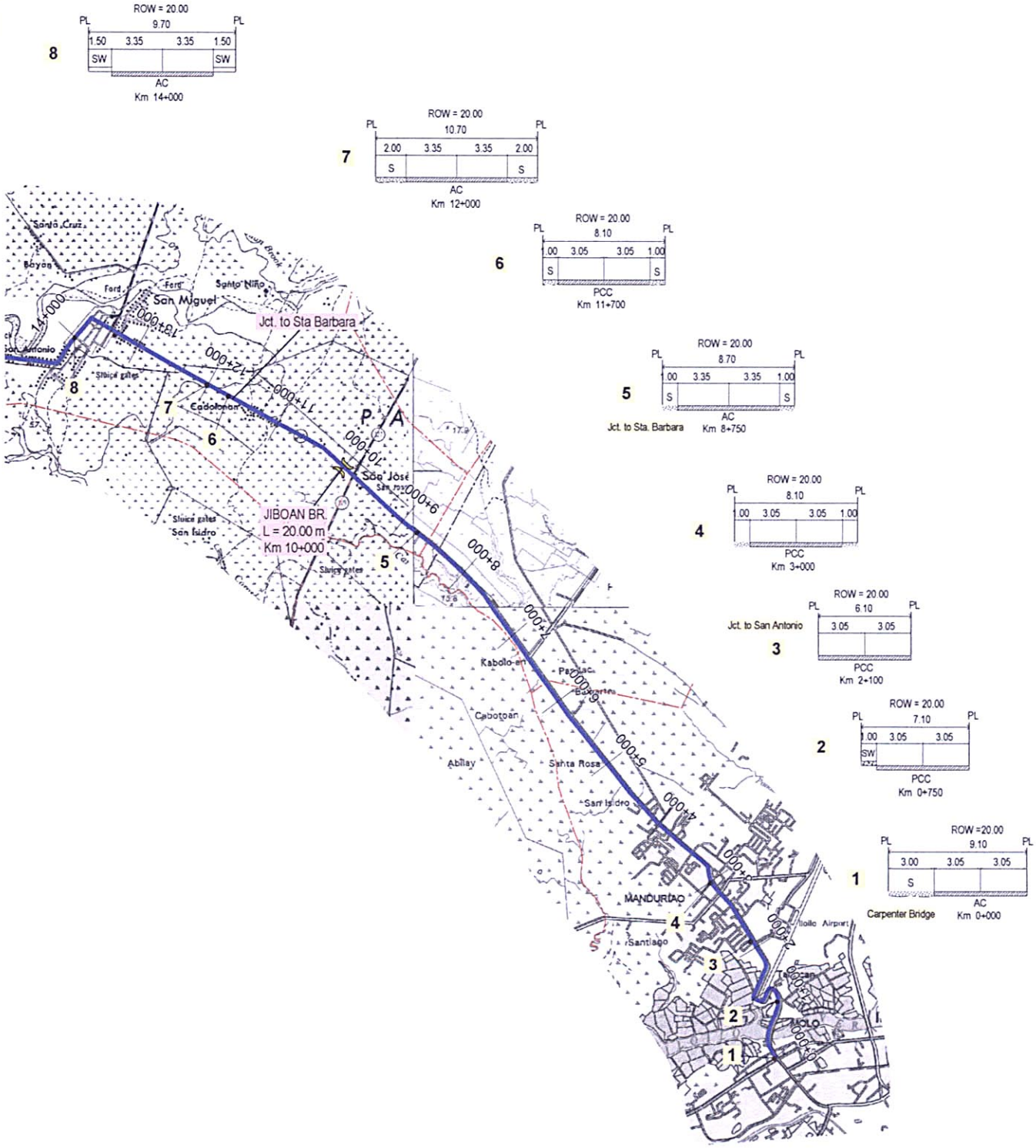
ALL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	TOTAL
1	20	22,317	1,187	160	66	2,237	68	180	2,517	2,775	355	474	1,852	5,448	74	19	402	87	24	334	62	6	160	22	120	224	40	9	238	31	4	2	696	38	20	12	16	5	1,446	28	126	110	18	5	4	14	969	106	338	18	138	428	227	1,196	1,054	42	16	8	6	28	48,626
2	22,317	44	3,690	4,298	178	8,136	818	612	7,024	686	949	278	922	3,004	40	105	102	156	19	26	10	2	30	4	38	32	28	4	18	4	0	2	6	4	4	0	2	2	22	2	2	8	2	0	2	0	112	59	20	0	4	39	19	158	342	8	2	4	2	22	54,423
3	1,187	3,690	88	4,126	202	4,481	282	146	2,183	115	130	45	176	566	28	145	92	244	24	57	20	10	28	6	78	55	38	8	14	16	0	0	36	4	4	0	2	13	18	2	2	9	19	7	2	0	216	164	50	71	10	219	53	86	183	24	2	6	2	16	19,500
4	160	4,298	4,126	248	45	453	148	228	3,248	1,630	650	39	79	241	26	66	117	215	13	61	8	2	30	4	32	30	26	4	16	2	0	0	6	4	4	0	2	8	20	2	2	4	2	4	2	0	95	12	39	23	8	54	20	66	88	8	6	12	4	20	16,760
5	66	178	202	45	16	105	3,223	1,156	84	52	39	991	40	142	19	22	8	110	0	4	9	0	16	8	58	21	19	4	54	2	0	0	10	2	2	0	0	0	10	0	2	2	10	0	0	0	38	4	24	3	2	22	6	43	17	2	0	2	2	12	6,908
6	2,237	8,136	4,481	453	105	122	2,779	483	2,304	335	492	624	736	306	87	882	146	14	7	49	133	206	992	26	596	438	114	30	372	11	4	2	598	8	8	28	4	98	306	6	6	152	12	13	2	16	299	15	362	122	38	146	57	254	359	28	12	14	6	44	30,715
7	68	818	282	148	3,223	2,779	10	9,948	692	70	70	45	101	79	31	41	19	1,085	9	8	20	8	33	7	41	45	51	7	14	2	0	0	6	4	4	0	2	5	16	2	2	6	5	6	0	0	46	12	22	13	8	28	12	64	16	2	0	2	2	16	20,055
8	180	612	146	228	1,156	483	9,948	744	559	178	186	2,260	282	290	86	74	38	17	20	21	89	16	439	15	267	197	645	14	46	8	4	2	22	16	14	8	6	6	54	6	6	54	8	8	20	6	94	17	155	11	8	105	28	122	110	8	2	8	6	52	20,210
9	2,517	7,024	2,183	3,248	84	2,304	692	559	50	312	64	3,162	2,064	2,564	64	296	34	53	7	29	7	3	16	6	68	40	16	81	176	20	0	0	390	6	52	0	0	97	108	2	5	38	8	3	0	0	49	24	37	7	6	282	38	574	270	14	222	6	4	16	30,001
10	2,775	686	115	1,630	52	335	70	178	312	66	675	68	123	78	53	14	41	30	18	28	14	2	46	4	58	50	42	6	28	74	4	2	56	6	6	18	2	4	36	4	4	12	4	2	2	0	73	21	40	6	6	57	33	108	168	443	4	8	4	34	8,838
11	355	949	130	650	39	492	70	186	64	675	194	194	272	397	353	10	26	9	2	12	16	2	84	4	113	54	44	56	80	855	4	2	107	6	60	4	4	11	198	4	6	8	4	2	2	6	88	20	59	8	6	95	51	244	206	6	2	6	4	36	7,646
12	474	278	45	39	991	624	45	2,260	3,162	68	194	46	1,738	2,642	32	100	30	220	2	30	308	52	1,614	248	70	48	32	4	198	2	0	14	474	4	32	8	2	2	784	2	2	94	10	2	0	4	280	23	278	4	22	546	120	1,406	368	20	8	4	4	16	20,129
13	1,852	922	176	79	40	736	101	282	2,064	123	272	1,738	18	22,832	268	76	13	5	13	7	18	2	22	2	720	136	22	296	38	10	0	2	19	2	4	0	2	147	22	2	2	4	12	0	0	0	31	7	53	68	6	87	22	77	80	6	6	2	2	16	33,564
14	5,448	3,004	566	241	142	306	79	290	2,564	78	397	2,642	22,832	528	10,367	368	12	6	35	7	24	2	26	2	641	120	26	205	120	269	7	15	21	4	4	0	2	33	683	7	10	4	9	0	2	0	37	10	63	66	10	98	19	334	0	4	0	4	2	20	52,815
15	74	40	28	26	19	87	31	86	64	53	353	32	268	10,367	18	4	16	5	20	4	6	0	20	2	98	24	18	10	1,597	949	15	35	34	4	4	0	2	2	41	7	11	4	2	0	2	0	38	8	16	0	2	94	18	104	10	2	0	2	2	16	14,794
16	19	105	145	66	22	882	41	74	296	14	10	100	76	368	4	78	16	14	12	23	3	0	2	0	17	4	4	11	2	0	0	0	0	0	0	0	0	14	2	0	0	4	4	3	2	0	25	3	34	44	4	9	4	21	24	4	0	0	0	2	2,611
17	402	102	92	117	8	146	19	38	34	41	26	30	13	12	16	16	128	147	811	1,774	8	7	15	5	20	12	10	2	6	0	0	0	2	2	2	0	0	6	6	0	0	10	0	3	0	0	141	2	49	31	5	17	11	28	105	20	6	14	2	8	4,527
18	87	156	244	215	110	14	1,085	17	53	30	9	220	5	6	5	14	147	0	0	0	3	0	2	0	20	2	2	0	4	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0	2	3	0	2	0	7	8	0	0	0	0	2	2,487
19	24	19	24	13	0	7	9	20	7	18	2	2	13	35	20	12	811	0	0	13	431	6	8	6	64	13	19	0	0	0	0	0	251	157	64	0	0	0	0	0	0	0	0	6	0	0	2	0	6	13	0	9	0	15	10	0	0	0	0	0	2,129
20	334	26	57	61	4	49	8	21	29	28	12	30	7	7	4	23	1,774	0	13	0	86	471	113	3	27	30	16	0	2	0	0	0	14	0	0	0	0	0	4	0	0	0	0	3	0	0	131	39	44	3	0	10	8	12	16	8	0	0	0	4	3,531
21	62	10	20	8	9	133	20	89	7	14	16	308	18	24	6	3	8	3	431	86	0	2,490	2,758	2,330	23	23	41	0	4	0	0	0	33	41	24	6	0	34	40	0	0	2	48	123	0	0	22	8	44	17	0	66	15	58	72	0	8	0	4	6	9,615
22	6	2	10	2	0	206	8	16	3	2	2	52	2	2	0	0	7	0	6	471	2,490	0	10	10	9	8	8	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	3	3	0	0	8	4	8	0	0	2	0	8	2	0	0	0	0	0	3,384
23	160	30	28	30	16	992	33	439	16	46	84	1,614	22	26	20	2	15	2	8	113	2,758	10	0	46	34	34	30	4	14	2	0	0	21	4	4	0	2	2	18	2	2	6	7	6	2	0	38	9	32	0	4	28	10	46	0	4	0	4	2	20	6,901
24	22	4	6	4	8	26	7	15	6	4	4	248	2	2	2	0	5	0	6	3	2,330	10	46	0	4	4	4	0	2	0	0	0	3	0	0	0	0	0	2	0	0	6	258	357	0	0	4	3	5	3	0	4	0	4	0	0	0	0	0	2	3,425
25	120	38	78	32	58	596	41	267	68	58	113	70	720	641	98	17	20	20	64	27	23	9	34	4	0	1,734	67	874	24	4	0	2	38	6	6	4	5	9	26	2	2	10	10	2	0	0	96	25	57	20	4	45	13	54	58	16	8	4	2	18	6,461
26	224	32	55	30	21	438	45	197	40	50	54	48	136	120	24	4	12	2	13	30	23	8	34	4	1,734	0	636	63	18	2	0	2	11	6	6	0	2	5	20	2	2	4	2	4	2	0	62	7	34	6	2	29	8	46	88	6	4	2	2	16	4,477
27	40	28	38	26	19	114	51	645	16	42	44	32	22	26	18	4	10	2	19	16	41	8	30	4	67	636	0	4	12	8	0	0	6	4	4	0	2	2	16	2	2	4	2	0	0	14	30	4	24	3	2	20	8	32	26	6	0	2	2	12	2,251
28	9	4	8	4	4	30	7	14	81	6	56	4	296	205	10	11	2	0	0	0	0	0	4	0	874	63	4	0	4	0	0	0	145	0	0	0	4	17	4	0	0	3	3	0	0	0	4	0	27	3	0	8	2	6	74	10	4	2	0	2	2,018
29	238	18	14	16	54	372	14	46	176	28	80	198	38	120	1,597	2	6	4	0	2	4	0	14	2	24	18	12	4	0	1,179	86	2,198	6	2	20	0	2	2	90	5	6	4	2	0	0	0	16	6	24	0	2	103	9	64	328	38	34	48	16	10	7,401
30	31	4	16	2	2	11	2	8	20	74	855	2	10	269	949	0	0	0	0	0	0	0	2	0	4	2	8	0	1,179	0	6	35	0	0	0	0	0	0	34	3	4	0	0	0	0	0	4	0	8	0	0	10	0	486	87	0	0	30	14	2	4,173
31	4	0	0	0	0	4	0	4	0	4	4	0	0	7	15	0	0	0	0	0	0	0	0	0	0	0	0	0	86	6	0	0	0	0	0	0	0	0	512	3	18	0	0	0	0	0	0	0	0	0	0	12	0	17	30	0	0	0	0	0	726
32	2	2	0	0	0	2	0	2	0	2	2	14	2	15	35	0	0	0	0	0	0	0	0	0	2	2	0	0	2,198	35	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	22	0	0	0	0	0	2,351
33	696	6	36	6	10	598	6	22	390	56	107	474	19	21	34	0	2	7	251	14	33	14	21	3	38	11	6	145	6	0	0	0	0	450	35	20	1,247	776	6	0	0	102	125	13	4	4	15	26	125	47	0	88	8	40	80	20	10	8	2	4	6,287
34	38	4	4	4	2	8	4	16	6	6	6	4	2	4	4	0	2	0	157	0	41	0	4	0	6	6	4	0	2	0	0	0	450	0	1,053	0	3	13	4	0	0	3	3	0	0	0	23	4	27	3	0	8	2	9	36	0	0	4	0	2	1,981
35	20	4	4	4	2	8	4	14	52	6	60	32	4	4	4	0	2	0	64	0	24	0	4	0	6	6	4	0	20	0	0	0	35	1,053	0	0	0	10	4	0	0	3	3	0	0	0	7	6	29	4	0	8	5	24	0	24	0	0	0	2	1,569
36	12	0	0	0	0	28	0	8	0	18	4	8	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0	0	0	0	0	0	20	0	0	0	472	13	7	0	0	3	0	0	708	0	0	3	9	3	0	15	0	8	6	0	0	6	0	0	1,361
37	16	2	2	2	0	4	2	6	0	2	4	2	2	2	2	0	0	0	0	0	0	0	2	0	5	2	2	4	2	0	0	0	1,247	3	0	472	0	227	9	0	3	4	4	0	14	0	10	4	12	6	0	46	3	14	2	2	0	0	2	2,149
38	5	2	13	8	0	98	5	6	97	4	11	2	147	33	2	14	6	0	0	0	34	0	2	0	9	5	2	17	2	0	0	0	776	13	10	13	227	0	16	0	3	13	6	0	4	0	2	3	5	3	0	11	3	10	8	0	0	0	0	2	1,652
39	1,446	22	18	20	10	306	16	54	108	36	198	784	22	683	41	2	6	2	0	4	40	0	18	2	26	20	16	4	90	34	512	2	6	4	4	7	9	16	206	430	1,853	4	2	0	0	0	48	7	19	6	2	261	12	183	276	36	16	2	30	16	7,997
40	28	2	2	2	0	6	2	6	2	4	4	2	2	7	7	0	0	0	0	0	0	0	2	0	2	2	2	0	5	3	3	0	0	0	0	0	0	0	430	0	4	0	0	0	0	0	2	0	2	4	0	118	3	16	38	0	0	14	0	2	728
41	126	2	2	2	2	6	2	6	5	4	6	2	2	10	11	0	0	0	0	0	0	0	2	0	2	2	2	0	6	4	18	0	0	0	0	0	3	3	1,853	4	0	0	0	0	0	0	2	0	2	3	0	15	3	29	18	0	0	0	0	2	2,161
42	110	8	9	4	2	152	6	54	38	12	8	94	4	4	4	4	10	0	0	0	2	0	6	6	10	4	4	3	4	0	0	0	102	3	3	3	4	13	4	0	0	0	1,701	1,701	26	37	1,223	7	17	216	60	0	37	5	21	6	434	0	0	0	4	4,488
43	18	2	19	2	10	12	5	8	8	4	4	10	12	9	2	4	0	0	0	0	48	3	7	258	10	2	2	3	2	0	0	0	125	3	3	0	4	6	2	0	0	1,701	0	138	4	6	2	3	9	6	0	7	3	7	0	6	0	0	0	2	2,501
44	5	0	7	4	0	13	6	8	3	2	2	2	0	0	0	3	3	0	6	3	123	3	6	357	2	4	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	26	138	0	0	0	2	3	3	3	0	5	0	2	0	0	0	0	0	0	757
45	4	2	2	2	0	2	0	20	0	2	2	0	0	2	2	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	708	14	4	0	0	0	37	4	0	0	3	0	3	4	6	0	12	3	8	0	0	0	0	0	0	856
46	14	0	0	0	0	16	0	6	0	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	1,223	6	0	3	0	0	3	183	218	0	44	11	16	0	0	0	0	0	0	1,771
47	969	112	216	95	38	299	46	94	49	73	88	280	31	37	38	25	141	4	2	131	22	8	38	4	96	62	30	4	16	4	0	0	15	23	7	0	10	2	48	2	2	7	2	2	0	0	36	884	35	11	9	51	17	76	170	24	6	10	24	30	4,555
48	106	59	164	12	4	15	12	17	24	21	20	23	7	10	8	3	2	0	0	39	8	4	9	3	25	7	4	0	6	0	0	0	26	4	6	3	4	3	7	0	0	17	3	3	3	3	884	11,847	22	3	10	12	7	15	48	8	8	8	0	8	13,574
49	338	20	50	39	24	362	22	155	37	40	59	278	53	63	16	34	49	2	6	44	44	8	32	5	57	34	24	27	24	8	0	0	125	27	29	9	12	5	19	2	2	216	9	3	4	183	35	22	23	1,132	10	63	18	63	80	24	5	10	6	22	4,113
50	18	0	71	23	3	122	13	11	7	6	8	4	68	66	0	44	31	3	13	3	17	0	0	3	20	6	3	3	0	0	0	0	47	3	4	3	6	3	6	4	3	60	6	3	6	218	11	3	1,132	309	11	92	3	8	4	4	0	2	0	0	2,517
51	138	4	10	8	2	38	8	8	6	6	6	22	6	10	2	4	5	0	0	0	0	0	4	0	4	2	2	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	9	10	10	11	24,929	9	4	10	16	0	0	0	0	8	25,315
52	428	39	219	54	22	146	28	105	282	57	95	546	87	98	94	9	17	2	9	10	66	2	28	4	45	29	20	8	103	10	12	6	88	8	8	15	46	11	261	118	15	37	7	5	12	44	51	12	63	92	9	125	103	492	128	16	16	8	16	30	4,516
53	227	19	53	20	6	57	12	28	38	33	51	120	22	19	18	4	11	0	0	8	15	0	10	0	13	8	8	2	9	0	0	0	8	2	5	0	3	3	12	3	3	5	3	0	3	11	17	7	18	3	4	103	29,666	47	24	6	8	4	4	24	30,807
54	1,196	158	86	66	43	254	64	122	574	108	244	1,406	77	334	104	21	28	7	15	12	58	8	46	4	54	46	32	6	64	486	17	6	40	9	24	8	14	10	183	16	29	21	7	2	8	16	76	15	63	8	10	492	47	1,741	381	44	28	38	18	64	9,158
55	1,054	342	183	88	17	359	16	110	270	168	206	368	80	0	10	24	105	8	10	16	72	2	0	0	58	88	26	74	328	87	30	22	80	36	0	6	2	8	276	38	18	6	0	0	0	0	170	48	80	4	16	128	24	381	0	6	6	0	4	0	5,558
56	42	8	24	8	2	28	2	8	14	443	6	20	6	4	2	4	20	0	0	8	0	0	4	0	16	6	6	10	38	0	0	0	20	0	24	0	2	0	36	0	0	434	6	0	0	0	24	8	24	4	0	16	6	44	6	2	0	0	0	6	1,391
57	16	2	2	6	0	12	0	2	222	4	2	8	6	0	0	0	6	0	0	0	8	0	0	0	8	4	0	4	34	0	0	0	10	0	0	0	0	0	16	0	0	0	0	0	0	0	6	8	6	0	0	16	8	28	6	0	0	0	0	2	452
58	8	4	6	12	2	14	2	8	6	8	6	4	2	4	2	0	14	0	0	0	0	0	4	0	4	2	2	2	48	30	0	0	8	4	0	6	0	0	2	14	0	0	0	0	0	0	10	8	10	2	0	8	4	38	0	0	0	0	2	18	328
59	6	2	2	4	2	6	2	6	4	4	4	4	2	2	2	0	2	0	0	0	4	0	2	0	2	2	2	0	16	14	0	0	2	0	0	0	0	0	30	0	0	0	0	0	0	0	24	0	6	0	0	16	4	18	4	0	0	2	0	18	220
60	28	22	16	20	12	44	16	52	16	34	36	16	16	20	16	2	8	2	0	4	6	0	20	2	18	16	12	2	10	2	0	0	4	2	2	0	2	2	16	2	2	4	2	0	0	0	30	8	22	0	8	30	24	64	0	6	2	18	18	0	736
TOTAL	48,626	54,423	19,500	16,760	6,908	30,715	20,055	20,210	30,001	8,838	7,646	20,129	33,564	52,815	14,794	2,611	4,527	2,487	2,129	3,531	9,615	3,384	6,901	3,425	6,461	4,477	2,251	2,018	7,401	4,173	726	2,351	6,287	1,981	1,569	1,361	2,149	1,652	7,997	728	2,161	4,488	2,501	757	856	1,771	4,555	13

