

The Development of The Public-private Partnership Technique for The Metro Manila Urban Expressway Network

FINAL REPORT

Volume II:
BIDDING DOCUMENTS

March 2003

ALMEC Corporation
NIPPON KOEI Co., Ltd.



JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS (DPWH)
THE REPUBLIC OF THE PHILIPPINES

The Development of The Public-private Partnership Technique for The Metro Manila Urban Expressway Network

FINAL REPORT

Volume II:
BIDDING DOCUMENTS

March 2003

ALMEC Corporation
NIPPON KOEI Co., Ltd.

PREQUALIFICATION DOCUMENTS

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PREQUALIFICATION DOCUMENTS
FOR
R10/C3/R9 EXPRESSWAY PROJECT

2003

DPWH Building, Bonifacio Drive, Port Area
Manila, Philippines

TABLE OF CONTENTS

SECTION 1.0	GENERAL CONDITIONS	1
1.1	Definition of Terms	1
1.2	Project Scope	3
1.2.1	Project Description	3
1.2.2	Right of Way	3
1.3	Prequalification Evaluation Criteria	3
1.4	Indicative Milestones for Project Implementation	3
SECTION 2.0	PROJECT INFORMATION	4
2.1	Introduction	4
2.2	The Project	4
2.3	Toll Road Traffic Forecast	5
2.4	Construction Cost	5
2.5	Contractual Framework	5
2.6	Public Utility Classification	6
SECTION 3.0	SCOPE OF WORK	6
3.1	Works to be Performed by Proponent	6
3.2	Project Design, Construction, Operation and Maintenance	7
3.3	Right-of-Way	7
3.4	Environmental Impact Assessment (EIA) and Environmental Clearance Certificate (ECC)	8
SECTION 4.0	GENERAL INFORMATION FOR APPLICANTS	8
4.1	Who may participate	8
4.2	Treatment of Documents from Applicants	8
4.3	Waiver of Action	8
4.4	Withdrawal of Members	8
SECTION 5.0	TENTATIVE PREQUALIFICATION AND BIDDING SCHEDULE	9
SECTION 6.0	PREQUALIFICATION PROCEDURES	10
6.1	Issuance of Prequalification Documents	10
6.2	Prequalification Conference	10
6.3	Filling up and Submission of Prequalification and Other Documents	10
6.4	Prequalification of the Applicant	12
6.4.1	Legal Requirements	12
6.4.2	Technical and Financial Requirements	13
Annex A	Confidential Prequalification Statement (Prequalification Forms)	
Annex B	Technical Specifications, Design and Performance Standards	
Annex C	Prequalification Drawings	

SECTION 1.0 GENERAL CONDITIONS

1.1 Definition of Terms

The following general words or terms are used in the text of the bid documents and shall have the following meaning, except where the context otherwise requires:

“Agreement” means the Build-Transfer-Operate Toll Concession Agreement between the successful Project Proponent and the Republic of the Philippines, acting through the Department of Public Works and Highways (DPWH).

“Applicant” means any firm, partnership, corporation, joint venture association or consortium that applies for pre-qualification in order to participate as bidder in the bidding for the Project.

“Bidder” means an Applicant pre-qualified by the DPWH PBAC to submit a bid for the Project.

“Bid Documents” means, collectively, the invitation to bid, instructions to bidders, standard specifications, supplemental specifications, plans, drawings, and other documents furnished by the DPWH to interested and pre-qualified bidders in connection with the Project.

“Build-Transfer and Operate”, or “BTO”, means a contractual arrangement whereby the Government contracts out the building of specific portions of the Project to the Proponent such that the contractor builds the facility on a turn-key basis, assuming cost overruns, delays and specified performance risks, upon the satisfactory commissioning of which title is transferred to the Government, which then allows the Proponent to operate the toll road on behalf of the DPWH under a long term concession agreement and collect toll fees as its revenues in lieu of amortization. BTO is a variant of the generic Build-Operate-Transfer (BOT) scheme.

“Concession Period” means an agreed period from the date on which the R10/C3/R9 Expressway commences operation to the date on which the target cumulative revenue is achieved in full, which shall not exceed fifty (50) years in any case.

“DPWH”, or “Department”, means the Department of Public Works and Highways, a government agency under the executive branch of the Government of the Republic of the Philippines, with domicile address as follows:

DEPARTMENT OF PUBLIC WORKS & HIGHWAYS
DPWH Building
Bonifacio Drive, Port Area
Manila, Philippines

“Independent Consultant” or “IC” means an independent consulting firm of international repute to serve both as independent design checker and as independent certification engineer. It shall be appointed by the Proponent from a list of consulting firms to be furnished by the DPWH. The appointment of the firm shall be confirmed by the DPWH. The duration of the IC’s appointment shall commence from the date of appointment until completion of construction. The Proponent shall pay for the services of the IC as defined in the Terms of Reference approved by the DPWH. The estimated cost of the services is approximately 3% of the project construction cost.

“PBAC” means the Pre-qualification, Bids and Awards Committee created by the DPWH, which shall be responsible for all aspects of the pre-bidding and bidding process for the Project, including, among others, the preparation of the bidding documents, publication of the invitation to pre-qualify and bid, pre-qualification of prospective bidders, conduct of pre-bid conferences and issuance of supplemental notices, interpretation of the rules regarding the bidding, the conduct of bidding, evaluation of the bids, resolution of disputes between/among bidders, and the recommendation for the acceptance of the winning bid and/or the award of the Project or the non-acceptance of all bids and/or the non-award of the Project, under justifiable causes..

“Project” means all aspects and activities pursuant to and/or in anticipation of the design and construction of the R10/C3/R9 Expressway- Section Pr together with the toll facilities for the entire expressway, the operation and maintenance of the entire R10/C3/R9 Expressway as a toll road facility, and the financing thereof.

“Proponent”, or **“GRANTEE”**, means the winning Bidder with whom DPWH enters into a Toll Concession Agreement to undertake the project activities described in the bid documents.

“R10/C3/R9 Expressway (R10/C3/R9)” is the name given to the project consisting of Section Pr, which is undertaken by a Proponent in accordance with this Agreement, and Section Pu, which is to be constructed by the DPWH under a separate contract.

“Toll Road Facilities” means all components of the R10/C3/R9 Expressway relating to its operation as a toll road, including, but not limited, to the following: toll plazas, toll collection system and equipment, traffic markers and signages, Operation and Maintenance (O&M) center/depot, perimeter fence, facilities of the Project Roads, ancillary buildings and facilities for O&M, fixed operation equipment, and O&M equipment and the like, but shall exclude the road Right-of-Way proper and all its civil works aspects.

1.2 Project Scope

1.2.1 Project Description

The R10/C3/R9 Expressway Project consists of the following:

a. Section Pr (R10):

Length	8.5 Kilometers
Number of lanes	2 x 2 lanes
Lane width	3.25 meters
Number of interchanges	1
Number of junction	0
On-ramp	4
Off-ramp	4

b. Section Pu (C3/R9):

Length	7.1 Kilometers
Number of lanes	2 x 2 lanes
Lane width	3.25 meters
Number of junction	2
On-ramp	3
Off-ramp	4

Section Pu, excluding toll road facilities, will be constructed by the DPWH under a separate contract. The Proponent shall undertake the design and construction of Section Pr together with the toll facilities for the entire expressway, the operation and maintenance of both Sections as a toll road during the concession period, and the financing thereof.

1.2.2 Right of Way

The Government shall be responsible for arranging the Right of Way and shall assume full responsibility for the costs of land acquisition and relocation of existing occupants and utilities.

1.3 Prequalification Evaluation Criteria

The prequalification evaluation criteria for Applicants are based on (i) compliance with legal and documentary requirements and (ii) a predetermined quantitative system that scores technical and financial capabilities of the Applicants.

1.4 Indicative Milestones for Project Implementation

The Project is scheduled to be implemented in accordance with milestones indicated in Table 1.1.

Table 1.1 Indicative Milestones of Project Implementation

Activity	Date
1. Award of Concession	
2. Financial Closing	Within 6 months from Award
3. Completion of Concession Agreement	
4. Approval of Concession Agreement	
5. Appointment of Independent Consultant	
6. Notice to Proceed	
7. Construction Period	1,095 days
8. Completion of Section Pu	
9. Completion of Section Pr	
10. Opening of entire section	

SECTION 2.0 PROJECT INFORMATION

2.1 Introduction

The lack of arterial access from the Metropolitan Manila city center to the North Luzon Expressway (NLE) has significantly deteriorated accessibility between the developing regions of northern Manila and the Manila central business districts as well as southern Manila regions. The productivity of Manila Port which is located at the northwest of Metro Manila is severely affected by low land-side accessibility to vital industrial areas in the north of Manila. It is estimated that nearly 30% of cargo throughputs in Manila Port comes from or goes to areas north of Manila.

The R10/C3/R9 Expressway is a part of the Metro Manila Urban Expressway Network to be implemented by the Government, and is one of the major infrastructure projects being implemented by the DPWH to improve accessibility between the city center, especially Manila Port, and areas north of Manila. The R10/C3/R9 Expressway will be implemented under a Public-Private- Partnership (PPP) scheme

2.2 The Project

The R10/C3/R9 Expressway consists of two routes; that is, the R10 route and the C3/R9 route.

The R10 route starts about 100 m north of the R10 Zaragoza intersection, runs northward along the existing R10, turns eastward on C4 up to the end point of MNTC C5 on Letre Road near Dagat-dagatan Avenue, a total length of 9.53 km. This route has 2 x 2 lanes with one interchange at the end point, and 4 on/off-ramps each. This route, referred to as Section Pr in this document, will be undertaken by a Proponent under a Build- Transfer- and Operate scheme.

The C3/R9 route starts from the beginning point of R10-C3 junction, runs eastward on C3 up to Bonifacio intersection, turns north along R9, crosses EDSA and then links up with the NLE, a total length of 6.53 km. This route has 2 x 2 lanes with two junction at a R10-C3 intersection and Bonifacio intersection, and 3 on-ramps and 4 off-ramps. This route, referred to as Section Pu, will be constructed by DPWH in another contract and likewise operated by the Proponent as a toll road facility together with Section Pr.

The Project to be undertaken by a Proponent thus involves the following:

- (a) Financing for the construction of Section Pr, construction/ installation of entire toll road facilities covering both Sections Pr and Pu, and operation and maintenance of the entire section as a toll road facility during the agreed concession period
- (b) Design and construction of Section Pr and all toll road facilities
- (c) Operation and maintenance of the entire section as a toll road facility during the concession period

2.3 Toll Road Traffic Forecast

The R10/C3/R9 traffic has been estimated as shown in Table 2.1. The figures in table are indicative only and the bidder is forewarned to validate and confirm beforehand the traffic volumes which he shall utilize during the bidding process.

Table 2.1 R10/C3/R9 Traffic Estimates

Year	Patronage(Vehicle/day)				Vehicle-Km/day			
	Class I	Class II	Class III	Total	Class I	Class II	Class III	Total
2010	84,283	1,231	9,186	94,700	497,280	7,696	87,024	592,000
2012	90,569	1,416	10,897	102,882	581,571	9,623	107,858	699,053
2015	100,889	1,748	13,864	116,500	735,540	13,455	148,005	897,000
2020	102,564	1,954	17,582	122,100	792,800	15,856	182,344	991,000
2025	106,214	2,048	19,707	127,969	875,880	17,518	201,453	1,094,851
2030	111,320	2,146	20,655	134,120	967,667	19,353	222,563	1,209,584
2035	111,320	2,146	20,655	134,120	967,667	19,353	222,563	1,209,584
2040	111,320	2,146	20,655	134,120	967,667	19,353	222,563	1,209,584

2.4 Construction Cost

The DPWH conducted a preliminary construction cost estimate of Section Pr, coming up with a construction cost estimate of some Php 7.6 billion at 2002 price levels, including VAT.

2.5 Contractual Framework

The first law governing BOT (and BTO) projects, RA No. 6957 – *An act Authorizing the Financing, Construction, Operation, and Maintenance of Infrastructure projects by the Private Sector, and for Other Purposes.* – was passed in July 1991. On May 8, 1994 the act was amended in line with the declared policy of the State to mobilize private resources for infrastructure

development. The Act is now referred to as RA No. 7718. The implementation of the BOT Law is circumscribed by its Implementing Rules and Regulations (IRR). The bidding process for the Project shall be implemented under this Act. The provisions are defined in the IRR and interested parties are required to familiarize themselves with this and related Acts.

The contractual model to be used for the Project is the Build-Transfer-Operate (BTO) scheme. The Government is not considering guarantees of any kind – financial or traffic. For this Project, the BTO scheme is defined as a contractual arrangement whereby the Proponent finances and constructs the toll road on a turn-key basis with full responsibility for cost overruns, delays, and specified performance and operating risks. Any increase or decrease in costs resulting from approved variation orders may be eligible for reimbursement or adjustment in total project construction cost. Once the toll road is certified as being substantially completed, title is transferred to the Government, and the DPWH grants the proponent the concession/franchise to operate and maintain the facility as a toll road. The Proponent, upon securing a Toll Operation Certificate to commence toll operation from the TRB, shall operate the toll road on behalf of the DPWH under a long term concession agreement. Returns to the Proponent shall accrue from income derived from operating the toll road.

2.6 Public Utility Classification

Inasmuch as the Project involves the operation of a public road as a toll facility, it is considered to be a public utility, thus necessitating that the project Operator be Filipino, or if a corporation, must be registered with the Philippine Securities and Exchange Commission (SEC) at least 60% of the outstanding capital stock of which should be Filipino-owned.

SECTION 3.0 SCOPE OF WORK

3.1 Works to be Performed by Proponent

The Proponent shall be responsible for the financing, detailed engineering design and construction of the R10/C3/R9 Section Pr, and operation and maintenance of the entire R10/C3/R9 as a toll road facility. The Section Pr will be turned over to the DPWH immediately after construction has been certified as being substantially complete, except the toll road facilities which shall be retained in the Proponent during the concession period and then turned over to the DPWH at the end of the concession period in accordance with the Toll Concession Agreement.

A pre-feasibility study has been undertaken by DPWH to ascertain the viability of the Project. The Bidder is expected to conduct his own studies to determine traffic volumes on the toll road and to ascertain revenues and costs under his responsibility.

The Proponent will also be responsible for obtaining all permits, licenses, approvals and other requirements necessary for undertaking the Project in complying with the Agreement.

3.2 Project Design, Construction, Operation and Maintenance

The Proponent (through its designer) shall make the detailed engineering design of Section Pr as a toll road in compliance with the toll road design standards and specifications of the DPWH (see Annex B). The detailed engineering design of the Project shall be certified by an Independent Consultant (IC) prior to the start of construction. The Proponent shall be solely responsible for the detailed design irrespective of the approvals by the DPWH.

The IC functions as an Independent Design Checker and Independent Certification Engineer. The scope of services of the IC includes checking of the detailed engineering design, periodic inspection of the construction, certification of claims, and certification of operation and maintenance manual. The IC shall report directly to the DPWH.

The winning bidder shall shoulder the cost of the services of the IC which is estimated to be approximately 3% of the project construction cost.

The Proponent will be required to construct the Project in accordance with the approved detailed engineering. The IC will be engaged to certify that the works are being carried out in accordance with the detailed engineering design. The IC shall issue a Construction Completion Report to the DPWH after works are completed and after the necessary inspections and tests have been taken place and passed.

The operation and maintenance of the R10/C3/R9 shall be undertaken by the Proponent throughout the concession period in accordance with the approved Toll Operation and Maintenance Manual and Procedures prepared by the Proponent based on the Minimum Standards/ Guidelines for Operation and Maintenance issued by the TRB.

The Proponent will be entitled to collect tolls from the users of the facility during a concession period in accordance with the agreed Toll Concession Agreement.

Unless otherwise allowed, the Proponent shall not have any right to the ancillary services which can be borne by or may be related to the Project. The Government will have the sole right to issue franchises for these services.

3.3 Right-of-Way

The DPWH shall assume full responsibility for acquisition of the right-of-way (ROW) which will be made available to the Proponent for purposes of the construction of the Project in accordance with the terms of the Agreement.

3.4 Environmental Impact Assessment (EIA) and Environmental Clearance Certificate (ECC)

An Environmental Impact Assessment (EIA) was undertaken by DPWH in 20__ and an Environmental Clearance Certificate (ECC) for the R10/C3/R9 has been secured by DPWH.

SECTION 4.0 GENERAL INFORMATION FOR APPLICANTS

4.1 Who may participate

Only applicants who have been prequalified can participate in the bidding for the project.

4.2 Treatment of Documents from Applicants

All documents and information submitted by prospective bidders and duly accepted by DPWH shall be treated and considered as strictly confidential.

4.3 Waiver of Action

All prospective Bidders shall, as part of their submissions, submit a statement declaring that the Bidder (a) has accepted the pre-qualification procedures and its evaluation criteria established by the DPWH and (b) waives any right it may have to seek or obtain a writ of injunction or prohibition or restraining order against the DPWH to prevent or restrain the pre-qualification process or any proceedings related thereto, the negotiation of and award of the contract to the successful Bidder, and the carrying out of the award of the contract. Such waiver shall, however, be without prejudice to the right of a losing bidder to question the lawfulness of its disqualification or the rejection of its bid by appropriate administrative or judicial processes not involving the issuance of a writ of injunction or prohibition or restraining order.

4.4 Withdrawal of Members

The withdrawal of any member of a joint venture or consortium prior to the actual award and/or implementation of the project could be a ground for the cancellation of the Concession Agreement and forfeiture of the proponent's bid security if after evaluation, the DPWH finds that the rest of the members of the joint venture or consortium can no longer successfully prosecute the Project to completion. DPWH may, however, proceed with the award or implementation of the Project if it finds that the other members of the joint venture or consortium are still capable of successfully carrying out the Project or that they have provided a suitable and acceptable substitute with equal or better qualifications.

SECTION 5.0 TENTATIVE PREQUALIFICATION AND BIDDING SCHEDULE

The prequalification and bidding will be implemented in accordance with the milestones with the following task and maximum duration stipulated in the Implementing Rules and Regulations of the BOT Law.

Activity	Period (day)
1. Advertisement of invitation to prequalify and bid for 3 consecutive weeks	0-21st
2. Prequalification Conference	58th
3. Preparation of Applicant's statement of qualification experience and concept plan	0-77th
4. Submission of Prequalification Documents	78th
5. Evaluation of Prequalification Documents	79th-109th
6. Prequalification, Bids and Awards Committee (PBAC) evaluation and approval of resolution of prequalified bidders	110th-117th
7. Notice to prequalified Applicants to submit bids.	118th-120th
8. Issuance of Bid Documents	121th-126th
9. Pre-Bid Conference	168th
10. Preparation of Proposal/Bid	127th-228th
11. Submission of Proposal/Bid	230th
12. Evaluation of Proposal	231th-261st
13. PBAC deliberation and approval of Resolution of Awards	262nd-276th
14. Notice of Award of Concession	277th-281th
15. Completion of the Preparation of Concession Agreement	330th
16. Approval of Concession Agreement and NEDA-ICC Clearance of Concession Agreement	330th-331st
17. Notice to Proceed	332nd

The following dates have been tentatively set for the prequalification and bidding schedule:

Activity	Date
1. Prequalification Conference	
2. Submission of prequalification documents	
3. Completion of evaluation of prequalification documents	
4. Notice of prequalified applicants	
5. Issuance of Bid Documents	
6. Pre-bid Conference	
7. Submission of bid	
8. Completion of evaluation of bids	
9. Notice of Awards	
10. Approval of Concession Agreement	
11. Notice to Proceed	

SECTION 6.0 PREQUALIFICATION PROCEDURES

6.1 Issuance of Prequalification Documents

To participate in the pre-qualification and obtain official registration as a prospective bidder, the Applicant is required to submit an application in the forms furnished by the DPWH and to pay the non-refundable amount specified in the “Invitation to Pre-qualify and Bid”.

Upon receipt of the Pre-qualification Documents, the Applicant is advised to immediately inform the DPWH-PBAC of the name and office address, telephone, cellular and telefax numbers of the person who shall represent the Applicant and who shall receive all correspondences and notices relating to the pre-qualification process.

All communication to DPWH shall be addressed to:

The Chairman
Prequalification, Bids and Award Committee (PBAC) for R10/C3/R9
Expressway BOT Project
Department of Public Works and Highways
DPWH Building
Bonifacio Drive, Port Area
Manila, Philippines

6.2 Prequalification Conference

The DPWH will hold a pre-qualification conference prior to the submittal of pre-qualification documents to further clarify instructions and other pertinent matters. All Applicants shall be notified of the date, time and place of the conference.

Minutes of the pre-qualification conference shall be issued to all applicants, which document shall form part of the pre-qualification documents.

6.3 Filling up and Submission of Prequalification and Other Documents

One original copy of the prequalification forms shall be filled up in by the Applicant. In case of a joint-venture or consortium, all members of the joint-venture shall accomplish the prequalification forms. For this purpose, the Applicant shall reproduce the required number of copies for use by the members of the joint-venture or consortium. Fifteen (15) copies of each of the required documents must be submitted to the DPWH.

In order to prove compliance with all the requirements for Prequalification, the Applicant shall submit the duly completed Prequalification forms together with the following:

- 1) Notarized documents indicating the person who will sign for the Applicant.
- 2) Other documents the Applicant considers important to demonstrate his ability to efficiently undertake the work to be contracted.
- 3) In case the Applicant is a Joint Venture,
 - A Joint Venture Agreement and/or license which defines precisely the general conditions under which the Joint Venture shall function;
 - The sponsoring member authorized to represent it;
 - The shares of participation of each member; and,
 - The particular obligations of each member
- 4) In case the Applicant is a Consortium,
 - A notarized Agreement executed by all consortium members formalizing their relationship vis a vis the prosecution of the Project;
 - The lead member authorized to represent it;
 - The shares of participation of each member; and,
 - The particular obligations/role of each member.

The conditions of the Joint Venture Agreement and Consortium Agreement should particularly stipulate that all members of the Joint Venture/Consortium bind themselves jointly and severally to any and all obligations which the Joint Venture may incur under any Agreement with the DPWH.

Addenda to the Pre-qualification documents may be issued by the DPWH during the pre-qualification period to clarify or modify provisions of the documents, which documents shall be distributed to each Applicant by the PBAC.

All Prequalification forms shall be completed in their entirety and no changes shall be made to the original wordings. If there are errors in completing the forms, corrections shall be made only by write-overs and initialed by the person signing the forms.

The duly accomplished forms shall be submitted to the DPWH at the address indicated in Par. 6.1.

Applicants must use the prescribed Confidential Statement and Pre-qualification Forms in signifying their intention to be pre-qualified for the Project. DPWH shall not be responsible for any misinterpretation of the terms and conditions of the Pre-qualification Requirements and Instructions by reason of an Applicant's non-usage of the prescribed Pre-qualification Format. All other documents and information required for pre-qualification as herein

specified shall be submitted together with the Confidential Statement and Pre-qualification Forms.

6.4 Prequalification of the Applicant

6.4.1 Legal Requirements

In order to qualify for award of contract, the Applicant shall, among other things, be able to meet the legal/ documentary requirements stated below.

Table 6.1 Legal Requirements

Item	Requirement
1. Ownership	<ul style="list-style-type: none"> Operator must be a Filipino or if a corporation at least 60% Filipino-owned.
2. Financial Undertakings	<ul style="list-style-type: none"> Credit lines to be certified by banks. Undertaking to provide equity equivalent to 20% of the project cost.
3. Documents to be Submitted	<ul style="list-style-type: none"> Notarized joint venture agreement/ Consortium Agreement/ joint and several liability undertaking Appointment of the lead company of joint venture/ consortium Certified true copies of Articles of Incorporation and By-laws/Articles of Partnership of each of the joint venture/consortium members. The certification should be issued by the official government agency where the corporation/ partnership is registered. List of shareholders and directors for each company Annual reports/audited financial statements for 20__-20__ (of the latest five years) Organizational chart and key personnel experience PCAB Registration should be secured prior to bidding

With respect to information on the organization of the firm, the Applicant shall provide full details of the Ownership Structure of each of the participants. In the case of a Corporation, copies of the corporate documents shall be provided.

For Joint Venture, Partnership or other types of Ownership, all pertinent documents such as the Joint Venture Agreement (in draft or final form) or Partnership Agreement shall be provided.

Ownership information is to be submitted in the format required by the Confidential Prequalification Statement attached to this document.

All entities owning or controlling more than three percent (3%) of the individual components shall be listed.

If Filipino, the Proponent must be duly registered by the Securities and Exchange Commission (SEC) for purposes of undertaking component activities of BTO projects. If foreign owned, the Proponent must be duly accredited by its government to undertake component activities of BTO projects and shall be certified as such by its embassy in the Philippines, or by the Philippine Consular Office located in the Proponent’s domicile/head office location.

6.4.2 Technical and Financial Requirements

The Applicant will be awarded points based on previous experience, primarily (i) technical capability and (ii) financial capability. The minimum requirement set for each criterion is 50 % of the point allocated thereto. The Applicant must meet the minimum criteria as well as gain a score in total of at least seventy (70) points to be prequalified.

Table 6.2 Prequalification Criteria

Criteria	Minimum Requirement
1. Technical Capability <ul style="list-style-type: none"> • Design (10) • Construction (10) • Operation (10) • Maintenance (10) • Key Personnel (20) <p style="text-align: right;">Subtotal (60)</p>	<ul style="list-style-type: none"> • Experience of 2 projects costing at least US\$140 M during the last 5 years • Experience of 2 projects costing at least US\$140 M during the last 5 years • Experience of at least 2 years in operating a toll expressway during the last 5 years • Experience of at least 2 years in maintaining a toll expressway during the last 5 years • Experience of key positions
2. Financial Capability <ul style="list-style-type: none"> • Net worth (10) • Credit available (10) • Raised financing for other BOT-Type project (20) <p style="text-align: right;">Subtotal (40)</p>	<ul style="list-style-type: none"> • Must be at least US\$ 140 M. • Must be at least US\$ 140 M. • Must have at least 1 BOT project in any sector in any country
Total (100)	

* Minimum must be met for each of the criteria and a total score must be greater than 70 points to be prequalified.

** This applies to the Applicant as a whole.

a) Experience

The Applicant must possess adequate experience in organizing, financing, managing, constructing, and operating projects of similar type and size. Such experience must be demonstrated in terms of the following: FINANCING, DESIGN, CONSTRUCTION, OPERATION AND MAINTENANCE of BOT-type projects.

The Applicant must have successfully undertaken project(s) similar in nature to the R10/C3/R9 Project with a capital cost equal to at least US\$ 140 Million. Experience shall be demonstrated by supplying the following minimal information for each project:

Owner:

Individuals in the Owner organization used as references must have held a position of responsibility for Project Management during the period of Project execution (include individual references and the current contract address, phone numbers and facsimile numbers). The Applicant should note that it is the intent of DPWH to contact each and every reference for the purpose of determining the Applicant's past performance.

Project Description:

A brief description of the project including total cost, location and any other pertinent information to assist the evaluators in assessing the validity of the Applicant's experience.

Applicant's Scope:

A complete description of the contracting experience of each of the Applicant members, specifically, the contract responsibility should be defined under the headings of: financing, design, construction and operation. The Applicant should clearly define their members' specific role (whether proponent, financier, operator, contractor etc.), and their actual participation in terms of percent of the total project.

Project Status:

The contract status of the projects shall be described along with the schedule for completion of uncompleted projects.

b) Key Personnel and Sub-contractors

The organization of the Applicant shall be included in the form of an organizational chart clearly showing the relationships among the Proponent, the Financier, the Contractor, and the Operator and the key personnel positions for each.

The Applicant shall include a complete description of his operational organization under the headings:

- Financing,
- Design (including detail engineering),
- Construction (including Quality Control & Quality Assurance),
- Operations and Maintenance ; and,
- Support Departments (accounting/finance, purchasing, administration, personnel, etc.)

The organizational chart shall include a brief description for key positions such as department or unit heads along with the classified listing of personnel (clerks, engineering, etc.)

A summary listing of all Management, Technical, and Supervisory personnel shall be submitted in the format prescribed. Summarized bio-data for each person proposed for a key position on the organization chart shall be provided. Bio-data shall be submitted in the format prescribed, including the following matters:

- Position or Title Proposed
- Name
- Nationality
- Education
- Current Position
- Specific Position demonstrating experience directly relevant to the proposed position on this project
- Chronological listing of previously held positions including employers and brief descriptions of responsibilities and duties
- Any other pertinent information relating to the proposed assignment.

c) Equipment and Plant

The Applicant shall submit a complete listing of the major equipment and plants that will be available for the execution of the project. The listing shall be separated into three categories: “Presently Owned”, “Leased” and “To be Purchased/Leased” and each category shall be divided for construction, operation and maintenance. .

d) Financial Data

The Applicant shall submit the following documents:

- Financial Statements audited for the last five fiscal years. These statements shall clearly show the Applicant members’ net worth and debt position. The Applicant’s net worth must be at least US\$ 140 M equivalent.

- A statement from reputable financial institutions committing to extend a credit line in an amount at least US\$ 140 M equivalent.
- A listing of source of other funds to sustain the initial operating expenses of the completed facility.
- Proof of the ability to provide equity to the Project in the amount at least US\$ 35 M equivalent.

CONFIDENTIAL PREQUALIFICATION STATEMENT

for

R10/C3/R9 Expressway Project

SUBMITTED BY: _____

ADDRESS: _____

TELEPHONE NO.: _____

FAX NO.: _____

DATE

Department of Public Works and Highways
DPWH Building, Bonifacio Drive, Port Area
Manila, Philippines
Tel. No. (632) 527-4111
Fax No. (632) 527-5635

- Notes:
1. If applicant is a joint venture or consortium, each member of the joint venture or consortium shall accomplish this confidential statement.
 2. These forms do not include all the information required to be submitted.

I. ORGANIZATION

1. _____
Applicant's Name and Country Incorporated

For JV/ consortium members, indicate participation in this project whether designer, contractor, equipment supplier, financier or operator. Indicate likewise if the member is the project's Principal Sponsor.

If a member is the principal Sponsor, please attach the nomination from the other members authorizing the Principal Sponsor to represent the Joint Venture or Consortium and to file the bid.

2. Year Organized: _____

3. Type of Organization: _____

4. Local Office Address: _____

5. Head Office Address: _____

Cable Address: _____

Telex No.: _____

Telefax No.: _____

6. Objectives or Nature of Business of Applicant members (Please summarize in these forms. Brochures and Pamphlets should be included in Section III)

7. The following tables will be used to provide information on the Applicant's Organization Profile:

Table 1.7.a	Joint Venture/ Consortium Organizations
Table 1.7.b	Names, Nationalities and Experience of Applicant Members
Table 1.7.c	Additional Information to be Furnished by Applicant
Table 1.7.d	Members of the Board of Directors (for Corporations)
Table 1.7.e	Additional information to be furnished by the Applicant

The person who shall solely represent the Applicant:

Name:

Address:

Designation:

Attached herewith a certified copy of Appointment of Responsible Person and his Authority.

Table 1.7.a

JOINT VENTURE/ CONSORTIUM ORGANIZATION

This table shall be completed by the Joint Venture/ Consortium and attached to the Confidential Statement of the Principal Sponsor.

MEMBER	HEAD OFFICE (Country)	PARTICIPATION IN PROJECT	EQUITY HOLDINGS IN THE JOINT VENTURE/ CONSORTIUM FOR THE PROJECT(amount & %)
Principal Sponsor			
Member			
Member			
Member			
Member			
Member			
Member			
Member			
Member			
Member			

II. ORGANIZATION DOCUMENTATION AND FINANCIAL STATEMENTS

Applicants shall submit for DPWH's examination the applicable certified true copies of the following:

- PRE-Q.A** Articles of Incorporation and By-Laws, if a corporation, or Article of Company-Partnership, if a partnership;
- PRE-Q.B** Privilege Tax receipt (PTR) for the current year;
- PRE-Q.C** For Filipino contractors to be engaged to undertake construction works, the Contractors License issued by the Philippine Contractors Accreditation Board (PCAB);
- PRE-Q.D** Certificate of Registration with the Bureau of Commerce and/or with the Securities and Exchange Commission;
- PRE-Q.E** Detailed audited financial statements for the last five (5) years of each of Applicant members and its partners, including Income Statement, Balance Sheet and Statement of Changes in Financial Position; and
- PRE-Q.F** Memorandum of Agreement or Joint Venture/ Consortium Agreement, if applicable.

III. EXPERIENCE RECORD (TECHNICAL)

1. Number of years of experience as a designer, contractor, operator, etc.

2. The following tables will be used to furnish required information on the technical experience of each Applicant member (Company brochures and technical data sheets of relevant projects may be attached only for purposes of supporting the projects listed in the tables.):

Table III.2.a Relevant projects completed with the Department of Public Works and Highways (particularly toll roads)

Table III.2.b Relevant projects completed outside of the Department of Public Works and Highways (Include Certificate of Final Acceptance and for Good Performance issued by the owner of each project)

Table III.2.c All On-Going projects engaged In at present

3. Attach a list of technical and managerial personnel with relevant experience in similar types of projects who are to be assigned to this project.

4. Have you ever failed to complete any work awarded to you? If so, where, when, and why?

5. Has any officer or partner to be involved in this project ever been an officer or partner of some organization that failed to complete a contract?

If so, state name of individual and organization, and reason for failure.

6. Has any officer or partner in this project ever failed to complete a contract handled in its own name?

If so, state name of individual, name of owner and reason for failure.

7. In what other lines of business are you engaged in?

Table III.2.b
RELEVANT PROJECTS COMPLETED OUTSIDE OF THE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
(Include Certificate of Final acceptance and for Good Performance issued by owner of each project)

NAME OF PROJECT	NAME AND ADDRESS OF OWNER	DATE COMPLETED	VALUE OF PROJECT	PARTICIPATION IN PROJECT

(Use extra sheets for additional information)

IV. FINANCIAL RECORD

1. Attach testimonial letters from banks attesting that the Applicant/ member is banking with them, is in good financial standing and has adequate resources.
2. The following tables shall be completed:

Table IV.1 Projects Completed with the Department of Public Works and Highways (to be furnished in conjunction with Table III.2.a)

Table IV.2 Projects Completed Outside of the Department of Public Works and Highways (to be completed in conjunction with Table III.2.b)

Table IV.3 All On-Going Projects Engaged in at present (to be completed in conjunction with Table III.2.c)

Table IV.2
PROJECTS COMPLETED OUTSIDE OF THE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

NAME OF PROJECT	AMOUNT OF FINANCING	NATURE OF FINANCING *

* Direct loans, supplier's credit, bond flotation, etc.

REPUBLIC OF THE PHILIPPINES

A F F I D A V I T

I, _____, of legal age and residing at _____
(Name of Affiant)

(Address)

after having been duly sworn according to law, deposes and states:

1. That I am the _____
(Official Capacity)

of the _____
(Name of Firm)

a corporation/co-partnership/individual duly organized under the laws
of _____

2. That personally, and as _____
(Official Capacity)

for and in behalf of the corporation/ co-partnership/ individual/ joint
venture/ consortium, I hereby certify:

a. That all statements made in this Confidential Prequalification
Statement and in the required attachment are true and correct.

b. That this Confidential Prequalification Statement is made for the
express purpose of qualifying my bid with the Department of
Public Works and Highways for its contract/s.

c. That any public official, engineer, architect, survey company, bank
depository, material or equipment manufacturer, distributor or any
other person, firm or corporation herein named is hereby requested
and authorized to supply the Department of Public Works and
Highways and its agency any information that may find necessary
to verify any item in this statement or regarding my competence
and general reputation.

d. That I am duly authorized by the corporation/ co-partnership/
individual/ joint venture/ consortium to make these representation
and to sign this statement.

For and in behalf of corporation
co-partnership/ individual/
joint venture/ consortium
Affiant

WITNESSES:

1. _____
2. _____

SUBSCRIBED AND SWORN to before me this _____ day of _____,
20____, issued at _____, Philippines, affiant exhibited to me
his Community Tax Certificate No. _____ issued on
_____20____,at_____.

NOTARY PUBLIC

Technical Specifications, Design and Performance Standards

1.0 Minimum Standards and Specifications

The following design standards shall be applied for the project:

Design Standards for Expressway

Description		Unit	Class-B (Inside EDSA)
Design Speed		kph	60
Lane Width		m	3.25
Outer Shoulder Width		m	2.00
Median Width		m	2.00
Median Island Width		m	1.00
Inner Shoulder Width*		m	0.50
Horizontal Alignment	Minimum Radius	m	150 (130)
	Minimum Curve Length	m	100
	Maximum Superelevation	%	10.0
	Minimum Transition Length	m	50
Vertical Alignment	Maximum Gradient	%	5.0
	Minimum Radius of Vertical Curve		
	Crest	m	2,000 (1,400)
	Sag	m	1,500 (1,000)
Minimum Vertical Curve Length		m	50
Minimum Stopping Sight Distance		m	85 (75)
Pavement Crossfall		%	2.0
Composite Gradient		%	10.5
Vertical Clearance*		m	5.0

Note: Figures in () show absolute minimum value to be used only when conditions necessitate it.

Standard Speed Change Lane

		Expressway Design Speed	
		80 kph	60 kph
Single Acceleration Lane	Acceleration Length (m)	160	120
	Taper Length (m) for Parallel Design	80	60
Single Deceleration Lane	Deceleration Length (m)	110	90
	Taper Length (m) for Parallel Design	80	60

Design Standards for an Interchange

Description		Unit	Case 1	Case 2	Case 3
Design Speed		km/h	80	60	50
Lane Width		m	3.50	3.25	3.25
Inner Shoulder Width		m	0.75	0.75	0.75
Outer Shoulder Width 1-lane		m	2.00	2.00	2.00
Outer Shoulder Width 2-lane		m	1.25	1.25	1.25
Horizontal Alignment	Minimum Radius	m	280 (230)	150 (120)	100 (80)
	Minimum Curve Length	m	140	100	80
	Maximum Superelevation	%	10.0	10.0	10.0
	Minimum Transition Length	m	70	50	40
Vertical Alignment	Maximum Gradient	%	4	5	6
	Minimum Radius of Vertical Curve				
	Crest	m	5,000 (3,000)	2,000 (1,400)	1,200 (800)
	Sag	m	3,000 (2,000)	1,500 (1,000)	1,100 (700)
Minimum Vertical Curve Length		m	70	50	40
Minimum Stopping Sight Distance		m	140 (110)	85 (75)	65 (55)
Pavement Crossfall		%	2.0	2.0	2.0
Composite Gradient		%	10.5	10.5	11.0
Vertical Clearance		m	5.0	5.0	5.0

- Notes:
1. Use Case 1 when intersecting expressways are both Class A.
 2. Use Case 2 when intersecting expressways are Class A and Class B or both Class B.
 3. Could be downgraded from Case 1 to Case 2 or Case 2 to Case 3, only when the conditions necessitate it.
 4. Figures in () show absolute minimum value to be used only when conditions necessitate it.

On/Off-ramp Geometric Design Standards

Description		Unit	Expressway Class-B
Design Speed of Street to be Connected		kph	80, 60, 50
Design Speed of On/Off-ramp		kph	40
Lane Width		m	3.25
Inner Shoulder Width		m	0.75
Outer Shoulder Width		m	1.50
Horizontal Alignment	Minimum Radius	m	50 (40)
	Minimum Curve Length	m	-
	Maximum Superelevation	%	10.0
	Minimum Transition Length	m	35
Vertical Alignment	Maximum Gradient	%	7.0
	Minimum Radius of Vertical Curve		
	Crest	m	450
	Sag	m	450
Minimum Vertical Curve Length		m	35
Minimum Stopping Sight Distance		m	50 (40)
Pavement Crossfall		%	2.0
Composite Gradient		%	11.0
Vertical Clearance		m	5.0

- Note:
1. Use design speed of 40 kph for street or ramp with toll facility.
 2. Figures in () show absolute minimum value to be used only when conditions necessitate it.

