

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) NATIONAL ECONOMIC DEVELOPMENT AUTHORITY (NEDA)



ROADMAP FOR TRANSPORT INFRASTRUCTURE DEVELOPMENT FOR METRO MANILA AND ITS SURROUNDING AREAS (REGION IV-A)

FINAL REPORT

ROADMAP PROJECTS PROFILE

March 2014

ALMEC CORPORATION

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A

SHORT-TERM PROGRAM

1 LIST OF PROJECTS

(1) Highways, Expressways, and Other Roads

		Name of Project	Area	Status	New/ Upgrade	Length (km)	Existing Lanes	Proposed Lanes	Total Cost (PHP mil.)
	1. C5 Missing Link	-	NCR	Committed	New	-	-	-	251
	Southern	b. Coastal Rd/C5 Extn. South Flyover	NCR	Committed	New	ı	-	-	210
	Section	c. C5 South Extn. Flyover at SLEX	NCR	Proposed	New	1	-	-	235
	2. Global City to O	rtigas Center Link Road	NCR	Proposed	New	1.2		3-3	8,120
	3. Skyway–FTI– C	5 Connector	NCR	Committed	New	6.8		2-2	17,880
	4. C3 Missing Link	(San Juan to Makati)	NCR	Proposed	New	5.2		3-3	24,000
	5. Rehabilitation of	EDSA (C-4)	NCR	Committed	Improve	22.9	-	-	3,744
	6. Arterial Road By	pass Project Phase II, Plaridel Bypass	BCLR	Committed	New	10.0	-	-	3,341
HIGHWAYS	7. EDSA-Taft Flyo	ver	NCR	Committed	New	1.4	-	2-2	3,033
¥	8. Metro Manila	a. C2 (Gov. Forbes)/ R-7 (Espana)	NCR	Committed	New	-	-	-	
E E	Interchanges	b. C-3 (Araneta Ave.)/E. Rodriguez Sr.	NCR	Committed	New	-			
Ą.	Construction Project Phase	c. C-5/ Lanuza St – Julia Vargas Ave.	NCR	Committed	New	-			
	IV	d. EDSA/ North Ave West Ave	NCR	Committed					
		Mindanao Ave. and EDSA/ Roosevelt			New	-	-	-	4,129
		Ave.	NOD	0 " 1					,,
		e. C-5/Kalayaan Ave.	NCR	Committed	New	-	-	-	
		f. C5: Green Meadows/ Acropolis/ CalleIndustria	NCR	Committed	New	-	-	-	
		g. P. Tuazon/ Katipunan	NCR	Committed	New	-	-	-	
			Total Cost					•	64,943
	1. DaangHari-SLE	x Link Project	BRLC	Committed	New	4.0	-	2-2	2,010
	2. NLEX-SLEX	a. Link Expressway	NCR	Committed	New	13.5	-	2-2	25,556
	Connector	b. Skyway Stage3	NCR	Committed	New	14.8	-	3-3	26,500
Ś	Project	c. Seg. 9 & 10, and connection to R10	NCR	Committed	New	8.0	-	3-3	8,600
ΜĄ	3. NAIA Expresswa	ay, phase II	NCR	Committed	New	7.2	-	2-2	15,520
EXPRESSWAYS	4. Cavite – Laguna	Expressway Project	BRLC	Committed	New	47.0	-	2-2	35,420
l S	5. CLLEX Phase I		GCR	Committed	New	30.7	-	2-2	14,936
EX	6. Calamba–Los B	años Expressway	BRLC	Proposed	New	15.5	-	2-2	8,210
B.	7. C6 extension – I	Flood Control Dike Expressway	BRLC	Committed	New	39.8	-	2-2	18,590
	8. Segment 8.2 of	NLEX to Commonwealth	NCR	Proposed	New	8.0	-	2-2	7,000
	9. Southern Tagalo	og Arterial Road (STAR) – Batangas–Lipa	GCR	Committed	Upgrade	22.0	1x1	2-2	2,320
			Total Cost						164,662
	Secondary Road	a. Bulacan Road Packages 1 and 2	BRLC	Proposed	New/ Upgrade	65.4	1x1	2-2	
S	Packages for Metro Manila,	b. Cavite Secondary Roads	BRLC	Proposed	New/ Upgrade	75.3	1x1	2x2/3x3	23,000
JAC	Bulacan and	c. Sucat Road Upgrade	NCR	Proposed	Upgrade	7.7	1x1/4x4	4-4	25,000
R	Cavite	d. Quirino Road (Paranaque)	NCR	Proposed	Upgrade	7.3	2x2	4-4	
OTHER ROADS		e. Paranaque Road Package	NCR	Proposed	Upgrade	13.0	1x1/2x2	3-3	
	Prepared studies	s for several projects	GCR	Proposed	- 1-3.50	-	-	-	500
C.	Other Central Lu		GCR	Committed	Upgrade	233.3	-	-	16,000
		Luzon Road Projects	GCR	Committed	Upgrade	206.0	_	_	36,360
	Caro counting		Total Cost	Sommittod	opg.aao	200.0		I	75,860
	1								,

(2) Railways

Name of Project	Area	Status	Length (km)	Total Cost (PHP mil.)
LRT Line1Cavite Extension and O&M	NCR/BCLR	Committed	11.7	63,550
2. LRT Line2 East Extension	NCR/BCLR	Committed	4.2	9,759
3. MRT 3 Capacity Expansion	NCR	Committed	-	8,634
4. MRT 7 stage1 (Quezon Ave.–Commonwealth Ave.)	NCR/BCLR	Committed	22.8	62,698
5. Contactless Automatic Fare Collection System (AFCS)	NCR	Committed	-	1,720
6. Line1 and Line2 System Rehabilitation	NCR	Committed	-	6,067
7. Manila–Malolos Commuter Line	NCR/BCLR	Proposed		24,800
8. Metro Manila CBD Transit System Project	NCR	Proposed	-	75
9. Mega Manila Subway Study	NCR	Proposed	-	120
10. Common Station for LRT 1, MRT 3 and MRT 7	NCR	Committed		1,400
Total Cost				178,823

(3) Road-based Public Transport

Name of Project	Status	Total Cost (PHP mil.)
1. Integrated Provincial Bus Terminal System (3 Provincial Bus Terminals)	Committed	5,080
2. Road-based Public Transport Service Modernization Study	Proposed	60
3. BRT System 1 (Quezon Avenue, C5, Ortigas)	Proposed	3,200
Total Cost		8,340

(4) Traffic Management

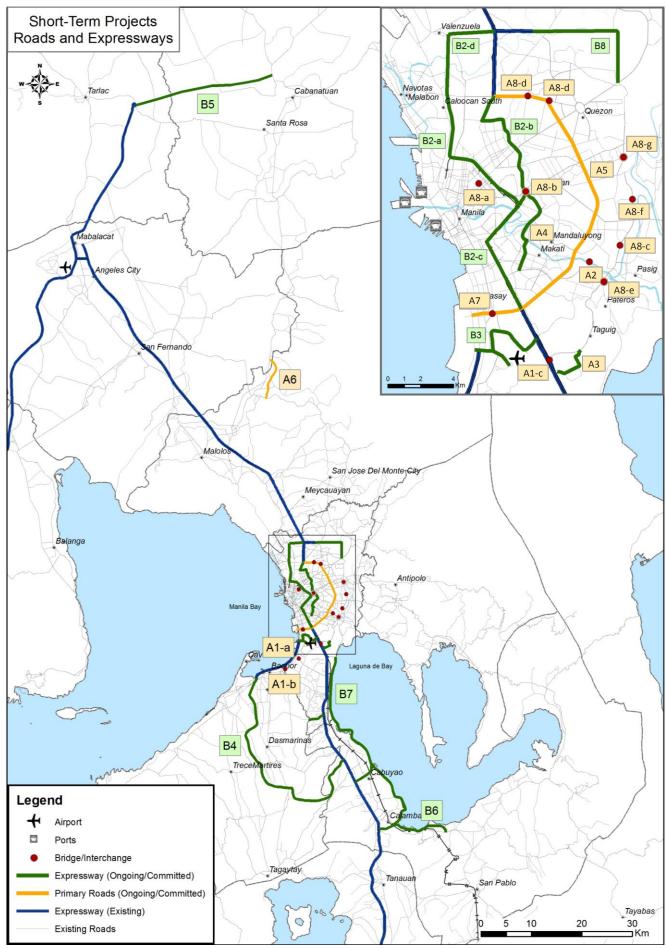
Name of Project	Status	Total Cost (PHP mil.)
Modernization of Traffic Signaling System, Communication and Monitoring	Committed	3,309
2. Systematic Road Safety Interventions Study	Proposed	1,000
3. Comprehensive Traffic Management Study	Proposed	50
Total Cost		4,359

(5) Airports

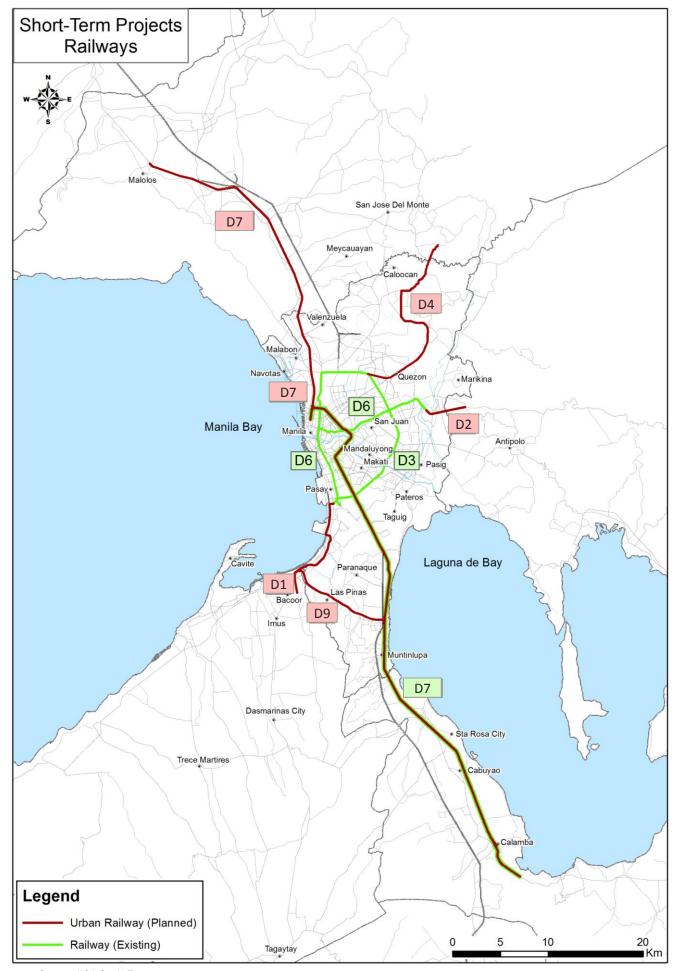
	Name of Project	Status	Total Cost (PHP mil.)
1. NAIA	a. NAIA Improvement – airside package	Committed	4 240
I. NAIA	b. NAIA improvement – landside package	Committed	4,249
2. Clark Inte	ernational Airport Construction of a Budget/ LCC Terminal	Committed	7,070
3. Feasibilit	y Study of a New NAIA	Proposed	50
	Total Cost		11,368

(6) Ports

Name of Project	Status	Total Cost (PHP mil.)
1. Projects for North Harbor	Committed	6,000
2. Projects for South Harbor	Committed	1,000
3. MICT	Committed	4,000
4. F/S of NH Redevelopment	Proposed	75
5. Other Ports	Proposed	1,010
Total Cost		12,085



Source: JICA Study Team



Source: JICA Study Team

2 ROADMAP FOR PROJECTS IN THE SHORT-TERM PROGRAM (2013–2016)

		Name of Project	2013	201	4	20	15	20	16	Beyond	Implementing	Damanka
		Name of Floject		SA-1	SA-2	SA-1	SA-2	SA-1	SA-2	2016	Agency	Remarks
	1. Missing Links of C5	a. Flyover on C.P. Garcia in Sucat	DPWH Approval	FS / EIS & NEDA / DD	Construct	Construct					DPWH	0
		b. Coastal Road/C5 Extension South Flyover	DPWH Approval	FS/EIS & NEDA / DD	Construct	Construct					DPWH	Concessionaire to seek DPWH approval
		c. C5 South Extension Flyover at SLEX	DPWH Approval	FS/EIS & NEDA /DD	Construct	Construct					DPWH	αρριοναι
	2. Global City to 0	Ortigas Center Link Road	EIS/ROW	ROW	Construct	Construct	Construct	Complete			DPWH	
	3. Skyway–FTI–C	C5 Connector	Update Docs	EIS /ROW	Construct	Construct	Construct	Construct	Complete		DPWH	PPP
	4. C3 Missing Lin	k (San Juan to Makati)	F/S	EIS / NEDA	ROW/ Construct	Construct	Construct	Construct	Complete		DPWH	
HIGHWAYS	5. Rehabilitation of EDSA (C-4)		Selective Reblocking	Selective Reblocking	Selective Reblocking						DPWH	
A. HIGH	6. Arterial Road Bypass Project Phase II, Plaridel Bypass		Business Case Study	DD / ROW	Construct	Construct	Complete				DPWH	PPP
	7. EDSA-Taft Fly	over	EIS	Construct	Construct	Construct	Construct	Complete			DPWH	
	8. Metro Manila	a. C2 (Gov. Forbes)/ R-7 (Espana)	NEDA Approval	DD / EIS	Construct	Construct	Complete				DPWH	
	7 Inter- changes/	b. C-3 (Araneta Ave.)/E. Rodriguez Sr.	NEDA Approval	DD / EIS	Construct	Construct	Complete				DPWH	
	Flyovers	c. C-5/ Lanuza St – Julia Vargas Ave.	NEDA Approval	DD / EIS	Construct	Construct	Complete				DPWH	
		d. EDSA/ North Ave - West Ave-Mindanao Ave.& EDSA/ Roosevelt Ave.	NEDA Approval	DD / EIS	Construct	Construct	Complete				DPWH	
		e. C-5/Kalayaan Ave.	NEDA Approval	DD / EIS	Construct	Construct	Complete				DPWH	
		f. C5: Green Meadows/ Acropolis/ Calle Industria	NEDA Approval	DD / EIS	Construct	Construct	Complete				DPWH	
		g. P. Tuazon/ Katipunan	NEDA Approval	DD / EIS	Construct	Construct	Complete				DPWH	
EXPRESSWAYS	1. DaangHari–SL	EX Link Tollroad (Segment 1 & II)	Ongoing Segment 1	Revision D/D Segment II	Complete						DPWH	PPP
SSW	2. NLEX-	a. Link Expressway (Metro Pacific)	Tender	DD / EIS	ROW	Construct	Construct	Construct	Complete		DPWH	PPP
PRE	SLEX Connectors	b. Skyway 3 section (Citra)	DD	EIS / ROW	Construct	Construct	Construct	Complete			TRB	PPP
B. EX	Connectors	c. Segments 9 & 10, and connection to R10 (MPDTC)	DD/ EIS/ ROW	Construct	Construct	Construct	Construct				DPWH	PPP

Name of Project		2013	201	4	20	15	20	16	Beyond	Implementing	Damaanka
	Name of Project		SA-1	SA-2	SA-1	SA-2	SA-1	SA-2	2016	Agency	Remarks
	3. NAIA Expressway, phase 2	DD/ROW	Construct	Construct	Construct	Construct	Construct	Complete		DPWH	PPP
	4. CALA Expressway, stages 1 and 2	PQ	Tender	ROW / DD	ROW / DD/ Construct	ROW / DD/ Construct	ROW / DD/ Construct	Construct	till 2017	DPWH	PPP Bidding Ongoing
	5. CLLEX Phase I (La Paz, Tarlac-Cabanatuan): PPP	Procure Advisor	Base Case Study	NEDA	DD / ROW	Construct	Construct	Construct	till 2017	DPWH	PPP
	CLLEX Phase I (La Paz, Tarlac-Cabanatuan): ODA	DD/EIS/ROW	DD/EIS/ROW	Construct	Construct	Complete				DPWH	ODA
	6. Calamba–Los Baños Expressway	Project Structure Preparation	DD	EIS / ROW	Construct	Construct	Construct	Complete		DPWH	PPP
	7. C6 Extension– Lakeshore Dike Expressway	Business Case Study	DD	EIS	ROW	Construct	Construct	Construct	till 2017	DPWH	PPP
	8. Segment 8.2 of NLEX to Commonwealth	Tender	DD	EIS	ROW	Construct	Construct	Complete		DPWH	PPP
	9. Southern Tagalog Arterial Road (STAR)–(Batangas–Lipa)	Construct	Construct	Construct	Construct					DPWH	PPP
	1. Bulacan Road Packages 1 and 2	Procure Consultants	F/S / NEDA / DD / EIS	ROW / Construct	Construct	Construct	Construct	Complete		DPWH	
	2. Cavite Secondary Roads	Procure Consultants	F/S / NEDA / DD / EIS	ROW / Construct	Construct	Construct	Construct	Complete		DPWH	
	3. Sucat Road Upgrade	Procure Consultants	F/S / NEDA / DD	EIS / ROW	Construct	Construct	Construct	Complete		DPWH	
DS	4. Quirino Road (Paranaque)	Procure Consultants	F/S / NEDA / DD / EIS	ROW / Construct	Construct	Construct	Construct	Complete		DPWH	
OTHER ROADS	5. Paranaque Road Package	Procure Consultants	F/S / NEDA / DD / EIS	ROW / Construct	Construct	Construct	Construct	Complete		DPWH	
C. OTHE	6. Amang Rodriguez-President Quezon	Procure Consultants/ Advisors	F/S / NEDA / DD	EIS / ROW	Construct	Construct	Construct	Complete		DPWH	
	7. Technical Assistance for the Development of Secondary Roads	Procure Consultants	F/S or Business Case Study	F/S or Business Case	F/S or Business Case	F/S or Business Case				DPWH	
	8. Other Central Luzon Road Projects	Procure Consultants	F/S /NEDA / DD /EIS	ROW / Construct	Construct	Construct	Construct	Complete		DPWH	
	9. Other Southern Luzon Road Projects	Procure Consultants	F/S / NEDA / DD/ EIS	ROW / Construct	Construct	Construct	Construct	Complete		DPWH	