APPENDIX 5.2-1

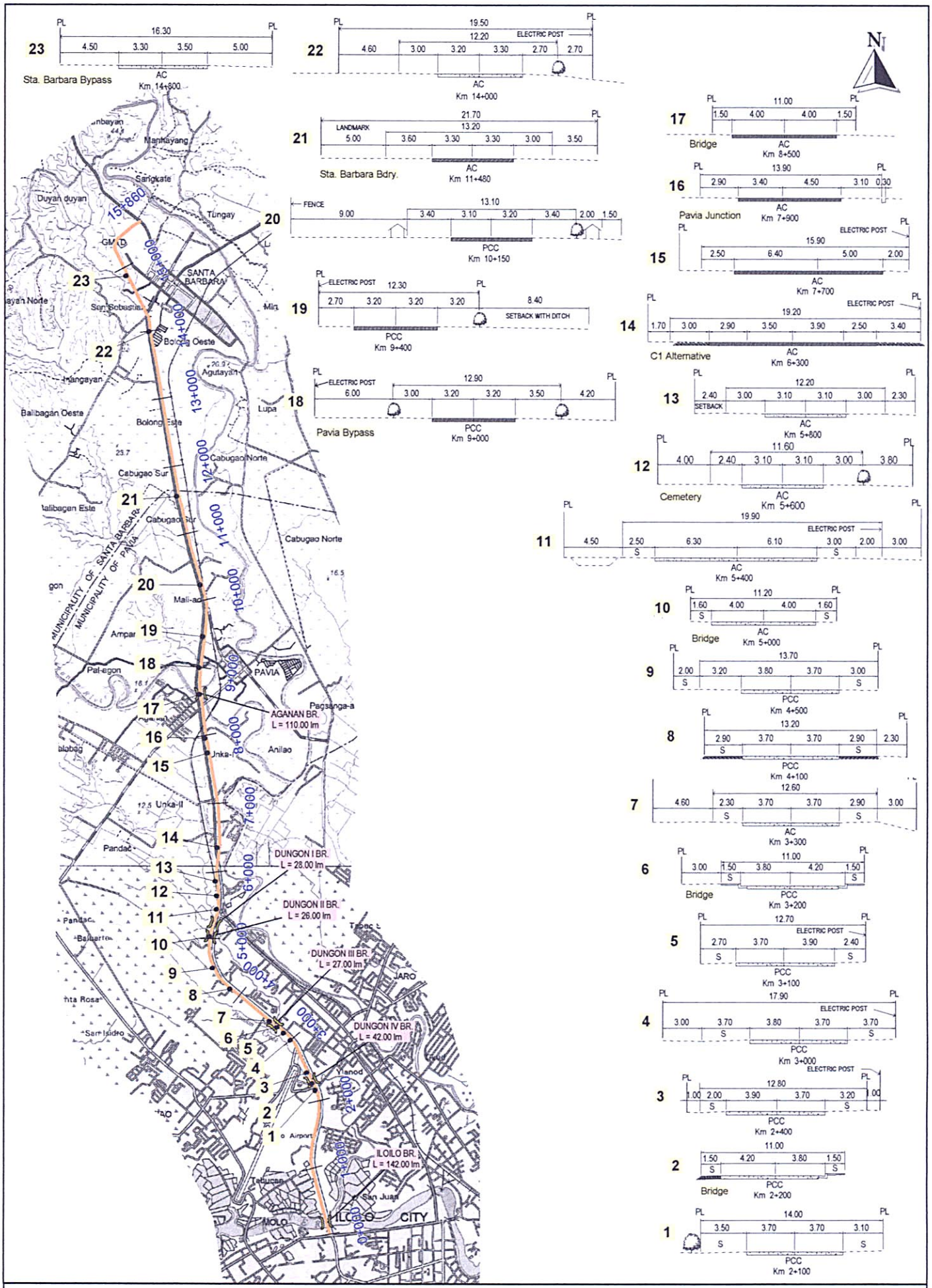
ROAD CROSS-SECTION OF MAJOR ROAD



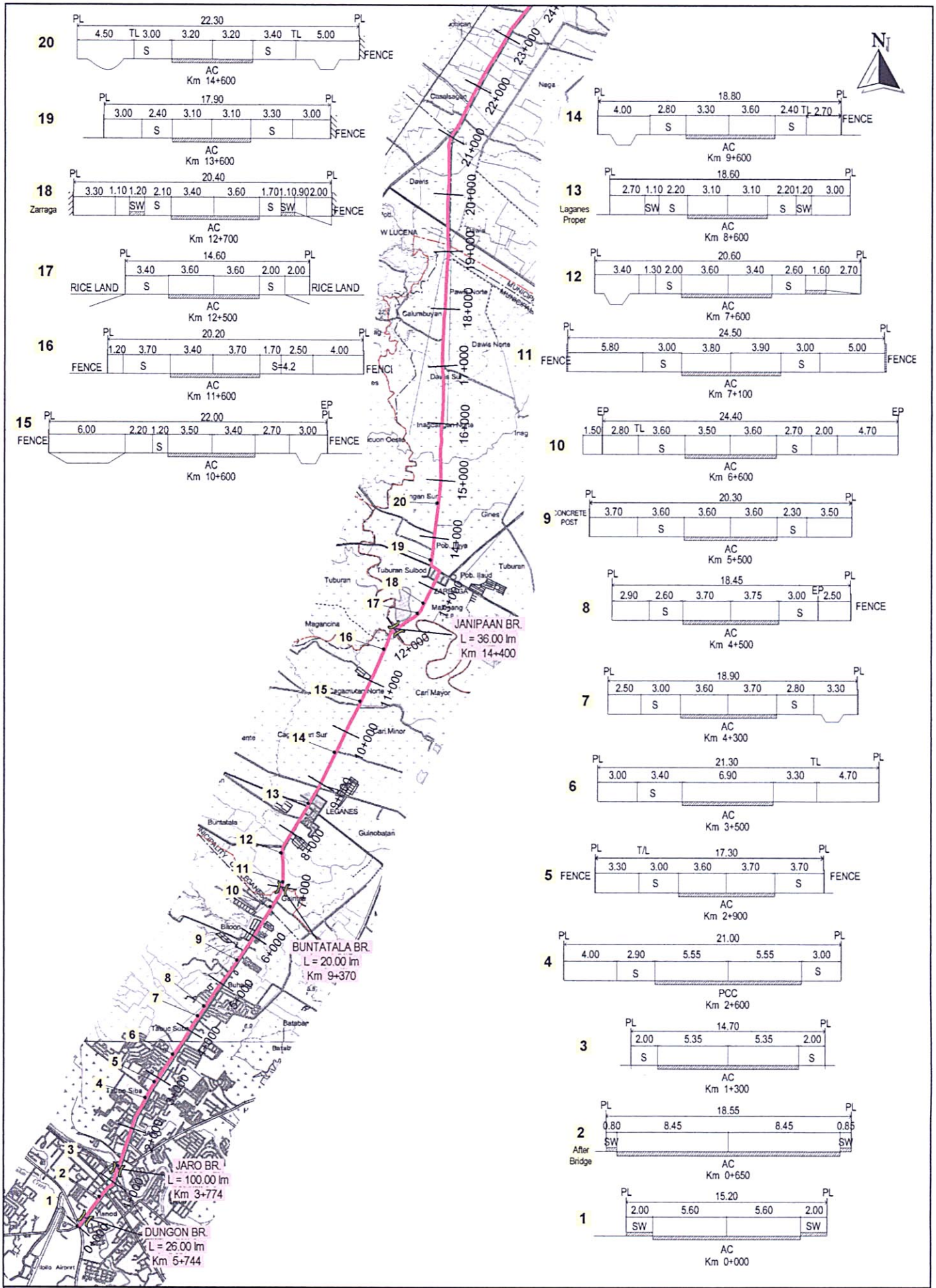
ILOILO - ANTIQUE ROAD



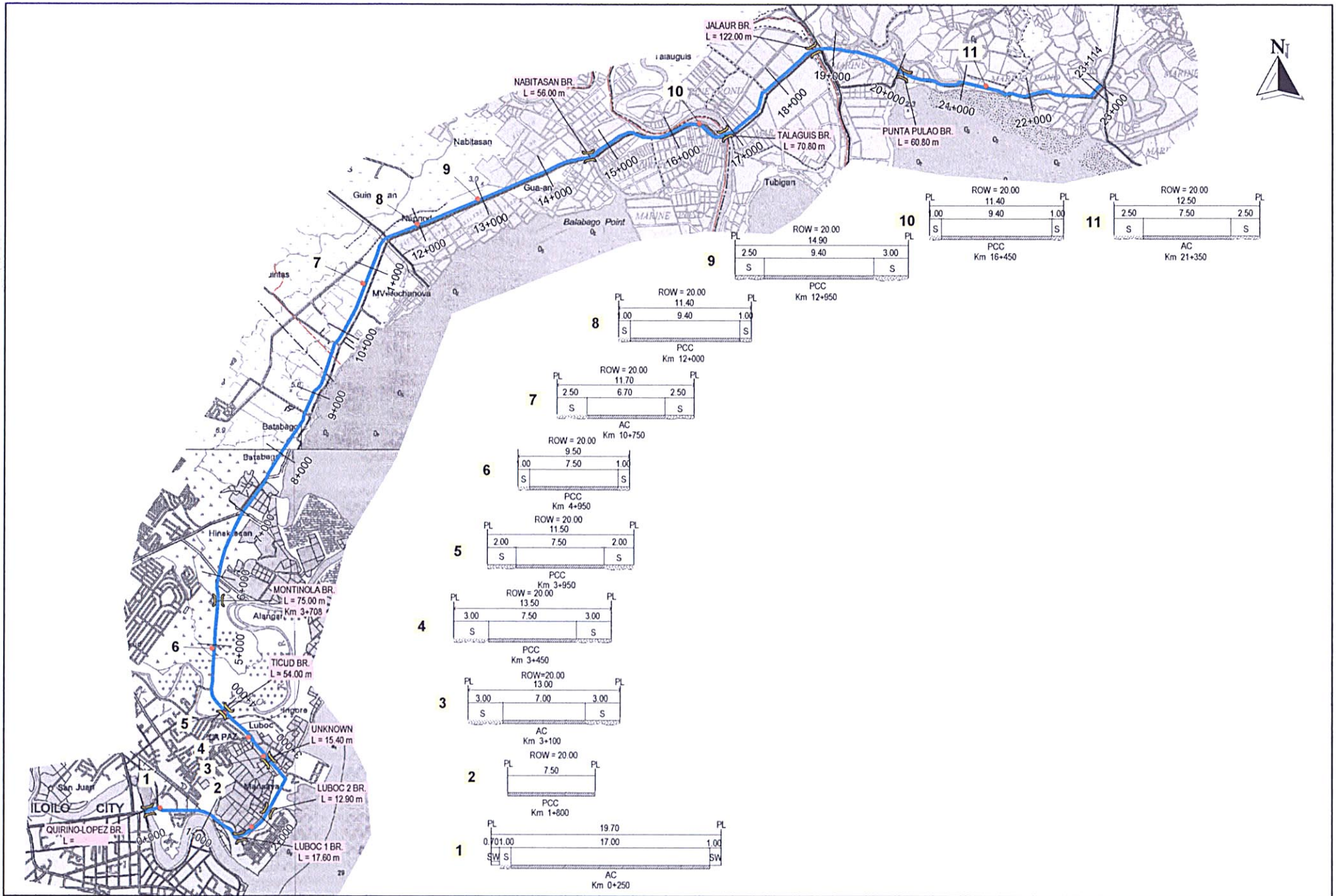
ILOILO - SAN MIGUEL ROAD



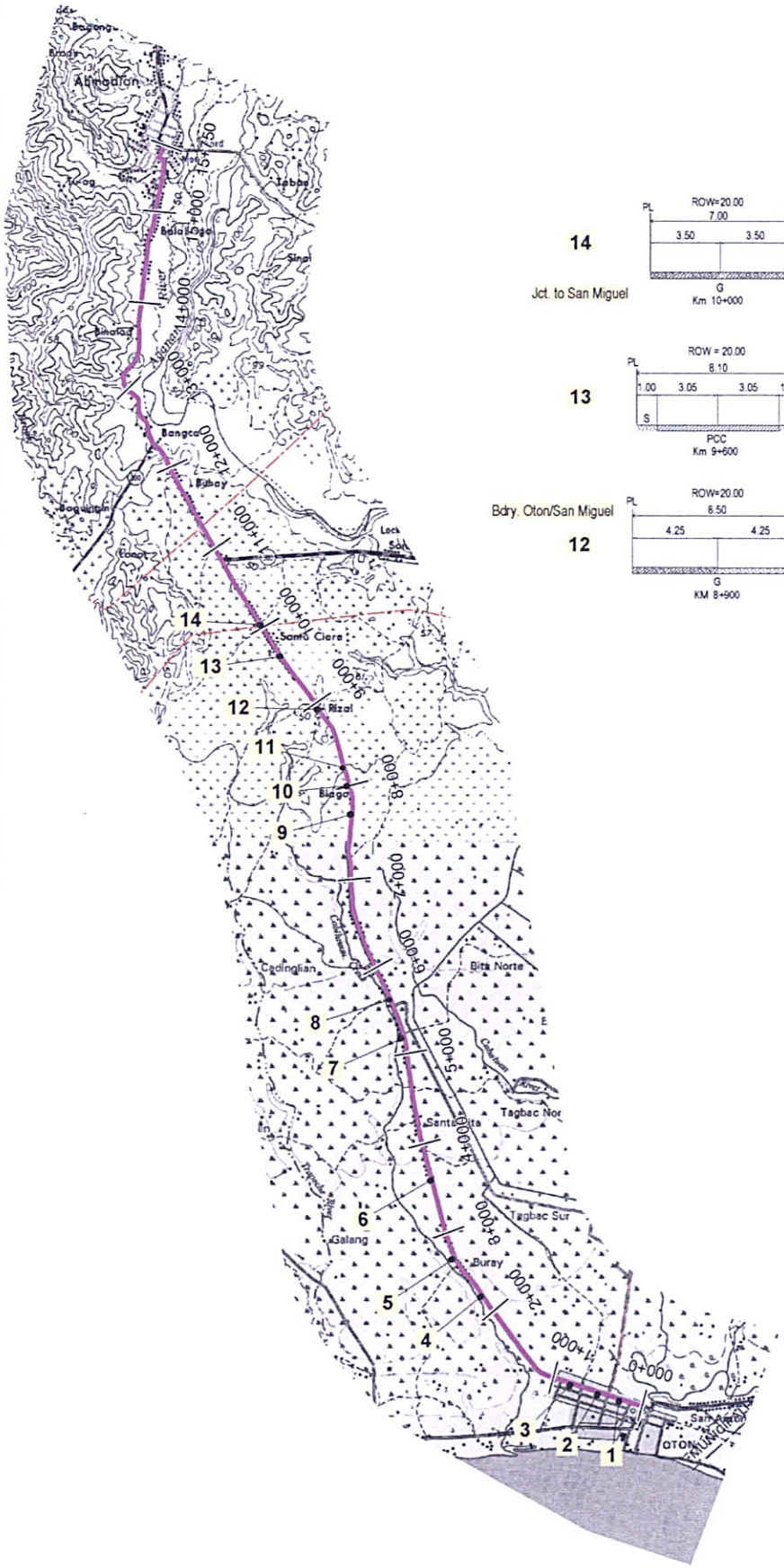
ILOILO - STA. BARBARA



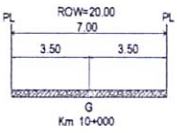
ILOILO - ROXAS ROAD



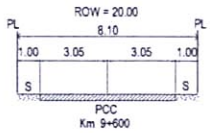
ILOILO COASTAL ROAD



14 — Jct. to San Miguel

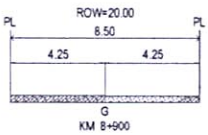


13

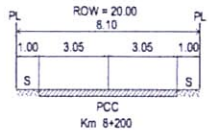


Bdry. Oton/San Miguel

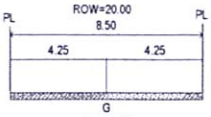
12



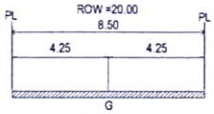
11



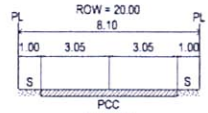
10



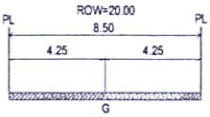
9



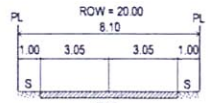
8



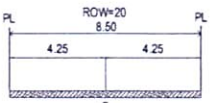
7



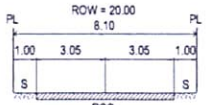
6



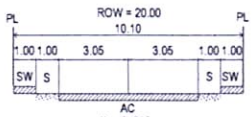
5



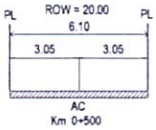
4



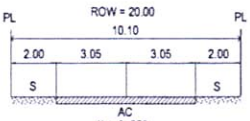
3



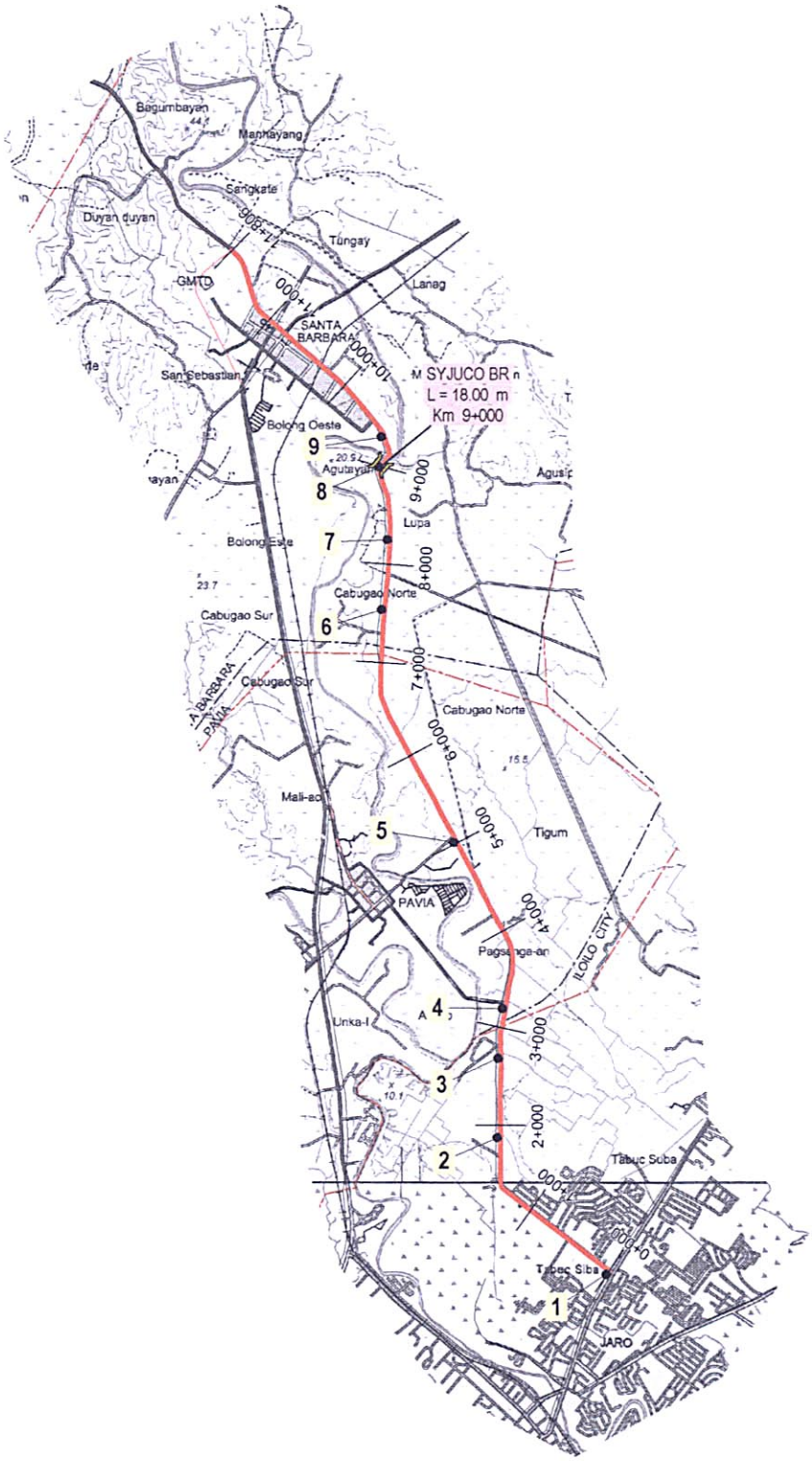
2 — Jct. to San Jose

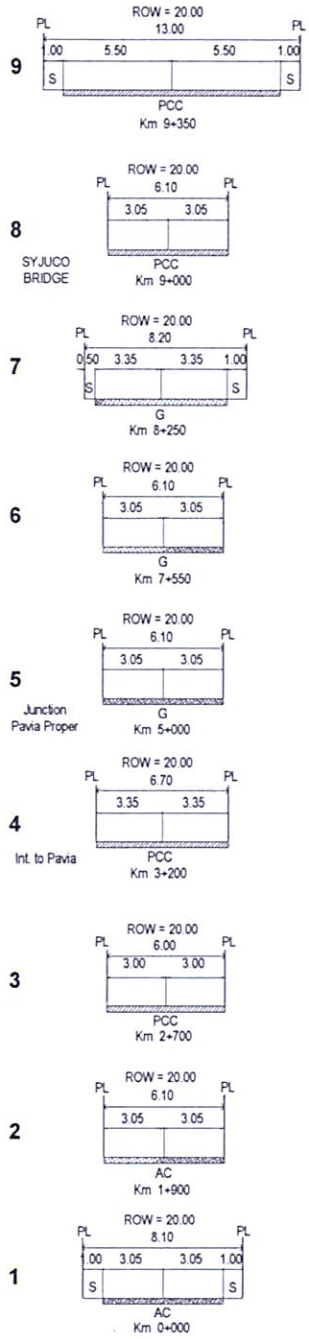


1

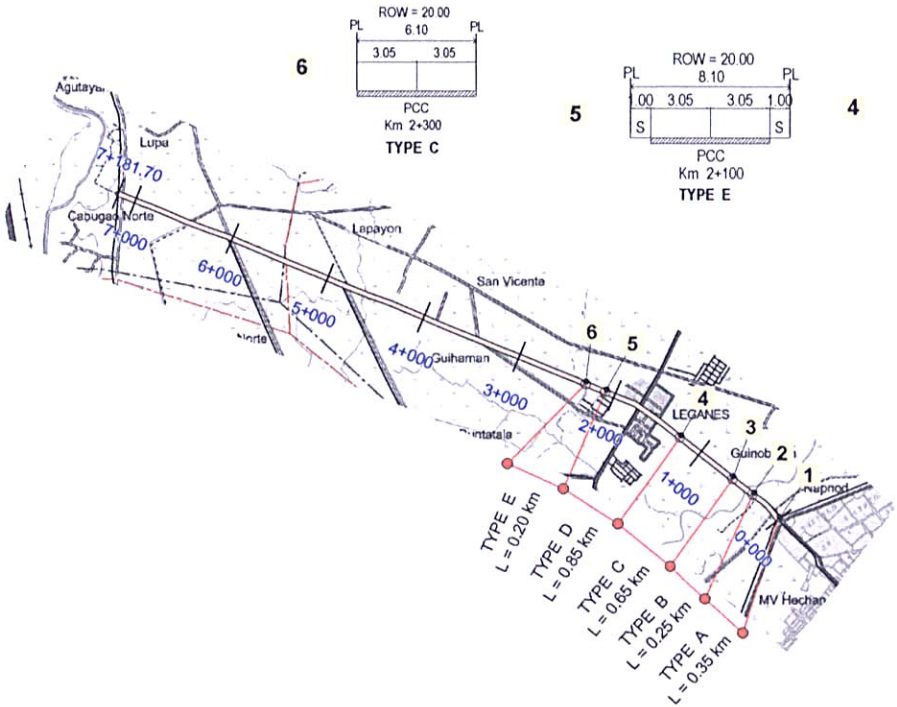


OTON - STA. MONICA - BANGCAL ROAD





JARO - STA. BARBARA ROAD



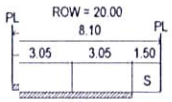
6

PCC
Km 2+300
TYPE C

5

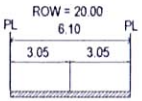
PCC
Km 2+100
TYPE E

4



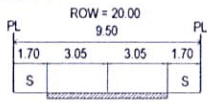
PCC
Km 1+250
TYPE D

3



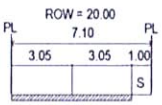
PCC
Km 0+600
TYPE C

2



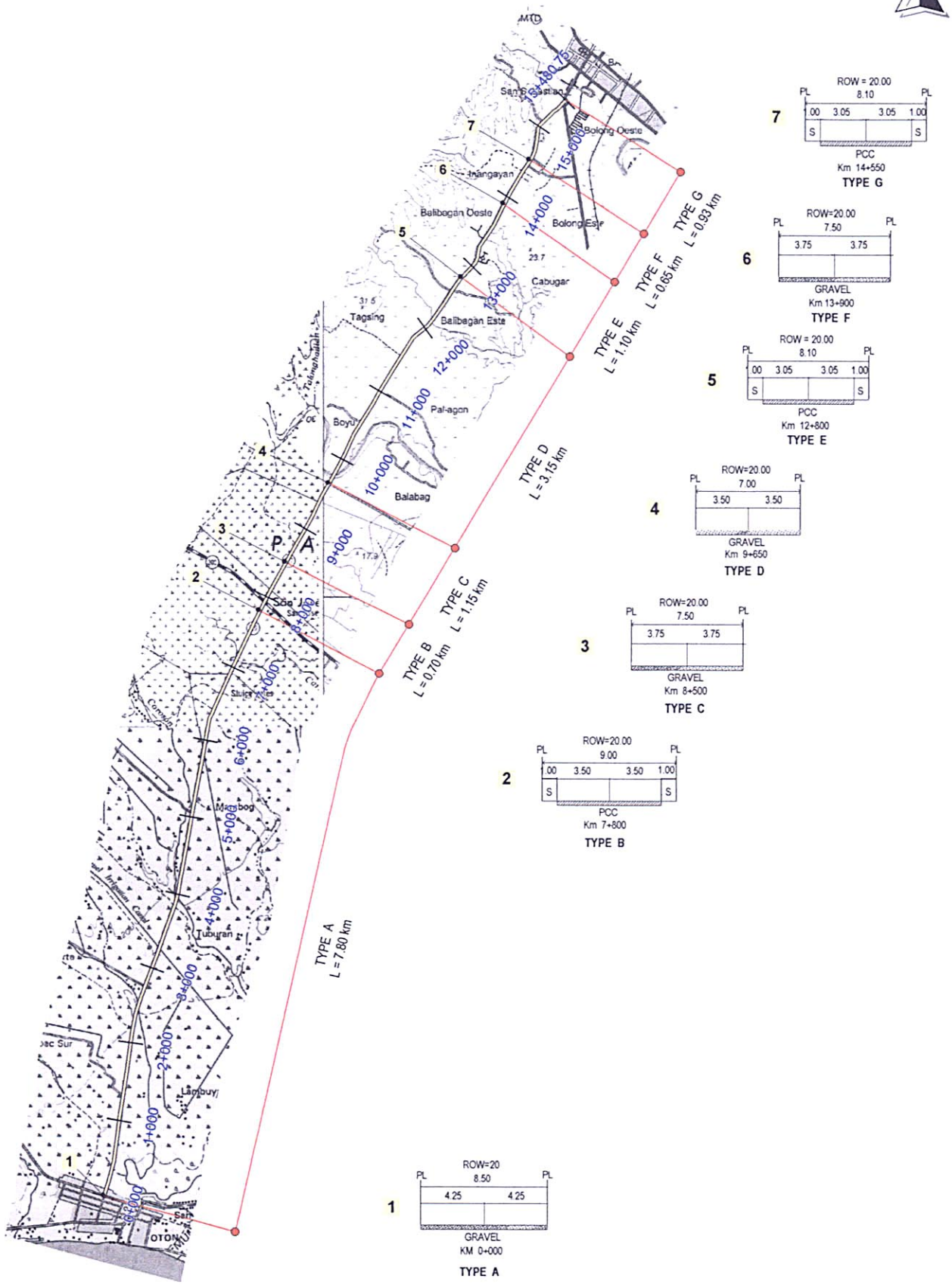
PCC
Km 0+350
TYPE B

1

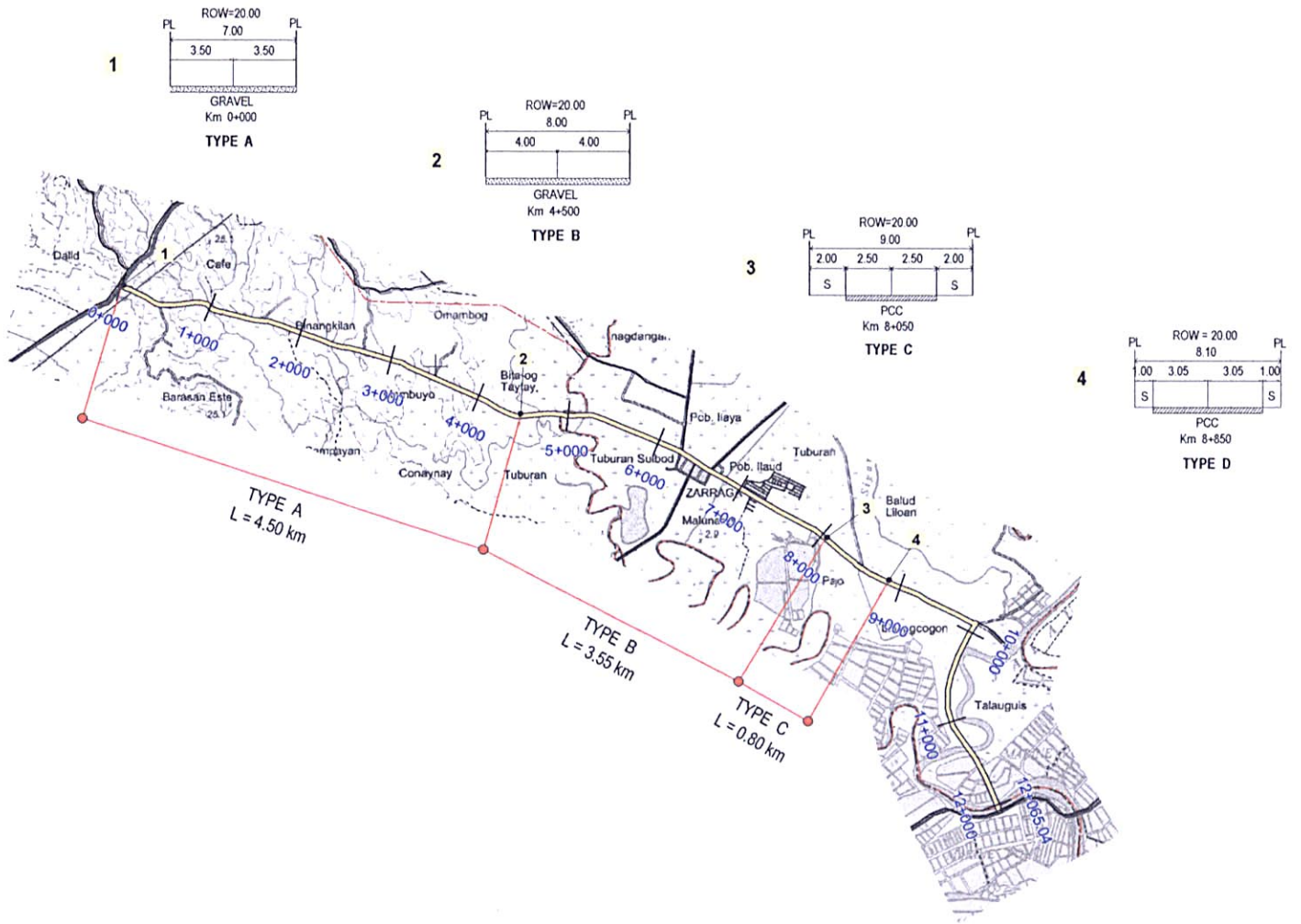


PCC
Km 0+000
TYPE A

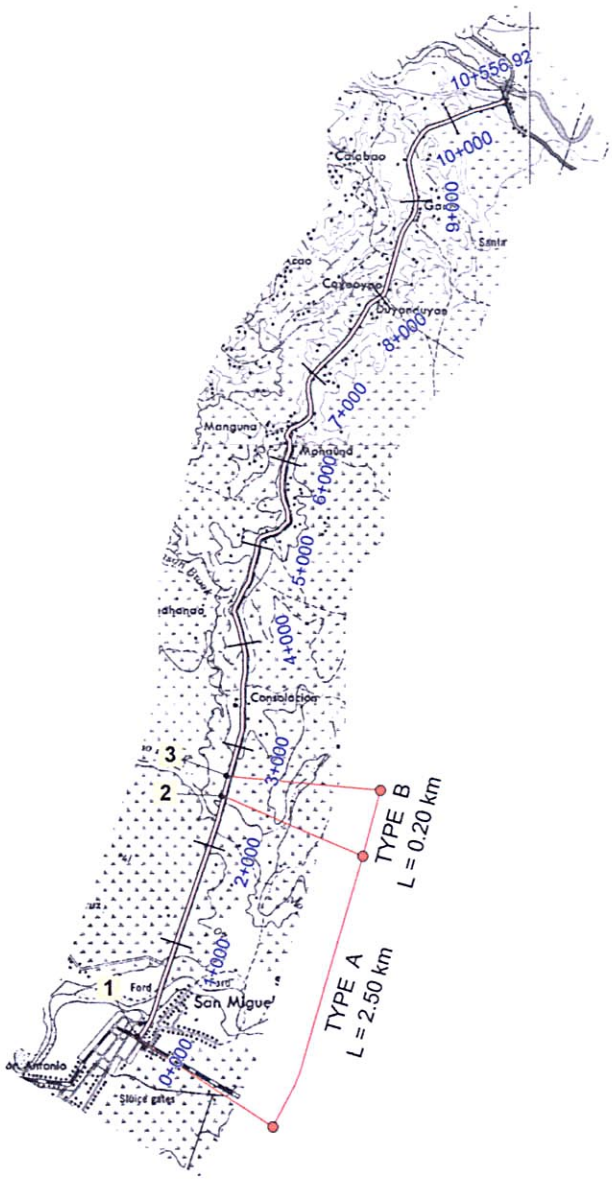
LEGANES - STA. BARBARA ROAD



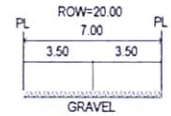
OTON - STA. BARBARA



STA. BARBARA - LIBONGCOGON

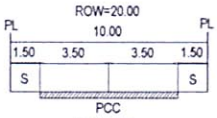


3



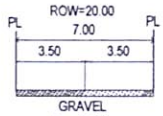
TYPE A

2



TYPE B

1



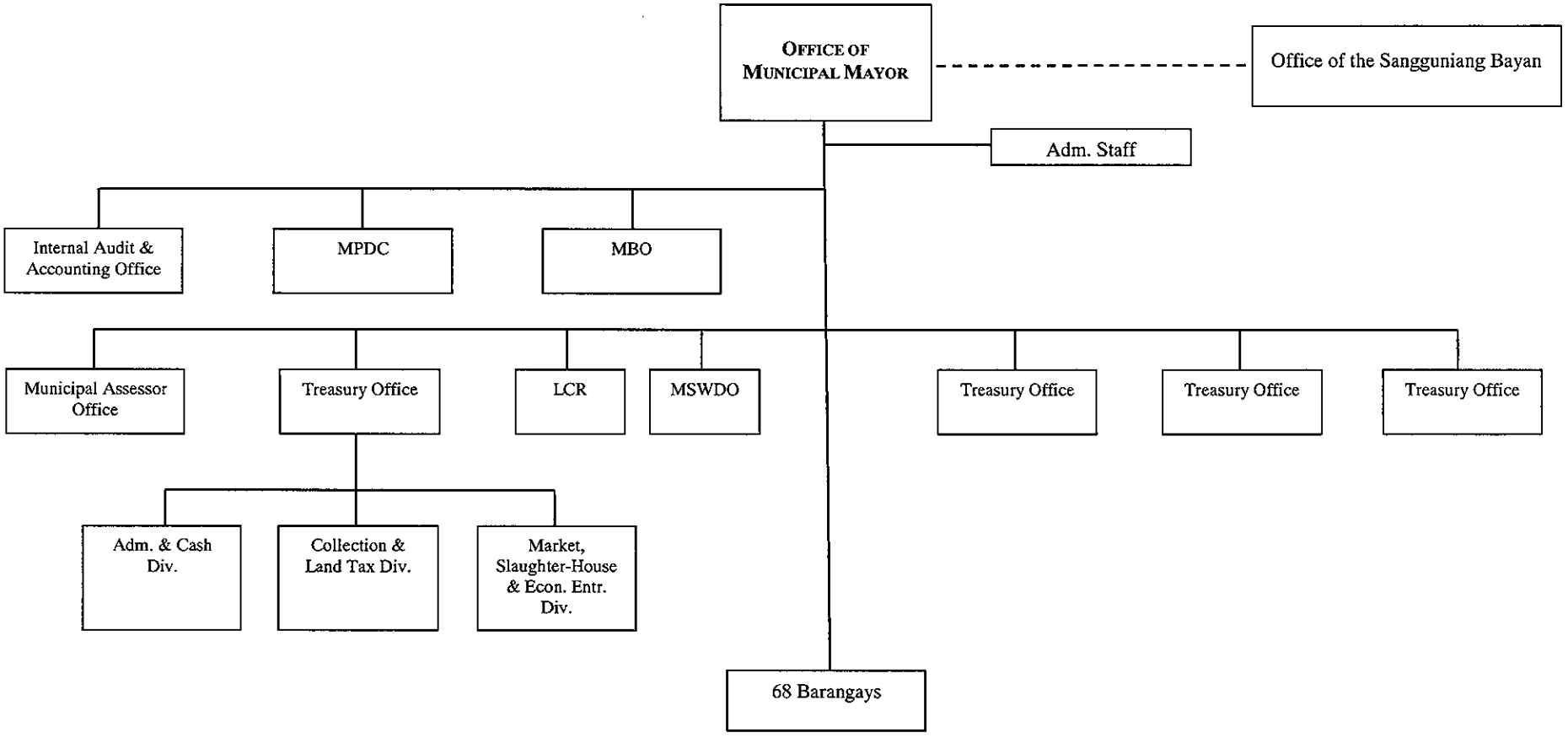
TYPE A

SAN MIGUEL - CABATUAN

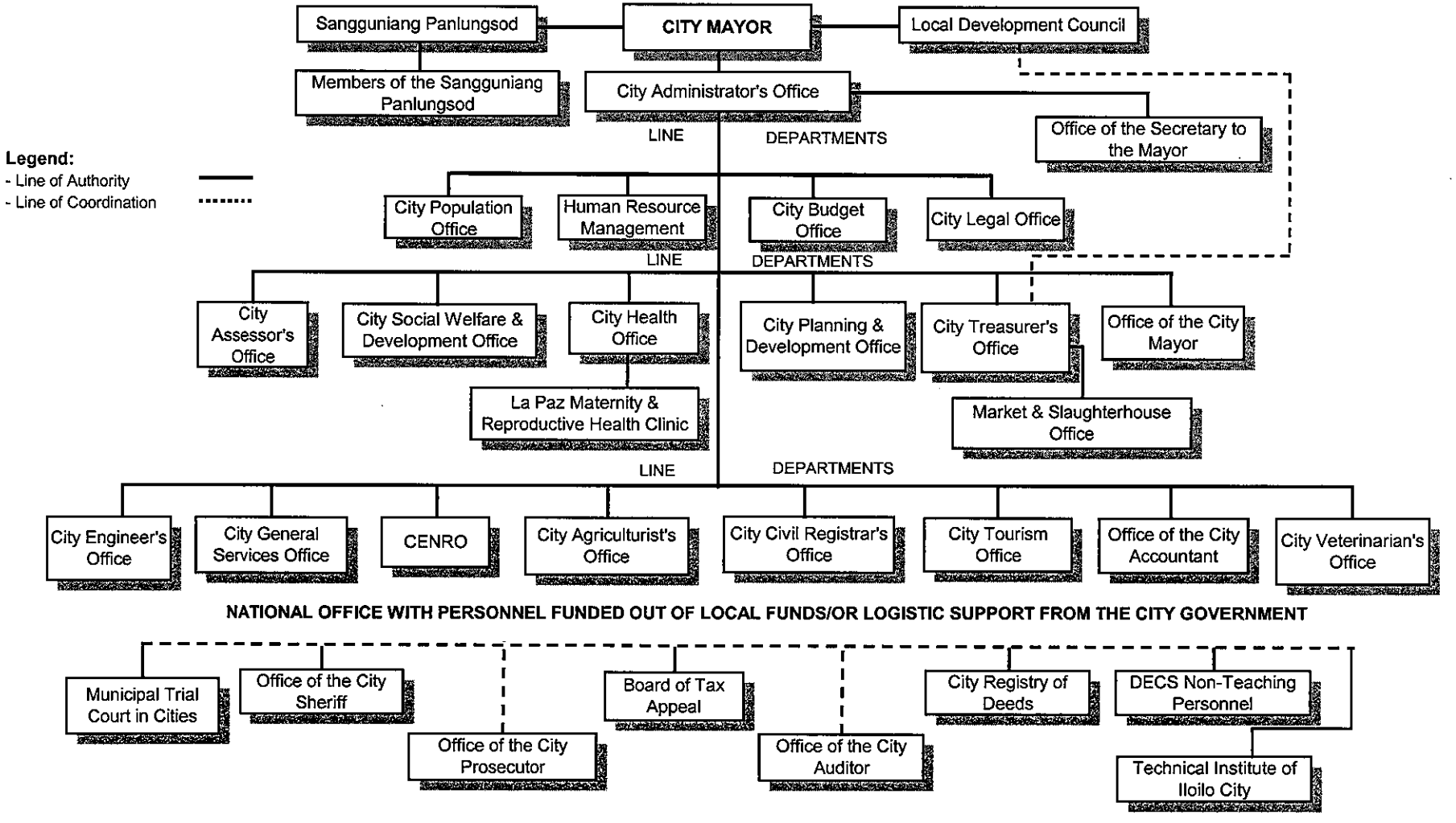
APPENDIX 7.1

ORGANIZATIONAL CHARTS

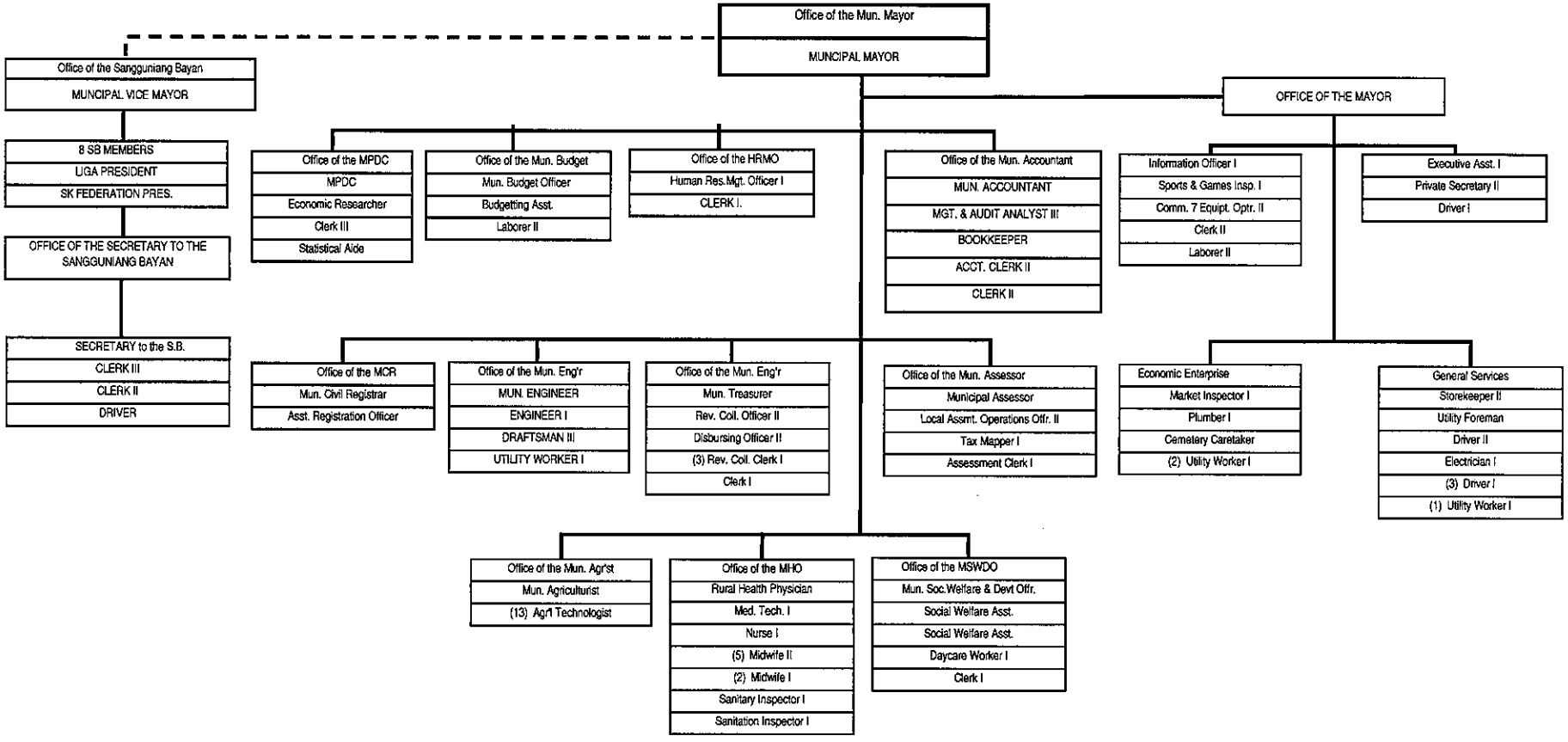
Municipality of Cabatuan
Organizational Chart



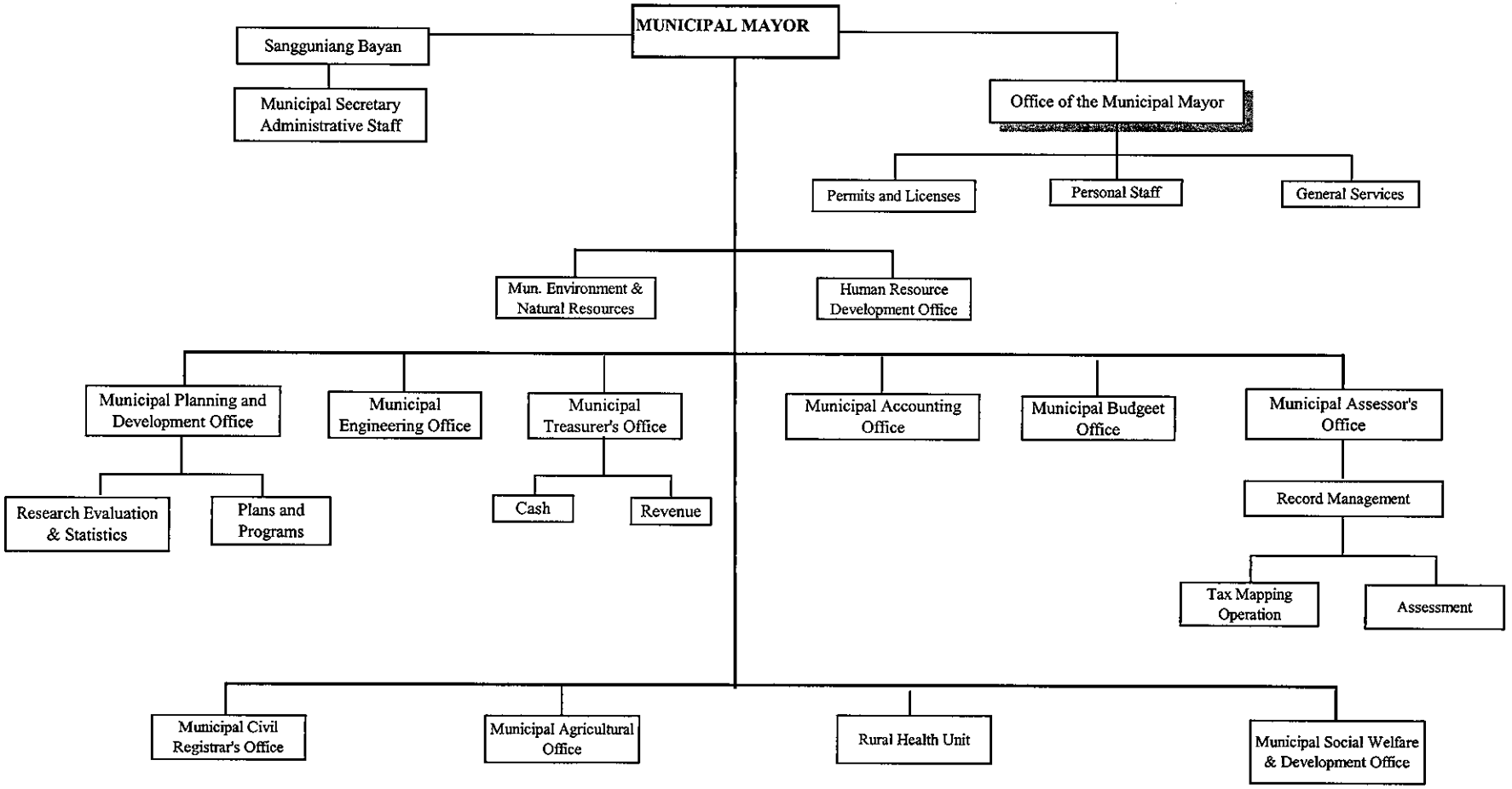
EXISTING ORGANIZATIONAL CHART OF ILOILO CITY



EXISTING ORGANIZATIONAL STRUCTURE CY-2003
MUNICIPALITY OF LEGANES



ORGANIZATIONAL CHART
MUNICIPALITY OF PAVIA



APPENDIX 7.2

MIDC MEMORANDUM OF AGREEMENT

AMENDED MEMORANDUM OF AGREEMENT
OF THE METROPOLITAN ILOILO DEVELOPMENT COUNCIL (MIDC)

KNOW ALL MEN BY THESE PRESENTS

This Memorandum of Agreement (MOA) executed and entered into this **7th day of October**, 2002 in Iloilo City, Philippines, by and among:

MUNICIPALITY OF LEGANES, a political subdivision created and existing pursuant to law with office address at the Municipal Building of Leganes, Province of Iloilo, represented herein by its Municipal Mayor Enrique M. Rojas;

MUNICIPALITY OF OTON, a political subdivision created and existing pursuant to law with office address at the Municipal Building of Oton, Province of Iloilo, represented herein by its Municipal Mayor Carina V. Flores;

MUNICIPALITY OF PAVIA, a political subdivision created and existing pursuant to the law with office address as the Municipal Building of Pavia, Province of Iloilo, represented herein by its Municipal Mayor Ervin G. Gerochi;

MUNICIPALITY OF SAN MIGUEL, a political subdivision created and existing pursuant to law with office address at the Municipal Building of San Miguel, Province of Iloilo, represented herein by its Municipal Mayor Gregorio S. Villarico;

CITY GOVERNMENT OF ILOILO, a highly-urbanized city created under the laws of the Republic of the Philippines with office address at the City Hall, Iloilo City, represented by its City Mayor, Jerry P. Treñas;

WITNESSETH

WHEREAS, pursuant to the Philippine Constitution and the Local Government Code of 1991, local government units could initiate cooperative undertakings within the framework of local autonomy and national decentralization;

WHEREAS, local governments, under the Local Government Code may group themselves and enter into inter-local government cooperation for the mutual benefit of the local governments;

WHEREAS, the rapid growth of population and the corresponding increase of social and economic requirements of contiguous local governments of Iloilo City, Leganes, Pavia, Oton, and San Miguel call for simultaneous and integrated development;

WHEREAS, many public services now rendered by local governments separately may be administered efficiently and economically if they are harmonized and integrated under a metropolitan arrangement;

WHEREAS, it is vital to the growth and development for Iloilo City and the four (4) municipalities that a workable and effective system be established for the coordination and integration of local government services and functions within the metropolitan community.

WHEREAS, the local government units may group themselves, consolidate or coordinate efforts, services and resources for purposes commonly beneficial to them:

NOW THEREFORE, WE, the Municipal Mayors of Leganes, Oton, Pavia, San Miguel, and the City of Iloilo, by virtue of the powers vested in us by laws, do hereby create the Metropolitan Iloilo Development Council (MIDC) and defining the following schemes of implementation:

Section 1.**CREATION OF THE METROPOLITAN ILOILO DEVELOPMENT COUNCIL (MIDC).** The affairs of the Metropolitan Iloilo shall be coordinated by the **MIDC,** which is composed of the five (5) Mayors. It shall serve as a coordinating and project implementing body of metro-wide programs and projects.

The Council shall be headed by a chairman, who shall be rotated every **three (3) years** among the mayors, starting with Iloilo City Mayor. From among the Council Members, a Vice-Chairman, Secretary and Treasurer will also be elected.

Section 2.**SCOPE OF SERVICES OF MIDC.** The scope of services of the MIDC shall include but not limited to services which have metro-wide impact and transcend local political boundaries or entail huge expenditures such that it would not be viable to be provided by the individual local government units (LGUs) comprising the MIDC. These services shall include:

1. ***Basic Services Delivery,*** which include review and coordination of programs and projects on health, housing, provision of livelihood opportunities and educational activities to member LGUs.

2. ***Economic Promotion,*** which include the planning and coordinated implementation of local economic investment promotion programs, conduct of entrepreneurship trainings and review of existing investments laws and ordinances.

3. ***Environmental Management,*** which include formulation of environmental programs and projects, coordination of the implementation and monitoring and evaluation of the different aspects of Metropolitan environment such as air quality management, flood control, integrated solid waste management, drainage and sewerage system.

4. ***Infrastructure Development,*** which includes review, coordination and monitoring of programs and projects related to transportation, traffic management, road networks, water works, power and telecommunication.

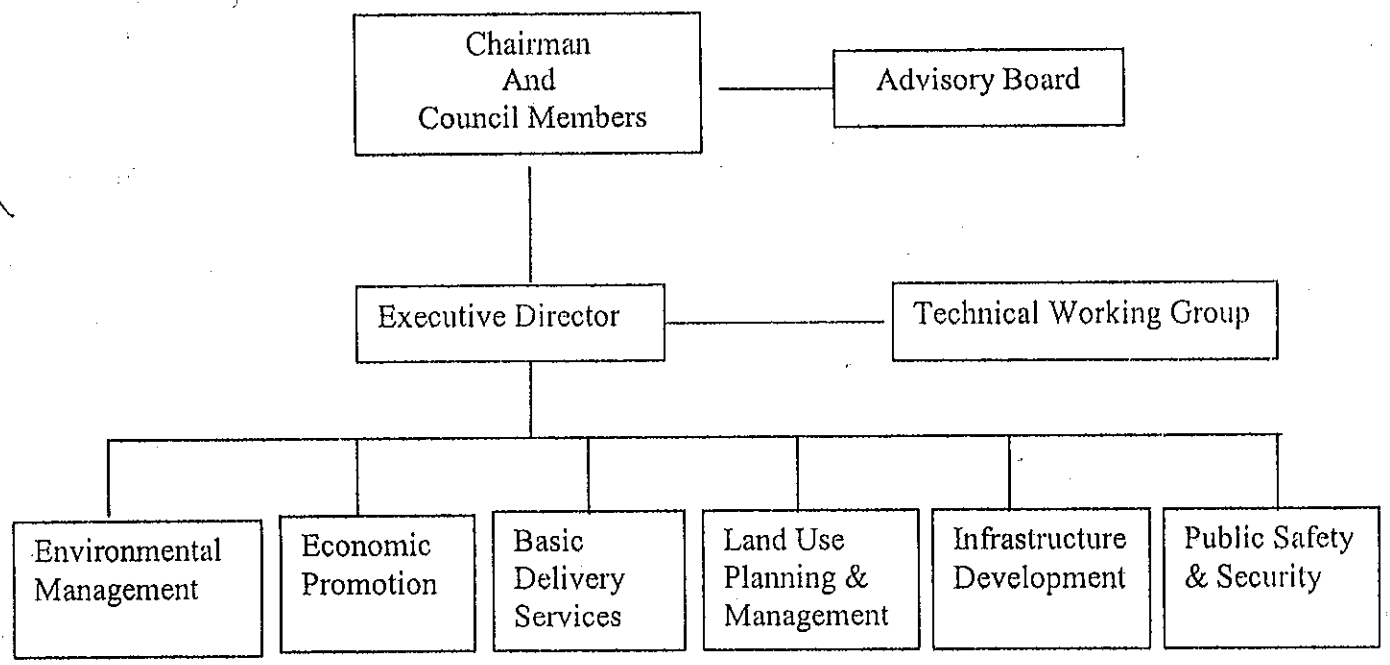
5. ***Land Use Planning and Management*** which include, but not limited to the preparation of the Metropolitan Physical Framework Plan; programs on urban and rural renewal and development, zoning and providing directions for urban growth and expansion, preparation of long-term and short-term development plans, development and evaluation of programs and projects, coordination of the implementation and monitoring of plans, programs and projects on a metro-wide basis.

6. ***Public Safety and Security*** which include formulation and coordination of programs to achieve public safety, police services, especially crime prevention and monitoring disaster preparedness, and coordination of relief operations;

Section 3. **ROLES AND FUNCTIONS OF MIDC** – The MIDC shall perform the following functions:

1. formulate metro-wide plans and programs, coordinate and monitor delivery of services such as public safety, infrastructure, land use planning and environmental management and economic promotion;