2.0 Structural Design Standards for Expressways

The National Standard of the Philippines shall be adopted as the Structural Design Standard, except as modified by the following specific design criteria:

Highways

2.1 Vertical Clearance

A minimum vertical clearance for vehicle traffic of 5.00 m shall be provided.

2.2 Standard Highway Loading

The standard highway loading shall be MS-18.

2.3 Earthquakes

The seismic design shall be based on the National Structural Code of the Philippines, Volume II – Bridges, 2nd Edition, 1997.

3.0 Design Life Standards

The minimum design life of the R10C3/R9 Expressway shall be:

Viaduct structures	100 years
Road pavement	40 years
Mechanical and Electrical Works	30 years
Wearing surface/overlay	10 years
Buildings	30 years

Renewable items shall have the following minimum residual life at the end of the Concession Period:

Road Surface	5 years
--------------	---------

**THE REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS**

R10/C3/R9 EXPRESSWAY PROJECT

**PREQUALIFICATION
DRAWINGS**

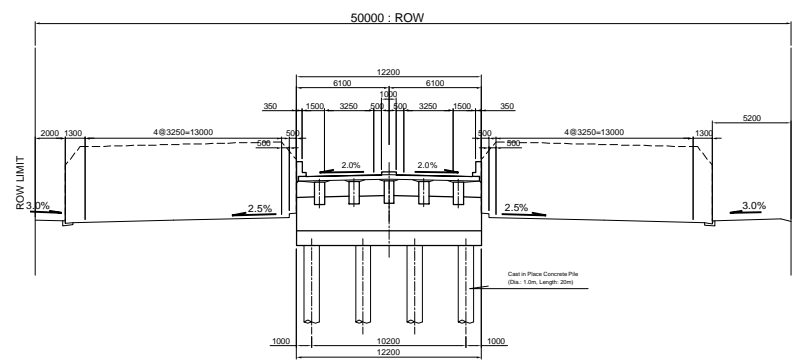
2003

VICINITY MAP (R10)

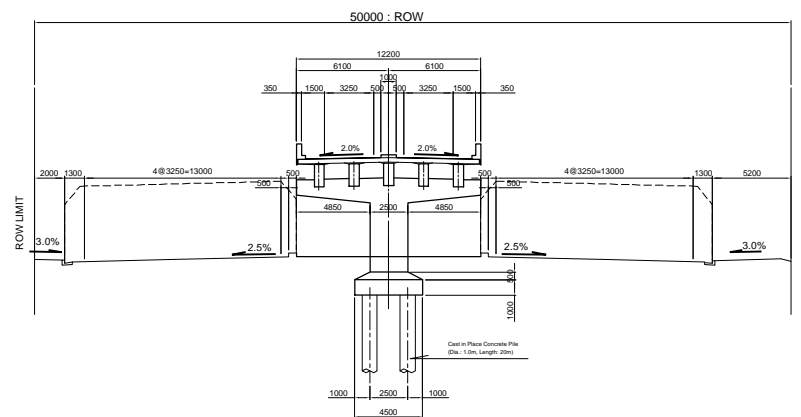
SCALE 1: 20,000



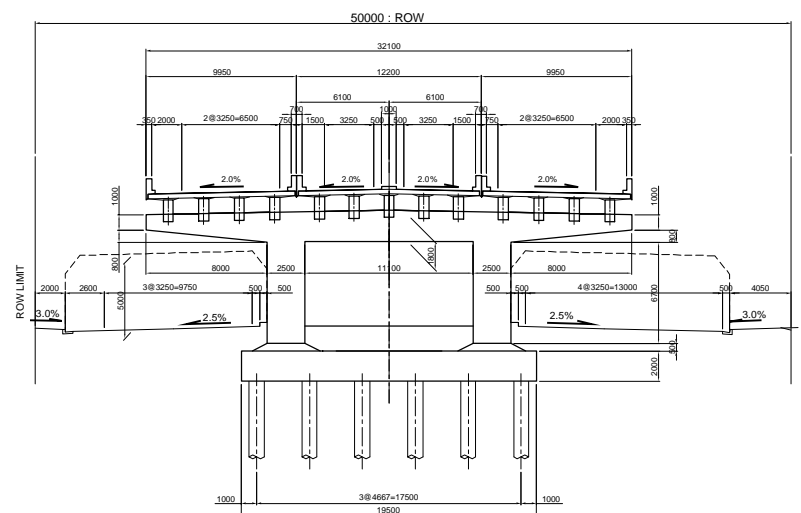
Section-1 (STA: 0+165) Scale 1:500



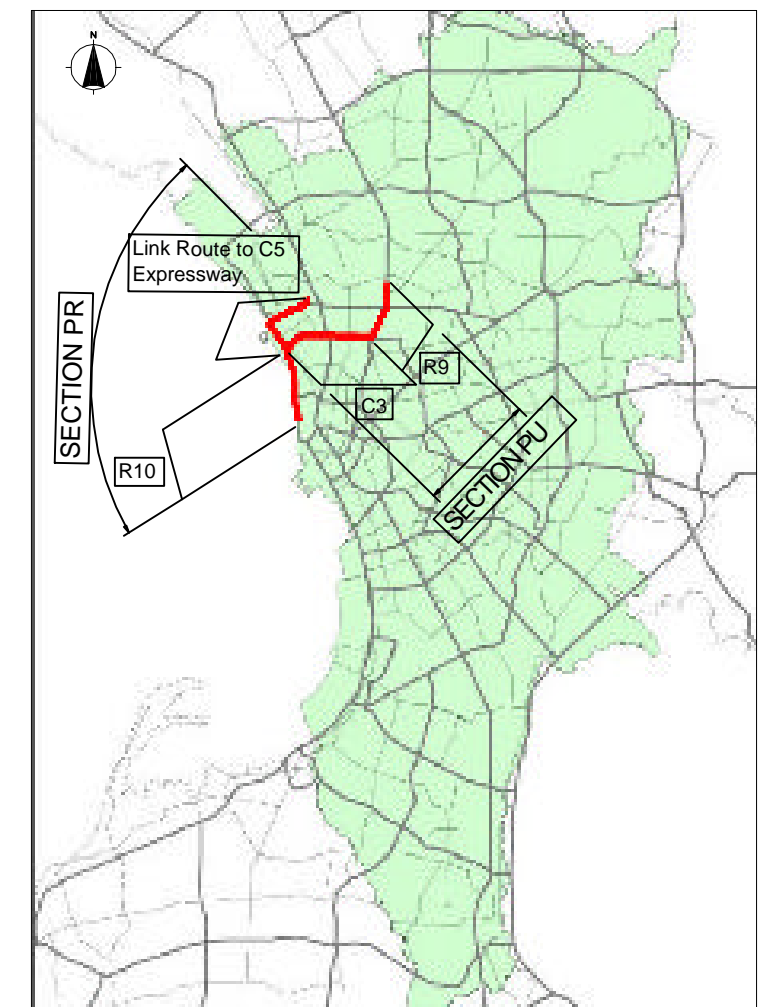
Section-2 Scale 1:500



Section-3 (STA: 0+435) Scale 1:500

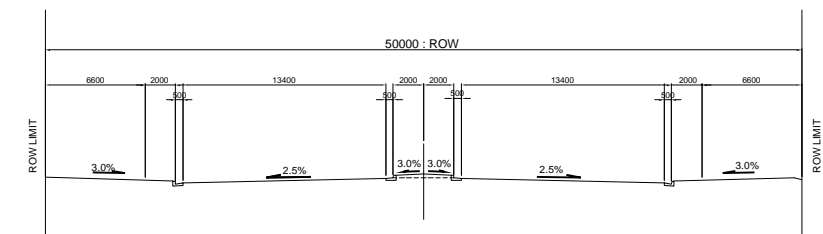


KEY MAP



Cross Section of Existing At-Grade Road
(Source: RADIAL ROAD R-10 PROJECT CONSTRUCTION PACKAGE I, from B.P. to C-2 Road)
(for Section-1,2,3)

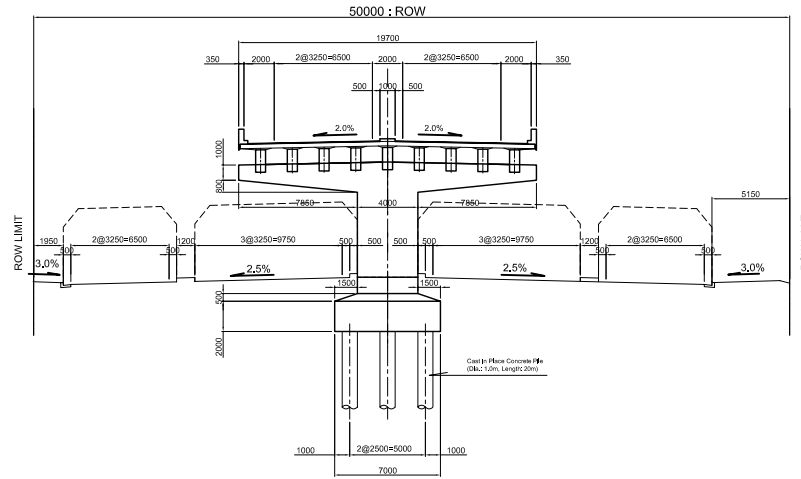
Scale 1:500



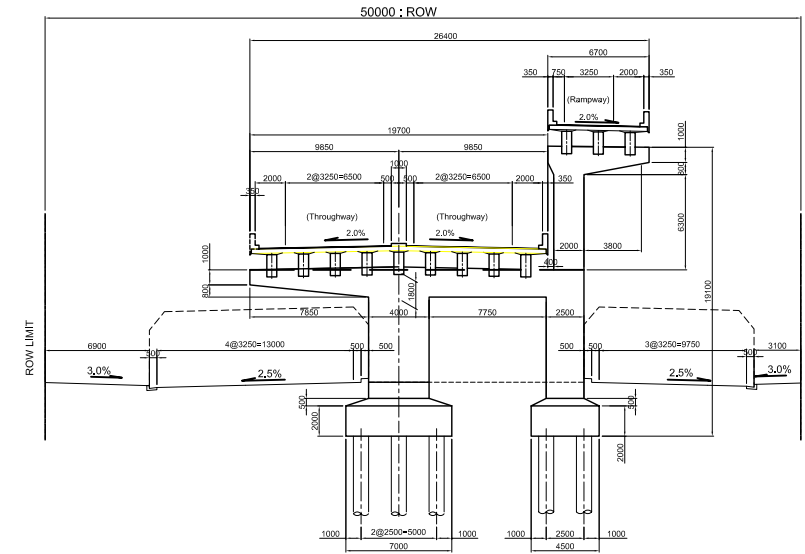
NOTE:
SECTION PU: C3/R9 ROUTE (STA 4+225 to STA 11+300)
undertaken by DPWH
SECTION PR: R10 & LINK ROUTE (STA 0+000 to STA 8+164)
undertaken by Concessionaire

<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>	<p>DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS Republic of Philippines</p>	<p>ALMEC CORPORATION</p> <p>NIPON KOEI CO., LTD.</p>	<p>R10/C3/R9 EXPRESSWAY PROJECT</p>	<p>Location Map and Typical Cross Sections (R10,1/2)</p>	SCALE	DWG. No.
					—	PQD-01

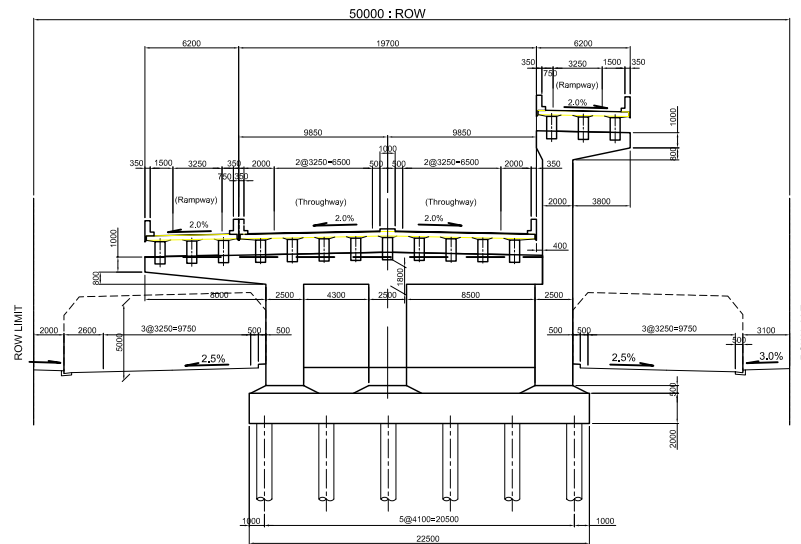
Section-4 Scale 1:500



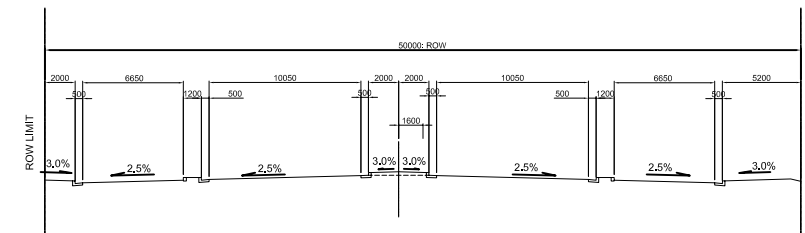
Section-7 Scale 1:500



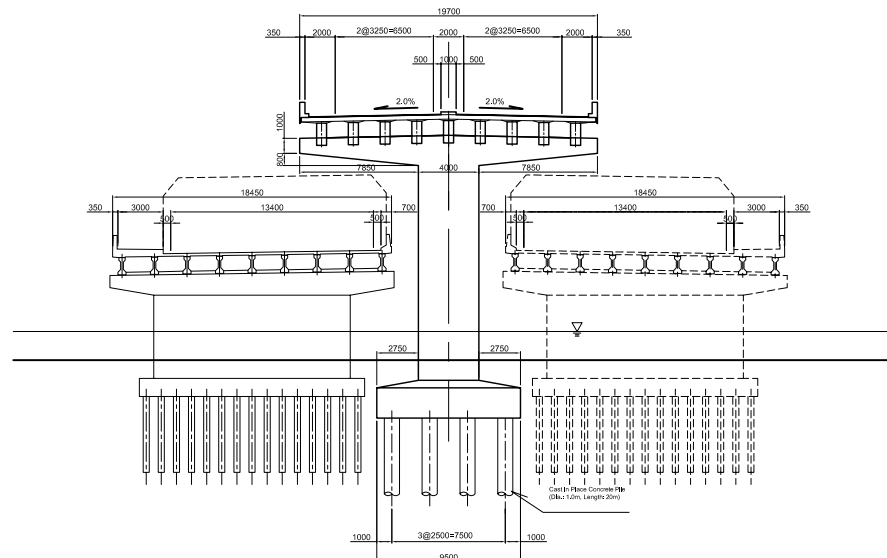
Section-5 Scale 1:500



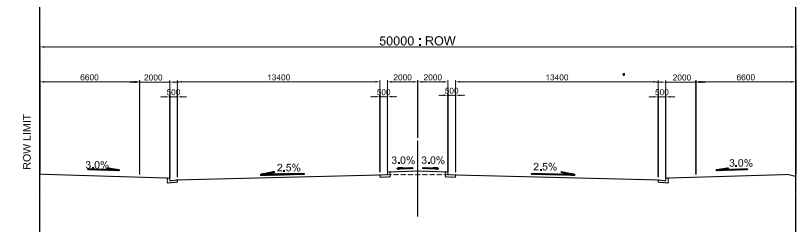
Cross Section of Existing At-Grade Road
(Source: RADIAL ROAD R-10 PROJECT CONSTRUCTION PACKAGE I, from B.P. to C-2 Road)
(for Section-4,5) Scale 1:500



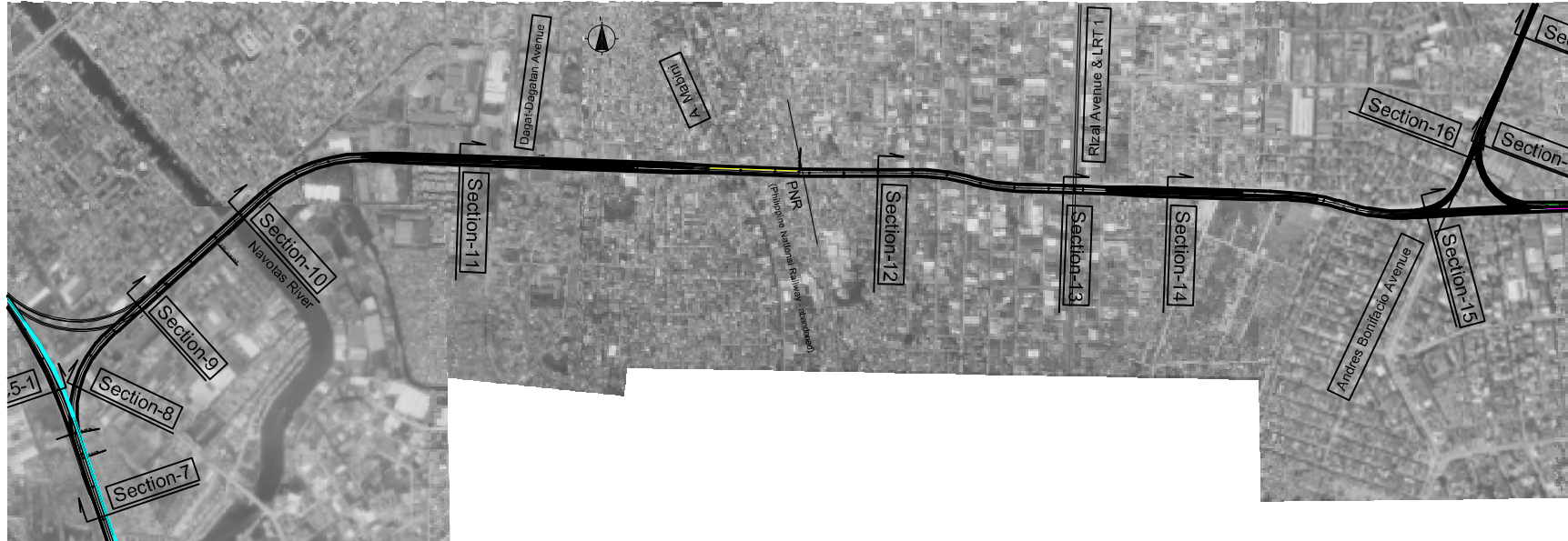
Section-6 Scale 1:500



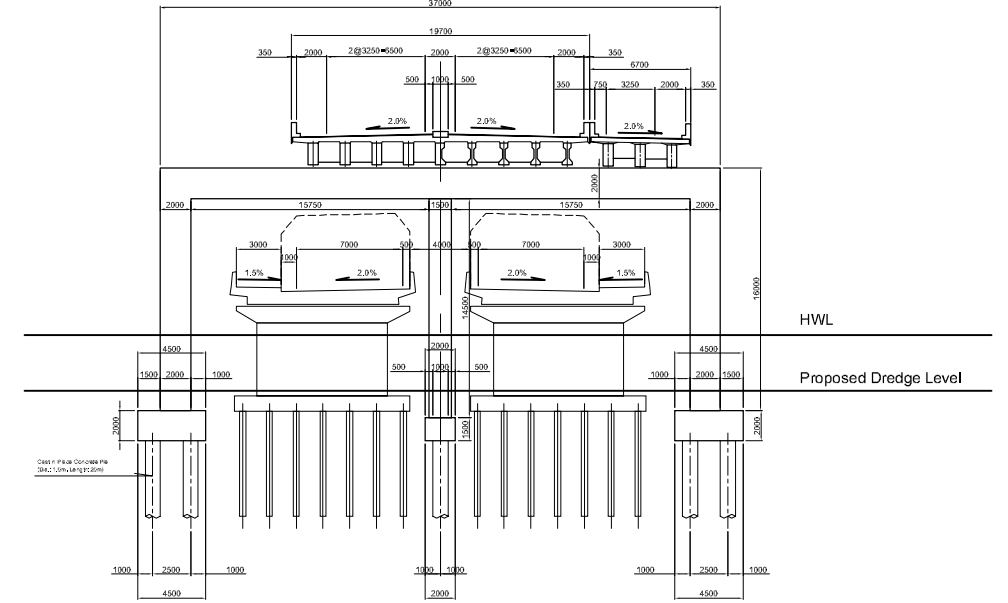
Cross Section of Existing At-Grade Road
(Source: RADIAL ROAD R-10 PROJECT CONSTRUCTION PACKAGE I, from C-2 Road to Interchange)
(for Section-6,7) Scale 1:500



VICINITY MAP (C3) SCALE 1: 20,000

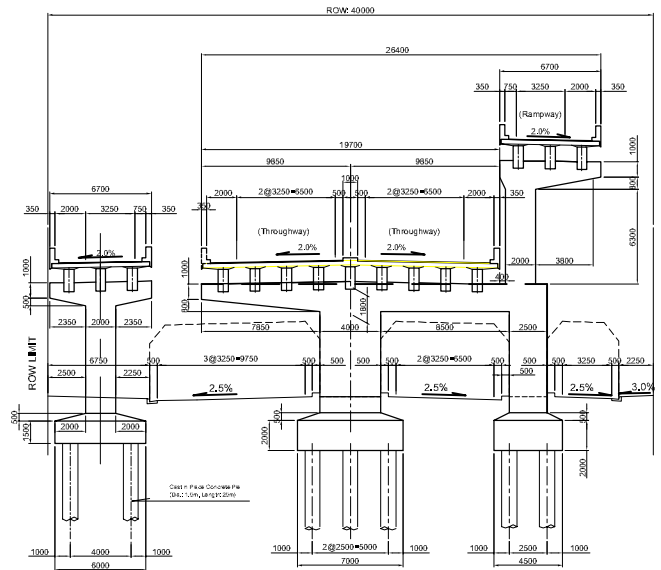
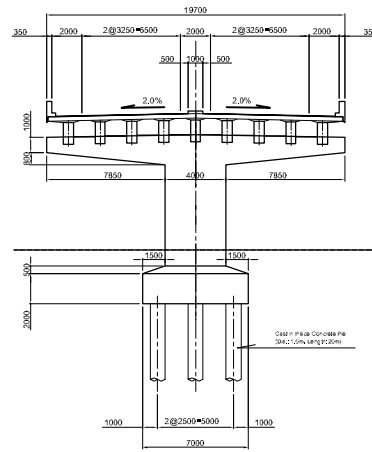


Section-10 (Above Navotas Bridge) Scale 1:500

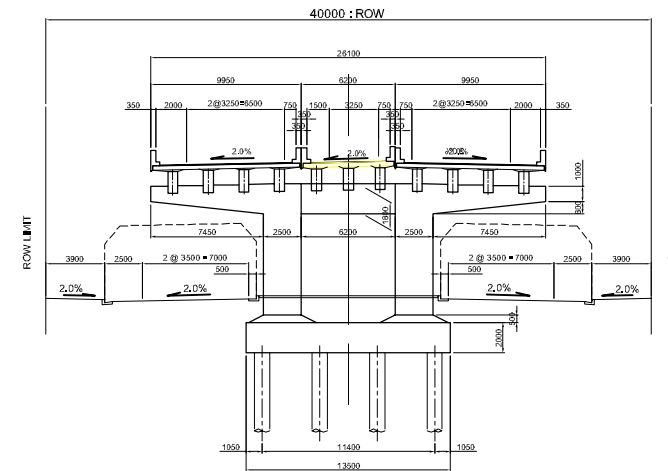


Section-9 (STA: 4+300) Scale 1:500

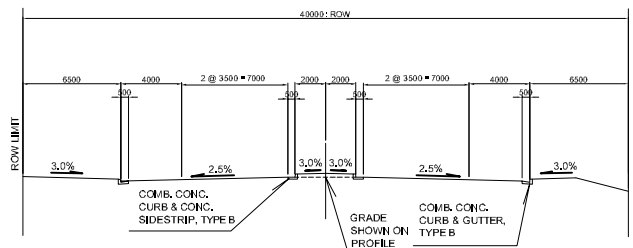
Section-8 (STA: 4+000) Scale 1:500



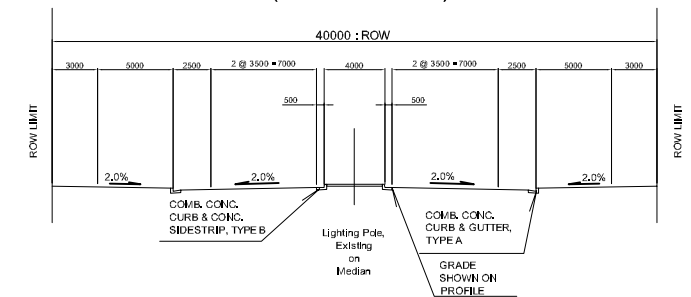
Section-11 Scale 1:500



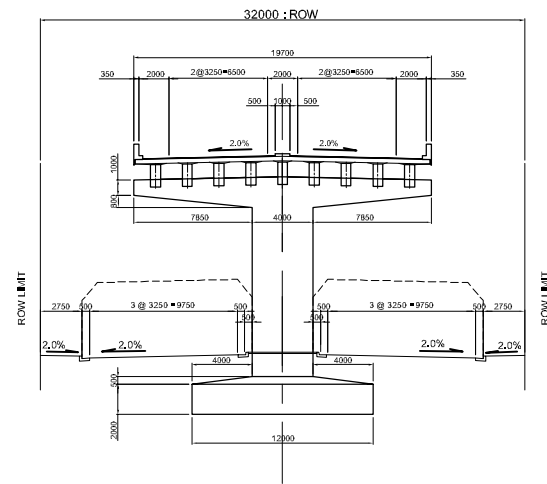
Cross Section of Existing At-Grade Road
(Source: RADIAL ROAD R-10 PROJECT CONSTRUCTION PACKAGE II, from R-10 to Navotas River)
(for Section-9) Scale 1:500



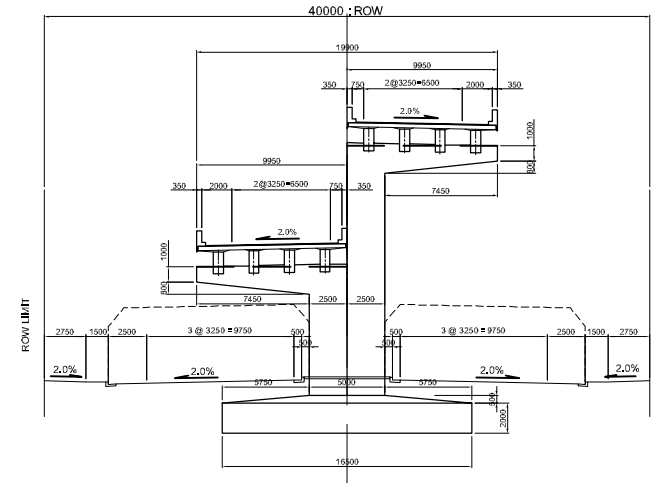
Cross Section of Existing At-Grade Road
(Source: R-10 AND ITS RELATED ROADS PROJECT PHASE I, from Navotas to Border of Dagat-Dagatan Ave.)
(for Section-11) Scale 1:500



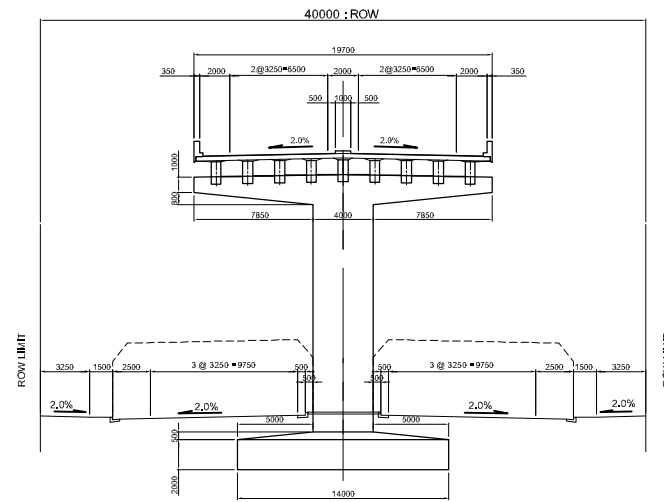
Section-12 Scale 1:500



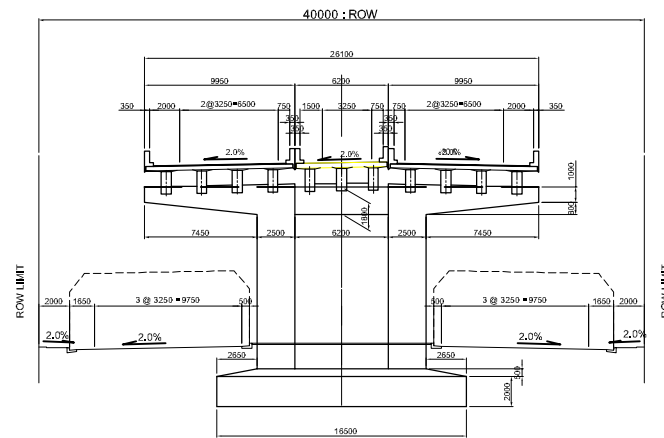
Section-15 Scale 1:500



Section-13 Scale 1:500

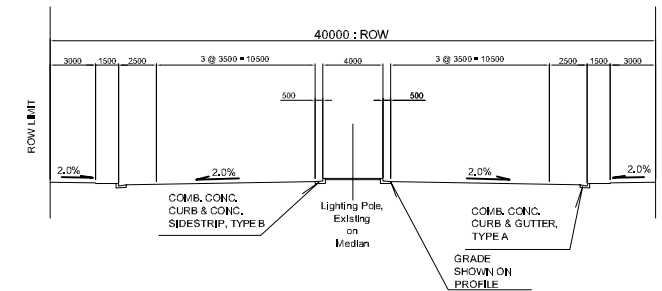


Section-14 Scale 1:500



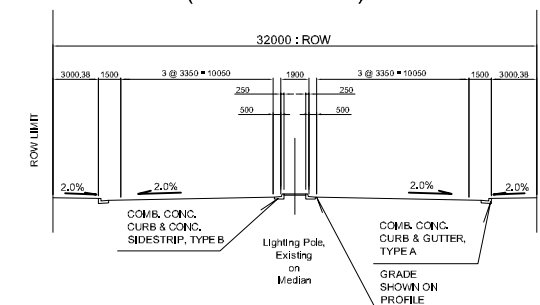
Cross Section of Existing At-Grade Road
(Source: R-10 AND ITS RELATED ROADS PROJECT PHASE II, from Border of Dagat-Dagatan Area to Mabini)

Scale 1:500



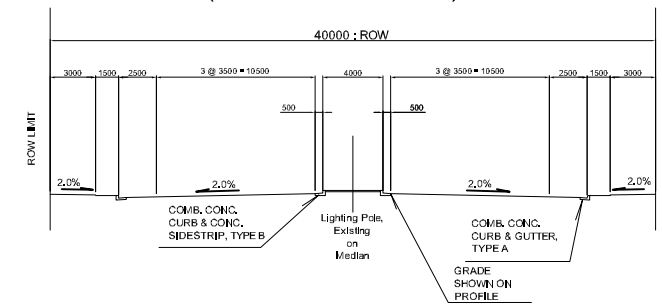
Cross Section of Existing At-Grade Road
(Source: RADIAL ROAD R-10 AND ITS RELATED ROADS PROJECT PHASE II, from A.Mabini to Rizal Avenue Ext.)
(for Section-12)

Scale 1:500



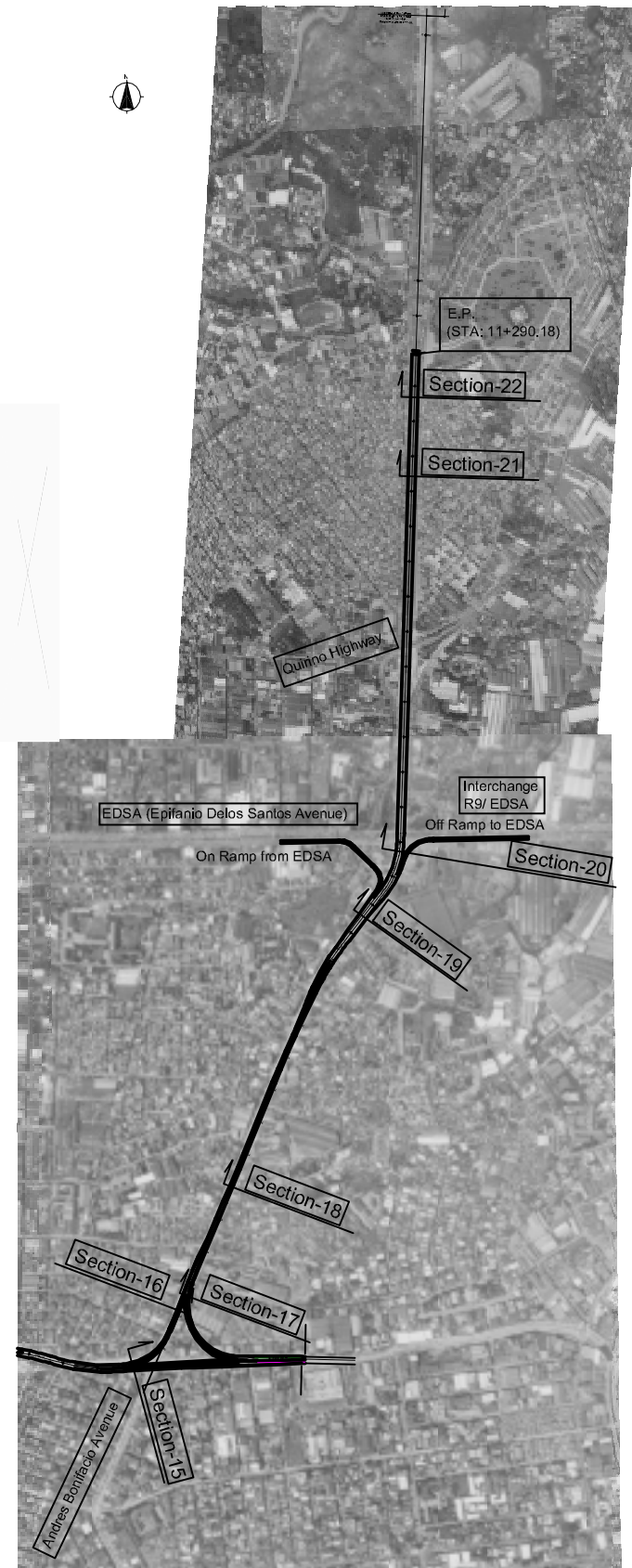
Cross Section of Existing At-Grade Road
(Source: RADIAL ROAD R-10 AND ITS RELATED ROADS PROJECT PHASE II, from A.Mabini to Rizal Avenue Ext.)
(for Section-13,14,15)

Scale 1:500

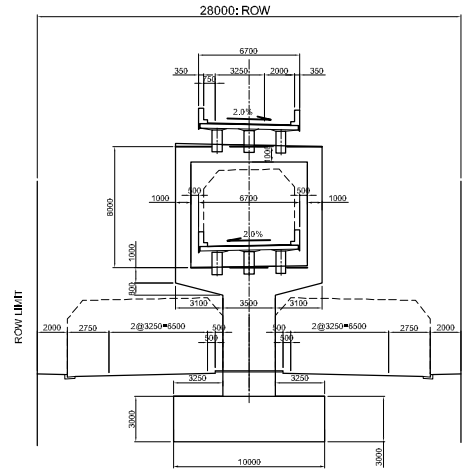


VICINITY MAP (R9)

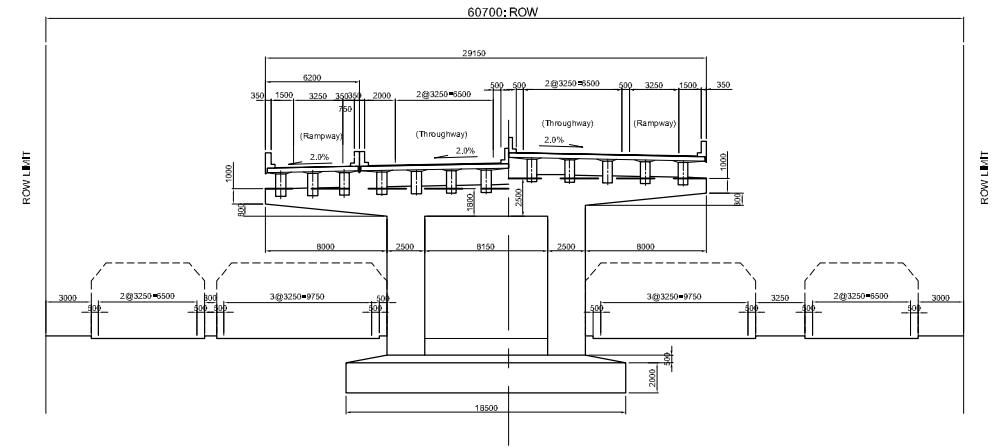
SCALE 1: 20,000



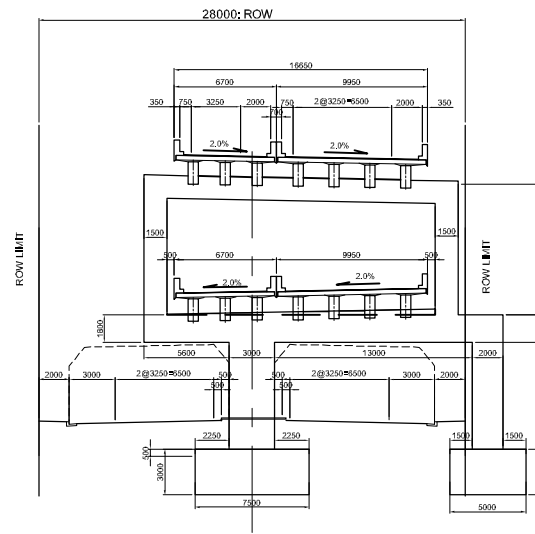
Section-16 Scale 1:500



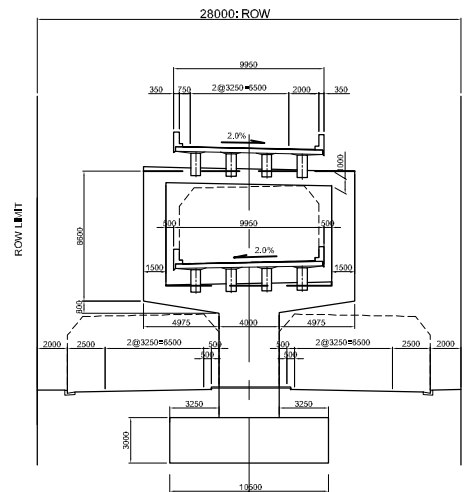
Section-19 Scale 1:500



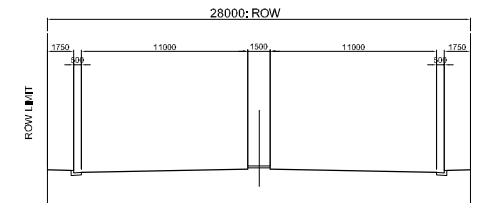
Section-17 Scale 1:500



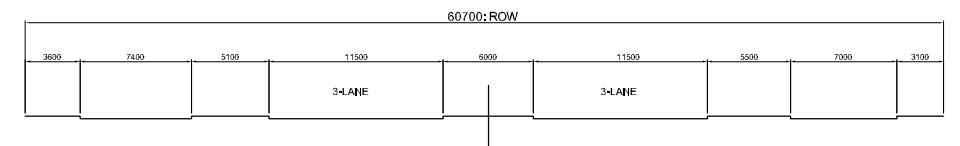
Section-18 Scale 1:500



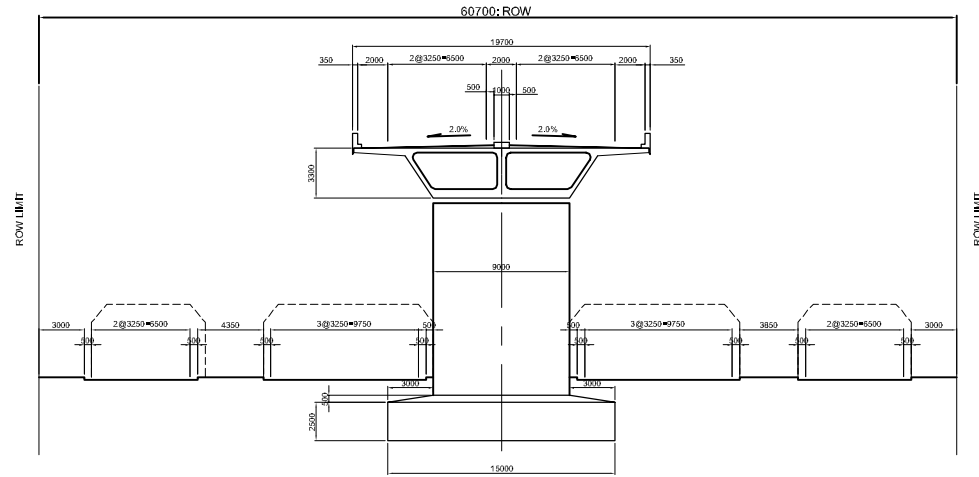
Cross Section of Existing At-Grade Road (Assumed)
(Source: METRO MANILA ROAD PAVEMENT REHABILITATION PROJECT & MMUES)
(for Section-16,17,18) Scale 1:500