Notes: SA 1= Semi-annual from January to June; SA 2= Semi-annual from July to December; Q4 = 4th quarter of the year; DD=detailed design; F/S= feasibility study; IEE=initial environmental examination; EIA=environmental impact assessment; PPP = public-private partnership;

	Name of Project		2013	20	14	2015		2016		Beyond	Implementing	Domonico
			Q4	SA-1	SA-2	SA-1	SA-2	SA-1	SA-2	2016	Agency	Remarks
	LRT 1–Cavite Ex Maintenance	PQ / Tender	Tender	DD /EIS/ ROW	DD / ROW /Construct	Construct	Construct	Construct	till 2017	DOTC	PPP Rebidding Ongoing	
	2. LRT 2–East Extension		Tender	DD / EIS / ROW	ROW	Construct	Construct	Complete			DOTC	PPP for O&M
	3. MRT 3 Capacity	Tender	Build Prep.	Build	Deploy	Deploy	Complete			DOTC		
S	4. MRT 7 stage1 (C	Tender	DD / EIS / ROW	ROW	Construct	Construct	Construct	Construct	till 2018	DOTC		
D. RAILWAYS	5. AFCS Common Ticketing System		Tender	System Development	Install	Complete					DOTC	PPP
\ ₹	6. System Rehabilit	tations for LRT Line 1 & Line 2	DD	Construct	Complete						DOTC	
	7. Mega Manila Co	mmuter Line (Malolos – Calamba)	F/S	NEDA Approval	DD/EIS		TBD				NLRC/PNR	
	8. Metro Manila CBD Transit System Project		Study	Study	NEDA Approval		TBD				DOTC	
	9. Mega Manila Subway Study			Preparatory Study	F/S	F/S	TBD				DOTC	
	10. Common Station for LRT 1, MRT 3 and MRT 7 (LRT Line 1 North Extension Project – Common Station)		NEDA Approval	Tender	DD/EIS	Construct	Construct				DOTC	
	Integrated Provir Bus Terminals or	NEDA Approval	DD	Construct	Complete					DOTC		
E. ROAD- BASED PT	Road-based Pub Study		Study	Study	Study	TBD				DOTC		
E. R(3. BRT System 1(Quezon Avenue, C5, Ortigas) Study Study Tender Construct Com		Complete				DOTC	PPP candidate				
ENT	Modernization of Traffic Signaling System (Installation of Intelligent Transport System Module A: Traffic Signal System Upgrading and Module B: Communication and Monitoring)		NEDA approved	DD	Install	Install	Install	Complete			MMDA	
F. TRAFFIC MANAGEMENT	Systematic Road Safety Interventions			Study	NEDA Approval	DD	Construct	Construct	Complete		MMDA	
	3. Comprehensive Traffic Management Study			Study	Study						MMDA	
G. AIRPORT S	1. NAIA	I. NAIA a. NAIA Improvement – airside package DD Implement Complete					MIAA					
AIRE		b. NAIA improvement – landside package		Construct	Construct	Complete					MIAA	

	Name of Project		2013	2013 2014		2015		2016		Beyond	Implementing	Domorko
			Q4	SA-1	SA-2	SA-1	SA-2	SA-1	SA-2	2016	Agency	Remarks
	2. Clark	a. Clark improvement – airside package		Implement	Implement	Implement	Implement	Implement	Complete		CIAC	
		 b. Clark improvement – landside package (Clark International Airport Construction of a Budget/ Low Cost Carrier (LCC) Terminal) 		DD/EIS	Construct	Construct	Construct	Construct	Complete		CIAC	
	3. Feasibility Study of a New NAIA			Study	Study		TBD				DOTC	
	Projects for North Harbor		Construct	Construct	Construct	Construct	Construct	Complete			PPA	
H. PORTS	2. Projects for South Harbor		Construct	Complete	TBD						PPA	Freeze beginning 2014
	3. MICT				TBD						PPA	Freeze beginning 2014
	4. F/S of NH Redevelopment			Study	Study	TBD					PPA	
	5. Other Ports			Construct	Construct	Construct	Construct	Construct	Complete		PPA	

Note: SA 1= Semi-annual from January to June; SA 2= Semi-annual from July to December.

Source: JICA Study Team

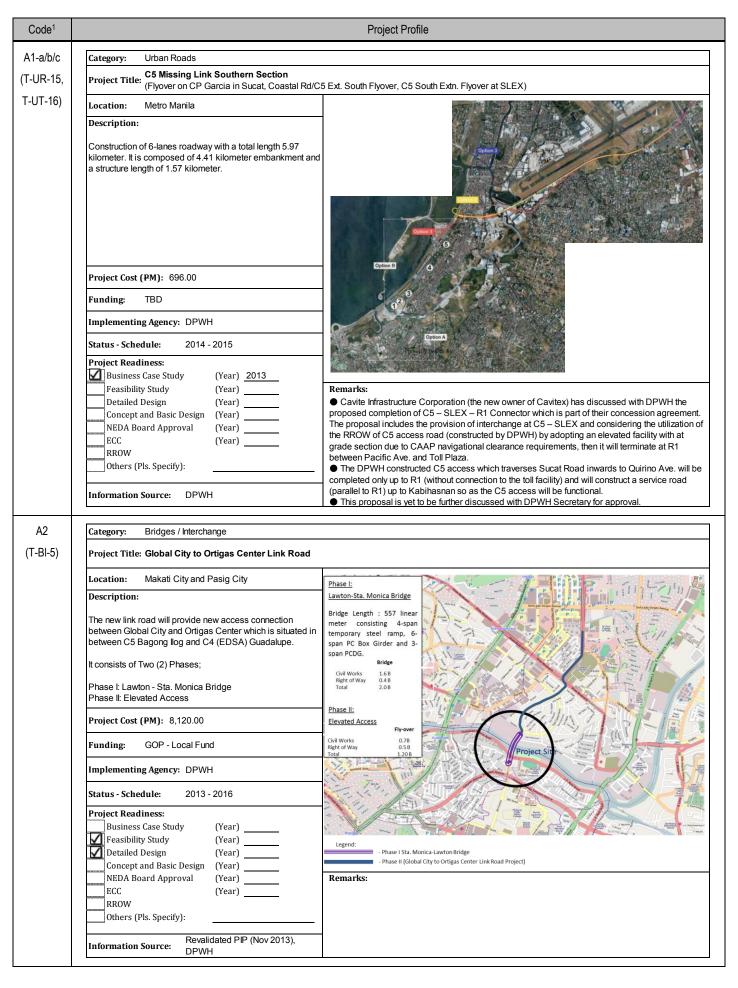
3 INDICATIVE INVESTMENT SCHEDULE FOR PROJECTS IN THE SHORT-TERM PROGRAM (2014–2016)

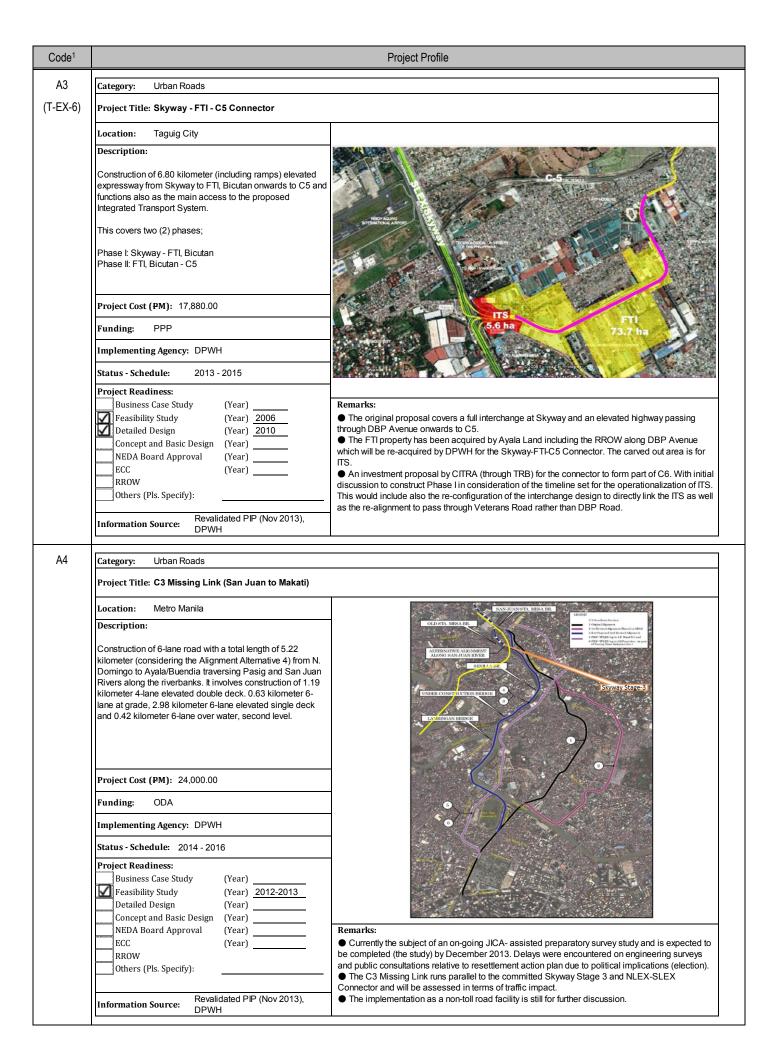
Name of Project			Total (PHP mil.)	2014	2015	2016	Beyond	Implementing Agency	
	1. Missing	a. Flyover on C.P. Garcia in Sucat	251	251				DPWH	
	Links of C5	b. Coastal Rd/C5 Ext. South Flyover	210	210				DPWH	
		c. C5 South Extn. Flyover at SLEX	235	235				DPWH	
	2. Global City-C	8,120	2,030	4,060	2,030		DPWH		
	3. Skyway/FTI/C	17,880	5,960	5,960	5,960		DPWH		
	4. C3 Missing Li	24,000	4,800	9,600	9,600		DPWH		
	5. EDSA Rehab	3,744	3,744				DPWH		
w	6. Plaridel Bypa	3,341	2,227	1,114			DPWH		
A. ROADS	7. C4 (EDSA)-T	3,033	455	1,820	758		DPWH		
. R	8. Metro	a. C2 (Gov. Forbes)/ R7 (Espana)		620					
¥.	Manila Inter- changes /	b. C3 (Araneta Ave.) / E. Rodriquez Sr.							
	Flyovers	c. C4 (EDSA) West Ave./North Ave./ Mindanao Ave and EDSA/Roosevelt Ave.	4,129		2,477	1,032		DPWH	
		d. C5 Lanuza St - Julia Vargas Ave			·	·			
		e. C5 Kalayaan Ave.							
		f. C5: Green Meadows/Acropolis/ Calle Industria							
		g. P. Tuazon / Katipunan							
		LEX Link Tollroad	2,010	2,010				DPWH	
	2. NLEX-SLEX Connectors	a. Link Expressway (Metro Pacific)	25,556		12,778	12,778		DPWH	
		b. Skyway 3 section (Citra) incl. common section	26,500	6,600	13,250	6,650		TRB	
B. EXPRESSWAYS		c. Segments 9 & 10, and connection to R10 (MPDTC)	8,600	4,300	4,300			DPWH	
SSV	3. NAIA Express	15,520	6,208	6,208	3,104		DPWH		
l R		sway, stages 1 and 2	35,420	2,846	5,692	5,692	21,190	DPWH	
X	5. CLLEX Phase	14,936	4,491	6,416	1,925	2,104	DPWH		
œ.	6. Calamba–Los	8,210		4,105	4,105		DPWH		
	7. C6 Extension	18,590		7,436	3,718	7,436	DPWH		
	8. Segment 8.2	7,000		3,500	3,500		DPWH		
	Southern Tag Lipa	2,320	1,740	580			DPWH		
	1. Bulacan Road	3,898	1,283	1,283	1,283		DPWH		
	2. Cavite Secon	5,981	1,994	1,994	1,994		DPWH		
SC	3. Sucat Road L	2,117	706	706	706		DPWH		
SOA	4. Quirino Road	2,972	991	991	991		DPWH		
X	5. Paranaque R	4,776	1,592	1,592	1,592		DPWH		
上岸	6. Amang Rodrig	3,305	1,102	1,102	1,102		DPWH		
C. OTHER ROADS	Secondary Ro		500	250	250			DPWH	
	8. Other Central	16,000	3,330	7,330	5,340		DPWH		
	9. Other Southe	36,360	10,100	14,130	12,130		DPWH		
	1. LRT 1–Cavite	63,550	10,000	10,000	10,000	33,550	DOTC		
	2. LRT 2–East E	9,759		4,879	4,879		DOTC		
۲S	3. MRT 3 Capac	8,633.64	2,153	4,317	2,158		DOTC		
D. RAILWAYS	4. MRT 7 stage ² Avenue)	62,698		15,675	15,675	31,348	DOTC		
. Z		on Ticketing System	1,722	688	688	344		DOTC	
		bilitation for LRT 1 & 2	6,067	6,067				DOTC	
		os Commuter Line (Initial phase of amba Commuter Rail)	24,800	6,200	6,200	6,200	6,200	NLRC/PNR	

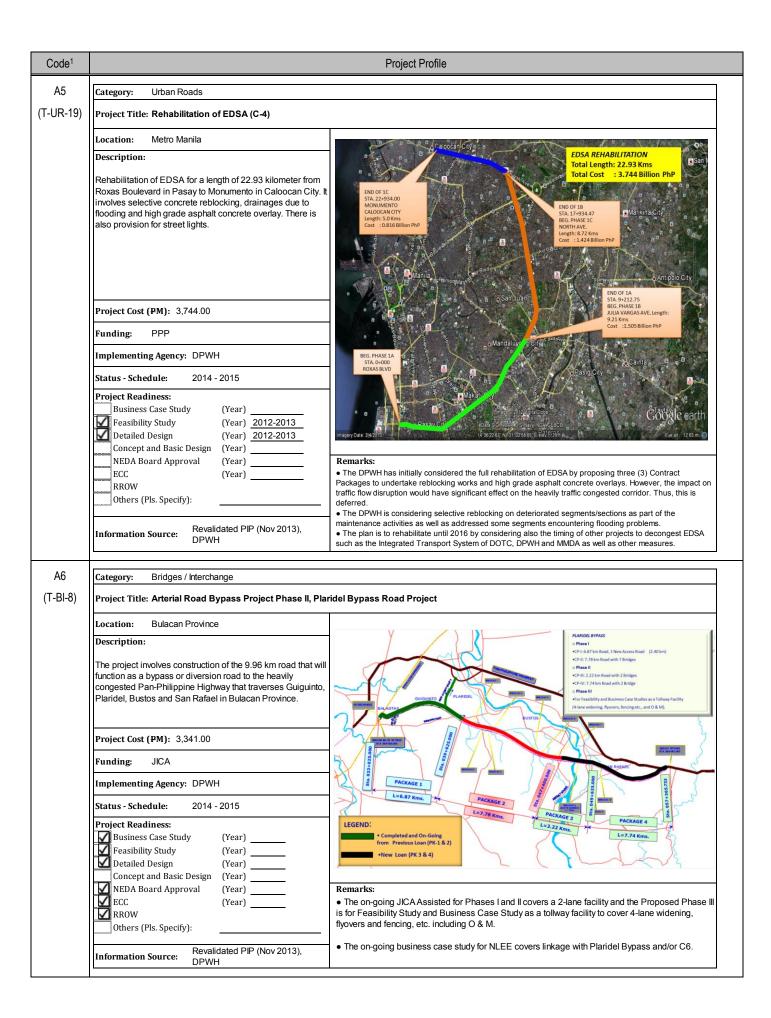
	N	Total (PHP mil.)	2014	2015	2016	Beyond	Implementing Agency	
	8. Metro Manila	75	75				DOTC	
9. Mega Manila Subway Study			120	120				DOTC
F. ROAD BASED PT	Integrated Provincial But System Projection	5,080	5,080				DOTC	
ROAD P	2. Road-based Study	60	40	20			DOTC	
ъ.	3. BRT System	1 (Quezon Ave., C5, Ortigas)	3,200	1,167	2,033			DOTC
F. TRAFFIC MGT.	Modernizatio Communicat Intelligent Tra Signal Systel Communicat	3,309	1,500	1,500	309		MMDA	
I	2. Systematic F	1,000		500	500		MMDA	
ır.	3. Comprehens	50	50				MMDA	
RTS	1. NAIA	a. NAIA Improvement – airside package	4,249	2,832	1,416			MIAA
G. AIRPORTS		b. NAIA improvement – landside package						MIAA
ල	Clark International Airport Construction of a Budget / LCC Terminal		7,070	2,357	2,357	2,357		CIAC
	3. Feasibility Study of a New NAIA		50	50				DOTC
	1. Projects for North Harbor		6,000	2,000	2,000	2,000		PPA
XTS	2. Projects for South Harbor		1,000	400	400	200		PPA
H. PORTS	3. MICT	4,000		800	1,600	1,600	PPA	
王	4. F/S of NH Re	75	75				PPA	
	5. Other Ports		1,010	337	337	337		PPA