2. undertake and/or manage metro-wide programs and projects;
3. institute metro-wide complementation of programs and projects for efficient utilization of LGU resources;
4. facilitate the sharing of manpower, financial and technical resources among the 5 LGUs;
5. receive grants, soft loans, assistance of any kinds, and national governments subsidies for its priority development programs and projects;
6. serve as forum for clearing inter local government issues, which may arise among them.

Section 4. **ORGANIZATIONAL SET-UP OF MIDC** – The proposed organizational structure is as follows:



Section 5. ROLES AND FUNCTIONS OF MIDC ADVISORY BOARD – The consultative body of the Metropolitan Iloilo Development Council (MIDC). The MIDC Advisory Board is composed of representatives from the different national government agencies and the academe. The Board provides recommendations and inputs that will support Metropolitan Iloilo Development Council to carry out its mandated purpose of achieving more efficient and equitable delivery of economic, environmental and social services through the promotion of inter local government cooperation.

Section 6. **PROJECT STEERING COMMITTEES** – committees on the identified areas of cooperation will be organized by the MIDC. To be composed of representatives of the five LGUs, one NGO, one private sector representative and the relevant national government agencies, the task forces will have the following functions:

1. prepare programs and projects to address priority sectoral issues;
2. recommend policies, rules and procedures to govern the projects and programs;
3. prepare work plan and budget for their sector;
4. implement one priority project to demonstrate the collaborative undertaking.

Each committee shall organize themselves into a working structure with following officials, namely – a Chairman, Co-chair and Secretary. These officials will be chosen from among the members. The following committees will be organized:

1. Committee on Environment Management
2. Committee on Land Use and Management
3. Committee on Public Safety and Security
4. Committee on Infrastructure Development
5. Committee on Basic Services Delivery
6. Committee on Economic Promotion

Section 7 - **TECHNICAL WORKING GROUP (TWG)** – A technical working group (TWG), to be composed of representatives from each of the member-LGU will be formed. The TWG shall plan and coordinate the daily activities of the committees. They shall serve as the technical arm of the MIDC. They shall also provide progress reports to the MIDC on their activities.

Section 8. **FUNCTIONS OF THE EXECUTIVE DIRECTOR** – The Executive Director, will be appointed from among the members of the Technical Working Group (TWG). **The term of office of the Executive Director is three (3) years and shall** take charge of the following:

1. head the technical working group
2. serve as ex-officio member of the council
3. assist the Chairman of MIDC and coordinates the activities of the Technical Working Group and Committees
4. facilitate the planning, implementation, and monitoring of common programs, projects and activities approved by the Council in coordination with the national government agencies and private sector
5. improve linkages with the member-LGUs, private sector and national government agencies
6. conduct periodic monitoring of programs and projects implemented
7. **supervise the conduct of all operations of MIDC**

Section 9. MEETINGS AND QUORUM – The Council shall have a regular monthly meetings scheduled every last Thursday of the month at its principal office or at any venue agreed by the Council. Special meetings maybe called by the Chairman or majority of the members provided a written notice have been sent to the members at least 3 days before the meeting. A majority or 3 out of 5 of the members of the Council shall constitute a quorum.

Section 10. **INSTITUTIONAL LINKAGES** – To carry out the purposes of this MOA, the MIDC shall consult, coordinate and work closely with the Provincial Government of Iloilo, National Economic and Development Authority (NEDA), the Department of Interior and Local Government (DILG) and other relevant agencies and private sector operating in the 5 LGUs.

The MIDC shall submit a master development plan to serves the overall framework of development for the 5 LGUs. It shall also submit its plans to the relevant agencies for integration and proper coordination. The MIDC may enter into contracts, memorandum of agreement and other cooperative arrangements for the delivery of its roles and functions.

The MIDC shall also interface with funding agencies such as the CIDA, AIDAB, JICA, USAID, ADB, World Bank, etc. for purposes of obtaining financial support, grants and donations as support to its programs and projects.

Section 11. **PREPARATION OF SHORT-TERM WORK PLANS** – Upon passage of this Memorandum of Agreement, the Technical Working Group shall immediately convene to discuss the preparation of implementing rules and guidelines and work plans shall be prepared within a month and should include a listing of short term (2-year) activities.

Section 12. **BUDGET** – To carry out the purposes of the MOA the **4 municipalities will contribute P50, 000 each while Iloilo City will contribute P150, 000 in 2002. For year 2003 onwards, the 4 municipalities and Iloilo City will contribute P100, 000 and P200, 000, respectively**. This will be used for common projects and maintenance and other operating expenses of the MIDC. **Additional Funding maybe requested for projects, as the need arises**. Funding requests shall also be made to the National Government to provide budgetary Allocation for certain common development projects. The MIDC may enter into agreements with national and international donor agencies for its projects.

Section 13. FUND ADMINISTRATOR – The Fund Administrator will be the one to maintain the funds of the Council. Whoever will be elected by the Council as treasurer will be designated as Fund Administrator for the Council. For 2002 the Municipal Mayor of Oton was designated as Treasurer and Fund Administrator.

Section 14. DISBURSEMENTS AND ACCOUNTING OF FUNDS –

- All disbursements or withdrawals of MIDC Funds shall pass through the Municipal/City Accountant and Municipal/City Treasurer of the Municipal/City of the elected Treasurer and Fund Administrator for the year. All transactions shall be approved by the Chairman and the Fund Administrator. Signatories of such, or any bank transactions are the Chairman and/or any of the two Alternative council members and the Treasurer and/or any assigned council members.

- All disbursements must be in accordance with the approved work and financial plan of the council, subject to the usual government accounting and auditing rules and regulations.

- All transactions shall be recorded by the Municipal/City accountant of the Municipal/City of the elected Treasurer and Fund Administrator, who shall prepare and submit reports/financial statements/fund utilization reports to the COA.

- All transactions, records and books of accounts shall be regularly audited by the Commission of Audit, which shall have exclusive audit jurisdiction over MIDC disbursements and accounting of funds.

Section 15. AMMENDMENTS – Any Amendments to the provisions of this Agreement shall be approved by the Council.

Section 16. **EFFECTIVITY** - This Memorandum of Agreement shall take effect immediately.

Done in the City of Iloilo, this 7th day of October, in the year of our Lord, two thousand and two.

HON. JERRY P. TREÑAS
City Mayor, Iloilo City

HON. CARINA V. FLORES
Municipal Mayor, Oton

HON. ENRIQUE M. ROJAS
Municipal Mayor, Leganes

HON. ERVIN G. GEROCHI
Municipal Mayor, Pavia

HON. GREGORIO S. VILLARICO
Municipal Mayor, San Miguel

WITNESS:

ATTY. SATURNINO B. GONZALES, JR.

MA. CRISTINA V. OCTAVIO

ACKNOWLEDGMENT
Republic of the Philippines
City of Iloilo
At the City of Iloilo, 2002 personally appeared:

Hon JERRY P. TREÑAS with Residence Certificate No. 05176465
Issued at Iloilo City on January 2, 2002.