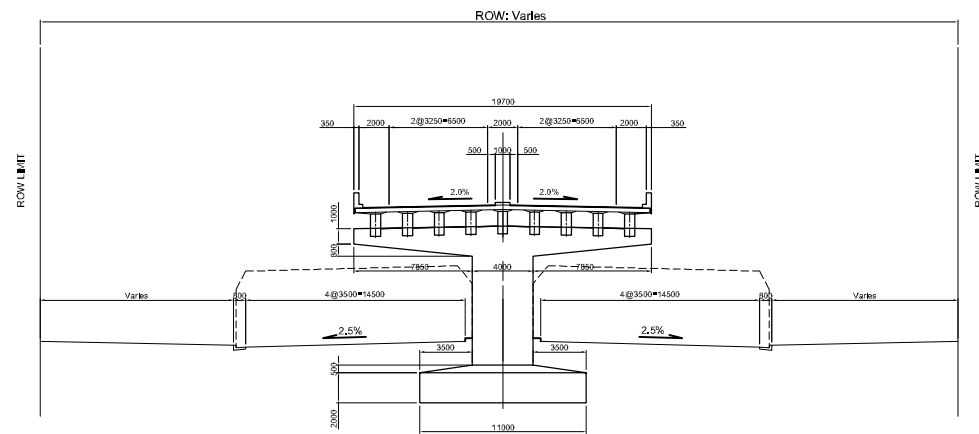
Cross Section of Existing At-Grade Road (Assumed)
(Source: MMUES)
(for Section-19) Scale 1:500



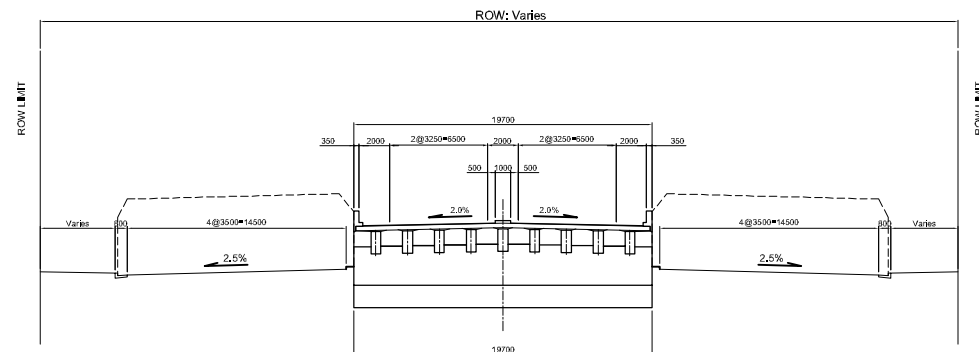
Section-20 (STA: 9+883, 9+943) Scale 1:500



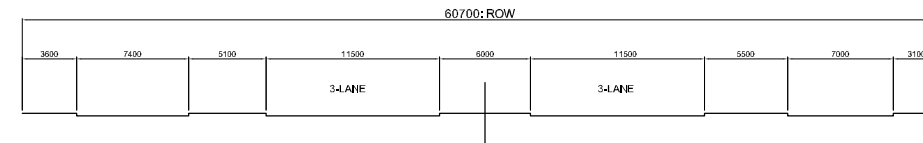
Section-21 Scale 1:500



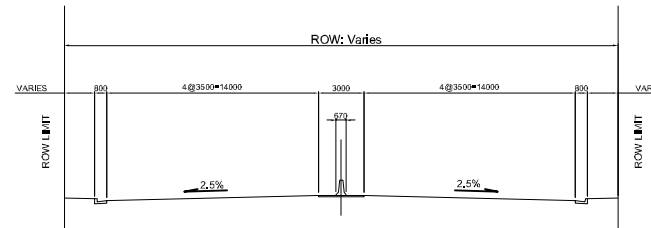
Section-22 (STA: 11+168) Scale 1:500



Cross Section of Existing At-Grade Road (Assumed)
(Source: MMUES)
(for Section-20) Scale 1:500

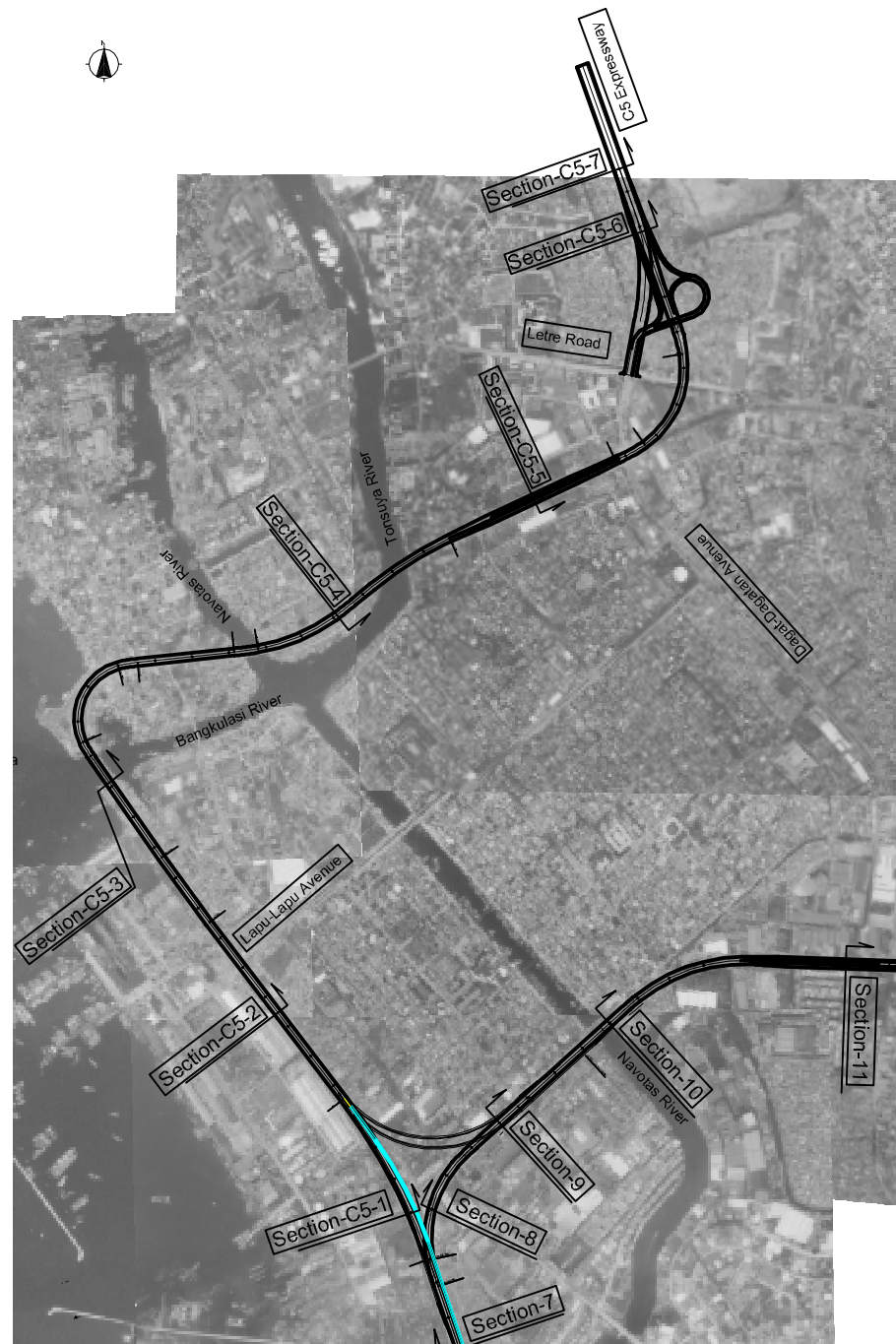


Cross Section of Existing At-Grade Road
(Source: MANILA NORTH TOLLWAYS PROJECT, South side before Balintawak Toll Area)
(for Section-21,22) Scale 1:500

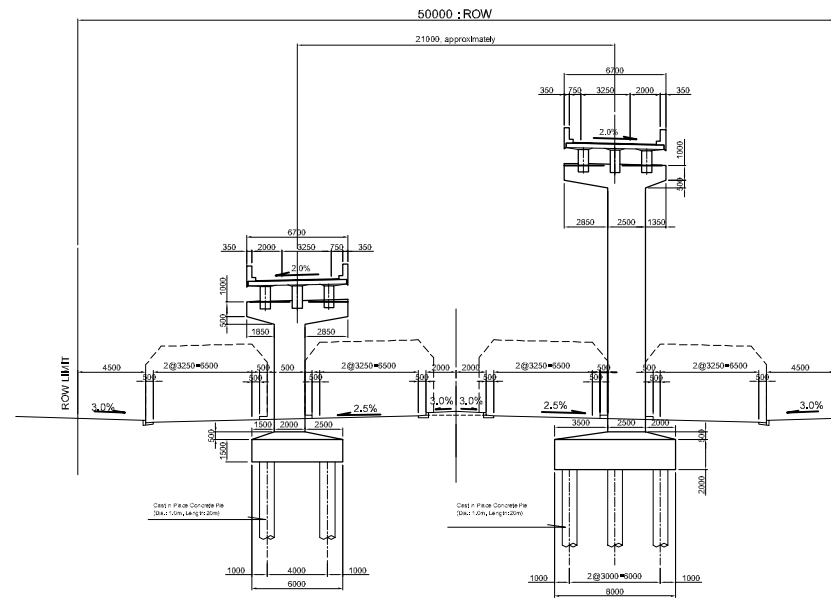


VICINITY MAP (Link Route to C5 Expressway)

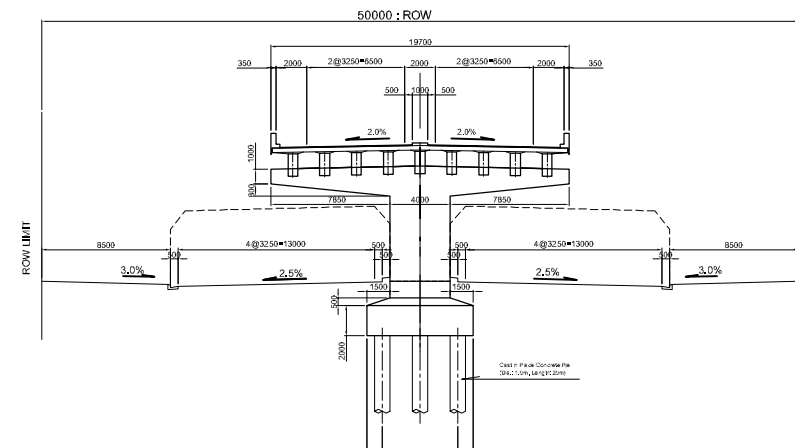
SCALE 1: 20,000



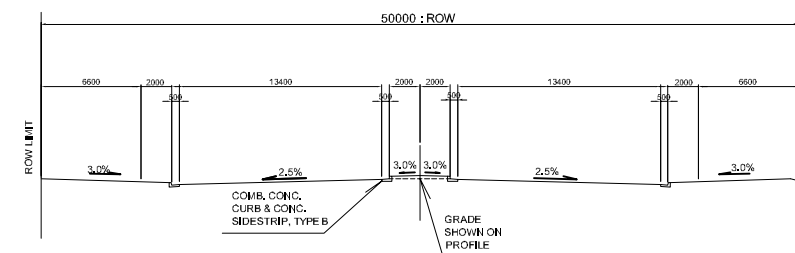
Section-C5-1 Scale 1:500



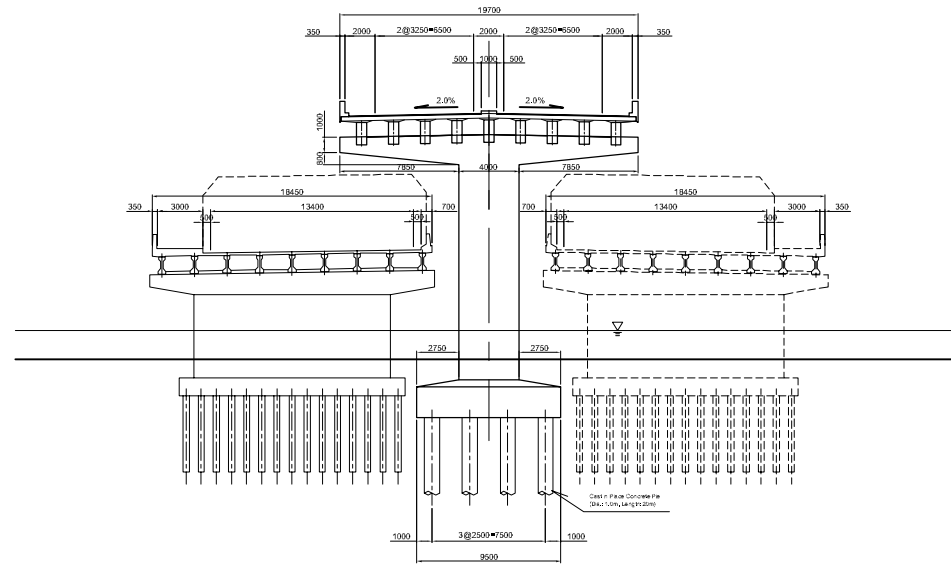
Section-C5-2 Scale 1:500



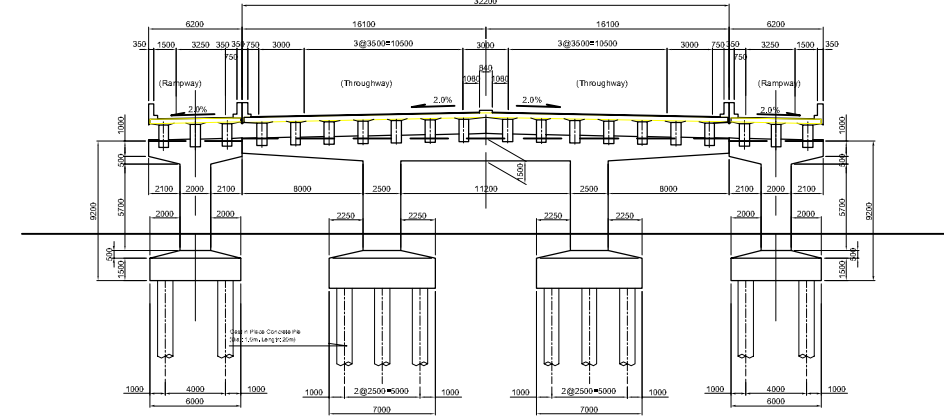
Cross Section of Existing At-Grade Road (Assumed)
 (Source: RADIAL ROAD R-10 PROJECT CONSTRUCTION PACKAGE I, from C-2 to Navotas Fisheries Port)
 (for Section-C5-1,2) Scale 1:500



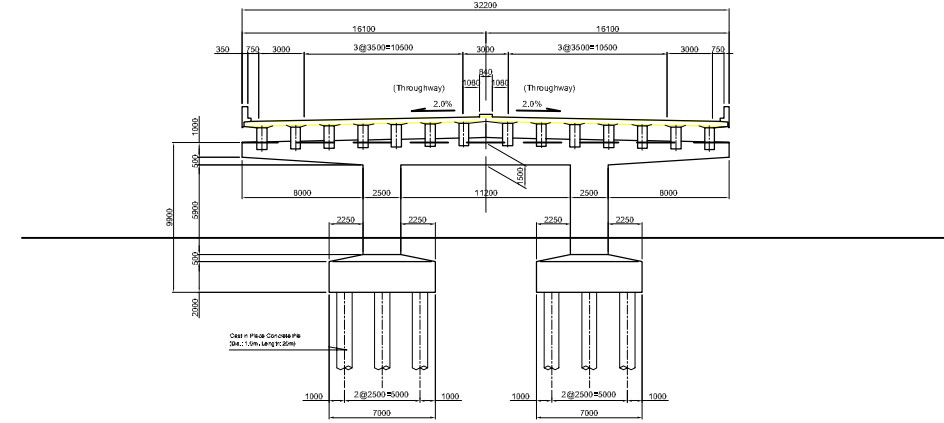
Section-C5-3 Scale 1:500



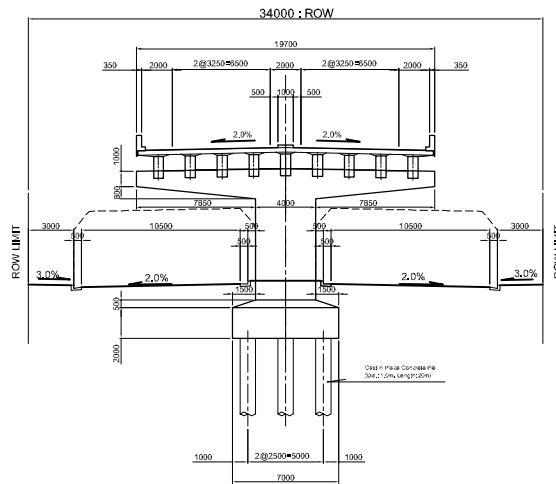
Section-C5-6 Scale 1:500



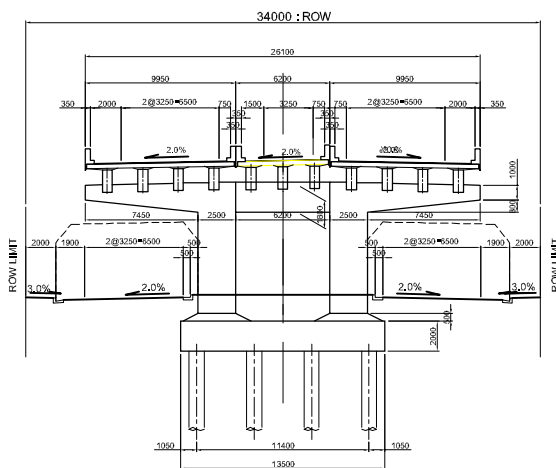
Section-C5-7 (STA: 8+164.471) Scale 1:500



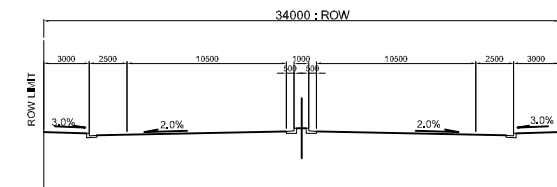
Section-C5-4 Scale 1:500



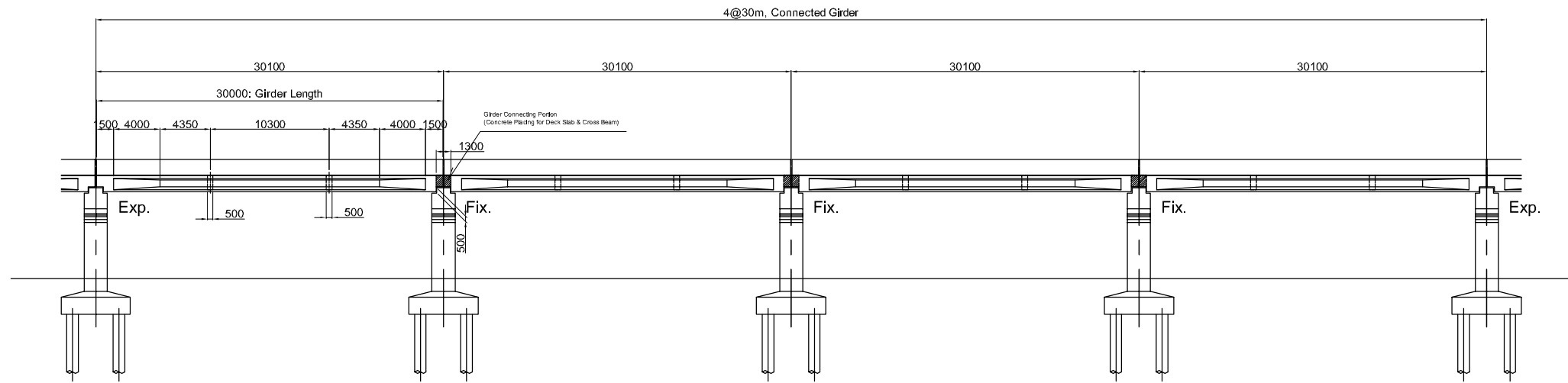
Section-C5-5 Scale 1:500



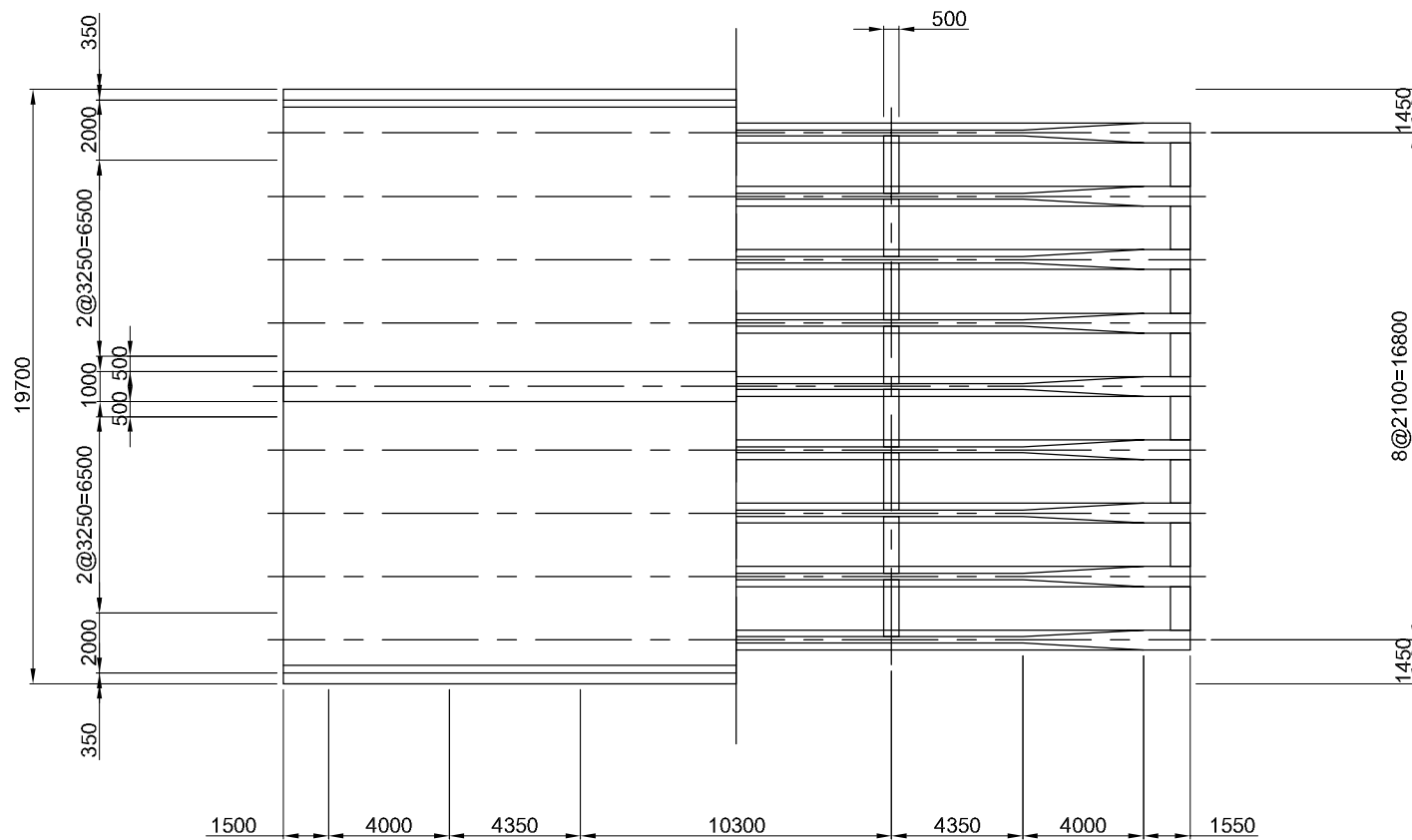
Cross Section of Existing At-Grade Road (Reference)
 (Source: RADIAL ROAD 10 AND ITS RELATED ROADS PROJECT PHASE II, CONTRACT PACKAGE IV A)
 (from Letre Road to Monumento)
 (for Section-C5-4,5) Scale 1:500



Side View of Standard Viaduct Scale 1:500

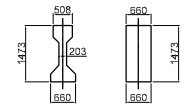


Plan (1 Span of 30m Length) Scale 1:250

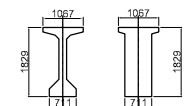


AASHTO Standard Girders Scale 1:200

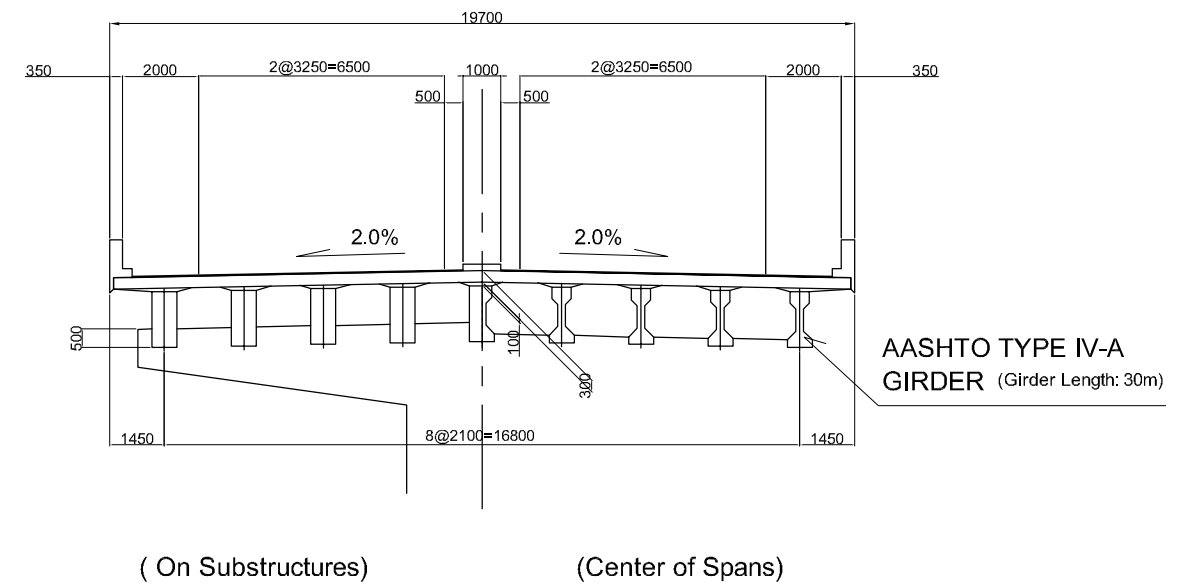
Type IV-A
(Girder Length: 30m)



Type VI
(Girder Length: 40m)



Typical Cross Section of Standard Viaduct (30m Length) Scale 1:200



BID DOCUMENTS

- Volume I** **Part I: Instructions to Bidders**
Part II: Minimum Design and Performance Standards and Specifications
Part III: Draft Toll Concession Agreement
- Volume II: Bid Drawings**

VOLUME I

**REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS**

R10/C3/R9 EXPRESSWAY PROJECT

BID DOCUMENTS

VOLUME I

2003

**DPWH Building, Bonifacio Drive, Port Area
Manila, Philippines**

TABLE OF CONTENTS

PART I: INSTRUCTIONS TO BIDDERS.....	1
SECTION 1.0 GENERAL CONDITIONS.....	1
1.1 Definition of Terms.....	1
1.2 Project Scope.....	3
1.2.1 Project Description	3
1.2.2 Right of Way	3
1.3 Bid Evaluation Criteria	3
1.4 Indicative Milestones for Project Implementation.....	4
1.5 Required Security.....	4
SECTION 2.0 PROJECT INFORMATION.....	5
2.1 Introduction	5
2.2 The Project	5
2.3 Projected Traffic	6
2.4 Construction Cost.....	6
2.5 Contractual Framework.....	6
2.6 Public Utility Classification.....	7
SECTION 3.0 SCOPE OF WORK.....	8
3.1 Works to be Performed by Proponent	8
3.2 Project Design, Construction, Operation and Maintenance	8
3.3 Right-of-Way.....	9
3.4 Environmental Impact Assessment (EIA) and Environmental Clearance Certificate (ECC)	9
SECTION 4.0 GENERAL INFORMATION FOR BIDDERS.....	10
4.1 Who May Participate.....	10
4.2 Bid Documents.....	10
4.3 Other Documents to be Provided by DPWH.....	10
4.4 Pre-Bid Conference and Site Visit.....	11
4.5 Language.....	11
4.6 Treatment of Document from Bidders	11
4.7 Bid Security	11
4.8 Withdrawal and/or Modification of Bids	11
4.9 Right to Reject or Accept Bids	11
4.10 Post-Qualification.....	12
4.11 Withdrawal of Members.....	12
4.12 Notice of Award	12
4.13 Execution of the Agreement	12
4.14 Performance Security.....	13
4.15 Submission to the Investment Coordinating Committee (ICC)	13
4.16 Submission to Congress	14
SECTION 5.0 SUBMISSION AND OPENING OF BIDS	15
5.1 Sealing and Marking of Bid.....	15
5.2 Submission and Opening Bids.....	15
5.3 Submission of Late Bids.....	16
5.4 Number of Document Copies to be Submitted	16
SECTION 6.0 BID PROPOSAL AND EVALUATION CRITERIA	17
6.1 General.....	17

6.2	Bid Information Requirements.....	17
6.3	Bid Evaluation Procedures	17
6.4	Evaluation Criteria of Technical Proposal (Feasibility Study)	18
6.4.1	Project Marketability	18
6.4.2	Engineering Design	19
6.4.3	Construction Plan.....	19
6.4.4	Operational Plan	21
6.4.5	Maintenance Plan.....	21
6.4.6	Environmental Management.....	21
6.4.7	Financial Viability.....	22
6.4.8	Enhancement.....	23
6.5	Evaluation Criteria of Financial Proposal.....	23

PART II: MINIMUM DESIGN AND PERFORMANCE STANDARDS AND SPECIFICATIONS 24

**SECTION 7.0 TECHNICAL SPECIFICATIONS: DESIGN AND CONSTRUCTION
24**

7.1	Design of Toll Road.....	24
7.1.1	Design Standards	24
7.1.2	Toll Road Facilities.....	24
7.2	Construction of Toll Road	25
7.2.1	Standard Specification for Construction.....	25
7.2.2	Construction Plan.....	25
7.2.3	Construction Work Requirements.....	25
7.2.4	Variation Orders (VO).....	26
7.2.5	Hand Over of Work.....	26

SECTION 8.0 OPERATION AND MAINTENANCE PROCEDURES27

8.1	Operation of Toll Facilities	27
8.1.1	Toll Collection Systems	27
8.1.2	Vehicle Classification	27
8.1.3	Operation of Toll Plazas.....	27
8.1.4	Toll Collection	31
8.1.5	Toll Equipment	32
8.1.6	Security System	33
8.1.7	Equipment Replacement Periods	33
8.1.8	Future introduction of new ETC system which includes Tag Lending System	34
8.2	Traffic Management.....	34
8.2.1	Definition of Traffic Management	34
8.2.2	Involvement in establishment and operation of integrated O&M organization	34
8.2.3	Relevant Traffic Legislation, Ordinances, Regulations and Standards (include all Acts, Ordinances and Regulations).....	34
8.2.4	Scope of Traffic Management	34
8.2.5	Toll Road Management System.....	35
8.3	Maintenance of Toll Road Facility	39
8.3.1	General.....	39
8.3.2	Involvement in establishment and operation of integrated O&M organization	39
8.3.3	Scope of Works.....	39
8.3.4	End of Concession Requirements	53

**ANNEX A: TECHNICAL SPECIFICATIONS, DESIGN
AND PERFORMANCE STANDARDS**

BID FORMS:

Bid Form No. 1	Bid Letter
Bid Form No. 2	Statement of Bids
Bid Form No. 3	Deviations/Clarifications from Bid Documents
Bid Form No. 4	Cumulative Revenue and Concession Period

PART I: INSTRUCTIONS TO BIDDERS

SECTION 1.0 GENERAL CONDITIONS

1.1 Definition of Terms

The following general words or terms are used in the text of the bid documents and shall have the following meaning, except where the context otherwise requires:

“Agreement” means the Build-Transfer-Operate Toll Concession Agreement between the selected Project Proponent and the Republic of the Philippines, acting through the Department of Public Works and Highways (DPWH).

“Applicant” means any firm, partnership, corporation, joint venture or consortium that applies for pre-qualification for the Project.

“Bidder” means an Applicant that is pre-qualified by the DPWH to submit a bid for the Project.

“Bid Documents” means, collectively, the invitation to bid, instructions to bidders, standard specifications, supplemental specifications, plans, drawings, and other documents furnished by the DPWH to interested and pre-qualified bidders in connection with the project.

“Build-Transfer and Operate”, or “BTO”, means a contractual arrangement whereby the Government contracts out the building of specified portions of the Project to the Proponent such that the contractor builds the facility on a turn-key basis, assuming cost overrun, delay and specified performance risks, upon satisfactory commissioning of which title is transferred to the Government, which then allows the Proponent to operate the facility in its behalf, collecting toll fees as its revenues in lieu of amortization. BTO is a variant of the generic Build-Operate-Transfer (BOT) scheme.

“Concession Period” means an agreed period from the date on which the R10/C3/R9 Expressway commences operation to the date on which the target cumulative revenue is achieved, which shall not exceed fifty (50) years in any case.

“DPWH”, or “Department”, means the Department of Public Works and Highways, a government agency under the executive branch of the Government of the Republic of the Philippines, with domicile address as follows:

DEPARTMENT OF PUBLIC WORKS & HIGHWAYS
DPWH Building
Bonifacio Drive, Port Area
Manila, Philippines

“Independent Consultant”, or “IC”, means an independent consulting firm of international repute to serve both as independent design checker and as independent certification engineer. It shall be appointed by the Proponent from a list of consulting firms to be furnished by the DPWH. The appointment of the firm shall be confirmed by the DPWH. The duration of the IC’s appointment shall commence from the date of appointment until completion of construction. The Proponent shall pay for the services of the IC as defined in the Terms of Reference approved by the DPWH. The estimated cost of the services is approximately 3% of the project construction cost.

“PBAC” means the Prequalification, Bids and Awards Committee created by the DPWH, which shall be responsible for all aspects of the pre-bidding and bidding processes, including, among others, the preparation of the bidding documents, the publication of the invitation to pre-qualify and bid, the pre-qualification of prospective bidders, the conduct of pre-bid conferences and issuance of supplemental notices, the interpretation of the rules regarding the bidding, the conduct of the bidding, the evaluation of bids, the resolution of disputes between bidders, and the recommendation for the acceptance of the appropriate bid and/or the award of the Project or the non-acceptance of all bids and/or the non-award of the Project, under justifiable causes.

“Project” means all aspects and activities pursuant to and/or in anticipation of the design and construction of the R10/C3/R9 Expressway- Section Pr together with the toll road facilities for the entire R10/C3/R9 expressway, the operation and maintenance thereof as a toll facility, and the financing thereof.

“Proponent” means the winning Bidder with whom the DPWH shall enter into a Toll Concession Agreement to undertake the project activities described in the bid documents.

“R10/C3/R9 Expressway (R10/C3/R9)” is the name given to the project consisting of Section Pr, which is to be undertaken by the Proponent in accordance with this Agreement, and Section Pu, which is to be constructed by the DPWH under a separate contract.

“Target Cumulative Revenue” means the threshold amount of cumulative toll revenue to be collected by the GRANTEE during the concession period, expressed at year 20__ (Base Year) pricing, the full collection of which ends the Proponent’s concession over the Project.

“Toll Road Facilities” means all components of the R10/C3/R9 Expressway relating to its operation as a toll road, including but not limited to the following: toll plazas, toll collection system and equipment, traffic markers and signages, Operations and Maintenance (O&M) center/depot, perimeter fence, facilities of the Project Roads, ancillary buildings and facilities for O&M, fixed operation equipment, and O&M equipment and the like, but shall exclude the road Right-of-Way proper and all its civil works aspects.

1.2 Project Scope

1.2.1 Project Description

The R10/C3/R9 Expressway Project consists of the following:

a. Section Pr (R10):

Length	8.5 Kilometers
Number of lanes	2 x 2 lanes
Lane width	3.25 meters
Number of interchanges	1
Number of junction	0
On-ramp	4
Off-ramp	4

b. Section Pu (C3/R9):

Length	7.1 Kilometers
Number of lanes	2 x 2 lanes
Lane width	3.25 meters
Number of junction	2
On-ramp	3
Off-ramp	4

Section Pu, excluding toll road facilities, will be constructed by DPWH in a separate contract. The Proponent shall undertake the design and construction of Section Pr and the provision of toll road facilities for the entire R10/C3/R9 Expressway, the operation and maintenance of both the Sections as a toll road during the concession period, and the financing thereof.

1.2.2 Right of Way

The Government shall be responsible for arranging the Right of Way and shall assume full responsibility for the costs of land acquisition and relocation of affected occupants and utilities.

1.3 Bid Evaluation Criteria

The Bid evaluation criteria to be applied for the Project are based on (i) Technical Evaluation on a preliminary engineering design, operational feasibility, environmental soundness and project financing, and (ii) Financial Evaluation on financial model including a proposed cumulative revenue, proposed concession period, project profitability and cost recovery.