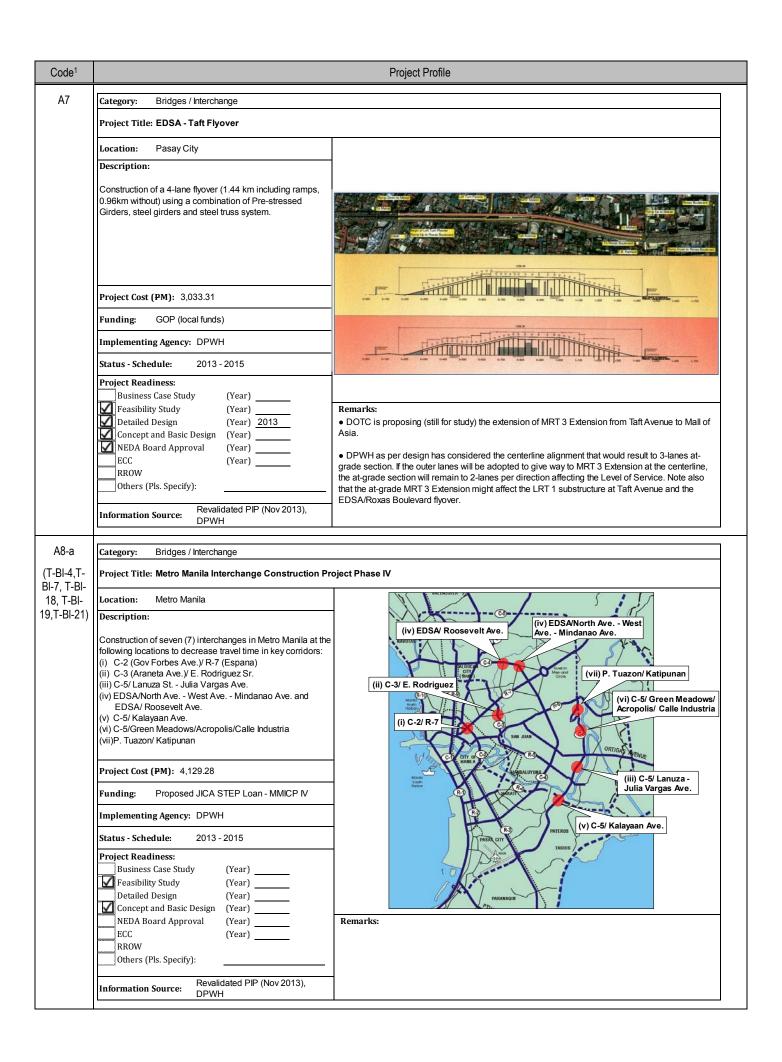
^{*} Cost reflected is the first tranche for the proposed road packages to start in the short term. Total cost would be PHP 69,100 B. Source: JICA Study Team