Hon. ENRIQUE M. ROJAS with Residence Certificate No. 12405113
Issued at Leganes, Iloilo on January 30, 2002.

Hon. CARINA V. FLORES with Residence Certificate No. 11385198
Issued at Oton, Iloilo on January 2, 2002.

Hon. ERVIN G. GEROCHI with Residence Certificate No. 04530078
Issued at Pavia, Iloilo on January 7, 2002.

Hon. GREGORIO S. VILLARICO with Residence Certificate No. 11400701
Issued at San Miguel, Iloilo on January 2, 2002.

Known to me to be same person who executed the foregoing instrument of the Amended Memorandum of Agreement, which consist of (6) pages including the page in which that acknowledgment is written and signed on every page by the parties executing this instrument and their witnesses and sealed with my notarial seal and said parties acknowledge to me that the same is their free acts and deeds.

Doc. No. 176
Page No. 36
Book No. III
Series of 2002.

RICHARD F. JERUTA
NOTARY PUBLIC
UNTIL DEC. 31, 2003
PTR 0419611
ISSUED AT ILOILO CITY
ON 1-13-02

APPENDIX 10.1

SINGLE YEAR BENEFIT COST ANALYSIS OF ROAD NETWORK ALTERNATIVES

APPENDIX 10.1

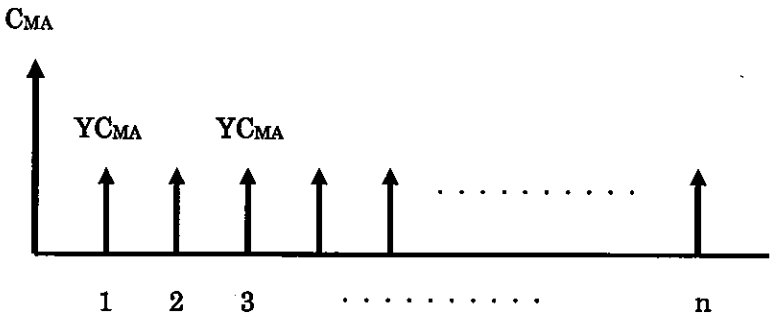
SINGLE YEAR BENEFIT COST ANALYSIS OF ROAD NETWORK ALTERNATIVES

10.1.1 METHODOLOGY

In this study, the economic analysis of the road network alternatives is made using the single year benefit cost ratio (B/C ratio), which is usually used for yearly benefit cost analysis. This method is classified as one of rough benefit cost analysis method.

In this method, it is assumed that investment costs for master plan (C_{MA}) are generated yearly during evaluation period (20 years in this study), which this cost is called as yearly cost (YC_{MA}). If the yearly benefits derived from the master plan (B_{MA}) exceed the yearly cost (YC_{MA}) or $B_{MA} / YC_{MA} > 1$, then this project can be defined as feasible.

When the Investment costs for master plan (C_{MA}) are converted to the yearly cost (YC_{MA}), the following formula can be expressed:



$$C_{MA} = YC_{MA} + YC_{MA} / (1+i) + YC_{MA} / (1+i)^2 + \cdots + YC_{MA} / (1+i)^{n-1}$$
$$= YC_{MA} \times \{(1+i)^n - 1\} / \{i \times (1+i)^n\} \quad \text{Formula 10.1.1}$$

$$YC_{MA} = C_{MA} \times \{i \times (1+i)^n\} / \{(1+i)^n - 1\} \quad \text{Formula 10.1.2}$$

Where,
i = discount rate (15 %)
n = evaluation period (20 years)

In these formulas, **{ i x (1+i) ^{n} } / {(1+i) ^{n} -1 }** is so called as "Capital Recovery Factor (**CRF**) " **CRF** is also expressed as the following formula:

$$YC_{MA} = C_{MA} \times (i) / \{1-(1+i)^{-n}\} \quad \text{Formula 10.1.3}$$

This means that when **'n'** become very long period, then **CRF** becomes near **'i '.** The single year B/C ratio can be expressed as followings:

$B_{MA} / YC_{MA} \geqq 1$ Feasible

$B_{MA} / YC_{MA} < 1$ Not feasible

10.1.2 RESULT OF B / C ANALYSIS

In Metro Iloilo, the rough economic analysis can be made as follows;

TABLE 10.1-1 ROUGH BENEFIT COST ANALYSIS BY ALTERNATIVES IN METRO ILOILO IN 2022

	Alternative 1	Alternative 2 (A)	Alternative 2 (B)	Alternative 3
Benefits in 2022	1,526	1,536	1,602	1,549
Economic Costs	4,613	4,534	4,774	4,616
Capital Recovery Cost Factor	0.1598	0.1598	0.1598	0.1598
B/C Ratio	2.07	2.12	2.10	2.10

Source: JICA Study Team

Rough benefit-cost analysis shows that all alternatives are economically feasible.

This B/C analysis is only made for single year (this case is only the year 2022). In the final stage, it is necessary to analyze full benefit / cost analysis for the Road Development Master Plan taking into account the implementation plan.

APPENDIX 10.2-1

COST ESTIMATES BY ALTERNATIVES

ROAD AND BRIDGE CONSTRUCTION COST
METRO ILOILO FUTURE ROAD NETWORK PLAN (ALTERNATIVE-1)

Road No.	Road Name		Admi. classi.	Civil Work: Road: Road Length (km)	Target Road: Length (km)	Target Road: Type of Cross-section	Road: Cost Per km (Million Peso)	Road: Cost (Million Peso) FINANCIAL	Road: Project Total Cost (Million Peso) FINANCIAL	Bridge: No.	Target Bridge: No.	Target Bridge: Widening (m)	Target Bridge: New Construction 2-Lane (m)	Target Bridge: New Construction 4-Lane (m)	Cost (Million Peso): Widening	Cost (Million Peso): New Construction 2-Lane	Cost (Million Peso): New Construction 4-Lane	Cost (Million Peso): Project Total Cost FINANCIAL	Civil Work Total: FOREIGN	Civil Work Total: LOCAL	Civil Work Total: TAX	Civil Work Total: FINANCIAL	Land: Additional ROW (m)	Land: Road Length (km): Urban	Land: Road Length (km): Rural	Land: Cost Per m2 (Peso): Urban	Land: Cost Per m2 (Peso): Rural	Land: Cost (Million Peso): Urban	Land: Cost (Million Peso): Rural	Land: Cost (Million Peso): Total	Total Cost
C-1	Circumferential Road No. 1		—	12.8	12.8	1	65.2	834.9	834.9	15.0	15.0			715.0			643.5	643.5	721.6	507.7	249.1	1,478.4	35.0	0.7	12.1	1500.0	100.0	85.8	42.4	128.1	1,606.5
C-2	Circumferential Road No. 2	Section - 1 (Oton-Jct. Iloilo-San Miguel Road)	NR	7.8	7.8	2.1	16.1	125.2	740.8	2.0								0.0	467.9	251.6	129.9	849.4	10.0	0.0	7.8		50.0	0.0	3.9	3.9	960.1
		Section - 2 (Jct. Iloilo-San Miguel Road-Sta. Barbara) +Ext.(3.9km)	Prov.	11.9	11.9	2.1	16.1	191.0															10.0	0.0	11.9		50.0	0.0	6.0	6.0	
		Section - 3 (New Construction Sect.) +Ext. Leganes	—	14.9	14.9	2	28.5	424.6		7.0	7.0		285.8			128.6		128.6					30.0	1.0	13.9	2000.0	50.0	60.0	20.9	80.9	
C-3	Circumferential Road No. 3	Section - 1 (Jct. Iloilo-San Miguel-Jct. Sta. Barbara-New Lucena Road)	Prov.	2.9	2.9	2.1	16.1	46.5	461.4	2.0	1.0	24.0			8.4			8.4	310.9	152.7	84.0	557.6	10.0	0.0	2.9		35.0	0.0	1.0	1.0	566.8
			—	7.8	7.8	2	28.5	222.3															30.0	0.0	7.8		35.0	0.0	8.2	8.2	
		Section - 2 (Jct. Sta.Barbara-New Lucena Road-Iloilo Coastal Road)	Prov.	12.0	12.0	2.1	16.1	192.6		4.0	4.0		195.0			87.8		87.8					10.0					0.0	0.0	0.0	
C-4	Circumferential Road No. 4	Tigbaun - Bangcal Road	NR	15.9	9.9	2.2	15.2	150.6	771.4	10.0	3.0	9.2	19.0		3.2	8.6		11.8	473.3	200.7	109.2	783.2	10.0	0.0	15.9		5.0	0.0	0.8	0.8	791.4
		Bangcal-Cabatuan Road	NR	17.3	12.1	2.2	15.2	184.1															10.0	0.0	17.3		5.0	0.0	0.9	0.9	
		Cabatuan-New Lucena Road	NR	14.9	12.0	2.2	15.2	182.6															10.0	0.0	14.9		5.0	0.0	0.7	0.7	
		New Lucena-Dumangas Road	NR	16.7	16.7	2.2	15.2	254.1															10.0	0.0	16.7		35.0	0.0	5.8	5.8	
R-1	Iloilo-Antique Road	Iloilo-Oton Section	NR	10.2	4.1	4.3	21.6	88.4	163.1	4.0	1.0		29.5			13.3		13.3	101.4	49.4	25.7	176.4									176.4
					4.1	4.6	13.1	53.8																							
					2.0	4.1	10.4	20.9																							
		Oton-Tigbauan Section	NR	12.0																											
R-2	Iloilo-San Miguel Road	Molo-Mandurlao Section	NR	1.9					106.9	2.0	1.0		87.5			39.4		39.4	81.7	42.5	22.0	146.3									146.3
		Mandurlao-San Miguel Section	NR	12.1	12.1	5	8.8	106.9																							
R-3	Iloilo-Sta.Barbara-Kalibo Road	City Proper-Jaro Section	NR	3.0	3.0	6.1	21.6	64.8	374.1	10.0	2.0		193.4			87.0		87.0	251.2	139.0	71.0	461.1									461.1
		Jaro-City Bdry. Section	NR	3.9	3.9	6.1	21.6	84.3																							
		Pavia Section	NR	5.5	5.5	6.2	26.2	144.2																							
		Sta. Barbara Section	NR	2.8	1.8	6.3.1	19.8	35.6																							
					1.0	6.3.2	14.5	14.5																							
		Sta. Barbara Bypass Section	NR	1.6	1.5	6.4.1	19.5	29.3																							
					0.1	6.4.2	14.2	1.4																							
		- Cabatuan Section	NR	9.6																											
		- Janiuay Section	NR	14.9																											
R-4	Iloilo-Roxas Road	Jct. Iloilo-Sta. Barbara Road-Jaro Bridge Section	NR	1.2					318.0	4.0	1.0		20.0			9.0		9.0	188.1	91.6	47.3	327.0									327.0
		Jaro Bridge-Jct. Jaro-Sta. Barbara Road Section	NR	1.4																											
		Jct. Jaro-Sta.Barbara Road-Leganes Proper Sect.	NR	5.7	5.7	7.2	38.2	218.0																							
		Leganes Proper-Zarraga Proper Section	NR	4.7	4.7	7.2	21.3	100.0																							
		Zarraga Proper-Jct. New Lucena-Dumangas Rd. Sect.	NR	7.5																											
R-5	Iloilo Coastal Road	Iloilo River Bridge-Jct. Int'l Port Access Road Section	NR	4.0	0.1	8.1	18.3	1.8	160.8	10.0								0.0	94.7	43.4	22.7	160.8									160.8
					2.3	8.2	20.4	47.0																							
		Jct. International Port Access Road-Study Area Bdry.Sect.	NR	7.8	5.4	8.3	20.7	112.0																							
				8.2																											
B-1	R-1 Bypass Road		—	8.6	8.6	9	28.7	246.6	246.6	10.0	10.0		170.0			76.5		76.5	172.6	100.3	50.3	323.1	30.0	0.4	8.2	2000.0	100.0	24.0	24.6	48.6	371.7
B-2	R-1 Bypass Road (Leganes L=3.2km, Zarraga L=3.9km)		—	7.1	7.1	9	28.7	203.6	203.6	2.0	2.0		30.0			13.5		13.5	123.7	61.8	31.6	217.1	30.0	0.3	6.8	2000.0	50.0	18.0	10.2	28.2	245.3
B-3	Cabatuan Bypass Road		—	2.1	2.1	9	28.7	60.2	60.2									0.0	35.1	16.6	8.5	60.2	30.0	0.0	2.1		35.0	0.0	2.2	2.2	62.4
S-1	Oton-Bangcal Road		NR	12.0	12.0	2.1	16.1	192.6	192.6									0.0	116.9	48.9	26.8	192.6									192.6
S-2	Jaro-Sta.Barbara Road	Iloilo City Section	PR	2.9					123.2									0.0	74.0	32.1	17.1	123.2									123.2
		Pavia Section	PR	4.1	4.1	10	16.0	65.6																							
		Sta. Barbara Section	PR	3.6	3.6	10	16.0	57.6																							
Total				293.3	215.6	—	—	—	4,757.8	82.0	47.0	33.2	1,030.2	715.0	11.6	463.6	643.5	1,118.7	3,233.2	1,748.1	895.1	5,876.5	—	2.4	138.3	—	—	187.8	127.5	315.3	6,191.7

Note: Unit price of Bridge construction

2-Lane new bridge = 450,000 P/m
4-Lane new bridge = 900,000 P/m
Widening of 2-Lane bridge = 250,000 P/m

ROAD AND BRIDGE CONSTRUCTION COST
METRO ILOILO FUTURE ROAD NETWORK PLAN (ALTERNATIVE-2A)

Road No.	Road Name		Admi. classi.	Civil Work: Road: Road Length (km)	Target Road: Length (km)	Target Road: Type of Cross-section	Target Road: Cost Per km (Million Peso)	Target Road: Cost (Million Peso)	Target Road: Project Total Cost (Million Peso)	Civil Work: Bridge: Target Bridge: No.	Target Bridge: No.	Target Bridge: Widening (m)	Target Bridge: New Construction 2-Lane (m)	Target Bridge: New Construction 4-Lane (m)	Cost (Million Peso): Widening	Cost (Million Peso): New Construction 2-Lane	Cost (Million Peso): New Construction 4-Lane	Cost (Million Peso): Project Total Cost FINANCIAL	Civil Work Total: FOREIGN	Civil Work Total: LOCAL	Civil Work Total: TAX	Civil Work Total: FINANCIAL	Land: Additional ROW (m)	Land: Road Length: (km): Urban	Land: Road Length: (km): Rural	Land: Cost Per m2 (Peso): Urban	Land: Cost Per m2 (Peso): Rural	Land: Cost (Million Peso): Urban	Land: Cost (Million Peso): Rural	Land: Cost (Million Peso): Total	Total Cost
C-1	Circumferential Road No. 1		—	12.8	12.8	1	65.2	834.9	834.9	15.0	15.0			715.0				643.5	643.5	721.6	507.7	249.1	1,478.4	35.0	0.7	12.1	3500.0	100.0	85.8	42.4	128.1	1,606.5
C-2	Circumferential Road No. 2	Section - 1 (Oton-Jct. Iloilo-San Miguel Road)	NR	7.8	7.8	2.1	16.1	125.2	578.1	2.0								0.0	399.2	216.8	111.0	727.0	10.0	0.0	7.8		50.0	0.0	3.9	3.9	810.5
		Section - 2 (Jct. Iloilo-San Miguel Road-Sta. Barbara)	Prov.	7.8	7.8	2.1	16.1	125.2															10.0	0.0	7.8		50.0	0.0	3.9	3.9	
		Section - 3 (New Construction Sect.)	—	11.5	11.5	2	28.5	327.7		10.0	10.0		330.8			148.9		148.9					30.0	1.0	10.5	2000.0	50.0	60.0	15.8	75.8	
C-3	Circumferential Road No. 3	Section - 1 (Jct. Iloilo-San Miguel-Jct. Sta. Barbara-New Lucena Road)	Prov.	2.9	2.9	2.1	16.1	46.5	541.2	2.0	1.0	24.0			8.4			8.4	357.5	184.6	95.3	637.4	10.0	0.0	2.9		35.0	0.0	1.0	1.0	653.7
			—	10.8	10.8	2	28.5	307.1															30.0	0.0	10.8		35.0	0.0	11.1	11.1	
		Section - 2 (Jct. Sta.Barbara-New Lucena Road-Iloilo Coastal Road)	Prov.	12.0	12.0	2.1	16.1	192.6		4.0	4.0		195.0			87.8		87.8					10.0	0.0	12.0		35.0	0.0	4.2	4.2	
C-4	Circumferential Road No. 4	Tigbauan - Bangcal Road	NR	15.9	9.9	2.2	15.2	150.6	771.4	10.0	3.0	9.2	19.0		3.2	8.6		11.8	473.3	209.7	109.2	783.2	10.0	0.0	15.9		5.0	0.0	0.8	0.8	791.4
		Bangcal-Cabatuan Road	NR	17.3	12.1	2.2	15.2	184.1															10.0	0.0	17.3		5.0	0.0	0.9	0.9	
		Cabatuan-New Lucena Road	NR	14.9	12.0	2.2	15.2	182.6															10.0	0.0	14.9		5.0	0.0	0.7	0.7	
		New Lucena-Dumangas Road	NR	16.7	16.7	2.2	15.2	254.1															10.0	0.0	16.7		35.0	0.0	5.8	5.8	
R-1	Iloilo-Antique Road	Iloilo-Oton Section	NR	10.2	4.1	4.3	21.6	88.4	163.1	4.0	1.0		29.5			13.3		13.3	101.4	49.4	25.7	176.4									176.4
					4.1	4.6	13.1	53.8																							
					2.0	4.1	10.4	20.9																							
		Oton-Tigbauan Section	NR	12.0																											
R-2	Iloilo-San Miguel Road	Molo-Mandurieo Section	NR	1.9					106.9	2.0	1.0		87.5			39.4		39.4	81.7	42.5	22.0	146.3									146.3
		Mandurieo-San Miguel Section	NR	12.1	12.1	5	8.8	106.9																							
R-3	Iloilo-Sta.Barbara-Kalibo Road	City Proper-Jaro Section	NR	3.0	3.0	6.1	21.6	64.8	374.1	10.0	2.0		193.4			87.0		87.0	251.2	139.0	71.0	461.1									461.1
		Jaro-City Bdry. Section	NR	3.9	3.9	6.1	21.6	84.3																							
		Pavia Section	NR	5.5	5.5	6.2	26.2	144.2																							
		Sta. Barbara Section	NR	2.8	1.8	6.3.1	19.8	35.6																							
					1.0	6.3.2	14.5	14.5																							
		Sta. Barbara Bypass Section	NR	1.6	1.5	6.4.1	19.5	29.3																							
					0.1	6.4.2	14.2	1.4																							
		- Cabatuan Section	NR	9.6																											
		- Jankuay Section	NR	14.9																											
R-4	Iloilo-Roxas Road	Jct. Iloilo-Sta. Barbara Road-Jaro Bridge Section	NR	1.2					318.0	4.0	1.0		20.0			9.0		9.0	168.1	91.6	47.3	327.0									327.0
		Jaro Bridge-Jct. Jaro-Sta. Barbara Road Section	NR	1.4																											
		Jct. Jaro-Sta.Barbara Road-Leganes Proper Sect.	NR	5.7	5.7	7.1	38.2	218.0																							
		Leganes Proper-Zarraga Proper Section	NR	4.7	4.7	7.2	21.3	100.0																							
		Zarraga Proper-Jct. New Lucena-Dumangas Rd. Sect.	NR	7.5																											
R-5	Iloilo Coastal Road	Iloilo River Bridge-Jct. Intl Port Access Road Section	NR	4.0	0.1	8.1	18.3	1.8	160.8	10.0								0.0	94.7	43.4	22.7	160.8									160.8
					2.3	8.2	20.4	47.0																							
		Jct. International Port Access Road-Study Area Bdry.Sect.	NR	7.8	5.4	8.3	20.7	112.0																							
				8.2																											
B-1	R-1 Bypass Road		—	8.6	8.6	9	28.7	246.6	246.6	10.0	10.0		170.0			76.5		76.5	172.6	100.3	50.3	323.1	30.0	0.4	8.2	2000.0	100.0	24.0	24.6	48.6	371.7
B-2	R-4 Bypass Road (Leganes L=3.2km, Zarraga L=3.9km)		—	6.4	6.4	9	28.7	183.5	183.5	1.0	1.0		15.0			6.8		6.8	109.5	53.4	27.4	190.3	30.0	0.3	6.1	2000.0	50.0	18.0	9.2	27.2	217.4
B-3	Cabatuan Bypass Road		—	2.1	2.1	9	28.7	60.2	60.2									0.0	35.1	16.6	8.5	60.2	30.0	0.0	2.1		35.0	0.0	2.2	2.2	62.4
S-1	Oton-Bangcal Road		NR	12.0	12.0	2.1	16.1	192.6	192.6									0.0	116.9	48.9	26.8	192.6									192.6
S-2	Jaro-Sta.Barbara Road	Iloilo City Section	PR	2.9					123.2									0.0	74.0	32.1	17.1	123.2									123.2
		Pavia Section	PR	4.1	4.1	10	16.0	65.6																							
		Sta. Barbara Section	PR	3.6	3.6	10	16.0	57.6																							
Total				287.9	210.2	—	—	—	4,654.8	94.0	49.0	33.2	1,060.2	715.0	11.6	477.1	643.5	1,132.2	3,176.7	1,726.8	883.4	5,787.0	—	2.4	144.9	—	—	187.8	126.5	314.2	6,101.2

Note: Unit price of bridge construction

2-Lane new bridge = 450,000 P/m
4-Lane new bridge = 900,000 P/m
Widening of 2-Lane bridge = 350,000 P/m

ROAD AND BRIDGE CONSTRUCTION COST
METRO ILOILO FUTURE ROAD NETWORK PLAN (ALTERNATIVE-3)

Road No.	Road Name		Admi. classi.	Road						Civil Work								Civil Work Total				Land							Total Cost
				Road Length (km)	Target Road					Bridge												Additional ROW (m)	Road Length (km)		Cost Per m2 (Peso)		Cost (Million Peso)			
					Length (km)	Type of Cross-section	FINANCIAL	FINANCIAL	FINANCIAL	No.	Target Bridge No.	Widening (m)	New Construction 2-Lane (m)	New Construction 4-Lane (m)	Widening	Cost (Million Peso) New Construction 2-Lane	New Construction 4-Lane	Project Total Cost FINANCIAL	FOREIGN	LOCAL	TAX	FINANCIAL		Urban	Rural	Urban	Rural	Urban	Rural	Total	
C-1	Circumferential Road No. 1		—	12.8	12.8	1	65.2	834.9	834.9	15.0	15.0			715.0			643.5	643.5	721.6	507.7	249.1	1,478.4	35.0	0.7	12.1	3500.0	100.0	85.8	42.4	128.1	1,606.5
C-2	Circumferential Road No. 2	Section - 1 (Oton-Jct. Iloilo-San Miguel Road)	NR	7.8	7.8	2.1	16.1	125.2	606.6	2.0							0.0	415.8	224.6	115.1	755.5	10.0	0.0	7.8		50.0	0.0	3.9	3.9	840.5
		Section - 2 (Jct. Iloilo-San Miguel Road-Sta. Barbara)	Prov.	7.8	7.8	2.1	16.1	125.2														10.0	0.0	7.8		50.0	0.0	3.9	3.9	
		Section - 3 (New Construction Sect.)	—	12.5	12.5	2	28.5	356.2		10.0	10.0		330.8			148.9		148.9				30.0	1.0	11.5	2000.0	50.0	60.0	17.3	77.3	
C-3	Circumferential Road No. 3	Section - 1 (Jct. Iloilo-San Miguel-Jct. Sta. Barbara-New Lucena Road)	Prov.	2.9	2.9	2.1	16.1	46.5	541.2	2.0	1.0	24.0			8.4			357.5	184.6	95.3	637.4	10.0	0.0	2.9		35.0	0.0	1.0	1.0	653.7
			—	10.6	10.6	2	28.5	302.1									8.4					30.0	0.0	10.6		35.0	0.0	11.1	11.1	
		Section - 2 (Jct. Sta.Barbara-New Lucena Road-Iloilo Coastal Road)	Prov.	12.0	12.0	2.1	16.1	192.6		4.0	4.0		195.0			87.8		87.8				10.0	0.0	12.0		35.0	0.0	4.2	4.2	
C-4	Circumferential Road No. 4	Tigbauan - Bangcal Road	NR	15.9	9.9	2.2	15.2	150.6	771.4	10.0	3.0	9.2	19.0		3.2	8.6		11.8	473.3	200.7	109.2	783.2	10.0	0.0	15.9		5.0	0.0	0.8	0.8	791.4
		Bangcal-Cabatuan Road	NR	17.3	12.1	2.2	15.2	184.1														10.0	0.0	17.3		5.0	0.0	0.9	0.9	
		Cabatuan-New Lucena Road	NR	14.9	12.0	2.2	15.2	182.6														10.0	0.0	14.9		5.0	0.0	0.7	0.7	
		New Lucena-Dumangas Road	NR	16.7	16.7	2.2	15.2	254.1														10.0	0.0	16.7		35.0	0.0	5.8	5.8	
R-1	Iloilo-Antique Road	Iloilo-Oton Section	NR	10.2	4.1	4.3	21.6	88.4	163.1	4.0	1.0		29.5			13.3		13.3	101.4	49.4	25.7	176.4									176.4
					4.1	4.6	13.1	53.8																						
					2.0	4.1	10.4	20.9																						
		Oton-Tigbauan Section	NR	12.0																										
R-2	Iloilo-San Miguel Road	Molo-Handurao Section	NR	1.9					106.9	2.0	1.0		87.5			39.4		39.4	81.7	42.5	22.0	146.3									146.3
		Handurao-San Miguel Section	NR	12.1	12.1	5	8.8	106.9																						
R-3	Iloilo-Sta.Barbara-Kalibo Road	City Proper-Jaro Section	NR	3.0	3.0	6.1	21.6	64.8	374.1	10.0	2.0		193.4			87.0		87.0	251.2	139.0	71.0	461.1									461.1
		Jaro-City Bdry. Section	NR	3.9	3.9	6.1	21.6	84.3																						
		Pavia Section	NR	5.5	5.5	6.2	26.2	144.2																						
		Sta. Barbara Section	NR	2.8	1.8	6.3.1	19.8	35.6																						
					1.0	6.3.2	14.5	14.5																						
		Sta. Barbara Bypass Section	NR	1.6	1.5	6.4.1	19.5	29.3																						
					0.1	6.4.2	14.2	1.4																						
		- Cabatuan Section	NR	9.6																										
		- Janiuay Section	NR	14.9																										
R-4	Iloilo-Roxas Road	Jct. Iloilo-Sta. Barbara Road-Jaro Bridge Section	NR	1.2					318.0	4.0	1.0		20.0			9.0		9.0	188.1	91.6	47.3	327.0									327.0
		Jaro Bridge-Jct. Jaro-Sta. Barbara Road Section	NR	1.4																										
		Jct. Jaro-Sta.Barbara Road-Legaspi Proper Sect.	NR	5.7	5.7	7.1	38.2	218.0																						
		Legaspi Proper-Zarraga Proper Section	NR	4.7	4.7	7.2	21.3	100.0																						
		Zarraga Proper-Jct. New Lucena-Dumangas Rd. Sect.	NR	7.5																										
R-5	Iloilo Coastal Road	Iloilo River Bridge-Jct. Int'l Port Access Road Section	NR	4.8	0.1	8.1	18.3	1.8	160.8	10.0						0.0		0.0	94.7	43.4	22.7	160.8									160.8
					2.3	8.2	20.4	47.0																						
		Jct. International Port Access Road-Study Area Bdry.Sect.	NR	7.8	5.4	8.3	20.7	112.0																						
				8.2																										
B-1	R-1 Bypass Road		—	8.8	8.8	9	28.7	246.6	246.6	10.0	10.0		170.0			76.5		76.5	172.6	100.3	50.3	323.1	30.0	0.4	8.2	2000.0	100.0	24.0	24.6	48.6	371.7
B-2	R-4 Bypass Road		—	7.2	7.2	9	28.7	206.5	206.5	5.0	5.0		95.0			42.8		42.8	136.5	74.9	37.8	249.2	30.0	0.3	6.9	2000.0	50.0	18.0	10.4	28.4	277.6
B-3	Cabatuan Bypass Road		—	2.1	2.1	9	28.7	60.2	60.2							0.0		0.0	35.1	16.6	8.5	60.2	30.0	0.0	2.1		35.0	0.0	2.2	2.2	62.4
S-1	Oton-Bangcal Road		NR	12.0	12.0	2.1	16.1	192.6	192.6							0.0		0.0	116.9	48.9	26.8	192.6									192.6
S-2	Jaro-Sta.Barbara Road	Iloilo City Section	PR	2.9					123.2							0.0		0.0	74.0	32.1	17.1	123.2									123.2
		Pavia Section	PR	4.1	4.1	10	16.0	65.6																						
		Sta. Barbara Section	PR	3.6	3.6	10	16.0	57.6																						
Total				289.7	212.0	—	—	—	4,706.2	88.0	53.0	33.2	1,140.2	715.0	11.6	513.1	643.5	1,168.2	3,220.3	1,756.2	697.9	5,674.4	—	2.4	146.7	—	—	187.8	129.2	316.9	6,191.3