The bids will be primarily checked in the presence of attendees as to their completeness, adequacy and compliance with the bid requirements hereof.

The PBAC reserves the right to resolve in whatever appropriate manner it may deem any issue regarding the submission of bids which is not otherwise

governed by these bidding rules, the Build-Operate-Transfer (BOT) Law and its Implementing Rules and Regulations (IRR), general laws, administrative rules and regulations, Commission on Audit regulations, NEDA policies and other applicable directives.

1.4 Indicative Milestones for Project Implementation

The Project is scheduled to be implemented in accordance with milestones indicated in Table 1.1.

Table 1.1 Indicative Milestones of Project Implementation

Activity	Date
1. Award of Concession	
2. Financial Closing	Within 6 months from Award
3. Completion of Concession Agreement	
4. Approval of Concession Agreement	
5. Appointment of Independent Consultant	
6. Notice to Proceed	
7. Construction Period	1,095 days
8. Completion of Section Pu	
9. Completion of Section Pr	
10. Opening of entire section	

1.5 Required Security

- a. Bid Security : 1.5 % of the estimated construction cost, but at least P100 million
- b. Performance Security : 20% of the total estimated construction cost if in the form of cash, manager’s check, cashier’s check, irrevocable letter of credit, bank draft
 30% of the total estimated construction cost if in the form of bank guarantee
 50% of the total estimated construction cost if in the form of surety bond secured from the Government Service Insurance System or other surety or bonding companies duly authorized by the Office of the Insurance Commissioner to commercially provide such facility

SECTION 2.0 PROJECT INFORMATION

2.1 Introduction

The lack of adequate arterial access from the Metropolitan Manila city center to the North Luzon Expressway (NLE) has significantly deteriorated accessibility between the developing regions of northern Manila and Manila central business districts as well as southern Manila regions. The productivity of Manila Port, which is located at the northwest of the Metro Manila, is severely affected by low land-side accessibility to vital industrial areas in the north of Manila. It is estimated that nearly 30% of cargo throughputs in Manila Port comes from or goes to areas north of Manila.

The R10/C3/R9 Expressway is a part of the Metro Manila Urban Expressway Network to be implemented by the Government, and is one of the major infrastructure projects being implemented by DPWH to improve the accessibility between the city center, especially Manila Port, and areas north of Manila. The R10/C3/R9 Expressway will be implemented under a Public-Private- Partnership (PPP) scheme.

2.2 The Project

The R10/C3/R9 consists of two routes; that is, the R10 route and the C3/R9 route.

The R10 route starts about 100 m north of the R10 Zaragoza intersection, runs northward along the existing R10, turns eastward on C4 up to the end point of MNTC C5 on Letre Road near Dagat-dagatan Avenue, traversing a total length of 9.53 km. This route has 2 x 2 lanes with one interchange at the end point, and 4 on/off-ramps each. This route, referred to as Section Pr in this document, will be undertaken by a Proponent under a Build- Transfer- and Operate scheme.

The C3/R9 route starts from the beginning point of R10-C3 junction, runs eastward on C3 up to Bonifacio intersection, turns north along R9, crosses EDSA and then links up with the North Luzon Expressway (NLE), covering a total length of 6.53 km. This route has 2 x 2 lanes with two junctions at R10-C3 intersection and Bonifacio intersection, and 3 on-ramps and 4 off-ramps. This route, referred to as Section Pu, will be constructed by DPWH in a separate contract but later on operated by a Proponent together with Section Pr as integral parts of one toll road project.

The scope of the Project to be undertaken by the Proponent involves the following:

- (a) Financing for the construction of Section Pr, construction/ installation of toll road facilities covering both Sections Pr and Pu, and operation and maintenance of all sections as a singular toll road facility during the concession period;

- (b) Design and construction of Section Pr and of all toll road facilities for all sections; and
- (c) Operation and maintenance of all sections as a singular toll road facility during the given concession period.

2.3 Projected Traffic

The R10/C3/R9 Expressway traffic has been estimated, as shown in Table 2.1. The figures in said table are indicative only and bidders are forewarned to confirm, validate and assume responsibility over any traffic volume assumptions they shall make use of for the bidding process.

Table 2. 1 R10/C3/R9 Traffic Estimates

Year	Patronage(Vehicle/day)				Vehicle-Km/day			
	Class I	Class II	Class III	Total	Class I	Class II	Class III	Total
2010	84,283	1,231	9,186	94,700	497,280	7,696	87,024	592,000
2012	90,569	1,416	10,897	102,882	581,571	9,623	107,858	699,053
2015	100,889	1,748	13,864	116,500	735,540	13,455	148,005	897,000
2020	102,564	1,954	17,582	122,100	792,800	15,856	182,344	991,000
2025	106,214	2,048	19,707	127,969	875,880	17,518	201,453	1,094,851
2030	111,320	2,146	20,655	134,120	967,667	19,353	222,563	1,209,584
2035	111,320	2,146	20,655	134,120	967,667	19,353	222,563	1,209,584
2040	111,320	2,146	20,655	134,120	967,667	19,353	222,563	1,209,584

2.4 Construction Cost

The DPWH conducted a preliminary construction cost estimate of Section Pr which placed the estimated construction cost thereof at some Php 7.6 Billion in 2002 price levels, including VAT.

2.5 Contractual Framework

The first law governing BOT (and BTO) projects, RA No. 6957 – *An act Authorizing the Financing, Construction, Operation, and Maintenance of Infrastructure projects by the Private Sector, and for Other Purposes.* – was passed in July 1991. On May 8, 1994, the act was amended in line with the declared policy of the State to mobilize private resources for infrastructure development. The Act is now referred to as RA No. 7718. The implementation of the BOT Law is circumscribed by its Implementing Rules and Regulations (IRR). The bidding process for the Project shall be implemented under this Act. The provisions are defined in the IRR and interested parties are required to familiarize themselves with this and related Acts.

The contractual model to be used for the Project is the Build-Transfer-Operate (BTO) scheme. The Government is not considering guarantees of any kind – financial or traffic. For this Project, the BTO scheme is defined as a contractual arrangement whereby the Proponent finances and constructs the toll road on a turn-key basis with full responsibility for cost overruns, delays, and specified performance and operating risks. Any increase or decrease in costs resulting from approved variation orders may be eligible for reimbursement or adjustment in total project construction cost. Once the toll

road is certified as being substantially completed, title is transferred to the Government, and the DPWH grants the proponent the concession/franchise to operate and maintain the facility as a toll road. The Proponent, upon securing from the Toll Regulatory Board (TRB) the appropriate Toll Operation Certificate, shall be allowed to operate the toll road on behalf of the DPWH under a long term concession agreement. Returns to the Proponent shall accrue from income derived from operating the toll road.

2.6 Public Utility Classification

The operation of the Project as a public toll road qualifies it as a public utility, requiring the project Operator to be Filipino, or if a corporation, to be registered with the Securities and Exchange Commission (SEC) and at least 60% Filipino-owned. The Operator shall have the singular primary purpose of undertaking for the Proponent the Operation and Maintenance of the Project, in accordance with the terms and conditions of the Toll Concession Agreement, the Toll Operation Certificate and such rules and regulations as may be prescribed therefor by the TRB and appropriate regulatory agencies. It shall be capitalized in an amount equivalent to at least one year of its anticipated annual Operational Budget. At least 40% of its outstanding capital stock shall be held by the Proponent at all times.

SECTION 3.0 SCOPE OF WORK

3.1 Works to be Performed by Proponent

The Proponent shall be responsible for the financing, detailed engineering design and construction of the R10/C3/R9 Expressway- Section Pr, and the operation and maintenance of the entire R10/C3/R9 Expressway as a toll road facility. Upon certification as to the substantial completion of its construction, ownership of Section Pr will immediately be turned over to the DPWH; however, the toll road facilities shall be retained in the Proponent during the concession period and turned over to the DPWH only at the end of the concession period.

A pre-feasibility study has been undertaken by DPWH to ascertain the viability of the project. The Bidder is expected to conduct his own studies to validate traffic assumptions on the toll road and to ascertain the level of revenues and costs involved in the Project.

The Proponent will also be responsible for obtaining all permits, licenses, approvals and other requirements necessary for undertaking the Project. The DPWH shall assist the Proponent in securing whatever investment incentives may be available to it under existing Board of Investment (BOI) programs and policies.

3.2 Project Design, Construction, Operation and Maintenance

The Proponent (through its designer) shall prepare the Detailed Engineering Design of Section Pr as a toll road in accordance with toll road design standards and specifications of the DPWH (see Annex B). The Detailed Engineering Design of the Project shall be certified to by the Independent Consultant (IC) prior to the start of construction. The Proponent shall be solely responsible for the Detailed Design regardless of any approvals issued thereon by the DPWH.

The IC functions as both an Independent Design Checker and an Independent Certification Engineer. The scope of services of the IC includes checking of the detailed engineering design, periodic inspection of the construction, certification of claims, and certification of the operation and maintenance manual. The IC shall report directly to the DPWH.

The winning bidder shall shoulder the cost of the services of the IC, which is estimated to be approximately 3% of the project construction cost.

The Proponent will be required to construct the Project in accordance with the approved Detailed Engineering. The IC will be engaged to certify that the works are being carried out in accordance with the Detailed Engineering Design. The IC shall issue a Construction Completion Report to the DPWH after works are completed and after the necessary inspections and tests have taken place and been passed.

The operation and maintenance of the entire R10/C3/R9 Expressway shall be undertaken by the Proponent throughout the concession period in accordance with the approved Toll Operation and Maintenance Manual and Procedures prepared by the Proponent based on the Minimum Standards/ Guidelines for Operation and Maintenance issued by the TRB.

The Proponent will be entitled to collect toll from the users of the facility during the concession period in accordance with the Toll Concession Agreement.

Except as may otherwise be allowed by the Government, the Proponent shall not claim any rights to the ancillary services borne by or related to the Project. The Government reserves the sole right to issue franchises for these services.

3.3 Right-of-Way

The DPWH shall assume full responsibility for the acquisition of the right-of-way (ROW) needed for prosecuting the works, which it shall make available to the Proponent in a timely manner. The Government shall likewise shoulder the costs of relocating existing occupants and utilities in the ROW.

3.4 Environmental Impact Assessment (EIA) and Environmental Clearance Certificate (ECC)

An Environmental Impact Assessment (EIA) was undertaken by DPWH in 20__ and an Environmental Clearance Certificate (ECC) for the R10/C3/R9 Expressway has been secured by DPWH.

SECTION 4.0 GENERAL INFORMATION FOR BIDDERS

4.1 Who May Participate

Only those who have been prequalified can participate in the bidding for the Project.

4.2 Bid Documents

The bid documents consist of the following components:

1. Volume I:
 - a. Part I Instructions to Bidders
 - b. Part II Minimum Design and Performance Standards and Specifications
 - c. Part III Draft Toll Concession Agreement
2. Volume II: Bid Drawings
3. DPWH Standard Specifications for Public Works and Highways, 1988 Edition: Volume II- Highways, Bridges and Airports

Bidder can obtain Volumes I and II from the PBAC Secretariat, DPWH, 5th Floor, Bonifacio Drive, Port Area, Manila, for Twenty Thousand Pesos (P20,000), while the DPWH Standard Specifications for Public Works and Highways, 1988 Edition: Volume II – Highways, Bridges and Airports, can be obtained, at his own expense, from the Supply and Property Management Division, Ground Floor, DPWH, Port Area, Manila.

4.3 Other Documents to be Provided by DPWH

In addition to the above-stated documents, DPWH will make available to bidders the following:

- 1) Detailed design report of R10/C3/R9 Section Pu
- 2) Geological investigation report for R10/C3/R9 Expressway Project
- 3) Environmental Impact Assessment Report for R10/C3/R9 Expressway Project

The above documents can be obtained, together with Volumes I and II, from DPWH for Twenty Thousand Pesos (Php 20,000).

It is noted, however, that these documents shall be used as references only by bidders in the conduct of their own studies.

4.4 Pre-Bid Conference and Site Visit

DPWH will conduct a pre-bid conference and site visit at dates to be announced later. Attendance at the pre-bid conference is compulsory and bidders are required to sign a register at the start of the meeting.

No provisions, terms, or conditions shall be modified by statements made at the pre-bid conference unless these are confirmed in writing by the DPWH. All amendments shall be issued to attendant bidders within a reasonable period after the meeting. Minutes of the conference shall also be issued to attendant bidders.

4.5 Language

All correspondences, documents, annexes, bid forms and technical data forms submitted for this bidding shall be drawn up in the English language.

4.6 Treatment of Document from Bidders

All documents and information submitted by the prospective bidders and duly accepted by DPWH shall be treated and considered as strictly confidential.

4.7 Bid Security

Bid security shall be in the form of cash, certified check, manager's check, letter of credit, or bank draft/guarantee issued by a reputable bank, or a surety bond callable on demand issued by an entity duly registered and recognized by the Office of the Insurance Commissioner and acceptable to DPWH, or any combination thereof payable to DPWH. The required bid security for the project is not less than one and half percent (1.5 %) of the estimated construction cost but at least 100 million Pesos.

The required bid security shall be valid for a period of one hundred eighty (180) calendar days from the date of opening of the bids. Bid securities shall be returned to the unsuccessful bidders as soon as the contract with the successful bidder has been approved by DPWH in accordance with the BOT Law and its Implementing Rules and Regulations (IRR)

4.8 Withdrawal and/or Modification of Bids

Withdrawal and/or modification of bids may be allowed upon written notice by the bidder to DPWH prior to the specified time and date set for the opening of bids after which no bids shall be modified or withdrawn. Withdrawal of bids after the bid opening date shall cause the forfeiture of the bidder's bid security.

4.9 Right to Reject or Accept Bids

DPWH reserves the right to reject any or all bids, waive any minor defects therein and accept the offer most advantageous to the government.

4.10 Post-Qualification

Notwithstanding the prequalification of the Bidder and before award of contract, a post-qualification may be conducted to re-examine the qualification of the Bidder.

4.11 Withdrawal of Members

The withdrawal of any member from a joint venture or consortium prior to the award and/or implementation of the Project could be a ground for the cancellation of the Concession Agreement and forfeiture of the Proponent's bid security if, after evaluation, DPWH finds that the rest of the members of the joint venture or consortium can no longer successfully prosecute the Project to completion. The DPWH may, however, proceed with the award or implementation of the Project if it finds that the other members of the joint venture or consortium are still capable of successfully carrying out the Project or that they have provided a suitable and acceptable substitute with equal or better qualifications.

Changes or replacements in the membership of the organization after pre-qualification shall be allowed provided that such changes or replacements will not diminish the capability of the joint venture or consortium in successfully carrying out the Project to completion.

4.12 Notice of Award

The Notice of Award will be issued by DPWH to the bidder so selected as a result of the successful outcome of the bidding exercise. The Notice of Award shall indicate, among others, the time within which the winning bidder shall submit the prescribed performance security, proof of commitment of equity contribution and indications of financing resources, and, in the case of a joint venture/consortium, the agreement indicating that the members are jointly and severally responsible for the obligations of the Project Proponent under the Agreement, as the case may be.

4.13 Execution of the Agreement

The successful bidder should sign the contract within seven (7) calendar days from receipt of the advice of DPWH that all requirements for award are fully complied with.

In the event of refusal, inability or failure of the bidder with the lowest complying evaluated bid to make good his bid by entering into contract with the Government within the time provided therefor, the DPWH shall forfeit his bid security. In such an event, the DPWH shall consider the next complying and qualified lowest evaluated bid for award. If the same likewise refuses or fails to enter into contract with the Government, its bid security shall likewise be forfeited and the DPWH shall consider the next complying and qualified lowest evaluated bid, and so on until an Agreement shall have been entered

into. In the event that the DPWH is unable to execute the Agreement with any of the complying and qualified bidders due to the refusal of the latter, the Project shall be subjected to a re-bidding.

Each unsuccessful bidder shall also be notified of the outcome of the bidding through official notices/communications.

4.14 Performance Security

To guarantee the faithful performance by the Project Proponent of its obligations under the Agreement, including the prosecution of the construction works related to the Project, the Proponent shall post in favor of the DPWH a performance security in the form of cash, manager's check, cashier's check, bank draft or guarantee confirmed by a local bank (in the case of foreign bidders bonded by a foreign bank), letter of credit issued by a reputable bank, surety bond callable on demand issued by the Government Service Insurance System or by surety or insurance companies duly accredited by the Office of the Insurance Commissioner, or a combination thereof, in accordance with the following schedules:

- a. Twenty percent (20%) of the total estimated construction cost of the Project if in the form of Cash, Manager's check, cashier's check, irrevocable letter of credit, bank draft; or
- b. Thirty percent (30%) of the total estimated construction cost of the Project if in the form of Bank Guarantee; or
- c. Fifty percent (50%) of the total estimated construction cost of the Project if in the form of Surety Bond.

4.15 Submission to the Investment Coordinating Committee (ICC)

Prior to the issuance of a Notice of Award, the DPWH will submit the draft Toll Concession Agreement (TCA) to the ICC for any of the following purposes in accordance with the BOT Law and its IRR:

- a. Clearance on a no-objection basis

This will be sought specifically on the extent of the final government undertakings (i.e., cost of right-of-way) to be provided for the Project.

- b. Information

Submission of the draft Agreement to the ICC will be for information only if government undertakings are within the scope of an earlier ICC approval.

- c. Review

The draft Toll Concession Agreement will be reviewed by the ICC if said draft includes additional provisions or provisions different from the

original scope of government undertakings earlier authorized for the Project.

4.16 Submission to Congress

The DPWH will likewise submit a copy of the Toll Concession Agreement to Congress for its information.

SECTION 5.0 SUBMISSION AND OPENING OF BIDS

5.1 Sealing and Marking of Bid

The bid, in the prescribed form and its annexes, shall be submitted in two (2) separate sealed envelopes, with the name of the bidder and the project in capital letters and addressed to the PBAC, 5th Floor, DPWH, Bonifacio Drive, Port Area, Manila. They shall be marked: “Do Not Open Before [Time & Date].”

The two envelopes shall contain the following:

(1) The first envelope, to be numbered as Envelope No. 1, shall be labeled as “Technical Proposal”, and shall contain the following documents (see Section 6 in details):

- 1) Authority of the Signing Official
- 2) Bid security
- 3) Project Marketability
- 4) Engineering Design
- 5) Construction Plan
- 6) Operational Plan
- 7) Maintenance Plan
- 8) Environmental Management
- 9) Financial Viability

(2) The second envelope, to be numbered as Envelopes No.2, shall be labeled “Financial Proposal”, marked “DO NOT OPEN UNTIL AUTHORIZED”. The envelope shall contain a financial model proposed by the bidder.

The amount of cumulative revenue at a price level of bidding year (day, month, year, which shall be specified by the DPWH in the bidding process) and a length of the concession period proposed by the bidder (30 years in maximum) shall be clearly mentioned in the Proposal.

A Compact Disk (CD) containing an electric file of the financial model made with Windows MS Excel shall be included into the Envelope No.2 for the purpose of check and evaluation.

5.2 Submission and Opening Bids

The bid shall be submitted simultaneously in two (2) separate sealed envelopes, the first bearing the technical proposal and the second the financial proposal.

(1) The bidder shall submit his bid on or before [Time, Date] at the Office of the PBAC Secretariat, 5th Floor, DPWH Building, Bonifacio Drive, Port Area, Manila.

- (2) The first envelope (Envelope No. 1) containing the Technical Proposal will be opened immediately after closing time of submission. The bids will be primarily checked in the presence of attendees as to their completeness and the adequacy of submission thereof.
- (3) The second envelope (Envelope No.2) containing the Financial Proposal shall be opened after the PBAC has completed the evaluation of the Technical Proposals and the same has been approved by the Secretary of the DPWH. Qualified bidders for the second stage evaluation shall be notified of the date, time and place of the opening of the second envelope.
- (4) All bidders and/or their representatives present at the opening of bids shall sign a register of attendees.

5.3 Submission of Late Bids

Bids submitted after the specified closing time and date will not be considered for evaluation.

5.4 Number of Document Copies to be Submitted

The bidder shall submit ten (10) copies of his bid, including the original.

SECTION 6.0 BID PROPOSAL AND EVALUATION CRITERIA

6.1 General

The bid proposal shall include all the information required herein. Each of the information submitted in the bid will be evaluated in accordance with the bid evaluation criteria set up herein.

6.2 Bid Information Requirements

The bid shall contain the following three categories of information on technical, operational and maintenance, and financial aspects:

Table 6.1 Bid Information Requirements

	No.	Criteria	Description
1. Technical Requirements	1.1	Project Marketability	Project viability based on traffic of the toll road, traffic growth, and construction, operating and maintenance costs
	1.2	Engineering Design	Preliminary design
	1.3	Construction Plan	Construction method, construction schedule, key personnel, sub-contractors
	1.4	Environmental Soundness	Preliminary environmental assessment during design and construction
2. Operational and Maintenance Requirements	2.1	Operation Plan	Operational plan and procedures for traffic and financial management, toll road management system
	2.2	Maintenance Plan	Maintenance procedures, toll road management system
	2.3	Environmental maintenance	Preliminary environmental assessment during operation and maintenance
3. Financial Requirements	3.1	Financial viability	Proposed financing plan such as minimum amount of equity, sources of financing for construction and operation phases, proposed equity contribution, commitment letter, cost estimates
	3.2	Financial Model	Proposed cumulative revenue at a price level of the bidding year, project profitability, cost recovery, proposed concession period

6.3 Bid Evaluation Procedures

The evaluation of bids shall be undertaken in two (2) stages in accordance with the procedures described below:

The first stage evaluation will be carried out with the confirmation of completeness and adequacy of the bid proposal and the assessment of the technical, operational and maintenance, environmental, and financial viability of the proposal contained in the bidder's first envelopes in light of the prescribed evaluation criteria herein.

The proposal must outline the various elements comprising the Project, by narrative descriptions, drawings, diagrams and schedules, and state the standards and specifications in compliance with which the toll road will be constructed.

Only those bidders whose Technical Proposals are deemed satisfactory and complete by the PBAC will have their second envelopes (Envelope No. 2) opened for further evaluation. Bidders whose Technical Proposals are not deemed by the PBAC to be satisfactory and complete will have the envelope containing their Financial Proposals returned unopened together with the reasons for their disqualification.

The second stage evaluation will be carried out with the assessment and comparison of the financial proposals based on the cumulative revenue proposed at a price level of the *bidding year* and the length of the concession period proposed by the bidders.

It is noted that once bidders have passed the first stage evaluation, all complying bids are then considered to be on equal footing. Award, if any, will therefore be made to the lowest complying bidder whose bid is most advantageous to the Government.

6.4 Evaluation Criteria of Technical Proposal (Feasibility Study)

The feasibility study shall be undertaken in accordance with acceptable standards and shall conclusively demonstrate the feasibility/viability of the Project.

The technical proposal will be evaluated under the following scoring system whereby points are allocated to each of the items for evaluation:

Table 6.2 Evaluation Criteria for Technical Proposal

Items for Evaluation		Points allocated
1.	Project Marketability	20
2.	Engineering Design	10
3.	Construction Plan	15
4.	Operational Plan	15
5.	Maintenance Plan	10
6.	Environmental Management	10
7.	Financial Viability	20
Total		100

The bid to be qualified for the second stage evaluation shall gain more than 50% of the points allocated for each of the items for evaluation and at least seventy (70) points in total.

6.4.1 Project Marketability

The project is expected to be a public utility serving as a part of the Metro Manila Urban Expressway Network.

The need for the project, based on traffic volumes and anticipated growth rates, must be clearly defined and justified. An analysis of toll elasticities must be included:

Evaluation Criteria:

- * Assumptions used in the study
- * Methodology in the establishments of growth rates for estimating future traffic; and,
- * Approach in the calculation of the traffic demand for the project

6.4.2 Engineering Design

The bidder shall submit the design of the project, at least up to preliminary engineering level, which will enable quantities to be estimated up to plus/minus ten percent (+/- 10%) of the final quantities. This will include, but not be limited to, alignment, roadway superstructures and substructures, interchange/junction structures, design calculations and drawings, and should conform with the minimum design and performance standards and specifications, taking into consideration the design of Section Pu completed by the DPWH for the R10/C3/R9 Project. The detailed design of the Section Pu will be made available to bidders as a reference for bidders to contemplate the connection between Sections Pu and Pr. This DPWH design includes the roadway structures, but not the toll road facilities.

The bidder shall also include a design, at preliminary engineering level, of the toll road facilities required to operate the entire R10/C3/R9 Expressway. In connection therewith, the bidder shall indicate any changes/ requirements to the detailed engineering design of Section Pu which the bidder considers necessary for the construction or installation of the toll road facilities. The design of the toll plazas shall include:

- Geometric design
- Structural design of lane area and canopy
- Architectural layout and design of control building
- Mechanical and electrical design
- Supply and installation of the toll collection equipment

Evaluation Criteria:

- * Proposed preliminary engineering design with full supporting documents based on the detailed review conducted on the basic engineering design shown in the bid drawings ,
- * Proposed design of the toll road facilities and indicated changes/ requirements to the detailed engineering design of Section Pu.

6.4.3 Construction Plan

The bidder shall submit a detailed construction execution plan for the Project, including, but not limited to, proposed construction methods and procedures, quality control procedures, site organization, staffing requirements and construction equipment/ plant availability for the works.

A detailed construction program of the Project shall also be submitted in reference to the milestones indicated in this bid documents such as substantial completion of the Project and availability of the toll plaza for installation of the equipment.

In particular, the following are required:

- Construction operation organization plan identifying all individuals in key positions and all participating entities (subcontractors, designers, etc.);
- Job description outlining duties and responsibilities for all key positions (including subcontractor organization);
- Bio-data for all personnel proposed to be assigned to key positions;
- Alternate or back-up personnel for all key positions;
- Listing and proposed layout of all temporary facilities (including pre-cast yard, equipment maintenance facilities and the like) to be used during the construction phase;
- Complete construction schedule using CPM scheduling techniques including period of construction (number of days);
- Complete manpower curves for the construction period showing the total required manpower delineated by craft or trade;
- A planned “S-Curve”;
- Narrative outline of the construction methodology to be used;
- A complete list of major construction equipment to be utilized. The listing must include the source of the equipment, present location, condition and ownership. Equipment to be imported shall be so indicated;
- A complete list of all subcontractors proposed. Any work not designated as subcontracted will be assumed as being performed by the contractor with directly employed forces. For subcontract works exceeding a value of ten million (Php10,000,000) Pesos, complete data on the proposed subcontractors shall be included. Such data shall include ownership, statement of abilities, current work load, and bio-data of proposed contract manager, among others;
- Safety Program to be implemented during the Construction phase of the Project; and,
- Security Program to be implemented during the Construction phase of the Project.

Evaluation Criteria:

- * Detailed construction execution plan
- * Detailed construction program
- * Key personnel
- * Major construction equipment
- * Subcontractors
- * Safety program
- * Security program

6.4.4 Operational Plan

The proposed organization methods, procedures and plans for operating the completed R10/C3/R9 Project shall be well defined and shall conform with acceptable standards for toll road operations. This shall include a statement on the management of the tollway operations, such as patrols, monitoring activities, emergency services and public relations. The bidder shall submit a statement of method of toll operations, including an organizational chart of the staff at the plazas, a staffing schedule and configuration for various classes of seasonal days, queuing parameters and financial control at the plazas (cash-ups, deposits and bookkeeping system). The bidder shall also present the job descriptions of all responsible personnel together with their bio-data .

Evaluation Criteria:

- * Operational plan indicating organization and staffing requirements
- * Road management systems
- * Assumptions and calculations required to estimate operational requirements
- * Financial control at plazas
- * Traffic management and queuing

6.4.5 Maintenance Plan

The bidder shall submit his proposed maintenance plan and procedures, based on standard specifications, for routine, periodic and unforeseen maintenance for the full length of the R10/C3/R9 Project. In addition, the bidder shall propose mechanisms to maintain Section Pu, which shall be constructed by the DPWH, e.g., inventories, defect periods, and the sort. A mechanism for overloading detection must be included.

Major rehabilitation can be required during the concession period. The standard specifications for the reconstruction of the pavement, replacement of bridge bearings, and other works are those issued by the DPWH. The bidder shall estimate and present life cycle maintenance requirements based on traffic growth.

Evaluation Criteria:

- * Maintenance plan and procedures including overloading, pavement and civil structures management system
- * Assumptions and calculations required to estimate maintenance requirements

6.4.6 Environmental Management

The design and technology of the Project to be proposed shall be in accordance with the environmental standards set forth by the Department of Environment and Natural Resources (DENR) and other relating agencies. Any adverse effects on the environment as a consequence of the Project as

proposed by the bidder shall be properly identified, including therein the corresponding correcting/ mitigating measures to be adopted.

A comprehensive Environmental Impact Assessment study undertaken by the DPWH for the full length of the R10/C3/R9 Expressway will be made available to the bidders. A review of the study is required of the bidders.

The bidder shall submit environmental management procedures which shall include:

- Environmental management during the construction stage, including the control of air pollution, noise, vibration, and hazardous material spillage
- Environmental management during the operation and maintenance stage

Evaluation Criteria:

- * Environmental management

6.4.7 Financial Viability

The proposed financing plan shall positively show that the same could adequately meet the construction cost and operating and maintenance cost requirements of the Project. The DPWH will assess the financing proposals of the bidders if the same matches and adequately meets the cost requirements of the Project.

Bidders are required to submit a financing plan showing, as a minimum, the following information:

- Details of the cost of design, construction, operation and maintenance of the Project;
- Details of the total expenditures (including interest during construction) which require funding;
- Proposed sources of financing for the design, construction and operation of the Project; and,
- Letters of Commitment from financing institutions;

The bidder shall include the level/nature of debt and equity funding to be provided and identify the parties with commitments to provide such funds. To be qualified, the minimum equity is 20% of the estimated project cost.

Exchange rates between the Philippine Pesos and foreign currencies for cost estimates shall be the rates of the date 28 days prior to the submission of bids which will be announced by the Banko Sentral ng Pilipinas and confirmed, in writing, by DPWH.

Evaluation Criteria:

- * Debt/Equity ratio
- * Appropriateness of cost estimates
- * Complete financing plan with all sources of financing, diagrammatic explanation and structure
- * Quality of Financial Institutions

6.4.8 Enhancement

The bidder may offer any terms to the government to make his proposal more attractive, such as, but not limited to, provisions allowing the government share in revenues; less government guarantee or reduction in the level of government undertakings or support.

6.5 Evaluation Criteria of Financial Proposal

The assessment and comparison of the financial proposals will be made based on a bidder's financial model which shall include the following:

- Proposed amount of cumulative revenue
- Proposed length of concession period (within 30 years in maximum)
- Details of cash flows, profit and loss statement, balance sheet and all assumptions
- Project profitability (Equity IRR, Financial IRR, etc.)

The Toll Rate used for a cash flow analysis shall be in compliance with the Draft Toll Concession Agreement in Part III hereof.

Evaluation Criteria:

- * Amount of cumulative revenue at a price level of the *bidding year*
- * Length of concession period (counted from the operation date)
- * Assumptions used in the analysis
- * Project profitability

Award will be given to the lowest complying bidder who offered the lowest amount of the cumulative revenue under acceptable assumptions. The concession period offered by the bidder will be secondarily considered.

PART II: MINIMUM DESIGN AND PERFORMANCE STANDARDS AND SPECIFICATIONS

SECTION 7.0 TECHNICAL SPECIFICATIONS: DESIGN AND CONSTRUCTION

7.1 Design of Toll Road

7.1.1 Design Standards

The design of the Project shall be undertaken in accordance with the following guidelines, design standards/ specifications and/or qualifications as may be approved by the DPWH:

- 1) Technical Specifications, Design and Performance Standards given in Annex A hereof.
- 2) National Structural Code of the Philippines, Vol. II- Bridges, 2nd Edition, 1997
- 3) 1988 DPWH Standard Specifications, Vol. II
- 4) National Structural Code of the Philippines, Vol. 1, Buildings
- 5) DPWH Design Guidelines, Criteria and Standards supplemented by AASHTO Highway Drainage Guidelines, 1987 edition
- 6) AASHTO Guide for Pavement Structures, 1986 edition
- 7) Philippine Electrical Code, Institute of Integrated Electrical Engineers of the Philippines
- 8) Philippine Road Signs Manual (Revised edition), 1982

7.1.2 Toll Road Facilities

The design of toll road facilities shall include the following:

- a. A plan for all toll facilities on the toll road including the following:
 1. A layout plan indicating the position of all the elements of the toll plazas including the carriageway tapers, platform, lighting, control building and parking areas. A longitudinal section on the corner line of the plaza must also be included.
 2. Toll platform indicating the layout of the lane area
 3. Toll islands indicating the toll booths and any protection structures.
 4. The canopy showing the minimum clearance, shape, form, material and signs.
 5. A plan view of the control building indicating the layout with approximate areas of each room and elevations of at least two sides.
- b. The Operations and Maintenance Center showing the position, layout and relative sizes of the following:
 1. Office and administrative building
 2. Workshop building

3. Warehouse building
4. Staff parking
5. Filling station
6. Plant and equipment store
7. Staff accommodation
8. Fire fighting equipment store
9. Store for traffic signs and deviation equipment
10. Public parking
11. Communications tower
12. Weighbridge
13. Vehicle checking station

The Bidder shall also include a preliminary design of the location of the Operation and Maintenance Center on the toll road as well as access to the Center from the toll road.

The selected Proponent's preliminary design submitted with its bid will serve as the basis for initiating the final detailed engineering design. This design must be undertaken in accordance with the terms of the Toll Concession Agreement.

7.2 Construction of Toll Road

7.2.1 Standard Specification for Construction

The toll road shall be constructed according to DPWH Standard Specification for Public Works and Highways, 1988 Edition, Volume II – Highways, Bridges and Airports, and other related guidelines, standards and specification approved by DPWH.

7.2.2 Construction Plan

- a. The Proponent must prepare a detailed construction schedule with a S-Curve based on items/work categories in accordance with the agreed implementation schedule.
- b. The construction schedule agreed to by DPWH will bind DPWH and the Proponent.

7.2.3 Construction Work Requirements

The construction work shall be executed, under sound engineering practices, in accordance with the technical specifications and final detailed engineering design approved by the DPWH, in compliance with the provisions and terms stipulated in the Toll Concession Agreement.

7.2.4 Variation Orders (VO)

a. Principles

Any variation to the design or construction may be proposed by the Proponent or by the DPWH. All changes must conform to the design criteria and the technical specifications. Any variation shall be dealt with in accordance with the procedures stipulated in the Toll Concession Agreement.

Any variation proposed by the Proponent shall be approved by DPWH before implementation.

b. Responsibility over Variation Orders

1. Responsibility of DPWH

The possibility of a change in the scope of work by DPWH may include, but not be limited to, additional works, and changes requested by other agencies and approved by the DPWH, after the approval of the final detailed engineering design.

These variations will be paid for by the DPWH.

2. Responsibility of Proponent

Variations which are the Proponent's responsibility include, but are not limited to, any work/ construction/ materials change which must be made in order to meet the design criteria and technical requirements.

The Proponent shall be responsible for these variations at his own cost.

7.2.5 Hand Over of Work

- a. The proponent shall allow for Structural Completion in accordance with the terms of the Toll Concession Agreement.
- b. The Independent Consultant shall issue the Contractor with a Hand-over Certificate once all defects have been rectified.
- c. The Proponent must submit as-built drawings and other supporting documents to DPWH not later than 6 months after the hand over of each section of road.
- d. Prior to hand over, the toll road operation and maintenance manual detailing operation procedures and technical maintenance requirements shall be certified by the Independent Consultant.

SECTION 8.0 OPERATION AND MAINTENANCE PROCEDURES

8.1 Operation of Toll Facilities

There are three elements to the operation of toll collection:

- * Payment of toll in the lanes
- * Control over the toll revenue collection, and
- * Management information systems

8.1.1 Toll Collection Systems

Closed Toll Collection System shall be applied for the Project.

This is the system whereby the road user has to stop twice, first at the entrance booth to take an entrance ticket and second to return and pay toll at the exit booth. This system is generally applied to toll roads with length of more than 40 km and with wide variation in distances traveled, so that the toll tariff applied is based on the travel distance covered.

8.1.2 Vehicle Classification

Vehicle classification for the R10/C3/R9 is as follows:

- CLASS 1 cars, jeepneys, pick-up and the like
- CLASS 2 two (2) axle trucks, tourist and school buses, PUB, class above 7ft.
- CLASS 3 heavy vehicles such as 3-axle trucks and trailers

8.1.3 Operation of Toll Plazas

A toll plaza is a collection of toll lanes, in any direction, incorporated under the same canopy, which maintain a common tariff for the various classification of vehicles. This grouping/definition ensures a systems approach in respect of information management and audibility, as well as general operations.

Toll plazas are operated as either “local” or “remote” toll plazas:

Local Plazas have, incorporated into the layout, a control building adjacent to the plaza which facilitates primarily supervision staff, cash counting and reconciliation, as well as facilities for cash transfer to banking entities.

Remote Plazas, on the other hand, are controlled from the “local” toll by means of fibre optic communication systems inclusive of voice, data and visual travel, thereby alleviating the necessity for full time operational staff and cash handling facilities at the remote plazas.