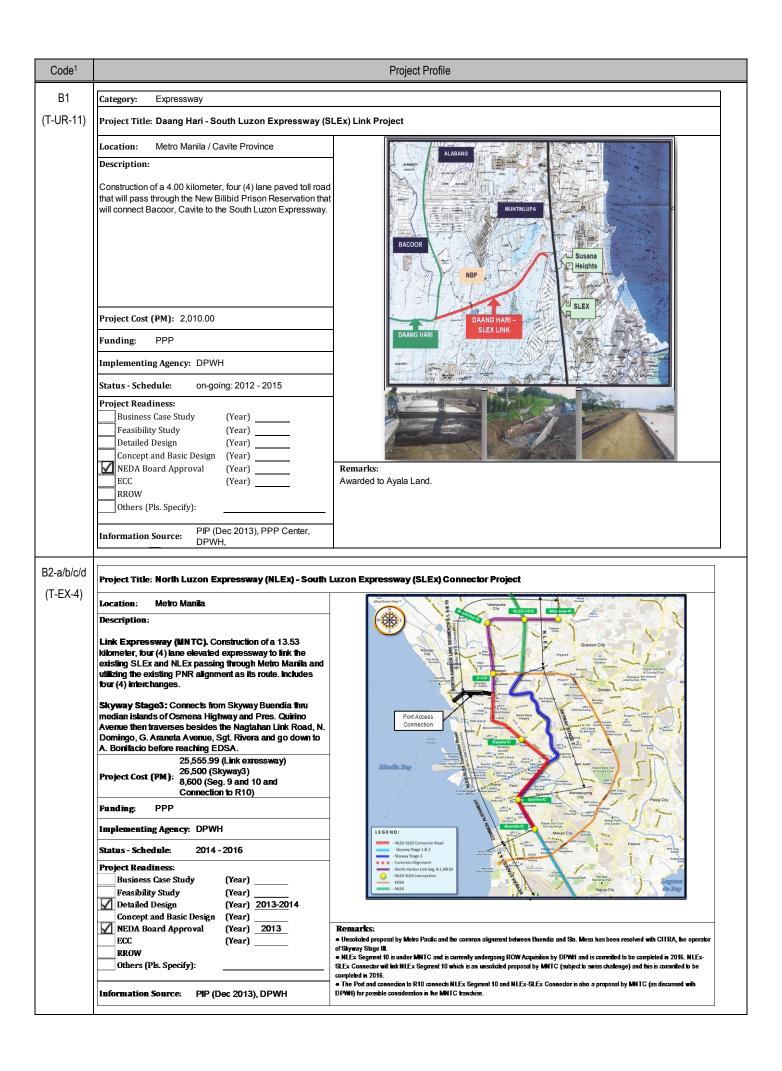
4 PROFILE OF SHORT-TERM PROJECTS

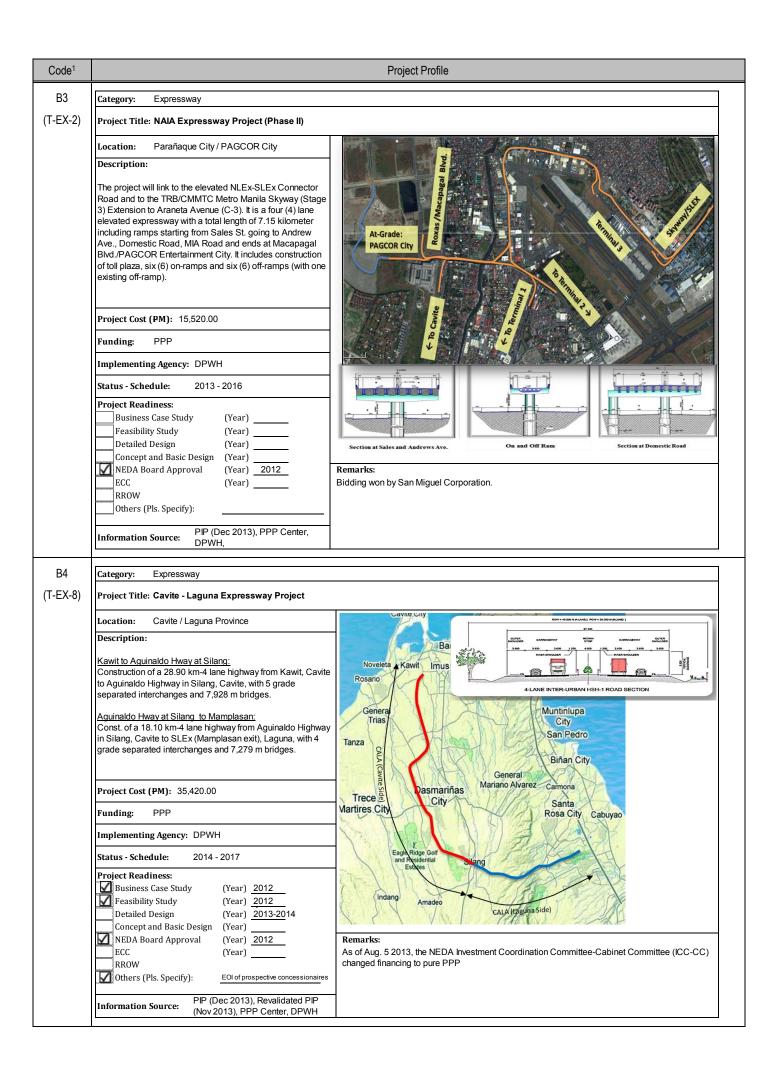


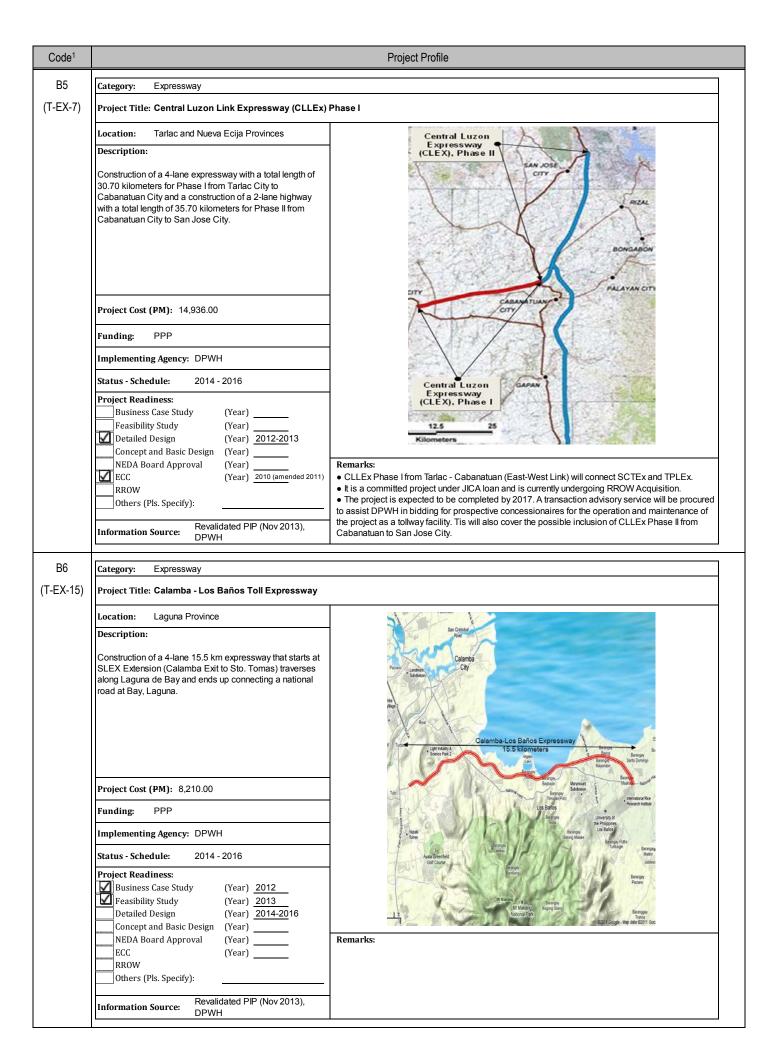


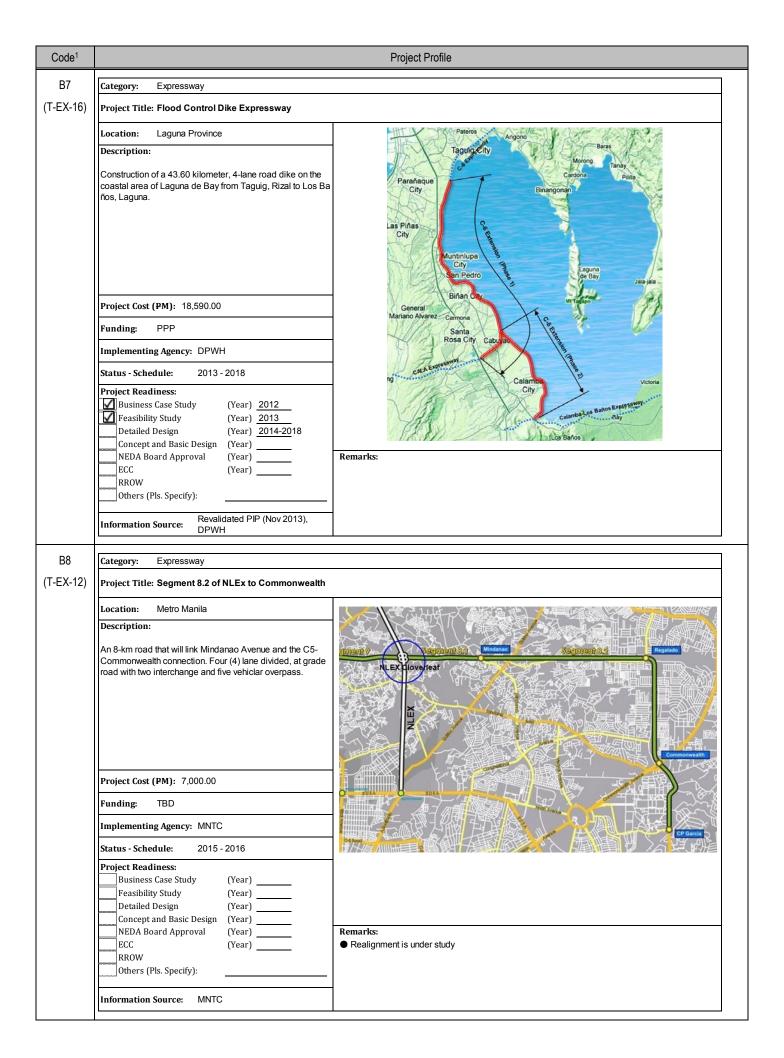


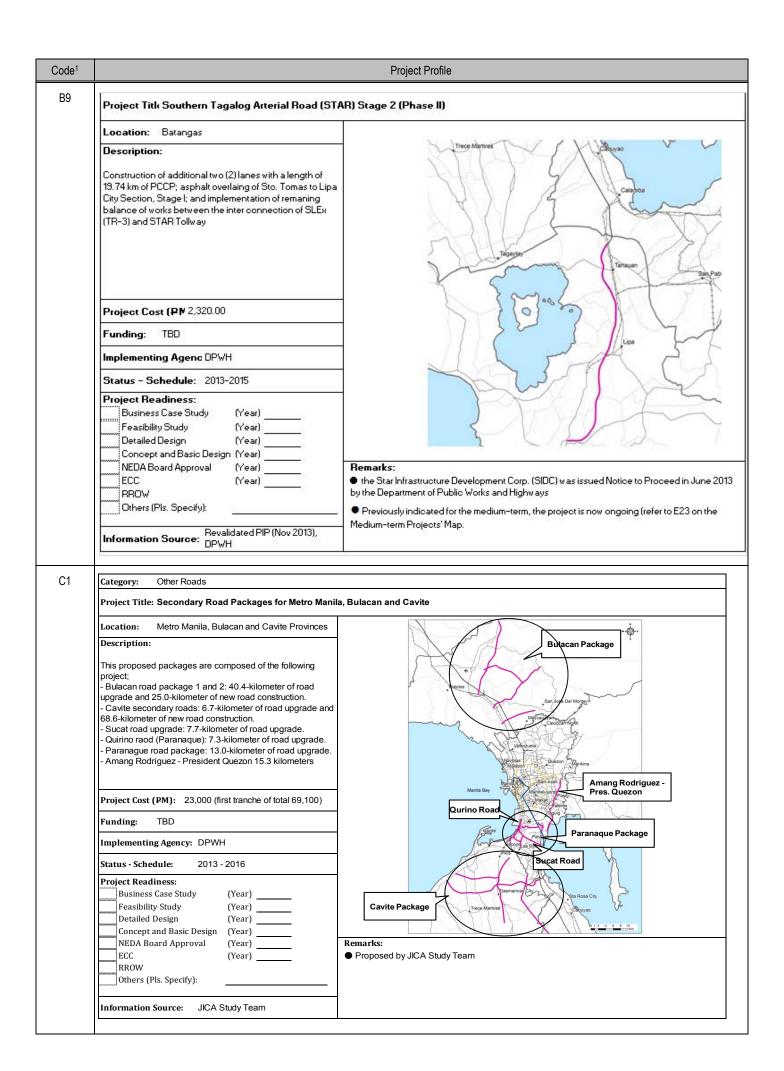


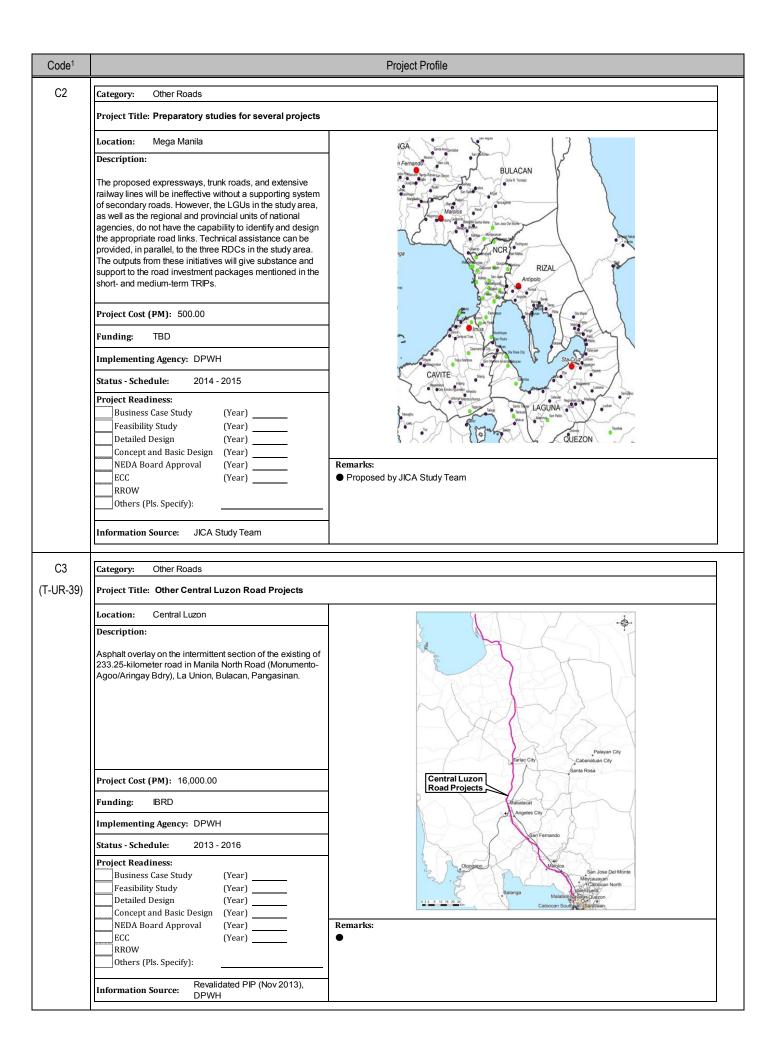


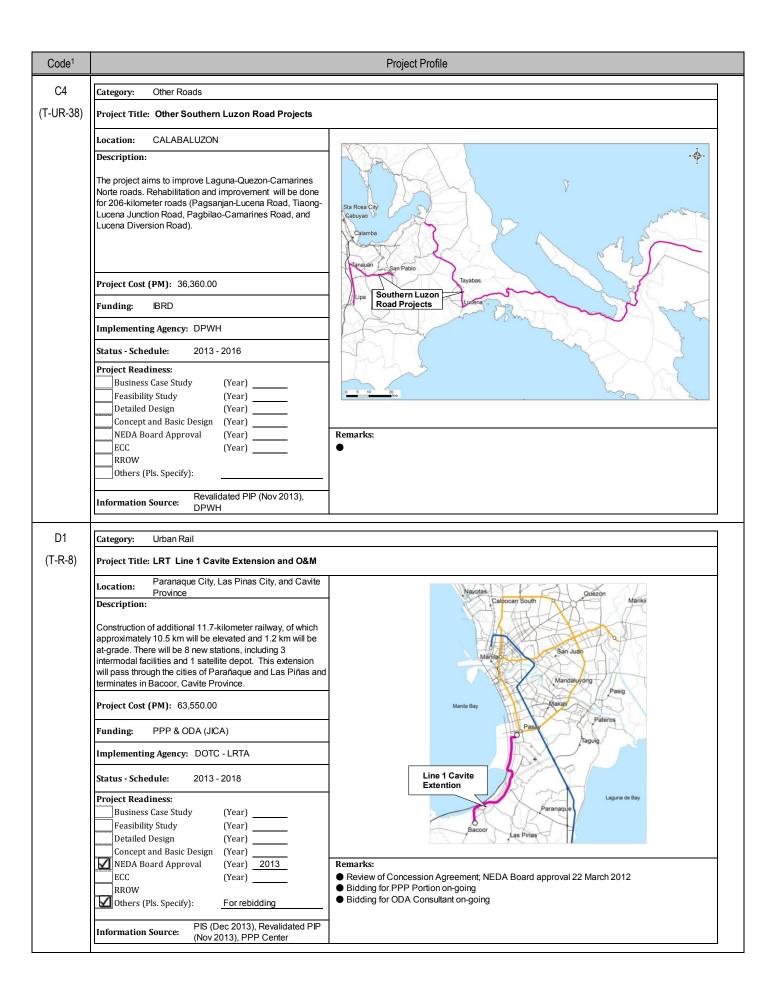


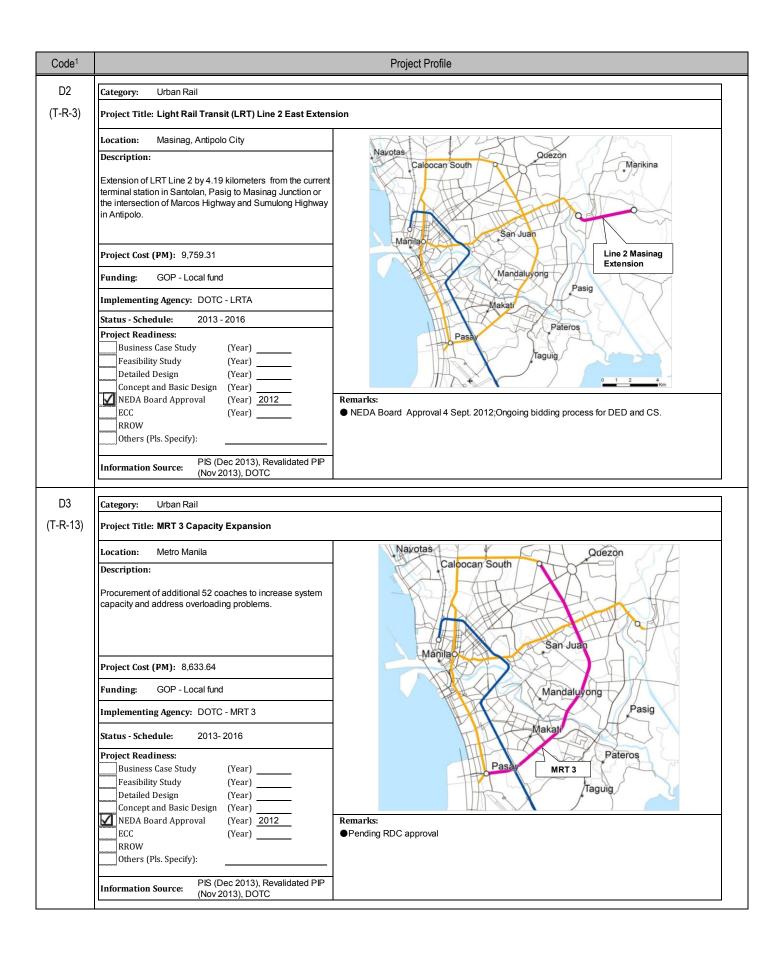


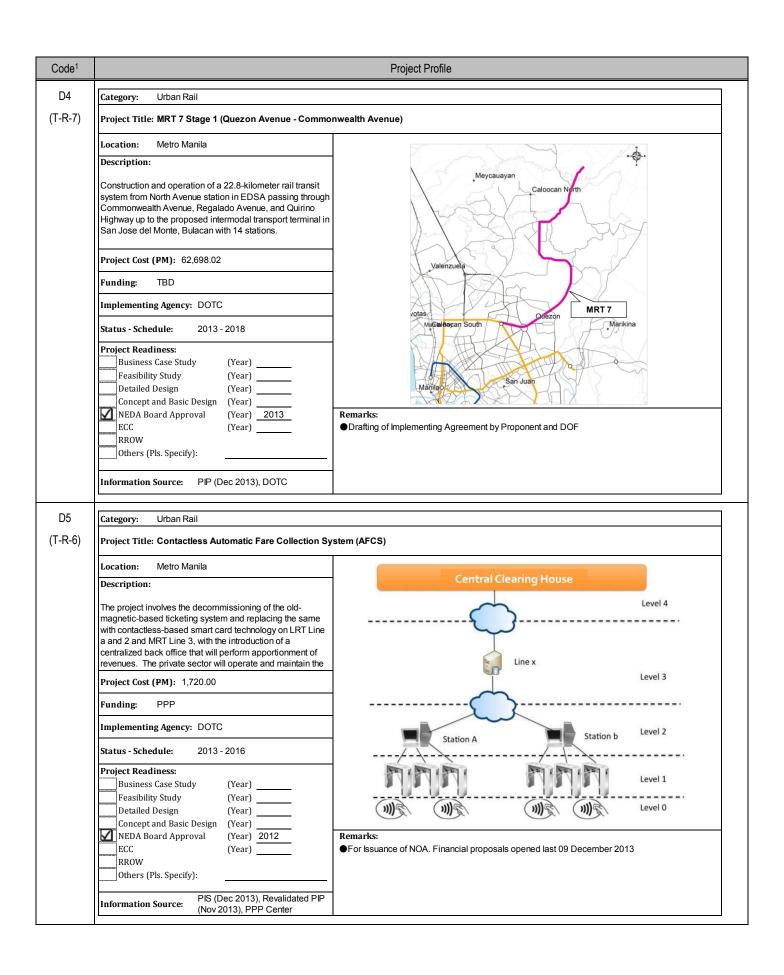


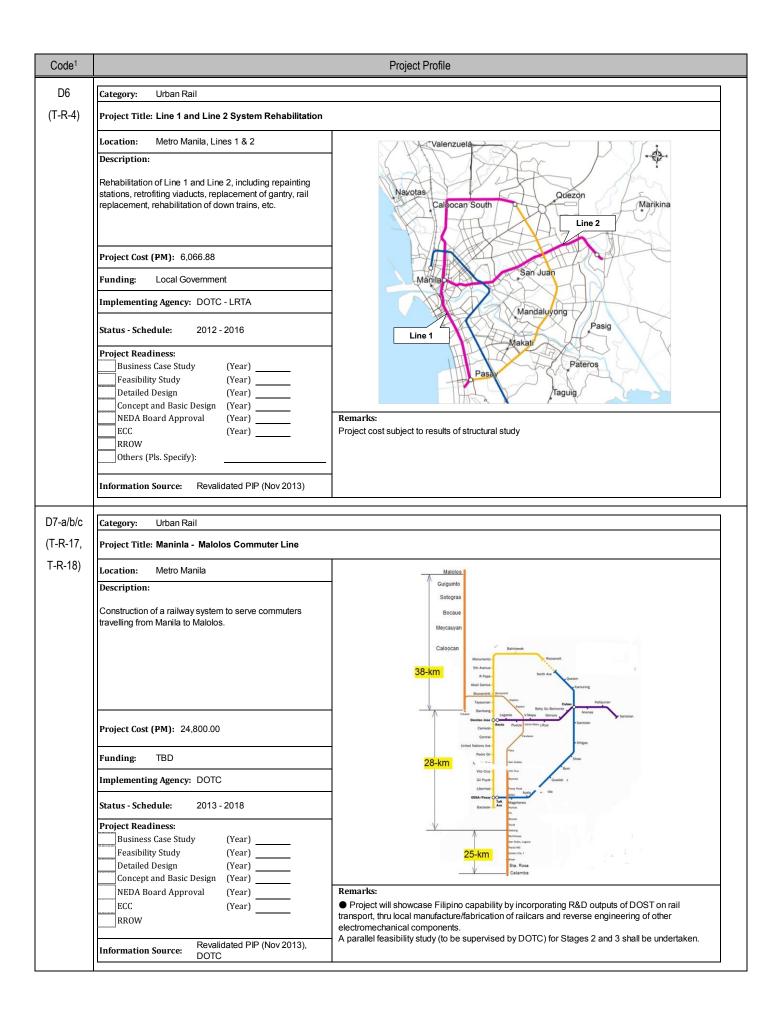


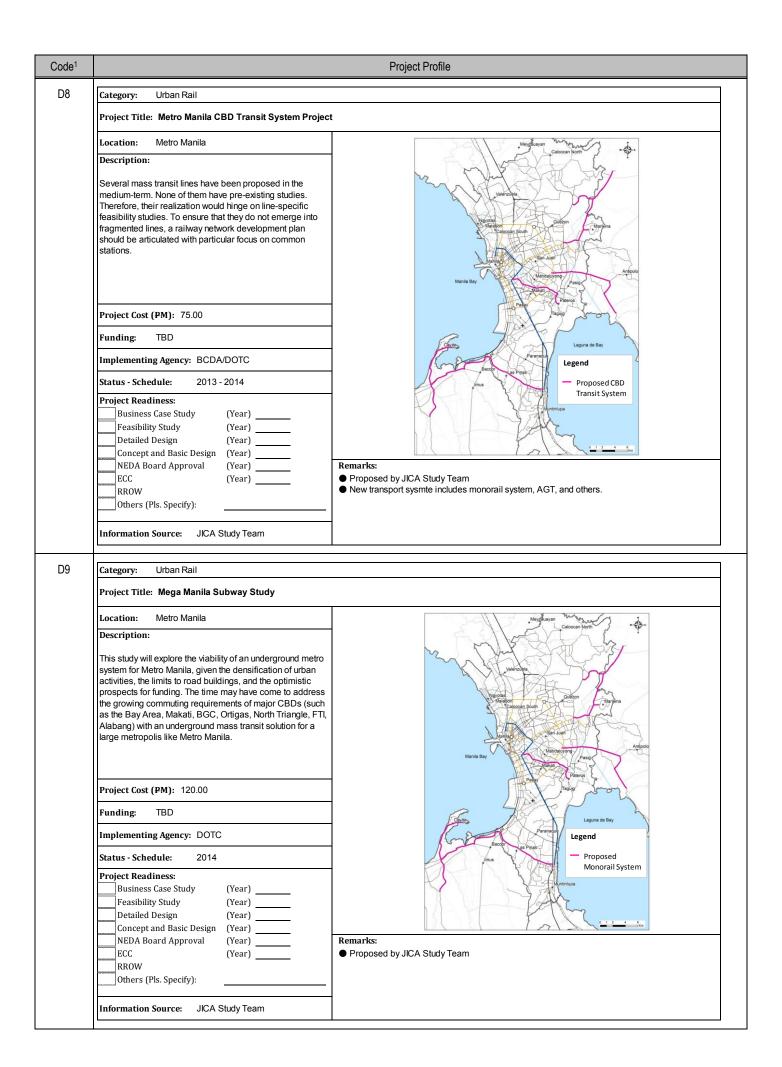


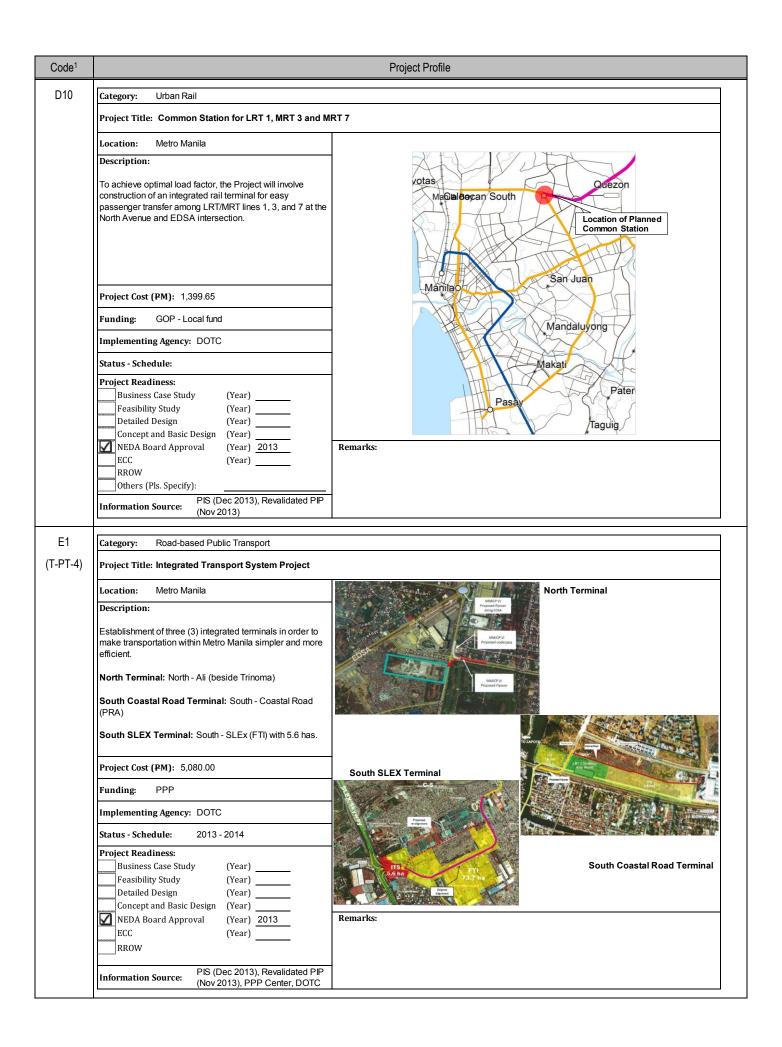


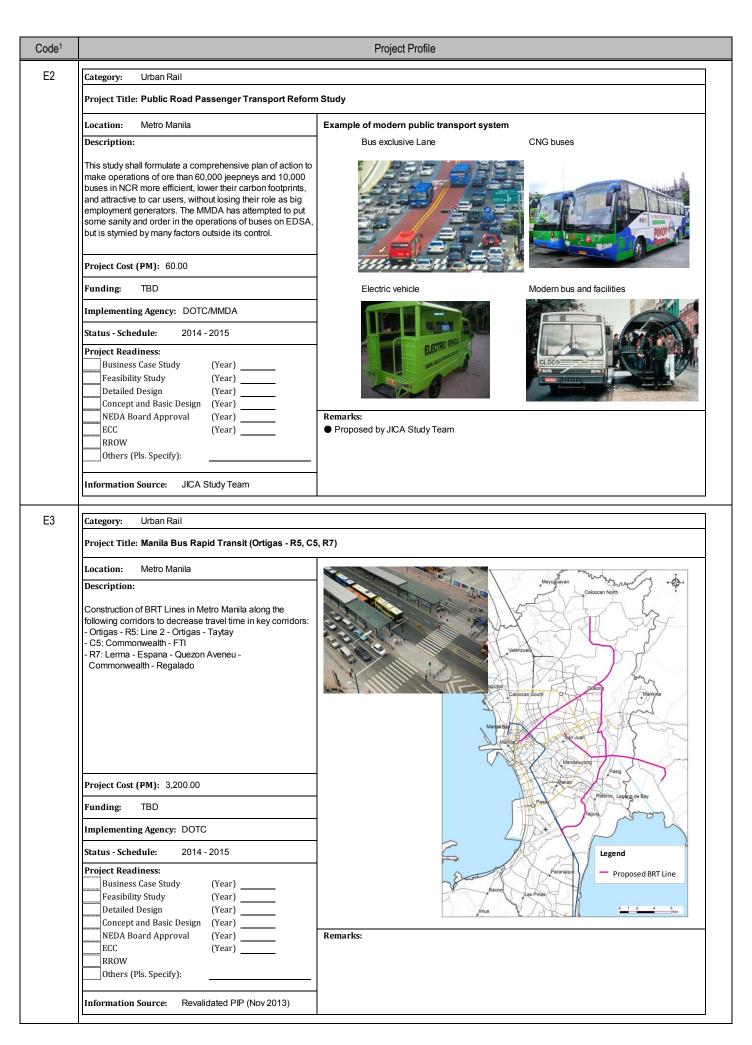




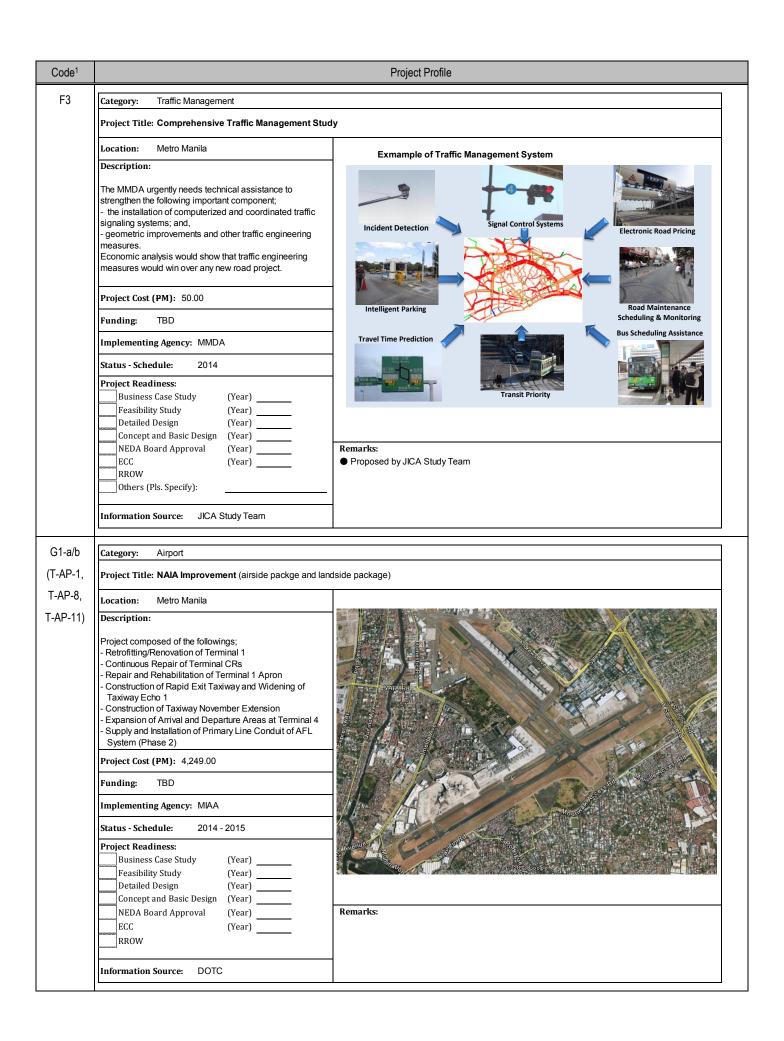


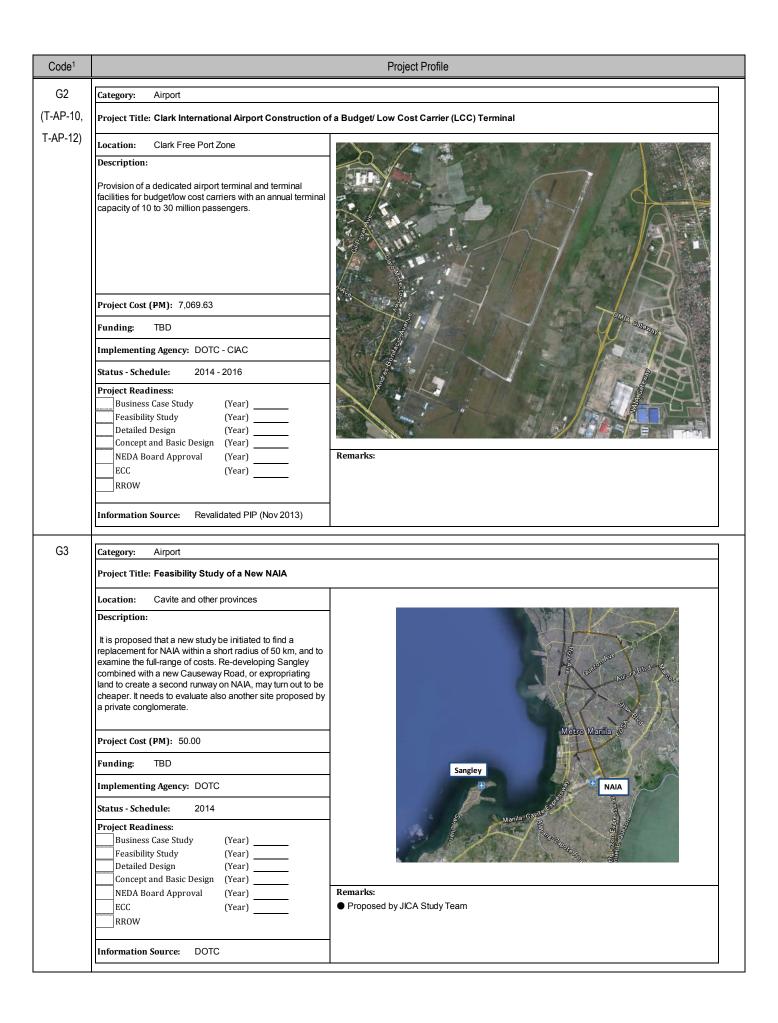


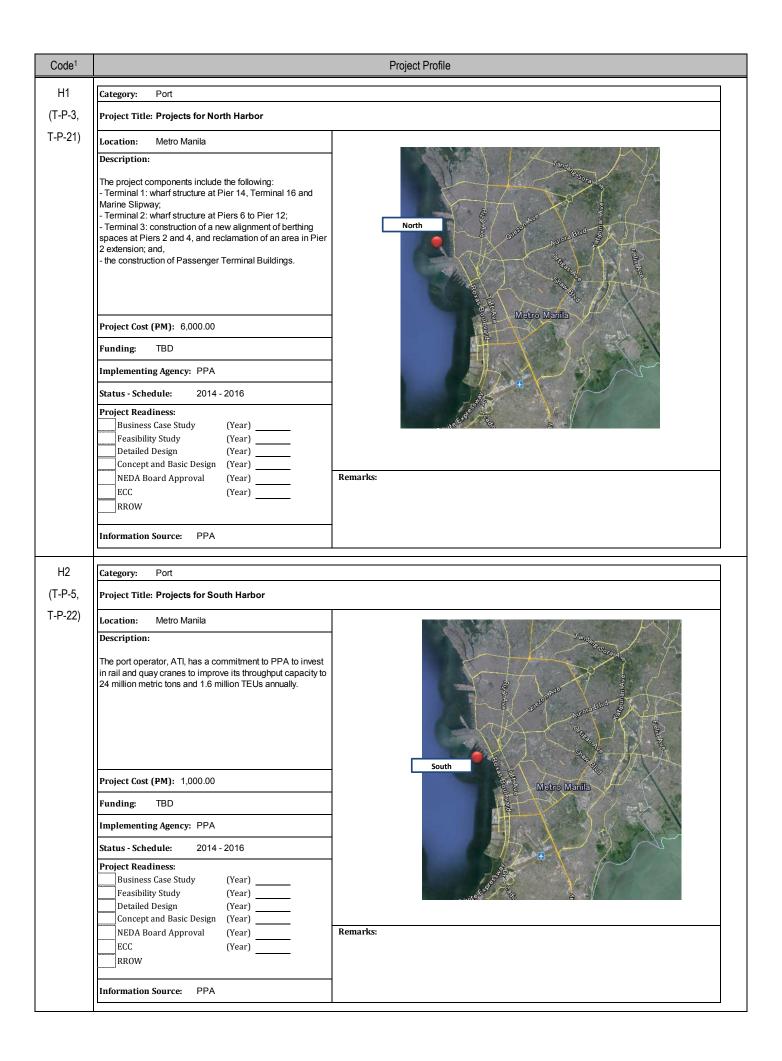


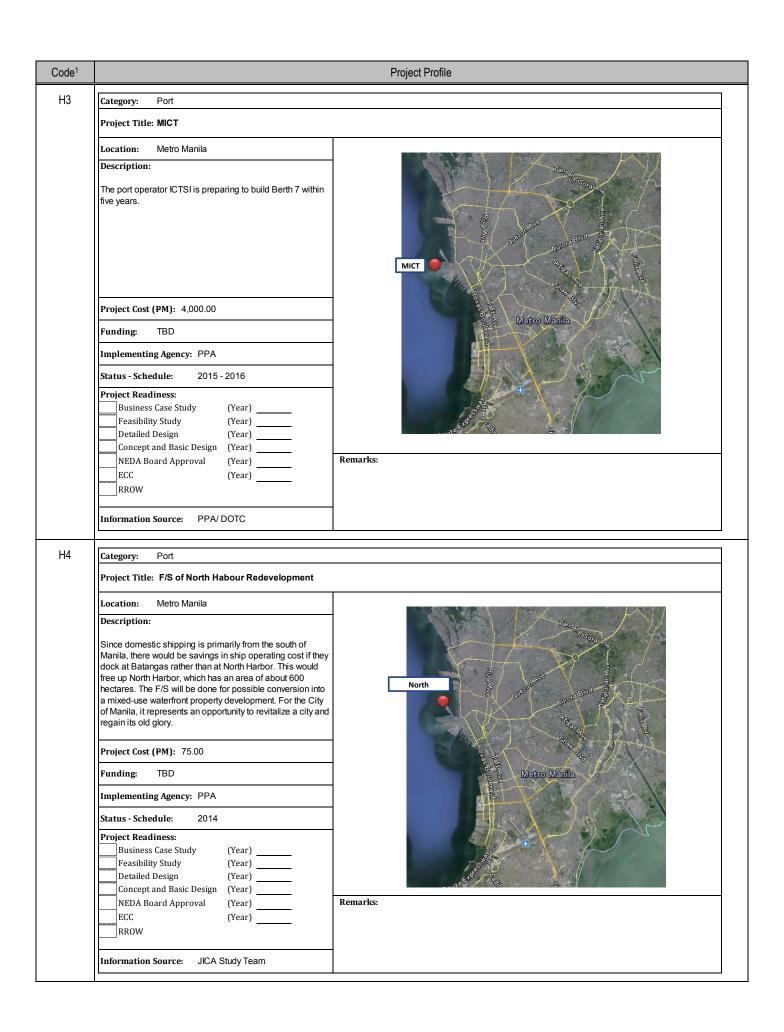


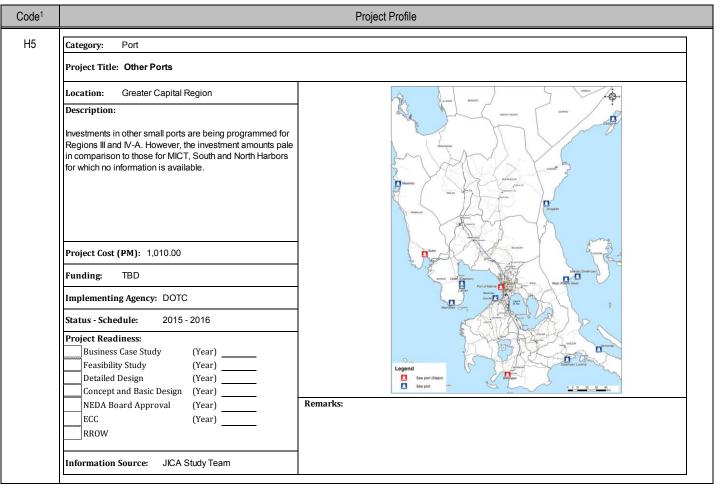
Code¹ **Project Profile** F1 Category: Traffic Management Project Title: Installation of Intelligent Transport System: Module A Traffic Signal System Upgrading, Module B Communication and Monitoring Location: Metro Manila Image of modern Traffic Command Center Description: Module A (Phase I) System upgrading of control center facilities (Phase II) System upgrading of field facilities (Phase III) Signalization of additional 200 warranted intersections, upgrading equipment, etc. Installation of (i) road safety surveillance system and wireless communication system, (ii) RFID traffic information colleciton system, (iii) video traffic information collection system, (iv) LED boards to convey traffic related messages Project Cost (PM): 3,309.00 Funding: TBD Implementing Agency: MMDA 2013 - 2016 Status - Schedule: Project Readiness: Business Case Study (Year) Feasibility Study (Year) Detailed Design Concept and Basic Design (Year) NEDA Board Approval (Year) Remarks: ECC (Year) RROW Others (Pls. Specify): Revalidated PIP (Nov 2013), Information Source: MMDA F2 Traffic Management Category: Project Title: Systematic Road Safety Interventions Study Metro Manila Example of road safety intervension Location: Description: Foot bridge Fence As a part of traffic management, traffic safety is important. Through the study, the comoponents of the systematic road safety intervenstions will be identified. The study scope shall cover 3Es (engineering, education and enforcement). - Engineering: Signalling, intersection improvement, safety facilities, pedestrian facilities, flyover, parking facilities, others. - Education: Safety education, safety campaign, others. Enforcement: Traffic surveillance, traffic control, vehicle inspection, others. Project Cost (PM): 1,000.00 CCTV Traffic academy Funding: TBD Implementing Agency: MMDA Status - Schedule: 2014 - 2016 Project Readiness: Business Case Study (Year) Feasibility Study (Year) Detailed Design (Year) Concept and Basic Design (Year) NEDA Board Approval (Year) Remarks: ECC Proposed by JICA Study Team (Year) RROW Others (Pls. Specify): Information Source: JICA Study Team











Source: JICA Study Team, compilation from NEDA, DPWH, DOTC, MMDA, PPP Center.

¹ Project codes in parenthesis correspond with the code in Appendix to Chapter 4 (2) Project Listings By Status.

MEDIUM- AND LONG-TERM PROGRAM

1 LIST OF MEDIUM AND LONG-TERM PROGRAM

(1) Highway and Expressway

	Code	Project	Plan	Area	Status	New/ Upgrade	Length (km)	Existing Lanes	Proposed Lanes	Total Cost (PHP mil.)