Note: Unit price of bridge construction

2-Lane new bridge = 450,000 P/m
4-Lane new bridge = 900,000 P/m
Widening of 2-Lane bridge = 350,000 P/m

APPENDIX 10.2-2

TYPICAL CROSS-SECTIONS

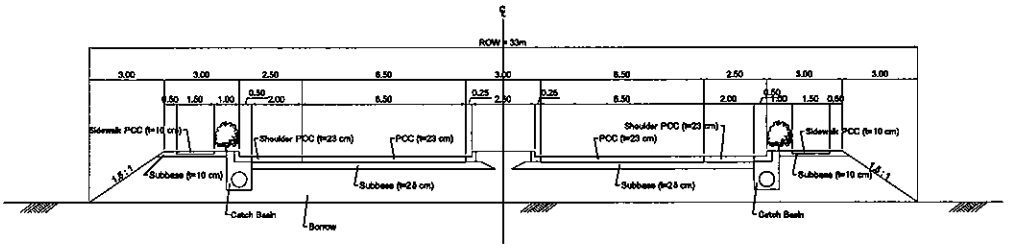
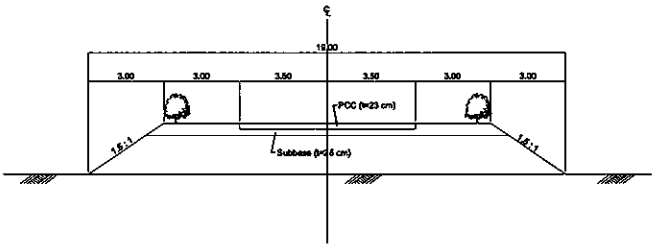
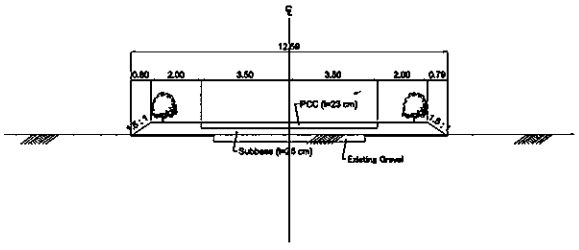
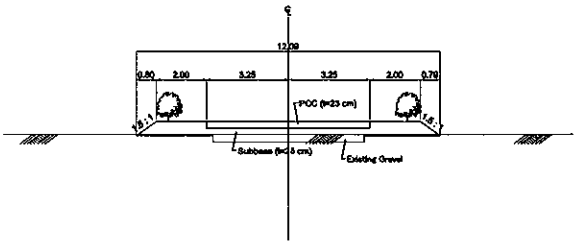
TYPE OF WORK	TYPICAL CROSS SECTION
TYPE-1 : New construction 4-lane	
TYPE-2 : New construction 2-lane	
TYPE-2.1 : New PCC pavement construction on existing gravel	
TYPE-2.2 : New PCC pavement construction on existing gravel	

FIGURE TYPICAL CROSS SECTIONS (1/7)

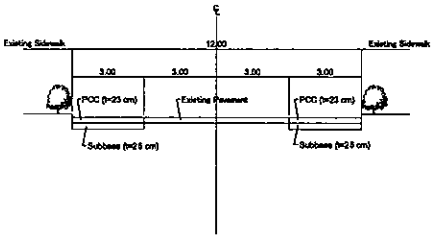
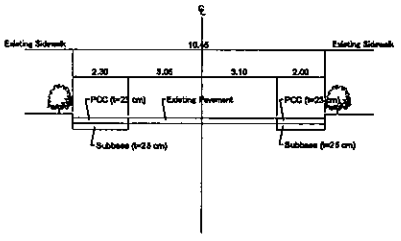
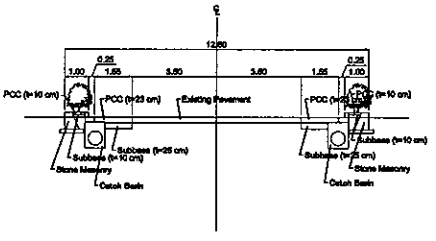
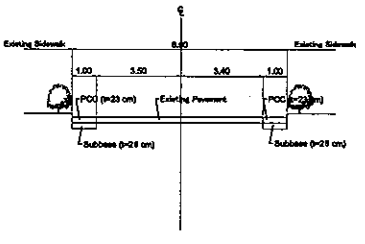
TYPE OF WORK	TYPICAL CROSS SECTION
TYPE-4.1 : Improvement from gravel to PCC pavement Widening	
TYPE-4.2 : Improvement from gravel to PCC pavement Widening	
TYPE-4.3 : Improvement from gravel to PCC pavement Widening	
TYPE-4.4 : Improvement from gravel to PCC pavement Widening	

FIGURE TYPICAL CROSS SECTIONS (2/7)

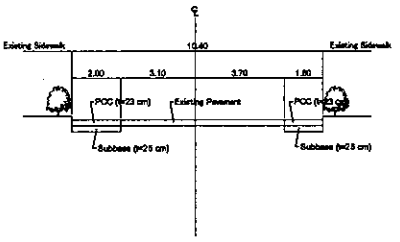
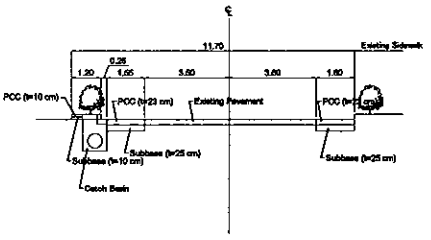
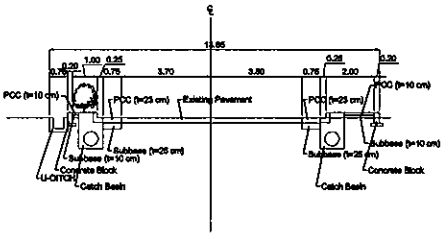
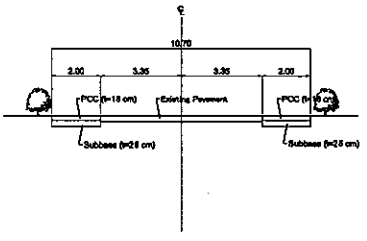
TYPE OF WORK	TYPICAL CROSS SECTION
TYPE-4.5 : Improvement from gravel to PCC pavement Widening	
TYPE-4.6 : Improvement from gravel to PCC pavement Widening	
TYPE-4.8 : Improvement from gravel to PCC pavement Widening	
TYPE-5 : Improvement from gravel to PCC pavement Widening	

FIGURE TYPICAL CROSS SECTIONS (3/7)

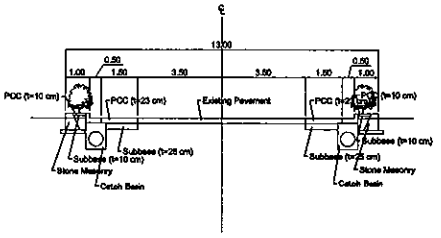
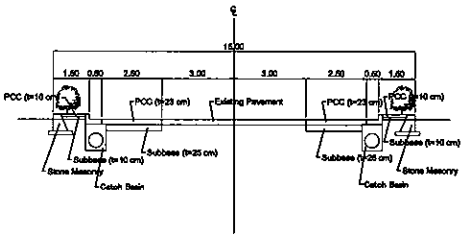
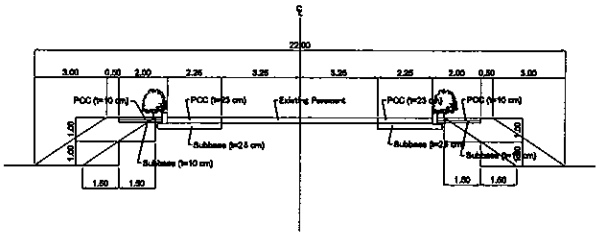
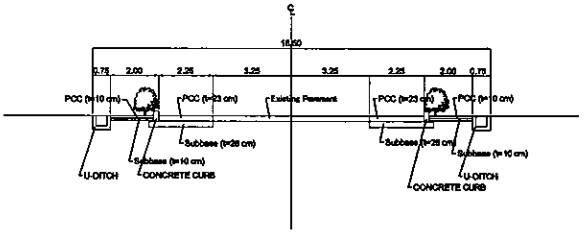
TYPE OF WORK	TYPICAL CROSS SECTION
TYPE-6.1 : Improvement from gravel to PCC pavement Widening	
TYPE-6.2 : Improvement from gravel to PCC pavement Widening	
TYPE-6.3.1 : Improvement from gravel to PCC pavement Widening	
TYPE-6.3.2 : Improvement from gravel to PCC pavement Widening	

FIGURE TYPICAL CROSS SECTIONS (4/7)

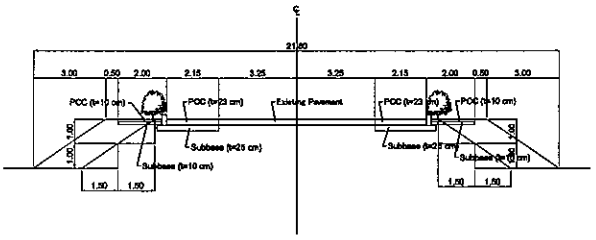
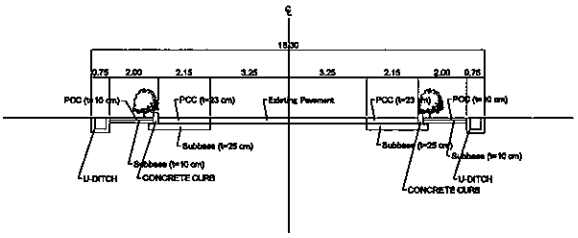
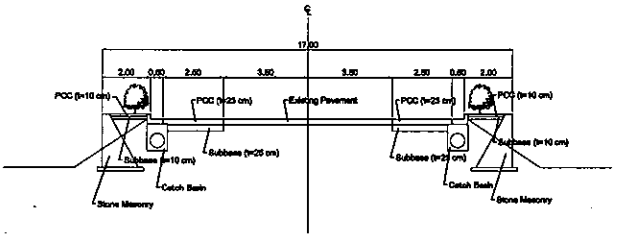
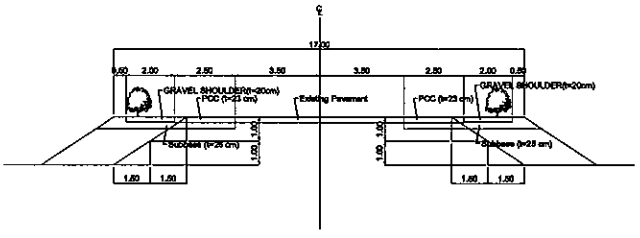
TYPE OF WORK	TYPICAL CROSS SECTION
TYPE-6.4.1 : Improvement from gravel to PCC pavement Widening	
TYPE-6.4.2 : Improvement from gravel to PCC pavement Widening	
TYPE-7.1 : Improvement from gravel to PCC pavement Widening from 2-lane to 4-lane	
TYPE-7.2 : Improvement from gravel to PCC pavement Widening	

FIGURE TYPICAL CROSS SECTIONS (5/7)

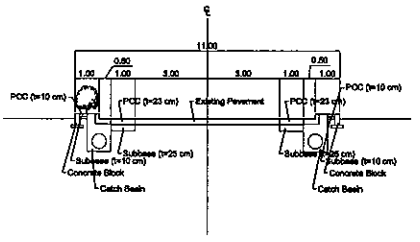
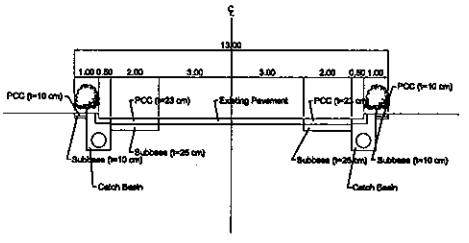
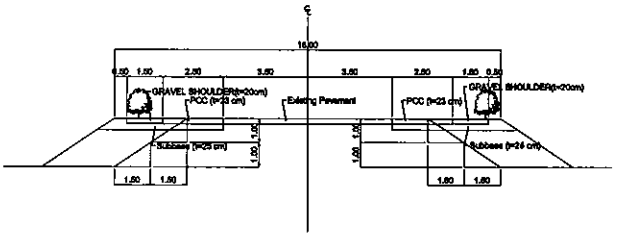
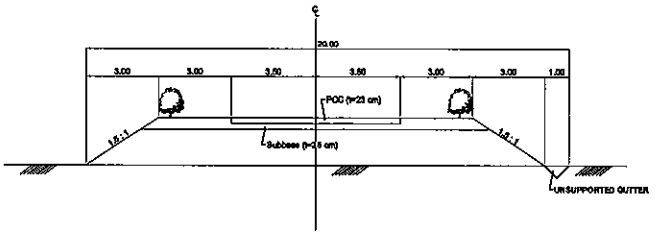
TYPE OF WORK	TYPICAL CROSS SECTION
TYPE-8.1 : Improvement from gravel to PCC pavement Widening	
TYPE-8.2 : Improvement from gravel to PCC pavement Widening	
TYPE-8.3 : Improvement from gravel to PCC pavement Widening	
TYPE-9 : New construction 2-lane	

FIGURE TYPICAL CROSS SECTIONS (6/7)

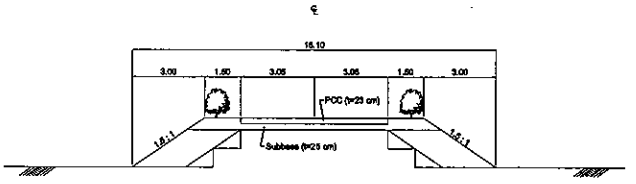
TYPE OF WORK	TYPICAL CROSS SECTION
TYPE-10 : Improvement from gravel to PCC pavement Widening	

FIGURE TYPICAL CROSS SECTIONS (7/7)

APPENDIX 11.1

ECONOMIC EVALUATION OF MASTER PLAN

APPENDIX 11.1
ECONOMIC EVALUATION OF MASTER PLAN

11.1 ECONOMIC EVALUATION OF MASTER PLAN

11.1.1 General

The evaluation of the Plans and Projects is made two stages in the planning process with different purposes; one is the stage of determination of priority among the projects (Section 11.2) and the other is to evaluate economic feasibility of the plan in accordance with the proposed implementation schedule which will be described in this section. In both cases, economic evaluation is made by comparison analysis between benefits and costs as illustrated in Figure 11.1-1. The process of economic evaluation of master plan is shown in Figure 11.1-2.

The evaluation period is assumed to be 20 years from the starting year of the improvement project.

The economic evaluation method is principally employed benefit cost analysis which is evaluated investment efficiency through comparison between costs and benefits derived from the road network. It is expressed the benefit cost stream during evaluation period and the economic indicators used in this study are as follows:

- Net Present Value (NPV),
- Benefit Cost (B/C) Ratio, and
- Economic Internal Rate of Return (EIRR).

The benefits derived from the road project can be defined principally as those with and without project. There are various benefits derived from the project. Among these benefits, the following tangible ones are taken into account in this study:

a) Reduction of Vehicle operating Costs (VOC)
   - Reduction of Running Cost
   - Reduction of Fixed Cost
b) Reduction of Travel Time Costs (TTC)

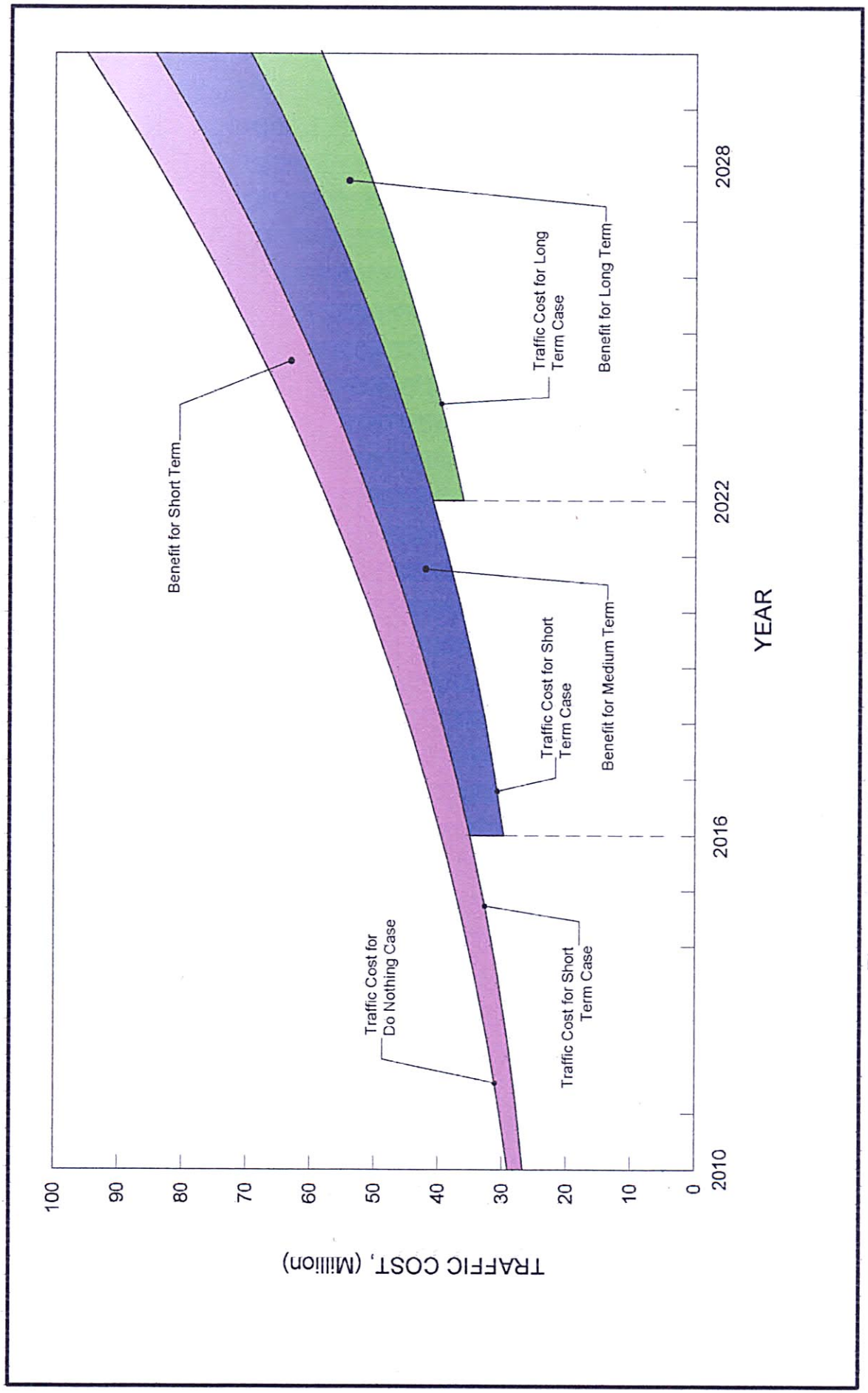


Figure 11.4-1 BENEFIT FOR MASTER PLAN CASE

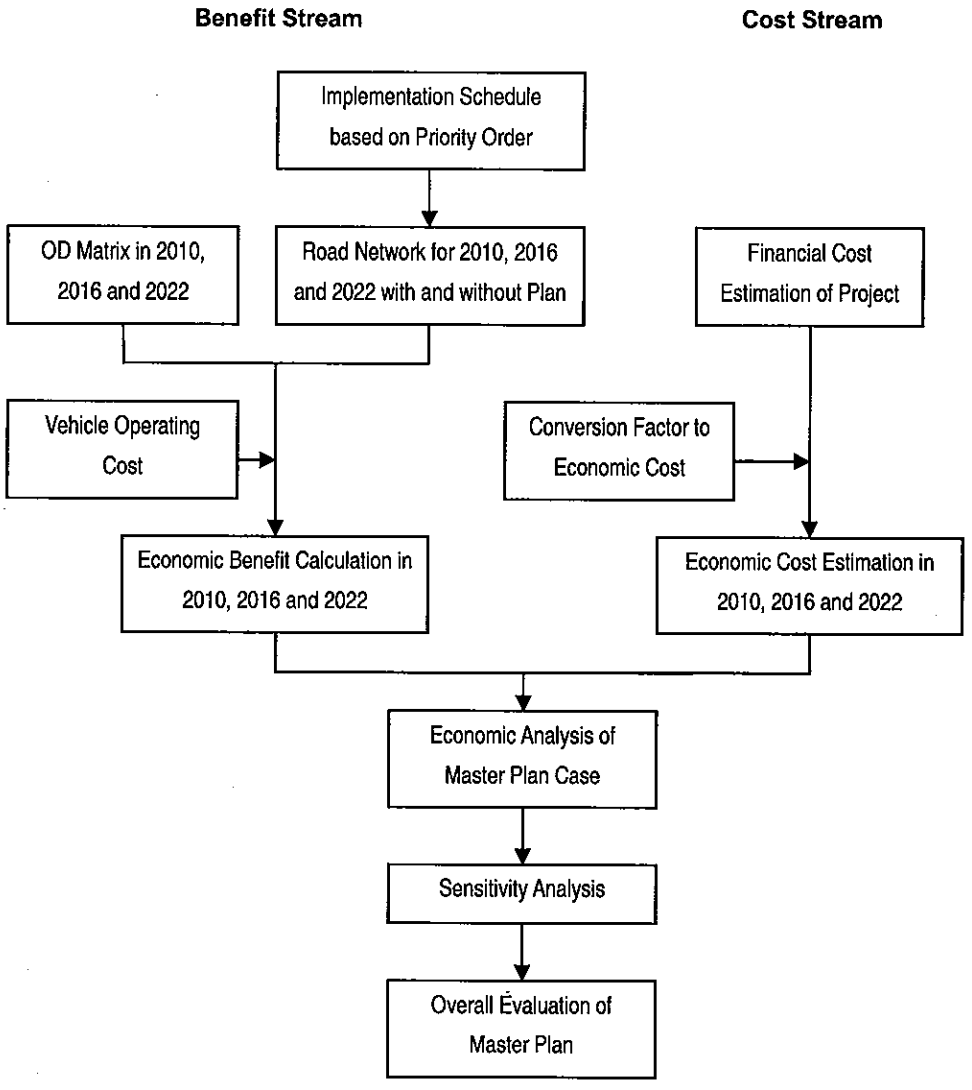


FIGURE 11.1-2 PROCEDURE FOR EVALUATION OF MASTER PLAN

11.1.2 Benefit of the Master Plan

(1) Vehicle Operating Cost (VOC) and Time Cost (TC)

The vehicle operating costs (VOC) and travel time cost (TC) are based on the estimated VOC (as of April 2002) by PMO-FS DPWH. The running cost (RC) in VOC is classified by pavement type and surface conditions. Based on the estimated VOC, the following VOC is expressed as follows:

a) VOC is expressed as 2003 prices taken into account an inflation rate.
RC by pavement type and surface condition is considered further travel speed factor

b) The VOC as of 2003 prices is presented in Table11.1-1.

TABLE 11.1-1 BASIC VEHICLE OPERATING COSTS AS OF 2003

	Running Cost (P/km)	Fixed Cost (P/min)	Time Cost (P/km)
Car	4,493	0.248	1.003
Jeepney	3,026	1.195	1.485
Bus	7,540	1.815	5.626
Truck	9,734	2.132	0.000
Motorcycle	832	0.083	0.593
Tricycle	998	0.978	0.223

Note: Pavement type: paved, Surface condition: good

Source: Estimated VOC as of 2003 price based on VOC as of 2002 estimated by PMO-FS DPWH,

Relationship between RC and travel speed is shown in Table 11.1-2 and Figures 11.1-2, -3, and -4. This relationship are employed that developed in MMUTIS (Metro Manila Urban Transport Integration Study (JICA, 1999)

TABLE 11.1-2 PARAMETERS FOR FORMULA OF RUNNING COST ESTIMATION

		A3	A2	A1	B
Paved Good	Car		0.5583	-55.677	5,854.6
	Jeepney		0.4075	-40.838	4,011.6
	Bus	0.0237	-1.7388	9.397	8,523.9
	Truck	0.0409	-2.0190	-122.380	15,489.0
	Motor cycle		0.3723	-24.529	1,172.3
Paved Bad	Car		0.7806	-57.734	7,342.4
	Jeepney		0.9206	-61.335	5,202.0
	Bus	0.0419	-2.0940	-14.086	13,360.0
	Truck	0.0719	-2.5191	-172.390	22,015.0
	Motor cycle		1.5585	-75.636	1,962.0
Gravel Bad	Car		0.8921	-65.982	8,391.3
	Jeepney		1.0521	-70.097	5,945.1
	Bus	0.0498	-2.4867	-16.727	15,865.0
	Truck	0.0854	-2.9914	-204.710	26,142.0
	Motor cycle		1.7811	-86.442	2,242.2

Note: Running cost formula RC = A3 X 3 + A2 X2 + A1 X + B

Where RC = Running cost (Pesos/1,000km)

A3, A2, A1: Parameter

X = Travel speed (km/h)