Toll plaza consists of following parts:

- a. Control Center

Management facility which allows central control/management over a group of plazas, either local or remote.
- b. Toll Collection

The physical collection of toll revenue via the toll booth (various payment methods) and by means of AVI (automatic vehicle identification) in future applications
- c. Toll Booth

The cubicle, located on the toll island, which houses toll collection personnel as well as some collection processing equipment.
- d. Toll Island

A system of New Hersey barriers, bullnoses and booth [protection structures which channel tollable traffic through the plaza, and which ultimately protect, against vehicular collision, the collection personnel and equipment located in the toll booths.
- e. Booth Protection Structures

Physical implements erected to protect the toll collection personnel and equipment, as well as the traveling public, against vehicular collisions. They generally consist of:

 - 1. Impact Attenuators

A system of specifically weighted collapsible barrels, fastened together in the longitudinal direction and fixed to the toll island bullnoses, the aim being to absorb all momentum resulting from vehicular collisions with the islands.
 - 2. Load Gauges

A swivel mechanism, coupled to a siren, which physically detects shifted or extra wide loads on vehicles which might damage or destroy the toll booths during their passage through the lane area.
 - 3. Booth Barriers

A system of bull bars which protect the toll booths in the event of vehicles not being able to stop on time once any problem has been identified by the load gauge.

f. Lane Area

The physical area through which the tollable traffic passes and in which the Automatic Vehicle Classification Subsystems (AVC's) are located.

g. Canopy

The structure, under which the lane area and islands is situated, and which protects the process of toll collection from the natural elements. Also housed on the canopy is the lane area lighting fixtures as well as overhead lane signs which indicate to the approaching traffic as to which lanes are open for collection, etc.

h. Service Tunnel

A structure upon which the toll booths are located (access trap-doors provided), which leads to the control building, via the switchgear/plant room. This tunnel not only provides safe access to the building from the lane area for collectors and supervisory staff, but also houses all electrical, mechanical and electron service/cabling, etc. leading from the switchgear/plant room to the toll booths and vice versa.

i. Switchgear Room/Plant Room

A chamber/room, which can be located directly under the control building, in which the UPS, main electrical distribution boards and lane equipment fibre optic termination cabinets are housed. In simple terms, the switchgear/plant room acts as a junction node for all services entering and exiting the control building.

j. Power Supply

The power supply system consists of a main connection to the public electricity company in the area, a generator and an UPS system which provides clean power to the control building, canopy lighting, lane equipment and Management information System (MIS) and which allows the orderly shutdown of all these systems.

k. Control Building

The Control Building, adjacent to a toll plaza, facilitates the full operations management staff and their operational activities. Facilities include, inter-alia, the following:

1. Control Room

A nerve center for toll plaza operations and MIS control, equipment control, communications network control and visual control of the toll plaza

2. Management/Administration Facilities
Facilities ensure the effective day-to-day management of the toll system.
3. Rest Room Facilities
Facilities for operations management staff as well as toll collectors. (includes ablutions, kitchen and rest room)
4. Cash-up Facilities
Cash-up rooms with cubicles in which toll collectors do cash-up
5. Vault Facilities
A highly secure area in which toll revenue is stored until bank collection.
6. Cash Transfer Facilities
A highly secure system where cash can be transferred to banking personnel without them entering the building
7. Card Sale Facilities
A facility to sell frequent user cards (ISO standards) to the general public using the toll system as well as to cater for general public queries
8. Archive Facilities
For storage of all toll transaction records, etc.
9. Maintenance Facilities
A workshop which houses spares for toll collection equipment and the necessary technical staff
10. General Maintenance Storage Facilities
A toll plaza is where the user takes an entrance ticket and/or pays the toll fee at the toll booth. The number of toll lanes at a toll plaza is determined from the design peak hour of traffic passing through the toll gate. The basis for calculating the number of lanes at a toll plaza are as follows:

- * Toll lane throughput of Open Toll Collection System:
300 to 500 vehicles/hour
- * Toll lane throughput of Closed Toll Collection System:
 - entrance lane (manual lane) 600 to 750 vehicles/hour
 - exit lane (manual lane) 350 to 450 vehicles/hour
 - ETC lane 1,000 to 1,200 vehicles/hour

If the traffic volume passing through a toll lane is low, then the minimum number of lanes in operation at any one time is as follows:

- * for single-direction toll gate: minimum one lane
- * for two-direction toll gate: minimum two lanes

8.1.4 Toll Collection

An Audital toll system can only be achieved if functionally designed collection equipment and control systems are implemented. The objective of any toll system is to collect toll in a controlled environment in order to maximize toll income and to provide information for operations management. The supply of the toll equipment and a toll management information system (TMIS) should be treated from a systems engineering approach. A toll system consists of more than one sub-system. A systems (or sub-system) is defined as a set of inputs or actions that are processed within definite system boundaries, which is designed to function independently to produce pre-defined measurable results that optimize the system as a whole.

Toll collection equipment is only one part of an overall toll entity. There are two subsets to the entity; the operations subset and the facilities subset. The operations subset deals with traffic, financial, and maintenance aspects. The facilities subset deals with aspects such as civil, structural, building, mechanical/electrical and electronic components. Two subsets are interrelated and form an integral part of a toll system.

Toll collection equipment can be broken down into two components. These are the lane equipment and the toll management information system. The purpose of the lane equipment is to collect and control toll income. The main equipment elements in a typical toll lane are:

- the lane controller
- patron fare display
- automatic vehicle identification (post-classification)
- methods of payment (cash/debit cards, frequent user cards, no payment) or
- electronic toll collection (optional)

The toll management information system (TMIS) is required for effective, accurate and timely storage, retrieval and processing of data received from the toll equipment. The TMIS manipulates the data into information in a format that will assist in controlling the toll collected. In addition the data which is dealt by TMIS should be sent to the TRB for monitoring.

8.1.5 Toll Equipment

Toll collection equipment should consist of the following equipment:

a. Toll lane equipment

1. Entrance Lane

- i. automatic ticket dispenser
- ii. automatic vehicle pre-classification system
- iii. traffic light
- iv. system reset loop
- v. lane closed barrier
- vi. overhead traffic light
- vii. lane controller and data link (fibre optic)
- viii. road side unit (RSU) for ETC

2. Exit Lane

- ii. toll collection computer (PC based)
- iii. toll collection terminal
- iv. high speed receipt printer
- v. swipe card reader (ISO standard cards)
- vi. cash box with security lid
- vii. patron fare display (variable message)
- viii. overhead lane sign (fibre optic-cross, arrow)
- ix. load shift detector and alarm
- x. violation alarm
- xi. lane closed barrier
- xii. automatic vehicle classification (piezo axle detectors)
- xiii. lane traffic light
- xiv. road side unit (RSU) for ETC

3. On Board Unit (OBU) for ETC

Note

1. The road side unit should allow both onboard units which use 5.8GHz passive type DSRC(Dedicated Short Range Communication) and 5.8GHz active type DSRC.
2. The Operator should purchase OBUs and lease OBUs to the users with appropriate deposit.

b. Toll Management Information System (TMIS)

A TMIS should have the following characteristics:

1. Management levels dealing with data validation as well as plaza operational, tactical and strategic.

2. Functional requirements such as financial, maintenance, personnel, operational and administration.
3. System requirements such as:
 - ii. control room real time computer system
 - iii. mimic board or screen
 - iv. incident printer
 - v. data link to DPWH HQ
 - vi. MIS software (realtime toll calculation and relational database)
 - vii. Multi-user operating system
4. The MIS software installation is subject to the following conditions:
 - ii. A 60-day test period is required prior to start of operation
 - iii. The Proponent will maintain the software for 5 years after the system is transferred to the DPWH
 - iv. The DPWH has access to the system at all times

8.1.6 Security System

A security system should have the following function:

- a. Centralized in the control building with communication links from all security points
- b. Personnel operation logging/out cards to be used as security access
- c. Swipe card readers and/or key pads to be installed at the following locations:
 1. All Control Building external doors (front and rear)
 2. Cash up room
 3. Control room
- d. Security gates should be installed at all external doors

8.1.7 Equipment Replacement Periods

The following should be used as guideline:

- a. Toll booth equipment 3 years
- b. Plaza control room equipment 5 years
- c. Electronic toll collection equipment 8 years
- d. Communication equipment 5 years

8.1.8 Future introduction of new ETC system which includes Tag Lending System

The operator should cooperate with other relative operators in introducing new ETC systems to the network in the future, including Tag Lending System when route alternatives appear.

8.2 Traffic Management

8.2.1 Definition of Traffic Management

Toll road traffic management has the following functions:

- Traffic control at all entrance, exit and mainline plazas
- To provide safe and comfortable driving conditions
- To provide information to the toll road users
- To monitor and provide assistance to toll road users
- To control overloading

8.2.2 Involvement in establishment and operation of integrated O&M organization

The operator should be involve in the establishment and operation of integrated O&M organization, which should be established in 2015 when northern part and southern part are being linked.

The organization shall conduct operation and maintenance work of the entire network, which includes toll collection and clearing of toll revenues.

8.2.3 Relevant Traffic Legislation, Ordinances, Regulations and Standards (include all Acts, Ordinances and Regulations)

The operator should comply with relevant traffic legislations, ordinances, regulations and standards.

8.2.4 Scope of Traffic Management

- a. The Operator should provide the following services:
 1. traffic control at toll plazas
 2. breakdown and recovery facilities
 3. traffic disruption and accident clearance
 4. Motor Vehicle Accident recording system
 5. Vehicle regulation facilities
- b. To achieve these objectives, each toll road section must be equipped with a toll road management system, which includes the following:
 - Traffic Control System
 - Patrol System

- Towing Services
- Rescued and Ambulance Service
- Traffic Policing System (law and order enforcement)
- Communication System
- Services System at Rest Area
- Complaints System
- Overloading Control System

8.2.5 Toll Road Management System

a. Traffic Control System

This system manages the incoming and outgoing traffic flow and vehicle movement along the toll road, with a view to optimizing volume and minimizing travel time, for the road users safety, orderliness, smooth travel and comfort.

All traffic control facilities must be routinely maintained in good order to achieve peak efficiency and economy. Any damage to or loss of facilities must immediately be repaired/replaced.

Management of traffic on toll roads must observe the integration with the management and network of traffic off the toll roads. The traffic situation on the toll road which affects traffic on other roads must always involve related officials.

Traffic control involves the use of fixed and moveable equipment. Fixed equipment includes road marking, traffic signs, rumble strips, and the like, while moveable equipment can be changed to suit the prevailing traffic conditions. The latest technology can give toll road users variable traffic information.

Traffic control facilities consist of:

1. Fixed Equipment (Traffic signs)
 - i. Reflector Signs – these are permanent signs employed to warn, prohibit, and give directions to road users, at entry, while transiting and exiting the toll road.
 - ii. Road Marking – is a sign on the road surface which includes equipment or signs which forms longitudinal, transverse, diagonal and other symbols, used to direct traffic flow and limit traffic in particular area.
 - iii. Road Studs – are studs with colored reflectors made from plastic, stainless steel or aluminum alloy. They are installed at intervals along the road markings.
 - iv. Guide Stakes – are placed on the roadside and consist of high intensity colored reflectors mounted on columns made of steel, rubber, or iron pipe with aluminum plate

place on the left-hand and right-hand side of the road at fixed distances.

- v. Kilometer Posts – are reflecting boards along the toll road section to show distances (in kilometers) made of steel tubing with aluminum plate, placed on the median and at distances of 5000 or 200 meters.

2. Movable Equipment

- i. Emergency Sign – are moveable reflecting signs, temporarily placed for traffic control during emergencies, such as accidents and roadwork on the toll road.
- ii. Traffic Cones – are dayglo plastic cones equipped with white reflectors. These cones are moveable and are placed temporarily for traffic control during emergency situations, such as accidents and roadworks on the toll road.
- iii. Flexible Poles – are poles made of flexible material (usually rubber/PVC) which are able to return to the original shape when hit, with the base of the pole fixed to the road surface.

3. Traffic Information System

The Traffic information system provides the following functions;

- Traffic surveillance;
- Data processing and incident detection;
- Information dissemination;
- Assistance in countermeasure implementation; and
- Data logging,

For above functions, a system of information collection equipments, such as traffic counter and CCTV camera, data processing computers, data dissemination equipments such as variable message sign and highway radio system, communication system, monitors, and control console, will be needed..

The same ends can be achieved by connecting up with a local radio station (a dedicated station is not required). Where changes are planned for the toll operations, the services of newspapers or local radio stations should be utilized.

All traffic information facilities must be routinely maintained in good condition.

The design (shape, size, color, lettering or symbol), technical specification and legalization of traffic information systems must be in accordance with standard specifications.

b. Patrol System

Traffic related incidents such as congestion and accidents are unforeseen events that should be anticipated to occur on the toll road facility. The Operator shall provide facilities for patrols on the toll road to monitor the movement of traffic. Disabled vehicles due to mechanical causes or to accidents will also be detected and the information passed on to the towing or rescue service.

The main function of this system are:

1. Observing of traffic situations and road conditions, with observation frequency at any point on the toll road fixed at a maximum of one hour during the daytime and 30 minutes during night-time;
2. Emergency aid observation for toll road uses with broken-down vehicles;
3. Emergency handling of traffic accidents

c. Towing of Disabled Vehicles

This operation should be carried out by mechanical service vehicles and tow trucks, with the aid of patrol cars. The number of vehicles required to perform the operation shall be made available on an “at call” basis. Mechanical service vehicles shall be fitted with the necessary tools and replacement parts to deal with minor breakdowns. The Operator has the choice of providing his own tow trucks or he may sub-contract the operation.

d. Rescue and Ambulance Service

1. Emergency service should be equipped with accessories and/or apparatus for paramedical assistance. The main function of this service is to:
 - i. Treat or stabilize victims at MVA's
 - ii. Transport accident victims to the nearest hospital (if necessary).
2. Operating Procedures
 - i. The ambulance and rescue units must be on stand-by at certain locations so that they can reach the accident site in less than 15 minutes.

- ii. The service must be available 24 hours a day, divided into 3 shifts;
- iii. The reserve crews must always be on stand-by for emergency situations.

e. Traffic Policing System

Traffic policing on toll roads is carried out in cooperation with the Philippine National Police. The traffic control associated with the toll road is the responsibility of the Operator. The Operator shall have his staff properly deputized to act as police officers as a standard procedure.

f. Communication and Emergency Call System

1. Internal Communication

Communication is to be maintained between the toll control building and the toll plazas at the mainline and remote plazas. This communication is between the personnel of the Operator. Radio contact is also to be maintained with all rescue and towing vehicles.

2. External SOS Call Communications

This is an SOS call system which will provide a communication facility between the Operator and toll road users for emergency situations. The SOS call stations are to be spaced every 500 meters.

3. Central Control

The communication center is to be situated in the toll control building and is to be attended 24 hours a day in shifts of 3 by 8 hours.

g. Complaints System

All complaints are to be addressed to the Operator who shall provide a system for addressing and processing the criticisms of the road user.

Claims from road users must be investigated and if valid, settled for an amount equal to the losses suffered, arising out of or due to the Operator's failure in the toll road operation. Toll road operation failure means that the Operator has not fulfilled his obligations in accordance with prevailing laws and regulations.

h. Vehicle Overloading System

Overloading of heavy vehicles is one of the prime causes of damages to the road pavement. Consequently, the Proponent shall provide a weighbridge on the toll road. All heavy vehicles will be required to pass over the weighbridge. The proponent can install a dynamic weighing system if he so wishes. This system shall be calibrated and tested in the presence of officials from the DPWH.

8.3 Maintenance of Toll Road Facility

8.3.1 General

Maintenance of the toll road is inseparable from the initial construction as the facility must be kept in an acceptable condition in order that the operation can be well carried out effectively and provide optimal service. The adoption of an efficient maintenance program is essential in order to preserve and restore the road pavement, side drains, structures and toll equipment in good working order.

The result and implementation of maintenance work must comply with the requirement for orderly, smooth, safe and comfortable traffic conditions, without any negative impact on the environment.

8.3.2 Involvement in establishment and operation of integrated O&M organization

The operator should be involved in the establishment and operation of an integrated O&M organization which should be established in 2015 when northern part and southern part are being linked.

The organization shall conduct operation and maintenance work on the entire network, which includes toll collection and clearing of toll revenue.

8.3.3 Scope of Works

a. Routine Maintenance

1. Inspection

Road inspection aims to accurately monitor and evaluate the present condition of the roadway in order to maintain safe and smooth traffic flow and prevent accidents and vehicle breakdown or damage. There are three levels of inspection described below:

Routine Inspection

This involves routine, ocular, on-vehicle inspection on or off the expressway by technicians from a moving patrol vehicle. The typical frequency is once a day for “on-expressway” inspection, and two to four times a year for “off-expressway” inspection.

Periodic Inspection

This involves close ocular on-foot inspection of the entire assigned section by a group of engineers and technicians on a periodic basis. The typical frequency is once a year.

Special Inspection

This entails close ocular and aural detailed on-foot inspection of a specific site by a team of professional engineers and technicians to obtain actual data needed to establish a special repair program. Such an inspection is carried out on a need basis but typically it is conducted once in every five years maximum.

2. Cleaning

General

The roadway must be cleaned to restore their functions and preserve the environment and improve their amenities. The time, means and frequency of cleaning are substantially dependent on traffic volume, heavy-vehicle composition, weather condition, ongoing activities in areas along the roadway, and incidents on the roadway. Special attention must be paid to cases such as after very windy weather, before an anticipated heavy rainfall and at harvest time in agricultural areas along the roadway. For safety and efficiency, most cleaning activities are implemented with complementary traffic regulations.

Cleaning of Roadway Surface

Both right and left shoulders of the divided carriageway and the ramp are cleaned mechanically by a brush- or vacuum-type sweeper or by a water sprinkler. Other parts can be supplemented with manual cleaning.

Cleaning of Associated Facilities

Paved and landscaped areas of the interchange and rest area are cleaned manually. Buildings and lavatories are also cleaned manually.

Cleaning of Road Accessories

Road accessories are cleaned as follows:

- Guardrails, manually or mechanically with a water sprinkler
- Traffic signs, manually with an expandable boom lifter
- Drain pipes, mechanically by a high-pressure washer or manually
- Gutters, mechanically by a vacuum-type sweeper
- Median inlets, manually
- Catch basins, manually or mechanically by a vacuum-type sweeper
- Bridge joints, mechanically by a high-pressure washer or manually with a water sprinkler
- Bridge catch basins, mechanically by a high-pressure washer or manually with a water sprinkler.

3. Vegetation

General

Roadside vegetation is provided to preserve the environment, improve the landscape and enhance safety. The time and means used in vegetation works heavily depend on the types of vegetation that will be planted and their state of growth.

Highway vegetation works are implemented for the following purposes – tree/forest control, lawn and slope vegetation control. For safety and efficiency, some vegetation works must be implemented together with complementary traffic regulations.

Tree/Forest Control

Tree/forest control consists of the following:

- Plant pruning
- Plant fertilization
- Insecticide spraying
- Weed and vine clearing
- Irrigation
- Prop renovation
- Damaged tree removal

- Weed cutting
- Tree felling

Lawn Control

Lawn control consists of the following:

- Lawn mowing
- Lawn fertilization
- Manual weeding

Chemical spraying

- Insecticide spraying
- Top dressing

Slope Vegetation

The slope vegetation includes:

- Weeding
- Slope fertilization

4. Traffic Accident Recovery

Except for major works to be contracted out, the expressway operator must conduct minor recovery works for damages on roadway components caused by traffic accidents, which usually include replacement of:

- Guardrails,
- Boundary fences,
- Anti-glare nets/plates,
- Delineators,
- Kilometer posts, and
- Traffic signs.

5. Traffic Regulation

A portion of a roadway cross-section must be temporarily secured for implementing on-road activities such as roadworks, cleaning and inspection. Traffic regulation for any of these purposes is an expressway operator's sole responsibility. It is typically classified as follows:

- Shoulder regulation
- Lane regulation for median lanes or shoulder lanes
- Median regulation
- Contra-flow (i.e. counterflow) regulation
- Moving regulation

b. Repair Works

1. Pavement Renovation

General

Minor damages to the pavement must be repaired immediately or as promptly as possible by various means.

Patching

Potholes, dents and other localized surface irregularities must be refilled with mixed materials.

Crack Seal

Minor cracks must be mended by injecting asphalt or filler.

Spot Replacement of the Pavement

Pavement damage as deep as into the base or sub-base must be partially cut off, removed and replaced.

Correction of the Rugged Road Surface

Road surface unevenness due to settlement of the embankment adjacent to a bridge or over a culvert is corrected by partially cutting the pavement to a certain depth and overlaying asphalt mixture to level the surface.

Surface Treatment

Minor damages to the surface must be treated by applying chemicals, asphalt or sand, or by grooving the concrete pavement surface.

Repaint of Road Markings

Road markings must be periodically repainted, as their conspicuousness decreases with time.

2. Repair of Bridges and Structures

General

Some components of the structures must be periodically renovated and/or repaired, due to inevitable deterioration with time.

Expansion Joints

Repair of expansion joints commonly used on expressways – rubber, steel finger, and buried joints – can be done by any of the following:

- Replacement
Replacement with the same type
Replacement with another type
- Partial repair
Recast of the post-cast pavement portion
Replacement of joint parts
Waterproofing of the curb portion
- Special repair
Conversion to non-drain steel finger joints
Adjustment of expansion openings
Elevation adjustment by uplifting the joint

Repainting of Steel Structures

Steel structures must be repainted with sufficient thickness of paint coating primarily to build anti-rust resistance and weather durability. Painting consists of five steps – abrasive blasting, touch-up, primer application, second coating, and top coating. Repainting is classified into three types:

- Whole Bridge Repainting: A steel bridge is entirely repainted at certain time intervals depending on local climatic conditions.
- Partial/Spot Repainting: Partial or spot repainting is done regularly on portions of steel structures where more deterioration or rusting has progressed.
- Special Repainting: Special repainting is done on road accessories, such as guardrails and lighting poles, and certain parts of the bridge such as splice plates, high-tensile bolts, shoes, expansion joints, and catch basins.

Partial Repair of the Bridge Deck

A damaged portion of the bridge deck may be partially repaired. The work consists of peeling off the pavement, chipping off the concrete deck of the damaged area, rearranging the reinforcing bars, fixing the undermolds, casting and curing the concrete, and repaving the renovated deck surface.

Repair of the Guard Wall

The deteriorated bridge guard walls must be repaired by chipping off peeling or cracked concrete surface, rustproofing the reinforcing bars, applying the primer, refilling the chipped

portions with grading materials, and applying the base filler and finishing coat.

Re-galvanization of the Guardrails

Rusted guardrails may be re-galvanized and reused.

c. Rehabilitation

1. Pavement Rehabilitation

General

The pavement must be occasionally reinforced to restore its functions, thereby improving its durability and serviceability, ensuring traffic safety and comfort, and preventing further degradation of the roadside environment.

Pavement Survey

Three major components of the pavement survey are pavement surface condition survey, pavement mixture survey and pavement structure survey.

- **Pavement Surface Condition Survey**
The surface conditions are surveyed for overall rehabilitation programming, when ocular inspection cannot provide a reliable evaluation of damages, or when long-term evaluation of particular pavement sections is in progress. The items subject to survey include:
 - Ruts,
 - Cracks,
 - Longitudinal surface roughness,
 - Ruggedness, and
 - Skid resistance.
- **Pavement Mixture Survey**
For damages caused by deterioration or aging of the pavement mixture or when determining the type of road surface regeneration, pavement samples cored at sites are taken to test their physical properties and evaluate their performance.
- **Pavement Structure Survey**
If pavement soundness is suspected to be as a result of an unusual deflection, the bearing capacity of the pavement and/or sub-grade is checked by core sampling or spot excavation, if necessary.
- **Evaluation Pavement Structure Survey**
The survey results are technically evaluated to judge the necessity for pavement rehabilitation.

Asphalt Pavement Overlay

A pavement that is rutted, rough or not skid-resistant, can be rehabilitated by overlay, unless severely deteriorated. The work consists of tack coating, application of asphalt mixture, leveling, and compaction. As a result, the pavement usually becomes thicker than before. Thereby, this requires simultaneously overlaying adjacent multiple lanes and raising the roadway profile and the elevation of drainage, traffic safety facilities, etc.

Asphalt Pavement Mill and Overlay

The mill and overlay method can be applied in two cases. One is when the pavement is not severely damaged and raising the roadway profile is impossible or impractical. The other is when the cracks on the surface, although serious, only penetrates the upper layer of the pavement.

The process involves milling the pavement surface, loading out the scraps and cleaning the newly exposed surface by a sweeper and compressor preceding tack coating, finishing and compaction.

Asphalt Surface Regeneration

Surface regeneration is a derivative of the pavement mill and overlay. In the process, the existing pavement surface is heated and raked. The scraps are not loaded out but reused for overlaying together with the new asphalt mixture. This process has two work types, as follows:

- Re-pavement
When the existing pavement to be recycled, although deformed but still sound, is milled and the resulting mixture is together with a new asphalt mixture and compacted.
- Re-mixing
This occurs when regenerative additives are blended to the milled pavement, which is too deteriorated to be directly reused, and then mixed with the new asphalt mixture, finished and compacted.

Pavement Resurfacing

If the pavement is heavily rutted or cracked, rough or not skid-resistant so much so that the deterioration extends deeply to the entire pavement thickness, it is completely removed and resurfaced up to the necessary area and depth.

Concrete Pavement Overlay

Seriously raveled or cracked concrete pavement is rehabilitated by overlaying or milling and overlaying. The overlaying material is mostly asphalt mixture due to its workability and economy, but a thin layer of cement can also be applied. When milling is applied, the surface is milled with a heavy cutting machine, then cleaned and shotblasted.

2. Bridges and Structure Rehabilitation

General

Bridges and structures must be maintained, repaired and rehabilitated for one or several of the following purposes:

- To prevent wear and tear
- To prevent deterioration and/or corrosion
- To allow upsizing of allowable vehicle dimensions
- To increase driving comfort
- To reinforce earthquake resistance

As for the steel structures, measures against fatigue of welded member portions and a countermeasure to increase the structure's fatigue strength must be selected. If the failure is unrecoverable, the rigidity of the floor slab must be raised to decrease induced stresses at the cracked members. If this is again unsuccessful, the rigidity of main girders must be increased.

Most of the damages to the concrete structure typically originate from cracks or scales on the surface, which possibly led to corrosion and dilation of the reinforcing bars and eventually to the structure's malfunction.

Recovery of Fatigue Failures

Cracks detected at the welded portion must be mended either by spot welding or winding up the high-tensile bolts at the stop holes or on the splice plates, depending on whether the cracks reach the member material or not. The spot welding and stop hole methods must be used primarily for temporary restoration of the member's function and are usually combined with other methods. The splice plate method must be applied in cases where cracks have progressed considerably.

Cross-sectional Reinforcement of Main Girders

The loading capacity of a bridge must be increased by reinforcing the cross-section of existing main girders. For steel bridges this involves:

- Changing plate girders to box girders,
- Reinforcing the lower flanges,
- Reinforcing the splice portions, and
- Reinforcing the stiffeners on the support points.

For concrete bridges, it involves:

- Anchoring and bonding steel plates to the bottom surface of the girder, and
- Bonding carbon fiber resin plates to the girder surfaces

Continuation of Consecutive Simple Girders

A set of adjacent simple girders and floor slabs, which will eliminate the need for expansion joints between them and will replace the metallic bearings with rubber ones, must be integrated into a single multi-span continuous girder, which will allow less bending moments at mid-points of the effective span.

Installation of Extra Main Girders

Increasing the number of main girders of a steel bridge, by installing extra girders between the existing main girders, improves the rigidity and loading capacity of the bridge.

Prestressing by Post-installed Outer Cables

By tensioning the PC cables additionally installed outside of the girder and inducing additional prestresses to the girder, the bending and shearing strengths of the girder are improved.

Partial Replacement of Floor Slabs

A portion of the floor slab where cracks have substantially progressed must be chipped off. The damaged reinforcing bars must then either be repaired or replaced before casting the super-high early-strength concrete. It must be waterproofed before paving.

Deck Top Thickening

To reinforce the bending and shearing strengths of the floor slab, the steel-fiber-reinforced concrete is cast over the shotblasted surface of the existing concrete slab, and the two new layers are integrated into a single solid deck for increased total thickness. The hard-mix fresh concrete with super-high early-strength cement and steel fibers must be spread out and

compacted sequentially by a dedicated concrete finisher. In some cases, reinforcement must be done by arranging steel bars in the thickened concrete.

Deck Bottom Thickening

To increase the bending strength of the floor slab, it is sometimes thickened at the bottom. Reinforcing bars are anchored to the sandblasted bottom surface of the slab, and resin mortar, usually polymer mortar with powerful cohesion and flexibility to deformation and water tightness, is sprayed up to a certain thickness.

Deck Waterproofing

Whenever the deck is repaired or rehabilitated, its upper surface is waterproofed prior to paving to prevent water from infiltrating. The waterproofing layer can either be the sheet type or the paint-film type, depending on the roughness of the slab surface and the size of work.

Shoe

The bridge shoe has diverse functions such as support of the vertical force, smooth rotation of the superstructure caused by strains, smooth movement of the superstructure due to elasticity, restraint to over movements, and, in case of an earthquake, resistance to uplift and transmission of horizontal forces. These functions must be restored promptly by eliminating failures to the shoe and their causes.

When a failure in the shoe is found, it must first be determined whether the failure extends to the super- and/or substructure(s) or not. Afterward, the necessity for a functional appraisal of the shoe must be determined. If needed, the whole shoe will be replaced, primarily by a rubber shoe or by another type that meets local requirements. If there is no need to raise the functional capacity of the shoe, only a partial repair will be undertaken. In this case, if rustproofing is necessary, the shoe will either be repainted with spray zinc or galvanized.

Drainage

A smooth drainage is essential to ensure a bridge's sound function and longer life. Drainage improvement is sometimes needed in bridges in use. When catch basins need to be improved, additional ones must be provided instead of merely replacing existing ones.

Bending of the drainpipe must be as moderate as possible for smoother passage of drained water. The drainpipes attached to the super- and substructure must be linked together by a flexible elastic joint.

3. Traffic Safety and Control Facilities

Guard Fences

Guard fences must be reinforced by using either a concrete guard wall (Autoguard of the New Jersey type), or solid guardrails must be reinforced by extra beams and posts.

Delineators

Conventional delineators with decreased performance must sometimes be replaced with improved types that are self-cleaning, luminous, or bigger.

Traffic Signs

Deteriorated traffic signs are replaced with new ones to recover legibility and conspicuousness. Technical improvements, such as illumination methods, posting locations, sizing of the board and design of the display, and innovations such as provision of the real-time information through variable message signs are applied to replaced or newly posted signs, to facilitate smoother and safer traffic.

d. Disaster Prevention

1. Slope Protection

The cross-sectional slopes resulting from roadway construction, i.e. embankment and cut, are prone to natural disasters such as collapses, cracks, swells, scales, gully erosion, spring water, boulders, and scouring. To prevent disasters, various slope protection works must be implemented even after completion of the roadway construction, which include:

- Concrete block frames,
- Concrete and mortar spray,
- Free shape frames,
- Mat gabions,
- Rockfall prevention nets,
- Boulder treatment,
- Concrete block masonry, and
- Earth reinforcement.

2. Seismic Disaster Prevention

Bridges in use must be reinforced to strengthen their resistance against earthquakes by:

- Widening the top surface of the substructure to provide sufficient length between the support point of the shoe and the edge,
- Linking adjacent girders with PC bars,
- Reinforcing the piers by lining them up with additional reinforced concrete, steel plates, or carbon fiber sheets (CFRP), and
- Protecting the abutment and its back-fill by building a cofferdam around it to control displacement which can be triggered by a landslide caused by an earthquake.

e. Maintenance of Equipment and Buildings

To maintain the performance of various electric, mechanical and communication equipment as well as buildings used in the operation of an expressway, they must be properly inspected, tested, maintained, repaired, or improved.

1. Inspection and Testing of Equipment

Compliance with specific standards must be monitored and the performance of each electric and mechanical equipment must be regularly tested and inspected for unusual appearance, loose connections and fittings, abnormal noise, overheating, lubrication, rust, loose grounding terminals, and so on. The equipment to be inspected include:

- Power receiver/distributor
- Auto-generator
- Roadway lighting
- Meteorological measurement equipment
- Variable message sign

For communication equipment, inspection, testing and cleaning must be carried out by checking the appearance, calling performance, fluorescent light, I/O level, optical loss, optical pulse, cable condition, voltage and current levels, alarm, and other components of the following:

- Emergency telephone
- Optical fiber cables
- Wave transmission system

The water supply and disposal systems for the rest area must likewise be regularly inspected for electrode, pipe stain and damages, operating conditions of the pump, bearing lubrication, oil, condition of screens, volume of foul deposits, foulness level, adjustment of components, ingredient analysis of discharged water, and so on.

2. Maintenance of Equipment

Routine maintenance of equipment primarily includes the following:

- Cleaning of lighting equipment along the roadway, toll plaza, rest area, and traffic signs, together with periodic replacement of worn-out bulbs
- Cleaning of variable message signs
- Cleaning of fire hydrants

Electric, mechanical and communication equipment also require periodic replacement of parts, oiling and lubrication, and overhaul.

3. Maintenance of Buildings

The architectural components of the toll plaza, comprising the tollbooths, islands and shed, must be periodically repainted. All buildings for both public use and operation/maintenance of the expressway must be routinely cleaned.

4. Vehicle Management

Vehicles used for the operation and maintenance of the expressway must be properly managed. These vehicles include patrol cars, sign vehicles, sweepers, water sprinklers, high-pressure washers, lift trucks, crane trucks, and the like.

f. Maintenance at Toll Plazas

The maintenance at toll plazas shall consist of:

- day-to-day cleaning, gardening and domestic services
- civil and building maintenance including painting and maintenance repairs
- replacement of high mast lighting luminaries
- electronic toll collection and control systems including preventive actions related to the toll lanes especially the AVC control system
- SOS communication system
- MIS support for hardware and software

These actions should be undertaken by the Proponent although outside subcontractors could be used for the computer hardware and software.

8.3.4 End of Concession Requirements

At the end of the concession period, the condition of the road and structural capacity of the full length of the toll facility will comply with the following requirements:

- a. Skid Resistance
- b. Riding Quality
- c. Rut Depth
- d. Faulting

The structural capacity of the road pavement shall be such as ensure that the above requirements will be met for a period of 5 years using the traffic volumes in the second last year of the concession as the basis for computation of road pavement loading. The methods of computation of the traffic and assessment of the future life of the pavement shall be by recognized methods as used by DPWH and shall be undertaken jointly by DPWH and the Proponent. If the road does not comply with the required standards, the proponent shall undertake the repairs at his own cost.

Technical Specifications, Design and Performance Standards

1.0 Minimum Standards and Specifications

The following design standards shall be applied for the project:

Design Standards for Expressway

Description		Unit	Class-B (Inside EDSA)
Design Speed		kph	60
Lane Width		m	3.25
Outer Shoulder Width		m	2.00
Median Width		m	2.00
Median Island Width		m	1.00
Inner Shoulder Width*		m	0.50
Horizontal Alignment	Minimum Radius	m	150 (130)
	Minimum Curve Length	m	100
	Maximum Superelevation	%	10.0
	Minimum Transition Length	m	50
Vertical Alignment	Maximum Gradient	%	5.0
	Minimum Radius of Vertical Curve		
	Crest	m	2,000 (1,400)
	Sag	m	1,500 (1,000)
Minimum Vertical Curve Length		m	50
Minimum Stopping Sight Distance		m	85 (75)
Pavement Crossfall		%	2.0
Composite Gradient		%	10.5
Vertical Clearance*		m	5.0

Note: Figures in () show absolute minimum value to be used only when conditions necessitate it.

Standard Speed Change Lane

		Expressway Design Speed	
		80 kph	60 kph
Single Acceleration Lane	Acceleration Length (m)	160	120
	Taper Length (m) for Parallel Design	80	60
Single Deceleration Lane	Deceleration Length (m)	110	90
	Taper Length (m) for Parallel Design	80	60

Design Standards for an Interchange

Description		Unit	Case 1	Case 2	Case 3
Design Speed		km/h	80	60	50
Lane Width		m	3.50	3.25	3.25
Inner Shoulder Width		m	0.75	0.75	0.75
Outer Shoulder Width 1-lane		m	2.00	2.00	2.00
Outer Shoulder Width 2-lane		m	1.25	1.25	1.25
Horizontal Alignment	Minimum Radius	m	280 (230)	150 (120)	100 (80)
	Minimum Curve Length	m	140	100	80
	Maximum Superelevation	%	10.0	10.0	10.0
	Minimum Transition Length	m	70	50	40
Vertical Alignment	Maximum Gradient	%	4	5	6
	Minimum Radius of Vertical Curve				
	Crest	m	5,000 (3,000)	2,000 (1,400)	1,200 (800)
	Sag	m	3,000 (2,000)	1,500 (1,000)	1,100 (700)
Minimum Vertical Curve Length		m	70	50	40
Minimum Stopping Sight Distance		m	140 (110)	85 (75)	65 (55)
Pavement Crossfall		%	2.0	2.0	2.0
Composite Gradient		%	10.5	10.5	11.0
Vertical Clearance		m	5.0	5.0	5.0

- Notes:
1. Use Case 1 when intersecting expressways are both Class A.
 2. Use Case 2 when intersecting expressways are Class A and Class B or both Class B.
 3. Could be downgraded from Case 1 to Case 2 or Case 2 to Case 3, only when the conditions necessitate it.
 4. Figures in () show absolute minimum value to be used only when conditions necessitate it.

On/Off-ramp Geometric Design Standards

Description		Unit	Expressway Class-B
Design Speed of Street to be Connected		kph	80, 60, 50
Design Speed of On/Off-ramp		kph	40
Lane Width		m	3.25
Inner Shoulder Width		m	0.75
Outer Shoulder Width		m	1.50
Horizontal Alignment	Minimum Radius	m	50 (40)
	Minimum Curve Length	m	-
	Maximum Superelevation	%	10.0
	Minimum Transition Length	m	35
Vertical Alignment	Maximum Gradient	%	7.0
	Minimum Radius of Vertical Curve		
	Crest	m	450
	Sag	m	450
Minimum Vertical Curve Length		m	35
Minimum Stopping Sight Distance		m	50 (40)
Pavement Crossfall		%	2.0
Composite Gradient		%	11.0
Vertical Clearance		m	5.0

- Note:
1. Use design speed of 40 kph for street or ramp with toll facility.
 2. Figures in () show absolute minimum value to be used only when conditions necessitate it.

2.0 Structural Design Standards for Expressways

The National Standard of the Philippines shall be adopted as the Structural Design Standard, except as modified by the following specific design criteria:

Highways

2.1 Vertical Clearance

A minimum vertical clearance for vehicle traffic of 5.00 m shall be provided.

2.2 Standard Highway Loading

The standard highway loading shall be MS-18.

2.3 Earthquakes

The seismic design shall be based on the National Structural Code of the Philippines, Volume II – Bridges, 2nd Edition, 1997.

3.0 Design Life Standards

The minimum design life of the R10/C3/R9 Expressway shall be as follows:

Viaduct structures	100 years
Road pavement	40 years
Mechanical and Electrical Works	30 years
Wearing surface/overlay	10 years
Buildings	30 years

Renewable items shall have the following minimum residual life at the end of the Concession Period:

Road Surface	5 years
--------------	---------

BID FORM NO. 1

BID LETTER

THE CHAIRMAN

Prequalification, Bids and Awards Committee (PBAC)
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
DPWH Building, Bonifacio Drive
Port Area, Manila
Philippines

Gentlemen:

In accordance with the Bidding Documents for the bidding out of the R10/C3/R9 Expressway Section Pr Project (Project) on a Build-Transfer-and Operate (BTO) scheme by the Department of Public Works and Highways (DPWH), the undersigned, having been authorized, as evidenced by a Special Power of Attorney, appended hereto as Annex _____, to represent the BIDDER

_____,
(Name of Bidder)

a joint venture/consortium whose members bind themselves solidarily together, a corporation/firm organized and existing under the laws of _____, a partnership consisting of _____, with _____ business address _____ at _____, hereby bids to undertake the Project.

The BIDDER agrees, upon receipt of the written Notice of Award, to execute the Toll Concession Agreement, a copy of which has been attached to the Bid Documents.

The BIDDER agrees, upon receipt of the written Notice of Award, to execute the Agreement.

Enclosed is the BIDDER's Bid Security in the sum of

(Words and Figures; State in U.S. Dollar or Philippine Pesos
at BSP rates prevailing five (5) days bid opening date)

in the form of ___ cash, ___ manager's check, ___ cashier's check, ___ irrevocable standby letter of credit, callable on demand (please check applicable form).

The BIDDER also agrees that if this bid proposal is accepted and the BIDDER fails to execute the Agreement with SEVEN (7) calendar days from receipt Notice of Award, the Bid Security accompanying this bid shall be forfeited in favor of the DPWH for such failure.

The BIDDER accepts the Government's right to reject any or all bids, waive any minor defects therein and accept the offer most advantageous to the Government. The

BIDDER further stipulates that: (a) he has accepted the qualification criteria established by the PBAC of the DPWH; and (b) he waives any right to seek and obtain a writ of injunction or prohibition or restraining order against the DPWH, its PBAC or any member thereof to prevent or restrain the qualification process or any proceeding related thereto, the holding of a bidding or any proceeding related thereto, the negotiation of and/or the award of the contract to a successful bidder, and the carrying out of the awarded contract, without prejudice to other administrative or judicial recourses.

The bid shall be valid for no less than one hundred eighty (180) calendar days from the bid opening date.