Hi-way	R-8	Navotas/ Malabon/ Valenzuela Package	Medium	NCR	Proposed	New	8.5	-	2x2	2,380
	R-9	Navotas/ Malabon/ Valenzuela Package	Medium	NCR	Proposed	New	2.3	-	3x3	960
	R-10	Navotas/ Malabon/ Valenzuela Package	Medium	NCR	Proposed	New	9.1	-	3x3	3,930
	R-11	Navotas/ Malabon/ Valenzuela Package	Medium	NCR	Proposed	Upgrade	31.0	1x1	2x2	5,890
	R-12	Navotas/ Malabon/ Valenzuela Package	Medium	NCR	Proposed	Upgrade	34.7	1x1	3x3	10,760
	R-13	Marikina Package	Medium	NCR	Proposed	New	10.6		2x2	2,230
	R-14	Marikina Package	Medium	NCR	Proposed	Upgrade	5.0	1x1	2x2	750
	R-15	Marikina Package	Medium	NCR	Proposed	Upgrade	25.1	1x1	2x2	4,020
	R-16	Marikina Package	Medium	NCR	Proposed	Upgrade	7.3	2x2	2x2	800
	R-17	Marikina Package	Medium	NCR	Proposed	Upgrade	1.9	1x1	3x3	510
	R-18	Marikina Package	Medium	NCR	Proposed	Upgrade	1.9	2x2	3x3	410
	R-44	Ortigas Avenue Upgrade	Medium	NCR	Proposed	Upgrade	9.5	1x1/2x2	3x3	8,910
	R-24	Amang Rodriguez Ave. & Pres. Manuel Quezon	Long	NCR	Proposed	Upgrade	15.3	1x1	2x2	9,930
	R-28	Alabang-Zapote	Medium	NCR/BRLC	Proposed	Upgrade	2.4	2x2	4x4	2,960
	R-29	Alabang-Zapote	Medium	NCR/BRLC	Proposed	Upgrade	9.0	3x3	4x4	6,510
	R-30	Rosario Package	Long	BRLC	Proposed	Upgrade	13.4	1x1	2x2	4,010
	R-31	Sta. Rosa–Tagaytay–Nasugbu	Long	BRLC	Proposed	Upgrade	66.6	1x1	2x2	11,330
	R-32	Marcos Highway	Medium	BRLC	Proposed	Upgrade	1.7	1x1	3x3	420
	R-33	Marcos Highway	Long	BRLC	Proposed	Upgrade	5.2	2x2	3x3	1,030
	R-34	Calamba Package	Medium	BRLC	Proposed	Upgrade	12.4	1x1	3x3	3,090
	R-35	Bay-Antipolo	Medium	BRLC	Proposed	Upgrade	86.4	1x1	2x2	11,230
	R-36	Sto Tomas-San Pablo-Lucena	Medium	BRLC	Proposed	Upgrade	68.0	1x1	2x2	8,840
	R-37	San Pablo–Majayjay	Medium	BRLC	Proposed	Upgrade	26.4	1x1	2x2	3,440
	R-40	San Simon (Bulacan)-Gapan (Nueva Ecija)	Long	GCR	Proposed	Upgrade	44.9	1x1	2x2	6,740
	R-41	Other Central Luzon Roads	Medium	GCR	Proposed	-	-	-	-	30,000
	R-42	Other CALABARZON Roads	Medium	GCR	Committed	-	-	-	-	60,000
	R-43	Preparatory Studies	Medium	GCR	Committed	-	-	-	-	4,774
			To	al Cost						205,854
Expressway	E-7	Pasay-Makati-BGC	Medium	NCR	Proposed	New	9.3	-	2-2	24,180
	E-8	Sta. Mesa–Pasig (Shaw Boulevard) R-4 Expressway	Medium	NCR	Proposed	New	7.1	ı	2-2	23,430
	E-9	Manila City–Quezon City (Quezon Av.) R-7 Expressway	Long	NCR	Proposed	New	10.2	-	2-2	24,480
	E-10	MRT-7 Access Link (C-6)–Bocaue–San Jose Del Mote	Medium	BRLC	Proposed	New	10.5	-	2-2	4,330
	E-11	CAVITEX-C-5-San Jose Del Monte (Bulacan)	Medium	BRLC	Proposed	New	46.7	-	2-2	13,640
	E-15	CALA Expressway	Medium	BRLC	Committed	New	47.2	-	3-3	30,210
	E-16	CAVITEX Extension West to Rosario	Long	BRLC	Proposed	New	10.5	-	2-2	12,710
	E-18	Guginto-Bustos Expressway	Long	BRLC	Proposed	New	24.6	-	2-2	10,140
	E-19	NLEX Extension West (Subic–San Fernando)	Long	GCR	Proposed	New	29.0	-	2-2	11,950
	E-21	North Luzon Expressway (San Jose Del Monte- Cabanatuan-San Jose)	Medium	GCR	Proposed	New	99.4	-	2-2	24,850
	E-22	SLEX Extension East (Calamba–Lucena)	Long	GCR	Proposed	New	47.8	-	2-2	12,520
	E-23	STAR-(Batangas-Lipa)	Medium	GCR	Proposed	Upgrade	18.8	1x1	3-3	4,360
	E-24	SLEX (Lipa–Sta Tomas)	Medium	GCR	Proposed	Upgrade	28.8	2-2	3-3	4,490
	E-25	NLEX North (Sta. Rita-Dau)	Medium	GCR	Proposed	Upgrade	53.0	2-2	3-3	8,270
	E-26	SCTEX (Subic-)	Medium	GCR	Proposed	Upgrade	12.3	1x1	3-3	2,840
	E-27	SCTEX-North	Long	GCR	Proposed	Upgrade	83.9	2-2	3-3	13,080
			To	tal Cost						225,480

(2) Railways

	Code	Project	Section	Plan	Area	Status	Length (km)	Total Cost (PHP mil.)
LRT1	1-2	LRT-1 South Ext Ph-II	Niyog-Dasmarinas	Long	NCR	Proposed	18.4	69,440
	1-3	LRT-1 North Ext.	Monumento-Malabon	Medium	NCR	Proposed	2.7	9,960
LRT2	2-2	LRT-2 East Ext. Ph-II	Masinag-Antipolo (U-Ground)	Long	NCR	Proposed	3	17,640
	2-2	LRT-2 East Ext. Ph-II	Masinag-Antipolo	Long	NCR	Proposed	6	32,000
	2-3	LRT-2 West Ext.	Recto-MM North Harbour	Medium	NCR	Proposed	4.7	30,840
MRT3	3-1	MRT-3 Ext South	Taft-Mall of Asia (Underground)	Medium	NCR	Proposed	2.2	21,880
	3-2	MRT-3 Ext West	Monumento-Malabon	Long	NCR	Proposed	7.2	46,720
MRT7	7-1	MRT-7 (Underground)	Recto-Blumentritt	Long	NCR	Proposed	2.1	23,440
	7-2	MRT-7 (Elevated)	Blumentritt-Comm. Ave-Banaba	Long	NCR	Proposed	24	104,920
MRT-NS	NS	Mega Manila Subway	San Jose Del Monte- Dasmarinas	Medium	NCR	Proposed	74.6	390,000
Secondary	M-1	Ortigas	Ortigas-Angono	Medium	NCR	Proposed	13.7	31,720
Route	M-4	Marikina Line	Marikina Area	Medium	NCR	Proposed	16.8	31,480
	M-5	Alabang	Alabang-Zapote	Medium	BRLC	Proposed	9.3	13,400
	M-6	Cavite	Zapote-Cavite-Gen. Trias	Long	BRLC	Proposed	20.6	25,560
NS-	P-2	South Ext.	Calamba-Batangas	Long	GCR	Proposed	47.7	18,880
Commuter	P-3	North Ext.	Malolos-Angeles-Tarlac	Long	GCR	Proposed	81.1	28,800
			Total Cost	•	•	•		935,188

(3) Road-based Public Transport

Code	Project	Status	Total Cost (PHP mil.)
E-3	BRT System 2 (EDSA–Binagonan)	Proposed	3,500
E-4	Bus Modernization Project	Proposed	25,000
E-5	Jeepney Modernization Project	Proposed	30,000
	58,500		

(4) Traffic Management

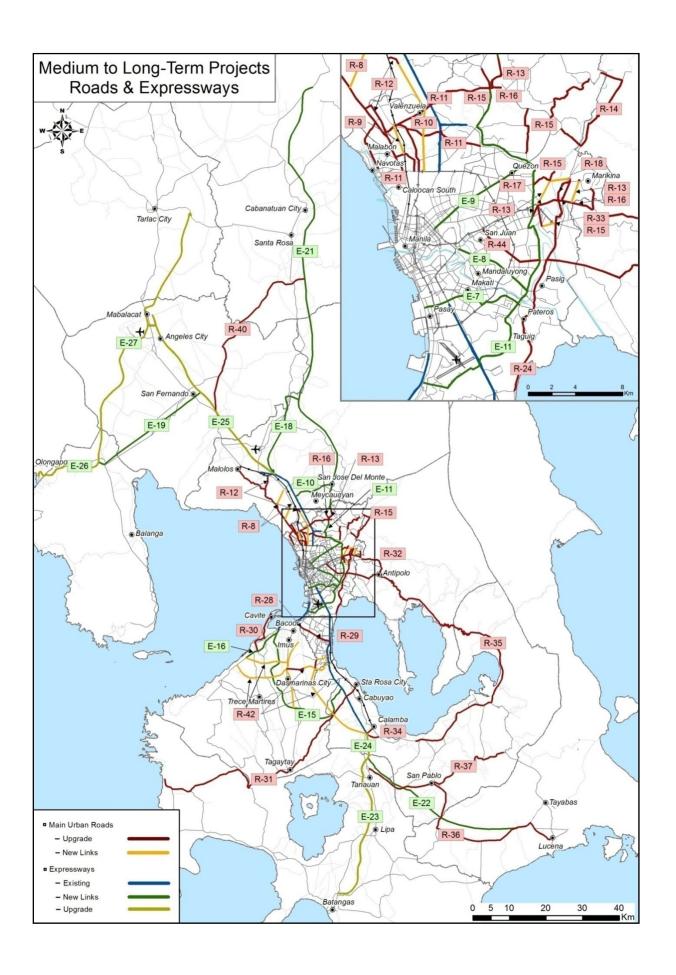
Code	Project	Status	Total Cost (PHP mil.)	
F-1	Smart Signalization Phase 6	Proposed	3,500	
F-4	ITS: Traffic Management	Proposed	1,000	
F-5	ITS: Public Transport	Proposed	750	
	Total Cost			

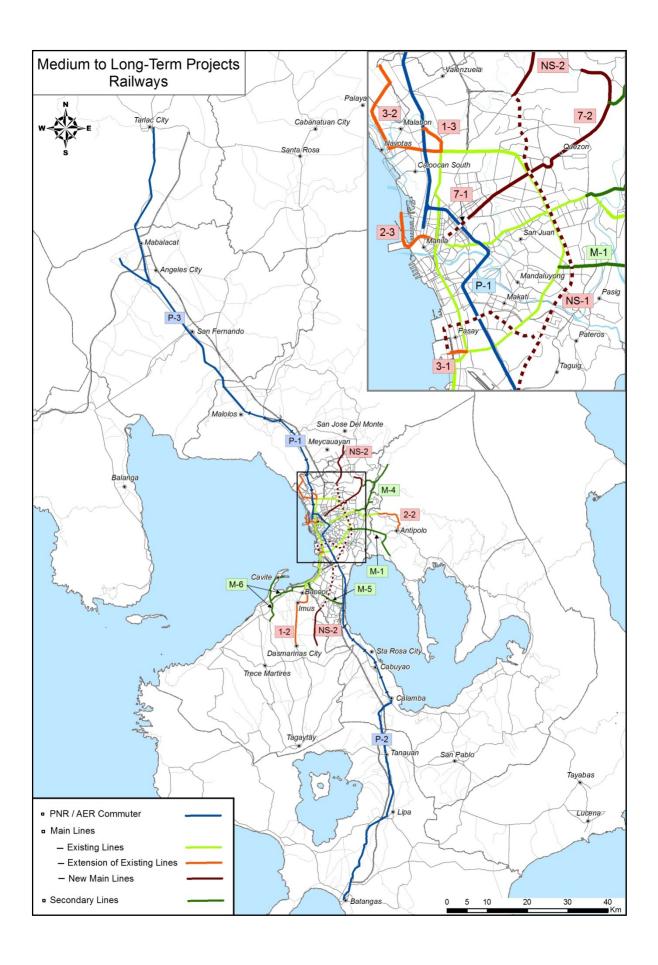
(5) Airports

Code	Project	Status	Total Cost (PHP mil.)	
G-1	New NAIA Airport	Proposed	435,900	
G-2	Clark Airport	Proposed	40,000	
	Total Cost			

(6) Ports

Code	Project	Status	Total Cost (PHP mil.)
H-1	North Harbor Port Conversion	Proposed	15,000
H-2	South Harbor (capacity capped)	Proposed	0
H-3	MICT (capacity capped)	Proposed	0
	15,000		





2 PROFILE OF MEDIUM AND LONG-TERM PROJECTS

Code		Project Profile
R-8 to R12	Category: Highway & Roads Project Title: Navotas/ Malabon/ Valenzuela Package Location: Metro Manila, Bulacan Province Description: Upgrade of 41.2km of local single carriageway 2 or 4 lanes roads to 4 or 6 lane roads. Addition of a new 10.6km link roads 1) N/S road from A. Bonifacio road through Tarong area across Marikina River (with new bridge) and connect with JP Rizal near its intersection with Lapu-Lapu Road in the north; and 2) a new link road between Marcos H'way (near LRT-2 Santolan Station) and Evangelist Avenue. Project Cost (PM): 23,920.00 (Total package) Funding: TBD - Likely to be Local Implementing Agency: DPWH	San Jose Del Monte Meydauayan Caloocan Nonth Valenduela Marikina Caloocan South
R13 to R18	Status - Schedule: Medium to Long term Project Need & Initial Assessment: Analysis of 2030 travel demand analysis of the area shows major congestion today, and much worst situation by 2030, when the average travel speed would drop to below 10kph. However, with the upgrades and addition of new roads the traffic speed would increase to 24kph. Source: Proposed by JICA Roadmap Study Category: Highways & Roads Project Title: Marikina Package	Remarks: The addition of Segment 9 & 10 expressways in the area would add road capacity, which would suffice for the short term need. However, in the long run further road capacity expansion is required in the north/south corridor to relive MacArthur Highway and NLEX - as no further capacity expansion of these roads would be possible. Local roads would also need major capacity expansion as population increases in the area. This could only be provided through widening of existing roads as shown in the above Figure.
	Location: Metro Manila Description: Upgrade of 41.2km of local single carriageway 2 or 4 lane roads to 4 or 6 lane roads. Addition of a new 10.6km link roads 1) N/S road from A. Bonifacio road through Tarong area across Marikina River (with new bridge) and connect with JP Rizal near its intersection with Lapu-Lapu Road in the north; and 2) a new link road between Marcos H'way (near LRT-2 Santolan Station) and Evangelist Avenue.	Masotas
	Project Cost (PM): 8,720.00 (Total package) Funding: TBD - Likely to be Local Implementing Agency: DPWH Status - Schedule: Medium to Long term Project Need & Initial Assessment: Current there are only two road (Marcos Highway & A. Bonifacio/ Sumulong H'way) crossings over the Marikina river which connect the entire Marikina valley with MM. Analysis of 2030 travel demand show that the existing two river crossings would reach capacity well before 2030. causing severe congestion across major primary roads linking Marikina and MM. After the addition of Marikina River crossings and local road improvements the traffic speeds in the area are estimated to increase from just under 6kph to be around 22kph by 2030. Source: Proposed by JICA Roadmap Study	Remarks: The traffic situation within Marikina valley and to the north to San Mateo/ Rodriguez and to NE of Quezon city would require road widening from the single 2 lane carriageway to 4 lane roads. The traffic situation within Marikina is not much better and would require additional road capacity expansion of primary and secondary roads both in the N/S and E/W directions. The roads requiring additional capacity are shown on the above map.

Code Project Profile

R24

Category: Highways & Roads

Project Title: Amang Rodriguez Av. & Pres. Manuel Quezon

Location: Metro Manila

Description:

Upgrade of 41.2 km of local single carriageway 2 or 4 lane roads to 4 or 6 lane roads.

Addition of new 10.6 km link roads 1) N/S road from A. Bonifacio road through Tarong area across Marikina River (with new bridge) and connect with JP Rizal near its intersection with Lapu-Lapu Road in the north; and 2) a new link road between Marcos H'way (near LRT-2 Santolan Station) and Evangelist Avenue.

Project Cost (PM): 9,930.00

Funding: TBD - Likely to be Local

Implementing Agency: DPWH

Status - Schedule: Long term

Project Need & Initial Assessment:

This N/S link east of C-5 would be congested by 2030, despite the addition of C-5 expressway (Project E-11). Upgrade of this existing road would improve traffic speeds in this N/S link from below 6 kph to about 20 kph after the upgrade by 2030.

Source: Proposed by JICA Roadmap Study



Remarks:

This is the only N/S link east of C-5 that would be congested despite the addition of C-5 expressway (Project E-11). Upgrade of this existing road would improve the traffic condition in this N/S corridor and would eliminate the need for a new and expensive major N/S road link C-6.

R28, R29

Category: Highways and Roads

Project Title: Alabang-Zapote Areas

Location: Metro Manila and Cavite Province

Description:

Upgrade of 41.2 km of local single carriageway 2 or 4 lane roads to 4 or 6 lane roads.

Addition of new 10.6 km link roads 1) N/S road from A. Bonifacio road through Tarong area across Marikina River (with new bridge) and connect with JP Rizal near its intersection with Lapu-Lapu Road in the north; and 2) a new link road between Marcos H'way (near LRT-2 Santolan Station) and Evangelist Avenue.

Project Cost (PM): 9,470.00

Funding: TBD - Likely to be Local

Implementing Agency: DPWH

Status - Schedule: Medium to Long term

Project Need & Initial Assessment:

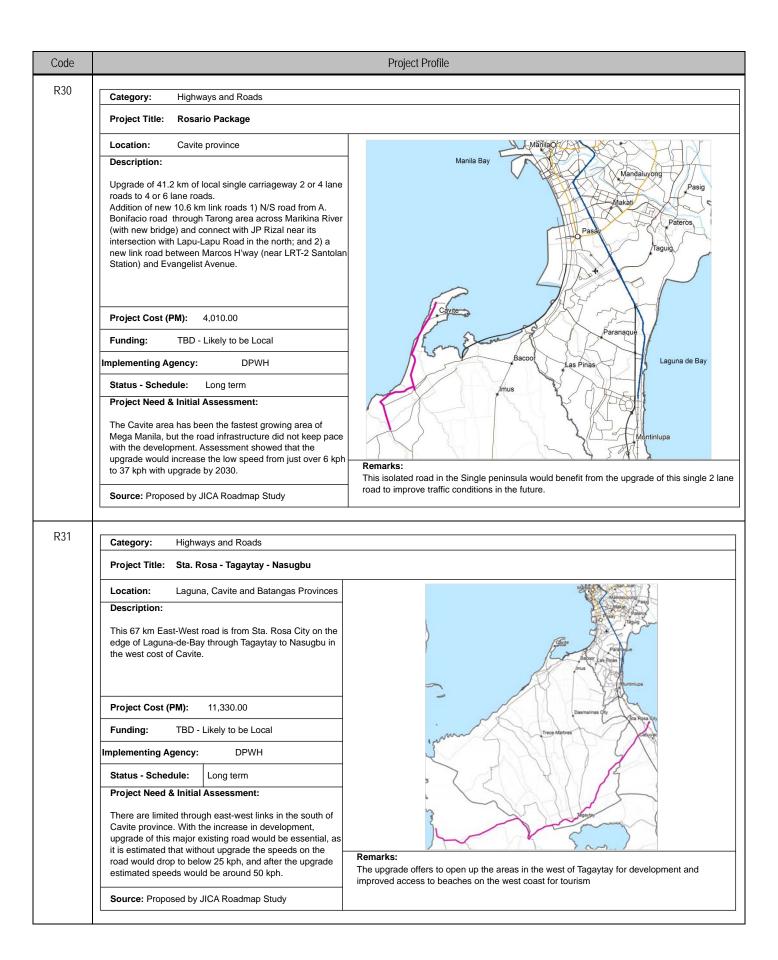
There is considerable demand on the east-west road between Alabang and Zapote. Where, if not upgraded, it is estimated that the average speed would drop to below 10 kph by 2030. The upgrade would provide relief to congestion and average speed would be around 30 kph, a reasonable travel speed in sub-urban areas.

Source: Proposed by JICA Roadmap Study



Remarks:

Even with CALA expressway there is a need for good primary roads for east-west travel north of CALA. Such upgrades are necessary for short distance travel to be at economical speeds of around 30 kph in sub-urban areas.



Code Project Profile R32, R33 Category: Highways and Roads Project Title: Marcos Highway Location: Rizal Province Description: Upgrade of 6.9 km section of Marcos Highway from Masinag to Antipolo to be a single six lane carriageway. Antipolo Mandaluyon Manila Bay Project Cost (PM): 1,450.00 Funding: TBD - Likely to be Local Pateros DPWH Implementing Agency: **Taguid** Status - Schedule: Medium to Long term Project Need & Initial Assessment: The 2030 traffic demand analysis showed that this section Remarks: of the road from Antipolo to Masinag would be extremely This road is a south-east extension of Marcos highway, which is a dual 3-lane up to Masinag up congested if no upgrades are applied, and travel speeds to the edge of MM boundary. Beyond that the road is a single carriageway of 2/4 lanes, which is would drop to below 6 kph. Upgrades would help bring inconsistent for a primary road to be of such standard by 2030. speeds to about 22 kph. Source: Proposed by JICA Roadmap Study R34 Highway & Local Roads Category: Project Title: Calamba Local Area Roads Package Laguna Province Location: Description: Upgrade of 12.4 km of various sections of secondary roads around Calamba City from 2 lane single carriageways to six Dasmarinas City Rosa City Project Cost (PM): 3,090.00 TBD - Likely to be Local Funding: Implementing Agency: DPWH Status - Schedule: Medium term Project Need & Initial Assessment: The Calamba area local roads in 2030 would be highly congested forcing local area traffic speeds to below 10 kph. Upgrades to local roads would be required to improve accessibility to Calamba railway station and regional N/S expressways. This would reduce congestion and increase The whole of the secondary roads around Calamba city area needs upgrade, and a average speeds to about 21 kph. comprehensive traffic management study is required to improve access to Calamba station and the N/S expressways. Source: Proposed by JICA Roadmap Study

Project Profile Code R35 Category: Highway & Local Roads Project Title: Bay - Antipolo Location: Laguna and Rizal Provinces Description: Upgrade of the Laguna-de-Bay circumferential road from Antipolo in Rizal to the southern tip of Laguna up to the Bay from the current 2 lane single carriageway to 4 lanes. Project Cost (PM): 11,230.00 Funding: TBD - Likely to be Local Implementing Agency: **DPWH** Status - Schedule: Medium term Project Need & Initial Assessment: This is the only main/primary road around the great lake -Laguna-de-Bay. Currently it is already congested, and if not improved by 2030, speeds would drop to below 15 kph. Upgrade to 4-lane single carriage would reduce Remarks: congestion, increasing average speed to about 44 kph. The only road connecting Rizal and Laguna province is of strategic importance and it is imperative that the average speed on the road does not drop below 30 kph. Source: Proposed by JICA Roadmap Study R36, R37 Category: Highway & Local Roads Project Title: Sto. Tomas - San Pablo - Lucena in Laguna and Quezon Provinces Location: Laguna and Quezon Provinces Description: Upgrade of this single carriageway 2-lane east-west 68 km long road connects the SLEX from near Laguna to San Pablo to the regional centre of Quezon province - Lucena City [R-36] and from San Pablo to Majajay 26.4km [R-37] = in total 94.4 km to 4-lanes. Project Cost (PM): 12,280.00 Funding: TBD - Likely to be Local DPWH Implementing Agency: Status - Schedule: Medium term Project Need & Initial Assessment: These are major east-west roads which connect Quezon province to SLEX via Laguna province. Currently these roads have light to heavy traffic, but by 2030 would experience congestion, and upgrade would be needed. Remarks: Widening to 4-lane single carriageway would increase the The roads outside the Mega Manila areas require further studies for the need to be upgraded at average speed to over 50 kph by 2030. a later date. Some of these roads would experience localised traffic congestion due to ribbon developments and encroachments, which could be easily avoided through better planning and Source: Proposed by JICA Roadmap Study enforcement of traffic rules.

Code Project Profile R40 Category: Highway & Local Roads Project Title: San Simon (Pampanga) - Gapan (Nueva Ecija) Location: Pampanga and Nueva Ecija Provinces Description: From San Simon (NLEX) interchange to San Antonio-San Isdro Gapan city. Upgrade of this east-west single carriageway 2-lane 44.9 km road to 4-lanes. Project Cost (PM): 6,740.00 Funding: TBD - Likely to be Local Implementing Agency: Status - Schedule: Long term Project Need & Initial Assessment: The traffic analysis showed that it is vital link between NLEX and the proposed second N/S expressway from Jose Del Monte to Cabanatuan/San Jose. In order to keep this primary road functioning at good average speed of Remarks: over 55 kph, it is essential for this road to be upgraded to 4-A key strategic primary route needs to be a minimum of 4-lanes wide to provide long distance lanes single carriageway and ribbon development is kept travel at speeds of around 55 kph or better, between two major provinces in Region-III. at bav. Source: Proposed by JICA Roadmap Study R41 Category: Highway & Local Roads Project Title: Other Central Luzon Roads Location: Central Luzon (GCR) Description: A block allocation for the upgrade and good up-keep of other committed/ proposed primary / secondary/ tertiary roads in Central Luzon. Project Cost (PM): 30,000.00 Funding: TBD - Likely to be Local DPWH Implementing Agency: Medium term Status - Schedule: MANILA Project Need & Initial Assessment: The traffic analysis showed that there are numerous roads in Central Luzon which need upgrading or good upkeep. These projects could be identified by local authorities in other provinces in GCR in Region III. For such improvements of secondary/tertiary roads in GCR, this block allocation is proposed.

Source: Proposed & Committed Project List.

Code R42 Project Profile

Category: Highway & Local Roads

Project Code: R-42

Project Title: Other CALABARZON Roads

Location: South Luzon - Calabarzon Roads

Description:

A block allocation for upgrade and good up-keep of other primary / secondary/ tertiary roads in Calabarzon Region of Luzon province.

Project Cost (PM): 60,000.00

Funding:

Implementing Agency: DPWH

Status - Schedule: Medium term
Project Need & Initial Assessment:

The traffic analysis showed that there are numerous roads in Central Luzon which need upgrading or good upkeep. For such improvements of secondary/tertiary roads in GCR southern provinces, this block allocation is propsoed.

Source: Proposed & Committed Project List.



Remarks:

These projects could be identified by local authorites in other provinces in GCR in Region IV-A.

R43

Category: Highway & Local Roads

Project Title: Preparatory Studies of Highway & Roads projects

Location: GCR

Description:

A block allocation for a number of studies that will be required for further justification of transport infrastructure projects under block allocations previously described under projects R-41 & R-42; or any other studies required to justify other medium to long term projects in the GCR the future.

Project Cost (PM): 4,774.00

Funding: ODA or Local

Implementing Agency: DPWH/ DOTC/ PNR/ NEDA etc

Status - Schedule: Short-Medium term

Project Need & Initial Assessment:

There is a serious lack of data for the development, planning and justification of transport infrastructure projects. In the recent past there has been a number of studies either with limited objectives or for localised areas. This study fulfils this gap in terms of providing an overall framework for the development and implementation of future transport infrastructure projects, but further justification would still be needed to secure funding and for the timely implementation of proposed projects.

Source: Proposed & Committed Project List.

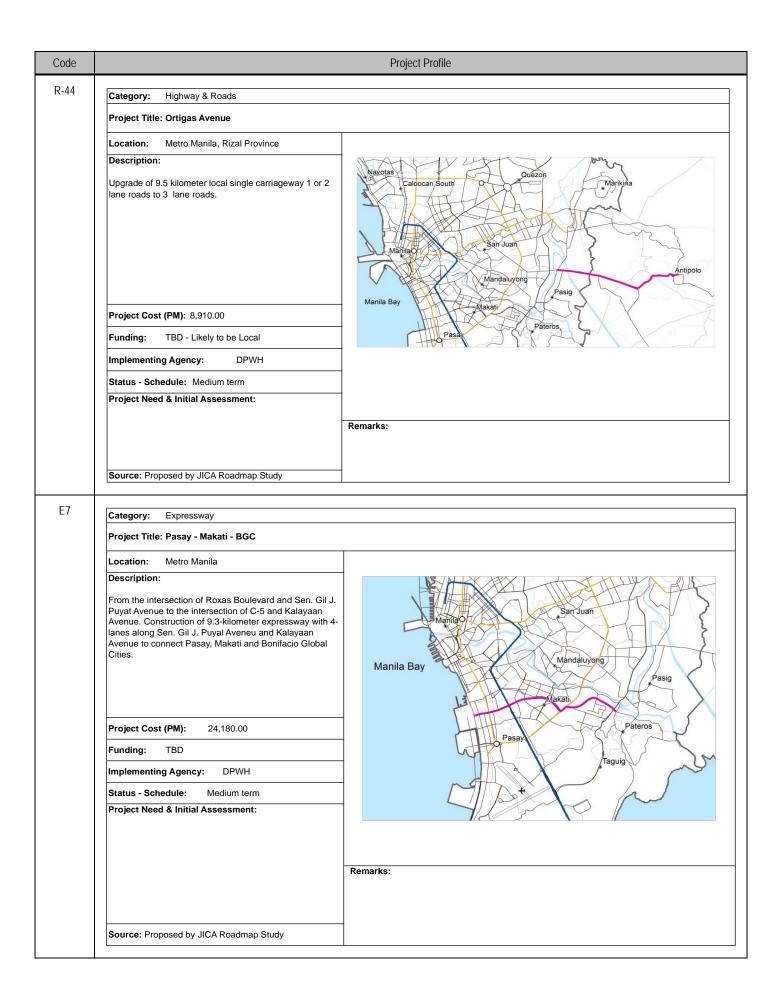


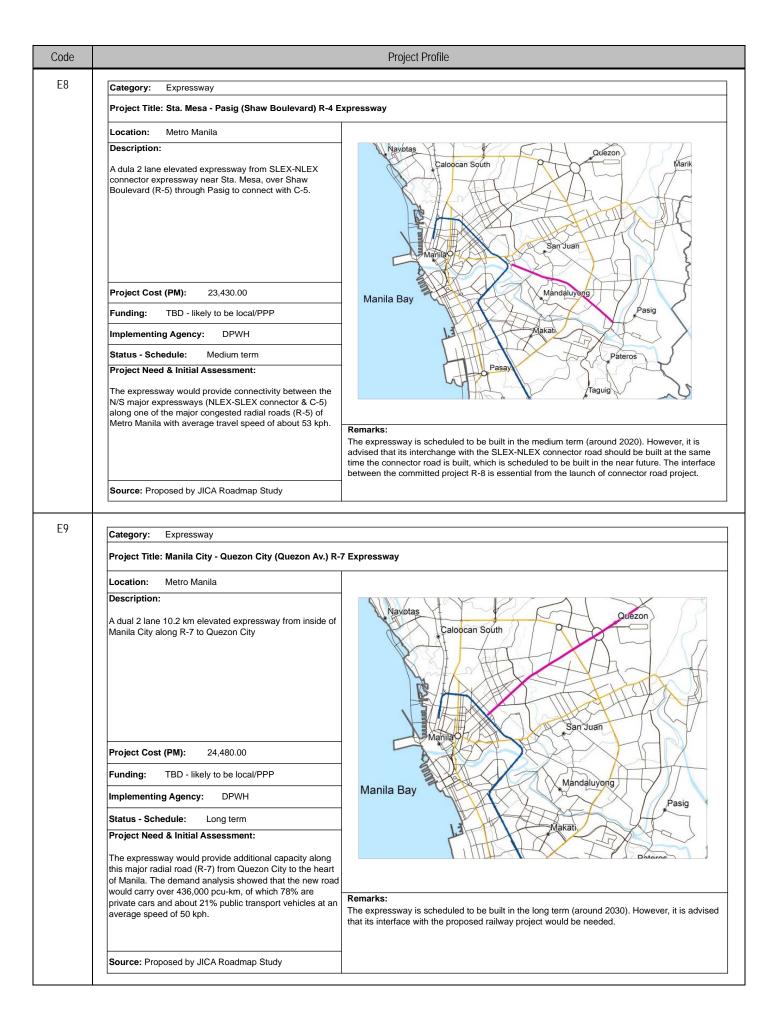




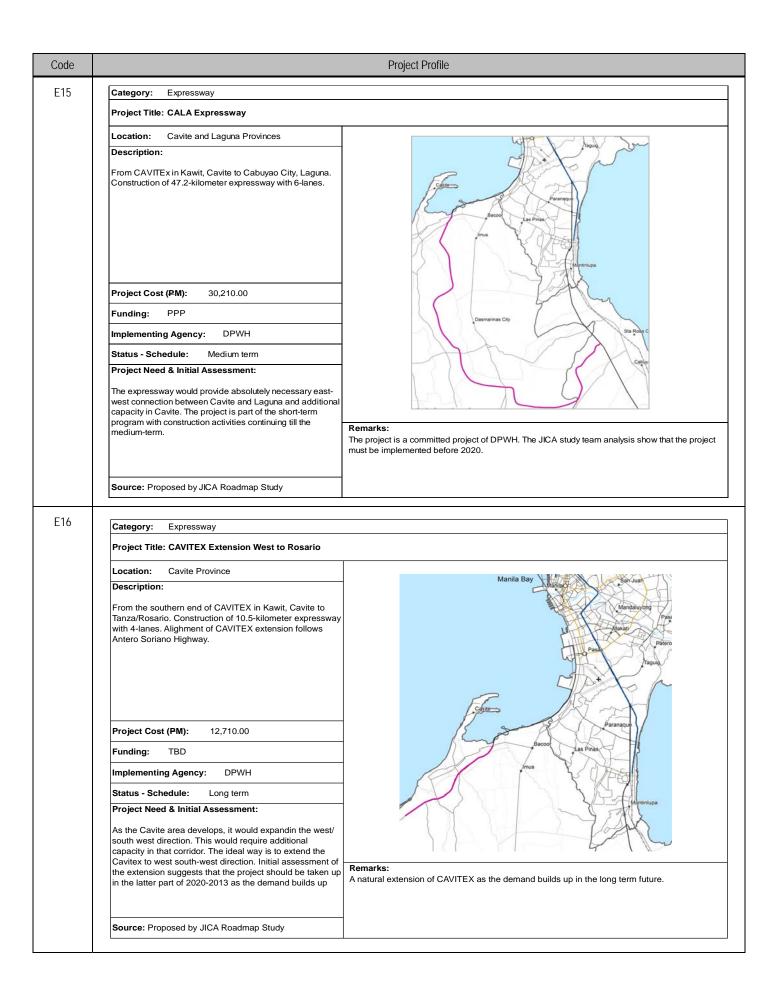
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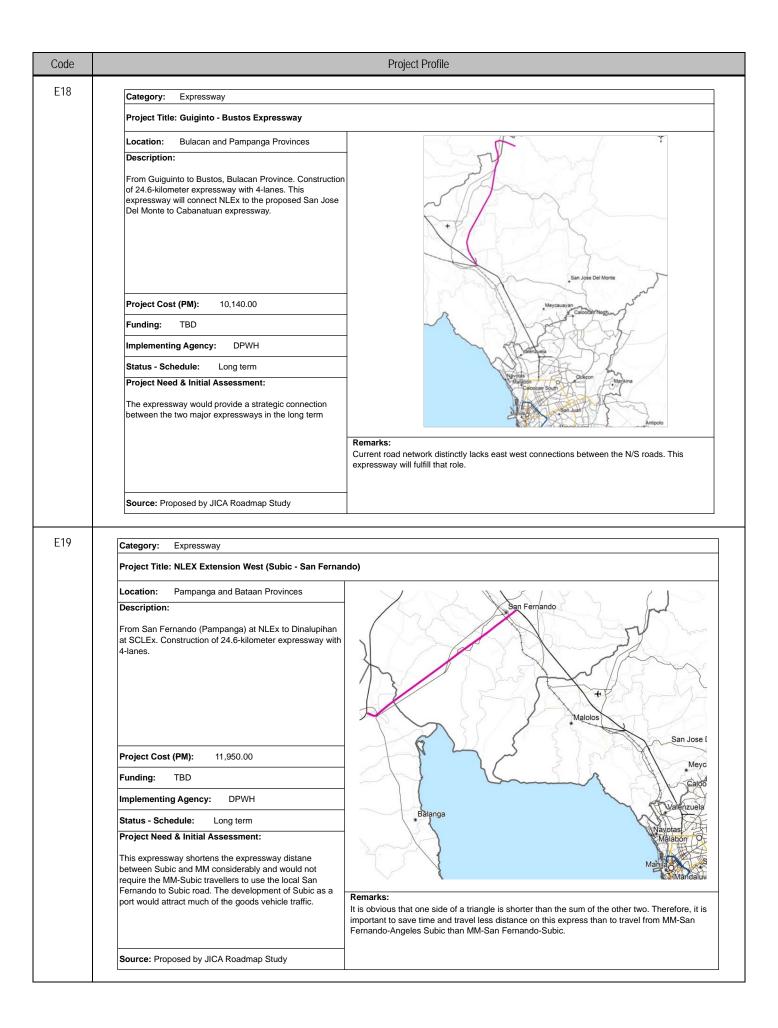
These projects to be further studied could be identified from this project list based on their proposed implementation period. Almost all of the long-term and expensive medium term projects would need further studies.





Project Profile Code E10 Category: Expressway Project Title: MRT-7 Access Link (C-6) - Bocaue - SJose Del Monte **Bulacan Province** Location: San Jose Del Monte Description: A dual 2 lane 10.5 km east-west elevated expressway in the north of Metro Manila to connect NLEX with the MRT-7 northern terminus and also to the newly proposed Expressway E-11. Meycauayan Caloocan North Project Cost (PM): 4.330.00 TBD - Likely to be local/PPP Funding: Implementing Agency: DPWH Status - Schedule: Medium term otas Project Need & Initial Assessment: The expressway would provide additional capacity in the east-west corridor in the north of Metro Manila. The demand analysis showed that the new road would carry over moderate traffice of about 350,000 pcu-km, at an Remarks: average speed of 75 kph. The expressway is scheduled to be built in the medium term (around 2020), because it would provide direct east west connection between the existing NLEX and newly proposed med expressways (E-11). Source: Proposed by JICA Roadmap Study E11 Category: Expressway Project Title: CAVITEX - C-5 - San Jose Del Monte (Bulacan) Location: Metro Manila, Bulacan Province Description: A major new N/S dual-2 46.7 km expressway from existing CAVITEX expressway in Cavite to above existing C-5 to North and end at San Jose Del Monte in Bulacan. Project Cost (PM): 13,640.00 Funding: TBD - Likely to be Local/PPP Implementing Agency: DPWH Status - Schedule: Medium term Project Need & Initial Assessment: The expressway would provide absolutely necessary N/S capacity from wext of MM (Cavite) to Bulacan. E-11 would relieve congestion on C-5 and reduce congestion on the only N/S expressway NLEX-SLEX connector roads, thus Remarks: providing effectively another N/S expressway. The pcu-km The expressway is an essential component of the 2030 master plan and is needed to be built by likely to be travelled are over 2.3 million by 2030, at an mid-late in this decade, to provide the additional highway capacity required to decongest the average speed of 42 kph. This establishes the need for an existing C-4 and C-5. additional N/S high-class link across Metro Manila. Source: Proposed by JICA Roadmap Study





Code Project Profile E21 Category: Expressway Project Title: North Luzon Expressway (SJ Del Monte-Cabanatuan-San Jose) Location: Nueva Ecija and Bulacan Provinces Description: From San Jose Del Monte at the north end-point of CAVITEX - C-5 - San Jose Del Monte Expressway (proposed) to San Jose, Nueva Ecija Province through the regional center of Cabanatuan. Construction of 99.4kilometer dual-2 land expressway. Project Cost (PM): 24.850.00 Funding: TBD Implementing Agency: Status - Schedule: Project Need & Initial Assessment: The current west side of North Luzon province is served by NLEX and SCTEx, yet the east side has no similar road. 2030 traffic demand analysis shows that by 2030 the expressway would attract about 900,000 pcu-km and Remarks: average speed would be about 70 kph. Source: Proposed by JICA Roadmap Study E22 Category: Expressway Project Title: SLEX Extension East (Calamba - Lucena) Location: Batangas, Laguna and Quezon Provinces Description: From Sto. Tomas Exit of SLEx to Lucena City. Construction of 47.8-kilometer expressway with 4-lanes. Project Cost (PM): 12,520.00 TBD Funding: Implementing Agency: DPWH Status - Schedule: Long term Project Need & Initial Assessment: The expressway would link the eastern sections of south Luzon region (Quezon Province) to the main expressway network providing direct expressway travel to MM and to north Luzon. It would also link this remote regional centre Remarks: of Lucena to Laguna and MM. The project is placed in the In the long term, as the demand builds up, it is better to provide a new expressway than to widen the existing road. This would thus provide both choice of toll/non-toll road and relieve Long term as initially the upgraded Calamba-San Pablo-Lucena road would be sufficient for the prevailing traffic congestion on the upgraded road. Source: Proposed by JICA Roadmap Study

Project Profile Code E24 Category: Expressway Project Title: SLEX (Lipa - Sto Tomas) Laguna and Batangas Provinces Location: Description: From Batino Exit of SLEx to Sto. Tomas Exit of SLEx. Upgrade of existing SLEx (28.8-kilometer) from 4-lanes to Project Cost (PM): 4,490.00 Funding: Implementing Agency: **DPWH** Medium term Status - Schedule: Project Need & Initial Assessment: A natural expansion of the existing capacity as the traffic builds up and reduces speeds. It is estimated that by 2030, the speeds would drop to below 70 kph and, with upgrade, would be back to near free-flow conditions. It is Remarks: estimated that with capacity expansion the speeds would It is only a matter of time before traffic builds up and speeds are reduced. That is why this increase from 65 kph (before expansion) to about 90 kph capacity expansion is recommended to be taken up in the medium term. in 2030. Source: Proposed by JICA Roadmap Study E25 Category: Expressway Project Title: NLEX North (Sta. Rita - Dau) Location: Pampanga and Bulacan Provinces Description: From Guiguinto, Bulacan to Sta. Ines Exit in Mabalacat, Pampanga. Upgrade of existing north section of NLEx (53.0-kilometer) from 4-lanes to 6-lanes. Project Cost (PM): 8,270.00 Funding: Implementing Agency: DPWH Status - Schedule: Medium term Project Need & Initial Assessment: The southern section of NLEX is already at capacity, and the congestion is moving up towards the northern sections. Therefore it is recommended to expand the expressway to standard dual-3 configuration before Remarks: serious congestion sets in. The 2030 traffic analysis shows The project is placed in the Medium term development plan as it is a vital N/S link where further that the speeds could drop below 65 kph if the expansion reduction of speeds would not be conducive to the natural growth and development of the is not carried out. northern Luzon regions. Source: Proposed by JICA Roadmap Study

Code Project Profile E26, E27 Category: Expressway Project Title: SCTEX (Subic-) Location: Tarlac, Pampanga and Bataan Provinces Description: The entire SCTEx from Tarlack City Interchange to Subic will be upgraded 2 or 4-lanes to 6-lanes. Project Cost (PM): 2,840.00 Funding: Implementing Agency: DPWH Status - Schedule: Medium and long term Project Need & Initial Assessment: The expressway is currently operating at an average speed of around 80-100 kph. With the development of Subic and Clark airport the growth of traffic would not be at above average rate, leading to congestion. This is not Remarks: conducive to the growth and development of the special As the land (additional land required for RoW) for expressway widening is already within its economic zones. Therefore it is recommended that the RoW - there is no reason that the expressway widening cannot be taken up in the medium term entire expressway should be widened to standard dual-3 and stretching into the long term to be complete by 2030. high standard expressway. Source: Proposed by JICA Roadmap Study 1-1, 1-2 Railway Category: Project Title: LRT-1 South Extension (Phase II)/ LRT-1 North Extension Location: Metro Manila, Cavite Province Description: The proposed project has three main components: i) Capacity Expansion (cape) - it proposed that Capex should be done as early as possible, but some components may take longer are likely to be in the mid-term, these encompass major upgrade of existing stations to improve Pax accessibility/ movements within station and concourse areas- which provide access to both platforms ii) Extend the Line from Monumento to North to Malabon thereby giving up section from Monumento to Common station to MRT Line-3 iii) Further southward extension from Bocor (Niyog) to Dasmarinas. Project Cost (PM): 79,400.00 Funding: TBD ODA and/or Local or both. Implementing Agency: DOTC Status - Schedule: Capex Now, Extensions Medium to Long term Project Need & Initial Assessment: Initial 2030 demand forecast with full proposed network justifies both the Capex and Line-1 north south extensions. Patronage is expected to reach 1.7million Pax daily, with max line volume of just over 26,000 PPHPD (Maximum Pax on line during average peak hour, well within the max The Line-1 north extension from Monumento to Malabon would require major and complex capacity of Line-1) and could be further enhanced with decisions by higher authorities to change the existing situation. But this would allow Line-3 to be better integration with other lines. extended to the west and serve South Caloocan, Navotas and Malabon cities - keeping the lines 1 & 3 as it is would deprive the three cities west of MM from mass transit for ever. Source: Propose by JICA Roadmap Study

Code Project Profile 2-2, 2-3 Category: Railway Project Title: LRT-2 East Extension (Phase II)/ LRT-2 West Extension Location: Metro Manila, Rizal Province Description: This entails two extensions for the existing LRT 2 line. The first is the extension is further east from Cainta (Masinag, assuming Santolan - Masinag extension is done in the short term) to Antipolo with 3kms underground section and 6 kms elevated to Antipolo. The other extension is to the west from Recto to Manila to the North Harbour. Mandaluyong Project Cost (PM): 80,480.00 Fundina: Implementing Agency: DOTC Status - Schedule: Medium to Long Term Taguig Project Need & Initial Assessment: To enhance the current utilisation of Line-2 Santolan to Masinag extension is required immediately, as the current Line-2 capacity is under utilised. West extension will further improve the existing capacity utilisation. In the long term it is natural to extend the line to A precursor to this project is the Phase 1 east extension of the line from Santolan to Masinag. The Antipolo. The 2030 forecast patronage would reach current load factor in the peak period around 65% and extension to Masinag would improve it by 760,000 Pax at around 18,000PPHPD. about 10%. Source: Propose by JICA Roadmap Study 3-1, 3-2 Railway Category: Project Title: MRT-3 Extension - South and West Location: Metro Manila, Bulacan Province Description: The proposed project is to extend existing MRT3 to the south from Taft station to Mall of Asia on the Reclamation Area by underground section of 2.2km. The second part is to extends the line west from North Avenue to Monumento (taking over common station/ Roosevelt & Balintawak from Line-1) and from Monumento to west, to Caloocan South to interchange with proposed N/S PNR commuter line and then to Navotas and Malabon cites with total length of 7.2 km from Monumento to west... 101.800 Project Cost (PM): Funding: Local Funds Implementing Agency: DOTC Mandaluyong Status - Schedule: Medium to Long Term Project Need & Initial Assessment: Pateros The south extension is essential to tap into the Mall of Asia demand. The west extension from North Avenue to Navotas Malabon cities would extend the line into the high growth area. The 2030 forecast patronage after capacity expansion Remarks: (with 120/130m long trains) and the two extensions is The extension to the south can start in the Medium Term (2017 to 2022) while the west extension is estimated to be just over one million daily passengers, and for the long term implementation. max line volume would reach around 20,000PPHPD. It should be noted that the proposed N/S underground line

would be running parallel with LRT-3 along the Busy EDSA

Source: Propose by JICA Roadmap Study

section.

Project Profile Code 7-1, 7-2 Category: Railway Project Title: MRT-7 Metro Manila Location: Description: The line is one of the committed project of DOTC. The committed section is from Fairview Center Mall to North Avenue. It is proposed that line-7 should be extended to inside EDSA along Quezon Avenue to Recto. The section form Recto to Espan is intended to be underground, and elevated from Espana to North Avenue and continue elevated northwards up to fairview center Mall as planned in the committed proposal. The total length from Recto to Fairview Mall is estimated to be 17.5km. In the north the line is shortened as the newly proposed N/S Subway line catchment area would cover the Line-7 catchment area. Project Cost (PM): 98,800.00 ODA/PPP Funding: Implementing Agency: DOTC Status - Schedule: Long Term Project Need & Initial Assessment: The proposed section of Line-7 is proposed to be extended to RECO providing a mass transit line along one of the busiest radial corridor (R-7) inside EDSA. Initial assesment shows that the corridor suitable for a mass trasit system all Remarks: the from North Avenue to Recto. the patronage on the line is Precursor to this project is a BRT line that is expected to run along Quezon Avenue and estimated to be over 700,000 daily Pax with Commonwealth Ave. The BRT should be designed that one-gay it be a temorary phase until the 20,000PPHPD. LRT-Line-7 is built. Source: Propose by JICA Roadmap Study NS-1, NS-2 Category: Railway Project Title: NS Line Metro Manila, Bulacan and Cavite Provinces Location: Description: This line is totally on a new line alignment. It stretches from Cavite in the south to just north of MM border in Bulacan. It is estimated that there vill 48 stations along its length of 68.8km. A substantial length (about 65% ~43.5km) will be underground in the Center of MM and in Makati/ BGC area Project Cost (PM): 514.160 Funding: TBD DOTC Implementing Agency: Status - Schedule: Medium Term Project Need & Initial Assessment: This N/S line through the heart of MM, and connecting very dense high-rise building areas of Makati/ Ortigas would generate around 1.9milion Pax daily with average Peak hour line volume of about 25,000 PPHPD. The line will be a Remarks: backbone for N/S travel in Mega Manila. The line is an ambitious project for MM, particularly with major section underground along EDSA and its branch extension to Makati.

Source: Propose by JICA Roadmap Study

Project Profile Code M1, M4, Category: Railway M5, M6 Project Title: Secondary Line Metro Manila, Rizal and Cavite Provinces Location: Description: There are five secondary lines 3 in Metro Manila and two Cavite. The Marikina Line does extend to Rizal province for short distance. These lines would have dual role of serving the local areas for short distance local trip and to act feeder lines to the main lord/MRT Lines in Metro Manila. The total length of five lines is estimated to be about 72km and 67 stations, providing good accessibility through high density of stations. Line-2 Paco--Makati--Pasig-Pateros line has been considered in the Short Term projects due to patronage is given higher priority. Project Cost (₽M): 102,160.00 (4-lines, 60.4km) TBD ODA/ PPP/ Local Fundina: Implementing Agency: Status - Schedule: Medium to Long Term Project Need & Initial Assessment: The project need is essential on two counts: i) The surrounding areas of MM like Marikina/ Cavite need their own high capacity mass transit systems, but the demand is not enough to warrant LRT or MRT system. i) The lines will act as feeder services to the proposed Do-Remarks: It is good plan to get one line (Line-2 Paco-Makati-JPRizal-BGC-Pateros to start in the short term, Maximum plan LRT/MRT/Commuter lines. and build other lines at later dates as the demand builds up. Total patronage on these four lines is estimated to be about one million Pax daily with line volumes varying between 4,000 and 10,000pphpd. Source: Propose by JICA Roadmap Study P-2, P-3 Category: Project Title: NS Commuter South Extension and North Extension Tarlac, Pampanga, Bulacan, Laguna and Location: Batangas Provinces Description: This is an extension of the Suburban Railway (or Commuter Line), which takes advantage of the PNR alignment. These will traverse Calamba to Batangas in the south for 48 km length with about 12 stations. In the north, it will run from Malolos to Tarlac an 81km long extension with about 20 stations 47.680 Project Cost (PM): Funding: ODA DOTC Implementing Agency: Status - Schedule: Long Term Project Need & Initial Assessment: It is estimated that the patronage on two lines would be around 1/2 million Pax by 2030. Detailed feasibility study with proper station locations is need to further assess their feasibility. Remarks: This north-south service will open up areas to afford opportunities for developing new towns with sub-urban railway in the peri-urban areas of Metro Manila. This can also serve as an avenue to integrated efforts for the resettlement of families, residing in flood prone areas, from Metro Manila to the new towns. Likewise, it will provide opportunities for families who need affordable housing and good living environment in the suburbs. Source: Propose by JICA Roadmap Study

Code Project Profile E3 Road-based Public Transport Category: Project Title: BRT System 2 (EDSA-Binagonan) Proposed route of BRT System (tentative) Location: Metro Manila, Rizal Province Description: The project detail will be defined in the project of BRT System 1 in short term projects. However, one of the suggested route is from EDSA to Binagonan in Rizal Province (24.24-kilometer). This route is a partialy same as the proposed BRT system by the Word Bank Feasibility Study. Antipolo Project Cost (₽M): 3,500.00 Funding: DOTC Implementing Agency: Status - Schedule: Medium term Project Need & Initial Assessment: The BRT System will function as a feeder services from Rizal Province to Metro Manila. This area needs their own mass transit system, however, there is not enough demand to introduce LRT or MRT system. Remarks: Source: Propose by JICA Roadmap Study E-4 Category: Road-based Public Transport

Project Title: Bus Modernization Project

Metro Manila Location:

Description:

Comprehensive approach is necessary to modernize bus system and services. The project includes improvement of bus fleet and bus terminals, route planning, fare setting and collection, and others.

Project Cost (PM): 25.000.00

Funding: TBD

DOTC Implementing Agency:

Medium term Status - Schedule:

Project Need & Initial Assessment:

More than 70% of people use buses and jeepneys for travel. However, The bus services are not provided effectively and efficiently. Replacement of bus fleets will contribute to imrove air quality. The imrovement of bus facilities can provide better accessibility to bus services and lessen the traffic congestions near the bus terminals.

Source: Propose by JICA Roadmap Study









Bus Terminal





Fare Collection with IC Card





Bus services are operated by private sector. Therefore, it is difficult to improve the services without the government subsidy or support.

Code Project Profile

E5 Category: Road-based Public Transport
Project Title: Jeepney Modernization Project
Location: Metro Manila
Description:

Modernaization of jeepney will improve safety and air quality. At the same time of the replacement of vehicles, operation and management of PUJ shall be improved. The replaced vehicles should be low emission vehicles (LEVs).

Project Cost (PM): 30,000.00

Funding: TBD

Implementing Agency: MMDA

Status - Schedule: Medium term

Project Need & Initial Assessment:

Jeepney causes many traffic problems such as traffic congestions due to loading and unloading of passengers, air pollutions, and others. However, many people use jeepney as feeder transport and main transport. Therefore, the modernization of jeepney is neccessary to improve transport environment for all road transport modes.

Source: Propose by JICA Roadmap Study





Remarks:

F-1 Category: Traffic Management

Project Title: Smart Signalization Phase 6

Location: Metro Manila

Description:

This project will be the countinous project of the Modernization of Traffic Signaling System in short term project.

The project detail will be defined in the short term project.

Project Cost (₽M): 3,500.00

Funding: TBD

Implementing Agency: MMDA

Status - Schedule: Medium term

Project Need & Initial Assessment:

Image of modern Traffic Command Center



Remarks:

Source: Propose by JICA Roadmap Study