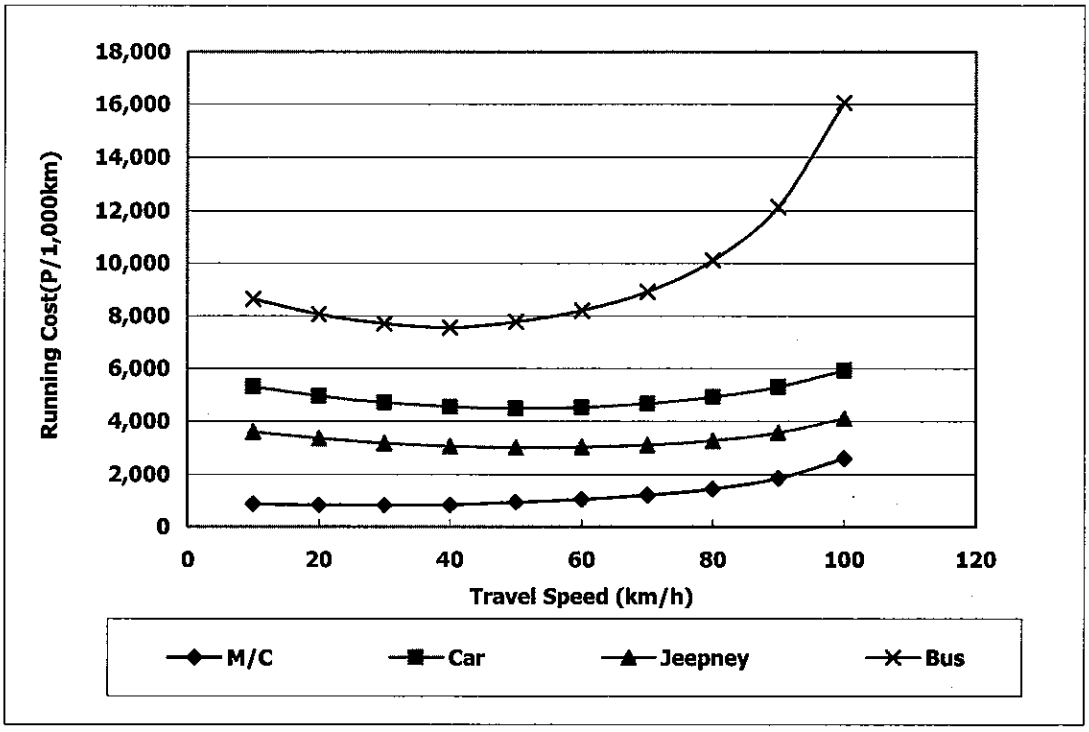


FIGURE 11.1-3 RELATIONSHIP BETWEEN RUNNING COST AND TRAVEL SPEED IN CASE OF PAVED AND GOOD CONDITION ROAD

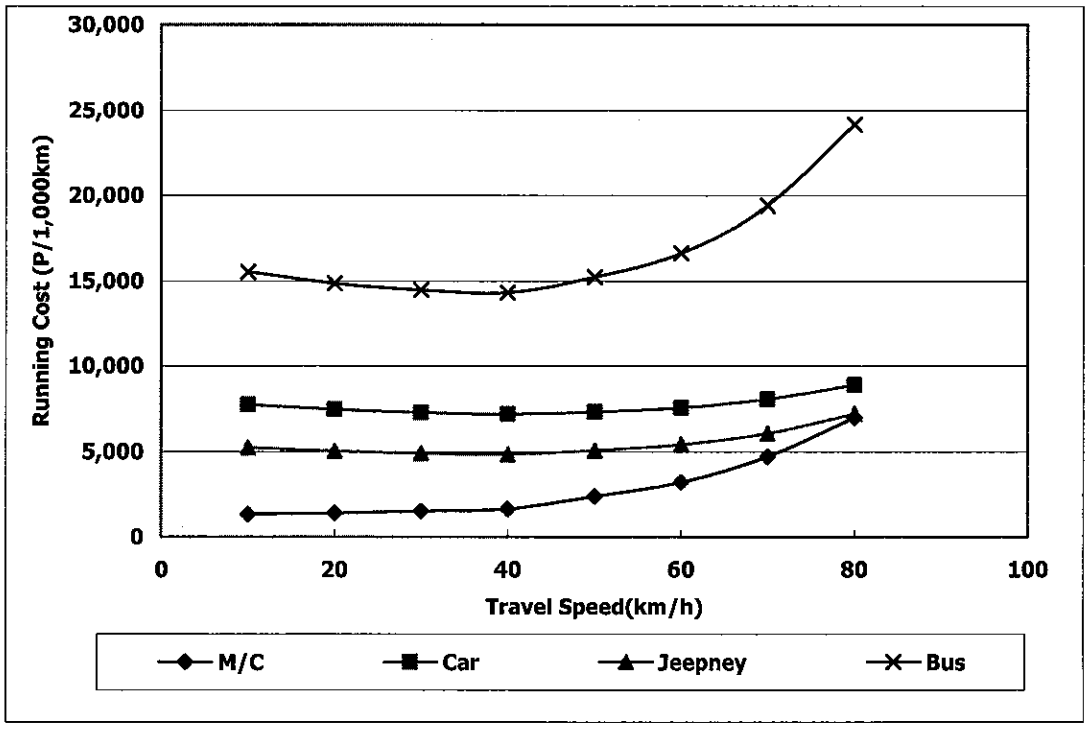


FIGURE 11.1-4 RELATIONSHIP BETWEEN RUNNING COST AND TRAVEL SPEED IN CASE OF PAVED AND BAD CONDITION ROAD

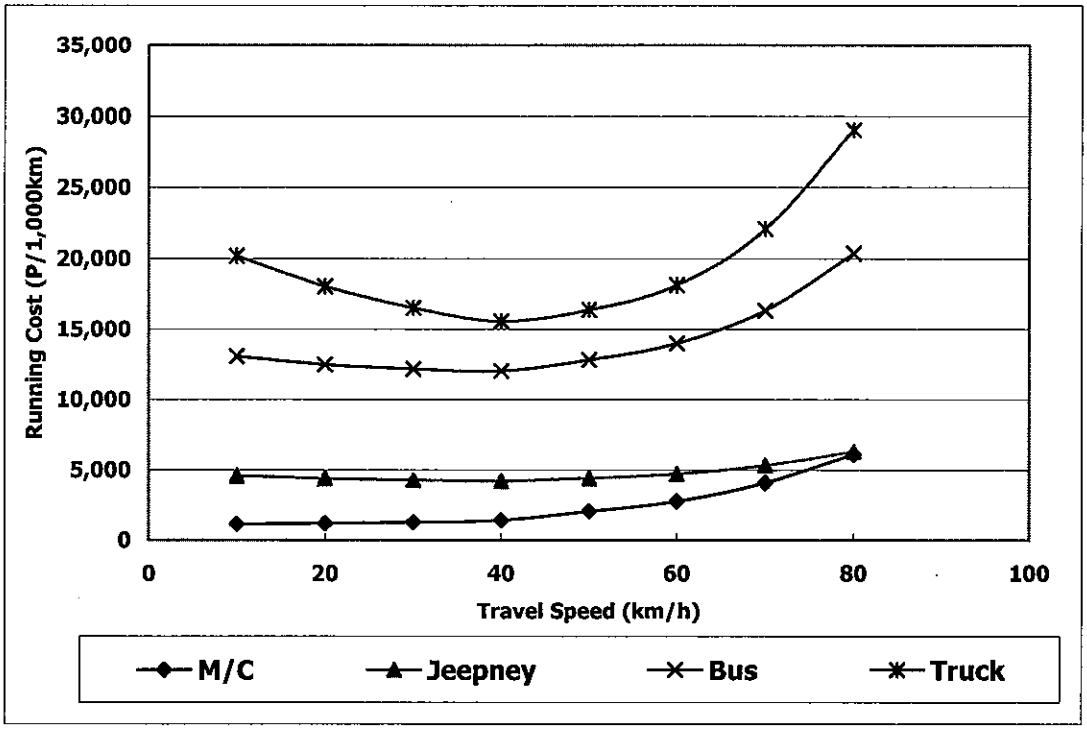


FIGURE 11.1-5 RELATIONSHIP BETWEEN RUNNING COST AND TRAVEL SPEED IN CASE OF GRAVEL AND BAD CONDITION ROAD

(2) Estimation of Vehicle Operating Costs

The saving in vehicle operating costs is quantified on the annual basis by means of the following formula:

$$SVOC = ((VK_S^{WO} - VK_S^{W}) \times VRC_S) + (VH^{WO} - VH^{W}) \times VFC)) \times AF$$

Where:

SVOC	:	Saving in vehicle operating costs
VK_S^{WO}	:	Vehicle traffic on the road network without Master Plan by travel speed
VK_S^{W}	:	Vehicle traffic on the road network with Master Plan by travel speed
VRC_S	:	Vehicle running cost by travel speed
VH^{WO}	:	Vehicle hours on the road network without Ayala Bridge
VH^{W}	:	Vehicle hours on the road network with Ayala Bridge
VFC	:	Fixed cost
AF	:	Annualized factor

Table 11.1-3 shows total VOC with and without the project.

TABLE 11.1-3 VOC ESTIMATION

Year	W/O Mater Plan	W/ Master Plan	Daily Benefit (W/O –W/)	Annualized Benefit
2010	14,730	13,848	882	299,825
2016	20,021	16,634	3,387	1,151,610
2022	27,408	22,958	4,451	1,513,177

Unit: '000 Pesos

(3) Estimation of Travel Time Cost

The saving in travel time costs was quantified on the annual basis by means of the following formula:

$STTC = (VH^{WO} - VH^{W}) \times TC \times AF$

Where:

- STTC : Saving in travel time costs
- VH^{WO} : Vehicle hours on the project road without master plan
- VH^{W} : Vehicle hours on the project road with master plan
- TC : Time Value
- AF : Annualized factor

Table 11.1-4 shows total travel time cost with and without the master plan.

TABLE 11.1-4 TRAVEL TIME COST ESTIMATION

Year	W/O Mater Plan	W/ Master Plan	Daily Benefit (W/O –W/)	Annualized Benefit
2010	6,046	5,348	697	237,127
2016	9,025	6,320	2,705	919,650
2022	13,435	9,085	4,350	1,479,058

Unit: '000 Pesos

(4) Summary of Benefit Calculation

Saving in VOC and travel time cost are summarized in Table 11.1-5.

TABLE 11.1-5 ESTIMATION OF BENEFITS

Year	Saving in VOC	Saving in TCC	Total Saving
2010	299,825	237,127	536,952
2016	1,151,610	919,650	2,071,260
2022	1,513,177	1,479,058	2,992,235

Unit: '000 Pesos/Year

11.1.3 Cost Estimation of Master Plan

(1) Project Cost

The project cost, which was already calculated in the previous section, is expressed as the financial cost. It is therefore to convert from financial cost to economic cost using conversion factor.

Taking into account the master plan stage in this study the economic cost is only estimated to deduct from financial cost to government taxes and is shown in Table 11.1-6.

TABLE 11.1-6 ECONOMIC COST ESTIMATION

Description	Economic Cost
1. Construction Cost from 2006 to 2010	1,111.8
2. Construction Cost from 2011 to 2016	1,832.2
3. Construction Cost from 2017 to 2022	3,375.7
Total	6,319.7

Unit: Million Pesos

(2) Maintenance Cost

According to the maintenance study in this study the present maintenance cost for the road and bridge in the Metro Iloilo are estimated for about 1.0% of the construction cost. In this study, therefore, the maintenance cost of the road project is assumed to be 1.0% of the construction cost.

11.1.4 Economic Evaluation

(1) Benefit Cost Analysis

Based on the above mentioned benefits and cost estimations, the economic analysis of the Master Plan case is made. Table 11.1-7 shows the benefit / cost analysis of the Master Plan implementation during project life period and Table 11.1-8 shows the benefit cost stream. The results of the economic analysis show that a Net Present Value (NPV) of P3,882 million and BCR of 3.34 over 20 years service life using a discount rate of 15% which is designated by the NEDA. The Economic Internal Rate of Return (EIRR) is compiled at 46.1 %.

TABLE 11.1-7 ECONOMIC INDICATIONS OF BENEFIT COST ANALYSIS IN METRO ILOILO

	Net Present Value (NPV) (Million Peso)	B/C Ratio	EIRR (%)
Short Term Plan	2,070	3.44	45.3
Medium Term Plan	1,195	3.40	50.6
Long Term Plan	85	1.27	21.0
Whole Plan	3,882	3.34	46.1

Notes: 1) Project life is assumed to be 20 years
2) Discount rate ids 15%

(2) Sensitivity Analysis

The sensitivity analysis is conducted under a worse case scenario incorporating increase and/or decrease of the estimation of costs and benefits. Table 11.1-9 shows the results of the sensitivity analysis.

TABLE 11.1-9 SENSITIVITY ANALYSIS REGARDING COSTS AND BENEFITS OF AYALA BRIDGE IMPROVEMENT PROJECT (EIRR)

Unit: %

		Benefits				
		20% down	10% down	Base Case	10% up	20% up
Costs	20% down	46.1	49.7	53.1	56.2	59.1
	10% down	42.6	46.1	49.3	52.3	55.2
	Base Case	39.5	42.9	46.1	49.0	51.8
	10% up	36.9	40.2	43.2	46.1	48.8
	20% up	34.5	37.7	40.7	43.5	46.1

Note: Service life of the project is assumed to be 20 years

(3) Summary of Economic Analysis

The implementation of the Master Plan following implementation schedule can be justified from view of national economic point since the economic indicators of all cases show more than the over cut-off level which can be considered as 15% of EIRR in the Philippines.

Table 11.1-8 Benefit - Cost Stream and Evaluation Indicators of the Master Plan in Metro Iloilo

Undiscounted Cost Benefit Stream Revenue

'000 Pesos

Sq.	Year	Construction Cost	O & M Cost	Cost Total	Benefit	Benefit - Cost
1	2004	-	-	-		-
2	2005	-	-	-		-
3	2006	77,500	-	77,500		-77,500
4	2007	82,800	775	83,575		-83,575
5	2008	82,800	1,603	84,403		-84,403
6	2009	434,300	2,431	436,731		-436,731
7	2010	434,400	6,774	441,174		-441,174
8	2011	219,100	11,118	230,218	672,292	442,074
9	2012	215,100	13,309	228,409	841,818	613,409
10	2013	299,400	15,460	314,860	1,054,184	739,324
11	2014	365,900	18,454	384,354	1,320,237	935,883
12	2015	280,100	22,113	302,213	1,653,578	1,351,365
13	2016	452,600	24,914	477,514	2,071,260	1,593,746
14	2017	239,400	29,440	268,840	2,195,332	1,926,492
15	2018	245,400	31,834	277,234	2,329,880	2,052,646
16	2019	179,400	34,288	213,688	2,475,812	2,262,124
17	2020	617,500	36,082	653,582	2,634,117	1,980,535
18	2021	486,700	42,257	528,957	2,805,868	2,276,911
19	2022	793,600	47,124	840,724	2,992,235	2,151,511
20	2023	813,700	55,060	868,760	2,992,235	2,123,475
21	2024	-	63,197	63,197	2,992,235	2,929,038
22	2025	-	63,197	63,197	2,992,235	2,929,038
23	2026	-	63,197	63,197	2,992,235	2,929,038
24	2027	-	63,197	63,197	2,992,235	2,929,038
25	2028	-	63,197	63,197	2,992,235	2,929,038
26	2029	-	63,197	63,197	2,992,235	2,929,038
27	2030	-	63,197	63,197	2,992,235	2,929,038
Residual Value		2,459,935			2,459,935	2,459,935
Total		6,319,700	835,415	7,155,115	49,444,428	42,289,313

	315,985	
Short-Term	1,111.8	
Mid-Term	1,832.2	
Long-Term	3,375.7	
Total Project Cost	6,319.7	Million Peso

Discounted Cost Benefit Stream Revenue

'000 Pesos

Sq.	Sq.	Year	Discounted	Construction Cost	O & M Cost	Cost Total	Benefit	Benefit - Cost
1		2004						
2		2005						
3	1	2006	1.150	67,391	-	67,391	-	-67,391
4	2	2007	1.323	62,609	586	63,195	-	-63,195
5	3	2008	1.521	54,442	1,054	55,496	-	-55,496
6	4	2009	1.749	248,312	1,390	249,702	-	-249,702
7	5	2010	2.011	215,974	3,368	219,341	-	-219,341
8	6	2011	2.313	94,723	4,807	99,530	290,650	191,121
9	7	2012	2.660	80,864	5,003	85,867	316,471	230,603
10	8	2013	3.059	97,874	5,054	102,928	344,615	241,686
11	9	2014	3.518	104,012	5,246	109,257	375,294	266,036
12	10	2015	4.046	69,236	5,466	74,702	408,739	334,037
13	11	2016	4.652	97,283	5,355	102,638	445,203	342,565
14	12	2017	5.350	44,746	5,503	50,248	410,323	360,075
15	13	2018	6.153	39,884	5,174	45,058	378,671	333,612
16	14	2019	7.076	25,354	4,846	30,200	349,903	319,703
17	15	2020	8.137	75,887	4,434	80,322	323,718	243,397
18	16	2021	9.358	52,011	4,516	56,527	299,848	243,322
19	17	2022	10.761	73,746	4,379	78,125	278,056	199,931
20	18	2023	12.375	65,751	4,449	70,200	241,788	171,588
21	19	2024	14.232	-	4,441	4,441	210,250	205,810
22	20	2025	16.367	-	3,861	3,861	182,826	178,965
23	21	2026	18.822	-	3,358	3,358	158,979	155,622
24	22	2027	21.645	-	2,920	2,920	138,243	135,323
25	23	2028	24.891	-	2,539	2,539	120,211	117,672
26	24	2029	28.625	-	2,208	2,208	104,532	102,324
27	25	2030	32.919	-	1,920	1,920	90,897	88,977
Residual Value			32.919				74,727	74,727
Total				1,570,101	91,875	1,661,976	5,543,946	3,881,970

Discount Rate	15.0%

Net Present Value (Million Peso)	3,882
B/C Ratio	3.34
EIRR	46.1%

APPENDIX 12.8-1

DETAILED CONSTRUCTION COST ESTIMATE

(Iloilo Circumferential Road No. 1)

Appendix 12.8-1 Detailed Construction Cost Estimate of Iloilo Circumferential Road No.1

Item No.	Description	Unit	Unit Cost	Component(%)			Quantity	Cost			
				Foreign	Local	Tax		Foreign	Local	Tax	Total
	PART C - EARTHWORK										
100(1)	Clearing and Grubbing	ha.	51,000.00	57	27	16	31.9	925,996.29	437,773.29	263,640.42	1,627,410.00
102(1)	Unsuitable Excavation	m3	176.00	59	17	24	96,268.0	10,013,411.59	2,931,167.86	3,998,587.37	16,943,166.83
102(2)a	Surplus Common Excavation	m3	176.00	60	24	15	0.0	0.00	0.00	0.00	0.00
103(2)a	Bridge Excavation, Common (AWL)	m3	200.00	53	31	16	12,571.6	1,327,560.96	789,496.48	397,262.56	2,514,320.00
103(2)b	Bridge Excavation, Common (BWL)	m3	750.00	51	34	15	3,494.6	1,336,684.50	880,639.20	403,626.30	2,620,950.00
104(1)a	Embankment from Excavation	m3	194.00	54	20	26	0.0	0.00	0.00	0.00	0.00
104(1)b	Embankment from Borrow	m3	390.00	56	30	15	353,589.7	77,223,986.11	40,680,492.68	19,995,496.40	137,899,975.20
104(1)c	Selected Borrow for Backfilling	m3	547.00	54	20	26	4,250.6	1,255,551.09	465,018.92	604,524.60	2,325,094.61
105(1)	Subgrade Preparation (Common Material)	m2	17.00	57	27	16	24,460.0	238,680.68	110,192.30	66,947.02	415,820.00
	Plastic-board drain method (@2.5m * 2.5m triangle, Depth 20.0m)	m2	148.00	65	20	15	20,095.0	1,933,139.00	594,812.00	446,109.00	2,974,060.00
	Sub Total							94,255,010.23	46,889,592.74	26,176,193.67	167,320,796.64
	PART D - SUBBASE AND BASE COURSE										
200	Aggregate Subbase Course	m3	550.00	54	32	14	91,211.5	26,989,476.93	15,952,887.85	7,223,949.22	50,166,314.00
201	Aggregate Base Course	m3	650.00	53	33	14	0.0	0.00	0.00	0.00	0.00
202	Crushed Aggregate Base Course (AC)	m3	750.00	54	32	14	29,703.4	12,052,154.55	7,017,428.25	3,207,967.20	22,277,550.00
	Sub Total							39,041,631.48	22,970,316.10	10,431,916.42	72,443,864.00
	PART E - SURFACE COURSE										
301(1)	Bituminous Prime Coat (MC-70 Cut-Back Asphalt)	t	25,000.00	65	17	18	185.5	3,000,786.00	807,012.00	830,202.00	4,638,000.00
302(2)	Bituminous Tack Coat (Emulsified Asphalt Grade SS-1)	t	25,000.00	65	18	18	61.8	998,716.00	270,550.00	276,734.00	1,546,000.00
310	Bituminous Concrete Surface Course, Hot Laid	t	3,500.00	64	18	18	32,143.3	71,663,487.35	20,700,285.20	20,137,777.45	112,501,550.00
311(1)a	PCC Pavement(Plain) (t=0.10m)	m2	450.00	62	23	15	0.0	0.00	0.00	0.00	0.00
311(1)c	PCC Pavement(Plain) (t=0.23m)	m2	770.00	62	23	15	0.0	0.00	0.00	0.00	0.00
311(1)d	PCC Pavement(Plain) (t=0.25m)	m2	820.00	62	23	15	0.0	0.00	0.00	0.00	0.00
311(2)	PCC Pavement(Reinforced) for Approach Slab, t=300mm	m2	4,480.00	62	23	15	450.0	1,249,920.00	463,680.00	302,400.00	2,016,000.00
	Sub Total							76,912,909.35	22,241,527.20	21,547,113.45	120,701,550.00
	PART F - BRIDGE CONSTRUCTION										
400(4)	Precast Concrete Piles (0.45m×0.45m), Furnished and Driven	m	3,200.00	52	28	20	17,839.0	29,684,096.00	15,983,744.00	11,416,960.00	57,084,800.00
400(15)	Test Piles (0.45m×0.45m)	m	364.00	52	35	13	823.0	155,777.44	104,850.20	38,944.36	299,572.00
400(16)a	Cast-in-Place Concrete Bored Piles, φ1000mm	m	23,900.00	38	45	17	0.0	0.00	0.00	0.00	0.00
400(16)b	Cast-in-Place Concrete Bored Piles, φ1200mm	m	32,500.00	38	45	17	0.0	0.00	0.00	0.00	0.00
400(19)	Piles Shoes for 0.45m×0.45m Piles	ea	1,740.00	55	30	15	564.0	539,748.00	294,408.00	147,204.00	981,360.00
401	Concrete Railings	m	2,240.00	38	49	13	784.0	667,340.80	860,518.40	228,300.80	1,756,160.00
404(1)	Reinforcing Steel, Grade 40 (Fy=275Mpa)	kg	38.00	50	37	13	0.0	0.00	0.00	0.00	0.00
404(2)	Reinforcing Steel, Grade 60 (Fy=415Mpa)	kg	40.00	50	37	13	1,032,415.0	20,648,299.00	15,279,741.26	5,368,557.74	41,296,598.00
405(1)	Structural Concrete Class"A1" for Substructure (f'c=24Mpa)	m3	3,500.00	34	50	16	2,999.3	3,569,167.00	5,248,775.00	1,679,608.00	10,497,550.00
405(2)	Structural Concrete Class"A2" for Superstructure (f'c=24Mpa)	m3	5,240.00	34	50	16	2,232.0	3,976,531.20	5,847,840.00	1,871,308.80	11,695,680.00
405(3)	Structural Concrete Class"A3" for Others (f'c=21Mpa)	m3	4,500.00	34	50	16	0.0	0.00	0.00	0.00	0.00
405(6)	Structural Concrete "Lean Concrete" (f'c=17 Mpa)	m3	2,750.00	43	37	20	238.5	282,026.25	242,673.75	131,175.00	655,875.00
406(1)b	Prestressed Concrete Girder, AASHTO Type □-B, L=22m	ea	331,400.00	22	62	16	0.0	0.00	0.00	0.00	0.00
406(1)c	Prestressed Concrete Girder, AASHTO Type □-B, L=25m	ea	391,250.00	25	59	16	0.0	0.00	0.00	0.00	0.00
406(1)d	Prestressed Concrete Girder, AASHTO Type IV-B, L=26m	ea	405,480.00	22	62	16	20.0	1,784,112.00	5,027,952.00	1,297,536.00	8,109,600.00
406(1)e	Prestressed Concrete Girder, AASHTO Type □-B, L=27m	ea	419,645.00	22	62	16	0.0	0.00	0.00	0.00	0.00
406(1)f	Prestressed Concrete Girder, AASHTO Type □-B, L=28m	ea	441,755.00	20	65	15	0.0	0.00	0.00	0.00	0.00
406(1)g	Prestressed Concrete Girder, AASHTO Type □, L=30m	ea	505,185.00	20	65	15	0.0	0.00	0.00	0.00	0.00
406(1)h	Prestressed Concrete Girder, AASHTO Type V, L=31m	ea	520,815.00	20	65	15	15.0	1,562,445.00	5,077,946.25	1,171,833.75	7,812,225.00
406(1)i	Prestressed Concrete Girder, AASHTO Type V, L=35m	ea	647,400.00	17	69	14	0.0	0.00	0.00	0.00	0.00
406(1)j	Prestressed Concrete Girder, AASHTO Type □, L=36m	ea	672,500.00	19	67	14	0.0	0.00	0.00	0.00	0.00
406(1)k	Prestressed Concrete Girder, AASHTO Type □, L=40m	ea	815,870.00	17	69	14	0.0	0.00	0.00	0.00	0.00
407(1)a	Elastomeric Bearing Pad, 400×350×60 (Duro 60)	ea	18,000.00	55	30	15	40.0	396,000.00	216,000.00	108,000.00	720,000.00
407(1)b	Elastomeric Bearing Pad, 500×350×60 (Duro 60)	ea	21,100.00	55	30	15	10.0	116,050.00	63,300.00	31,650.00	211,000.00
407(2)	Expansion Joint, 50mm Gap	m	46,300.00	55	30	15	101.7	2,589,790.50	1,412,613.00	706,306.50	4,708,710.00
407(4)	Metal Drain (φ150mm G.I. Drain Pipe)	m	965.00	55	30	15	120.0	63,690.00	34,740.00	17,370.00	115,800.00
	Sub Total							66,035,073.19	55,695,101.86	24,214,754.95	145,944,930.00
	PART G - DRAINAGE AND SLOPE PROTECTION STRUCTURES										
500(1)b	Reinforced Concrete Pipe Culvert, 910mmφ (Extra. Str.)	m	6,630.00	57	28	15	881.0	3,329,387.10	1,635,488.40	876,154.50	5,841,030.00
500(1)c	Reinforced Concrete Pipe Culvert, 1070mmφ (Extra. Str.)	m	10,000.00	57	28	15	66.0	376,200.00	182,160.00	101,640.00	660,000.00
500(1)d	Reinforced Concrete Pipe Culvert, 1220mmφ (Extra. Str.)	m	10,600.00	57	28	15	63.0	380,646.00	186,984.00	100,170.00	667,800.00
500(1)e	Reinforced Concrete Pipe Culvert, 1520mmφ (Extra. Str.)	m	18,800.00	57	28	15	0.0	0.00	0.00	0.00	0.00
500(3)a1	Reinforced Concrete Box Culvert 1-1.5m x 1.5m	m	16,400.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)a2	Reinforced Concrete Box Culvert 2-1.5m x 1.5m	m	26,100.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)a3	Reinforced Concrete Box Culvert 3-1.5m x 1.5m	m	36,500.00	42	43	15	15.0	229,950.00	235,425.00	82,125.00	547,500.00
500(3)b1	Reinforced Concrete Box Culvert 1-2.4m x 2.4m	m	27,700.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)b2	Reinforced Concrete Box Culvert 2-2.4m x 2.4m	m	47,300.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)b3	Reinforced Concrete Box Culvert 3-2.4m x 2.4m	m	67,100.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)c1	Reinforced Concrete Box Culvert 1-3.0m x 3.0m	m	37,900.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)c2	Reinforced Concrete Box Culvert 2-3.0m x 3.0m	m	66,600.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)c3	Reinforced Concrete Box Culvert 3-3.0m x 3.0m	m	93,900.00	42	43	15	0.0	0.00	0.00	0.00	0.00
502(2)b1	Reinforced Concrete Headwall, 1-910mmφ RCPC	ea.	19,300.00	28	57	15	75.0	405,300.00	825,075.00	217,125.00	1,447,500.00
502(2)b2	Reinforced Concrete Headwall, 2-910mmφ RCPC	ea.	25,900.00	28	57	15	14.0	101,528.00	206,682.00	54,390.00	362,600.00
502(2)c1	Reinforced Concrete Headwall, 1-1070mmφ RCPC	ea.	22,000.00	30	55	15	0.0	0.00	0.00	0.00	0.00
502(2)c2	Reinforced Concrete Headwall, 2-1070mmφ RCPC	ea.	32,100.00	30	55	15	4.0	38,520.00	70,620.00	19,260.00	128,400.00
502(2)d1	Reinforced Concrete Headwall, 1-1220mmφ RCPC	ea.	27,400.00	31	54	15	2.0	16,988.00	29,592.00	8,220.00	54,800.00
502(2)d2	Reinforced Concrete Headwall, 2-1220mmφ RCPC	ea.	38,600.00	31	54	15	2.0	23,932.00	41,688.00	11,580.00	77,200.00
502(2)f1	Reinforced Concrete Headwall, 1-1520mmφ RCPC	ea.	37,300.00	33	52	15	0.0	0.00	0.00	0.00	0.00
502(2)f2	Reinforced Concrete Headwall, 2-1520mmφ RCPC	ea.	53,200.00	33	52	15	0.0	0.00	0.00	0.00	0.00
502(10)a1	Reinforced Concrete Headwall, Box Culvert 1-1.5m x 1.5m	ea.	51,200.00	44	41	15	0.0	0.00	0.00	0.00	0.00
502(10)a2	Reinforced Concrete Headwall, Box Culvert 2-1.5m x 1.5m	ea.	61,400.00	45	40	15	0.0	0.00	0.00	0.00	0.00
502(10)a3	Reinforced Concrete Headwall, Box Culvert 3-1.5m x 1.5m	ea.	72,700.00	45	40	15	2.0	65,430.00	58,160.00	21,810.00	145,400.00
502(10)b1	Reinforced Concrete Headwall, Box Culvert 1-2.4m x 2.4m	ea.	104,000.00	44	41	15	0.0	0.00	0.00	0.00	0.00
502(10)b2	Reinforced Concrete Headwall, Box Culvert 2-2.4m x 2.4m	ea.	125,000.00	45	40	15	0.0	0.00	0.00	0.00	0.00
502(10)b3	Reinforced Concrete Headwall, Box Culvert 3-2.4m x 2.4m	ea.	145,000.00	45	40	15	0.0	0.00	0.00	0.00	0.00
502(10)c1	Reinforced Concrete Headwall, Box Culvert 1-3.0m x 3.0m	ea.	152,000.00	44	41	15	0.0	0.00	0.00	0.00	0.00
502(10)c2	Reinforced Concrete Headwall, Box Culvert 2-3.0m x 3.0m	ea.	183,000.00	45	40	15	0.0	0.00	0.00	0.00	0.00
502(10)c3	Reinforced Concrete Headwall, Box Culvert 3-3.0m x 3.0m	ea.	207,000.00	45	40	15	0.0	0.00	0.00	0.00	0.00
502(3)b1	Catch Basin for RCPC 1-φ910	ea.	24,700.00	38	47	15	1.0	9,386.00	11,609.00	3,705.00	24,700.00
502(3)b2	Catch Basin for RCPC 2-φ910	ea.	38,700.00	39	46	15	0.0	0.00	0.00	0.00	0.00
502(3)c1	Catch Basin for RCPC 1-φ1070	ea.	28,900.00	38	47	15	0.0	0.00	0.00	0.00	0.00
502(3)c2	Catch Basin for RCPC 2-φ1070	ea.	46,500.00	39	46	15	0.0	0.00	0.00	0.00	0.00
502(3)d1	Catch Basin for RCPC 1-φ1220	ea.	37,800.00	38	47	15	0.0	0.00	0.00	0.00	0.00
502(3)d2	Catch Basin for RCPC 2-φ1220	ea.	62,300.00	39	46	15	0.0	0.00	0.00	0.00	0.00
502(3)e1	Catch Basin for RCPC 1-φ1520	ea.	48,400.00	38	47	15	0.0	0.00	0.00	0.00	0.00
502(3)e2	Catch Basin for RCPC 2-φ1520	ea.	82,200.00	39	46	15	0.0	0.00	0.00	0.00	0.00
504(5)	Grouted Riprap, Class "A"	m3	2,250.00	49	36	15	5,728.7	6,315,913.80	4,640,263.20	1,933,443.00	12,889,620.00
505(1)	Stone Masonry	m3	2,360.00	55	30	15	20.0	26,007.20	14,018.40	7,174.40	47,200.00
505(2)	Gravity Type Retaining Wall(H=1.0 ~ 1.5m)	m3	5,560.00	44	41	15	0.0	0.00	0.00	0.00	0.00
507	Steel Sheet Pile (85×400×8mm), Furnished and Driven	m	1,430.00	55	30	15	0.0	0.00	0.00	0.00	0.00
509	Gabions	m3	3,510.00	51	34	15	1,600.0	2,869,776.00	1,886,976.00	859,248.00	5,616,000.00
510	Rubble Concrete Slope Protection, t = 350mm	m3	2,010.00	51	34	15	898.0	920,539.80	613,693.20	270,747.00	1,804,980.00
511(a)	Concrete Side Dicth (0.5 x 0.5)	m	2,270.00	38	47	15	1,400.0	1,207,640.00	1,493,660.00	476,700.00	3,178,000.00
	Sub Total							16,317,143.90	12,132,094.20	5,043,491.90	33,492,730.00
	PART H - MISCELLANEOUS STRUCTURES										
600(1)a	Concrete Curb, Type A (200x450mm)	m	640.00	58	27	15	1,642.0	609,510.40	283,737.60	157,632.00	1,050,880.00
600(1)c	Concrete Curb for Edge of Sidewalk(200*500)	m	760.00	58	27	15	0.0	0.00	0.00	0.00	0.00
600(3)a	Combination Concrete Curb & Gutter/Side Strip, Type A (675x364mm)	m	1,095.00	58	27	15	440.0	279,925.80	131,531.40	70,342.80	481,800.00
603(3)a	Metal Guardrail	m	2,300.00	58	27	15	2,104.0	2,806,736.00	1,306,584.00	725,880.00	4,839,200.00
610	Sodding	m2	182.00	58	27	15	105,312.8	11,135,986.10	5,232,571.78	2,798,371.72	19,166,929.60
611(1)	Trees (Furnishing and Transplanting)	ea.	1,220.00	58	27	15	0.0	0.00	0.00	0.00	0.00
SPL620(1)	Traffic Signal (3-leg intersection)	ea.	2,024,000.00	20	65	15	2.0	809,600.00	2,631,200.00	607,200.00	4,048,000.00
SPL620(2)	Traffic Signal (4-leg intersection)	ea.	2,205,700.00	20	65	15	4.0	1,764,560.00	5,734,820.00	1,323,420.00	8,822,800.00
	Other Miscellaneous (Road Signs,Pavement Stud,etc)	km	1,500,000.00	70	20	10	14.3	15,051,750.00	4,300,500.00	2,150,250.00	21,502,500.00
	Sub Total							32,458,068.30	19,620,944.78	7,833,096.52	59,912,109.60
	PART A,B- ENGINEER'S FACILITY AND MOBILIZATION / DEMOBILIZATION										
	(5% of PART C to H)							16,250,991.82	8,977,478.84	4,762,328.35	29,990,799.01
	CONTINGENCY										
	(5% of PART A to H)							17,063,541.41	9,426,352.79	5,000,444.76	31,490,338.96
	TOTAL							358,334,369.68	197,953,408.51	105,009,340.02	661,297,118.21