The BIDDER warrants that no official or employee of DPWH has been employed or retained in the preparation of this Bid proposal.

Very truly yours,

Name of the Project Proponent/BIDDER

Business Address

By: _____
Name in Print and Signature

Designation

WITNESSES:

Name in Print and Signature

Name in Print and Signature

Address

Address

BID FORM NO. 2

STATEMENT OF BIDS FOR R10/C3/R9 EXPRESSWAY SECTION PR PROJECT

1.0 GENERAL

- 1.1 In accordance with the provisions of the Bidding Documents for the R10/C3/R9 Expressway Section Pr Project (Project), and all attachments, exhibits and documents referred to therein;

(State Name of Project Proponent/BIDDER)

hereby offers to finance and construct the Project Tollway, turn it over to DPWH, and operate and maintain it on behalf of DPWH, in accordance with provision set forth herein.

- 1.2 BIDDER understands that DPWH shall rely on the following representations in evaluating and ranking the Bids and that the inability of BIDDER to substantiate the basis for any representation may result in adjustment of his rating, or in the event of the misrepresentation, disqualification from the bid.
- 1.3 BIDDER understands that this Bid shall be incorporated directly into and made part of the Agreement. The Bid and other guarantees shall constitute material terms of the Agreement.

2.0 PROJECT DESCRIPTION

- 2.1 The BIDDER warrants to finance and construct the Project Tollway on a turn-key basis, assuming cost overruns, delays, and specified performance risk, taking into consideration the design issued with the Bidding Document, to turn over title to DPWH, and to operate and maintain the system for a concession period stated in the Toll Concession Agreement.
- 2.2 Guaranteed Construction Period: Three (3)Years
- 2.3 Guaranteed Date of Start of Commercial Operation
- Operation Date: [Date]

3.0 BID SECURITY

As required by DPWH, upon submission of the Bid, BIDDER shall post with DPWH a Proposal Bond in the amount specified in the Instructions to Bidders in US\$ or its equivalent in the Philippine Pesos at the BSP exchange rate prevailing five (5) days before opening date.

Bid Security

(State Amount)

(Form of Security)

(Bonding Company)

(Bonding Number)

(Validity Period)

4.0 BIDDER'S CAPITALIZATION AND ORGANIZATION

4.1 List below participants and/or other interested parties in the organization and their equity holdings:

	NAME OF PARTICIPANT	PARTICIPATION*	SHARE OF TOTAL EQUITY (%)
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____

* Refers to participation as in "Principal Sponsor", "Consultant", "Contractor", "Operator", "Financier", "Equipment Supplier", etc.

4.2 List below the officials of the organization and their company affiliations. In case of a consortium, this refers to the Board of Directors of the Principal Sponsor.

MEMBERS OF THE BOARD OF DIRECTORS:

	NAME	COMPANY
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____

CORPORATE OFFICIALS:

	NAME	POSITION
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____

5.0 NOTICES

Communications with herein Bidder regarding this Bid should be directed to:

Name : _____
Title : _____
Address : _____

Telephone No.:

Telefax No. :

6.0 EXCEPTIONS

Deviations/Clarifications (if any) to the Biding document and Draft Toll Concession Agreement are attached to this Bid. As for deviations/clarifications, please indicate.

_____ Deviations/Clarifications presented

_____ No Deviations/clarifications presented

7.0 CERTIFICATION

BIDDER certifies that all of the statements and representations made in this Bid including exhibits, documents and other attachments are true to the best of the BIDDER's knowledge and belief, and agrees to be bound by the representations, terms, and conditions in the Bidding Documents and the Draft BTO Agreement.

Submitted by:

Name of Project Proponent/BIDDER

Name and Signature of Authorized Representative

Designation

Date Signed

WITNESSES:

(Name and Signature)

(Name and Signature)

(Address of Witness)

(Address of Witness)

BID FORM NO. 3

DEVIATIONS/CLARIFICATION SHEETS

Bidders are not permitted to deviate from the requirement of the Bid Documents and Draft Toll Concession Agreement (TCA), Bids exhibiting non-conformance shall be rejected. However, as an alternative attached with the conforming bid, minor deviations from the Bidder's standard practice and/or advantageous to DPWH will be allowed if such deviations are within standard practice and/or advantageous to the DPWH. The alternative bid will be considered only for the first ranked bid.

Such deviations shall be clearly detailed in the form shown below (additional sheets shall be used as necessary) and the entries shall be referred to the Bid Documents and/or the draft TCA, Section or Clause Number to which they refer.

Deviations and clarifications not submitted in the specified manner may be rejected.

CONFORME: _____

PRESENTATIONS OF DEVIATIONS/CLARIFICATION FROM THE BID DOCUMENTS/DRAFT TOLL CONCESSION AGREEMENT

SECTION CLAUSE NO.	TEXT	BIDDER'S PROPOSAL

BID FORM NO.4

CUMULATIVE REVENUE AND CONCESSION PERIOD

1. Proposed Amount of Cumulative Revenue at a price level of bidding year (day, month, year, which shall be specified by the DPWH in the bidding process)

_____ Pesos (P. _____)

Note: The amount above shall be adjusted and converted to the Target Cumulative Revenue expressed at a price level of the Base Year before the commencement of the operation of the Project.

- 2.. Proposed Length of Concession Period (30 years in maximum)

_____ days

**BID DOCUMENTS
VOLUME I
PART III**

DRAFT TOLL CONCESSION AGREEMENT

(Covering R10/C3/R9 Expressway (R10/C3/R9) Project)

REPUBLIC OF THE PHILIPPINES
Grantor

and

[NAME OF CONCESSIONNAIRE]
Grantee

TABLE OF CONTENTS

SECTIONS	PAGE
SECTION 1.0 DEFINITIONS AND INTERPRETATION.....	2
1.01 Definitions.....	2
1.02 Interpretation	4
1.03 Contract Documents.....	5
SECTION 2.0 SCOPE OF THE PROJECT	5
2.01 Project Description	5
2.02 Scope of Works	6
SECTION 3.0 GRANT OF PRIVILEGE AND RECITAL OF OBLIGATIONS	6
3.01 By the GRANTOR.....	6
3.02 By the GRANTEE.....	7
SECTION 4.0 INDEPENDENT CONSULTANT.....	8
4.01 Functions of the Independent Consultant	8
4.02 Appointment of the Independent Consultant	9
4.03 Compliance with Philippine Laws.....	9
4.04 Payment of Services	9
4.05 Dispute Resolution	9
SECTION 5.0 DESIGN OF THE R10/C3/R9 EXPRESSWAY.....	10
5.01 Design Standard.....	10
5.02 Grantor's Design for the R10/C3/R9 PROJECT	10
5.03 Submission and Approval of Final Engineering Design	10
5.04 Subsequent Amendment to the Approved FED.....	11
5.05 Changes in the Design; Additional Works	11
5.06 Project Construction Schedule.....	12
SECTION 6.0 CONSTRUCTION OF THE R10/C3/R9 EXPRESSWAY	12
6.01 Grant of Construction.....	12
6.02 Road Right-of-Way.....	12
6.03 Commencement of Construction; Notice to Proceed.....	13
6.04 Construction of the Project	14
6.05 Excusable Delay in Construction.....	16
6.06 Substantial Completion.....	16
6.07 Cooperation with Contractors for Section Pu	18
6.08 Final Acceptance for Section Pu	18
6.09 Opening of Completed Sections For Public Use	18
6.10 Early Completion.....	18
6.11 Liquidated Damage for Delay.....	18
6.12 Damage due to Hidden Defects; Collapse of Structure	19
SECTION 7.0 OWNERSHIP OF THE TOLL ROAD	19
SECTION 8.0 OPERATION AND MAINTENANCE.....	19
8.01 Operation	19
8.02 Grant of Operation and Maintenance	20
8.03 Term of Operation and Maintenance	20

8.04	Concession Period.....	20
8.05	Obligations under the Concession	20
8.06	Procedure for Issuance of Toll Operation Certificate.....	21
8.07	Scope of Operations	22
8.08	Scope of Maintenance.....	22
8.09	Safety and Emergency Operations.....	23
8.10	Traffic Mobility and Decongestion Facilities	23
8.11	GRANTEE's Operations Company.....	23
8.12	Operation and Maintenance Supervision	24
8.13	Toll User-Related Services.....	24
8.14	Non-Toll User Related Services.....	24
8.15	Treatment of Additional Revenues.....	25
SECTION 9.0 PROJECT FINANCING.....		25
9.01	Grant of Right to exclusively arrange for Project Financing.....	25
9.02	Proof of Availability of funds for the Implementation of the R10/C3/R9 Project	25
9.03	Liability to Financiers	26
9.04	Security to Financiers	26
SECTION 10.0 TOLL RATE AND TOLL COLLECTIONS.....		26
10.01	Base Toll Rate.....	26
10.02	Toll Rate Adjustment	27
10.03	Increase of Base Toll Rate in real term.....	29
10.04	Toll and Toll Collection	30
10.05	Calculation of Cumulative Revenue.....	30
SECTION 11.0 DEFAULT AND TERMINATION		31
11.01	General Principles	31
11.02	Termination by Reason of GRANTEE's Default.....	31
11.03	Termination by Reason of Operator's Default	34
11.04	Termination by Reason of GRANTOR's Default:	37
11.05	Termination by Reason of Requisition	40
11.06	Other Consequences of Termination of this Agreement	40
11.07	Subrogation and Indemnity	41
11.08	Survival of Obligation after Termination	41
11.09	Termination By Reason of Project Completion.....	41
SECTION 12.0 REPRESENTATIONS AND WARRANTIES		42
12.01	Of the GRANTOR	42
12.02	Of the GRANTEE	42
SECTION 13.0 SETTLEMENT OF DISPUTES		43
13.01	Dispute Resolution	43
13.02	Arbitration	43
SECTION 14.0 FORCE MAJEURE.....		44
14.01	Events of Force Majeure	44
14.02	Notification of Force Majeure	44
14.03	Obligation of each Party in the Event of Force Majeure.....	45
14.04	Alternative Procedure in case of Self-insurance by the GRANTOR	46
14.05	Extension of Concession Period	46
SECTION 15.0 MISCELLANEOUS PROVISIONS.....		47
15.01	Effectiveness of Agreement.....	47

15.02	Assignment	47
15.03	Change in Ownership Structure/ Share Ownership	47
15.04	Confidentiality	47
15.05	Further Assurances	48
15.06	Modification and Amendment	48
15.07	Sufficiency of Documents	49
15.08	Severability	49
15.09	Notices	49
15.10	Waiver	50
15.11	Preparation and Closing Cost	50
15.12	Applicable Law.....	50

Annex A : R10/C3/R9 Financial Model [to be attached]

Annex B : Proof of Minimum Equity Requirement [to be attached]

Annex C : Toll Road Design Standards and Specification for the R10/C3/R9 [to be attached]

Annex D : Environmental Clearance Certificate of the R10/C3/R9 [to be attached]

Annex E : Grantor's Minimum Standards for Operation and Maintenance [to be attached]

DRAFT TOLL CONCESSION AGREEMENT
(Covering R10/C3/R9 Expressway [R10/C3/R9] Project)

MADE AND EXECUTED this ___ day of _____, 20__ in Manila, Philippines,
among:

- (1) **REPUBLIC OF THE PHILIPPINES** (the “**GRANTOR**”), acting by and through the **DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS** (the “**DPWH**”), with offices at the DPWH Building, Port Area, Manila, represented by **[NAME]**, Secretary;
- (2) **[NAME OF CONCESSIONNAIRE]** (the “**GRANTEE**”), a corporation organized and existing under and by virtue of Philippine laws, with offices at **[Address]**, represented by **[NAME]**, **[POSITION]**;

WITNESSETH: That

WHEREAS, the Government of the Republic of the Philippines (the **GRP**) has determined that the expeditious construction and operation of the R10/C3/R9 Expressway (**R10/C3/R9**), as a part of Metro Manila Urban Expressway Network, is necessary and essential to the success of its economic development;

WHEREAS, to effectively address the public need without incurring unnecessary debt on the part of the GRP, the DPWH enjoined private sector proponents, through international competitive bidding, to implement the project pursuant to a scheme allowed by law and agreed upon by the parties, specifically, the “Build-Transfer-Operate” (**BTO**) variant recognized under RA 6957, as amended by R.A 7718 (the Build-Operate-Transfer Law, or **BOT Law**);

WHEREAS, the Invitation To Prequalify and Bid was advertised in daily newspapers of national circulation in **[month & year]** in compliance with the Implementing Rules and Regulations of the BOT Law;

WHEREAS, the **[name of consortium]** (the **CONSORTIUM**) was among the **[number]** consortia which were pre-qualified to submit technical and financial proposals;

WHEREAS, in the public bidding held on **[date]**, the CONSORTIUM proposed and submitted the lowest Target Cumulative Revenue in the bidding year (**figure of year**);

WHEREAS, the award to the CONSORTIUM of the contract for the financing, design, construction, operation and maintenance of the R10/C3/R9 Section Pr and the operation and maintenance of the entire R10/C3/R9 under RA 6957, as amended by RA 7718, was recommended by the Prequalification, Bids and Awards Committee (PBAC) of the DPWH and approved by the DPWH Secretary, per PBAC Resolution approved on **[date]**;

WHEREAS, the GRANTOR has determined that public interest can best be served through a Toll Concession Agreement (“**TCA**”) between the GRANTOR and the GRANTEE, embodying therein the terms and conditions under which the financing, design, construction, operation and maintenance of the R10/C3/R9 is to be implemented.

WHEREAS, the members of the CONSORTIUM have formed the GRANTEE as the joint venture corporation under which they shall implement the R10/C3/R9 Project;

NOW, THEREFORE, in consideration of the foregoing premises and the stipulations hereunder; the GOVERNMENT OF THE REPUBLIC OF THE PHILIPPINES, as GRANTOR, acting through the Department of Public Works and Highways, and the [name of concessionaire], as GRANTEE, do hereby agree on the following:

SECTION 1.0 DEFINITIONS AND INTERPRETATION

1.01 Definitions

In this Agreement, the following terms and expressions shall have the following meanings, except when the context otherwise indicates:

- a. **Agreement** – shall mean this Toll Concession Agreement covering the R10/C3/R9 Project as described herein, the annexes hereto, and any and all subsequent amendments and/or supplements hereto.
- b. **Basic Design** – shall mean the basic design, specifications and standards for the R10/C3/R9 Project, as set forth in this Agreement.
- c. **Closed System** – shall mean the method of collecting toll from toll road users calculated on the basis of distance traveled, as specified in Section 10.04 c.
- d. **Concession** - shall refer to the exclusive right and privilege bestowed by the GRANTOR upon the GRANTEE, or its successors or assigns, pursuant to the authority conferred upon it by RA 6957, as amended by RA 7718 (the amended Build-Operate-Transfer Law), whereby the GRANTEE, by itself or through its assigns, undertakes the financing, design, construction and maintenance of the R10/C3/R9 and in return is granted the franchise to operate the same as a toll road facility for the full coverture of the Concession Period, collecting toll and other charges for the use by motorists of said facilities.
- e. **Concession Period** – shall mean the consecutive period of time, as determined under Section 8.04, during which the GRANTEE is extended the Concession over the Project corresponding to the period needed for the achievement of the agreed target cumulative revenue.
- f. **Construction** – shall mean all aspects of construction work or activity relating to the R10/C3/R9 Project, including toll road facilities.
- g. **Contractor** – shall mean the respective party providing services to the GRANTEE relating to the construction of the R10/C3/R9 Project.
- h. **Design** – shall mean either the Basic Design or the Final Engineering Design, or jointly, as the context may require.
- i. **Effective Date** – shall refer to the date when this Toll Concession Agreement shall have full force and effect, which shall be immediately upon the signing thereof by the authorized representatives of the GRANTOR and the GRANTEE, without need of further approval.
- j. **Final Engineering Design** – shall mean the detailed engineering design for the R10/C3/R9 Project to be prepared by the GRANTEE based on the agreed Basic Design and to be approved by the GRANTOR in accordance with Section 5.03.
- k. **Financier** – shall mean the aggregation of financial institutions, lenders and/ or other creditors providing any Financing to the GRANTEE for the R10/C3/R9 Project.

- l. **Financing** – shall mean any financing arrangement (except the equity portion) entered into from time to time by the GRANTEE to finance the Implementation of the R10/C3/R9 Project, including any refinancing thereof.
- m. **GRANTEE** – shall refer to the joint venture corporation named herein formed by the consortium which won the bidding for the R10/C3/R9 Project for purposes of prosecuting the said project under a BTO arrangement with the GRANTOR, including its successors and assigns.
- n. **GRANTOR** – shall refer to the Government of the Republic of the Philippines, acting in this instance through the Department of Public Works and Highways (DPWH).
- o. **Independent Consultant** – shall mean an independent consulting firm of international repute to serve both as independent design checker and as independent certification engineer, as well as value engineers to record the value of the components of the Project completed from time to time.
- p. **Maintenance** – shall mean all the aspects of the maintenance as set out in this Agreement and in the Operation and Maintenance Manual for the R10/C3/R9 Project which may from time to time be revised, amended and/or supplemented as public interest may require.
- q. **Notice to Proceed** – shall mean the notice issued in writing by the GRANTOR directing the GRANTEE to commence with the implementation of the construction of the R10/C3/R9 Section Pr.
- r. **Operation** – shall mean all the aspects of the Operation as set out in this Agreement and in the Operations and Maintenance Manual for the R10/C3/R9 Project which may from time to time be revised, amended, and/or supplemented as public interest may require.
- s. **Operations Company** – shall refer to the corporation separately formed by the GRANTEE to operate and maintain the R10/C3/R9 after its construction under a Toll Operation Certificate to be issued therefor, as further described under Section 8.11 herein.
- t. **Operation Date** – shall mean the date on which the completed R10/C3/R9 has commenced full toll road operation upon the issuance of a Toll Operation Certificate therefor.
- u. **Parties** – shall mean collectively the GRANTOR, the GRANTEE, and when the context requires, the Operations Company, including their substitutes and assigns.
- v. **Project** – shall mean all aspects and activities pursuant to, in pursuance of, in relation with and/or in anticipation of the design, construction of the R10/C3/R9 Section Pr and all toll road facilities, the operation and maintenance of the entire R10/C3/R9, and the financing thereof.
- w. **Right-of-Way (ROW)** – shall mean the land area required for the fulfillment of the Project as described in the Final Engineering Design.
- x. **R10/C3/R9 Expressway (R10/C3/R9)** – is the name given to the project which is proposed to be implemented in accordance with this Agreement.
- y. **Toll Operation Certificate** – shall mean the certificate issued by the TRB, pursuant to which the Operation of the R10/C3/R9 as a toll road facility is authorized.
- z. **Target Cumulative Revenue** - shall mean the amount of cumulative revenue to be collected through the concession period expressed in year 20__ (Base Year) price levels, which was calculated based on the contracted cumulative revenue at a price level of bid year with necessary adjustments and agreed upon between the GRANTOR and the GRANTEE before the commencement of the operation of the Project as causing a termination of the concession period of the Project. The

Target Cumulative Revenue in bid year shall be adjusted upon the completion of construction based on the price escalation of construction materials and labor due to inflation during construction period and change orders initiated by the GRANTOR.

- aa. **Toll Regulatory Board (TRB)** – means the governmental regulator for toll road operations mentioned in the BOT Law (Republic Act No. 6957, as amended by Republic Act No. 7718).
- bb. **Toll Road Facilities** – shall refer to all components of the R10/C3/R9 relating to its operation as a toll road as may be approved by the TRB, including but not limited to the following: toll plazas, toll collection system and equipment, traffic markers and signages, O&M center/depot, perimeter fence, facilities of the Project Roads, ancillary buildings and facilities for O&M, fixed operation equipment, and O&M equipment and the like, but shall exclude the road Right-of-Way proper and all its civil works aspects.
- cc. **Utilities** – shall mean all public utilities, such as water supply lines, electricity, telecommunications, and the like located within the Land in Vacant Possession specified in Section 6.02.

1.02 Interpretation

In this Agreement, except to the extent that the context otherwise requires:

- a. reference to any regulation shall include the implementing regulations and amendments thereto;
- b. words denoting the singular shall include the plural and vice versa;
- c. words denoting individuals shall include corporations and vice versa;
- d. headings are for convenience only and shall not affect the interpretation of the text;
- e. references to Sections and Annexes are references to Sections and Annexes of this Agreement;
- f. references to any document or agreement shall be deemed to include references to such document or agreement as amended, supplemented, novated, varied or replaced from time to time;
- g. references to any party to this Agreement, whether in this Agreement or in any other agreement and/or document issued pursuant hereto and/or contemplated thereunder, shall include its successor/s and/or permitted assign/s;
- h. words denoting any gender shall include all genders;
- i. whenever there shall appear any reference to a time within an act should be done or agreement reached or consent given, such reference shall include any other period agreed from time to time by the parties;
- j. for purposes of this Agreement, the contents of all annexes hereto shall be deemed incorporated herein by reference as if set forth at length in the body hereof; Provided, however, that in case of a conflict and/or inconsistency between the provisions of this Agreement and the

provisions or contents of any annex hereto, the provisions of this Agreement will prevail over the conflicting and/or inconsistent provisions or contents of the annex;

- k. for purposes of this Agreement, the copies of the annexes hereto which shall be considered as authentic are those which are properly initialed by a representative of each of the Parties on each and every page of each annex.

1.03 Contract Documents

The following documents shall be attached to and shall form integral parts of this Agreement:

- a. GRANTEE's Financial Model, as Annex "A" hereof;
- b. GRANTEE's Proof of Minimum Equity Requirement, as Annex "B" hereof;
- c. Toll Road Design Standards and Specifications for the R10/C3/R9, as Annex "C" hereof;
- d. Environmental Clearance Certificate of the R10/C3/R9 Project, as Annex "D" hereof;
- e. GRANTOR's Minimum Standards for Operation and Maintenance, as Annex "E": hereof

SECTION 2.0 SCOPE OF THE PROJECT

2.01 Project Description

The R10/C3/R9 Expressway Project shall consist of the following:

- a. Section Pu (C3/R9):

Length	7.1 Kilometers
Number of lanes	2 x 2 lanes
Lane width	3.25 meters
Number of junction	2
On-ramp	3
Off-ramp	4

- b. Section Pr (R10):

Length	8.5 Kilometers
Number of lanes	2 x 2 lanes
Lane width	3.25 meters
Number of interchanges	1
Number of junction	0
On-ramp	4
Off-ramp	4

Section Pu, excluding toll road facilities, will be constructed by GRANTOR under another contract. The GRANTEE shall undertake the design and construction of Section Pr and entire toll road facilities, operation and maintenance of both the Sections as a toll road facility during the agreed concession period, and financing thereof.

2.02 Scope of Works

This Agreement shall cover all the activities related to the following components of the R10/C3/R9 Project:

- a. The final engineering design of the R10/C3/R9 Section Pr;
- b. The construction of the R10/C3/R9 Section Pr;
- c. The design and construction of all toll road facilities for both the Sections Pu and Pr of the R10/C3/R9;
- d. The operation of the entire R10/C3/R9 as a toll road facility during the agreed concession period;
- e. The maintenance of the entire R10/C3/R9 during the agreed concession period; and,
- f. The financing of the Project, through equity and debt instruments, until the full satisfactory completion of the R10/C3/R9 Project and for the operation and maintenance of the toll road and its facilities during the concession period.

SECTION 3.0 GRANT OF PRIVILEGE AND RECITAL OF OBLIGATIONS

3.01 By the GRANTOR

a. Grant of Privilege

Subject to the provisions of this Agreement, the GRANTOR hereby declares that, after conducting a public bidding, GRANTOR hereby grants to the GRANTEE the privilege to design and construct the R10/C3/R9, and to operate and maintain the same through its nominated Operations Company, and to finance said activities of the R10/C3/R9 Project identified herein. For purposes of enabling the GRANTEE, through its Operations Company, to collect toll and other charges from motorist-users, the GRANTOR hereby grants the GRANTEE the concession to operate the R10/C3/R9 Toll Road as a public utility during the concession period and as may further be provided hereunder.

b. Obligations of the GRANTOR

In general, the GRANTOR shall:

- 1) After issuance by the DWPB of the Certificate of Substantial Completion and issuance by the TRB of the Toll Operation

Certificate, turn over to the GRANTEE the possession and control of Section Pu for the GRANTEE to operate and maintain.

- 2) Procure and provide to the GRANTEE in timely manner the necessary road Right-of-Way to undertake the R10/C3/R9 Section Pr and its related toll road facilities.
- 3) Assist in securing any and all governmental and/or other authorizations' approval/s, license/s, permit/s and/or consent/s which may be required and/or necessitated to enable the GRANTEE and the Operations Company.
 - 1) To perform their respective obligations and to exercise their rights and privileges.
 - 2) To avail of any incentive provided for under Philippine laws.
 - 3) To comply with applicable Philippine tax law.
 - 4) To procure financing, local and foreign.
- 4) Assist, with best endeavor, to procure all appropriate licenses, permits, approvals and authorizations for the implementation and fulfillment of the Project from design, construction, operation and up to final turn-over of the R10/C3/R9 at the end of the concession period.
- 5) Ensure that the road facilities of the Section Pu undertaken by the GRANTOR shall be secured, protected and properly maintained during the period that the R10/C3/R9 is not being operated as a Toll Road facility.
- 6) Undertake all other obligations under this Agreement.
- 7) Be deemed to have complied with its undertakings hereunder regardless of whether or not the GRANTOR's efforts at providing assistance to the GRANTEE and/or the Operations Company produces the intended outcome, for as long as in providing the assistance requested, the GRANTOR acts in good faith and exercises it best endeavors.

3.02 By the GRANTEE

a. Acceptance of Privilege

Subject to the provisions of this Agreement, the GRANTEE hereby accepts the grant of privilege to design, to construct, to operate and maintain, and to finance all activities of the R10/C3/R9 Project identified herein, together with the grant of the Concession to operate the same as a public utility.

b. Obligations of the GRANTEE

In general, the GRANTEE shall:

- 1) Operate and maintain Section Pu of the R10/C3/R9 as a toll road, provide the necessary toll operation and maintenance facilities, and provide adequate financing therefor.
- 2) Design, construct, operate and maintain Section Pr of the R10/C3/R9 Project as a toll road facility and provide adequate financing therefor.
- 3) Undertake all relevant and necessary activities and obligations under this Agreement for the satisfactory fulfillment of the Project.
- 4) Design and construct an O & M Center to accommodate depot motor shop, security, offices, and other required undertakings.
- 5) Design, manufacture, install and test all toll collection system equipment and facilities, to be completed before start of toll operations.
- 6) Perform its obligation to design and construct, and through the Operations Company to operate and maintain the entire R10/C3/R9 in accordance with best industry practices, and shall exercise its rights and privileges under this Agreement with utmost care and vigilance, taking into account good business practices and complying at all times with the requirements of Philippine laws, rules, regulations and authorities.
- 7) Procure all the necessary financing to satisfactorily fulfill its obligations under this Agreement in accordance with accepted international and domestic monetary and financing practices.
- 8) Unless otherwise exempted therefrom, the GRANTEE shall pay all taxes, including income and corporate taxes payable in accordance with Philippine tax laws.
- 9) The GRANTEE and/or its appointed contractor/s shall comply with and strictly observe all laws regarding workmen's health and safety, workmen's welfare, compensation for injuries, minimum wage, hours of labor and other applicable labor law requirements and/or standards.

SECTION 4.0 INDEPENDENT CONSULTANT

4.01 Functions of the Independent Consultant

- a. As Independent Design Checker, the Independent Consultant shall review and confirm that the Final Engineering Design for Section Pr, including that of the Operation and Maintenance Facilities and all other toll road facilities as may be approved by the TRB, are within the standards and specifications agreed upon for the R10/C3/R9 Project.
- b. As Independent Certification Engineer, the Independent Consultant shall carry out periodic inspection of the construction of Section Pr and the entire toll road facilities as may be approved by the TRB to ensure that

the same is in compliance with relevant approved designs and construction specifications.

4.02 Appointment of the Independent Consultant

- a. An Independent Consultant shall be appointed for the Project within ninety (90) calendar days from effectivity of this Agreement.
- b. Procedure for selection and appointment
 - 1) Upon effectivity of this Agreement, the GRANTOR shall furnish the GRANTEE a list of reputable consulting firms.
 - 2) The GRANTEE shall evaluate, select and nominate the Independent Consultant from the GRANTOR's list, justifying and submitting for confirmation by the GRANTOR the appointment of the Independent Consultant.
 - 3) The GRANTOR shall, unless it has any objections, promptly confirm the appointment of the Independent Consultant.
- c. Terms of Reference, pursuant to which the services of the Independent Consultant shall be engaged, shall be prepared by the GRANTEE and submitted for approval of the GRANTOR. Such Terms of Reference shall include, among others, provisions for the prompt and orderly replacement of the Independent Consultant, both for cause (e.g. misconduct, incompetence, negligence) and without cause (e.g. death, incapacity by reason of injury or sickness).

4.03 Compliance with Philippine Laws

The performance by the Independent Consultant of its functions and duties under this Agreement shall at all times be in accordance with Philippine laws, including, without limitation, all laws, rules and regulations governing the practice of professions in the Philippines.

4.04 Payment of Services

The GRANTEE shall pay for the services of the Independent Consultant in accordance with its contract and upon certification by the GRANTOR of the services rendered by the Independent Consultant for each billing period, not to exceed once a month; Provided that the total compensation to be received by the Independent Consultant shall not exceed three percent (3%) of the estimated project construction cost of the GRANTEE as reflected in its Financial Model attached as an annex hereto.

4.05 Dispute Resolution

- a. In the event of disagreement or dispute in respect of the Final Engineering Design among the Independent Consultant, the GRANTOR and/or the GRANTEE, such disagreement or dispute shall immediately be referred to the Secretary of Public Works and Highways, who shall promptly resolve such disagreement or dispute.

- b. If there are any defective works or works which are not in compliance with technical specifications, the Independent Consultant shall, in a written report, inform the GRANTOR and the GRANTEE thereof. The GRANTEE shall undertake appropriate corrective measures to remedy the defective works indicated in the report. In case of any disagreement or dispute among the Independent Consultant, the GRANTOR and/or the GRANTEE in respect of any alleged defective works, such disagreement or dispute shall be referred to the Secretary of Public Works and Highways for resolution.
- c. The decision of the Secretary of Public Works and Highways on any disagreement or dispute presented to him for resolution shall be considered final and binding.

SECTION 5.0 DESIGN OF THE R10/C3/R9 EXPRESSWAY

5.01 Design Standard

In principle, the GRANTOR and the GRANTEE agree that the R10/C3/R9 shall be designed in accordance with the standard specifications of the DPWH and in accordance with this Agreement.

5.02 Grantor's Design for the R10/C3/R9 PROJECT

The GRANTOR shall provide the basic design for the construction of Section Pr of the R10/C3/R9. For Section Pu of the R10/C3/R9, the detailed design has been completed and will be constructed under a separate construction contract with the GRANTOR. For the Section Pr, the detailed design shall be made by the GRANTEE based on the basic design provided by the GRANTOR. In preparing the detailed design, the GRANTEE shall conform with the agreed Toll Road Design Standards and Specifications.

5.03 Submission and Approval of Final Engineering Design

- a. The GRANTEE shall, at least ninety (90) calendar days prior to beginning the construction work, secure the GRANTOR's approval for the Final Engineering Design (the **FED**) for the segment of Section Pr for which construction can be carried out continuously without any interruption for at least six (6) months. The FED must be duly certified by the Independent Consultant prior to submission to the GRANTOR.
- b. Upon receipt of the duly certified FED, the GRANTOR shall promptly act on the submission within fifteen (15) calendar days.
- c. If any objection is made with respect to the FED, such objection shall be transmitted to the GRANTEE within fifteen (15) calendar days from receipt of the FED by the GRANTOR. The GRANTEE shall resubmit the FED with the required revisions within seven (7) calendar days from the GRANTEE's receipt of the GRANTOR's objection. The written approval of the revised FED shall be issued within seven (7) calendar days from receipt by the GRANTOR of the revised FED. The duration specified herein may be adjusted depending upon the degree of revisions under the mutual agreement between both parties.

- d. The GRANTEE shall be obligated to make revisions only with respect to matters concerning
 - 1) Adjustment of the FED to comply with agreed standards and specifications and to suit actual field conditions, and
 - 2) Errors in computation related to the design of the Project as a ground for amending the FED.
- e. If within fifteen (15) calendar days from receipt by the GRANTOR of the FED, no objection is made in respect thereof, the FED shall be deemed approved, and such approval shall be confirmed in writing within twenty-one (21) calendar days from receipt by the GRANTOR of the FED.

Notwithstanding the failure by the GRANTOR to confirm in writing the approval on a no-objection basis, such implied approval shall be deemed fully operative immediately after the lapse of the fifteen (15) calendar day period from receipt by the GRANTOR of the FED.

5.04 Subsequent Amendment to the Approved FED

- a. The GRANTEE and/or the Independent Consultant may, at any time, propose any amendment to the approved FED that is intended:
 - 1) To make the approved FED conform to agreed adjustments in the original design standards and specifications, or
 - 2) To suit the approved FED to actual field conditions.
- b. The GRANTOR shall promptly act on the duly-certified (by the Independent Consultant) proposed amendment to the approved FED, and shall issue its approval or objections thereto within fifteen (15) calendar days from submission thereof or within such longer period as may be mutually agreed upon between the GRANTOR and the GRANTEE, taking into consideration the character and quantity of any such proposed amendment, following the procedure in Sections 5.03 c. and e.
- c. Any additional cost and/or expense which may be required by any design amendment proposed by the GRANTEE and/or the Independent Consultant shall be for the account of the GRANTEE.

5.05 Changes in the Design; Additional Works

The GRANTOR may, in its own discretion, request for design changes to the agreed design standards and specifications referred to in Section 5.03, or request for any additional or extra work in addition to the agreed design standards, provided that such request is made during the period of construction. The additional costs and/or expenses entailed thereby shall be for the account of the GRANTOR, which shall be paid through budgetary appropriations, or through interim toll rate adjustments to be approved by the TRB, or through some other equitable mechanism which the parties may agree on; Provided, that the Parties mutually agree on the amount of such costs and/or expenses.

5.06 Project Construction Schedule

After approval of the FED and effectivity of the Notice to Proceed, the GRANTEE shall, within fifteen (15) calendar days, prepare and submit a construction time schedule for the GRANTOR's review, comment and approval, which should show the following milestones agreed upon between the GRANTOR and the GRANTEE:

	(Description of activities)		(Date)
1)	Issuance of Notice to Proceed	:	date
2)	Commencement of connection work of Sections Pu and Pr	:	date
3)	Commencement of installation of toll road facilities to Section Pu by the GRANTEE	:	date
4)	Substantial completion of the entire R10/C3/R9 as a toll road facility certified by the GRANTOR	:	date
5)	Commencement of Operation and Maintenance by the GRANTEE (Operation Date)	:	date

SECTION 6.0 CONSTRUCTION OF THE R10/C3/R9 EXPRESSWAY

6.01 Grant of Construction

- a. Subject to the terms and conditions of this Agreement, the GRANTOR grants to the GRANTEE the exclusive right, privilege, responsibility and obligation to construct Section Pr and all toll road facilities for the entire R10/C3/R9;
- b. The right and obligation granted to the GRANTEE to perform the construction shall be for such term counted from the effectivity of the Notice to Proceed to construct as may be agreed upon between the GRANTOR and the GRANTEE under Section 5.06 hereof.
- c. Satisfactorily completion of the construction shall be carried out at the sole expense and responsibility of the GRANTEE and in accordance with the Approved Final Engineering Design, with the GRANTOR likewise fulfilling its responsibilities to the GRANTEE hereunder.

6.02 Road Right-of-Way

- a. The GRANTOR shall procure and provide to the GRANTEE the required road Right-of-Way where the Project is to be constructed, inclusive of areas covered in Section Pu and Section Pr of the R10/C3/R9 identified for the construction of the toll road facilities approved by the TRB. The GRANTOR shall likewise be obligated to ensure the availability of the land required for the Right-of-Way throughout the term of this Agreement in a way that will enable the GRANTEE to effectively, unimpededly, and continuously perform the construction thereon in accordance with this Agreement (also referred to

herein as the **Land in Vacant Possession**), subject further to the conditions in Sections 6.03 b. 2) and c.

- b. The GRANTOR shall be responsible for the removal, relocation and reinstallation of the Utilities: Provided, however, that the GRANTEE shall provide funding for all reasonable costs and expenses required for the removal, relocation and reinstallation of such Utilities.
- c. The GRANTOR shall be responsible and liable on its own for any damages and/or claims from the Public or any third party arising from, or as a consequence of the removal, relocation and reinstatement of the Utilities. The GRANTOR shall hold the GRANTEE harmless and/or indemnify the GRANTEE from any such damages and/or claims, except where the damage or injury to third parties arises from the GRANTEE's or its contractor's fault, negligence or willful disregard of precautionary or preventive measures enforced by the GRANTOR.

6.03 Commencement of Construction; Notice to Proceed

- a. The implementation of the Construction of the Project shall be commenced pursuant to the Notice to Proceed issued by the GRANTOR.
- b. The Notice to Proceed shall become effective only upon fulfillment of all of the following conditions precedent:
 - 1) Receipt by the GRANTEE of a duly approved copy of the Final Engineering Design for the segment of Section Pr for which construction can be carried out continuously without any interruption for at least six (6) months;
 - 2) Receipt by the GRANTOR of the acceptance by the GRANTEE of the Land in Vacant Possession, which acceptance shall be in writing and shall confirm that:
 - a) The Land in Vacant Possession is free from any claims, interference or disturbance from any private and/or governmental institutions, or any private property; and
 - b) The Right-of-Way is in place and has been made available to the GRANTEE for purposes of the construction.
 - 3) Receipt by the GRANTOR of the Performance Bond from the GRANTEE as contemplated in Section 6.04 e.
- c. The GRANTEE's acceptance of the Land in Vacant Possession under Section 6.03 b. 2), a) and b) shall be presumed from the issuance by the Independent Consultant's certificate to the effect that there exists a clear path for the unimpeded and continuous performance of construction for a period of twelve (12) months counted from the date of the Independent Consultant's certificate; Provided, however, that at least three (3) months prior to the expiration of the 12-month "clear path" period referred hereto, the GRANTOR shall, for the remainder of the construction period, ensure that the GRANTEE shall at all times and from time to time be provided with a work area where construction can be performed in an unimpeded and continuous manner for a minimum

period of six (6) months therefrom, or for a shorter period for as long as full and satisfactory completion of the construction can be assured to the GRANTEE.