APPENDIX 12.8-2

SUMMARY OF IMPACT AND COMPENSATION COST

(Iloilo Circumferential Road)

Appendix 12.8-2 Summary of Impact and Compensation Cost

Iloilo Circumferential Road

Description	No. of HHs	Unit	Rate/Unit	Quantity	Amount (Php)	Remarks
Compensation for Land and Other Assets						
1. Land						
1) Residential-1	-	m^2	3,500	11,100	38,850,000	Name of land owner to be identified by parcelllary survey.
1) Residential-2	-	m^2	3,000	3,800	11,400,000	
2) Residential-3	-	m^2	2,500	22,047.5	55,118,750	
3) Agricultural (Rice Field-1)	-	m^2	250	223,802.5	55,950,625	
4) Agricultural (Rice Field-2)	-	m^2	200	250,400	50,080,000	
5) Agricultural (Coconut Tree)	-	m^2	200	10,600	2,120,000	
6) Fish Pond	-	m^2	250	35,600	8,900,000	
Subtotal				557,350	222,419,375	
2.Structures						
1) Shanty (Bamboo, Nipa)	21	m^2	1,000	418.25	418,250	
2) Wood with GI sheet	34	m^2	1,140	1,080.38	1,231,633	
3) Concrete with wood	6	m^2	6,000	321.00	1,926,000	
4) Concrete	26	m^2	8,000	2,291.00	18,328,000	
Subtotal	87			4,110.63	21,903,883	
3.Other Fixed Structures						
1) Signboard	-	Nos.	1	50,000	50,000	
4.Repair Cost	-	-	-	-	-	None
5.Electric Post Relocation	-	-	-	-	-	None
6.Perennials						
Various types	-	Nos.	various	4,424	1,548,400	
Subtotal					245,921,658	
Other Compensations						
1. Disturbance Allowance						
1) Severely affected land owners	-	-	-	-	-	None
2) Agricultural lessees	-	-	-	-	-	None
3) Temporary land users	-	-	-	-	-	None
4) Severely affected structural owners	61	-	10,000	61	610,000	
2. Subsistence Allowance						
1) Income loss for shop owners	8	-	20,000	8	160,000	
2. Financial Assistance						
1) Land users w/o title	-	-	-	-	-	Not identified
3. Rehabilitation Assistance						
1) Severely affected land owners	-	-	-	-	-	Not identified
2) Agricultural lessees	-	-	-	-	-	Not identified
3) Severely affected structural owners.	-	-	-	-	-	Not identified
4. Transportation Allowance						
1) Relocating PAPs	61	-	3,000	61	183,000	
2) Shanty dwellers go back to province.	-	-	-	-	-	None
5. Transitional allowance						
1) Renters of affected structures	-	-	-	-	-	None
Subtotal					953,000	
Total					246,874,658	
RAP Implementation					3,371,150	
GRAND TOTAL					250,245,808	

APPENDIX 12.10-1

SCHEDULE OF LAND VALUES

APPENDIX 12.10-1 SCHEDULE OF LAND VALUES

Kind of Land	Classifiaction	Land Value (2003) (P/ha)	Zonal Value 1998 (P/ha)
Prawn Ponds	1st	516,400	
Intensive	2nd	461,100	
	3rd	384,200	
Prawn Ponds	1st	345,400	300,000
Semi-itensive	2nd	308,400	
	3rd	231,300	
Prawn Ponds	1st	259,900	
Traditionai	2nd	232,100	
	3rd	185,600	
Fish Ponds (Tilapia)	1st	254,000	
	2nd	220,000	
	3rd	169,300	
	4th	143,900	
Fish Ponds (Bangus)	1st	345,000	
	2nd	293,000	
	3rd	258,800	
	4th	138,000	
Fish Ponds (Lapu-Lapu)	1st	591,200	
	2nd	512,400	
	3rd	473,000	
	4th	394,100	
Lowland Rice with	1st	313,100	200,000
Irrigation	2nd	300,200	
	3rd	287,300	
	4th	257,500	
Lowland Rice w/o	1st	212,000	120,000
Irrigation	2nd	198,500	
	3rd	185,000	
Upland Rice	1st	66,600	60,000
	2nd	55,500	
Cornland	1st	64,300	60,000
	2nd	52,600	
	3rd	40,900	
Coconutland	1st	76,900	60,000
	2nd	69,200	
	3rd	61,500	
Bambo Land	1st	69,200	
	2nd	61,500	
	3rd	53,800	
Coffe Land	1st	32,300	
	2nd	25,800	
	3rd	19,400	
Salt Beds	1st	273,000	
	2nd	245,700	
	3rd	232,100	
Banana Land	1st	38,500	
	2nd	25,600	
	3rd	12,800	
	4th	9,600	
Poultry Farm	1st	394,900	
Broiler	2nd	197,500	
	3rd	96,800	
Sorghum	1st	36,000	30,000
	2nd	27,000	
	3rd	22,500	
Mango Land	1st	89,000	60,000
	2nd	71,200	
	3rd	53,400	
Forest Land	1st	19,600	10,000
	2nd	59,700	
	3rd	57,700	
Abaca		38,600	60,000
Horticulture/Root Crop		51,300	50,000
Ipil Ipil/ Kakawate		48,600	30,000
Pasture Land		20,000	30,000
Cocgon		19,800	10,000
Zacate		36,000	40,000
Kangkong		37,900	150,000
Mangrove		27,500	50,000
Pincapple Land		57,700	70,000

APPENDIX 12.10-1 SCHEDULE OF MARKET VALUES FOR RESIDENTIAL, COMMERCIAL AND INDUSTRIAL LANDS

Province of Iloilo

Municipalities	R-1	R-2	R-3	R-4	R-5	C-1	C-2	C-3	C-4	C-5	I-1	I-2	I-3	I-4	I-5
Average Zonal Value	5,000	3,000	1,000	700	500	11,500	9,000	7,000	4,500	2,000	4,000		3,000		2,000
Ajuy	900	810	675	360	180	1,200	1,080	985	875	780	1,200	1,080	985	875	780
Culasi, Ajuy	700	630	525	280	140	1,000	900	820	730	650	1,000	900	820	730	650
Alimodian	930	840	700	370	190	1,200	1,080	985	875	780	1,200	1,080	985	875	780
Anilao	900	810	675	360	180	1,300	1,170	1,065	950	845	1,300	1,170	1,065	950	845
Badiangan	700	630	525	280	140	1,000	900	820	730	650	1,000	900	820	730	650
Balasan	1,000	900	750	400	200	1,200	1,080	985	875	780	1,200	1,080	985	875	780
Banate	960	865	720	385	190	1,200	1,080	985	875	780	1,200	1,080	985	875	780
Barotac Nuevo	1,100	990	825	440	220	1,500	1,350	1,230	1,095	975	1,500	1,350	1,230	1,095	975
Barotac Viejo	900	810	675	360	180	1,200	1,080	985	875	780	1,200	1,080	985	875	780
Batad	1,000	900	750	400	200	1,200	1,080	985	875	780	1,200	1,080	985	875	780
Bingawan	700	630	525	280	140	1,000	900	820	730	650	1,000	900	820	730	650
Cabatuan	1,400	1,260	1,050	560	280	1,800	1,620	1,475	1,310	1,170	1,800	1,620	1,475	1,310	1,170
Zonal Value	810 - 850 (1998)					1,230 - 1,350 (1998)					1,350 (1998)				
Calinog	1,200	1,080	900	480	240	1,600	1,440	1,310	1,170	1,040	1,600	1,440	1,310	1,170	1,040
Carles	600	540	450	270	120	1,000	900	820	730	650	1,000	900	820	730	650
Concepcion	700	630	525	280	140	1,100	990	900	800	715	1,100	990	900	800	715
Dingle	1,000	900	750	400	200	1,400	1,260	1,150	1,020	910	1,400	1,260	1,150	1,020	910
Dueñas	900	810	675	360	180	1,400	1,260	1,150	1,020	910	1,400	1,260	1,150	1,020	910
Dumangas	1,100	990	825	440	220	1,500	1,350	1,230	1,095	975	1,500	1,350	1,230	1,095	975
Estancia	1,200	1,080	900	480	240	1,800	1,620	1,475	1,310	1,170	1,800	1,620	1,475	1,310	1,170
Guimbal	900	810	675	360	180	1,500	1,350	1,230	1,095	975	1,500	1,350	1,230	1,095	975
Igbaras	740	665	555	295	150	1,100	990	900	800	715	1,100	990	900	800	715
Janiuay	1,200	1,080	900	480	240	1,500	1,350	1,230	1,095	975	1,500	1,350	1,230	1,095	975
Lambunao	1,200	1,080	900	480	240	1,600	1,440	1,310	1,170	1,040	1,600	1,440	1,310	1,170	1,040
Leganes	1,500	1,300	1,125	600	300	1,800	1,620	1,475	1,310	1,170	1,800	1,620	1,475	1,310	1,170
Zonal Value	400 - 1,850 (1998)					1,100 - 1,850 (1998)					1,100 - 1,850 (1998)				
Lemery	640	575	480	255	130	1,000	900	820	730	650	1,000	900	820	730	650
Leon	1,000	900	750	400	200	1,400	1,260	1,150	1,020	910	1,400	1,260	1,150	1,020	910
Maasin	1,000	900	750	400	200	1,500	1,350	1,230	1,095	975	1,500	1,350	1,230	1,095	975
Miag-ao	1,500	1,350	1,125	600	300	2,000	1,800	1,640	1,460	1,300	2,000	1,800	1,640	1,460	1,300
Mina	700	630	525	280	140	1,000	900	820	730	650	1,000	900	820	730	650
New Lucena	800	720	600	320	160	1,200	1,080	985	875	780	1,200	1,080	985	875	780
Oton	1,500	1,350	1,125	600	300	2,000	1,800	1,640	1,460	1,300	2,000	1,800	1,640	1,460	1,300
Zonal Value	300 - 900 (1998)					1,200 - 1,345 (1998)					1,350 (1998)				
Pavia	1,500	1,350	1,125	600	300	2,200	1,980	1,800	1,600	1,430	2,200	1,980	1,800	1,600	1,430
Zonal Value	550 - 1,250 (1998)					1,250 - 1,500 (1998)					1,900 (1998)				
Pototan	1,200	1,080	900	480	240	1,500	1,350	1,230	1,095	975	1,500	1,350	1,230	1,095	975
San Dionisio	730	650	540	290	145	1,200	1,080	985	875	780	1,200	1,080	985	875	780
San Enrique	830	745	620	330	165	1,500	1,350	1,230	1,095	975	1,500	1,350	1,230	1,095	975
San Joaquin	900	810	675	360	180	1,200	1,080	985	875	780	1,200	1,080	985	875	780
San Miguel	1,300	1,170	975	520	260	1,600	1,440	1,310	1,170	1,040	1,600	1,440	1,310	1,170	1,040
Zonal Value	350 - 050 (1998)					1,100 - 1,25 (1998)					1,200 (1998)				
San Rafael	600	540	450	240	120	1,000	900	820	730	650	1,000	900	820	730	650
Sta. Barbara	1,500	1,350	1,125	600	300	1,800	1,620	1,475	1,310	1,170	1,800	1,620	1,475	1,310	1,170
Zonal Value	620 - 900 (1998)					1,230 - 1,350 (1998)									
Sara	1,000	900	750	400	200	1,500	1,350	1,230	1,095	975	1,500	1,350	1,230	1,095	975
Tigbauan	900	810	675	360	180	1,500	1,350	1,230	1,095	975	1,500	1,350	1,230	1,095	975
Tubungan	650	585	485	260	130	1,000	900	820	730	650	1,000	900	820	730	650
Zarraga	1,000	900	750	400	200	1,500	1,350	1,230	1,095	975	1,500	1,350	1,230	1,095	975

APPENDIX 13.8-1

DETAILED CONSTRUCTION COST ESTIMATE

(Iloilo-Sta. Barbara Road)

Appendix 13.8-1 Detailed Construction Cost Estimate of Iloilo-Sta. Barbara Road

Item No.	Description	Unit	Unit Cost	Component(%)			Quantity	Cost			
				Foreign	Local	Tax		Foreign	Local	Tax	Total
	PART C - EARTHWORK										
100(1)	Clearing and Grubbing	ha.	51,000.00	57	27	16	0.0	0.00	0.00	0.00	0.00
101(1)a	Removal of Existing Concrete Railing	m3	700.00	27	56	17	294.0	55,566.00	115,248.00	34,986.00	205,800.00
101(1)b	Removal of Existing Grouted Riprap	m3	400.00	27	56	17	595.0	64,260.00	133,280.00	40,460.00	238,000.00
102(1)	Unsuitable Excavation	m3	176.00	59	17	24	100,317.7	10,434,640.68	3,054,471.81	4,166,793.91	17,655,906.40
102(2)a	Surplus Common Excavation	m3	176.00	60	24	15	0.0	0.00	0.00	0.00	0.00
103(2)a	Bridge Excavation, Common (AWL)	m3	200.00	53	31	16	1,430.0	151,008.00	89,804.00	45,188.00	286,000.00
103(2)b	Bridge Excavation, Common (BWL)	m3	750.00	51	34	15	2,150.4	822,528.00	541,900.80	248,371.20	1,612,800.00
104(1)a	Embankment from Excavation	m3	194.00	54	20	26	0.0	0.00	0.00	0.00	0.00
104(1)b	Embankment from Borrow	m3	390.00	56	30	15	11,826.7	2,582,955.65	1,360,664.14	668,801.02	4,612,420.80
104(1)c	Selected Borrow for Backfilling	m3	547.00	54	20	26	800.0	236,304.00	87,520.00	113,776.00	437,600.00
105(1)	Subgrade Preparation (Common Material)	m2	17.00	57	27	16	126,037.4	1,229,872.95	567,798.49	344,964.36	2,142,635.80
	Plastic-board drain method (@2.5m * 2.5m triangle, Depth 20.0m)	m2	148.00	65	20	15	0.0	0.00	0.00	0.00	0.00
	Sub Total							15,577,135.28	5,950,687.23	5,663,340.49	27,191,163.00
	PART D - SUBBASE AND BASE COURSE										
200	Aggregate Subbase Course	m3	550.00	54	32	14	40,091.3	11,863,021.59	7,011,971.87	3,175,232.54	22,050,226.00
201	Aggregate Base Course	m3	650.00	53	33	14	0.0	0.00	0.00	0.00	0.00
202	Crushed Aggregate Base Course (AC)	m3	750.00	54	32	14	19,264.0	7,816,368.00	4,551,120.00	2,080,512.00	14,448,000.00
	Sub Total							19,679,389.59	11,563,091.87	5,255,744.54	36,498,226.00
	PART E - SURFACE COURSE										
301(1)	Bituminous Prime Coat (MC-70 Cut-Back Asphalt)	t	25,000.00	65	17	18	144.5	2,336,964.00	628,488.00	646,548.00	3,612,000.00
302(2)	Bituminous Tack Coat (Emulsified Asphalt Grade SS-1)	t	25,000.00	65	18	18	48.2	777,784.00	210,700.00	215,516.00	1,204,000.00
310	Bituminous Concrete Surface Course, Hot Laid	t	3,500.00	64	18	18	22,924.2	51,109,414.72	14,763,159.04	14,361,986.24	80,234,560.00
310(1)	Pavement Rehabilitation/Overlay	t	3,719.00	64	18	18	21,549.5	51,291,257.92	14,425,666.29	14,425,666.29	80,142,590.50
311(1)a	PCC Pavement(Plain) (t=0.10m)	m2	450.00	62	23	15	36,840.0	10,344,672.00	3,746,628.00	2,486,700.00	16,578,000.00
311(1)c	PCC Pavement(Plain) (t=0.23m)	m2	770.00	62	23	15	0.0	0.00	0.00	0.00	0.00
311(1)d	PCC Pavement(Plain) (t=0.25m)	m2	820.00	62	23	15	0.0	0.00	0.00	0.00	0.00
311(2)	PCC Pavement(Reinforced) for Approach Slab, t=300mm	m2	4,480.00	62	23	15	320.0	888,832.00	329,728.00	215,040.00	1,433,600.00
	Sub Total							116,748,924.64	34,104,369.33	32,351,456.53	183,204,750.50
	PART F - BRIDGE CONSTRUCTION										
400(4)	Precast Concrete Piles (0.45m×0.45m), Furnished and Driven	m	3,200.00	52	28	20	2,640.0	4,392,960.00	2,365,440.00	1,689,600.00	8,448,000.00
400(15)	Test Piles (0.45m×0.45m)	m	364.00	52	35	13	264.0	49,969.92	33,633.60	12,492.48	96,096.00
400(16)a	Cast-in-Place Concrete Bored Piles, φ1000mm	m	23,900.00	38	45	17	0.0	0.00	0.00	0.00	0.00
400(16)b	Cast-in-Place Concrete Bored Piles, φ1200mm	m	32,500.00	38	45	17	0.0	0.00	0.00	0.00	0.00
400(19)	Piles Shoes for 0.45m×0.45m Piles	ea	1,740.00	55	30	15	144.0	137,808.00	75,168.00	37,584.00	250,560.00
401	Concrete Railings	m	2,240.00	38	49	13	294.0	250,252.80	322,694.40	85,612.80	658,560.00
404(1)	Reinforcing Steel, Grade 40 (Fy=275Mpa)	kg	38.00	50	37	13	0.0	0.00	0.00	0.00	0.00
404(2)	Reinforcing Steel, Grade 60 (Fy=415Mpa)	kg	40.00	50	37	13	305,092.5	6,101,850.00	4,515,369.00	1,586,481.00	12,203,700.00
405(1)	Structural Concrete Class"A1" for Substructure (f'c=24Mpa)	m3	3,500.00	34	50	16	796.4	947,716.00	1,393,700.00	445,984.00	2,787,400.00
405(2)	Structural Concrete Class"A2" for Superstructure (f'c=24Mpa)	m3	5,240.00	34	50	16	632.1	1,126,149.36	1,656,102.00	529,952.64	3,312,204.00
405(3)	Structural Concrete Class"A3" for Others (f'c=21Mpa)	m3	4,500.00	34	50	16	0.0	0.00	0.00	0.00	0.00
405(6)	Structural Concrete "Lean Concrete" (f'c=17 Mpa)	m3	2,750.00	43	37	20	69.6	82,302.00	70,818.00	38,280.00	191,400.00
406(1)b	Prestressed Concrete Girder, AASHTO Type □-B, L=22m	ea	331,400.00	22	62	16	0.0	0.00	0.00	0.00	0.00
406(1)c	Prestressed Concrete Girder, AASHTO Type □-B, L=25m	ea	391,250.00	25	59	16	0.0	0.00	0.00	0.00	0.00
406(1)d	Prestressed Concrete Girder, AASHTO Type IV-B, L=26m	ea	405,480.00	22	62	16	0.0	0.00	0.00	0.00	0.00
406(1)e	Prestressed Concrete Girder, AASHTO Type □-B, L=27m	ea	419,645.00	22	62	16	0.0	0.00	0.00	0.00	0.00
406(1)f	Prestressed Concrete Girder, AASHTO Type □-B, L=28m	ea	441,755.00	20	65	15	0.0	0.00	0.00	0.00	0.00
406(1)g	Prestressed Concrete Girder, AASHTO Type □, L=30m	ea	505,185.00	20	65	15	0.0	0.00	0.00	0.00	0.00
406(1)h	Prestressed Concrete Girder, AASHTO Type V, L=31m	ea	520,815.00	20	65	15	0.0	0.00	0.00	0.00	0.00
406(1)i	Prestressed Concrete Girder, AASHTO Type V, L=35m	ea	647,400.00	17	69	14	0.0	0.00	0.00	0.00	0.00
406(1)j	Prestressed Concrete Girder, AASHTO Type □, L=36m	ea	672,500.00	19	67	14	0.0	0.00	0.00	0.00	0.00
406(1)k	Prestressed Concrete Girder, AASHTO Type □, L=40m	ea	815,870.00	17	69	14	0.0	0.00	0.00	0.00	0.00
407(1)a	Elastomeric Bearing Pad, 400×350×60 (Duro 60)	ea	18,000.00	55	30	15	0.0	0.00	0.00	0.00	0.00
407(1)b	Elastomeric Bearing Pad, 500×350×60 (Duro 60)	ea	21,100.00	55	30	15	0.0	0.00	0.00	0.00	0.00
407(2)	Expansion Joint, 50mm Gap	m	46,300.00	55	30	15	205.2	5,225,418.00	2,850,228.00	1,425,114.00	9,500,760.00
407(4)	Metal Drain (φ150mm G.I. Drain Pipe)	m	965.00	55	30	15	48.0	25,476.00	13,896.00	6,948.00	46,320.00
SPL	Carbon Fiber(2Layers)	m2	1,500.00	55	30	15	162.0	133,650.00	72,900.00	36,450.00	243,000.00
	Sub Total							18,473,552.08	13,369,949.00	5,894,498.92	37,738,000.00
	PART G - DRAINAGE AND SLOPE PROTECTION STRUCTURES										
500(1)a	Reinforced Concrete Pipe Culvert, 610mmφ (Extra. Str.)	m	4,451.00	57	28	15	10,870.0	27,577,950.90	13,547,063.60	7,257,355.50	48,382,370.00
500(1)b	Reinforced Concrete Pipe Culvert, 910mmφ (Extra. Str.)	m	6,630.00	57	28	15	76.0	287,211.60	141,086.40	75,582.00	503,880.00
500(1)c	Reinforced Concrete Pipe Culvert, 1070mmφ (Extra. Str.)	m	10,000.00	57	28	15	2.0	11,400.00	5,520.00	3,080.00	20,000.00
500(1)d	Reinforced Concrete Pipe Culvert, 1220mmφ (Extra. Str.)	m	10,600.00	57	28	15	72.0	435,024.00	213,696.00	114,480.00	763,200.00
500(1)e	Reinforced Concrete Pipe Culvert, 1520mmφ (Extra. Str.)	m	18,800.00	57	28	15	0.0	0.00	0.00	0.00	0.00
500(3)a1	Reinforced Concrete Box Culvert 1-1.5m x 1.5m	m	16,400.00	42	43	15	206.0	1,422,306.40	1,439,198.40	516,895.20	3,378,400.00
500(3)a2	Reinforced Concrete Box Culvert 2-1.5m x 1.5m	m	26,100.00	42	43	15	75.0	822,150.00	841,725.00	293,625.00	1,957,500.00
500(3)a3	Reinforced Concrete Box Culvert 3-1.5m x 1.5m	m	36,500.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)b1	Reinforced Concrete Box Culvert 1-2.4m x 2.4m	m	27,700.00	42	43	15	5.0	58,170.00	59,555.00	20,775.00	138,500.00
500(3)b2	Reinforced Concrete Box Culvert 2-2.4m x 2.4m	m	47,300.00	42	43	15	202.0	4,012,932.00	4,108,478.00	1,433,190.00	9,554,600.00
500(3)b3	Reinforced Concrete Box Culvert 3-2.4m x 2.4m	m	67,100.00	42	43	15	5.0	140,910.00	144,265.00	50,325.00	335,500.00
500(3)c1	Reinforced Concrete Box Culvert 1-3.0m x 3.0m	m	37,900.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)c2	Reinforced Concrete Box Culvert 2-3.0m x 3.0m	m	66,600.00	42	43	15	19.0	531,468.00	544,122.00	189,810.00	1,265,400.00
500(3)c3	Reinforced Concrete Box Culvert 3-3.0m x 3.0m	m	93,900.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)d1	Reinforced Concrete Box Culvert 2-4.0m x 2.5m	m	81,400.00	42	43	15	0.0	0.00	0.00	0.00	0.00
502(2)b1	Reinforced Concrete Headwall, 1-910mmφ RCPC	ea.	19,300.00	28	57	15	8.0	43,232.00	88,008.00	23,160.00	154,400.00
502(2)b2	Reinforced Concrete Headwall, 2-910mmφ RCPC	ea.	25,900.00	28	57	15	2.0	14,504.00	29,526.00	7,770.00	51,800.00
502(2)c1	Reinforced Concrete Headwall, 1-1070mmφ RCPC	ea.	22,000.00	30	55	15	2.0	13,200.00	24,200.00	6,600.00	44,000.00
502(2)c2	Reinforced Concrete Headwall, 2-1070mmφ RCPC	ea.	32,100.00	30	55	15	0.0	0.00	0.00	0.00	0.00
502(2)d1	Reinforced Concrete Headwall, 1-1220mmφ RCPC	ea.	27,400.00	31	54	15	2.0	16,986.00	29,592.00	8,220.00	54,800.00
502(2)d2	Reinforced Concrete Headwall, 2-1220mmφ RCPC	ea.	38,600.00	31	54	15	4.0	47,864.00	83,376.00	23,160.00	154,400.00
502(2)f1	Reinforced Concrete Headwall, 1-1520mmφ RCPC	ea.	37,300.00	33	52	15	0.0	0.00	0.00	0.00	0.00
502(2)f2	Reinforced Concrete Headwall, 2-1520mmφ RCPC	ea.	53,200.00	33	52	15	0.0	0.00	0.00	0.00	0.00
502(10)a1	Reinforced Concrete Headwall, Box Culvert 1-1.5m x 1.5m	ea.	51,200.00	44	41	15	26.0	585,728.00	545,792.00	199,680.00	1,331,200.00
502(10)a2	Reinforced Concrete Headwall, Box Culvert 2-1.5m x 1.5m	ea.	61,400.00	45	40	15	6.0	165,780.00	147,360.00	55,260.00	368,400.00
502(10)a3	Reinforced Concrete Headwall, Box Culvert 3-1.5m x 1.5m	ea.	72,700.00	45	40	15	0.0	0.00	0.00	0.00	0.00
502(10)b1	Reinforced Concrete Headwall, Box Culvert 1-2.4m x 2.4m	ea.	104,000.00	44	41	15	2.0	91,520.00	85,280.00	31,200.00	208,000.00
502(10)b2	Reinforced Concrete Headwall, Box Culvert 2-2.4m x 2.4m	ea.	125,000.00	45	40	15	0.0	0.00	0.00	0.00	0.00
502(10)b3	Reinforced Concrete Headwall, Box Culvert 3-2.4m x 2.4m	ea.	145,000.00	45	40	15	0.0	0.00	0.00	0.00	0.00
502(10)c1	Reinforced Concrete Headwall, Box Culvert 1-3.0m x 3.0m	ea.	152,000.00	44	41	15	0.0	0.00	0.00	0.00	0.00
502(10)c2	Reinforced Concrete Headwall, Box Culvert 2-3.0m x 3.0m	ea.	183,000.00	45	40	15	0.0	0.00	0.00	0.00	0.00
502(10)c3	Reinforced Concrete Headwall, Box Culvert 3-3.0m x 3.0m	ea.	207,000.00	45	40	15	0.0	0.00	0.00	0.00	0.00
502(10)d1	Reinforced Concrete Headwall, Box Culvert 2-4.0m x 2.5m	ea.	203,000.00	45	40	15	2.0	182,700.00	162,400.00	60,900.00	406,000.00
502(3)a1	Catch Basin for RCPC 1-φ610	ea.	16,800.00	45	40	15	262.0	1,980,720.00	1,760,640.00	660,240.00	4,401,600.00
502(3)b1	Catch Basin for RCPC 1-φ910	ea.	24,700.00	38	47	15	0.0	0.00	0.00	0.00	0.00
504(5)	Grouted Riprap, Class "A"	m3	2,250.00	49	36	15	365.0	402,412.50	295,650.00	123,187.50	821,250.00
505(1)	Stone Masonry	m3	2,360.00	55	30	15	4,514.5	5,870,475.22	3,184,303.34	1,619,441.44	10,654,220.00
505(2)	Gravity Type Retaining Wall(H=1.0 ~ 1.5m)	m3	5,560.00	44	41	15	2,112.0	5,166,796.80	4,814,515.20	1,761,408.00	11,742,720.00
506	Loose Boulder Apron 300mmφmin.,S.G=2.65	m3	2,250.00	44	41	15	68.4	67,716.00	63,099.00	23,085.00	153,900.00
507	Steel Sheet Pile (85×400×8mm), Furnished and Driven	m	1,430.00	55	30	15	0.0	0.00	0.00	0.00	0.00
509	Gabions	m3	3,510.00	51	34	15	496.0	889,630.56	584,962.56	266,366.88	1,740,960.00
510	Rubble Concrete Slope Protection, t = 350mm	m3	2,010.00	51	34	15	800.0	820,080.00	546,720.00	241,200.00	1,608,000.00
511(a)	Concrete Side Dicth (0.5 x 0.5)	m	2,270.00	38	47	15	0.0	0.00	0.00	0.00	0.00
	Sub Total							24,080,919.08	19,923,069.90	7,808,641.02	51,812,630.00
	PART H - MISCELLANEOUS STRUCTURES										
600(1)a	Concrete Curb, Type A (200x450mm)	m	640.00	58	27	15	10,077.0	3,740,582.40	1,741,305.60	967,392.00	6,449,280.00
600(1)c	Concrete Curb for Edge of Sidewalk(200*500)	m	760.00	58	27	15	13,375.0	5,895,700.00	2,744,550.00	1,524,750.00	10,165,000.00
600(3)a	Combination Concrete Curb & Gutter/Side Strip, Type A (675x364mm)	m	1,095.00	58	27	15	13,000.0	8,270,535.00	3,886,155.00	2,078,310.00	14,235,000.00
603(3)a	Metal Guardrail	m	2,300.00	58	27	15	1,400.0	1,867,600.00	869,400.00	483,000.00	3,220,000.00
610	Sodding	m2	182.00	58	27	15	0.0	0.00	0.00	0.00	0.00
611(1)	Trees (Furnishing and Transplanting)	ea.	1,220.00	58	27	15	0.0	0.00	0.00	0.00	0.00
SPL620(1)	Traffic Signal (3-leg intersection)	ea.	2,024,000.00	20	65	15	2.0	809,600.00	2,631,200.00	607,200.00	4,048,000.00
SPL620(2)	Traffic Signal (4-leg intersection)	ea.	2,205,700.00	20	65	15	3.0	1,323,420.00	4,301,115.00	992,565.00	6,617,100.00
	Other Miscellaneous (Road Signs,Pavement Stud,etc)	km	1,500,000.00	70	20	10	13.1	13,755,000.00	3,930,000.00	1,965,000.00	19,650,000.00
	Sub Total							35,662,437.40	20,103,725.60	8,618,217.00	64,384,380.00
	PART A,B- ENGINEER'S FACILITY AND MOBILIZATION / DEMOBILIZATION										
	(5% of PART C to H)							11,511,117.90	5,250,744.65	3,279,594.93	20,041,457.48
	CONTINGENCY										
	(5% of PART A to H)							12,086,673.80	5,513,281.88	3,443,574.67	21,043,530.35
	TOTAL							253,820,149.77	115,778,919.45	72,315,068.10	441,914,137.32

APPENDIX 13.8-2

SUMMARY OF IMPACT AND COMPENSATION COST

(Iloilo-Sta. Barbara Road)

Appendix 13.8-2 Summary of Impact and Compensation Cost

Iloilo - Sta Barbara Road

Description	No. of HHs	Unit	Rate/Unit	Quantity	Amount (Php)	Remarks
Compensation for Land and Other Assets						
1. Land	-	m^2	-	-	-	ROW has been acquired.
Subtotal						
2. Structures						
1) Shanty (Bamboo & Nipa)	161	m^2	1,000	4,017.16	4,071,160	
2) Wood with GI sheet	111	m^2	1,140	3,310.00	3,773,400	
3) Concrete with wood	197	m^2	6,000	6,619.36	39,716,160	
4) Concrete	44	m^2	8,000	1,450.92	12,322,820	
Subtotal	**513**			**15,397.44**	**59,893,540**	
3. Other Fixed Structures						
1) Wood Fence	24	m	100	919.34	91,934	LGUs and public utility companies are included.
2) Concrete/Steel Fence	53	m	200	1,288.96	257,792	
3) Signboard	19	Nos.	3,00	19	57,000	
4) Water/Telephone Facility	7	Nos.	10,000	7	70,000	
Subtotal	**103**				**476,726**	
4. Repair Cost	-	-	-	-	-	None
5. Electric Post Relocation	-	Nos.	-	358	-	Relocation of the posts will be carried out by power supply firm.
6. Perennials						
Various types		Nos.	various	185	64,750	
Subtotal					**60,435,016**	
Other Compensations						
1. Disturbance Allowance						
1) Severely affected land owners	-	-	-	-	-	None
2) Agricultural lessees	-	-	-	-	-	None
3) Temporary land users	-	-	-	-	-	None
4) Severely affected structural owners	362	HH	10,000	362	3,620,000	
2. Subsistence Allowance						
1) Income loss for shop owners	279	HH	15,000	279	4,185,000	
2. Financial Assistance						
1) Land users w/o title	-	-	-	-	-	None
3. Rehabilitation Assistance						
1) Severely affected land owners	-	-	-	-	-	None
2) Agricultural lessees	-	-	-	-	-	None
3) Severely affected structural owners.	105	HH	15,000	105	1,575,000	
4. Transportation Allowance						
1) Relocating PAPs	373	HH	3,000	373	1,119,000	
2) Shanty dwellers go back to province.	-	-	-	-	-	None
5. Transitional allowance						
1) Renters of affected structures	11	HH	3,000	11	33,000	
Subtotal					**10,532,000**	
Total					**70,967,016**	
RAP Implementation					**2,247,900**	
GRAND TOTAL					**73,214,916**	

APPENDIX 14.8-1

DETAILED CONSTRUCTION COST ESTIMATE

(Iloilo-R4 Bypass Road)

Appendix 14.8-1 Detailed Construction Cost Estimate of Iloilo R-4 Bypass Road

Item No.	Description	Unit	Unit Cost	Component(%)			Quantity	Cost			
				Foreign	Local	Tax		Foreign	Local	Tax	Total
	PART C - EARTHWORK										
100(1)	Clearing and Grubbing	ha.	51,000.00	57	27	16	33.08	959,948.52	453,824.52	273,306.96	1,687,080.00
102(1)	Unsuitable Excavation	m3	176.00	59	17	24	80,036.7	8,325,092.19	2,436,955.92	3,324,402.29	14,086,450.40
102(2)a	Surplus Common Excavation	m3	176.00	60	24	15	0.0	0.00	0.00	0.00	0.00
103(2)a	Bridge Excavation, Common (AWL)	m3	200.00	53	31	16	1,380.0	145,728.00	86,664.00	43,608.00	276,000.00
103(2)b	Bridge Excavation, Common (BWL)	m3	750.00	51	34	15	650.0	248,625.00	163,800.00	75,075.00	487,500.00
104(1)a	Embankment from Excavation	m3	194.00	54	20	26	0.0	0.00	0.00	0.00	0.00
104(1)b	Embankment from Borrow	m3	390.00	56	30	15	335,000.2	73,164,043.68	38,541,773.01	18,944,261.31	130,650,078.00
104(1)c	Selected Borrow for Backfilling	m3	547.00	54	20	26	1,850.0	546,453.00	202,390.00	263,107.00	1,011,950.00
105(1)	Subgrade Preparation (Common Material)	m2	17.00	57	27	16	10,315.2	100,655.72	46,469.98	28,232.70	175,358.40
	Plastic-board drain method (@2.5m * 2.5m triangle, Depth 20.0m)	m2	148.00	65	20	15	68,290.0	6,569,498.00	2,021,384.00	1,516,038.00	10,106,920.00
	Sub Total							90,060,044.11	43,953,261.43	24,468,031.27	158,481,336.80
	PART D - SUBBASE AND BASE COURSE										
200	Aggregate Subbase Course	m3	550.00	54	32	14	72,349.2	21,408,119.40	12,653,869.83	5,730,054.26	39,792,043.50
201	Aggregate Base Course	m3	650.00	53	33	14	0.0	0.00	0.00	0.00	0.00
202	Crushed Aggregate Base Course (AC)	m3	750.00	54	32	14	18,674.8	7,577,300.10	4,411,921.50	2,016,878.40	14,006,100.00
	Sub Total							28,985,419.50	17,065,791.33	7,746,932.66	53,798,143.50
	PART E - SURFACE COURSE										
301(1)	Bituminous Prime Coat (MC-70 Cut-Back Asphalt)	t	25,000.00	65	17	18	120.6	1,950,705.00	524,610.00	539,685.00	3,015,000.00
302(2)	Bituminous Tack Coat (Emulsified Asphalt Grade SS-1)	t	25,000.00	65	18	18	40.2	649,230.00	175,875.00	179,895.00	1,005,000.00
310	Bituminous Concrete Surface Course, Hot Laid	t	3,500.00	64	18	18	21,895.1	48,815,125.45	14,100,444.40	13,717,280.15	76,632,850.00
311(1)a	PCC Pavement(Plain) (t=0.10m)	m2	450.00	62	23	15	0.0	0.00	0.00	0.00	0.00
311(1)c	PCC Pavement(Plain) (t=0.23m)	m2	770.00	62	23	15	0.0	0.00	0.00	0.00	0.00
311(1)d	PCC Pavement(Plain) (t=0.25m)	m2	820.00	62	23	15	0.0	0.00	0.00	0.00	0.00
311(2)	PCC Pavement(Reinforced) for Approach Slab, t=300mm	m2	4,480.00	62	23	15	409.0	1,136,038.40	421,433.60	274,848.00	1,832,320.00
	Sub Total							52,551,098.85	15,222,383.00	14,711,708.15	82,485,170.00
	PART F - BRIDGE CONSTRUCTION										
400(4)	Precast Concrete Piles (0.45m×0.45m), Furnished and Driven	m	3,200.00	52	28	20	10,802.0	17,974,528.00	9,678,592.00	6,913,280.00	34,566,400.00
400(15)	Test Piles (0.45m×0.45m)	m	364.00	52	35	13	392.0	74,197.76	49,940.80	18,549.44	142,688.00
400(16)a	Cast-in-Place Concrete Bored Piles, φ1000mm	m	23,900.00	38	45	17	0.0	0.00	0.00	0.00	0.00
400(16)b	Cast-in-Place Concrete Bored Piles, φ1200mm	m	32,500.00	38	45	17	0.0	0.00	0.00	0.00	0.00
400(19)	Piles Shoes for 0.45m×0.45m Piles	ea	1,740.00	55	30	15	444.0	424,908.00	231,768.00	115,884.00	772,560.00
401	Concrete Railings	m	2,240.00	38	49	13	596.0	507,315.20	654,169.60	173,555.20	1,335,040.00
404(1)	Reinforcing Steel, Grade 40 (Fy=275Mpa)	kg	38.00	50	37	13	0.0	0.00	0.00	0.00	0.00
404(2)	Reinforcing Steel, Grade 60 (Fy=415Mpa)	kg	40.00	50	37	13	635,100.0	12,702,000.00	9,399,480.00	3,302,520.00	25,404,000.00
405(1)	Structural Concrete Class"A1" for Substructure (f'c=24Mpa)	m3	3,500.00	34	50	16	2,024.6	2,409,321.60	3,543,120.00	1,133,798.40	7,086,240.00
405(2)	Structural Concrete Class"A2" for Superstructure (f'c=24Mpa)	m3	5,240.00	34	50	16	1,751.7	3,120,846.54	4,589,480.20	1,468,633.66	9,178,960.40
405(3)	Structural Concrete Class"A3" for Others (f'c=21Mpa)	m3	4,500.00	34	50	16	0.0	0.00	0.00	0.00	0.00
405(6)	Structural Concrete "Lean Concrete" (f'c=17 Mpa)	m3	2,750.00	43	37	20	139.1	164,485.75	141,534.25	76,505.00	382,525.00
406(1)b	Prestressed Concrete Girder, AASHTO Type □-B, L=22m	ea	331,400.00	22	62	16	0.0	0.00	0.00	0.00	0.00
406(1)c	Prestressed Concrete Girder, AASHTO Type □-B, L=25m	ea	391,250.00	25	59	16	0.0	0.00	0.00	0.00	0.00
406(1)d	Prestressed Concrete Girder, AASHTO Type IV-B, L=26m	ea	405,480.00	22	62	16	0.0	0.00	0.00	0.00	0.00
406(1)e	Prestressed Concrete Girder, AASHTO Type □-B, L=27m	ea	419,645.00	22	62	16	0.0	0.00	0.00	0.00	0.00
406(1)f	Prestressed Concrete Girder, AASHTO Type □-B, L=28m	ea	441,755.00	20	65	15	18.0	1,590,318.00	5,168,533.50	1,192,738.50	7,951,590.00
406(1)g	Prestressed Concrete Girder, AASHTO Type □, L=30m	ea	505,185.00	20	65	15	0.0	0.00	0.00	0.00	0.00
406(1)h	Prestressed Concrete Girder, AASHTO Type V, L=31m	ea	520,815.00	20	65	15	0.0	0.00	0.00	0.00	0.00
406(1)i	Prestressed Concrete Girder, AASHTO Type V, L=35m	ea	647,400.00	17	69	14	0.0	0.00	0.00	0.00	0.00
406(1)j	Prestressed Concrete Girder, AASHTO Type □, L=36m	ea	672,500.00	19	67	14	0.0	0.00	0.00	0.00	0.00
406(1)k	Prestressed Concrete Girder, AASHTO Type □, L=40m	ea	815,870.00	17	69	14	0.0	0.00	0.00	0.00	0.00
407(1)a	Elastomeric Bearing Pad, 400×350×60 (Duro 60)	ea	18,000.00	55	30	15	30.0	297,000.00	162,000.00	81,000.00	540,000.00
407(1)b	Elastomeric Bearing Pad, 500×350×60 (Duro 60)	ea	21,100.00	55	30	15	12.0	139,260.00	75,960.00	37,980.00	253,200.00
407(2)	Expansion Joint, 50mm Gap	m	46,300.00	55	30	15	101.0	2,571,965.00	1,402,890.00	701,445.00	4,676,300.00
407(4)	Metal Drain (φ150mm G.I. Drain Pipe)	m	965.00	55	30	15	80.0	42,460.00	23,160.00	11,580.00	77,200.00
	Sub Total							42,018,605.85	35,120,628.35	15,227,469.20	92,366,703.40
	PART G - DRAINAGE AND SLOPE PROTECTION STRUCTURES										
500(1)b	Reinforced Concrete Pipe Culvert, 910mmφ (Extra. Str.)	m	6,630.00	57	28	15	385.0	1,454,953.50	714,714.00	382,882.50	2,552,550.00
500(1)c	Reinforced Concrete Pipe Culvert, 1070mmφ (Extra. Str.)	m	10,000.00	57	28	15	78.0	444,600.00	215,280.00	120,120.00	780,000.00
500(1)d	Reinforced Concrete Pipe Culvert, 1220mmφ (Extra. Str.)	m	10,600.00	57	28	15	312.0	1,885,104.00	926,016.00	496,080.00	3,307,200.00
500(1)e	Reinforced Concrete Pipe Culvert, 1520mmφ (Extra. Str.)	m	18,800.00	57	28	15	0.0	0.00	0.00	0.00	0.00
500(3)a1	Reinforced Concrete Box Culvert 1-1.5m x 1.5m	m	16,400.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)a2	Reinforced Concrete Box Culvert 2-1.5m x 1.5m	m	26,100.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)a3	Reinforced Concrete Box Culvert 3-1.5m x 1.5m	m	36,500.00	42	43	15	72.0	1,103,760.00	1,130,040.00	394,200.00	2,628,000.00
500(3)b1	Reinforced Concrete Box Culvert 1-2.4m x 2.4m	m	27,700.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)b2	Reinforced Concrete Box Culvert 2-2.4m x 2.4m	m	47,300.00	42	43	15	14.0	278,124.00	284,746.00	99,330.00	662,200.00
500(3)b3	Reinforced Concrete Box Culvert 3-2.4m x 2.4m	m	67,100.00	42	43	15	28.0	789,096.00	807,884.00	281,820.00	1,878,800.00
500(3)c1	Reinforced Concrete Box Culvert 1-3.0m x 3.0m	m	37,900.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)c2	Reinforced Concrete Box Culvert 2-3.0m x 3.0m	m	66,600.00	42	43	15	0.0	0.00	0.00	0.00	0.00
500(3)c3	Reinforced Concrete Box Culvert 3-3.0m x 3.0m	m	93,900.00	42	43	15	39.0	1,538,082.00	1,574,703.00	549,315.00	3,662,100.00
502(2)b1	Reinforced Concrete Headwall, 1-910mmφ RCPC	ea.	19,300.00	28	57	15	36.0	194,544.00	396,036.00	104,220.00	694,800.00
502(2)b2	Reinforced Concrete Headwall, 2-910mmφ RCPC	ea.	25,900.00	28	57	15	6.0	43,512.00	88,578.00	23,310.00	155,400.00
502(2)c1	Reinforced Concrete Headwall, 1-1070mmφ RCPC	ea.	22,000.00	30	55	15	2.0	13,200.00	24,200.00	6,600.00	44,000.00
502(2)c2	Reinforced Concrete Headwall, 2-1070mmφ RCPC	ea.	32,100.00	30	55	15	4.0	38,520.00	70,620.00	19,260.00	128,400.00
502(2)d1	Reinforced Concrete Headwall, 1-1220mmφ RCPC	ea.	27,400.00	31	54	15	4.0	33,976.00	59,184.00	16,440.00	109,600.00
502(2)d2	Reinforced Concrete Headwall, 2-1220mmφ RCPC	ea.	38,600.00	31	54	15	18.0	215,388.00	375,192.00	104,220.00	694,800.00
502(2)f1	Reinforced Concrete Headwall, 1-1520mmφ RCPC	ea.	37,300.00	33	52	15	0.0	0.00	0.00	0.00	0.00
502(2)f2	Reinforced Concrete Headwall, 2-1520mmφ RCPC	ea.	53,200.00	33	52	15	0.0	0.00	0.00	0.00	0.00
502(10)a1	Reinforced Concrete Headwall, Box Culvert 1-1.5m x 1.5m	ea.	51,200.00	44	41	15	0.0	0.00	0.00	0.00	0.00
502(10)a2	Reinforced Concrete Headwall, Box Culvert 2-1.5m x 1.5m	ea.	61,400.00	45	40	15	0.0	0.00	0.00	0.00	0.00
502(10)a3	Reinforced Concrete Headwall, Box Culvert 3-1.5m x 1.5m	ea.	72,700.00	45	40	15	10.0	327,150.00	290,800.00	109,050.00	727,000.00
502(10)b1	Reinforced Concrete Headwall, Box Culvert 1-2.4m x 2.4m	ea.	104,000.00	44	41	15	0.0	0.00	0.00	0.00	0.00
502(10)b2	Reinforced Concrete Headwall, Box Culvert 2-2.4m x 2.4m	ea.	125,000.00	45	40	15	2.0	112,500.00	100,000.00	37,500.00	250,000.00
502(10)b3	Reinforced Concrete Headwall, Box Culvert 3-2.4m x 2.4m	ea.	145,000.00	45	40	15	4.0	261,000.00	232,000.00	87,000.00	580,000.00
502(10)c1	Reinforced Concrete Headwall, Box Culvert 1-3.0m x 3.0m	ea.	152,000.00	44	41	15	0.0	0.00	0.00	0.00	0.00
502(10)c2	Reinforced Concrete Headwall, Box Culvert 2-3.0m x 3.0m	ea.	183,000.00	45	40	15	0.0	0.00	0.00	0.00	0.00
502(10)c3	Reinforced Concrete Headwall, Box Culvert 3-3.0m x 3.0m	ea.	207,000.00	45	40	15	4.0	372,600.00	331,200.00	124,200.00	828,000.00
502(3)b1	Catch Basin for RCPC 1-φ910	ea.	24,700.00	38	47	15	0.0	0.00	0.00	0.00	0.00
502(3)b2	Catch Basin for RCPC 2-φ910		38,700.00	39	46	15	0.0	0.00	0.00	0.00	0.00
502(3)c1	Catch Basin for RCPC 1-φ1070	ea.	28,900.00	38	47	15	0.0	0.00	0.00	0.00	0.00
502(3)c2	Catch Basin for RCPC 2-φ1070		46,500.00	39	46	15	0.0	0.00	0.00	0.00	0.00
502(3)d1	Catch Basin for RCPC 1-φ1220	ea.	37,800.00	38	47	15	0.0	0.00	0.00	0.00	0.00
502(3)d2	Catch Basin for RCPC 2-φ1220		62,300.00	39	46	15	0.0	0.00	0.00	0.00	0.00
502(3)e1	Catch Basin for RCPC 1-φ1520	ea.	48,400.00	38	47	15	0.0	0.00	0.00	0.00	0.00
502(3)e2	Catch Basin for RCPC 2-φ1520		82,200.00	39	46	15	0.0	0.00	0.00	0.00	0.00
504(5)	Grouted Riprap, Class "A"	m3	2,250.00	49	36	15	7,622.3	8,403,585.75	6,174,063.00	2,572,526.25	17,150,175.00
505(1)	Stone Masonry	m3	2,360.00	55	30	15	10.0	13,003.60	7,009.20	3,587.20	23,600.00
505(2)	Gravity Type Retaining Wall(H=1.0 ~ 1.5m)	m3	5,560.00	44	41	15	1.0	2,446.40	2,279.60	834.00	5,560.00
507	Steel Sheet Pile (85×400×8mm), Furnished and Driven	m	1,430.00	55	30	15	0.0	0.00	0.00	0.00	0.00
509	Gabions	m3	3,510.00	51	34	15	300.0	538,083.00	353,808.00	161,109.00	1,053,000.00
510	Rubble Concrete Slope Protection, t = 350mm	m3	2,010.00	51	34	15	296.4	303,839.64	202,559.76	89,364.60	595,764.00
511(a)	Concrete Side Dicth (0.5 x 0.5)	m	2,270.00	38	47	15	0.0	0.00	0.00	0.00	0.00
	Sub Total							18,367,067.89	14,360,912.56	5,782,968.55	38,510,949.00
	PART H - MISCELLANEOUS STRUCTURES										
600(1)a	Concrete Curb, Type A (200x450mm)	m	640.00	58	27	15	1,512.0	561,254.40	261,273.60	145,152.00	967,680.00
600(1)c	Concrete Curb for Edge of Sidewalk(200*500)	m	760.00	58	27	15	0.0	0.00	0.00	0.00	0.00
600(3)a	Combination Concrete Curb & Gutter/Side Strip, Type A (675x364mm)	m	1,095.00	58	27	15	0.0	0.00	0.00	0.00	0.00
603(3)a	Metal Guardrail	m	2,300.00	58	27	15	3,100.0	4,135,400.00	1,925,100.00	1,069,500.00	7,130,000.00
610	Sodding	m2	182.00	58	27	15	105,915.6	11,199,727.38	5,262,522.50	2,814,389.32	19,276,639.20
611(1)	Trees (Furnishing and Transplanting)	ea.	1,220.00	58	27	15	0.0	0.00	0.00	0.00	0.00
SPL620(1)	Traffic Signal (3-leg intersection)	ea.	2,024,000.00	20	65	15	2.0	809,600.00	2,631,200.00	607,200.00	4,048,000.00
SPL620(2)	Traffic Signal (4-leg intersection)	ea.	2,205,700.00	20	65	15	0.0	0.00	0.00	0.00	0.00
	Other Miscellaneous (Road Signs,Pavement Stud,etc)	km	1,500,000.00	70	20	10	11.9	12,456,150.00	3,558,900.00	1,779,450.00	17,794,500.00
	Sub Total							29,162,131.78	13,638,996.10	6,415,691.32	49,216,819.20
	PART A,B- ENGINEER'S FACILITY AND MOBILIZATION / DEMOBILIZATION										
	(5% of PART C to H)							13,057,218.40	6,968,097.64	3,717,640.06	23,742,956.10
	CONTINGENCY										
	(5% of PART A to H)							13,710,079.32	7,316,502.52	3,903,522.06	24,930,103.90
	TOTAL							287,911,665.69	153,646,552.93	81,973,963.28	523,532,181.89

APPENDIX 14.8-2

SUMMARY OF IMPACT AND COMPENSATION COST

(Iloilo-Roxas Road Bypass)

Appendix 14.8-2 Summary of Impact and Compensation Cost

Iloilo – Roxas Road Bypass

Description	No. of HHs	Unit	Rate/Unit	Quantity	Amount (Php)	Remarks
Compensation for Land and Other Assets						
1. Land						
1) Residential-1	-	m^2	2,500	12,950	32,375,000	Name of land owners to be identified by parcellary survey
2) Residential-2	-	m^2	2,000	900	1,800,000	
3) Agricultural (Rice field)	-	m^2	250	323,200	80,800,000	
4) Agricultural (Others)	-	m^2	200	18,750	3,750,000	
Subtotal				**355,800**	**118,725,000**	
2. Structures						
1) Shanty (Bamboo & nipa)	13	m^2	1,000	375.44	375,440	
2) Wood with GI sheet	8	m^2	1,140	229.09	375,163	
3) Concrete with wood	7	m^2	6,000	395.40	2,372,400	
4) Concrete	3	m^2	8,000	200.60	1,604,800	
Subtotal	**41**			**1,200.53**	**4,727,803**	
3. Other Fixed Structures						
1) Wood Fence	2	m	100	420	42,000	
2) Concrete/Steel Fence	2	m	200	108	21,600	
Subtotal	**4**			**528**	**63,600**	
4. Repair Cost	-	-	-	-	-	None
5. Electric Post Relocation	-	-	-	-	-	None
6. Perennials						
Various types	-	Nos.	various	750	262,500	
Subtotal					**123,778,903**	
Other Compensations						
1. Disturbance Allowance						
1) Severely affected land owners	-	-	-	-	-	None
2) Agricultural lessees	-	-	-	-	-	None
3) Temporary land users	-	-	-	-	-	None
4) Severely affected structural owners	18	-	10,000	18	180,000	
2. Subsistence Allowance						
1) Income loss for shop owners	2	-	20,000	2	40,000	
2. Financial Assistance						
1) Land users w/o title	-	-	-	-	-	Not identified
3. Rehabilitation Assistance						
1) Severely affected land owners	-	-	-	-	-	Not identified
2) Agricultural lessees	-	-	-	-	-	Not identified
3) Severely affected structural owners.	-	-	-	-	-	Not identified
4. Transportation Allowance						
1) Relocating PAPs	18	-	3,000	18	54,000	
2) Shanty dwellers go back to province.	-	-	-	-	-	None
5. Transitional allowance						
1) Renters of affected structures	7	-	3,000	7	21,000	None
Subtotal					**295,000**	
Total					**124,053,903**	
RAP Implementation					**2,823,400**	
GRAND TOTAL					**126,897,303**	