- d. The fulfillment of the Conditions Precedent shall be confirmed in writing jointly by the GRANTOR and the GRANTEE. Such confirmation shall state the date on which all Conditions Precedent were fulfilled, as well as the date on which construction should commence.
- e. If, within a period of twelve (12) months from the Effective Date, the Conditions Precedent specified under Section 6.03 b., except when the GRANTEE is unable to complete/ submit the FED within the prescribed period, have not been fulfilled, the GRANTOR and the GRANTEE shall promptly negotiate with each other in good faith for the purpose of determining whether to terminate this Agreement or to extend the period for the fulfillment of such Conditions Precedent for such period and upon such other terms and conditions as may be agreed upon between the GRANTOR and the GRANTEE, including, without limitation, an adjustment in Construction Costs and Concession Period; *Provided*, that upon the expiration of such extension period, the GRANTEE shall have the right to terminate this Agreement or to agree to a further extension of the period for the fulfillment of such Conditions Precedent; *Provided, further*, that if the GRANTEE shall choose to terminate this Agreement, the effects of such termination shall be as set forth in Section 11.04 (Termination by Reason of the GRANTOR's default).
- f. After the issuance by the GRANTOR of the Notice to Proceed, but prior to the fulfillment of the Conditions Precedent for the effectiveness of the Notice to Proceed, the GRANTEE may, in its own judgment and discretion and upon prior written notice to the GRANTOR, commence any preliminary construction activities in relation to the Project in accordance with applicable laws, rules and/or regulations in regard to permitting, licensing, certification and authorization of construction activities: *Provided*, however, that the commencement of such preliminary construction activities shall not be construed as a waiver of any of the Conditions Precedent contemplated under Section 6.03 b. 1) and 2).
- g. The GRANTEE assumes the responsibility of securing all the necessary licenses, permits, clearances, authorizations and their attendant costs and fees prior to start of any construction activities. The GRANTEE may request the assistance of the GRANTOR thereon on a best endeavor basis.

6.04 Construction of the Project

- a. Construction of Section Pr and all toll road facilities for the entire R10/C3/R9 shall be carried out in accordance with the approved Final Engineering Design and shall be managed and supervised by the GRANTEE in coordination with the Independent Consultant.
- b. The GRANTEE shall be free to choose and appoint any contractors and subcontractors, and to agree on the terms and conditions of the construction contracts for goods and services to be provided by

contractors, including, without limitation, prices, in accordance with applicable laws, rules or regulations.

- c. The GRANTEE shall be primarily responsible and accountable for the actions and activities of its contractors and for their compliance with relevant laws, rules and regulations applicable to the construction industry.
- d. The GRANTEE shall procure or cause to be procured the following insurance coverages during construction and until the satisfactory completion of the Construction:
 - 1) Contractor's All Risk insurance for 110% of the full construction value, to include all goods, equipment, materials, plants and other items necessary for construction, inclusive of the period during which such goods, equipment, materials, plants and other items are in transit to the area provided as Land in Vacant Possession; Provided, that the GRANTEE shall have absolute discretion in determining the beneficiary to such insurance coverage; and,
 - 2) Liability insurance covering any liability, including third party unlimited incidents, which may arise in connection with the construction; Provided, that adequate coverage for liability under a Contractor's All Risk insurance taken out by the GRANTEE under Section 6.04 d. 1) shall be considered as sufficient compliance herewith.
- e. As security for the completion by the GRANTEE of all toll road facilities for the entire R10/C3/R9 within the construction period stipulated in Section 6.01 b., the GRANTEE shall promptly post, as a condition precedent to the effectivity of the Notice to Proceed, a Performance Bond in the form of either cash, manager's check, cashier's check, bank draft or guarantee, letter of credit issued by a reputable bank or banks acceptable to the GRANTOR and upon such terms and conditions satisfactory to the GRANTOR, including without limitation a proviso to the effect that upon the service of notice of termination by the GRANTOR to the GRANTEE for non-completion or for unsatisfactory completion of the construction the GRANTOR shall be entitled to draw the full amount of the above cited letter of credit, surety bond callable on demand issued by the Government Service Insurance System or by a surety or insurance company duly accredited with the Office of the Insurance Commissioner, or a combination thereof, in accordance with the following schedules:
 - a. Cash, Manager's Check, Cashier's Check, Irrevocable Letter of Credit, Bank Draft – Twenty percent (20%) of the total estimated construction cost;
 - b. Bank Guarantee – Thirty percent (30%) of the total estimated construction cost;
 - c. Surety Bond – Fifty percent (50%) of the total estimated construction cost.

“Total Estimated Construction Cost” for this purpose shall mean the estimated construction cost of Section Pr.

The performance Bond shall be provided only up to the transfer to the GRANTOR of the entire Section Pr.

- f. The GRANTOR shall ensure that the Section Pu be substantially completed within the timeframe envisioned under Section 5.06.
- g. The GRANTOR shall be allowed to monitor the progress of the project’s construction (the DPWH in respect of the road infrastructure and the TRB as regards toll road facilities).

6.05 Excusable Delay in Construction

- a. In the event of delay in the start of construction due to prolonged delay in the issuance by governmental agencies or by local government units of the required construction permits, licenses, authorization, and/or other approvals, both parties shall mutually agree on a reasonable extension of time to resolve any issues that may have arisen from such request for issuance and shall correspondingly adjust the period within which construction must be completed; Provided, however, that the GRANTEE, in preparing the construction implementation schedule, shall properly indicate therein the reasonable period within which the GRANTEE expects to complete all the required permits, licenses, authorization, and/or approvals.
- b. Any delay in construction caused by Force Majeure or by any other causes not attributable to the willful act, fault, or negligence of the GRANTEE shall correspondingly extend the period of construction equivalent to the time required to remedy the cause of such delay; Provided, that if the GRANTOR and the GRANTEE cannot agree on an extension period acceptable to both parties, or if the GRANTOR and the GRANTEE mutually agree that construction cannot be resumed or expected to be completed within any agreed extension period, then the GRANTEE may, by notice to the GRANTOR, or the GRANTOR may, by notice to the GRANTEE, terminate this Agreement, in which event the GRANTEE shall be entitled to such remedy as may be provided for under Section 11.04 (Termination by Reason of GRANTOR’s Default).

6.06 Substantial Completion

- a. The R10/C3/R9, in its entirety or segments thereof, shall be considered as substantially complete if the construction thereof has reached such a state as to make it possible to determine whether the same sufficiently conforms to the Final Engineering Design and complies with all laws, rules and regulations for the operation of toll roads.
- b. The fact that the Section Pr is substantially complete shall be certified by the GRANTOR, in accordance with the following procedure:
 - 1) As soon as the Section Pr required of the GRANTEE to be constructed hereunder is substantially completed, the Contractor thereof shall tender the same to the GRANTEE pursuant to a Hand-over Certificate issued in accordance with the Construction

Contract. The Hand-over Certificate shall be duly certified by the Independent Consultant.

- 2) Upon its acceptance of the Hand-over Certificate, the GRANTEE shall promptly submit a copy thereof to the GRANTOR. Within thirty (30) days from receipt by the GRANTOR of a copy of the Hand-over Certificate, the GRANTOR shall cause the completed Section Pr to be inspected.
 - 3) If it is determined that the Section Pr conforms with the Final Engineering Design, the GRANTOR shall certify that the same is substantially complete by way of its issuance of a Certificate of Substantial Completion, which shall be issued not later than the last day of the 30-day inspection period provided for above.
 - 4) If, during inspection, the Section Pr is found to have defects, the GRANTOR shall cause a list of such defects to be prepared and a copy thereof furnished to the GRANTEE not later than the last day of the 30-day inspection period; Provided, however, that if on the last day of the 30-day inspection period, no report of defects is received by the GRANTEE, the GRANTOR shall thereby be deemed to have found no defect in the construction thereof and the GRANTEE shall be entitled as a matter of right to the issuance of the Certificate of Substantial Completion for the Section Pr of the R10/C3/R9.
 - 5) Should the GRANTEE, on the other hand, receive the GRANTOR's report of defects, the GRANTEE shall be bound to undertake all appropriate remedial and/or corrective works as promptly as possible. As soon as all required corrective and/or remedial works shall have thereby been undertaken in consideration of the GRANTOR's report, the GRANTEE shall request the GRANTOR in writing for a re-inspection thereof.
 - 6) Upon receipt by the GRANTOR of the GRANTEE's request for re-inspection, the GRANTOR shall cause the Section Pr to be inspected anew, such re-inspection to be completed not later than seven (7) days from the GRANTOR's receipt of the GRANTEE's request for re-inspection.
 - 7) If, upon re-inspection, the Independent Consultant certifies in writing that all defects included in the GRANTOR's previous report have been properly corrected and/or remedied, the GRANTOR shall issue the corresponding Certificate of Substantial Completion for the Section Pr not later than thirty (30) days from the GRANTOR's receipt of the Independent Consultant's certification.
- c. As soon as the entire R10/C3/R9 are substantially completed, the GRANTOR shall issue the corresponding Certificate of Substantial Completion for the entirety of the R10/C3/R9 in favor of the GRANTEE. The procedure set forth in Section 6.06 b. shall be observed insofar as it may be applicable hereto.

- d. The issuance of a Certification of Substantial Completion in accordance with the foregoing sections shall constitute an acknowledgment by the GRANTOR that the completed section is suitable for operation as a toll road.

6.07 Cooperation with Contractors for Section Pu

At the design and construction stage, the GRANTEE shall proceed with its activities relating to the connection of the Sections Pu and Pr as well as the construction/ installation of the toll road facilities in cooperation with the GRANTOR's contractors who will undertake the construction of Section Pu.

6.08 Final Acceptance for Section Pu

The GRANTOR shall furnish the GRANTEE with copies of the Certificate/s of Final Acceptance attesting that the Section Pu has been completely constructed in accordance with the GRANTOR's standards and that the GRANTOR has satisfactorily accepted ownership thereof from its constructors.

6.09 Opening of Completed Sections For Public Use

During the construction stage, the GRANTOR shall not open up the completed sections of the R10/C3/R9 for public use without prior approval of the GRANTEE. Any repair necessitated on any damage to the completed sections of the R10/C3/R9 occasioned by the GRANTOR's decision to open the same up for public use before the operation date shall be for the GRANTOR's account.

6.10 Early Completion

In the event of the GRANTEE's early completion of the Construction, it shall be allowed to operate the R10/C3/R9 as a toll road facility even prior to the initial operation date of the concession period stated under Section 8.04 without thereby amending the fixed dates for the duration of the concession period stated therein, subject to the GRANTEE's compliance with the requirements for the issuance of a Toll Operation Certificate under Section 8.06; Provided that the Toll Rate at the early operation date shall be the same as the toll rate of the initial operation date as indicated herein.

The revenue earned by the GRANTEE due to his early completion shall be considered as an additional revenue to the GRANTEE as bonus.

6.11 Liquidated Damage for Delay

If the GRANTEE fails to comply with the Time for Completion (Substantial Completion of the entire R10/C3/R9 as a toll road facility certified by the GRANTOR) in accordance with Section 6.06, the GRANTEE shall pay to the GRANTOR Seven Million Five Hundred Thousand Pesos (₱ 7.5 million) per day as liquidated damages for a period after the date scheduled as such in Section 5.06 until the date stated in a Certificate of Substantial Completion for the entire R10/C3/R9 issued by the GRANTOR; Provided, however, that the amount for liquidated damages shall not exceed ten percent (10%) of the total estimated construction cost as stated in Section 6.04 e. The GRANTOR may, without prejudice to any other method of recovery, draw the amount of such damages from the Performance Bond posted by the GRANTEE. The payment of such damages shall not relieve the GRANTEE from any obligation to complete the

project works, or from any other of its obligations and liabilities under the Agreement.

6.12 Damage due to Hidden Defects; Collapse of Structure

Throughout the Concession Period, the GRANTEE shall, at its own expense, repair any damage to the R10/C3/R9 which may have been proximately caused by, or may be attributable to, hidden defect/s in the Design or Construction thereof undertaken hereunder by the GRANTEE; Provided, however, that this provision shall not apply to any damage due to ordinary wear and tear; Provided, further that nothing herein shall be construed as relieving the GRANTEE and/or its contractors, architects or engineers from their responsibilities under Article 1723 of the Civil Code of the Philippines regarding liability for damage in the event of the collapse of a structure within fifteen (15) years from the completion of its construction. In the event of damage due to hidden defects in portion of the R10/C3/R9 the construction of which were undertaken by the GRANTOR, repair thereto in a timely manner shall be the obligation of the GRANTOR, without prejudice to the GRANTEE's right to just compensation from the GRANTOR in the event of temporary partial or total closure of the R10/C3/R9 occasioned thereby.

SECTION 7.0 OWNERSHIP OF THE TOLL ROAD

The R10/C3/R9 except the Toll Road Facilities thereof of a fixed and permanent nature shall be owned by the Philippine Government, without prejudice to the rights and entitlements of the GRANTEE under this Agreement. The legal transfer of ownership of the R10/C3/R9 except the Toll Road Facilities thereof shall be deemed to occur automatically upon the GRANTOR's issuance of the Certificate of Substantial Completion therefor. Meanwhile the ownership of Toll Road Facilities shall be retained by the GRANTEE throughout the duration of the concession period and then transferred to the GRANTOR free of charge upon the termination of the concession period.

SECTION 8.0 OPERATION AND MAINTENANCE

8.01 Operation

- a. Full Operation of the R10/C3/R9 as a toll road facility and public utility shall be authorized as soon as the Toll Operation Certificate is issued by the TRB for the entire R10/C3/R9.
- b. The Toll Operation Certificate shall be issued in favor of and in the name of the GRANTEE. By its acceptance thereof and its assumption of its duties and responsibilities thereunder, the GRANTEE shall be deemed to have bound itself to the terms and conditions of the Toll Operation Certificate
- c. The GRANTEE shall prepare and submit for the approval of the TRB a draft Toll Operation and Maintenance Manual and Procedures, in accordance with the Minimum Standards for Operation and Maintenance annexed hereto, not later than six (6) months before the intended Operation Date of the R10/C3/R9, which document, as may from time to time and at anytime be revised or amended by agreement between the GRANTEE and the TRB, shall codify the procedures,

mechanisms and standards to be met in the Operation and Maintenance of the R10/C3/R9 throughout the duration of the Concession Period.

8.02 Grant of Operation and Maintenance

Subject to the terms and conditions of this Agreement, the Operation and Maintenance of the R10/C3/R9 shall be the exclusive right, privilege, responsibility and obligation of the GRANTEE through the Operations Company which it shall form in accordance with Section 8.11.

8.03 Term of Operation and Maintenance

The GRANTEE, through the Operations Company, shall perform the Operation and Maintenance of the R10/C3/R9 starting from the Operation Date until the expiration of the Concession Period, inclusive of allowable adjustment thereof.

8.04 Concession Period

For the avoidance of doubt, the Concession Period for the R10/C3/R9 shall commence on [date] and expire on [date], corresponding to the period needed for the achievement of the agreed target cumulative revenue (“TCR”) at a price level of year 20__ [base year], estimated at _____. In the event the TCR is not achieved by the agreed expiration date, the GRANTEE may be allowed an extension of the concession period up to a maximum of five (5) years; Provided, That the extended concession shall be terminated upon the achievement of the TCR at anytime within the extended period.

8.05 Obligations under the Concession

- a. The GRANTEE shall take all legal and other actions which may be required, necessary and/or appropriate to commence with the Operation of the R10/C3/R9 as a toll road facility as expeditiously as possible.
- b. The GRANTEE, through the Operations Company, shall perform the Operation and Maintenance of the R10/C3/R9 in accordance with this Agreement, the Toll Operation Certificate, the Toll Operation and Maintenance Manual and Procedures to be subsequently agreed upon with the TRB including any amendment or supplement thereto, and all applicable laws and regulations in effect at any time and from time to time. In this regard, the TRB shall have the right to inspect and check on the Operation and Maintenance on site including, from time to time, the verification and audit of Toll Revenues, Financial Books and all relevant records.
- c. The GRANTEE, through the Operations Company, shall at all times provide qualified manpower in order to perform optimal Operation and Maintenance on the R10/C3/R9.
- d. Upon being authorized to operate, the GRANTEE, through the Operations Company, shall keep the R10/C3/R9 open to toll road users continuously and without interruption. The GRANTEE, through the Operations Company, may however immediately close down any portion of the toll road, without securing prior closure authorization from the TRB, whenever it determines that the use of the toll road or any portion thereof imperils motorists in the light of the relevant directives

or established procedures and there is no material time for obtaining prior closure authorization; Provided, that the GRANTEE, through the Operations Company, shall serve notice thereof to the TRB within twenty-four (24) hours from the emergency closure of the affected toll facility.

- e. Without prejudice to any other provision of this Agreement, all costs and expenses in respect of undertaking the Operation and Maintenance of the toll facilities, including without limitation taxes and other obligations arising therefrom accruing at any time during the Concession Period, shall be the joint responsibility of the GRANTEE and the Operations Company.
- f. The GRANTEE, through the Operations Company, shall take out, or cause to be taken out, such reasonable and practicable insurance coverages as may be mutually agreed upon with the GRANTOR, which may include casualty insurance, property insurance on toll operations facilities, and third party liability insurance in connection with the use by third persons of the toll road facilities. Certified copies of the policies and all renewal certificates and endorsement slips shall be submitted by the GRANTEE, through the Operations Company, to the GRANTOR immediately upon receipt thereof from the insurer. The Parties shall mutually agree upon the insurer, the amount and duration of coverage, the extent of information to be disclosed, and causes for cancellation including prohibited acts that may render void or voidable any insurance taken. The designation of beneficiary/ies shall however be the sole prerogative of the GRANTEE/ Operations Company.

8.06 Procedure for Issuance of Toll Operation Certificate

- a. The procedure for the issuance of the Toll Operation Certificate shall be as follows:
 - 1) The GRANTEE shall be allowed to submit to the TRB (copy-furnished the GRANTOR) an application for the issuance of a Toll Operation Certificate in favor of the GRANTEE immediately upon the GRANTEE's receipt from the GRANTOR of the Certificate of Substantial Completion of the entire R10/C3/R9 including all toll road facilities.
 - 2) The application shall be in writing, duly verified by a responsible officer of the GRANTEE, and shall contain all relevant information as may be necessary and/or appropriate to justify the issuance in its favor of the Toll Operation Certificate, particularly in respect of physical requirements for operating and maintaining the R10/C3/R9 as a toll road facility.
 - 3) The application to be submitted by the GRANTEE shall attach thereto all documents as may be deemed appropriate for the purpose or as the TRB may reasonably require.
- b. The GRANTEE's application for a Toll Operation Certificate shall be resolved by the TRB not later than thirty (30) days from filing and from the GRANTEE's compliance with the requirements under Section 8.06 a. hereof.

- c. The TRB shall not unreasonably withhold the issuance in the GRANTEE's favor of the Toll Operation Certificate for the R10/C3/R9, all reasonable conditions and requirements therefor having been substantially complied with by the GRANTEE. Should delay in the issuance thereof be occasioned by the fault or negligence of the GRANTOR or the TRB, the GRANTEE shall be compensated therefor either by way of equitably extending the originally-agreed concession period, or by some other equitable mechanism which the GRANTOR and the GRANTEE may agree upon.

8.07 Scope of Operations

- a. The Operation of the R10/C3/R9 shall normally be performed all throughout the twenty-four (24) hours in a day, everyday.
- b. The physical aspects of Operation shall include (but shall not be limited to) the following activities, services, systems and facilities:
 - 1) Toll collection and accounting system
 - 2) Traffic control and management system
 - 3) Toll road patrol and vehicle control community system
 - 4) Facilities for assistance of disabled vehicles and for answering to emergencies.
 - 5) Information service/message sign boards
 - 6) Vehicle regulation facilities (e.g., weight, load, height)
 - 7) Emergency call and lightning facilities
 - 8) Emergency operations facilities
 - 9) Traffic management and administration of toll road facilities
 - 10) Personnel and staff management, development and control
- c. The physical aspects of Operation shall be governed by the terms of this Agreement, the Toll Operation Certificate/s, the Toll Operation and Maintenance Manual and Procedures, and pertinent laws, rules and regulations including such guidelines as may be promulgated by the TRB upon prior consultation with the GRANTEE and the Operations Company.

8.08 Scope of Maintenance

- a. The GRANTEE shall maintain the R10/C3/R9 in good condition and shall perform repairs, reconditions, periodic maintenance and restorations thereon as may be prescribed in this Agreement, the Toll Operation Certificate/s, the Toll Operation and Maintenance Manual and procedures, and general business practices considering all circumstances which the GRANTEE and the Operations Company shall deem relevant.
- b. The physical aspects of Maintenance shall include, (but shall not be limited to) the following activities, services, systems and facilities:
 - 1) Management and control systems for maintenance
 - 2) Patrolling and inspection facilities
 - 3) Road cleaning and obstruction control facilities
 - 4) Electricity and water supply facilities
 - 5) Re-pavement facilities, steel bridge painting, bridge strengthening, pavement painting and the like

- 6) Disaster prevention and reaction facilities
 - 7) Environmental enhancement protection
 - 8) The maintenance of R10/C3/R9 facilities (including periodic repairs and renewal)
 - 9) Periodic structural overlays
- c. The physical aspects of Maintenance shall be governed by the terms of this Agreement, the Toll Operation Certificate, the Toll Operation and Maintenance Manual and Procedures, pertinent laws, rules and regulations including such guidelines as may be promulgated by the TRB upon prior consultation with the GRANTEE and the Operations Company.

8.09 Safety and Emergency Operations

- a. In the Operation and Maintenance of the R10/C3/R9, the GRANTEE, through the Operations Company, shall maintain order and safety of the traffic and ensure the well-being of toll road users.
- b. Except as may otherwise be applicable in the event of Force Majeure or Hidden Defects, in case of damage to any portion of the R10/C3/R9, the GRANTEE, through the Operations Company, shall, as may be feasible under the circumstances attending, expeditiously perform the necessary repairs and undertake the required measures to ensure the smooth flow of traffic and the safety of toll road users.

8.10 Traffic Mobility and Decongestion Facilities

The TRB shall coordinate with the appropriate national or local government unit or other public authority for the purpose of ensuring and/or facilitating the construction and operation of any traffic mobility and/or decongestion facility which the GRANTOR may authorize the GRANTEE to construct or implement.

8.11 GRANTEE's Operations Company

- a. Subject to all relevant existing laws, rules and regulations particularly in respect of nationality requirements for operating a public utility, the GRANTEE shall incorporate a reasonable sized Operations Company at least six (6) months prior to the Operations Date of the R10/C3/R9. The GRANTEE shall be stockholder in the Operations Company in the minimum proportion of forty percent (40%) of its total shares of stock outstanding; Provided, that any Operations Contract entered into by the GRANTEE with the Operations Company shall be subject to the approval of the TRB, which approval shall not be unreasonably withheld.
- b. The Operations Company shall be a single purpose corporation, the powers and functions of which shall only be to undertake and perform the Operation and Maintenance of the R10/C3/R9 for and on behalf of the GRANTEE under this Agreement, including the collection of toll revenue and the payment of all monetary obligations incurred in the course of implementing this Agreement.
- c. The GRANTOR hereby expressly recognizes the GRANTEE's right and prerogative to assign its rights and transfer its liabilities and obligations under this Agreement to the Operations Company, provided that the

GRANTEE shall continue to be responsible to the GRANTOR and the GRANTEE's Financiers for the due performance by the Operations Company of its undertakings hereunder. The Parties shall execute with the Operations Company any and all such agreements as may be necessary and/or appropriate for the purpose of giving effect to this engagement; otherwise, the Operations Company's assumption of its duties and responsibilities as toll operator shall be deemed as its acceptance of the terms and conditions of this Agreement, the Toll Operation Certificate, the Toll Operation and Maintenance Manual and Procedures, and such other agreements or directives pertinent to the operation of the R10/C3/R9 as a toll road facility.

- d. The GRANTEE's willful failure or refusal to incorporate and set up the Operations Company in accordance herewith shall be treated as a special event of default which, until remedied, shall prevent it from collecting Toll from user motorists.

8.12 Operation and Maintenance Supervision

The TRB shall have the right to inspect any part of the operation and maintenance of the R10/C3/R9 and all duly-approved toll-related and non-toll related facilities, taking into account at all times the flow of traffic and level of service required to ensure that the annual routine/ regular and heavy repairs/ periodic maintenance works on the R10/C3/R9 are duly implemented by the GRANTEE and/or Operations Company in line with the agreed scope of Operation and Maintenance, the Toll Operation and Maintenance Manual and Procedures, and pertinent laws, rules, regulations and guidelines issued by the TRB. The TRB's overhead expenses for such supervision shall be shouldered by the GRANTEE, through the Operations Company, and shall accordingly provide such amounts needed therefor, in accordance with the procedures, controls and corresponding budget as may be approved by the TRB; Provided, however, that the total annual expenses shall in no case exceed two (2%) percent of the total annual budget for operation and maintenance in the financial projections; Provided, further, that in the event that the aggregate amount of the TRB's PROJECT OVERHEAD EXPENSES is less than 2%, the differential amount shall be deposited to the National Treasury.

8.13 Toll User-Related Services

The GRANTEE shall have the exclusive right to engage and/or charge service fees to concessionaires within the R10/C3/R9 for services to be rendered to the users of the toll road for emergency and toll user assistance services, including but not limited to automotive repair shops, towing services, and the like, in accordance with such rules and regulations as may be promulgated by the GRANTOR; Provided, however, that any such headquarters, depots, shops or garages that may be established in relation to the foregoing may only be located outside the Right-of-Way and merely granted ready access to the R10/C3/R9 for purposes of rendering the said Services.

8.14 Non-Toll User Related Services

The GRANTEE may, subject to such rules and regulations as may be promulgated by GRANTOR, collect and/or charge service fees from concessionaires rendering non-toll user related services, such as the use of the

R10/C3/R9 Right-of-Way for passage of cables, pipes, transmission and communication lines and the like.

8.15 Treatment of Additional Revenues

In either case under Sections 8.13 and 8.14, the aforementioned rules and regulations to be promulgated by the GRANTOR may include a provision that a certain percentage of the Net Income derived by the GRANTEE and of the foregoing service fees shall be remitted to the National Treasury.

SECTION 9.0 PROJECT FINANCING

9.01 Grant of Right to exclusively arrange for Project Financing

- a. Subject to the terms and conditions of this Agreement, the GRANTOR grants to the GRANTEE the exclusive right, privilege, responsibility and obligation to secure and make the necessary arrangements for the financing, through equity and/or debt, of the design, construction, installation, operation and maintenance of the R10/C3/R9 Project.
- b. Evidence of Project Financing shall consist of the GRANTEE's Shareholders Agreement and receipt of payment for shareholdings; Project Financing Agreements or similar debt arrangements with Financiers; or Turn-key design and construction agreements with constructors and engineering consultants which are willing to finance on their own the design and construction works of the R10/C3/R9 Project or portions thereof.

9.02 Proof of Availability of funds for the Implementation of the R10/C3/R9 Project

- a. For purposes of implementing the R10/C3/R9 Project in accordance with the intent of this Agreement, the GRANTEE shall present proof of the availability of sufficient funds to prosecute the Project by way of submitting to the GRANTOR within a reasonable period of time evidences of Project Financing in accordance with the following schedule:
 - 1) GRANTEE's paid-up equity in the Project, equivalent to twenty percent (20%) or more of the Total Project Cost for Section Pr inclusive of the entire toll road facilities– Upon the signing of this Agreement.
 - 2) Project Financing Agreement for the remaining eighty percent (80%) of the Total Project Cost as presented in the financial plan – Upon the effectivity of the Notice to Proceed but not later than one (1) year from the signing of this Agreement.
 - 3) Financial arrangement for the Operation and Maintenance of the R10/C3/R9, equivalent to twelve (12) months' operating and maintenance requirement in the form of equity in the Operating Company – Six (6) months prior to the agreed commencement of the Concession Period. The GRANTEE shall see to it that the twelve month operating and maintenance fund requirement is replenished and maintained and/or otherwise secured on a

continuing basis and in accordance with the actual requirements of the R10/C3/R9 until the last twelve (12) months of the Concession Period, inclusive of any extension thereto.

- b. The inability of the GRANTEE to provide the required fund or financial arrangement for the Project shall be subject to the appropriate default provision under this Agreement.

9.03 Liability to Financiers

For the avoidance of doubt, the repayment of any debt or similar financial instruments by the GRANTEE in relation to this Agreement shall be the sole obligation of the GRANTEE, until and unless the GRANTOR has been declared in default and this Agreement is terminated for reason of GRANTOR’s Default and the GRANTOR is consequently subrogated to the rights, privileges and obligations and responsibilities of the GRANTEE.

9.04 Security to Financiers

The GRANTOR and the GRANTEE hereby expressly agree that the GRANTEE or its Operating Company shall be allowed to assign to the GRANTEE’s Financiers after deducting O&M expenses all the GRANTEE’s accounts receivable including, without limitation, the Toll Road Revenue, in order to secure the repayment of the Financing for the Project. The GRANTOR shall not unreasonably withhold the performance of any act, or the execution of any document which may be reasonably required by the GRANTEE’s Financiers to be so performed or executed from time to time as a precondition to the grant of the Financing required for the implementation of the R10/C3/R9 Project, the performance or execution of which shall be made by the GRANTOR in a timely manner.

SECTION 10.0 TOLL RATE AND TOLL COLLECTIONS

10.01 Base Toll Rate

- a. The Base Toll Rate for the R10/C3/R9 shall be at the 2005 year price as follows:

Class I Vehicles	Class II Vehicles	Class III Vehicles
₱ 4.0/km	₱ 8.0/km	₱ 10.4/km

Class I Vehicles shall cover light vehicles, such as cars, jeepneys, taxis, vans, pick-ups, and the like; **Class II Vehicles** shall include medium-weight vehicles, such as buses and two (2)-axle trucks; **Class III Vehicles** shall refer to heavy vehicles, such as trucks with three (3) axles and more.

- b. Any subsequent Toll Rate Adjustment shall be made upon request and through a formal application by the GRANTEE and/or the Operations Company in accordance with Section 10.02 – Toll Rate Adjustment.

- c. The parties recognize that the Base Toll Rate was decided by the GRANTOR and shall be applied to calculation of the target cumulative revenue during the concession period.

10.02 Toll Rate Adjustment

- a. Adjustment in Toll Rates shall be of two kinds, namely: (a) periodic and (b) interim. Periodic adjustments shall be governed by Section 10.02 b., while interim adjustments by Section 10.02 c.
- b. Periodic adjustment in Toll Rates shall be subject to the following provisions:
 - 1) The TRB shall allow the GRANTEE a periodic adjustment in the prevailing Toll Rate setting on respective **Toll Review Dates** (Dates every three years calculated from the Operation Date), which shall be the Toll Rate calculated through application of the following formula, subject to rounding:

$$TR_n = TR_o (K+1)^n$$

where,

- i) Until all principal and interests on Loans denominated in a currency other than in Philippine Peso have been fully repaid

$$K = 0.25 (CPI_c - CPI_R) / CPI_R + 0.2(ER_c - ER_R) / ER_R$$

- ii) After all principal and interests on Loans denominated in a currency other than in Philippine Peso have been fully repaid

$$K = (CPI_c - CPI_R) / CPI_R$$

n = Number of years between any periodic adjustment and its succeeding periodic or interim adjustment.

Definitions:

TR_n = Toll Rate for the succeeding three (3) Concession Years

TR_o = Toll rate at the last Toll Review Date before rounding

CPI_c = Consumer price index (“CPI”) for N.C.R. determined by the National Statistics Office (NSO) for the month immediately prior to the Toll Review Date

CPI_R = CPI for N.C.R. at the last Toll Review Date

ER_c = The exchange rate (“Exchange Rate”) between the Philippine Peso and the currency in which the Loans are denominated calculated by taking the average rate as published by the Bangko Sentral ng Pilipinas (BSP) over the 6 month preceding the Toll Review Date.

ER_R = The Exchange Rate used in the formula aforesaid at the last Toll Review Date.

For purposes of adjusting the Toll Rates, all three (3) vehicle classifications shall be subject to the same rate of adjustment as indicated in the formula above.

- 2) The Toll as adjusted in Section 10.02 b. 1) shall be the Toll Rates as hereinafter set out for the immediately succeeding three (3) years and shall be enforced and collected by the GRANTEE, on the first day of January of the year immediately succeeding the Toll Review Date.
- c. Without prejudice to the provisions of section 10.02 b., Toll Rates shall further be adjusted as follows:
- 1) The GRANTEE shall be entitled to apply for and, if warranted, to be granted an additional interim adjustment of the Toll Rate upon the occurrence of any of the following events:
 - (i) in the event of Force Majeure, or
 - (ii) in the event of a significant depreciation, devaluation or appreciation of the Philippine Peso against the currency in which the Loans are denominated in excess of 10% over or below the exchange rate at the last Toll review Date (hereinafter referred to as the 10% benchmark), or
 - (iii) whenever additional costs are incurred for required repair or reconstruction work arising out of Force Majeure, if such additional costs are not adequately covered by insurance.
 - 2) Any application for Toll Rate adjustment pursuant to Section 10.02 c. 1) (ii) shall be submitted to the GRANTOR, through the TRB, on or before September 30th of the Concession Year in which the said event occurred (hereinafter referred as “the **Forex Review Date**”) and such adjustment to the Toll Rate shall be made on the first day of January of the year immediately following the Forex Review Date.
 - 3) The evaluation of any such application shall be subject to the following guidelines:
 - (i) The GRANTEE’s right to apply for an interim Toll Rate adjustment under Section 10.02 c. 1) (ii) shall be recognized only while any Financing arrangement is

outstanding and has not yet been paid in full in accordance with the Financial Model attached as an annex hereto.

- (ii) An interim adjustment in Toll Rates under Section 10.02 c. 1) (ii) shall consider such amount as may be required to provide interim relief to the GRANTEE from a substantial increase in debt-service burden resulting from such depreciation, devaluation.
 - (iii) An interim adjustment in Toll rates under any situation in Section 10.02 c. 1) so allowed to be effected shall be considered as an advance to the GRANTEE to be set off against future Toll Rate adjustments; Provided, that in computing the amount to be set off the advance, the time value of the advance shall be considered, as may be recognized in the Financial Model.
- d. In the adjustment of Toll Rates under Section 10.02, the current Toll Rates shall not be Rounded for purposes of computing the New Toll Rates. Thus, in Section 10.02 b. 1), the Existing Toll Rate will refer to the unrounded Initial Toll Rate (as shown in the Financial Projections) in the case of the first scheduled toll rate adjustments, or to unrounded toll rate as determined during the last adjustment in the case of all succeeding toll rate adjustments after the first-scheduled toll rate adjustment.
- e. The adjusted Toll Rate shall be enforced and collected by the GRANTEE, through the Operations Company.

10.03 Increase of Base Toll Rate in real term

- a. Through the concession period, the Base Toll Rate (TR_b) expressed at the year 2005 price shall be increased in real term on corresponding Toll Review Dates as follows:

TR _b	Class I Vehicle	Class II Vehicle	Class III Vehicle
2005	₱ 4.0/km	₱ 8.0/km	₱ 10.4/km
2015	₱ 10.0 + ₱ 4.0/km	₱ 20.0 + ₱ 8.0/km	₱ 26.0 + ₱ 10.4/km
2020	₱ 20.0 + ₱ 4.0/km	₱ 40.0 + ₱ 8.0/km	₱ 56.0 + ₱ 10.4/km

Toll rates after year 2015 shall be composed of a fixed toll portion as entrance fee and a proportional toll portion to traveling distance.

- b. As the Base Toll Rate corresponding to the designated years above is expressed at the year 2005 price, actual Toll Rate shall be calculated based on the following formula:

$$IA_a = IA_b(1+K)$$

Where

$$K = (CPI_c - CPI_b)/CPI_b$$

Definitions:

- IA_a = Toll Rate at the adjustment year price
- IA_b = Toll Rate at the year 2005 price
- CPI_b = Consumer price index (“CPI”) for N.C.R. in year 2005 determined by the National Statistics Office (NSO)
- CPI_c = The CPI for N.C.R determined by the NSO for the month immediately prior to the corresponding Toll Review Date

10.04 Toll and Toll Collection

- a. Throughout the term of the Operation and Maintenance of the R10/C3/R9 as a toll road facility in accordance with this Agreement, including the period of its partial operation in case, the GRANTEE, through its Operations Company, shall collect Toll in accordance with this Agreement and the Toll Operation and Maintenance Manual and Procedures.
- b. The schedule of Toll Rates as calculated based on the prevailing Toll Rate, shall be published by the GRANTEE in a newspaper of general circulation at least once a week for three (3) consecutive weeks not later than one (1) month after the applicable Toll Review Date or Forex Review Date.
- c. The Toll shall be collected by using the Closed System, whereby the toll charged in respect of the use of any segment of the R10/C3/R9 shall be such amount determined by multiplying the applicable Toll Rate by the aggregate length per kilometer of distance traveled, subject to rounding.
- d. The GRANTEE, through the Operations Company, shall be required to issue toll tickets or their functional equivalent to users of the R10/C3/R9 at toll plazas provided for such purpose at the entries and/or exits of the R10/C3/R9.
- e. The toll revenue collected by the GRANTEE, through the Operations Company, shall be deposited daily in the designated account duly opened and maintained for such purpose.
- f. The Operations Company shall submit to both the GRANTOR and the GRANTEE daily toll collection reports in a manner and form that may be mutually agreed upon from time to time by all parties. Non-compliance with such submissions may prejudice any request for adjustment subsequently made at the instance solely of the Operations Company.

10.05 Calculation of Cumulative Revenue

- a. The Cumulative Revenue (CR) shall be calculated through application of the following formula:

$$CR = \sum_{t=i}^e R_t$$

Where

$$R_t = NR_t \times AF_t$$

Definitions:

R_t = Toll Revenue at year-t expressed at a price level of the base year 20__

NR_t = Nominal Toll Revenue at the year-t price

AF_t = Adjustment Factor to convert a price level from year- t to the base year 20__

e = the end year of Concession

i = the beginning year of Operation

- b. The Cumulative Revenue shall be monthly calculated to compare with the Target Cumulative Revenue by the GRANTEE, a result of which shall be submitted to the GRANTOR for approval.

SECTION 11.0 DEFAULT AND TERMINATION

11.01 General Principles

- a. Other than as may be provided for in law, this Agreement shall not terminate or be terminated for any reason other than as set forth in this Agreement.
- b. Any notice of termination required hereunder shall state the specific cause/s for such termination.
- c. The Party in default shall bear the consequence of termination.

11.02 Termination by Reason of GRANTEE's Default

A. INCIDENCES OF DEFAULT BY THE GRANTEE:

- a. The following shall constitute Default by the GRANTEE during construction:
 - 1) Whenever the GRANTEE incurs a negative slippage in the construction activities equivalent to twenty percent (20%) of the construction works which remains unremedied for a period of three (3) months despite constant reminders, and such slippage is solely attributable to the GRANTEE as determined by the Independent Consultant and/or the GRANTOR.

- 2) Whenever the GRANTEE fails to execute the works in accordance with contract standards and specifications and refuses to remedy for a period of three (3) months any major deficiency or deviation from standard industry practice that has been found to materially affect the integrity of the project, or substantially causes the project to fail to meet the minimum performance standards of a toll facility; Provided, that the major deficiency or deviation has been reported to the GRANTEE by the Independent Consultant and confirmed by the GRANTOR, despite which the GRANTEE, after an extended period of due written notice, fails to remedy the same.
 - 3) Whenever the GRANTEE is persistently or flagrantly in breach of any material obligation under this Agreement for causes solely attributable to the GRANTEE.
 - 4) In the event that the Independent Consultant certifies to the GRANTOR that the GRANTEE has abandoned the construction of the facility and the completion of the project is imperiled.
- b. The following shall constitute other events of default by the GRANTEE:
- 1) If, after six (6) months from the signing and approval of this Agreement, the GRANTEE fails to fulfill or meet any requirement for the effectiveness of this Agreement which is or ought to be within the GRANTEE's power to fulfill, as a consequence of which this Agreement remains not in effect.
 - 2) If, after twelve (12) months from the effectivity of this Agreement, the Independent Consultant certifies that the GRANTEE has not satisfactorily accomplished and submitted for approval the Final Engineering Design for the R10/C3/R9 despite written notice and demand from the GRANTOR.
 - 3) If, after twelve (12) months from the effectivity of this Agreement, the GRANTEE fails to procure the necessary financing for the construction of the project, which may be indicated by the absence of any continuing major construction activity in the project site or the GRANTEE's continuing inability to commence or proceed with construction activities in accordance with the agreed construction schedule, as certified by the Independent Consultant.
 - 4) If, after six (6) months from the agreed commencement date of the Operation and Maintenance Concession Period, the GRANTEE, for reasons attributable to the GRANTEE alone, fails to operate the R10/C3/R9 as a Toll Road facility.
 - 5) Whenever the GRANTEE is in the process of being liquidated and dissolved, for reasons other than insolvency, or is declared insolvent, or whenever, during the loan repayment period, the GRANTEE's lenders and/or creditors have determined that the GRANTEE is unable to fulfill its obligation to such lenders and/or creditors.

- 6) Whenever the GRANTEE is in breach of or violates any laws and regulations of the Republic of the Philippines, and thereby, adversely affects investments in the R10/C3/R9 Project.
- 7) Whenever the GRANTEE totally assigns its rights and obligations under this Agreement to a third party other than as may be allowed herein, or substantially changes without the written consent of the GRANTOR any material aspect of its commitments under the bid proposal submitted to the GRANTOR, by reason of which the R10/C3/R9 Project was awarded to the GRANTEE.

B. DUE PROCESS IN CASE OF GRANTEE'S DEFAULT:

- a. Upon the occurrence of any situation amounting to the GRANTEE's default, the GRANTOR shall serve a written Notice of Default on the GRANTEE, and requiring therein the GRANTEE to remedy the cause/s of default within a period of three (3) months from receipt by the GRANTEE of such Notice (the "**GRANTEE'S CURING PERIOD**").
- b. Should the GRANTEE substantially address the GRANTOR's demand by instituting remedies satisfactory to the GRANTOR, the Notice of Default shall thereby be rendered inefficacious and of no bearing. If the GRANTEE, on the other hand, fails to remedy such default within the curing period provided, the GRANTOR, at its option, may terminate this Agreement by serving a written Notice of Termination on the GRANTEE. Contract termination shall thereby take effect within such period as may be decreed in the GRANTOR's Notice of Termination.
- c. With the GRANTOR's conformity, the GRANTEE and/or its Financiers may be allowed to appoint within the curing period a SUBSTITUTE GRANTEE, which shall be tasked with undertaking the GRANTEE's obligations and will in turn be allowed to benefit from the GRANTEE's rights and privileges under this Agreement. Provided, that the GRANTEE shall first execute and submit to the GRANTOR the corresponding deed of assignment in favor of the SUBSTITUTE GRANTEE, duly approved by all of the GRANTEE's Financiers. This Agreement shall immediately terminate insofar as it may concern the GRANTEE upon the GRANTOR's acceptance of the SUBSTITUTE GRANTEE.
- d. At the GRANTOR's option, the Parties may mutually agree upon the reasonable extension of the curing period if such extension is necessary for the approval and confirmation of the SUBSTITUTE GRANTEE. Provided, that in no case shall the extension be more than six (6) months from the expiry of the original curing period.
- e. In the event that the GRANTEE and/or its Financiers do not nominate a SUBSTITUE GRANTEE, or having done so fail to secure the approval thereto of the GRANTOR and/or all of the GRANTEE's Financiers, the GRANTOR shall, at the end of the curing period, immediately take over the Construction site and/or the Operation and Maintenance of the R10/C3/R9, subject to the Operations Company's rights under Section 11.02 C. b. Should a SUBSTITUTE GRANTEE be subsequently designated and confirmed, the GRANTOR shall turn over the facilities

thereto, subject to the rights of the Operations Company under Section 11.02 C. b.

- f. For continuity of operations the Operations Company shall, whenever the GRANTEE is incapacitated from fulfilling its obligations hereunder or to its Financiers, hold intact all Toll Revenues which it may meanwhile collect from motorists, less such amounts as it may need for its ordinary operations, and place the same in an escrow account to be designated by the GRANTOR until such time as the Operations Company shall otherwise be directed by mutual agreement of the GRANTOR, the GRANTEE/ substitute GRANTEE and the GRANTEE's Financiers. Any willful or negligent breach by the Operations Company of its obligation to safeguard the integrity of Toll Revenues shall be considered as a material breach of its undertakings hereunder.

C. CONSEQUENCES OF TERMINATION DUE TO GRANTEE'S DEFAULT:

- a. If this Agreement is terminated by the GRANTOR by reason of the GRANTEE's default, all rights and privileges of the GRANTEE under this Agreement shall be extinguished; Provided, however, that the GRANTOR shall at all times and at its sole option have the right to invoke and exercise any other remedy which may be available to it under any provision of this Agreement, including the confiscation of the performance bond, and under any applicable law, rule and/or regulation which may be in effect at the time of default; Provided, further, that all obligations, responsibilities and liabilities incurred by the GRANTEE with third parties, including Financiers and Investors, in relation to this Agreement shall be the sole obligation, responsibility, and liability of the GRANTEE.
- b. Where the Operations Company is not itself in default, it shall not be prejudiced by the consequences of the GRANTEE's default, and the substitute GRANTEE shall be required to respect the Operations Company's rights hereunder as a precondition to the substitute GRANTEE's recognition as such.

11.03 Termination by Reason of Operator's Default

A. INCIDENCES OF DEFAULT BY THE OPERATIONS COMPANY

The following events shall constitute Default of the Operations Company:

- a. When the Operations Company is persistently or flagrantly in breach of any material obligation or undertaking relating to Operations and Maintenance of the R10/C3/R9 under either this Agreement, the Toll Operation Certificate/s, the Toll Operation and Maintenance Manual and Procedures, or any law, rule or regulation made applicable thereto, inclusive of such regulations and directives as may from time to time be issued by the TRB.
- b. In the event that the GRANTOR or the GRANTEE determines that the Operations Company has abandoned the Operation and Maintenance of

the toll road facilities without any apparent intention to resume its undertakings therein;

- c. Whenever the Operations Company is in the process of being liquidated and dissolved, for reasons other than insolvency, or is declared insolvent, or whenever, during the loan repayment period, the TRB, and/or the GRANTEE and/or the GRANTEE's Financiers have determined that the Operations Company is unable to fulfill its obligations as toll road operator.
- d. Whenever the Operations Company is in breach of or violates any law and regulations of the Republic of the Philippines, which thereby adversely affects investments in the R10/C3/R9 Project and/or imperils the proper safekeeping of the toll road facilities and/or the safety of motorists.
- e. If, after sixty (60) days from the issuance of the Toll Operation Certificate, the Operations Company fails to fulfill or meet any requirement for the assumption of its role as Operator which is or ought to be within the Operations Company's power to fulfill, as a consequence of which the R10/C3/R9 has not been operated as a toll road facility.
- f. Whenever the Operations Company totally assigns its rights and obligations under this Agreement to a third party without the written consent of the GRANTOR and the GRANTEE and/or the GRANTEE's Financiers.
- g. Whenever the Operations Company, by act or omission, breaches or compromises in any respect the integrity of Toll Revenues, which may be indicated by its continued failure to adequately account therefore despite demand.

B. DUE PROCESS IN CASE OF OPERATOR'S DEFAULT:

- a. Upon the occurrence of any situation amounting to the Operations Company's default, the GRANTOR, the TRB and/or the GRANTEE (the "**Demanding Party**") shall cause the GRANTEE to serve a written Notice of Default on the Operations Company, stating with particularity the incident/s constituting the Operations Company's Default, and requiring therein the Operations Company to remedy the cause/s of default within a period not longer than seven (7) days from receipt by the Operations Company of such Notice (the "**OPERATOR'S CURING PERIOD**").
- b. Should the Operations Company substantially address the demanding party's demand by instituting remedies satisfactory to the demanding party, the Notice of Default shall thereby be rendered inefficacious and of no bearing. If the Operations Company, on the other hand, fails to remedy such default within the curing period provided, the demanding party, at its option, may cause the GRANTEE to terminate its Agreement with the Operations Company by the GRANTEE's service of a written Notice of Termination on the Operations Company. Contact termination shall thereby take effect within such period as may be

decreed by the demanding party in the GRANTEE's Notice of Termination.

c. At the demanding party's option, the Parties may mutually agree upon the reasonable extension of the curing period if such extension is necessary for the approval and confirmation of a Substitute Operator; Provided, that at no instance shall the R10/C3/R9 or any segment thereof be left without an operator.

d. The GRANTEE's failure or refusal to unreasonably serve the GRANTOR's demand and/or Notice of Termination on the Operations Company mentioned above may be considered by the GRANTOR as a material breach by the GRANTEE itself of this Agreement.

C. CONSEQUENCES OF TERMINATION DUE TO OPERATOR'S DEFAULT:

a. Upon termination of this Agreement insofar as the Operations Company is concerned due to its default, the Operations Company shall be entitled to payment/ reimbursement from the GRANTEE only of the following:

1. The value of its unpaid fees for services already rendered, less the amount of any unpaid obligation which it may have to the GRANTEE arising as a consequence of or incidental to its default; and

2. Any amount which it may have advanced for the purchase or acquisition of tollway-related facilities, supplies, and equipment, or for the improvement of the toll road infrastructure or for the enhancement of its traffic system, less any remaining obligations thereon to the Operations Company's lenders and creditors which shall be assumed by the SUBSTITUTE OPERATOR and/or by the GRANTEE.

b. Unless the GRANTEE may thereby likewise be considered to have materially breached its undertakings to the GRANTOR under this Agreement, the Operations Company's default shall not be considered as the GRANTEE's default.

c. In the event of termination of the Operations Company's services as Operator for the R10/C3/R9, the GRANTEE shall be obliged to immediately procure the services of a SUBSTITUTE OPERATOR within the curing period or shortly thereafter with a view to preserving the undisrupted Operation and Maintenance of the R10/C3/R9 at all times.

d. Should the GRANTEE fail to designate a SUBSTITUTE OPERATOR upon the effectivity of the termination of the services of the Operations Company, or having done so has not secured the approval of the GRANTOR and/or the GRANTEE's Financiers for the SUBSTITUTE OPERATOR, the GRANTOR may exercise its right under Section 11.02 B. e. or allow the GRANTEE, by itself or through a temporary Operator to be hired by the GRANTEE for the purpose, to meanwhile manage the operations of the R10/C3/R9, subject to such terms and conditions as the

GRANTOR, with the concurrence of the GRANTEE's Financiers, may reasonably impose.

11.04 Termination by Reason of GRANTOR's Default:

A. INCIDENCES OF DEFAULT BY THE GRANTOR:

The following events shall constitute Default of the GRANTOR:

- a. The GRANTOR fails to perform any of its obligations under this Agreement.
- b. The GRANTOR breaches any of its representations, warranties, covenants or undertakings under this Agreement.
- c. The occurrence of any of the following events:
 - 1) Whenever an act of the Philippine Government or any of its instrumentalities, departments, bureaus or agencies adversely affects the ability of the GRANTEE and/or Operations Company to exercise or to enjoy the benefits of its rights and/or privileges under this Agreement, or to perform its obligations, duties or undertakings hereunder; or
 - 2) In the event of a unilateral revocation, suspension or amendment of this Agreement by the GRANTOR, and such adversely affects the feasibility of the R10/C3/R9 Project;
- d. Any change in any applicable law, regulation or policy or any change in the interpretation of any applicable law, regulation or policy which:
 - 1) Adversely affects the feasibility of the R10/C3/R9 Project and there is no mechanism in this Agreement which adequately compensates the GRANTEE therefore, or
 - 2) Makes it unlawful or unreasonable for the GRANTEE and/or the Operations Company to continue with the implementation of the R10/C3/R9 Project, or
 - 3) Makes it impossible or unlawful to freely convert Philippine Pesos at any time into any other currency, or to repatriate any amounts to which the GRANTEE and/or the Operations Company and/or its/ their respective shareholders/investors and/or Financiers are entitled, or for any of the GRANTEE's and/or Operations Company's shareholders to maintain their equity participation in the GRANTEE and/or Operations Company and/or to exercise and/or fulfill any of their rights and obligations under the GRANTEE's and/or Operations Company's Articles of Incorporation, By-Laws, or any other document pertaining to the R10/C3/R9 Project to which such shareholder is or may be a party, or
 - 4) Makes it impossible or unlawful for the GRANTEE and/or their Financiers to exercise any of its/ either rights or to fulfill any of its/ their obligations in respect of the R10/C3/R9 Project.

B. DUE PROCESS IN CASE OF GRANTOR'S DEFAULT:

- a. Upon the occurrence of any of the GRANTOR's Default, the GRANTEE shall serve a written notice of default on the GRANTOR, stating therein the nature of the GRANTOR's Default and requesting that the Default be cured by the GRANTOR within a period of three (3) months from receipt of the Notice of Default (the "**GRANTOR'S CURING PERIOD**").
- b. In order to expedite the curing process, the GRANTOR and the GRANTEE shall promptly meet, within seven (7) calendar days from receipt of Notice of Default, to negotiate with each other in good faith for the purpose of reaching an agreement as to the means, period and/or other terms and conditions for the curing of the GRANTOR'S Default.
- c. If, after having met in accordance with Section 11.04 B. b., the GRANTOR and the GRANTEE cannot agree as to the means, period and/or terms and conditions for the curing of the GRANTOR'S Default, or if the GRANTOR fails to cure the GRANTOR'S Default, or fails to do so in accordance with the Agreement for the curing of the GRANTOR's Default, or if the GRANTOR unreasonably refuses to meet with the GRANTEE in accordance with Section 11.04 B. b., the GRANTEE may serve a Notice of Termination on the GRANTOR, stating therein the date when the Termination shall become effective.
- d. If the GRANTOR's Default, from its occurrence, is not capable of being cured, the GRANTEE may serve a Notice of Default and consequently a Notice of Termination on the GRANTOR, specifying therein in the nature of the GRANTOR's Default and the reasons why, in the GRANTEE's opinion, the GRANTOR's Default is not capable of being cured, and stating likewise the date when Termination shall become effective.

C. CONSEQUENCES OF TERMINATION DUE TO GRANTOR'S DEFAULT:

If this Agreement is terminated by the GRANTEE by reason of the GRANTOR's default, the GRANTOR shall:

- a. Be obligated to take over the Project and shall forthwith assume all attendant liabilities thereof including all of the GRANTEE's and/or Operations Company's obligations to its/ their Financiers for the project; and
- b. Pay just compensation to the GRANTEE in accordance with the following:
 - 1) In the event of termination after the Effective Date and before the commencement of construction, the GRANTOR shall pay just compensation by reimbursing to the GRANTEE.
 - a) The cost of preparing the Final Engineering Design; and

- b) The cost of mobilization prior to construction and pursuant to the Notice to Proceed, as well as preliminary construction works allowed under Section 6.03 f.

Provided, that such costs are duly certified by the Independent Consultant as having been expended by the GRANTEE in accordance with this Agreement; Provided, further, that said reimbursements shall be due and demandable ninety (90) days from the effectiveness of the termination and after certification of the correctness of the amounts due by the Independent Consultant.

- 2) In the event of termination after the commencement of construction works and prior to the completion of the Project, the GRANTOR shall pay just compensation to the GRANTEE equivalent to actual expenses incurred in the project plus a reasonable rate of return thereon as fixed in the GRANTEE's financial model, pro-rated as to time to time and amount. The amount of such compensation shall be determined as of the date of effectivity of the Termination and shall become due and demandable ninety (90) days after the effectivity of the termination and after certification of the correctness of the amounts due by the Independent Consultant.
- 3) In the event of Termination after completion of construction, the compensation to be paid for the GRANTOR shall be equivalent to the net income which the GRANTEE expects to earn or realize during the unexpired or remaining term of the concession period, as shown in the schedule of Projected Net Income included in the Financial Projections. The net income payable to the GRANTEE shall be paid by the GRANTOR on an annual basis on the last working day of December of each year, except for the payment accruing during the final year of the concession period, which shall be paid as of the terminal date hereof.

Any compensation accruing to the GRANTEE under all the foregoing situations shall be subject to default interest, equivalent to the prevailing Manila Reference Rate for sixty (60) day loans, or in the absence of which, such other basis as may be generally accepted in the Philippine banking industry, quoted as of the due date of the maturing default interest payment, up to the date of actual payment of any such defaulted amount, and

- c. Pay just compensation to the Operations Company equivalent to any unpaid or unrecovered amount which the Operations Company may have been required to provide on its own for the purchase or acquisition of Tollway-related facilities, supplies and equipment, or for the improvement of the tollways infrastructure, or for the enhancement of its traffic system, subject to default interest equivalent to the prevailing Manila Reference Rate for sixty (60) day loans, or such other basis as may be generally recognized in the Philippine banking industry, quoted as of the due date of the maturing default interest payment up to the date of actual payment of any such defaulted amount.

In the situations treated under Sections 11.04 C. b. and c., the GRANTEE and/or the Operations Company shall in turn be obligated to surrender to the GRANTOR all plans, documents, equipment, machineries, supplies and facilities pertaining to the R10/C3/R9 Project the amounts of which shall have been considered in the compensation to be made therefore by the GRANTOR, without need of demand.

11.05 Termination by Reason of Requisition

- A. Requisition shall take place with the taking by governmental action of the ownership and/or control of the GRANTEE and/or the Operations Company, and/or of a majority of its/ their shares which may be issued and outstanding at any time and from time to time as by nationalization, expropriation, sequestration and/or other equivalent process.
- B. In the event of Requisition, this Agreement shall immediately be legally terminated and the Termination shall become effective upon the exercise by the GRANTOR of the ownership and control of the GRANTEE and/or the Operations Company.
- C. Should this Agreement be terminated by reason of Requisition, the GRANTOR shall:
 - 1) Be obligated to take over the Project, and shall forthwith assume all attendant liabilities thereof; and
 - 2) Pay to the GRANTEE and/or Operations Company the Fair Market Value thereof in proportion to the number of shares of ownership taken by the GRANTOR in the process of Requisition on the basis of its/ their then book value as an on-going concern immediately prior to requisition, certified by a team of three independent valuers/ appraisers appointed one each by the GRANTOR and GRANTEE and/or Operations Company, and one by the mutual consent of the two valuers appointed by the Parties to this Agreement.

11.06 Other Consequences of Termination of this Agreement

- A. By Reason of GRANTEE's Default
 - a. In case of Termination prior to commencement of construction, the GRANTEE shall submit to the GRANTOR the completed FED or any portion of it, duly certified by the Independent Consultant as having been executed in accordance with this Agreement.
 - b. In case of termination prior to the completion of the R10/C3/R9, the GRANTEE shall cease all construction and remove from the construction site all its workmen, employees, agents and contractors and shall vacate it completely;
 - c. In case of termination during toll road operations, the GRANTEE shall surrender to the GRANTOR the R10/C3/R9 and the toll road facilities.
 - d. All duly authorized design, construction, and/ or operation and maintenance-related agreements pursuant to the GRANTEE's obligation

under this Agreement that are subsisting at the time of effectivity of this Agreement, except the agreement with the Operations Company in accordance with Section 11.02 C. b., shall be terminated by the GRANTEE, which shall likewise be responsible for any termination costs arising therefrom and shall indemnify and hold harmless the GRANTOR from and against any payment obligation in respect of the same.

B. By Reason of GRANTOR's Default

Concurrent with the assumption of all attendant liabilities of the Project under Section 11.04 (C. a.), the GRANTOR shall assign to the GRANTEE's Financiers all revenues from Toll and other revenue collectible from the R10/C3/R9 after deducting O&M expenses which should otherwise have accrued in favor of said Financiers for purposes of securing the payment and/or satisfaction of all such attendant liabilities. To this end, the GRANTOR shall promptly execute any and all such documents as may be necessary, required and/or appropriate to effectuate the GRANTOR's assumption of all attendant liabilities of the R10/C3/R9 Project (including without limitation the Financing thereof) and the assignment to the Financiers of all revenue from the R10/C3/R9 or any segment or section thereof which would otherwise have accrued in favor of the GRANTEE, as security for the payment and/or satisfaction of all assumed attendant liabilities of the Project. Such assignment or security shall remain valid and in effect until all assumed by the GRANTOR (including without limitation the Financiers thereof) will have been paid, settled and/or discharged.

11.07 Subrogation and Indemnity

- a. The assumption by the GRANTOR of all the attendant liabilities of the Project, including without limitation the Financing, shall entitle the GRANTOR to exercise and/or avail itself of any and all rights, powers and/or privileges of the GRANTEE under the relevant agreement, contract and/or instrument covering the assumed attendant liabilities.
- b. The GRANTOR shall indemnify and hold the GRANTEE harmless from and against any payment obligation to be made, or liability to be assumed, by the GRANTOR pursuant hereto.

11.08 Survival of Obligation after Termination

For the avoidance of doubt, the obligations of the GRANTOR and the GRANTEE in respect of the termination of this Agreement shall survive the termination hereof.

11.09 Termination By Reason of Project Completion

- a. Upon the expiry of the Concession Period and this Agreement, the GRANTEE shall hand over to the GRANTOR the Project Toll Roads, including Toll Road Facilities and any and all equipment found in and directly used in connection with the Operation and Maintenance of the Project Toll Roads, without cost, free from all liens and encumbrances, fully operational and in good working order and condition in accordance with the Toll Operation and Maintenance Manual and Procedures. Such

hand-over shall also include all drawings, plans and specifications relating to the Design, Construction, Operation and Maintenance, and as-built drawings and quality assurance records of the Project Toll Roads and Toll Road Facilities.

- b. Upon the completion of the hand-over as provided for above, the GRANTEE shall automatically be relieved of any liability, responsibility or obligation in respect of any further Construction, Operation and Maintenance of the Project Toll Roads, except for any past GRANTEE's Default that the GRANTEE may be required to rectify pursuant to the provisions of this Agreement or by way of operation of any subsisting legal or contractual guaranty on the quality of works binding upon the GRANTEE. Should there remain outstanding Financing obligations after the expiration of the Concession Period, the GRANTEE shall be solely responsible therefor.

SECTION 12.0 REPRESENTATIONS AND WARRANTIES

12.01 Of the GRANTOR

The GRANTOR represents and warrants to the GRANTEE that:

- a. The GRANTOR (in reference to the DPWH) is duly organized and validly existing as an agency of the Philippine Government and has all requisite power, authority and legal right to execute and deliver this Agreement, and to perform its obligation hereunder.
- b. The GRANTOR has taken all appropriate legal, corporate and/or administrative and other action which may be required and/or appropriate to authorize the execution, delivery and performance, as well as ensure the effectiveness and binding effect, of this Agreement and any and all other agreements, instruments, or documents contemplated thereunder.
- c. This Agreement constitutes the legal, valid and binding obligation of the GRANTOR, enforceable against the GRANTOR in accordance with its terms. This Agreement is in satisfactory and proper legal form under the laws of the Republic of the Philippines.
- d. The GRANTOR is subject to civil and commercial law with respect to its obligations under this Agreement or any other document contemplated hereunder. The GRANTOR does not enjoy any rights of immunity from suit, judgment or execution or from any legal process in respect of its obligations under this Agreement or any other document contemplated thereunder.

12.02 Of the GRANTEE

The GRANTEE represents and warrants to the GRANTOR that:

- a. It is a corporation duly organized and validly existing under the laws of the Republic of the Philippines and has all requisite power, authority and legal right to carry on the business which it now conducts or proposes to conduct.

- b. It has full power, authority and legal right to execute and deliver this Agreement and to perform its obligations hereunder, and has taken all appropriate and necessary corporate and legal action to authorize the execution, delivery and performance hereof and all other agreements, instruments or documents contemplated hereunder.
- c. The GRANTEE's signatory to this Agreement is of age, has full legal capacity and has been duly authorized by the Board of Directors of the GRANTEE to sign, execute and deliver this Agreement for and on behalf of the GRANTEE.
- d. This Agreement constitutes the legal, valid and binding obligation of the GRANTEE, enforceable against the GRANTEE in accordance with its terms. This Agreement is in satisfactory and proper legal form under the laws of the Republic of the Philippines.

SECTION 13.0 SETTLEMENT OF DISPUTES

13.01 Dispute Resolution

Any dispute or controversy of any kind whatsoever (such dispute or controversy being referred to as a "**Dispute**"), whether involving all or any two of the Parties, which may arise out of or in connection with this Agreement, except as may otherwise be provided herein or by law, shall at the first instance be resolved, within sixty (60) days from its occurrence, through amicable means, such as but not limited to mutual discussion.

13.02 Arbitration

- a. If the dispute cannot be settled amicably within the sixty (60) day period provided for above, the dispute shall be settled with finality by arbitration under Executive Order No. 1008, entitled, "Construction Industry Arbitration Law". The respective parties undertake to abide by and implement the arbitration award. The place of arbitration shall be Metro Manila or such other place as may be chosen by the party initiating the arbitration proceedings. The arbitration proceedings shall be conducted in the English language.
- b. For the purpose of ensuring the effectiveness of Section 13.02 a., each party waives any right which it may now or hereafter have to commence or maintain any suit or legal proceedings concerning the Dispute until the same will have been determined in accordance with the arbitration proceedings provided for herein, and then only for the enforcement of the award or decision rendered in such arbitration proceedings. For this purpose, the parties hereby expressly stipulate on the jurisdiction over them of the Construction Industry Arbitration Commission to the exclusion of other fora.
- c. The award rendered in any arbitration proceedings commenced hereunder shall be final and conclusive and the award or decision rendered pursuant to such proceedings may be registered with any court having jurisdiction for its enforcement. Each party covenants that it will

not contest or appeal from any such award or decision, unless the same is vitiated by fraud, accident, mistake or excusable negligence.

- d. The costs of arbitration shall be funded initially by the claimant, provided that the arbitral board may reallocate the liability for such cost to the losing Party or apportion such cost among the Parties or may impose the obligation on each Party to pay a prorated portion thereof, as the arbitral board may consider reasonable. Without prejudice to the foregoing, each Party shall fund its own legal and other expenses relating to such arbitration, including the cost for the arbitrator appointed by each Party.

SECTION 14.0 FORCE MAJEURE

14.01 Events of Force Majeure

Events beyond the control of a Party, and/or the results thereof, may effectively prevent such Party from performing and fulfilling its obligations under this Agreement, including without limitation:

- a. War, hostilities (whether declared or not), invasion, act of foreign enemies, rebellion, revolution, insurrection, military or usurped power, civil war, terrorism/ civil disturbances, riot, sabotage;
- b. Ionizing, radiation or contamination by radioactivity from any nuclear waste, from the combustion of nuclear fuel, radioactive toxic explosive, or other hazardous properties or any explosive, nuclear assembly or nuclear component thereof;
- c. Natural catastrophes, including but not limited to earthquakes, floods, subsidence, lightning , landslides, volcanic activity and exceptional inclement weather; and
- d. Riots and disorders, strikes, lockouts, labor unrest or other industrial disturbances affecting the performance of this Agreement, which are not cause by and/or attributable to the GRANTEE or its contractors or subcontractors.

Each of the above-enumerated events, being hereafter referred to as "Force Majeure", shall excuse each of the GRANTOR or the GRANTEE or the Operations Company from performing its obligations hereunder but shall not release any party from its monetary obligations hereunder.

14.02 Notification of Force Majeure

If an event of Force Majeure prevents any Party from performing its obligations hereunder, or if the occurrence of Force Majeure adversely affects the ability of the GRANTEE, by itself or through the Operations Company, to exercise its rights and to enjoy the benefits contemplated hereunder, the affected Party shall immediately notify the other Parties of the occurrence of such event, and of its subsequent cessation; Provided, that such occurrence or cessation of occurrence is known to the Party serving notice of Force Majeure.

14.03 Obligation of each Party in the Event of Force Majeure

- a. If an event of Force Majeure, or the results thereof, prevents the GRANTEE and/or the Operations Company from performing its/their obligations hereunder or, in the opinion of the GRANTEE, adversely affects any of its rights or benefits under this Agreement, and provided that the Force Majeure results in physical damage to the toll road Facilities and/or endangers the safety of person/s, the GRANTEE, by itself or through the Operations Company, shall be responsible for taking such actions and precautions as may be required or necessary to mitigate any resulting damage, loss or peril to safety by utilizing any insurance proceeds received by or payable under any insurance policy covering Force Majeure, except business interruption insurance.
- b. If the GRANTEE and/or the Operations Company serves notice to the GRANTOR that the insurance proceeds received or payable by reason of any such damage is insufficient to be able to undertake or perform the required reconstruction or repair work on the damaged toll road or toll road facility, the GRANTEE and/or the Operations Company shall have the option to provide any funding shortfall, and/or undertake or cause the performance of the required reconstruction and/or repair work on the damaged toll road.
- c. The Parties thereby agree that any amount advanced and/or incurred by the GRANTEE and/or the Operations Company pursuant to Section 14.03 b. shall be repaid by means of:
 - 1) An appropriate escalation/increase in the relevant Toll rate/s; and/or
 - 2) An appropriate extension of the Concession Period applicable to the toll road.

The escalation/ increase in Toll Rate/s contemplated under this Section 14.03 c. shall take effect as of the date of the resumption of operation of the toll road.

- d. If the GRANTEE and/or the Operations Company serves notice on the GRANTOR that the GRANTEE and/or the Operations Company is unable to raise funds for any required reconstruction and/or repair work on the damaged toll road facility, the GRANTOR shall undertake or perform such reconstruction and/or repair work in order to reinstate the damaged toll road or toll road facility to its condition prior to the occurrence of the Force Majeure which caused the damage.
- e. If the GRANTEE and/or the Operations Company should elect to request the GRANTOR to undertake or perform the reconstruction or repair work on the damaged toll road or toll road facility, the GRANTEE and/or the Operations Company shall serve notice to that effect on the GRANTOR within thirty (30) days from the occurrence of the Force Majeure which caused the damage.
- f. If the GRANTOR notifies the GRANTEE and/or the Operations Company that the GRANTOR is unable to provide the funding required for the reconstruction and/or repair work on the damaged toll road or toll

road facility, so as to reinstate the same upon terms and conditions satisfactory to the GRANTEE and/or the Operations Company, or if the GRANTEE and/or the Operations Company is of the opinion that any delay in the reconstruction and/or repair of the damaged toll road or toll road facility will adversely affect any of its rights and/ or benefits under this Agreement; then the GRANTEE and/or the Operations Company and the GRANTOR shall negotiate with each other promptly and in good faith with a view to achieving agreement on the following matters: (a) how and by what means the required reconstruction and/or repair work on the damaged toll road or toll road facility can be accomplished expeditiously; and/or (b) the measures required for the protection of the rights and benefits of the GRANTEE's and/or the Operations Company's rights and benefits; Provided, however, that if no such agreement is reached within six (6) months from the commencement of negotiations between them, this Agreement may be deemed terminated, in which case the GRANTOR shall be subject to the obligations set forth in Section 11.04 C.

- g. In order to avoid any doubt, the Parties agree that upon occurrence of any event of Force Majeure affecting the GRANTEE's and/or Operations Company's obligations relating to Operation and Maintenance, the GRANTEE and/or Operations Company shall nonetheless continue to be responsible for performing such obligations relating to Operation and Maintenance as may still be performed, whether wholly or partially. Irrespective of the occurrence of an event of Force Majeure, the GRANTEE and/or the Operations Company shall continue to reasonably responsible for the safety of the toll road and its users. Unless otherwise agreed upon by the Parties or dictated by exigencies, the occurrence of an event of Force Majeure affecting the GRANTEE's and/or Operations Company's obligations relating to Operation and Maintenance shall not result in the closure of the affected toll road, provided that if a temporary closure is unavoidable so as to make possible the performance of any required reconstruction and/or repair work, or to protect lives or property, the toll road shall be opened to the public as soon as possible by taking such measures and precautions as are necessary under the circumstances.

14.04 Alternative Procedure in case of Self-insurance by the GRANTOR

If the R10/C3/R9 is not insured against force majeure because the GRANTOR has opted to self-insure its interests in the toll road. Section 14.03 f. shall become immediately applicable, such that upon service of notice of the occurrence of an event of force majeure on the GRANTOR by the GRANTEE and/or the Operations Company, the GRANTOR and the GRANTEE/ Operations Company shall forthwith negotiate with each other in good faith for the same purpose, for the same ends and with like effect as set forth in Section 14.03 f.

14.05 Extension of Concession Period

Notwithstanding what is provided for under Section 14.03 f., if the GRANTEE/Operations Company elects not to terminate this Agreement and gives notice to such effects to the GRANTOR, the GRANTOR shall upon the request of the GRANTEE/Operations Company obtain all governmental and/or other authorization/s approval/s, license/s and/or permit/s which may be required and/or necessary for the extension of the relevant Concession Period/s by such a

period as may be sufficient to enable the GRANTEE/ Operations Company to recover or repay any expense incurred, or any losses suffered and/or new debt incurred by the GRANTEE/ Operations Company during or by reason of such event of Force Majeure. Such extension period shall in no event be less than the period equivalent to a period commencing with the occurrence of Force Majeure until the Force Majeure and the results thereof have been completely eliminated.

SECTION 15.0 MISCELLANEOUS PROVISIONS

15.01 Effectiveness of Agreement

This Agreement shall come into force and become effective on the Effective Date.

15.02 Assignment

- a. Except as otherwise provided herein or by law, the GRANTEE may not assign its rights or transfer its liabilities and obligations under this Agreement (particularly, its primary and exclusive privilege, responsibility and obligation to undertake the Design and Construction of the Project toll road, and the financing thereof) to any other party without the consent of the GRANTOR.
- b. The GRANTEE may assign its rights under this Agreement to the Financiers as security for the repayment of Financing provided by such Financiers, and each party hereto, as required, shall enter into such agreements as may be necessary or appropriate to give effect to this provision.
- c. The GRANTOR hereby expressly recognizes the GRANTEE's right to assign to its Financiers its rights and privileges under this Agreement in order to secure its repayment of the Financing, until such time as the Financing for the R10/C3/R9 Project shall have been fully paid.

15.03 Change in Ownership Structure/ Share Ownership

Prior approval of the GRANTOR during the construction stage shall be secured for changes in the Ownership Structure/ Share Ownership of the capital stock of the GRANTEE affecting 20% or more of the common shares which approval shall not be unreasonably withheld.

15.04 Confidentiality

- a. None of the parties shall, at any time, before or after the expiry or sooner termination of this Agreement, without the consent of the other, divulge or suffer or permit its officers, employees, agent or contractors to divulge to any person (other than to any of its or their respective officers or employees who require the same to enable them to properly carry out their duties) any of the contents of this Agreement or any information relating to the negotiations concerning the operations, contracts, commercial or financial arrangement or affairs of the other parties hereto. Documents marked "CONFIDENTIAL" or otherwise, providing that such material shall be kept confidential, shall constitute prima facie evidence that such information contained therein is subject to the terms of this provision.

- b. The restrictions imposed above shall not apply to the disclosure of any information:
 - 1) which may now or hereafter come into the public otherwise than as a result of a breach of an undertaking of confidentiality or which is obtainable with no more than reasonable diligence from sources other than any of the Parties hereto;
 - 2) which is required by law to be disclosed to any person who is authorized by law to receive the same;
 - 3) to a court, arbitrator or administrative tribunal in the course of proceedings before it to which the disclosing party is a party; or
 - 4) to any consultants, banks financiers or advisors of the disclosing party.
- c. No public announcement or statement regarding the signature, performance or termination of this Agreement shall be issued or made, unless prior thereto all Parties have been furnished with a copy thereof and have approved the same. Such approval shall not be unreasonably withheld or delayed.

15.05 Further Assurances

Each Party shall at all times and from time to time take all such legal steps, do all such further acts and execute all such further deeds, documents, and/or instruments as may be required, necessary and/or appropriate in order to give full effect to and carry out the terms of this Agreement in a timely manner. The parties shall at all times extend full consideration upon the other parties hereto for the purpose of attaining the realization of the Project, and for this purpose shall exert their utmost tolerance to minor disputes or misunderstandings and/or act upon any significant matter submitted for their consideration with requisite dispatch.

15.06 Modification and Amendment

- a. At any time during the term of this Agreement, upon request of the GRANTOR or the GRANTEE, the GRANTOR and the GRANTEE shall consult with each other to determine whether in light of all relevant circumstances, the financial or other provisions of this Agreement need revision. Such revision shall ensure that this Agreement operates equitably and without major detriment to the interest of any of the Parties. In reaching agreement on any revision in accordance with this section, the Parties shall ensure that no revision to this Agreement shall prejudice the GRANTEE's financial credibility or its ability to raise funds by borrowing or other means. Any consultation among the Parties pursuant to this Section shall be carried out in a spirit of cooperation with due regard to the intent and objectives of this Agreement and within the limitations and restrictions attending under such equitable terms as may mutually be agreed upon between them based on the terms of this Agreement insofar as this Agreement may remain applicable.

- b. This Agreement shall not be modified, amended or varied in any manner unless such modification, amendment or variation is in writing and executed by the Parties.

15.07 Sufficiency of Documents

- a. The documents forming parts of this Agreement are to be taken as mutually explanatory of one another.
- b. Each Party shall upon request promptly provide to the requesting Party any and all documents which such Party may reasonably request for the purposes of or in connection with this Agreement; Provided, however, that without need of any such request, the GRANTEE shall furnish the GRANTOR a copy of any contract, agreement and/or instrument relating to or which is in connection with this Agreement and/or the Project, including without limitation any Financing agreement contract, shareholders' agreement, and others to which the GRANTEE is a party.

15.08 Severability

The declaration of any provision of this Agreement as void, invalid or otherwise unenforceable shall not invalidate the remaining provisions hereof, and the Parties shall promptly amend this Agreement and/or execute such additional document/s as may be necessary and/or appropriate to give legal effect to the void, invalid or otherwise unenforceable provision in such a manner that, when taken with the remaining provisions, will achieve the intended commercial purpose of the void, invalid or otherwise unenforceable provisions.

15.09 Notices

- a. Any notice, request, report, approval, consent, or other communication required or permitted to be given or made under this Agreement shall be in writing in English and delivered to the address or sent to the facsimile number of each party hereto as shown below:

GRANTOR : REPUBLIC OF THE PHILIPPINES

DEPARTMENT OF PUBLIC WORKS AND
HIGHWAYS

Address: DPWH Building, Port Area, Manila
Tel. No.:
Fax No.:
Attention: The Secretary of Public Works and
Highways

GRANTEE : [NAME OF CONCESSIONNAIRE]
Address:

Tel. No.:
Fax. No.:
Attention: The Chief Operating Officer

or to such other address, facsimile numbers as each Party may have notified the other parties of.

- b. Such notice shall be deemed to have duly given or made if in case of delivery in person or by facsimile transmission, as of the date of actual delivery to the recipient at such address or facsimile number which is duly acknowledged.

15.10 Waiver

The failure of any Party to enforce any provision of this Agreement shall not be construed as a waiver of its right to enforce such provision or any other provision in this Agreement or as a waiver of any continuing, succeeding or subsequent breach of any such provision or other provision of this Agreement.

15.11 Preparation and Closing Cost

Any and all costs incurred by each party hereto in relation to and/or by reason of the preparation and closing of this Agreement, including without limitation stamp duties, shall be borne exclusively by the Party incurring such expense.

15.12 Applicable Law

This Agreement shall be deemed made under and governed by and construed in accordance with the laws of the Republic of the Philippines.

IN WITNESS WHEREOF, the parties have caused their respective representatives to execute this Agreement on the date and at the place first set out above.

REPUBLIC OF THE PHILIPPINES
(GRANTOR)
acting by and through the
Department of public Works and Highway
By:

[NAME]
Secretary

[NAME]
(GRANTEE)

By:
