

BID DOCUMENTS

CONSTRUCTION OF MARIVELES MUNICIPAL FISH PORT

Prepared By:

TECHNICAL SERVICES DEPARTMENT

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SECTION I
INVITATION TO BID

INVITATION TO BID

The Philippine Fisheries Development Authority (PFDA) through its Bids and Awards Committee (BAC) invites contractors registered with the Philippine Contractors Accreditation Board (PCAB) to bid for the hereunder contracts:

<p style="text-align: center;">PROJECT/LOCATION; CONTRACT DURATION; APPROVED BUDGET FOR THE CONTRACT/SOURCE OF FUND</p>	<p style="text-align: center;">PROJECT DESCRIPTION/ EQUIPMENT REQUIREMENT</p>	<p style="text-align: center;">REQUIRED PCAB LICENSE/ LICENSE</p>
<p>Project 1: (Re-bidding) Construction of Mariveles Municipal Fish Port/Brgy. Poblacion, Mariveles, Bataan</p> <p>Contract Duration: 360 Calendar Days</p> <p>Approved Budget for the Contract: P 18,531,908.00</p> <p>Source of Fund: FY 2015 National Government Subsidy to PFDA</p>	<p>The project includes the (a) site development and utilities works such as: clearing and disposal of affected areas, reclamation works, rock revetment works, concrete works, concrete pavement, utilities works, and miscellaneous work items; (b) concreting of access road such as earthworks and concrete works; and (c) building facilities such as trading hall/admin. office/public c.r. and ice stalls./</p> <p>Roller Compactor, 6MT-1 unit leased; Backhoe, 1.0 cu.m.-1 unit owned; Payloader, 1.0 cu.m. cap-1 unit leased; Grader, 135hp-1 unit leased; Dumptrucks, 6-10 wheeler-1 unit owned and 1 unit leased;</p> <p>Concrete Mixer (1-2 Bagger) – 2 units owned and 1 unit leased; and welding machine 2 units owned.</p>	<p style="text-align: center;">“Medium A” for Ports, Harbor and Offshore Engineering</p>
<p>Project 2: Upgrading of Pier and Repair of Building Facilities of Zamboanga Fish</p>	<p>The project includes the (a) construction safety and health program such as: personal protective equipment (ppe), safety and health</p>	

<p>Port Complex /ZFPC, Brgy. Sangali, Zamboanga City</p> <p>Contract Duration: 540 Calendar Days</p> <p>Approved Budget for the Contract: P 109,399,835.00</p> <p>Source of Fund:</p> <p>FY 2016 National Government Subsidy to PFDA</p>	<p>engineer, signages; (b) repair/rehabilitation work of existing pier such as demolition of existing concrete slab, beams/girder, pile cap and fender base, precast concrete piles, concrete and rebar works, perimeter fence/gates, mooring and fendering system, water distribution system, and pier lighting system; and (c) building facilities such as construction of trading hall./</p> <p>Crane, 50T cap.- 1 unit owned and 1 unit leased; Backhoe w/ concrete breaker, 1.0 cu.m.-1 unit owned; Payloader, 1.0 cu.m. cap-1 unit owned; Diesel Hammer, Single Acting-1 unit owned; Dumptrucks, 6-10 wheeler-2 units owned; Transit Mixer, 6.0 cu.m. cap.-2 units owned; Concrete Mixer (1-2 Bagger) – 2 units owned; Plate Compactor-1 unit owned; and Jackhammer w/ Compressor- 2 units owned.</p>	<p>“Medium B” for Ports, Harbor and Offshore Engineering</p>
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<p>Project 3: Construction of Lingayen Municipal Fish Port/Brgy. Poblacion,</p>	<p>The project includes the site development and utilities work such as: demolition of concrete curbs and existing structures, concrete</p>	
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<p>Lingayen, Pangasinan</p> <p>Contract Duration: 300 <i>Calendar</i></p> <p style="text-align: right;">Days</p> <p>Approved Budget for the Contract: P 6,228,519.00</p> <p><i>Source of Fund:</i></p> <p>FY 2015 National Government Subsidy to PFDA</p>	<p>pavement/base course/curb and gutter, slope protection/stairlanding, outside water distribution, drainage/sewerage systems, and miscellaneous work items; and building facilities such as: construction of market hall/</p> <p>Roller Compactor, 6T- 1 unit leased; Grader, 135 Hp- 1 unit leased; Backhoe w/ concrete breaker, 1.0 cu.m. cap.- 1 unit leased; Dumptruck, 10 wheeler-1 unit leased; Concrete Mixer, (1-2 bagger)-2 units owned; Plate Compactor -1 unit owned; Jackhammer-1 unit owned; and Concrete Vibrator-1 unit owned.</p>	<p>“Small B” for Ports, Harbor and Offshore Engineering.</p>
<p>Project 4: Construction of Multi-Purpose Building and Public Toilets for NFPC Market Hall Nos. 1-5/</p> <p>Brgy. North Blvd., Navotas Fish Port Complex, Navotas City</p> <p>Contract Duration: 300 <i>Calendar</i></p> <p style="text-align: right;">Days</p> <p>Approved Budget for the Contract: P 5,878,752.00</p> <p><i>Source of Fund:</i></p> <p>PFDA Corporate Fund</p>	<p>The project includes the construction of multi-purpose building such as: clearing, demolition and disposal of unsuitable materials, earthworks, concrete and masonry works, carpentry and other works, doors/windows and other works, plumbing and sewerage systems, potable water supply system, electrical works and painting works; public toilets for market hall nos. 1-5 such as: clearing, demolition and disposal of unsuitable materials, earthworks, concrete and masonry works, doors and windows and carpentry works, drainage and sewerage systems, potable water supply system, electrical works, and painting works. /</p> <p>Dumptruck, 8 wheeler-1 unit leased;</p> <p>Transit Mixer, 6.0 cu.m. cap,-1 unit leased;</p> <p>Concrete Mixer, (1-2 bagger)-3 units owned; and Plate Compactor - 1 unit owned.</p>	<p>“Small B” for Building and Industrial Plant</p>

Procurement will be conducted through open competitive bidding procedures using non-discretionary pass/

fail criterion as specified in the Implementing Rules and Regulations of R.A 9184. Bids received in excess of the ABC shall be automatically rejected at the opening of bid.

Interested bidders may submit their Letter of Intent (LOI) at the Office of the Bids and Awards Committee upon presentation of the original or authenticated renewal of contractor's license on the dates specified below. Prospective bidders should have key personnel and equipment (listed in the personnel and equipment requirements) available for the prosecution of the contract and must have an experience or completed a contract that is similar to the contract to be bid of at least 50% of the ABC.

All particulars relative to bid security, performance security, pre-bidding conference, evaluation of bids, post-qualification and award of contract shall be governed by the pertinent provisions of R.A. 9184 and its Implementing Rules and Regulations.

The schedule of BAC activities is as follows:

ACTIVITIES	SCHEDULE	VENUE
1. Publication/Posting of Invitation to Bid	April 24-30, 2017	
2. Issuance of Bid Documents	April 24-May 22, 2017	Office of BAC Secretariat Rm. No. 204, 2/F PCA Annex I Bldg., PCA Compound, Elliptical Road, Diliman, Quezon City
3. Pre-bid Conference (Projects 1-4)	May 8, 2017; 2:00 PM	PFDA Conference Room Rm. No. 205, 2/F PCA Annex I Bldg., PCA Compound, Elliptical Road, Diliman, Quezon City
4. Submission of Bids		PFDA Conference Room
a. Projects 3 and 4	May 22, 2017; 9:00 A.M.	Rm. No. 205, 2/F PCA Annex I Bldg., PCA Compound, Elliptical Road, Diliman, Quezon City
b. Projects 1 and 2	May 22, 2017; 12:00 NN	Rm. No. 205, 2/F PCA Annex I Bldg., PCA Compound, Elliptical Road, Diliman, Quezon City

5. Opening of Bids		PFDA Conference Room
a. Projects 3 and 4	May 22, 2017; 10:00 A.M.	Rm. No. 205, 2/F PCA Annex I Bldg., PCA Compound, Elliptical Road, Diliman, Quezon City
b. Projects 1 and 2	May 22, 2017; 2:00 P.M.	

A complete set of Bidding Documents may be purchased from the BAC Secretariat at the address above upon payment of a non-refundable fee of P18,000.00/set for Project 1, P 35,000.00/set for Project 2, and P10,000.00/set/project for projects 3 and 4. It may also be downloaded free of charge from the website of the Philippine Government & Electronic Procurement System (PhilGEPS) and the website of the Procuring Entity, provided that bidders shall pay the fee for the bidding documents on or before the submission of bids.

The PFDA reserves the right to reject any bid, accept the offer most advantageous to the government, to annul the bidding process, to waive any formalities and to reject all bids at any time prior to contract award, without thereby incurring any liability to the affected bidder or bidders.

For further information, please refer to:

Ms. Girlie R. Hilario
Head, BAC Secretariat
Rm. 305, 3/F PCA Annex I Bldg.
Elliptical Rd., Diliman, Q.C.

ATTY. LORALIE C. DATAHAN
Chairperson, Bids and Awards Committee

SECTION II
INSTRUCTION TO BIDDERS

General

I. Scope of Bid

- 1.1 The Procuring Entity named in the **BDS**, invites bids for the construction of Works, as described in **Section VI, Specifications**.
- 1.2 The name, identification, and number of lots specific to this bidding are provided in the **BDS**. The contracting strategy and basis of evaluation of lots is described in **ITB Clause 27**.
- 1.2 The successful bidder will be expected to complete the Works by the intended completion date specified in **SCC Clause 1.17**.

2. Source of Funds

The Procuring Entity has a budget or received funds from the Funding Source named in the **BDS**, and in the amount indicated in the **BDS**. It intends to apply part of the funds received for the Project, as defined in the **BDS**, to cover eligible payments under the Contract for the Works.

3. Corrupt, Fraudulent, Collusive, and Coercive Practices

- 3.1 Unless otherwise specified in the BDS, the Procuring Entity, as well as bidders and contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. In pursuance of this policy, the Funding Source:
 - (a) defines, for purposes of this provision, the terms set forth below as follows:
 - (i) "corrupt practice" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves, others, or induce others to do so, by misusing the position in which they are placed, and includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; entering, on behalf of the Procuring Entity, into any contract or transaction manifestly and grossly disadvantageous to the same, whether or not the public officer profited or will profit thereby, and similar acts as provided in Republic Act 3019;
 - (ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Procuring Entity, and includes collusive practices among Bidders (prior to or after Bid submission) designed to establish bid prices at artificial, non-competitive levels

and to deprive the Procuring Entity of the benefits of free and open competition;

(iii) “collusive practices” means a scheme or arrangement between two or more bidders, with or without the knowledge of the Procuring Entity, designed to establish bid prices at artificial, non-competitive levels; and

(iv) “coercive practices” means harming or threatening to harm, directly or indirectly, persons, or their property to influence their participation in a procurement process, or affect the execution of a contract;

(v) “obstructive practice” is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to an administrative proceedings or investigation or making false statements to investigators in order to materially impede an administrative proceedings or investigation of the Procuring Entity or any foreign government/foreign or international financing institution into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the administrative proceedings or investigation or from pursuing such proceedings or investigation; or

(bb) acts intended to materially impede the exercise of the inspection and audit rights of the Procuring Entity or any foreign government/foreign or international financing institution herein.

(b) will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the Contract; and

(c) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded Contract funded by the Funding Source if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing or, or in executing, a Contract funded by the Funding Source.

3.2 Further, the Procuring Entity will seek to impose the maximum civil, administrative, and/or criminal penalties available under the applicable laws on individuals and organizations deemed to be involved in any of the practices mentioned in **ITB** Clause 3.1(a).

- 3.3 Furthermore, the Funding Source and the Procuring Entity reserve the right to inspect and audit records and accounts of a contractor in the bidding for and performance of a contract themselves or through independent auditors as reflected in the GCC Clause 34.

4. Conflict of Interest

- 4.1 All bidders found to have conflicting interests shall be disqualified to participate in the procurement at hand, without prejudice to the imposition of appropriate administrative, civil, and criminal sanctions. A Bidder may be considered to have conflicting interests with another Bidder in any of the events described in paragraphs (a) through (c) and a general conflict of interest in any of the circumstances set out in paragraphs (d) through (g) below:
- (a) A Bidder has controlling shareholders in common with another Bidder;
 - (b) A Bidder receives or has received any direct or indirect subsidy from any other Bidder;
 - (c) A Bidder has the same legal representative as that of another Bidder for purposes of this Bid;
 - (d) A Bidder has a relationship, directly or through third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder or influence the decisions of the Procuring Entity regarding this bidding process.
 - (e) A Bidder submits more than one bid in this bidding process. However, this does not limit the participation of subcontractors in more than one bid;
 - (f) A Bidder who participated as a consultant in the preparation of the design or technical specifications of the goods and related services that are the subject of the bid; or
 - (g) A Bidder who lends, or temporarily seconds, its personnel to firms or organizations which are engaged in consulting services for the preparation related to procurement for or implementation of the project, if the personnel would be involved in any capacity on the same project.
- 4.2 In accordance with Section 47 of the IRR of RA 9184, all Bidding Documents shall be accompanied by a sworn affidavit of the Bidder that it is not related to the Head of the Procuring Entity (HoPE), members of the Bids and Awards Committee (BAC), members of the Technical Working Group (TWG), members of the BAC Secretariat, the head of the Project Management Office (PMO) or the end-user unit, and the project consultants, by consanguinity or affinity up to the third civil degree. On the part of the bidder, this Clause shall apply to the following persons:

- (a) If the Bidder is an individual or a sole proprietorship, to the Bidder himself;
- (b) If the Bidder is a partnership, to all its officers and members;
- (c) If the Bidder is a corporation, to all its officers, directors, and controlling stockholders;
- (d) If the Bidder is a cooperative, to all its officers, directors, and controlling shareholders or members; and
- (e) If the Bidder is a joint venture (JV), the provisions of items (a), (b), (c) or (d) of this Clause shall correspondingly apply to each of the members of the said JV, as may be appropriate.

Relationship of the nature described above or failure to comply with this Clause will result in the automatic disqualification of a Bidder.

5. Eligible Bidders

5.1 Unless otherwise indicated in the **BDS**, the following persons shall be eligible to participate in the Bidding:

- (a) Duly licensed Filipino citizens/sole proprietorship;
- (b) Partnerships duly organized under the laws of the Philippines and of which at least seventy five percent (75%) of the interest belongs to citizens of the Philippines;
- © Corporations duly organized under the laws of the Philippines, and of which at least seventy five percent (75%) of the outstanding capital stock belongs to citizens of the Philippines;
- (d) Cooperatives duly organized under the laws of the Philippines;
- (e) Persons/entities forming themselves into a JV, i.e., a group of two (2) or more persons/entities that intend to be jointly and severally responsible or liable for a particular contract: Provided, however, that, in accordance with Letter of Instructions No. 630, Filipino ownership or interest of the joint venture concerned shall be at least seventy five percent (75%): Provided, further, that joint ventures in which Filipino ownership or interest is less than seventy five percent (75%) may be eligible where the structures to be built require the application of techniques and/or technologies which are not adequately possessed by a person/entity meeting the seventy five percent (75%) Filipino ownership requirement: Provided, finally, that in the latter case, Filipino ownership or interest shall not be less than twenty five percent (25%). For this purpose Filipino

ownership or interest shall be based on the contributions of each of the members of the joint venture as specified in their JVA.

- 5.2 The Procuring Entity may also invite foreign bidders when provided for under any Treaty or International or Executive Agreement as specified in the **BDS**.
- 5.3 Government owned or controlled corporations (GOCCs) may be eligible to participate only if they can establish that they (a) are legally and financially autonomous, (b) operate under commercial law, and (c) are not attached agencies of the Procuring Entity.
- 5.4 (a) The Bidder must have an experience of having completed a Single Largest Completed Contract (SLCC) that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC adjusted, if necessary, by the Bidder to current prices using the Philippine Statistics Authority (PSA) consumer price index. However, contractors under Small A and Small B categories without similar experience on the contract to be bid may be allowed to bid if the cost of such contract is not more than the Allowable Range of Contract Cost (ARCC) of their registration based on the guidelines as prescribed by the PCAB.

For this purpose, contracts similar to the Project shall be those described in the **BDS**.

- 5.5 The Bidder must submit a computation of its Net Financial Contracting Capacity (NFCC), which must be at least equal to the ABC to be bid, calculated as follows:

The NFCC= computed using the following formula, must be at least equal to the ABC to be bid:

NFCC = [(Current assets minus current liabilities) (15)] minus the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started coinciding with the contract for this Project.

The values of the domestic bidder's current assets and current liabilities shall be based on the latest Audited Financial Statements (AFS) submitted to the BIR.

For purposes of computing the foreign bidders' NFCC, the value of the current assets and current liabilities shall be based on their audited financial statements prepared in accordance with international financial reporting standards.

6. Bidder's Responsibilities

- 6.1 The Bidder or its duly authorized representative shall submit a sworn statement in the form prescribed in Section IX. Bidding forms as required in **ITB** Clause 12.1 (b)(iii).

6.2 The Bidder is responsible for the following:

- (a) Having taken steps to carefully examine all of the Bidding Documents;
- (b) Having acknowledged all conditions, local or otherwise, affecting the implementation of the contract;
- (c) Having made an estimate of the facilities available and needed for the contract to be bid, if any; and
- (d) Having complied with its responsibility to inquire or secure Supplemental/Bid Bulletin/s as provided under **ITB** Clause 10.4.
- (e) Ensuring that it is not “blacklisted” or barred from bidding by the GoP or any of its agencies, offices, corporations, or LGU’s, including foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the GPPB;
- (f) Ensuring that each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
- (g) Authorizing the HoPE or its duly authorized representative/s to verify all the documents submitted;
- (h) Ensuring that the signatory is the duly authorized representative of the Bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit its bid, and to sign and execute the ensuing contract, accompanied by the duly notarized Special Power of Attorney, Board/Partnership Resolution, or Secretary’s Certificate, whichever is applicable;
- (i) Complying with the disclosure provision under Section 47 of RA 9184 and its IRR in relation to other provisions of RA 3019
- (j) Complying with existing labor laws and standards, in the case of procurement of services. Moreover, bidder undertakes to:
 - (i) Ensure the entitlement of workers to wages, hours of work, safety and health and other prevailing conditions of work as established by national laws, rules and regulations; or collective bargaining agreement; or arbitration award, if and when applicable.

In case there is a finding by the Procuring Entity or the DOLE of underpayment or non-payment of workers’ wage and wage-related benefits, bidder agrees that the performance security or portion of the contract amount shall be withheld in favor of the complaining workers pursuant to appropriate provisions of

Republic Act No. 9184 without prejudice to the institution of appropriate actions under the Labor Code, as amended, and other social legislations.

- (ii) Comply with occupational safety and health standards and to correct deficiencies, if any.

In case of imminent danger, injury or death of the worker, bidder undertakes to suspend contract implementation pending clearance to proceed from the DOLE Regional Office and to comply with Work Stoppage Order; and

(iii) Inform the workers of their conditions of work, labor clauses under the contract specifying wages, hours of works and other benefits under prevailing national laws, rules and regulations; or collective bargaining agreement; or arbitration award, if and when applicable, through posting in two (2) conspicuous places in the establishment's premises; and

- (k) Ensuring that it did not give or pay, directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the;

Failure to observe any of the above responsibilities shall be at the risk of the Bidder concerned.

- 6.3 The Bidder, by the act of submitting its bid, shall be deemed to have inspected the site and determined the general characteristics of the contract works and the conditions for this Project and examine all instructions, forms, terms, and project requirements in the Bidding Documents.
- 6.4 It shall be the sole responsibility of the prospective bidder to determine and to satisfy itself by such means as it considers necessary or desirable as to all matters pertaining to this Project, including: (a) the location and the nature of the contract, project, or work; (b) climatic conditions; (c) transportation facilities; (c) nature and condition of the terrain, geological conditions at the site communication facilities, requirements, location and availability of construction aggregates and other materials, labor, water, electric power and access roads; and (d) other factors that may affect the cost, duration and execution or implementation of the contract, project, or work.
- 6.5 The Procuring Entity shall not assume any responsibility regarding erroneous interpretations or conclusions by the prospective or eligible bidder out of the data furnished by the procuring entity. However, the Procuring Entity shall ensure that all information in the Bidding Documents, including supplemental/bid bulletins issued are correct and consistent.

- 6.6 Before submitting their bids, the Bidders are deemed to have become familiar with all existing laws, decrees, ordinances, acts and regulations of the Philippines which may affect the contract in any way.
- 6.7 The Bidder shall bear all costs associated with the preparation and submission of his bid, and the Procuring Entity will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- 6.8 The Bidder should note that the Procuring Entity will accept bids only from those that have paid the applicable fee for the Bidding Documents at the office indicated in the Invitation to Bid.

7. Origin of GOODS and Services

There is no restriction on the origin of Goods, or Contracting of Works or Services other than those prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.

8. Subcontracts

- 8.1 Unless otherwise specified in the **BDS**, the Bidder may subcontract portions of the Works to an extent as may be approved by the Procuring Entity and stated in the **BDS**. However, subcontracting of any portion shall not relieve the Bidder from any liability or obligation that may arise from the contract for this Project.
- 8.2 Subcontractors must submit the documentary requirements under **ITB** Clause 12 and comply with the eligibility criteria specified in the **BDS**. In the event that any subcontractor is found by the Procuring Entity to be ineligible, the subcontracting of such portion of the Works shall be disallowed.
- 8.3 The Bidder may identify the subcontractor to whom a portion of the Works will be subcontracted at any stage of the bidding process or during contract implementation. If the Bidder opts to disclose the name of the subcontractor during bid submission, the Bidder shall include the required documents as part of the technical component of its bid.

B. Contents of Bidding Documents

9. Pre-Bid Conference

- 9.1 (a) If so specified in the **BDS**, a pre-bid conference shall be held at the venue and on the date indicated therein, to clarify and address the Bidders' questions on the technical and financial components of this Project.

The pre-bid conference shall be held at least twelve (12) calendar days before the deadline for the submission of and receipt of bids, but not earlier than seven (7) calendar days from the posting of the Invitation to Bid/Bidding Documents in the PhilGEPS website. If the Procuring Entity determines that, by reason of the

*method, nature, or complexity of the contract to be bid, or when international participation will be more advantageous to the GoP, a longer period for the preparation of bids is necessary, the pre-bid conference shall be held at least thirty (30) calendar days before the deadline for the submission and receipt of bids, as specified in the **BDS**.*

- 9.2 Bidders are encouraged to attend the pre-bid conference to ensure that they fully understand the Procuring Entity's requirements. Non-attendance of the Bidder will in no way prejudice its bid; however, the Bidder is expected to know the changes and/or amendments to the Bidding Documents as recorded in the minutes of the pre-bid conference and the Supplemental/Bid Bulletin. The minutes of the pre-bid conference shall be recorded and prepared not later than five (5) calendar days after the pre-bid conference. The minutes shall be

made available to prospective bidders not later than five (5) days upon written request.

Decisions of the BAC amending any provision of the bidding documents shall be issued in writing through a Supplemental/Bid Bulletin at least seven (7) calendar days before the deadline for the submission and receipts of bids.

10. Clarification and Amendment of Bidding Documents

- 10.1 Prospective bidders may request for clarification(s) on and/or interpretation of any part of the Bidding Documents. Such a request must be in writing and submitted to the Procuring Entity at the address indicated in the **BDS** at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.
- 10.2 The BAC shall respond to the said request by issuing a Supplemental/Bid Bulletin, to be made available to all those who have properly secured the Bidding Documents, at least seven (7) calendar days before the deadline for the submission and receipt of Bids.
- 10.3 Supplemental/Bid Bulletins may be issued upon the Procuring Entity's initiative for purposes of clarifying or modifying any provision of the Bidding Documents not later than seven (7) calendar days before the deadline for the submission and receipt of Bids. Any modification to the Bidding Documents shall be identified as an amendment.
- 10.4 Any Supplemental/Bid Bulletin issued by the BAC shall also be posted on the (PhilGEPS) and the website of the procuring Entity concerned, if available and at any conspicuous place in the premises of the Procuring Entity concerned. It shall be the responsibility of all Bidders who have properly secured the Bidding Documents to inquire and secure Supplemental/Bid Bulletins that may be issued by the BAC. However, bidders who have submitted bids before the issuance of the Supplemental/Bid Bulletin must be informed and allowed to modify or withdraw their bids in accordance with **ITB** Clause 23.

C. Preparation of Bids

11. Language of Bids

The eligibility requirements or statements, the bids, and all other documents to be submitted to the BAC must be in English. If the eligibility requirements or statements, the bids and all other documents submitted to the BAC are in foreign language other than English, it must be accompanied by a translation of the documents in English. The documents shall be translated by the relevant foreign government agency, the foreign government agency authorized to translate documents, or a registered translator in the foreign bidder's country; and shall be authenticated by the appropriate Philippine foreign service establishment/post of the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. The English translation shall govern, for purposes of interpretation of the bid.

12. Documents Comprising the Bid: Eligibility and Technical Components

12.1 Unless otherwise indicated in the **BDS**, the first envelope shall contain the following eligibility and technical documents:

(a) Eligibility Documents –

Class "A" Documents:

- (i) PhilGEPS Certificate of Registration and Membership in accordance with Section 8.5.2 of the IRR, except for foreign bidders participating in the procurement by a Philippine Foreign Service Office or Post, which shall submit their eligibility documents under Section 23.1 of the IRR, provided, that the winning bidder shall register with the PhilGEPS in accordance with Section 37.1.4 of the IRR.
- (ii) Statement of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; and

Statement of the Bidder's SLCC similar to the contract to be bid, in accordance with ITB Clause 5.4.

The two statements required shall indicate for each contract the following:

- (ii.1) name of the contract;
- (ii.2) date of the contract;

- (ii.3) contract duration;
- (ii.4) owner's name and address;
- (ii.5) nature of work;
- (ii.6) contractor's role (whether sole contractor, subcontractor, or partner in a JV) and percentage of participation;
- (ii.7) total contract value at award;
- (ii.8) date of completion or estimated completion time;
- (ii.9) total contract value at completion, if applicable;
- (ii.10) percentages of planned and actual accomplishments, if applicable;
- (ii.11) value of outstanding works, if applicable;

The statement of the Bidder's SLCC shall be supported by the Notice of Award and/or Notice to Proceed, Project Owner's Certificate of Final acceptance issued by the Owner other than the Contractor or the Constructors Performance Evaluation System (CPES) Final Rating, which must be at least satisfactory. In case of contracts with the private sector, an equivalent document shall be submitted.

- (iii) Unless otherwise provided in the **BDS**, a valid special (PCAB) License in case of joint ventures, and registration for the type and cost of the contract for this Project; and
- (iv) NFCC computation in accordance with **ITB** Clause 5.5.

Class "B" Document:

- (v) If applicable, valid Joint Venture Agreement (JVA) in accordance with the RA 4566.
- (b) Technical Documents –
- (i) Bid security as prescribed in **ITB** Clause 18. If the Bidder opts to submit the bid security in the form of:
 - (i.1) a bank draft/guarantee or an irrevocable letter of credit issued by a foreign bank, it shall be accompanied by a confirmation from a Universal or Commercial Bank; or

- (i.2) a surety bond accompanied by a certification coming from an authorized Insurance Commission that a surety or insurance company is authorized to issue such instrument; or
- (i.3) Bid Securing Declaration
- (ii) Project Requirements, which shall include the following:
 - (ii.1) Organizational chart for the contract to be bid;
 - (ii.2) List of contractor's personnel (e.g., Project Manager; Project Engineers, Materials Engineers, and Foremen).to be assigned to the contract to be bid, with their complete qualification and experience data. These personnel must meet the required minimum years of experience set in the **BDS**; and
 - (ii.3) List of contractor's equipment units, which are owned, leased, and/or under purchase agreements, supported by certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be, which must meet the minimum requirements for the contract set in the **BDS**; and
- (iii) Sworn statement in accordance with Section 25.3 of the IRR of RA 9184 and using the form prescribed in Section IX, Bidding Forms;

13. Documents Comprising the Bid: Financial Component

- 13.1 Unless otherwise stated in the **BDS**, the financial component of the bid shall contain the following:
- (a) Financial Bid Form, which includes bid prices and the bill of quantities, in accordance with **ITB** Clauses 15.1 and 15.3; and
 - (b) Any other document related to the financial component of the bid as stated in the **BDS**.
- (13.2) (a) Unless indicated in the **BDS**, all Bids that exceed the ABC shall not be accepted.
- (b) Unless otherwise indicated in the **BDS**, for foreign-funded procurement, a ceiling may be applied to bid prices provided the following conditions are met:
 - (i) Bidding Documents are obtainable free of charge on a freely accessible website. If payment of Bidding Documents is

required by the procuring entity, payment could be made upon the submission of bids.

- (ii) The procuring entity has procedures in place to ensure that the ABC is based on recent estimates made by the engineer or the responsible unit of the procuring entity and that the estimates are based on adequate detailed engineering (in case of infrastructure projects) and reflect the quality, supervision and risk and inflationary factors, as well as prevailing market prices, associated with the types of works or goods to be produced.
- (iii) The procuring entity has trained cost estimators on estimating prices and analyzing bid variances. In the case of infrastructure projects, the procuring entity must also have trained quantity surveyors.
- (iv) The procuring entity has established a system to monitor and report bid prices relative to ABC and engineer's/procuring entity's estimate.
- (v) The procuring entity has established a monitoring and evaluation system for contract implementation to provide a feedback on actual total costs of goods and works.

14. Alternative Bids

- 14.1 Alternative Bids shall be rejected. For this purpose, alternative bid is an offer made by a Bidder in addition or as a substitute to its original bid which may be included as part of its original bid or submitted separately therewith for purposes of bidding. A bid with options is considered an alternative bid regardless of whether said bid proposal is contained in a single envelope or submitted in two (2) or more separate bid envelopes.
- 14.2 Bidders shall submit offers that comply with the requirements of the Bidding Documents, including the basic technical design as indicated in the drawings and specifications. Unless there is a value engineering clause in the **BDS**, alternative bids shall not be accepted.
- 14.3 Each Bidder shall submit only one Bid, either individually or as a partner in a JV. A Bidder who submits or participates in more than one bid (other than as a subcontractor if a subcontractor is permitted to participate in more than one bid) will cause all the proposals with the Bidder's participation to be disqualified. This shall be without prejudice to any applicable criminal, civil and administrative penalties that may be imposed upon the persons and entities concerned.

15. Bid Prices

- 15.1 The contract shall be for the whole Works, as described in **ITB** Clause 1.1, based on the priced Bill of Quantities submitted by the Bidder.
- 15.2 The Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Bids not addressing or providing all of the required items in the Bidding Documents including, where applicable, Bill of Quantities, shall be considered non-responsive and, thus, automatically disqualified. In this regard, where a required item is provided, but no price is indicated, the same shall be considered as non-responsive, but specifying a "0" (zero) or as dash (-) for the said item would mean that it is being offered for free to the Government, except those required by law or regulations to be provided for.
- 15.3 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, prior to the deadline for submission of bids, shall be included in the rates, prices, and total bid price submitted by the Bidder.
- 15.4 All bid prices for the given scope of work in the contract as awarded shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances as specified in **GCC** Clause 48. Upon the recommendation of the Procuring Entity, price escalation may be allowed in extraordinary circumstances as may be determined by the National Economic and Development Authority in accordance with the Civil Code of the Philippines, and upon approval by the GPPB. Furthermore, in cases where the cost of the awarded contract is affected by any applicable new laws, ordinances, regulations, or other acts of the GoP, promulgated after the date of bid opening, a contract price adjustment shall be made or appropriate relief shall be applied on a no loss-no gain basis.

16. Bid Currencies

- 16.1 All bid prices shall be quoted in Philippine Pesos unless otherwise provided in the **BDS**. However, for purposes of bid evaluation, bids denominated in foreign currencies shall be converted to Philippine currency based on the exchange rate prevailing on the day of the Bid opening.
- 16.2 If so allowed in accordance with **ITB** Clause 16.1, the Procuring Entity for purposes of bid evaluation and comparing the bid prices will convert the amounts in various currencies in which the bid price is expressed to Philippine Pesos at the exchange rate as published in the *BangkoSentral ng Pilipinas*(BSP) reference rate bulletin on the day of the bid opening.
- 16.3 Unless otherwise specified in the **BDS**, payment of the contract price shall be made in Philippine Pesos.

17. Bid Validity

- 17.1 Bids shall remain valid for the period specified in the **BDS** which shall not exceed one hundred twenty (120) calendar days from the date of the opening of bids.

17.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Procuring Entity may request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. The bid security described in **ITB** Clause 18 should also be extended corresponding to the extension of the bid validity period at the least. A Bidder may refuse the request without forfeiting its bid security, but his bid shall no longer be considered for further evaluation and award. A Bidder granting the request shall not be required or permitted to modify its bid.

18. Bid Security

18.1 The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in an amount stated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the following schedule:

Form of Bid Security	Amount of Bid Security (Equal to Percentage of the ABC)
(a) Cash or cashier's/manager's check issued by a Universal or Commercial Bank.	Two percent (2%)
(b) Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.	
(c) Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security; and/or	Five percent (5%)

The Bid Securing Declaration mentioned above is an undertaking which states, among others, that the Bidder shall enter into contract with the procuring entity and furnish the performance security required under ITB Clause 32.2, within ten (10) calendar days from receipt of the Notice of Award, and commits to pay the corresponding amount as fine, and be suspended for a period of time from being qualified to participate in any government procurement activity in the event it violated any of the conditions stated therein as provided in the guidelines issued by the GPPB.

- 18.2 The bid security should be valid for the period specified in the **BDS**. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.
- 18.3 No bid securities shall be returned to bidders after the opening of bids and before contract signing, except to those that failed or declared as post-disqualified, upon submission of a written waiver of their right to file a motion for reconsideration and/or protest or lapse of the reglementary period without having filed a request for reconsideration or protest. Without prejudice on its forfeiture, Bid Securities shall be returned only after the bidder with the Lowest Calculated Responsive Bid has signed the contract and furnished the Performance Security, but in no case later than the expiration of the Bid Security validity period indicated in **ITB Clause 18.2**.
- 18.4 Upon signing and execution of the contract, pursuant to **ITB** Clause 31, and the posting of the performance security, pursuant to **ITB** Clause 32, the successful Bidder's Bid security will be discharged, but in no case later than the Bid security validity period as indicated in **ITB Clause 18.2**.
- 18.5 The bid security may be forfeited:
- (a) if a Bidder:
 - (i) withdraws its bid during the period of bid validity specified in **ITB** Clause 17;
 - (ii) does not accept the correction of errors pursuant to **ITB** Clause 27.3(b);
 - (iii) has a finding against the veracity of the required documents submitted in accordance with **ITB** Clause 28.2;
 - (iv) submission of eligibility requirement containing false information or falsified documents;
 - (v) submission of bids that contain false information or falsified documents, or the concealment of such information in the bids in order to influence the outcome of eligibility screening or any other stage of the public bidding;
 - (vi) allowing the use of one's name, or using the name of another for purposes of public bidding;
 - (vii) withdrawal of a bid, or refusal to accept an award, or enter into contract with the Government without justifiable cause, after the Bidder had been adjudged as having submitted the LCRB;

- (viii) refusal or failure to post the required performance security within the prescribed time;
 - (ix) refusal to clarify or validate in writing its bid during post-qualification within the period of seven (7) calendar days from the receipt of the request for clarification;
 - (x) any documented attempt by a Bidder to unduly influence the outcome of the bidding in his favor;
 - (xi) failure of the potential joint venture partners to enter into the joint venture after the bid is declared successful; or
 - (xii) all other acts that tend to defeat the purpose of the competitive bidding, such as habitually withdrawing from bidding, submitting late Bids or patently insufficient bid, for at least three (3) times within a year, except for valid reasons.
- (b) if the successful Bidder:
- (i) fails to sign the contract in accordance with **ITB** Clause 31;
 - (ii) fails to furnish performance security in accordance with **ITB** Clause 32.

19. Format and Signing of Bids

- 19.1 Bidders shall submit their bids through their duly authorized representative using the appropriate forms provided in Section IX Bidding Forms on or before the deadline specified in the **ITB** Clause 21 in two (2) separate sealed bid envelopes, and which shall be submitted simultaneously. The first shall contain the technical component of the bid, including the eligibility requirements under **ITB** Clause 12.1, and the second shall contain the financial component of the bid. This shall also be observed for each lot in the case of lot procurement.
- 19.2 Forms as mentioned in **ITB** Clause 19.1 must be completed without any alterations to their format, and no substitute form shall be accepted. All blank spaces shall be filled in with the information requested.
- 19.3 The Bidder shall prepare and submit an original of the first and second envelopes as described in **ITB** Clauses 12 and 13. In addition, the Bidder shall submit copies of the first and second envelopes. In the event of any discrepancy between the original and the copies, the original shall prevail.
- 19.4 Each and every page of the Bid Form, including the Bill of Quantities, under Section IX hereof, shall be signed by the duly authorized representative/s of the Bidder. Failure to do so shall be a ground for the rejection of bid.

19.5 Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the duly authorized representative/s of the Bidder.

20. Sealing and Marking of Bids

20.1 Bidders shall enclose their original eligibility and technical documents described in **ITB** Clause 12, in one sealed envelope marked “ORIGINAL - TECHNICAL COMPONENT”, and the original of their financial component in another sealed envelope marked “ORIGINAL - FINANCIAL COMPONENT”, sealing them all in an outer envelope marked “ORIGINAL BID”.

20.2 Each copy of the first and second envelopes shall be similarly sealed duly marking the inner envelopes as “COPY NO. ___ - TECHNICAL COMPONENT” and “COPY NO. ___ – FINANCIAL COMPONENT” and the outer envelope as “COPY NO. ___”, respectively. These envelopes containing the original and the copies shall then be enclosed in one single envelope.

20.3 The original and the number of copies of the Bid as indicated in the **BDS** shall be typed or written in ink and shall be signed by the Bidder or its duly authorized representative/s.

20.4 All envelopes shall:

- (a) contain the name of the contract to be bid in capital letters;
- (b) bear the name and address of the Bidder in capital letters;
- (c) be addressed to the Procuring Entity’s BAC identified in **ITB** Clause 20.1;
- (d) bear the specific identification of this bidding process indicated in the **ITB** Clause 1.2; and
- (e) bear a warning “DO NOT OPEN BEFORE...” the date and time for the opening of bids, in accordance with **ITB** Clause 21.

20.5 Bid envelopes that are not properly sealed and marked, as required in the bidding documents, shall not be rejected, but the Bidder or its duly authorized representative shall acknowledge such condition of the bid as submitted. The BAC or the Procuring Entity shall assume no responsibility for the misplacement of the contents of the improperly sealed or marked bid, or for its premature opening.

D. Submission and Opening of Bids

21. Deadline for Submission of Bids

Bids must be received by the Procuring Entity’s BAC at the address and on or before the date and time indicated in the **BDS**.

22. Late Bids

Any bid submitted after the deadline for submission and receipt of bids prescribed by the Procuring Entity, pursuant to **ITB** Clause 21, shall be declared “Late” and shall not be accepted by the Procuring Entity. The BAC shall record in the minutes of Bid Submission and Opening, the Bidder’s name, its representative and the time the late bid was submitted.

23. Modification and Withdrawal of Bids

23.1 The Bidder may modify its bid after it has been submitted; provided that the modification is received by the Procuring Entity prior to the deadline prescribed for submission and receipt of bids. The Bidder shall not be allowed to retrieve its original bid, but shall be allowed to submit another bid equally sealed, properly identified in accordance with Clause No. 20, linked to its original bid marked as “TECHNICAL MODIFICATION” or “FINANCIAL MODIFICATION” and stamped “received” by the BAC. Bid modifications received after the applicable deadline shall not be considered and shall be returned to the Bidder unopened.

23.2 A Bidder may, through a letter of withdrawal, withdraw its bid after it has been submitted, for valid and justifiable reason; provided that the letter of withdrawal is received by the Procuring Entity prior to the deadline prescribed for submission and receipt of bids. The Letter of Withdrawal must be executed by the authorized representative of the Bidder identified in the Omnibus Sworn Statement, a copy of which should be attached to the letter.

23.3 Bids requested to be withdrawn in accordance with **ITB** Clause 23.1 shall be returned unopened to the Bidders. A Bidder, who has acquired the bidding documents may also express its intention not to participate in the bidding through a letter which should reach and be stamped by the BAC before the deadline for submission and receipt of bids. A Bidder that withdraws its bid shall not be permitted to submit another bid, directly or indirectly, for the same contract.

23.4 No bid may be modified after the deadline for submission of bids. No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Financial Bid Form. Withdrawal of a bid during this interval shall result in the forfeiture of the Bidder’s bid security, pursuant to **ITB** Clause 18.5, and the imposition of administrative, civil, and criminal sanctions as prescribed by RA 9184 and its IRR.

24. Opening and Preliminary Examination of Bids

24.1 The BAC shall open the Bids in public, immediately after the deadline for the submission and receipt of bids in public, as specified in the **BDS**. In case the Bids cannot be opened as scheduled due to justifiable reasons, the BAC shall take custody of the Bids submitted and reschedule the opening of Bids on the next

working day or the soonest possible time through the issuance of a Notice of Postponement to be posted in the PhilGEPS website and the website of the Procuring entity concerned.

- 24.2 Unless otherwise specified in the BDS, the BAC shall open the first bid envelopes and determine each Bidder's compliance with the documents prescribed in ITB Clause 12, using a non-discretionary "pass/fail" criterion. If a Bidder submits the required document, it shall be rated "passed" for that particular requirement. In this regard, bids that fail to include any requirement or are incomplete or patently insufficient shall be considered as "failed". Otherwise, the BAC shall rate the said first bid envelope as "passed".
- 24.3 Unless otherwise specified in the BDS, immediately after determining compliance with the requirements in the first envelope, the BAC shall forthwith open the second bid envelope of each remaining eligible bidder whose first bid envelope was rated "passed". The second envelope of each complying bidder shall be opened within the same day. In case one or more of the requirements in the second envelope of a particular bid is missing, incomplete or patently insufficient, and/or if the submitted total bid price exceeds the ABC unless otherwise provided in **ITB** Clause 13.2, the BAC shall rate the bid concerned as "failed". Only bids that are determined to contain all the bid requirements for both components shall be rated "passed" and shall immediately be considered for evaluation and comparison.
- 24.4 Letters of withdrawal shall be read out and recorded during bid opening, and the envelope containing the corresponding withdrawn bid shall be returned to the Bidder unopened.
- 24.5 All members of the BAC who are present during bid opening shall initial every page of the original copies of all bids received and opened.
- 24.6 In the case of an eligible foreign Bidder as described in **ITB** Clause 5, the class "A" Documents may be substituted with the appropriate equivalent documents, if any, issued by the country of the foreign bidder concerned, which shall likewise be uploaded and maintained in the PhilGEPS in accordance with Section 8.5.2 of the IRR.
 - a) Registration Certificate from the Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or CDA for cooperatives;
 - b) Mayor's/Business permit issued by the local government where the principal place of business of the Bidder is located; and
 - c) Audited Financial Statements showing, among others, the prospective Bidder's total and current assets and liabilities stamped "received" by the Bureau of Internal Revenue or its duly accredited and authorized

institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission.

- 24.7 Each partner of a joint venture agreement shall likewise submit the document required in ITB Clauses 12.1(a)(i). Submission of documents required under **ITB** Clauses 12.1(a)(ii) to 12.1(a)(iv) by any of the joint venture partners constitutes compliance.
- 24.8 The procuring entity shall prepare the minutes of the proceedings of the bid opening that shall include, as a minimum: (a) names of Bidders, their bid price (per lot, if applicable, and/or including discount, if any), bid security, findings of preliminary examination, and whether there is a withdrawal or modification; and (b) attendance sheet. The BAC members shall sign the abstract of bids as read.
- 24.8 The Bidder or its duly authorized representatives may attend the opening of bids. The BAC shall ensure the integrity, security, and confidentiality of all submitted bids. The Abstract of Bids as read and the minutes of the Bid Opening shall be made available to the public upon written request and payment of a specified fee to recover cost of materials.
- 24.9 To ensure transparency and accurate representation of the bid submission, the BAC Secretariat shall notify in writing all Bidders whose bids it has received through its PhilGEPS-registered physical address or official e-mail address. The notice shall be issued within seven (7) calendar days from the date of the bid opening.

E. Evaluation and Comparison of Bids

25. Process to be Confidential

- 25.1 Members of the BAC, including its staff and personnel, as well as its Secretariat and TWG, are prohibited from making or accepting any kind of communication with any bidder regarding the evaluation of their bids until the issuance of the Notice of Award, unless otherwise allowed in the **ITB** Clause 26.
- 25.2 Any effort by a bidder to influence the Procuring Entity in the Procuring Entity's decision in respect of Bid evaluation, bid comparison or contract award will result in the rejection of the Bidder's Bid.

26. Clarification of Bids

To assist in the evaluation, comparison and post-qualification of the bids, the Procuring Entity may ask in writing any Bidder for a clarification of its bid. All responses to requests for clarification shall be in writing. Any clarification submitted by a Bidder in respect to its bid and that is not in response to a request by the Procuring Entity shall not be considered

27. Detailed Evaluation and Comparison of Bids

- 27.1 The Procuring Entity will undertake the detailed evaluation and comparison of Bids which have passed the opening and preliminary examination of Bids, pursuant to ITB Clause 24, in order to determine the Lowest Calculated Bid.
- 27.2 The Lowest Calculated Bid shall be determined in two steps:
- (a) The detailed evaluation of the financial component of the bids, to establish the correct calculated prices of the bids; and
 - (b) The ranking of the total bid prices as so calculated from the lowest to highest. The bid with the lowest price shall be identified as the Lowest Calculated Bid.
- 27.3 The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all bids rated "passed", using non-discretionary "pass/fail" criterion. The BAC shall consider the following in the evaluation of bids:
- (a) Completeness of the bid. Unless the **BDS** allows partial bids, bids not addressing or providing all the required items in the Schedule of Requirements including, where applicable, bill of quantities, shall be considered non-responsive and, thus, automatically disqualified. In this regard, where a required item is provided, but no price is indicated, the same shall be considered as non-responsive, but specifying a zero (0)" or a dash (-) for the said item would mean that it is being offered for free to the Procuring Entity, except those required by law or regulations to be provided for; and
 - (b) Arithmetical corrections. Consider computational errors, omissions to enable proper comparison of all eligible bids. It may also consider bid modifications. Any adjustment shall be calculated in monetary terms to determine the calculated prices.
- 27.4 Based on the detailed evaluation of bids, those that comply with the above-mentioned requirements shall be ranked in the ascending order of their total calculated bid prices, as evaluated and corrected for computational errors, discounts and other modifications, to identify the Lowest Calculated Bid. Total calculated bid prices, as evaluated and corrected for computational errors, discounts and other modifications, which exceed the ABC shall not be considered, unless otherwise indicated in the **BDS**.
- 27.5 The Procuring Entity's evaluation of bids shall be based on the bid price quoted in the Bid form, which includes the Bill of Quantities.
- 27.6 Bids shall be evaluated on an equal footing to ensure fair competition. For this purpose, all bidders shall be required to include in their bids the cost of all taxes, such as, but not limited to, value added tax (VAT), income tax, local taxes, and other fiscal levies and duties which shall be itemized in the bid form and reflected

in the detailed estimates. Such bids, including said taxes, shall be the basis for bid evaluation and comparison.

- 27.7 If so indicated pursuant to **ITB** Clause 1.2. Bids are being invited for individual lots or for any combination thereof, provided that all Bids and combinations of Bids shall be received by the same deadline and opened and evaluates simultaneously so as to determine the bid or combination of bids offering the lowest calculated cost to the procuring entity. Bid prices quoted shall correspond to all the requirements specified for each lot. Bid Security as required by **ITB** Clause 17 shall be submitted for each contract (lot) separately. The basis for evaluation of lots is specified in **BDS** Clause 27.3.

28. Post Qualification

- 28.1 The Procuring Entity shall determine to its satisfaction whether the Bidder that is evaluated as having submitted the Lowest Calculated Bid (LCB) complies with and is responsive to all the requirements and conditions specified in **ITB** Clauses 5, 12, and 13.
- 28.2 Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS) and other appropriate licenses and permits required by law and stated in the **BDS**.
- Failure to submit any of the post-qualification requirements on time, or a finding against the veracity thereof, shall disqualify the Bidder for award. Provided in the event that a finding against the veracity of any of the documents submitted is made, it shall cause the forfeiture of the bid security in accordance with section 69 of the IRR of RA 9184.
- 28.3 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted pursuant to **ITB** Clauses 12 and 13, as well as other information as the Procuring Entity deems necessary and appropriate, using a non-discretionary "pass/fail" criterion, which shall be completed within a period of twelve (12) calendar days.
- 28.4 If the BAC determines that the Bidder with the Lowest Calculated Bid passes all the criteria for post-qualification, it shall declare the said bid as the LCRB, and recommend to the HoPE the award of contract to the said Bidder at its submitted price or its calculated bid price, whichever is lower, subject to **ITB** Clause 30.3.
- 28.5 A negative determination shall result in rejection of the Bidder's Bid, in which event the Procuring Entity shall proceed to the next Lowest Calculated Bid with a fresh period to make a similar determination of that Bidder's capabilities to perform satisfactorily. If the second Bidder, however, fails the post qualification, the procedure for post qualification shall be repeated for the Bidder with the next

Lowest Calculated Bid, and so on until the LCRB is determined for recommendation of contract award.

- 28.6 Within a period not exceeding fifteen (15) calendar days from the determination by the BAC of the LCRB and the recommendation to award the contract, the HoPE or his duly authorized representative shall approve or disapprove the said recommendation.
- 28.7 In the event of disapproval, which shall be based on valid, reasonable, and justifiable grounds as provided for under Section 41 of the IRR of RA 9184, the HoPE shall notify the BAC and the Bidder in writing of such decision and the grounds for it. When applicable, the BAC shall conduct a post-qualification of the Bidder with the Lowest Calculated Bid. A request for reconsideration may be filed by the Bidder with the HoPE in accordance with Section 37.1.3 of the IRR of RA 9184.

29. Reservation Clause

- 29.1 Notwithstanding the eligibility or post-qualification of a bidder, the Procuring Entity concerned reserves the right to review its qualifications at any stage of the procurement process if it has reasonable grounds to believe that a misrepresentation has been made by the said bidder, or that there has been a change in the Bidder's capability to undertake the project from the time it submitted its eligibility requirements. Should such review uncover any misrepresentation made in the eligibility and bidding requirements, statements or documents, or any changes in the situation of the Bidder which will affect its capability to undertake the project so that it fails the preset eligibility or bid evaluation criteria, the Procuring Entity shall consider the said Bidder as ineligible and shall disqualify it from submitting a bid or from obtaining an award or contract.
- 29.2 Based on the following grounds, the Procuring Entity reserves the right to reject any and all Bids, declare a Failure of Bidding at any time prior to the contract award, or not to award the contract, without thereby incurring any liability, and make no assurance that a contract shall be entered into as a result of the bidding:
- (a) If there is *prima facie* evidence of collusion between appropriate public officers or employees of the Procuring Entity, or between the BAC and any of the bidders, or if the collusion is between or among the bidders themselves, or between a bidder and a third party, including any act which restricts, suppresses or nullifies or tends to restrict, suppress or nullify competition;
 - (b) If the Procuring Entity's BAC is found to have failed in following the prescribed bidding procedures; or

- (c) For any justifiable and reasonable ground where the award of the contract will not redound to the benefit of the GOP as follows:
 - (i) If the physical and economic conditions have significantly changed so as to render the project no longer economically, financially or technically feasible as determined by the HoPE;
 - (ii) If the project is no longer necessary as determined by the HoPE; and
 - (iii) If the source of funds for the project has been withheld or reduced through no fault of the Procuring Entity.

29.3 In addition, the Procuring Entity may likewise declare a failure of bidding when:

- (a) No bids are received;
- (b) All prospective bidders are declared ineligible;
- (c) All bids fail to comply with all the bid requirements or fail post-qualification; or
- (d) The bidder with the LCRB refuses, without justifiable cause to accept the award of contract, and no award is made in accordance with Section 40 of the IRR of RA 9184.

F. Award of Contract

30. Contract Award

- 30.1 Subject to **ITB** Clause 28, the HoPE or its duly authorized representative shall award the contract to the Bidder whose Bid has been determined to be the LCRB.
- 30.2 Prior to the expiration of the period of bid validity, the Procuring Entity shall notify the successful Bidder in writing that its bid has been accepted, through a Notice of Award duly received by the Bidder or its authorized representative personally or by registered mail or electronically, receipt of which must be confirmed in writing within two (2) days by the LCRB and submitted personally or sent by registered mail or electronically to the Procuring Entity.
- 30.3 Notwithstanding the issuance of the Notice of Award, award of contract shall be subject to the following conditions:
 - (a) Submission of the following documents within ten (10) calendar days from receipt of the Notice of Award.:

- (i) In the case of procurement by a Philippine Foreign Service Office or Post, the PhilGEPS Registration Number of the winning foreign Bidder; or
 - (ii) Valid PCAB license and registration for the type and cost of the contract to be bid for foreign bidders when the Treaty or International or Executive Agreement expressly allows submission of the PCAB license and registration for the type and cost of the contract to be bid as a pre-condition to the Award;
- (b) Posting of the performance security in accordance with **ITB** Clause 32;
 - (c) Signing of the contract as provided in **ITB** Clause 31; and
 - (d) Approval by higher authority, if required, as provided in Section 37.3 of the IRR of RA 9184.

31 Signing of the Contract

- 31.1 At the same time as the Procuring Entity notifies the successful Bidder that its Bid has been accepted, the Procuring Entity shall send the Contract Form to the Bidder, which Contract has been provided in the Bidding Documents, incorporating therein all agreements between the parties.
- 31.2 Within ten (10) calendar days from receipt of the Notice of Award, the successful Bidder shall post the required performance security, sign and date the contract and return it to the Procuring Entity.
- 31.3 The Procuring Entity shall enter into contract with the successful Bidder within the same ten (10) calendar day period provided that all the documentary requirements are complied with.
- 31.4 The following documents shall form part of the contract:
 - (a) Contract Agreement;
 - (b) Bidding Documents;
 - (c) Winning bidder's bid, including the Technical and Financial Proposals, and all other documents/statements submitted (e.g., Bidder's response to request for clarification on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;
 - (d) Performance Security;
 - (e) Notice of Award of Contract; and

- (f) Other contract documents that may be required by existing laws and/or specified in the **BDS**.

32. Performance Security

- 32.1 To guarantee the faithful performance by the winning Bidder of its obligations under the contract, it shall post a performance security within a maximum period of ten (10) calendar days from the receipt of the Notice of Award from the Procuring Entity and in no case later than the signing of the contract.
- 32.2 The performance security shall be denominated in Philippine Pesos and posted in favor of the Procuring Entity in an amount not less than the percentage of the total contract price in accordance with the following schedule:

Form of Performance Security	Amount of Performance Security (Equal to Percentage of the Total Contract Price)
(a) Cash or cashier's/manager's check issued by a Universal or Commercial Bank.	Ten percent (10%)
(b) Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.	
(c) Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security.	Thirty percent (30%)

- 32.3 Failure of the successful Bidder to comply with the above-mentioned requirement shall constitute sufficient ground for the annulment of the award and forfeiture of the bid security, in which event the Procuring Entity shall have a fresh period to initiate and complete the post qualification of the second Lowest Calculated Bid. The procedure shall be repeated until the LCRB is identified and selected for recommendation of contract award. However if no Bidder passed post-qualification, the BAC shall declare the bidding a failure and conduct a re-bidding with re-advertisement, if necessary..

33. Notice to Proceed

- 33.1 Within seven (7) calendar days from the date of approval of the contract by the appropriate government approving authority, the Procuring Entity shall issue its Notice to Proceed (NTP) together with a copy or copies of the approved contract to successful Bidder. All notices called for by the terms of the contract shall be effective only at the time of receipt thereof by the successful Bidder.

34. Protest Mechanism

Decision of the procuring entity at any stage of the procurement process may be questioned in accordance with Sections 55 of the IRR of RA 9184.

SECTION III
BID DATA SHEET

Bid Data Sheet

ITB Clause	
1.1	The PROCURING ENTITY is <i>Philippine Fisheries Development Authority</i> . The name of the Contract is <i>Construction of Mariveles Municipal Fish Port.</i>
2	The Funding Source is: The Government of the Philippines (GOP), <i>through</i> <i>FY 2015 National Government Subsidy</i> in the amount of <u><i>Eighteen Million Five Hundred Thirty One Thousand Nine Hundred Eight Pesos (P 18,531,908.00).</i></u>
3.1	No further instructions.
5.1	No further instructions.
5.2	Bidding is restricted to eligible bidders as defined in ITB Clause 5.1.
5.4(a)	No further instructions.
5.4(b)	For this purpose, similar contracts shall refer to contracts which have the same major categories of work. (<i>port works</i>)
8.1	“Subcontracting is not allowed.”
8.2	“Not applicable”.
9.1	The Procuring Entity will hold a <u><i>pre-bid conference</i></u> for this Project on <u><i>May 8, 2017 at 2:00 P.M.</i></u> .
10.1	The Procuring Entity’s address is: <i>PCA Annex Building, Elliptical Road, Diliman, Quezon City</i> <i>Atty. Loralie C. Datahan</i> <i>925-6138</i>
10.4	No further instructions.

12.1	No further instructions.																					
12.1(a)(iii)	No further instructions.																					
12.1(b)(ii.2)	<p><i>The minimum work experience requirements for key personnel are the following:</i></p> <p><u>Key Personnel</u> <u>General Experience</u> <u>Relevant Experience</u></p> <table> <tr> <td>1. Project Manager (1 C.E.)</td> <td>Civil Works</td> <td>at least 10years experience in port works & civil works and must have managed or supervised at least P 15.0M project of similar nature</td> </tr> <tr> <td>2. Project Engineer (1 C.E.)</td> <td>Civil Works</td> <td>at least 5years experience in port works & civil works</td> </tr> <tr> <td>3. Electrical Engineer(1E.E.)</td> <td>Electrical Works</td> <td>at least 5years experience in electrical works</td> </tr> <tr> <td>4. Materials Engineer (1 C.E.)</td> <td></td> <td>with at least 2 years relevant experience</td> </tr> <tr> <td>5. Construction Foreman</td> <td></td> <td>with 15 years experience in civil and electrical works</td> </tr> </table>	1. Project Manager (1 C.E.)	Civil Works	at least 10years experience in port works & civil works and must have managed or supervised at least P 15.0M project of similar nature	2. Project Engineer (1 C.E.)	Civil Works	at least 5years experience in port works & civil works	3. Electrical Engineer(1E.E.)	Electrical Works	at least 5years experience in electrical works	4. Materials Engineer (1 C.E.)		with at least 2 years relevant experience	5. Construction Foreman		with 15 years experience in civil and electrical works						
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4. Materials Engineer (1 C.E.)		with at least 2 years relevant experience																				
5. Construction Foreman		with 15 years experience in civil and electrical works																				
	<p>The minimum major equipment requirements are the following:</p> <p><u>Equipment Capacity</u> <u>Number of Units</u></p> <table> <tr> <td>-Roller Compactor</td> <td>6MT</td> <td>1 leased</td> </tr> <tr> <td>-Grader</td> <td>135Hp</td> <td>1 leased</td> </tr> <tr> <td>-Backhoe</td> <td>1.0 cu.m.</td> <td>1 owned</td> </tr> <tr> <td>-Payloader</td> <td>1.0 cu.m.</td> <td>1 leased</td> </tr> <tr> <td>-Dump Trucks</td> <td>6 wheeler</td> <td>1 owned & 1 leased</td> </tr> <tr> <td>-Concrete Mixer</td> <td>1-2 bagger</td> <td>2 owned & 1 leased</td> </tr> <tr> <td>-Welding Machine</td> <td></td> <td>2 owned</td> </tr> </table>	-Roller Compactor	6MT	1 leased	-Grader	135Hp	1 leased	-Backhoe	1.0 cu.m.	1 owned	-Payloader	1.0 cu.m.	1 leased	-Dump Trucks	6 wheeler	1 owned & 1 leased	-Concrete Mixer	1-2 bagger	2 owned & 1 leased	-Welding Machine		2 owned
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-Welding Machine		2 owned																				
12.1(a)(iv)	No further instructions.																					
13.1	“No additional Requirements”																					
13.1(b)	<p><i>This shall include all of the following documents:</i></p> <ol style="list-style-type: none"> <i>1) Bid prices in the Bill of Quantities</i> <i>2) Detailed Estimates, including summary sheet indicating the unit prices of construction materials; labor rates, and equipment rentals used in coming up with the Bid; and</i> 																					

	<i>3) Cash Flow by quarter or payment schedule.</i>
13.2	The <i>ABC</i> is <u>P18,531,908.00.</u> Any bid with a financial component exceeding this amount shall not be accepted.
14.2	“No further instructions.”
15.4	No further instructions.
16.1	The bid prices shall be quoted in Philippine Pesos.
16.3	No further instructions.
17.1	Bids will be valid until <i>120 calendar days.</i>
18.1	The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts: <ul style="list-style-type: none"> 1. The amount of not less than <u>P 370,638.16</u>[2% of ABC],if bid security is in cash, cashier’s/manager’s check, bank draft/guarantee or irrevocable letter of credit; 2. The amount of not less than <u>P 926,595.40</u> [5% of ABC], if bid security is in Surety Bond.
18.2	The bid security shall be valid until <i>120 calendar days.</i>
20.3	Each Bidder shall submit <i>one (1) original and two (2) copies</i> of the first and second components of its bid.
21	The address for submission of bids is <i>PFDA, PCA Annex Building, Elliptical Road, Diliman, Quezon City.</i> The deadline for submission of bids is on <u>May 22, 2017 at 12:00NN.</u>
24.1	The place of bid opening is <i>PFDA Conference room</i> The date and time of bid opening is on <u>May 22, 2017 at 2:00 P.M..</u>
24.2	No further instructions.

24.3	No further instructions.
27.3	<i>Partial bid is not allowed. The infrastructure project is packaged in a single lot and the lot shall not be divided into sub-lots for the purpose of bidding, evaluation, and contract award.</i>
27.4	No further instructions.
28.2	<i>“NONE”</i>
31.4(f)	<i>Submit documents relevant to the Project that may be required by existing laws and/or the PFDA, such as construction schedule and S-curve, manpower schedule, construction methods, equipment utilization schedule, construction safety and health program approved by the Department of Labor and Employment, and PERT/CPM.</i>

SECTION IV
GENERAL CONDITIONS OF THE
CONTRACT

1. Definitions

For purposes of this Clause, boldface type is used to identify defined terms.

- 1.1. The **Arbiter** is the person appointed jointly by the Procuring Entity and the Contractor to resolve disputes in the first instance, as provided for in **GCC Clause 21**.
- 1.2. **Bill of Quantities** refers to a list of the specific items of the Work and their corresponding unit prices, lump sums, and/or provisional sums.
- 1.3. The **Completion Date** is the date of completion of the Works as certified by the Procuring Entity's Representative, in accordance with **GCC Clause 49**.
- 1.4. The **Contract** is the contract between the Procuring Entity and the Contractor to execute, complete, and maintain the Works.
- 1.5. The **Contract Effectivity Date** is the date of signing of the Contract. However, the contractor shall commence execution of the Works on the Start Date as defined in **GCC Clause 1.28**.
- 1.6. The **Contract Price** is the price stated in the Notice of Award and thereafter to be paid by the Procuring Entity to the Contractor for the execution of the Works in accordance with this Contract.
- 1.7. **Contract Time Extension** is the allowable period for the Contractor to complete the Works in addition to the original Completion Date stated in this Contract.
- 1.8. The **Contractor** is the juridical entity whose proposal has been accepted by the Procuring Entity and to whom the Contract to execute the Work was awarded.
- 1.9. The **Contractor's Bid** is the signed offer or proposal submitted by the Contractor to the Procuring Entity in response to the Bidding Documents.
- 1.10. **Days** are calendar days; months are calendar months.
- 1.11. **Dayworks** are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.
- 1.12. A **Defect** is any part of the Works not completed in accordance with the Contract.
- 1.13. The **Defects Liability Certificate** is the certificate issued by Procuring Entity's Representative upon correction of defects by the Contractor.
- 1.14. The **Defects Liability Period** is the one year period between project completion and final acceptance within which the Contractor assumes the responsibility to undertake the repair of any damage to the Works at his own expense.

- 1.15. **Drawings** are graphical presentations of the Works. They include all supplementary details, shop drawings, calculations, and other information provided or approved for the execution of this Contract.
- 1.16. **Equipment** refers to all facilities, supplies, appliances, materials or things required for the execution and completion of the Work provided by the Contractor and which shall not form or are not intended to form part of the Permanent Works.
- 1.17. The **Intended Completion Date** refers to the date specified in the **SCC** when the Contractor is expected to have completed the Works. The Intended Completion Date may be revised only by the Procuring Entity's Representative by issuing an extension of time or an acceleration order.
- 1.18. **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- 1.19. The **Notice to Proceed** is a written notice issued by the Procuring Entity or the Procuring Entity's Representative to the Contractor requiring the latter to begin the commencement of the work not later than a specified or determinable date.
- 1.20. **Permanent Works** all permanent structures and all other project features and facilities required to be constructed and completed in accordance with this Contract which shall be delivered to the Procuring Entity and which shall remain at the Site after the removal of all Temporary Works.
- 1.21. **Plant** refers to the machinery, apparatus, and the like intended to form an integral part of the Permanent Works.
- 1.22. The **Procuring Entity** is the party who employs the Contractor to carry out the Works stated in the **SCC**.
- 1.23. The **Procuring Entity's Representative** refers to the Head of the Procuring Entity or his duly authorized representative, identified in the **SCC**, who shall be responsible for supervising the execution of the Works and administering this Contract.
- 1.24. The **Site** is the place provided by the Procuring Entity where the Works shall be executed and any other place or places which may be designated in the **SCC**, or notified to the Contractor by the Procuring Entity's Representative as forming part of the Site.
- 1.25. **Site Investigation Reports** are those that were included in the Bidding Documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.
- 1.26. **Slippage** is a delay in work execution occurring when actual accomplishment falls below the target as measured by the difference between the scheduled and

actual accomplishment of the Work by the Contractor as established from the work schedule. This is actually described as a percentage of the whole Works.

- 1.27. **Specifications** means the description of Works to be done and the qualities of materials to be used, the equipment to be installed and the mode of construction.
- 1.28. The **Start Date**, as specified in the **SCC**, is the date when the Contractor is obliged to commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- 1.29. A **Subcontractor** is any person or organization to whom a part of the Works has been subcontracted by the Contractor, as allowed by the Procuring Entity, but not any assignee of such person.
- 1.30. **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Permanent Works.
- 1.31. **Work(s)** refer to the Permanent Works and Temporary Works to be executed by the Contractor in accordance with this Contract, including (i) the furnishing of all labor, materials, equipment and others incidental, necessary or convenient to the complete execution of the Works; (ii) the passing of any tests before acceptance by the Procuring Entity's Representative; (iii) and the carrying out of all duties and obligations of the Contractor imposed by this Contract as described in the **SCC**.

2. Interpretation

- 2.1 In interpreting the Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of this Contract unless specifically defined. The Procuring Entity's Representative will provide instructions clarifying queries about the Conditions of Contract.
- 2.2 If sectional completion is specified in the **SCC**, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 2.3 The documents forming this Contract shall be interpreted in the following order of priority:
 - a) Contract Agreement;
 - b) Bid Data Sheet;
 - c) Instruction to Bidders;

- d) Addenda to the Bidding Documents;
- e) Special Conditions of Contract;
- f) General Conditions of Contract;
- g) Specifications;
- h) Bill of Quantities; and
- i) Drawings.

3. Governing Language and Law

- 3.1 This Contract has been executed in the English language, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract. All correspondence and other documents pertaining to this Contract which are exchanged by the parties shall be written in English.
- 3.2 This Contract shall be interpreted in accordance with the laws of the Republic of the Philippines.

4. Communications

Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is received by the concerned party.

5. Possession of Site

- 5.1 On the date specified in the **SCC**, the Procuring Entity shall grant the Contractor possession of so much of the Site as may be required to enable it to proceed with the execution of the Works. If the Contractor suffers delay or incurs cost from failure on the part of the Procuring Entity to give possession in accordance with the terms of this clause, the Procuring Entity's Representative shall give the Contractor a Contract Time Extension and certify such sum as fair to cover the cost incurred, which sum shall be paid by Procuring Entity.
- 5.2 If possession of a portion is not given by the date stated in the **SCC** Clause 5.1, the Procuring Entity will be deemed to have delayed the start of the relevant activities. The resulting adjustments in contract time to address such delay shall be in accordance with **GCC** Clause 47.
- 5.3 The Contractor shall bear all costs and charges for special or temporary right-of-way required by it in connection with access to the Site. The Contractor shall also provide at his own cost any additional facilities outside the Site required by it for purposes of the Works.

- 5.4 The Contractor shall allow the Procuring Entity's Representative and any person authorized by the Procuring Entity's Representative access to the Site and to any place where work in connection with this Contract is being carried out or is intended to be carried out.

6. The Contractor's Obligations

- 6.1 The Contractor shall carry out the Works properly and in accordance with this Contract. The Contractor shall provide all supervision, labor, Materials, Plant and Contractor's Equipment, which may be required. All Materials and Plant on Site shall be deemed to be the property of the Procuring Entity.
- 6.2 The Contractor shall commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program of Work submitted by the Contractor, as updated with the approval of the Procuring Entity's Representative, and complete them by the Intended Completion Date.
- 6.3 The Contractor shall be responsible for the safety of all activities on the Site.
- 6.4 The Contractor shall carry out all instructions of the Procuring Entity's Representative that comply with the applicable laws where the Site is located.
- 6.5 The Contractor shall employ the key personnel named in the Schedule of Key Personnel, as referred to in the **SCC**, to carry out the supervision of the Works. The Procuring Entity will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are equal to or better than those of the personnel listed in the Schedule.
- 6.6 If the Procuring Entity's Representative asks the Contractor to remove a member of the Contractor's staff or work force, for justifiable cause, the Contractor shall ensure that the person leaves the Site within seven (7) days and has no further connection with the Work in this Contract.
- 6.7 During Contract implementation, the Contractor and his subcontractors shall abide at all times by all labor laws, including child labor related enactments, and other relevant rules.
- 6.8 The Contractor shall submit to the Procuring Entity for consent the name and particulars of the person authorized to receive instructions on behalf of the Contractor.
- 6.9 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Procuring Entity between the dates given in the schedule of other contractors particularly when they shall require access to the Site. The Contractor shall also provide facilities and services for them during this period. The Procuring Entity may modify the schedule of other contractors, and shall notify the Contractor of any such modification thereto.

- 6.10 Should anything of historical or other interest or of significant value be unexpectedly discovered on the Site, it shall be the property of the Procuring Entity. The Contractor shall notify the Procuring Entity's Representative of such discoveries and carry out the Procuring Entity's Representative's instructions in dealing with them.

7. Performance Security

- 7.1 Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the Contractor shall furnish the performance security in any of the forms prescribed in **ITB** Clause 32.2.
- 7.2 The performance security posted in favor of the Procuring Entity shall be forfeited in the event it is established that the Contractor is in default in any of its obligations under the Contract.
- 7.3 The performance security shall remain valid until issuance by the Procuring Entity of the Certificate of Final Acceptance.
- 7.4 The performance security may be released by the Procuring Entity and returned to the Contractor after the issuance of the Certificate of Final Acceptance subject to the following conditions:
- (a) There are no pending claims against the Contractor or the surety company filed by the Procuring Entity;
 - (b) The Contractor has no pending claims for labor and materials filed against it; and
 - (c) Other terms specified in the **SCC**.
- 7.5 The Contractor shall post an additional performance security following the amount and form specified in **ITB** Clause 32.2 to cover any cumulative increase of more than ten percent (10%) over the original value of the contract as a result of amendments to order or change orders, extra work orders and supplemental agreements, as the case may be. The Contractor shall cause the extension of the validity of the performance security to cover approved contract time extensions.
- 7.6 In case of a reduction in the contract value or for partially completed Works under the contract which are usable and accepted by the Procuring Entity the use of which, in the judgment of the implementing agency or the Procuring Entity, will not affect the structural integrity of the entire project, the Procuring Entity shall allow a proportional reduction in the original performance security, provided that any such reduction is more than ten percent (10%) and that the aggregate of such reductions is not more than fifty percent (50%) of the original performance security.

7.7 Unless otherwise indicated in the SCC, the Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to Act 3688 against any subcontractor be they an individual, firm, partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

8. Subcontracting

8.1 Unless otherwise indicated in the SCC, the Contractor cannot subcontract Works more than the percentage specified in **BDS** Clause 8.1.

8.2 Subcontracting of any portion of the Works does not relieve the Contractor of any liability or obligation under this Contract. The Contractor will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants or workmen as fully as if these were the Contractor's own acts, defaults, or negligence, or those of its agents, servants or workmen.

8.3 If subcontracting is allowed. The contractor may identify its subcontractor during contract implementation stage. Subcontractors disclosed and identified during the bidding may be changed during the implementation of this Contract. In either case, subcontractors must submit the documentary requirements under ITB Clause 12 and comply with the eligibility criteria specified in the BDS. In the event that any subcontractor is found by any Procuring Entity to be eligible, the subcontracting of such portion of the Works shall be disallowed.

9. Liquidated Damages

9.1 The Contractor shall pay liquidated damages to the Procuring Entity for each day that the Completion Date is later than the Intended Completion Date. The applicable liquidated damages is at least one-tenth (1/10) of a percent of the cost of the unperformed portion for every day of delay. The total amount of liquidated damages shall not exceed ten percent (10%) of the amount of the contract. The Procuring Entity may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities. Once the cumulative amount of liquidated damages reaches ten percent (10%) of the amount of this Contract, the Procuring Entity shall rescind this Contract, without prejudice to other courses of action and remedies available under the circumstances.

9.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer of the Procuring Entity shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate.

10. Site Investigation Reports

The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the SCC supplemented by any information obtained by the Contractor.

11. The Procuring Entity, Licenses and Permits

The Procuring Entity shall, if requested by the Contractor, assist him in applying for permits, licenses or approvals, which are required for the Works.

12. Contractor's Risk and Warranty Security

- 12.1 The Contractor shall assume full responsibility for the Works from the time project construction commenced up to final acceptance by the Procuring Entity and shall be held responsible for any damage or destruction of the Works except those occasioned by *force majeure*. The Contractor shall be fully responsible for the safety, protection, security, and convenience of his personnel, third parties, and the public at large, as well as the Works, Equipment, installation, and the like to be affected by his construction work.
- 12.2 The defects liability period for infrastructure projects shall be one year from contract completion up to final acceptance by the Procuring Entity. During this period, the Contractor shall undertake the repair works, at his own expense, of any damage to the Works on account of the use of materials of inferior quality within ninety (90) days from the time the HoPE has issued an order to undertake repair. In case of failure or refusal to comply with this mandate, the Procuring Entity shall undertake such repair works and shall be entitled to full reimbursement of expenses incurred therein upon demand.
- 12.3 Unless otherwise indicated in the SCC, in case the Contractor fails to comply with the preceding paragraph, the Procuring Entity shall forfeit its performance security, subject its property (ies) to attachment or garnishment proceedings, and perpetually disqualify it from participating in any public bidding. All payables of the GOP in his favor shall be offset to recover the costs.
- 12.4 After final acceptance of the Works by the Procuring Entity, the Contractor shall be held responsible for "Structural Defects", *i.e.*, major faults/flaws/deficiencies in one or more key structural elements of the project which may lead to structural failure of the completed elements or structure, or "Structural Failures", *i.e.*, where one or more key structural elements in an infrastructure facility fails or collapses, thereby rendering the facility or part thereof incapable of withstanding the design loads, and/or endangering the safety of the users or the general public:
- (a) Contractor – Where Structural Defects/Failures arise due to faults attributable to improper construction, use of inferior quality/substandard materials, and any violation of the contract plans and specifications, the contractor shall be held liable;
 - (b) Consultants – Where Structural Defects/Failures arise due to faulty and/or inadequate design and specifications as well as construction supervision, then the consultant who prepared the design or undertook construction supervision for the project shall be held liable;

- (c) Procuring Entity's Representatives/Project Manager/Construction Managers and Supervisors – The project owner's representative(s), project manager, construction manager, and supervisor(s) shall be held liable in cases where the Structural Defects/Failures are due to his/their willful intervention in altering the designs and other specifications; negligence or omission in not approving or acting on proposed changes to noted defects or deficiencies in the design and/or specifications; and the use of substandard construction materials in the project;
- (d) Third Parties - Third Parties shall be held liable in cases where Structural Defects/Failures are caused by work undertaken by them such as leaking pipes, diggings or excavations, underground cables and electrical wires, underground tunnel, mining shaft and the like, in which case the applicable warranty to such structure should be levied to third parties for their construction or restoration works.
- (e) Users - In cases where Structural Defects/Failures are due to abuse/misuse by the end user of the constructed facility and/or non-compliance by a user with the technical design limits and/or intended purpose of the same, then the user concerned shall be held liable.

12.5 The warranty against Structural Defects/Failures, except those occasioned on force majeure, shall cover the period specified in the **SCC** reckoned from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity.

12.6 The Contractor shall be required to put up a warranty security in the form of cash, bank guarantee, letter of credit, GSIS or surety bond callable on demand, in accordance with the following schedule:

Form of Warranty	Minimum Amount in Percentage (%) of Total Contract Price
(a) Cash or letter of credit issued by Universal or Commercial bank: provided, however, that the letter of credit shall be confirmed or authenticated by a Universal or Commercial bank, if issued by a foreign bank	Five Percent (5%)
(b) Bank guarantee confirmed by Universal or Commercial bank: provided, however, that the letter of credit shall be confirmed or authenticated by a Universal or Commercial bank, if issued by a foreign bank	Ten Percent (10%)
(c) Surety bond callable upon demand issued by GSIS or any surety or	Thirty Percent (30%)

insurance company duly certified by the Insurance Commission	
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- 12.7 The warranty security shall be stated in Philippine Pesos and shall remain effective for one year from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity, and returned only after the lapse of said one year period.
- 12.8 In case of structural defects/failure occurring during the applicable warranty period provided in **GCC** Clause 12.5, the Procuring Entity shall undertake the necessary restoration or reconstruction works and shall be entitled to full reimbursement by the parties found to be liable for expenses incurred therein upon demand, without prejudice to the filing of appropriate administrative, civil, and/or criminal charges against the responsible persons as well as the forfeiture of the warranty security posted in favor of the Procuring Entity.

13. Liability of the Contractor

Subject to additional provisions, if any, set forth in the **SCC**, the Contractor's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

14. Procuring Entity's Risk

- 14.1 From the Start Date until the Certificate of Final Acceptance has been issued, the following are risks of the Procuring Entity:
- (a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to:
 - (i) any type of use or occupation of the Site authorized by the Procuring Entity after the official acceptance of the works; or
 - (ii) negligence, breach of statutory duty, or interference with any legal right by the Procuring Entity or by any person employed by or contracted to him except the Contractor.
 - (b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Procuring Entity or in the Procuring Entity's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

15. Insurance

- 15.1 The Contractor shall, under his name and at his own expense, obtain and maintain, for the duration of this Contract, the following insurance coverage:
- (a) Contractor's All Risk Insurance;

- (b) Transportation to the project Site of Equipment, Machinery, and Supplies owned by the Contractor;
 - (c) Personal injury or death of Contractor's employees; and
 - (d) Comprehensive insurance for third party liability to Contractor's direct or indirect act or omission causing damage to third persons.
- 15.2 The Contractor shall provide evidence to the Procuring Entity's Representative that the insurances required under this Contract have been effected and shall, within a reasonable time, provide copies of the insurance policies to the Procuring Entity's Representative. Such evidence and such policies shall be provided to the Procuring Entity's through the Procuring Entity's Representative.
- 15.3 The Contractor shall notify the insurers of changes in the nature, extent, or program for the execution of the Works and ensure the adequacy of the insurances at all times in accordance with the terms of this Contract and shall produce to the Procuring Entity's Representative the insurance policies in force including the receipts for payment of the current premiums.

The above insurance policies shall be obtained from any reputable insurance company approved by the Procuring Entity's Representative.

- 15.4 If the Contractor fails to obtain and keep in force the insurances referred to herein or any other insurance which he may be required to obtain under the terms of this Contract, the Procuring Entity may obtain and keep in force any such insurances and pay such premiums as may be necessary for the purpose. From time to time, the Procuring Entity may deduct the amount it shall pay for said premiums including twenty five percent (25%) therein from any monies due, or which may become due, to the Contractor, without prejudice to the Procuring Entity exercising its right to impose other sanctions against the Contractor pursuant to the provisions of this Contract.
- 15.5 In the event the Contractor fails to observe the above safeguards, the Procuring Entity may, at the Contractor's expense, take whatever measure is deemed necessary for its protection and that of the Contractor's personnel and third parties, and/or order the interruption of dangerous Works. In addition, the Procuring Entity may refuse to make the payments under GCC Clause 40 until the Contractor complies with this Clause.
- 15.6 The Contractor shall immediately replace the insurance policy obtained as required in this Contract, without need of the Procuring Entity's demand, with a new policy issued by a new insurance company acceptable to the Procuring Entity for any of the following grounds:

- (a) The issuer of the insurance policy to be replaced has:
 - (i) become bankrupt;

- (ii) been placed under receivership or under a management committee;
- (iii) been sued for suspension of payment; or
- (iv) been suspended by the Insurance Commission and its license to engage in business or its authority to issue insurance policies cancelled; or
- (v) Where reasonable grounds exist that the insurer may not be able, fully and promptly, to fulfill its obligation under the insurance policy.

16. Termination for Default of Contractor

16.1 The Procuring Entity shall terminate this Contract for default when any of the following conditions attend its implementation:

- (i) Due to Contractor's fault and while the project is on-going, it has incurred negative slippage of fifteen percent (15%) or more in accordance with Presidential Decree 1870, regardless of whether or not previous warnings and notices have been issued for the Contractor to improve his performance.
- (ii) Due to his own fault and after this Contract time has expired, the Contractor incurs delay in the completion of the work after this Contract has expired; or
- (iii) The Contractor:
 - (i) abandons the contract Works, refuses or fails to comply with a valid instruction of the Procuring Entity or fails to proceed expeditiously and without delay despite a written notice by the Procuring Entity;
 - (ii) does not actually have on the project Site the minimum essential equipment listed on the bid necessary to prosecute the Works in accordance with the approved Program of Work and equipment deployment schedule as required for the project;
 - (iii) does not execute the Works in accordance with this Contract or persistently or flagrantly neglects to carry out its obligations under this Contract;
 - (iv) neglects or refuses to remove materials or to perform a new Work that has been rejected as defective or unsuitable; or

- (v) sub-lets any part of this Contract without approval by the Procuring Entity.

16.2 All materials on the Site, Plant, Works, including Equipment purchased and funded under the Contract shall be deemed to be the property of the Procuring Entity if this Contract is rescinded because of the Contractor's fault.

17. Termination for Default of Procuring Entity

17.1 The Contractor may terminate this Contract with the Procuring Entity if the works are completely stopped for a continuous period of at least sixty (60) calendar days through no fault of its own, due to any of the following reasons:

- (a) Failure of the Procuring Entity to deliver, within a reasonable time, supplies, materials, right-of-way, or other items it is obligated to furnish under the terms of this Contract; or
- (b) The prosecution of the Work is disrupted by the adverse peace and order situation, as certified by the Armed Forces of the Philippines Provincial Commander and approved by the Secretary of National Defense.

18. Termination for Other Causes

18.1 The Procuring Entity may terminate this Contract, in whole or in part, at any time for its convenience. The HoPE may terminate this Contract for the convenience of the Procuring Entity if he has determined the existence of conditions that make Project Implementation economically, financially or technically impractical and/or unnecessary, such as, but not limited to, fortuitous event(s) or changes in law and National Government policies.

18.2 The Procuring Entity or the Contractor may terminate this Contract if the other party causes a fundamental breach of this Contract.

18.3 Fundamental breaches of Contract shall include, but shall not be limited to, the following:

- (a) The Contractor stops work for twenty eight (28) days when no stoppage of work is shown on the current Program of Work and the stoppage has not been authorized by the Procuring Entity's Representative;
- (b) The Procuring Entity's Representative instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within twenty eight (28) days;
- (c) The Procuring Entity shall terminate this Contract if the Contractor is declared bankrupt or insolvent as determined with finality by a court of competent jurisdiction. In this event, termination will be without compensation to the Contractor, provided that such termination will not

prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Procuring Entity and/or the Contractor. In the case of the Contractor's insolvency, any Contractor's Equipment which the Procuring Entity instructs in the notice is to be used until the completion of the Works;

- (d) A payment certified by the Procuring Entity's Representative is not paid by the Procuring Entity to the Contractor within eighty four (84) days from the date of the Procuring Entity's Representative's certificate;
- (e) The Procuring Entity's Representative gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Procuring Entity's Representative;
- (f) The Contractor does not maintain a Security, which is required;
- (g) The Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the **GCC** Clause 9; and
- (h) In case it is determined prima facie by the Procuring Entity that the Contractor has engaged, before or during the implementation of the contract, in unlawful deeds and behaviors relative to contract acquisition and implementation, such as, but not limited to, the following:
 - (i) corrupt, fraudulent, collusive and coercive practices as defined in **ITB** Clause 3.1(a), unless otherwise specified in the SCC;
 - (ii) drawing up or using forged documents;
 - (iii) using adulterated materials, means or methods, or engaging in production contrary to rules of science or the trade; and
 - (iv) any other act analogous to the foregoing.

18.4 The Funding Source or the Procuring Entity, as appropriate, will seek to impose the maximum civil, administrative and/or criminal penalties available under the applicable law on individuals and organizations deemed to be involved with corrupt, fraudulent, or coercive practices.

18.5 When persons from either party to this Contract gives notice of a fundamental breach to the Procuring Entity's Representative in order to terminate the existing contract for a cause other than those listed under **GCC** Clause 18.3, the Procuring Entity's Representative shall decide whether the breach is fundamental or not.

18.6 If this Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

19. Procedures for Termination of Contracts

19.1 The following provisions shall govern the procedures for the termination of this Contract:

- (a) Upon receipt of a written report of acts or causes which may constitute ground(s) for termination as aforementioned, or upon its own initiative, the Implementing Unit shall, within a period of seven (7) calendar days, verify the existence of such ground(s) and cause the execution of a Verified Report, with all relevant evidence attached;
- (b) Upon recommendation by the Procuring Entity, the HoPE shall terminate this Contract only by a written notice to the Contractor conveying the termination of this Contract. The notice shall state:
 - (i) that this Contract is being terminated for any of the ground(s) afore-mentioned, and a statement of the acts that constitute the ground(s) constituting the same;
 - (ii) the extent of termination, whether in whole or in part;
 - (iii) an instruction to the Contractor to show cause as to why this Contract should not be terminated; and
 - (iv) special instructions of the Procuring Entity, if any.

The Notice to Terminate shall be accompanied by a copy of the Verified Report;

- (c) Within a period of seven (7) calendar days from receipt of the Notice of Termination, the Contractor shall submit to the HoPE a verified position paper stating why the contract should not be terminated. If the Contractor fails to show cause after the lapse of the seven (7) day period, either by inaction or by default, the HoPE shall issue an order terminating the contract;
- (d) The Procuring Entity may, at anytime before receipt of the Contractor's verified position paper described in item © above withdraw the Notice to Terminate if it determined that certain items or works subject of the notice had been completed, delivered, or performed before the Contractor's receipt of the notice
- (e) Within a non-extendible period of ten (10) calendar days from receipt of the verified position paper, the HoPE shall decide whether or not to terminate this Contract. It shall serve a written notice to the Contractor of its decision and, unless otherwise provided in the said notice, this Contract is deemed terminated from receipt of the Contractor of the notice of

decision. The termination shall only be based on the ground(s) stated in the Notice to Terminate; and

- (f) The HoPE may create a Contract Termination Review Committee (CTRC) to assist him in the discharge of this function. All decisions recommended by the CTRC shall be subject to the approval of the HoPE.

19.2 Pursuant to Section 69(f) of RA 9184 and without prejudice to the imposition of additional administrative sanctions as the internal rules of the agency may provide and/or further criminal prosecution as provided by applicable laws, the procuring entity shall impose on contractors after the termination of the contract the penalty of suspension for one (1) year for the first offense, suspension for two (2) years for the second offense from participating in the public bidding process, for violations committed during the contract implementation stage, which include but not limited to the following:

- (a) Failure of the contractor, due solely to his fault or negligence, to mobilize and start work or performance within the specified period in the Notice to Proceed (“NTP”);
- (b) Failure by the contractor to fully and faithfully comply with its contractual obligations without valid cause, or failure by the contractor to comply with any written lawful instruction of the procuring entity or its representative(s) pursuant to the implementation of the contract. For the procurement of infrastructure projects or consultancy contracts, lawful instructions include but are not limited to the following:
 - (i) Employment of competent technical personnel, competent engineers and/or work supervisors;
 - (ii) Provision of warning signs and barricades in accordance with approved plans and specifications and contract provisions;
 - (iii) Stockpiling in proper places of all materials and removal from the project site of waste and excess materials, including broken pavement and excavated debris in accordance with approved plans and specifications and contract provisions;
 - (iv) Deployment of committed equipment, facilities, support staff and manpower; and
 - (v) Renewal of the effectivity dates of the performance security after its expiration during the course of contract implementation.
- (c) Assignment and subcontracting of the contract or any part thereof or substitution of key personnel named in the proposal without prior written approval by the procuring entity.

- (d) Poor performance by the contractor or unsatisfactory quality and/or progress of work arising from his fault or negligence as reflected in the Constructor's Performance Evaluation System ("CPES") rating sheet. In the absence of the CPES rating sheet, the existing performance monitoring system of the procuring entity shall be applied. Any of the following acts by the constructor shall be construed as poor performance:
 - (i) Negative slippage of 15% and above within the critical path of the project due entirely to the fault or negligence of the contractor; and
 - (ii) Quality of materials and workmanship not complying with the approved specifications arising from the contractor's fault or negligence.
- (e) Willful or deliberate abandonment or non-performance of the project or contract by the contractor resulting to substantial breach thereof without lawful and/or just cause.

In addition to the penalty of suspension, the performance security posted by the contractor shall also be forfeited.

20. Force Majeure, Release From Performance

- 20.1 For purposes of this Contract the terms "*force majeure*" and "fortuitous event" may be used interchangeably. In this regard, a fortuitous event or *force majeure* shall be interpreted to mean an event which the Contractor could not have foreseen, or which though foreseen, was inevitable. It shall not include ordinary unfavorable weather conditions; and any other cause the effects of which could have been avoided with the exercise of reasonable diligence by the Contractor.
- 20.2 If this Contract is discontinued by an outbreak of war or by any other event entirely outside the control of either the Procuring Entity or the Contractor, the Procuring Entity's Representative shall certify that this Contract has been discontinued. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all works carried out before receiving it and for any Work carried out afterwards to which a commitment was made.
- 20.3 If the event continues for a period of eighty four (84) days, either party may then give notice of termination, which shall take effect twenty eight (28) days after the giving of the notice.
- 20.4 After termination, the Contractor shall be entitled to payment of the unpaid balance of the value of the Works executed and of the materials and Plant reasonably delivered to the Site, adjusted by the following:
 - (a) any sum to which the Contractor is entitled under **GCC** Clause 28;

- (b) the cost of his suspension and demobilization;
 - © any sum to which the Procuring Entity is entitled.
- 20.5 The net balance due shall be paid or repaid within a reasonable time period from the time of the notice of termination.

21. Resolution of Disputes

- 21.1 If any dispute or difference of any kind whatsoever shall arise between the parties in connection with the implementation of the contract covered by the Act and this IRR, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.
- 21.2 If the Contractor believes that a decision taken by the Procuring Entity's Representative was either outside the authority given to the Procuring Entity's Representative by this Contract or that the decision was wrongly taken, the decision shall be referred to the Arbiter indicated in the **SCC** within fourteen (14) days of the notification of the Procuring Entity's Representative's decision.
- 21.3 Any and all disputes arising from the implementation of this Contract covered by the R.A. 9184 and its IRR shall be submitted to arbitration in the Philippines according to the provisions of Republic Act No. 876, otherwise known as the "Arbitration Law" and Republic Act 9285, otherwise known as the "Alternative Dispute Resolution Act of 2004": *Provided, however,* That, disputes that are within the competence of the Construction Industry Arbitration Commission to resolve shall be referred thereto. The process of arbitration shall be incorporated as a provision in this Contract that will be executed pursuant to the provisions of the Act and its IRR: *Provided, further,* That, by mutual agreement, the parties may agree in writing to resort to other alternative modes of dispute resolution.

22. Suspension of Loan, Credit, Grant, or Appropriation

In the event that the Funding Source suspends the Loan, Credit, Grant, or Appropriation to the Procuring Entity, from which part of the payments to the Contractor are being made:

- (a) The Procuring Entity is obligated to notify the Contractor of such suspension within seven (7) days of having received the suspension notice.
- (b) If the Contractor has not received sums due it for work already done within forty five (45) days from the time the Contractor's claim for payment has been certified by the Procuring Entity's Representative, the Contractor may immediately issue a suspension of work notice in accordance with **SCC** Clause 45.2.

23. Procuring Entity's Representative's Decisions

- 23.1 Except where otherwise specifically stated, the Procuring Entity's Representative will decide contractual matters between the Procuring Entity and the Contractor in the role representing the Procuring Entity.
- 23.2 The Procuring Entity's Representative may delegate any of his duties and responsibilities to other people, except to the Arbiter, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.

24. Approval of Drawings and Temporary Works by the Procuring Entity's Representative

- 24.1 All Drawings prepared by the Contractor for the execution of the Temporary Works, are subject to prior approval by the Procuring Entity's Representative before its use.
- 24.2 The Contractor shall be responsible for design of Temporary Works.
- 24.3 The Procuring Entity's Representative's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
- 24.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, when required by the Procuring Entity.

25. Acceleration and Delays Ordered by the Procuring Entity's Representative

- 25.1 When the Procuring Entity wants the Contractor to finish before the Intended Completion Date, the Procuring Entity's Representative will obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Procuring Entity accepts these proposals, the Intended Completion Date will be adjusted accordingly and confirmed by both the Procuring Entity and the Contractor.
- 25.2 If the Contractor's Financial Proposals for an acceleration are accepted by the Procuring Entity, they are incorporated in the Contract Price and treated as a Variation.

26. Extension of the Intended Completion Date

- 26.1 The Procuring Entity's Representative shall extend the Intended Completion Date if a Variation is issued which makes it impossible for the Intended Completion Date to be achieved by the Contractor without taking steps to accelerate the remaining work, which would cause the Contractor to incur additional costs. No payment shall be made for any event which may warrant the extension of the Intended Completion Date.
- 26.2 The Procuring Entity's Representative shall decide whether and by how much to extend the Intended Completion Date within twenty one (21) days of the Contractor asking the Procuring Entity's Representative for a decision thereto

after fully submitting all supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

27. Right to Vary

27.1 The Procuring Entity's Representative with the prior approval of the Procuring Entity may instruct Variations, up to a maximum cumulative amount of ten percent (10%) of the original contract cost.

27.2 Variations shall be valued as follows:

- (a) At a lump sum price agreed between the parties;
- (b) where appropriate, at rates in this Contract;
- (c) in the absence of appropriate rates, the rates in this Contract shall be used as the basis for valuation; or failing which
- (d) at appropriate new rates, equal to or lower than current industry rates and to be agreed upon by both parties and approved by the HoPE.

28. Contractors Right to Claim

If the Contractor incurs cost as a result of any of the events under **GCC** Clause 13, the Contractor shall be entitled to the amount of such cost. If as a result of any of the said events, it is necessary to change the Works, this shall be dealt with as a Variation.

29. Dayworks

29.1 Subject to **GCC** Clause 43 on Variation Order, and if applicable as indicated in the **SCC**, the Dayworks rates in the Contractor's bid shall be used for small additional amounts of work only when the Procuring Entity's Representative has given written instructions in advance for additional work to be paid for in that way.

29.2 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Procuring Entity's Representative. Each completed form shall be verified and signed by the Procuring Entity's Representative within two days of the work being done.

29.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

30. Early Warning

- 30.1 The Contractor shall warn the Procuring Entity's Representative at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Procuring Entity's Representative may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.
- 30.2 The Contractor shall cooperate with the Procuring Entity's Representative in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Procuring Entity's Representative.

31. Program of Work

- 31.1 Within the time stated in the **SCC**, the Contractor shall submit to the Procuring Entity's Representative for approval a Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works.
- 31.2 An update of the Program of Work shall show the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.
- 31.3 The Contractor shall submit to the Procuring Entity's Representative for approval an updated Program of Work at intervals no longer than the period stated in the **SCC**. If the Contractor does not submit an updated Program of Work within this period, the Procuring Entity's Representative may withhold the amount stated in the **SCC** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program of Work has been submitted.
- 31.4 The Procuring Entity's Representative's approval of the Program of Work shall not alter the Contractor's obligations. The Contractor may revise the Program of Work and submit it to the Procuring Entity's Representative again at any time. A revised Program of Work shall show the effect of any approved Variations .
- 31.5 When the Program of Work is updated, the Contractor shall provide the Procuring Entity's Representative with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.
- 31.6 All Variations shall be included in updated Program of Work produced by the Contractor.

32. Management Conferences

- 32.1 Either the Procuring Entity's Representative or the Contractor may require the other to attend a Management Conference. The Management Conference shall

review the plans for remaining work and deal with matters raised in accordance with the early warning procedure.

- 32.2 The Procuring Entity's Representative shall record the business of Management Conferences and provide copies of the record to those attending the Conference and to the Procuring Entity . The responsibility of the parties for actions to be taken shall be decided by the Procuring Entity's Representative either at the Management Conference or after the Management Conference and stated in writing to all who attended the Conference.

33. Bill of Quantities

- 33.1 The Bill of Quantities shall contain items of work for the construction, installation, testing, and commissioning of work to be done by the Contractor.
- 33.2 The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.
- 33.3 If the final quantity of any work done differs from the quantity in the Bill of Quantities for the particular item and is not more than twenty five percent (25%) of the original quantity, provided the aggregate changes for all items do not exceed ten percent (10%) of the Contract price, the Procuring Entity's Representative shall make the necessary adjustments to allow for the changes subject to applicable laws, rules, and regulations.
- 33.4 If requested by the Procuring Entity's Representative, the Contractor shall provide the Procuring Entity's Representative with a detailed cost breakdown of any rate in the Bill of Quantities.

34. Instructions, Inspections and Audits

- 34.1 The Procuring Entity's personnel shall at all reasonable times during construction of the Work be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of the construction.
- 34.2 If the Procuring Entity's Representative instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no defect, the test shall be a Compensation Event.
- 34.3 The Contractor shall permit the Funding Source named in the **SCC** to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Funding Source, if so required by the Funding Source.

35. Identifying Defects

The Procuring Entity's Representative shall check the Contractor's work and notify the Contractor of any defects that are found. Such checking shall not affect the Contractor's responsibilities. The Procuring Entity's Representative may instruct the Contractor to search uncover defects and test any work that the Procuring Entity's Representative considers below standards and defective.

36. Cost of Repairs

Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Liability Periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

37. Correction of Defects

37.1 The Procuring Entity's Representative shall give notice to the Contractor of any defects before the end of the Defects Liability Period, which is One (1) year from project completion up to final acceptance by the Procuring entity's Representative.

37.2 Every time notice of a defect is given, the Contractor shall correct the notified defect within the length of time specified in the Procuring Entity's Representative's notice.

37.3 The Contractor shall correct the defects which he notices himself before the end of the Defects Liability Period.

37.4 The Procuring Entity shall certify that all defects have been corrected. If the Procuring Entity considers that correction of a defect is not essential, he can request the Contractor to submit a quotation for the corresponding reduction in the Contract Price. If the Procuring Entity accepts the quotation, the corresponding change in the SCC is a Variation.

38. Uncorrected Defects

38.1 The Procuring Entity shall give the Contractor at least fourteen (14) days notice of his intention to use a third party to correct a Defect. If the Contractor does not correct the Defect himself within the period, the Procuring Entity may have the Defect corrected by the third party. The cost of the correction will be deducted from the Contract Price.

38.2 The use of a third party to correct defects that are uncorrected by the Contractor will in no way relieve the Contractor of its liabilities and warranties under the Contract.

39. Advance Payment

- 39.1 The Procuring Entity shall, upon a written request of the contractor which shall be submitted as a contract document, make an advance payment to the contractor in an amount not exceeding fifteen percent (15%) of the total contract price, to be made in lump sum or, at the most two, installments according to a schedule specified in the **SCC**.
- 39.2 The advance payment shall be made only upon the submission to and acceptance by the Procuring Entity of an irrevocable standby letter of credit of equivalent value from a commercial bank, a bank guarantee or a surety bond callable upon demand, issued by a surety or insurance company duly licensed by the Insurance Commission and confirmed by the Procuring Entity.
- 39.3 The advance payment shall be repaid by the Contractor by an amount equal to the percentage of the total contract price used for the advance payment.
- 39.4 The contractor may reduce his standby letter of credit or guarantee instrument by the amounts refunded by the Monthly Certificates in the advance payment.
- 39.5 The Procuring Entity will provide an Advance Payment on the Contract Price as stipulated in the Conditions of Contract, subject to the maximum amount stated in **SCC** Clause 39.1.

40. Progress Payments

- 40.1 The Contractor may submit a request for payment for Work accomplished. Such request for payment shall be verified and certified by the Procuring Entity's Representative/Project Engineer. Except as otherwise stipulated in the **SCC**, materials and equipment delivered on the site but not completely put in place shall not be included for payment.
- 40.2 The Procuring Entity shall deduct the following from the certified gross amounts to be paid to the contractor as progress payment:
- (a) Cumulative value of the work previously certified and paid for.
 - (b) Portion of the advance payment to be recouped for the month.
 - (c) Retention money in accordance with the condition of contract.
 - (d) Amount to cover third party liabilities.
 - (e) Amount to cover uncorrected discovered defects in the works.
- 40.3 Payments shall be adjusted by deducting therefrom the amounts for advance payments and retention. The Procuring Entity shall pay the Contractor the amounts certified by the Procuring Entity's Representative within twenty eight (28) days from the date each certificate was issued. No payment of interest for delayed payments and adjustments shall be made by the Procuring Entity.

- 40.4 The first progress payment may be paid by the Procuring Entity to the Contractor provided that at least twenty percent (20%) of the work has been accomplished as certified by the Procuring Entity's Representative.
- 40.5 Items of the Works for which a price of "0" (zero) has been entered will not be paid for by the Procuring Entity and shall be deemed covered by other rates and prices in the Contract.

41. Payment Certificates

- 41.1 The Contractor shall submit to the Procuring Entity's Representative monthly statements of the estimated value of the work executed less the cumulative amount certified previously.
- 41.2 The Procuring Entity's Representative shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- 41.3 The value of Work executed shall:
 - (a) be determined by the Procuring Entity's Representative;
 - (b) comprise the value of the quantities of the items in the Bill of Quantities completed; and
 - (c) include the valuations of approved variations.
- 41.4 The Procuring Entity's Representative may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

42. Retention

- 42.1 The Procuring Entity shall retain from each payment due to the Contractor an amount equal to a percentage thereof using the rate as specified in SCCSub-Clause 42.2.
- 42.2 Progress payments are subject to retention of ten percent (10%), referred to as the "retention money." Such retention shall be based on the total amount due to the Contractor prior to any deduction and shall be retained from every progress payment until fifty percent (50%) of the value of Works, as determined by the Procuring Entity, are completed. If, after fifty percent (50%) completion, the Work is satisfactorily done and on schedule, no additional retention shall be made; otherwise, the ten percent (10%) retention shall again be imposed using the rate specified therefor.
- 42.3 The total "retention money" shall be due for release upon final acceptance of the Works. The Contractor may, however, request the substitution of the retention money for each progress billing with irrevocable standby letters of credit from a

commercial bank, bank guarantees or surety bonds callable on demand, of amounts equivalent to the retention money substituted for and acceptable to the Procuring Entity, provided that the project is on schedule and is satisfactorily undertaken. Otherwise, the ten (10%) percent retention shall be made. Said irrevocable standby letters of credit, bank guarantees and/or surety bonds, to be posted in favor of the Government shall be valid for a duration to be determined by the concerned implementing office/agency or Procuring Entity and will answer for the purpose for which the ten (10%) percent retention is intended, *i.e.*, to cover uncorrected discovered defects and third party liabilities.

- 42.4 On completion of the whole Works, the Contractor may substitute retention money with an “on demand” Bank guarantee in a form acceptable to the Procuring Entity.

43 Variation Orders

- 43.1 Variation Orders may be issued by the Procuring Entity to cover any increase/decrease in quantities, including the introduction of new work items that are not included in the original contract or reclassification of work items that are either due to change of plans, design or alignment to suit actual field conditions resulting in disparity between the preconstruction plans used for purposes of bidding and the “as staked plans” or construction drawings prepared after a joint survey by the Contractor and the Procuring Entity after award of the contract, provided that the cumulative amount of the Variation Order does not exceed ten percent (10%) of the original project cost. The addition/deletion of Works should be within the general scope of the project as bid and awarded. The scope of works shall not be reduced so as to accommodate a positive Variation Order. A Variation Order may either be in the form of a Change Order or Extra Work Order.
- 43.2 A Change Order may be issued by the implementing official to cover any increase/decrease in quantities of original Work items in the contract.
- 43.3 An Extra Work Order may be issued by the implementing official to cover the introduction of new work necessary for the completion, improvement or protection of the project which were not included as items of Work in the original contract, such as, where there are subsurface or latent physical conditions at the site differing materially from those indicated in the contract, or where there are duly unknown physical conditions at the site of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in the Work or character provided for in the contract.
- 43.4 Any cumulative Variation Order beyond ten percent (10%) shall be subject of another contract to be bid out if the works are separable from the original contract. In exceptional cases where it is urgently necessary to complete the original scope of work, the HoPE may authorize a positive Variation Order go beyond ten percent (10%) but not more than twenty percent (20%) of the original

contract price, subject to the guidelines to be determined by the GPPB: *Provided, however,* That appropriate sanctions shall be imposed on the designer, consultant or official responsible for the original detailed engineering design which failed to consider the Variation Order beyond ten percent (10%).

43.5 In claiming for any Variation Order, the Contractor shall, within seven (7) calendar days after such work has been commenced or after the circumstances leading to such condition(s) leading to the extra cost, and within twenty-eight (28) calendar days deliver a written communication giving full and detailed particulars of any extra cost in order that it may be investigated at that time. Failure to provide either of such notices in the time stipulated shall constitute a waiver by the contractor for any claim. The preparation and submission of Variation Orders are as follows:

- (a) If the Procuring Entity's representative/Project Engineer believes that a Change Order or Extra Work Order should be issued, he shall prepare the proposed Order accompanied with the notices submitted by the Contractor, the plans therefore, his computations as to the quantities of the additional works involved per item indicating the specific stations where such works are needed, the date of his inspections and investigations thereon, and the log book thereof, and a detailed estimate of the unit cost of such items of work, together with his justifications for the need of such Change Order or Extra Work Order, and shall submit the same to the HoPE for approval.
- (b) The HoPE or his duly authorized representative, upon receipt of the proposed Change Order or Extra Work Order shall immediately instruct the appropriate technical staff or office of the Procuring Entity to conduct an on-the-spot investigation to verify the need for the Work to be prosecuted and to review the proposed plan, and prices of the work involved.
- (c) The technical staff or appropriate office of the Procuring Entity shall submit a report of their findings and recommendations, together with the supporting documents, to the Head of Procuring Entity or his duly authorized representative for consideration.
- (d) The HoPE or his duly authorized representative, acting upon the recommendation of the technical staff or appropriate office, shall approve the change Order or Extra Work Order after being satisfied that the same is justified, necessary, and in order.
- (e) The timeframe for the processing of Variation Orders from the preparation up to the approval by the Procuring Entity concerned shall not exceed thirty (30) calendar days.

44. Contract Completion

Once the project reaches an accomplishment of ninety five (95%) of the total contract amount, the Procuring Entity may create an inspectorate team to make preliminary inspection and submit a punch-list to the Contractor in preparation for the final turnover of the project. Said punch-list will contain, among others, the remaining Works, Work deficiencies for necessary corrections, and the specific duration/time to fully complete the project considering the approved remaining contract time. This, however, shall not preclude the claim of the Procuring Entity for liquidated damages.

45. Suspension of Work

- 45.1 The Procuring Entity shall have the authority to suspend the work wholly or partly by written order for such period as may be deemed necessary, due to *force majeure* or any fortuitous events or for failure on the part of the Contractor to correct bad conditions which are unsafe for workers or for the general public, to carry out valid orders given by the Procuring Entity or to perform any provisions of the contract, or due to adjustment of plans to suit field conditions as found necessary during construction. The Contractor shall immediately comply with such order to suspend the work wholly or partly.
- 45.2 The Contractor or its duly authorized representative shall have the right to suspend work operation on any or all projects/activities along the critical path of activities after fifteen (15) calendar days from date of receipt of written notice from the Contractor to the district engineer/regional director/consultant or equivalent official, as the case may be, due to the following:
- (a) There exist right-of-way problems which prohibit the Contractor from performing work in accordance with the approved construction schedule.
 - (b) Requisite construction plans which must be owner-furnished are not issued to the contractor precluding any work called for by such plans.
 - (c) Peace and order conditions make it extremely dangerous, if not possible, to work. However, this condition must be certified in writing by the Philippine National Police (PNP) station which has responsibility over the affected area and confirmed by the Department of Interior and Local Government (DILG) Regional Director.
 - (d) There is failure on the part of the Procuring Entity to deliver government-furnished materials and equipment as stipulated in the contract.
 - (e) Delay in the payment of Contractor's claim for progress billing beyond forty-five (45) calendar days from the time the Contractor's claim has been certified to by the procuring entity's authorized representative that the documents are complete unless there are justifiable reasons thereof which shall be communicated in writing to the Contractor.
- 45.3 In case of total suspension, or suspension of activities along the critical path, which is not due to any fault of the Contractor, the elapsed time between the

effective order of suspending operation and the order to resume work shall be allowed the Contractor by adjusting the contract time accordingly.

46. Payment on Termination

- 46.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Procuring Entity's Representative shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the SCC. Additional Liquidated Damages shall not apply. If the total amount due to the Procuring Entity exceeds any payment due to the Contractor, the difference shall be a debt payable to the Procuring Entity.
- 46.2 If the Contract is terminated for the Procuring Entity's convenience or because of a fundamental breach of Contract by the Procuring Entity, the Procuring Entity's Representative shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.
- 46.3 The net balance due shall be paid or repaid within twenty eight (28) days from the notice of termination.
- 46.4 If the Contractor has terminated the Contract under **GCC** Clauses 17 or 18, the Procuring Entity shall promptly return the Performance Security to the Contractor.

47. Extension of Contract Time

- 47.1 Should the amount of additional work of any kind or other special circumstances of any kind whatsoever occur such as to fairly entitle the contractor to an extension of contract time, the Procuring Entity shall determine the amount of such extension; provided that the Procuring Entity is not bound to take into account any claim for an extension of time unless the Contractor has, prior to the expiration of the contract time and within thirty (30) calendar days after such work has been commenced or after the circumstances leading to such claim have arisen, delivered to the Procuring Entity notices in order that it could have investigated them at that time. Failure to provide such notice shall constitute a waiver by the Contractor of any claim. Upon receipt of full and detailed particulars, the Procuring Entity shall examine the facts and extent of the delay and shall extend the contract time completing the contract work when, in the Procuring Entity's opinion, the findings of facts justify an extension.

- 47.2 No extension of contract time shall be granted the Contractor due to (a) ordinary unfavorable weather conditions and (b) inexcusable failure or negligence of Contractor to provide the required equipment, supplies or materials.
- 47.3 Extension of contract time may be granted only when the affected activities fall within the critical path of the PERT/CPM network.
- 47.4 No extension of contract time shall be granted when the reason given to support the request for extension was already considered in the determination of the original contract time during the conduct of detailed engineering and in the preparation of the contract documents as agreed upon by the parties before contract perfection.
- 47.5 Extension of contract time shall be granted for rainy/unworkable days considered unfavorable for the prosecution of the works at the site, based on the actual conditions obtained at the site, in excess of the number of rainy/unworkable days pre-determined by the Procuring Entity in relation to the original contract time during the conduct of detailed engineering and in the preparation of the contract documents as agreed upon by the parties before contract perfection, and/or for equivalent period of delay due to major calamities such as exceptionally destructive typhoons, floods and earthquakes, and epidemics, and for causes such as non-delivery on time of materials, working drawings, or written information to be furnished by the Procuring Entity, non-acquisition of permit to enter private properties or non-execution of the deed of sale or donation within the right-of-way resulting in complete paralyzation of construction activities, and other meritorious causes as determined by the Procuring Entity's Representative and approved by the HoPE. Shortage of construction materials, general labor strikes, and peace and order problems that disrupt construction operations through no fault of the Contractor may be considered as additional grounds for extension of contract time provided they are publicly felt and certified by appropriate government agencies such as DTI, DOLE, DILG, and DND, among others. The written consent of bondsmen must be attached to any request of the Contractor for extension of contract time and submitted to the Procuring Entity for consideration and the validity of the Performance Security shall be correspondingly extended.

48. Price Adjustment

Except for extraordinary circumstances as determined by NEDA and approved by the GPPB, no price adjustment shall be allowed. Nevertheless, in case where the cost of the awarded contract is affected by any applicable new laws, ordinances, regulations, or other acts of the GoP, promulgated after the date of bid opening, a contract price adjustment shall be made or appropriate relief shall be applied on a no loss-no gain basis.

49. Completion

The Contractor shall request the Procuring Entity's Representative to issue a certificate of Completion of the Works, and the Procuring Entity's Representative will do so upon deciding that the work is completed.

50. Taking Over

The Procuring Entity shall take over the Site and the Works within seven (7) days from the date the Procuring Entity's Representative issues a certificate of Completion.

51. Operating and Maintenance Manuals

- 51.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the **SCC**.
- 51.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the **SCC**, or they do not receive the Procuring Entity's Representative's approval, the Procuring Entity's Representative shall withhold the amount stated in the **SCC** from payments due to the Contractor.

SECTION V
SPECIAL CONDITIONS OF THE
CONTRACT

Special Conditions of Contract

GCC Clause	
1.17	<p>The Intended Completion Time/Contract Duration is 360 <i>Calendar Days</i>.</p> <p><i>The breakdown of the computation for the total contract time is as follows:</i></p> <p>1. <i>Total Actual Number of Working Days</i> = <u>250</u></p> <p><i>(Counted six (6) days a week)</i></p> <p>2. <i>Allowance for Holidays & Weekends</i> = <u>50</u></p> <p>3. <i>Allowance for Inclement Weather</i> = <u>60</u></p> <p style="text-align: right;"><i>Total Contract Time</i> = <u>360</u></p> <p style="text-align: right;"><i>(Calendar Days)</i></p>
1.22	The Procuring Entity is <i>Philippine Fisheries Development Authority, PCA Annex Building, Elliptical Road, Diliman, Quezon City.</i>
1.23	<p>The Procuring Entity's Representative is:</p> <p><i>Atty. Loralie C. Datahan</i></p> <p><i>Chairperson, Bids and Awards Committee</i></p>
1.24	The Site is located at <i>Brgy. Poblacion, Mariveles, Bataan</i>
1.28	The Start Date is <i>seven (7) calendar after receipt of Notice to Proceed.</i>
1.31	The Works consist of <i>1)Site Development and Utilities Works such as: clearing and disposal, reclamation works, rock revetment work, concrete work, concrete pavement, utilities work, and miscellaneous work item:2)Concreting of Access road such as: earthworks and concrete works; and Building Facilities such as: trading hall/admin. office/public c.r. and ice stalls</i>
2.2	<i>Not applicable.</i>
5.1	The Procuring Entity shall give possession of all parts of the Site to the Contractor.

6.5	<p>The Contractor shall employ the following Key Personnel:</p> <p><i>Project Manager</i></p> <p><i>Project Engineer</i></p> <p><i>Electrical Engineer</i></p> <p><i>Materials Engineer</i></p> <p><i>Construction Foreman</i></p> <p>Note: The names of the Key Personnel and their designation shall be filled out by winning contractor prior to contract signing.</p>
7.4(c)	No further instructions.
7.7	No further instructions.
8.1	No further instructions.
10	None
12.3	No further instructions.
12.5	Fifteen (15) Years
13	“No additional provision.”
18.3(h)(i)	No further instructions.
21.2	<p>The Arbiter is:</p> <p><i>Regional Trial Court of Quezon City</i></p>
29.1	No dayworks are applicable to the contract.
31.1	The Contractor shall submit the Program of Work to the Procuring Entity’s Representative within <i>seven (7)</i> days upon receipt of Notice to Proceed.
31.3	<p>The period between Program of Work updates is <i>thirty (30)</i> days.</p> <p>The amount to be withheld for late submission of an updated Program of Work is <i>five percent (5%) of the previous work accomplishment.</i></p>
34.3	The Funding Source is from the <i>FY2015 National Government Subsidy.</i>
37.1	No further instructions.
39.1	The amount of the advance payment is <i>fifteen percent (15%) of the</i>

	<i>Contract Price.</i>
40.1	No further instructions.
51.1	The date by which “as-built” drawings (One original copy in TRACING PAPER-105/110 tyke., two blue print copies and electronic file in DVD disc.) are required to be submitted before the release of final payment.
51.2	No final payment shall be made by the Procuring Entity unless the Contractor prepares and submits the required as-built plans.

SECTION VI
TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

PART I – SITE DEVELOPMENT AND UTILITIES WORK

A. SURVEY AND LAYOUT WORKS

Scope of Work

This section covers topographic and hydrographic survey including layout and installation of markers.

A.01 Topographic and Hydrographic Survey

Reference: All survey works shall be carried out in reference to bench marks or monuments designated by the Engineer.

Surveyor: *Licensed Surveyor shall carry out all survey works specified in this section.* The Contractor shall submit in advance for the Owner's approval, the true copy of license and qualifications of the surveyor to be employed for the works.

Prior to commencement of the work, the Contractor shall carry out the pre-construction topographic and hydrographic survey of the project by means of traversing, sounding and leveling, and shall prepare topographic/hydrographic plan on tracing paper in a convenient scale approved by the Engineer. The salient features of the area with respect to their position and shall have contour lines of 250mm vertical intervals. This survey shall form the basis for future quantity measurements.

All stations shall be established by closed traversing with an error of closure of not more than 1:3000.

The Contractor shall submit to the Owner the original and two (2) copies of the plan signed by the Surveyor and the Owner's Representative.

A.02 Layout and Installation of Markers

The Contractors shall layout the works and shall be solely responsible for the accuracy of such laying out. The Contractor shall provide, fix and maintain all stakes marks or the like which are necessary for the accurate laying out of the works and shall take all necessary precautions to prevent their removal or disturbances, all as approved by the Owner. The Contractor shall provide suitable range in the water to indicate the face lines of revetment.

Laying out of works shall include the verification of position of all markers, supply and installation of any and all other markers which the Contractor may require for the proper execution and completion of the work, and shall also include the repositioning of the Owner's marker if such repositioning is deemed necessary by the Contractor and approved by the Owner.

A. 03 Construction Survey Work Shall Provide:

1. Lines and reference points for building structures, parking areas, roads, utilities and other major site improvements included under this contract.
2. Reference points, lines and levels necessary for layout of canal, drainage system, roadway and other construction related to the control of surface and storm water.

A.04 Filed Notes

Filed Notes, calculations sheets and other documents shall be prepared in a manner acceptable to the Owner. The Contractor shall submit such notes and other documents on completion of the respective works or, if required, during the progress of works for the Engineer's inspection thereof.

B. CLEARING AND DISPOSAL

B.01 Description

This Item shall consist of the removal wholly or in part, and satisfactory disposal of all buildings, fences, structures, old pavements, abandoned pipe lines, and any other obstructions which are not designated or permitted to remain, except for the obstructions to be removed and disposed off under other items in the Contract. It shall also include the salvaging of designated materials and backfilling the resulting trenches, holes, and pits.

B.02 Construction Requirements

General

The Contractor shall perform the work described above, within and adjacent to the roadway, on Government land or easement, as shown on the Plans or as directed by the Engineer. All designated salvable material shall be removed, without unnecessary damage, in sections or pieces which may be readily transported, and shall be stored by the Contractor at specified places on the project or as otherwise shown in the Special Provisions. Perishable material shall be handled as designated in Subsection 100.2.2 Nonperishable material may be disposed off outside the limits of view from the project with written permission of the property owner on whose property the material is placed. Copies of all agreements with property owners are to be furnished to the Engineer. Basements or cavities left by the structure removal shall be filled with acceptable material to the level of the surrounding ground and, if within the prism of construction, shall be compacted to the required density.

C. RECLAMATION / EARTHWORKS

C.01 Description

This item shall consist of introducing suitable materials obtained from authorized borrow pit areas situated beyond the right-of way limits of the project at locations designated by the Owner's Representative and place as required within the area to be reclaimed and to the required elevation. The materials shall be of a quality satisfactory for the purpose intended. Reclamation shall include the clearing and grubbing of sites and the removal of all materials.

C.02 Materials Requirements

Filling materials shall consist of all types earthen materials such as soil, gravel, sand, shells, corals, cinders and rock of any geologic origin and any additional filler for blending which have distinctive properties readily identified in the field and have distinct engineering characteristics of which practical use can be made. Materials such as weeds, silt, muck and other superfluous or organic materials are not considered suitable materials for reclamation.

C.03 Construction Requirements

B.03.1 By Borrow

Borrow material shall be secured from land sources recommended as borrow outside the limits of the project or at locations/sites approved by the Owner's Representative. The Contractor shall construct and maintain haul roads. Likewise, the Contractor shall secure borrow from sources other than those designated, provided that the materials and location are approved by the Owner's representative, in which case, the Contractor shall, at his own expense, secure the pit and construct and maintain the haul roads together with the necessary right-of way for such roads and the right-of-access thereto.

The materials shall be hauled and placed in positions on the reclamation indicated on the plans.

Borrow pits when practicable shall be so excavated that they will drain to the nearest natural outlet or to such outlet as indicated on the plans or designated by the Owner's Representative. Side slopes of borrow pits in all cases shall be dressed to such slope as the Engineer may direct.

C.04 Compaction Requirement

The materials above MLLW whether obtained by borrow pits shall be spread out and compacted in layers not exceeding 300mm preferably by at least six passes of a vibratory roller of at least 8 ton drawn by a tractor. The fill shall be compacted to not less than 90% of standard proctor test requirement.

In case there is a layer of very compressible clay of variable thickness underneath the areas to be reclaimed, the filling immediately on top of the original sea or river beds shall be executed in thin layers not exceeding one meter spread over a wide area to avoid bulging of the soft compressible clay, until the MLLW elevation is reached. If in spite of this precaution, some clay eruption is observed on the fill material, this clay will be removed down to the elevation of the original sea or river bed and replace with good material. In the event that the top sea or river bed material is composed of soft silt, muck or organic material, the Contractor shall remove such soft material prior to filling or filling operation should be programmed so that the soft material can be push out of the reclamation area as directed by the Owner's Representative. The reclamation area shall be filled to the finished elevation shown on the plan plus allowances for expected settlement. Filling of the reclamation area and the construction of bulkheads shall be given top priority over other construction activities.

Final Test Acceptance: Upon assumed completion of filling up works, moisture content of the fill shall be determined in accordance with ASTM D 2216. Test samples shall be taken at places designated by the Owner. For each place designated, two test samples shall be taken at depths of 300 mm and 700 mm respectively. The average moisture content of any two specimens taken in one place shall not exceed 90 percent. All tests shall be performed in the presence of the Owner's Representative.

Graders or any equipment acceptable shall do grading of roadbed prior to the start of pavement works to the Owner. Grading and compaction shall be brought up to the specified lines and elevation as shown on the drawings. The roadbed shall be subject to the Owner's approval prior to the start of pavement works.

D. POLYFELT F-FILTRATION (FILTER FABRIC)

D.01 Scope of Work

1. This work covers all the following requirements regarding the installation of geotextile (filter fabric) in accordance with the lines, grades, and dimensions shown in the Drawing.

2. D.02 General

3.

4. The geotextile fabric shall meet the following requirements in full. If required, a sample of 1.00 sq. m. shall be supplied to the Engineer for approval and retention purposes of comparative testing against materials randomly sampled from the site.

D.03 Physical Properties

5. C.03.1 The geotextile must be UV-stabilized and the manufacturer shall certify that the quality of polymer used in the manufacture of the geotextile is such that retention of at least 80% of original tensile strength values after 3 months continuous exposure to natural sunlight will be achieved.

6. C.03.2 Fibers used in the manufacture of the geotextile shall be resistant to long-term contact with damp cementations substrates or acid or alkali leachate solutions in the pH range 2-13.
7. C.03.3 Where the geotextile is required as a filter in silty soil conditions, the minimum porosity of geotextile shall be >80%.

8. D.04 Mechanical and Hydraulic Properties

9.

10. The geotextile supplier is required to certify that material delivered to site will be proven to meet or exceed the following properties:

D.04.1 Minimum Nominal Mass (ASTM D3776)	600 g./sq.m.
D.04.2 Multidirectional Tensile Strength (R)	30.0 KN/m
D.04.3 Minimum Tensile Elongation at Break (E) (According to ASTM D4595)	90/40 %
D.04.4 Indicative resistance to installation and construction stress (R x E) (According to ASTM D4595)	9.50 KN/m
D.04.5 CBR Puncture Strength (According to DIN 5407)	4500 N
D.04.6 Maximum Effective Opening Size, ϕ (Dw)	0.08 mm

D.04.7 Permeability under 50 mm head

(Vertical water flow rate obtained
from testing in an acceptable
international laboratory)

35 l/sq. m./sec

11. D.05 Storage, Installation, and Measurement

12.

D.05.1 The geotextile shall be delivered to site with an outer wrapper to protect it from exposure to the elements.

D.05.2 Installation of the geotextile shall be in accordance with the manufacturer's instructions.

D.05.3 The Engineer reserves the right to sample geotextile delivered to site for individual quality control testing at the Contractor's expense. Material not meeting the manufacturer's certified values will be rejected from the site.

D.05.4 The geotextile shall be proven to resist dynamic puncture damage when subject to impact stress from rock (200-400 kgs.) dropped from a minimum height of 2.00 mts. Geotextile failing to resist puncture shall not be accepted.

D.05.5 To facilitate site Quality Assurance, each roll of geotextile delivered to site shall be clearly labeled with brand name, grade, and production batch number and this information is required to be clearly printed at regular intervals along the entire length of each roll.

D.05.6 Geotextiles overlaps shall be at least 1.00 m. when installed underwater and 0.35 mts. to 0.50 mts. for installation in dry conditions (depending on the subsoil conditions) unless otherwise stated on the Drawings. Alternatively, geotextile overlaps are to be heat-welded or sewn using appropriate polypropylene or other synthetic thread and portable hand sewing equipment. Joint seams shall meet or exceed 80 % of the fabric's tensile strength.

D.05.7 The geotextile shall not be subjected to direct construction vehicle traffic and backfill operations shall closely follow laying of the sheet.

D.05.8 The Contractor shall be responsible for avoiding damage to the geotextile during placement and compaction of the initial fill layer. The capability of the geotextile to resist installation damage shall be considered by the Contractor prior to submission of materials to the Engineer for approval.

If required by the Engineer, the Contractor shall at no charge, excavate down to the geotextile at regular intervals to visually check against construction damage and on completion of the inspection, backfill and re-compact. Damaged geotextile areas shall be fully exposed and overlaid with an additional layer of geotextile prior to backfilling.

D.05.9 In the event that consistent visible damage to the geotextile is observed, the Contractor shall be obliged to upgrade the quality of geotextiles used in subsequent sections of the construction.

E. ROCKWORKS

E.01 Description

This item shall consist of quarried rocks or bulkheads constructed at the locations indicated, in accordance with these specifications and in conformity with lines, elevations, slopes, cross section and dimensions shown on the plan or as required by the Owner's Representative.

E.02 Materials

E.02.1 Rocks

a. Quality and Shapes of Rocks.

Unless otherwise specifically stated, all rocks to be used shall be hard, durable, and not likely to disintegrate in sea water. Class I and II rocks must weigh not less than 1,900 kilogram per cubic meter solid (specific gravity – 1.9) or approximately 19.05 kilo Newton (kN) per cubic meter of solid materials, while Class III rocks shall weigh not less than 1,500 kilograms per cubic meter (specific gravity – 1.5) or approximately 15.09 kilo Newton (kN) per cubic meter of solid materials when reasonably dig

Rocks with specific gravity higher than those specified above will be accepted but no increase in the contract price will be made on this account.

Class I & II rocks shall be angular. Sub-angular rocks may be used subject to the approval of the Owner's Representative. Rounded or well rounded rocks will not be accepted.

b. Sizes of Rocks

Pieces of Class I rocks shall weigh not less than 1 ton (1000 kilograms) and above.

Class II rocks shall weigh 100 to 200 kilograms for secondary layer for rock causeway.

Class III rocks (corestone, leveling rocks and core rocks) shall be of any size and shapes provided that the larger piece shall weigh less than 100 kilograms and that not more than five percent (5%) of the entire quantity thereof shall consist of pieces the least dimension of which is not less than the size of pea gravel or as shown on the plan.

Quarry run shall consist of materials ranging from 5 cm to 10 cm diameter per piece.

Gravel Bedding with binder shall consist of materials ranging from 7% gravel to 30% selected borrow materials. Gravel shall consist of materials ranging from 1 cm to 5 cm diameter per piece.

E.02.2 Concrete Filler (Rubble Concrete)

The concrete filler/rubble concrete for rocks bulkheads when required for the purpose of preventing escape of fill material, shall be class "B" concrete plus 10% additional cement conforming to the requirements given under Item 405, "Structure Concrete", Volume II, of Standard Specifications for the particular class given.

E.03 Construction Method

E.03.1 Method of Placing Class I & II Rocks

The larger pieces of facing rock (Class I & II) shall first be laid carefully along the toe of the bulkhead with allowance being made for possible settlement.

These rows of large rocks shall be extended to maintain slightly in advance of the completed portion of the work. The larger pieces of rock shall be placed on the outer slope of the bulkhead and they shall be laid so that their longest dimension will be approximately normal to the plane of the face of the slope as indicated on the plans. The plane of the exposed faces of the rocks shall conform approximately to the prescribed line and grades indicated on the plans, and as stated out on the site by the Owner. No cutting, spoiling or coursing of the rocks will be required. The rocks shall be firmly bedded into the slopes and against the adjoining rocks. The works shall be done in skillful manner, which implies careful selection of the rocks to fit properly together so

that the finished surface shall be even and tight. Whenever necessary, small pieces of filler rocks shall be wedged firmly in between the facing rocks so that the latter shall be in the stable position. Filler rocks shall be of the kind and type of the facing rock. Rocks shall not be out on the faces of the bulkhead by more than 0.15 meters inward or outward.

E.03.2 Method of Placing Class III or Heating Rock

Class III rocks may be placed simultaneously or before placing Class I & II rocks. The larger pieces of Class III shall be placed at the bottom and against the inner slopes of Class I or II rocks. Smaller size rocks should be used to fill the voids between the larger pieces. Rocks shall not be out of line on the faces of the bulkheads by more than 0.15 meters inward or outward.

E.03.3 Concrete filler shall be used to fill crevices on the inside slope of the rocks to thickness 0.15 meter as shown on the plans or as directed by the Owner's representative. The surface shall conform to the slope. After grouting, the surface shall be cured as specified for "Structural Concrete", Item 405 of Standard Specifications for a period of at least 3 days.

F. EXCAVATION FOR BULKHEADS AND RECLAMATION

F.01 Description

This item shall consist of removal and disposal of unsuitable material that may be required for the construction of the bulkheads and reclamation works. It shall include all necessary clearing and maintenance of the excavation prior to backfilling. It shall also include removal of obstruction or parts thereof, as required. Materials such as weed, fine silt, mud and other superfluous material are considered unsuitable materials.

F.02 Construction Requirements

Excavation will include removal of unsuitable material along the line of pile. All unsuitable material shall be disposed of as directed by the PFDA Engineer.

Materials encountered in the excavation and determined by the Engineer as suitable for slope protection or other purposes shall be conserved & utilized as directed by the Engineer.

The seabed shall be excavated according to the cross sections shown on the Plans or as established by the Owner's Representative and dispose the unsuitable material at a place directed by the Owner's Representative. In case of over dredging wherein the limits and slope shown on the Plan or as established by the Owner's Representative are exceeded by more than 0.30 m., the area shall not be backfilled with the type of material excavated but with good sand specified for sand mattress but shall not be included in the payment.

The Contractor shall submit before proceeding with the work under this item his proposed method of excavation including drawings and other details left open to his choice when not fully shown on the Plans. The Owner shall approve such method, drawings and details before actual work is started under this item.

G. CRIB WALL AND RETAINING WALL

G.01 Scope of Work

This item includes furnishing of materials, labor, equipment required to complete the following works:

- a. Construction of retaining wall, revetment cap and stairlanding, with a minimum compressive strength of 3,000 psi (20.70 Mpa) at 28 days and shall conform to the requirement of **Part II.C. – CONCRETE WORKS** and the plan.

G.02 Material Requirements

Concrete used in this item shall be mix concrete with compressive strength of 3,000 psi. (20.7 Mpa) at 28 days.

Reinforcing steel shall conform to the requirements of DPWH Standard Specifications for Item 404, of Volume II, "Reinforcing Steel".

G.03 Construction Requirement

In no case shall these structures be placed on top of the bulkheads until such time that the structures has sufficiently settled.

The line, elevation and form of the works shall be true to line or as shown on the Plans. Unless otherwise specified on the Plans, the top shall be level and faces shall vertical except the curve portion, if any. Special care shall be exercised to smooth and tight fitting forms, which can be held rigidly to line and grade and removed without injury to the concrete. Forms shall be board, combination of G.I. sheets and board line with suitable materials, which will meet the approval of the

Owner's Representative. All corners of the finished work shall be true, sharp and clean-cut and shall be free from cracks or other defects.

H. REVETMENT CAP

H.01 Description

This item shall consist of furnishing of materials, labor & equipment necessary to complete the work.

H.02 Material Requirements

Concrete used in this item shall be mix concrete with compressive strength of 3,000 psi. (20.7 Mpa) at 28 days.

Reinforcing steel shall conform to the requirements of DPWH Standard Specifications for Item 404, of Volume II, "Reinforcing Steel".

H.03 Construction Requirement

Revetment cap shall include all works constructed on top of the rock bulkheads.

In no case shall these structures be placed on top of the bulkheads until such time that the bulkheads has sufficiently settled.

The line, elevation and form of the revetment cap shall be true to line or as shown on the Plans. Unless otherwise specified on the Plans, the top shall be level and faces shall vertical except the curve portion, if any. Special care shall be exercised to smooth and tight fitting forms, which can be held rigidly to line and grade and removed without injury to the concrete. Forms shall be board, combination of G.I. sheets and board or board line with suitable materials, which will meet the approval of the Owner's Representative. All corners of the finished work shall be true, sharp and clean-cut and shall be free from, cracks or other defects.

Concrete shall be mixed, placed and finished in accordance with the DPWH Standard Specifications for Item 405, "Structural Concrete".

I. STAIRLANDING

I.01 Scope of Work

This item includes furnishing of materials, labor, equipment required to complete the following works:

- a. Construction of stairlanding, with a minimum strength of 3,000 psi (20.70 Mpa) at 28 days and shall conform to the requirement of **Part II.C. – CONCRETE WORKS** and the plan.
- b. Installation of 200 mm x 200 mm Reinforced Concrete Mooring Post.
- c. Installation of 16 mm dia. Stainless Steel Mooring Ring.

J. PORTLAND CEMENT CONCRETE PAVEMENT

J.01 Description

This item shall consist of a pavement of Portland Cement Concrete with or without reinforcement, constructed on the prepared base in accordance with this Specification and in conformity with the lines, grades, thickness and typical cross section shown on the Plans.

J.02 Surface Preparation

Laying/spreading and compaction of Aggregate Base Coarse (Item 201).

Base coarse materials shall conform to the grading requirement of Table 201.1 of the DPWH Standard Specifications 2012 and shall be free from vegetable matter and lumps or balls of clay, and shall be such nature that it can be compacted readily to form a firm, stable base.

Aggregate base coarse materials shall be laid in accordance with Plan & DPWH Standard Specification 2012, Volume II.

Compactions of materials shall conform to **Part I.B.04**

Filling, Grading and Compaction of fill materials.

Except when provided herein, all applicable provisions of the 2012 DPWH Standard Specifications for Item 201 – AGGREGATE BASE COARSE shall be followed.

Prior to the delivery of materials, the Contractor shall submit samples to the Engineer for approval.

J.03 Concrete Pavement

The material shall be Field Mix Concrete and shall have compressive strength of 3,500 psi (24.10 Mpa) when tested at twenty eight (28) days in accordance with the AASHTO T 97, or 22 respectively.

Concrete pavement shall have thickness of 200mm and shall conform to DPWH Standard Specification 2012, Item 311- Portland Cement Pavement and the Plan.

Construction joints shall be provided with 16 mm. diameter X 0.60 m. dowel spaced at 0.60 m. on center.

Joint filler shall be mixed asphalt and mineral or rubber filler. It shall be punched to admit the dowels where called for in the Plans.

The filler for each joint shall be furnished in a single place for the full depth and width required for the joint.

J.04 Curbs and Gutter

All curbs and gutter shall have a minimum compressive strength of 20.70 Mpa at 28 days and shall conform to the requirements of **Part II.C. CONCRETE WORKS.**

Excavation shall be made to the required depth and the base upon which the curb and/or gutter are to be set shall be compacted to a firm and even surface.

Minor defects shall be repaired with mortar containing one part of Portland cement and two parts of fine aggregate. Plastering shall not be permitted and all rejected portions shall be removed and replaced at the Contractor expense.

All applicable provisions of DPWH Standard Specifications 2012, Item 600 shall be followed.

K. DRAINAGE AND SEWERAGE SYSTEM

K.01 Scope of Work

13. The Contractor shall furnish all works, equipment, materials, labor, and supervision required to complete this item in full compliance with the Drawing and these Specifications.

14.

K.02 Work Included

15. a. Excavation and Backfilling

All excavation shall conform to the requirement of **Part II.B. – EXCAVATION AND BACKFILLING FOR BUILDINGS.**

- b. Construction of 5 cum. Holding Tank

Holding Tank shall be constructed in accordance with the Plans and shall conform to the requirements of **Part II.E. –CEMENT AND MASONRY.**

- c. Supply and installation of all pipes and fittings as indicated in the Plan and Specification.

16.

L. OUTSIDE WATER DISTRIBUTION SYSTEM

L.01 Scope of Work

17. The Contractor shall furnish all works, equipment, materials, labor, testing and supervision required to complete the entire water supply system, in strict compliance with the Drawing and these Specifications.
- 18.

L.02 Work Included

- a. Supply and installation of all pipes and fittings as indicated in the Plan and Specification.
 - b. Furnishing and installation of valves, water meters, stand pipes, water meter box and its accessories.
 - c. Hydrostatic pressure testing of pipelines.
 - d. All works guarantee.
- 19.
20. Specifications for inside water distribution system, please refer to provision of *Part II.K – PLUMBING WORKS*.

NOTE: Expenses for connection/tapping of fish port water supply system from existing local water district's main waterline shall be provided by the Local Government Unit of Mariveles, Bataan / Philippine Fisheries Development Authority.

L.03 Trench Excavation/Backfilling

All excavations shall be protected from damage due to water and the Contractor, at his own expense, shall provide pumps, enclosure and temporary drainage whenever necessary to keep the excavation free of water.

Whenever it is necessary to excavate deeper to bring the pipe below the hydraulic gradient or for the purpose of protecting the pipe line, the Contractor shall do all the excavation work and backfill at his own expense.

After pipes have been laid, tested and approved, backfilling shall be done with approved materials free from large clods, stones and organic matters.

Excavated materials may be used for backfilling as approved by the Engineer.

In all cases, backfill materials shall be moistened, if dry, and tampered to 95% compaction.

L.04 Pipe Laying and Anchorage

Pipes shall not be laid in water, or when trench or weather conditions are unsuitable for the work. Water shall be kept out of the trench until the joining is complete.

All dirt shall be removed from the inside of the pipe before laying. Changes in direction of pipes and other fittings that maybe unsettled by pressure shall be properly anchored by concrete thrust blocks. Likewise, all exposed pipe shall also be supported and anchored whenever necessary.

The design of these supports shall be approved by the Engineer and all extra costs shall be at the expense of the Contractor.

L.05 Sand Bedding and Backfilling

Each layer of sand bed and backfill shall be moistened, if dry and tampered to 95% compaction. Water settling shall not be permitted in clayey soils.

No backfilling shall commence without proper installation of trust blocks and pressure testing.

L.06 High Density Polyethylene (HDPE) Pipe and Fittings

HDPE pipe shall conform with the standard specifications of PNS 55-SDR 13.5.

Fittings shall be injection molded compression type fittings. Installation shall be as per manufacturer's specification.

L.07 Galvanized Pipes and Fittings

Galvanized steel pipe shall conform to the requirements of "ASTM A – 120" and shall be Schedule 40. Fittings for galvanized pipe shall be of galvanized malleable iron.

L.08 Water Meters

Water meter must be "ARAD" or "Asahi" brand, or approved equivalent, screw type brass bodied with operating pressure conforming to standard specifications of MWSS and LWUA.

L.09 Valves

Valves shall be KITZ or equivalent and shall be provided on all supplied fixtures as specified.

L.10 Anti-Corrosion Painting

All exposed metal surface such as G.I. Pipes, pipe clamps, steel ladder, water tank steel base, meter box covers etc., must be applied with two (2) coats of anti-corrosion paint.

For galvanized metals - apply one coat zinc-chromate primer and one coat silver chrome finish.

For other metals surfaces - apply one coat of red lead primer and one coat silver chrome finish.

L.11 Testing Requirements

Pressure testing of the piping system shall be performed as work progresses to detect leaks especially at the pipe joints. Testing shall be done prior to backfilling. Testing shall be made only after all the pipes are properly anchored. Test pressures and procedures as approved by the Engineer.

Pump test shall also be performed to check its performance under actual operating condition. This is done after the installation works so that the whole system including its controls shall be subjected to demonstration test to prove that they operate and function satisfactorily.

All pipes, fittings, valves, joints and coupling found to be defective or cracked during the test shall be removed and replaced by the Contractor at his own expense.

L.12 Water Supply Pits, Drain Box and Valve Manholes

Concrete to be used shall develop 20.7Mpa strength after 28 days. Dimension and other data are indicated in the Plans. Cast iron covers shall conform to MWSS/LWUA Standard.

L.13 General Requirements for Mechanical Works

1.0 Supervision of Mechanical Works (Water Supply)

a. General Work

Furnish full time services of one or more experienced supervisor (master plumber) well qualified in directing, overseeing all phases of works of this nature.

b. Equipment Installation Work

Furnish services of manufacturer's representative to supervise equipment installation when regular full time supervisor are not otherwise qualified.

2.0 Review of the Water Supply System

- a. Before procurement of the pumps and controls, the contractor shall review and evaluate the system provided herein. In case the Contractor has no expertise in such works, it shall avail the services of the manufacturer's authorized representative.
- b. If any discrepancy, which needs necessary corrections, the matter shall be brought to the Owner's attention for proper action.

3.0 Approval of Materials and Equipment

All materials and equipment shall be new. Before procurement and delivery to project site, the contractor shall submit to the Owner the technical data indicating the rated capacities and performance curve related to the equipment/material for evaluation and approval.

For pumps and controls, a performance test is required at the supplier shop to prove that they operate and function satisfactorily based on the technical data submitted before procurement.

4.0 Maintenance Services, Warranty and Reliability Trial Testing

- a. The Contractor shall assume the responsibility to provide warranty to all equipment, machinery and system, so as to function not only as a part but also as a whole, intended and installed under the Contract as assurance against any defects due.
- b. To material, manufacturing, fabrication and installation that may occur during normal operation with appropriate maintenance for a period of twelve (12) months reckoned from the date of issuance of Certificate of Acceptance.

- c. The Contractor shall provide a reliability trial test for a period of two (2) weeks from the date of project completion at no additional cost to the Owner. During this test period, the Contractor shall provide at least one (1) qualified technician to oversee the testing.

- d. Emergency services shall be available when called for at no additional cost to the Owner where it is attributable to the Contractor and/or Manufacturer.

M. ELECTRICAL WORKS

All works shall conform to the applicable provision of *Part III – ELECTRICAL WORKS*.

N. MISCELLANEOUS WORK ITEMS

N.01 Scope of Work

This section covers the furnishing of all work, equipment, materials, labor and supervision required to complete the items in full compliance with the Drawing and this Specifications.

N.02 CURBS AND PAVEMENT MARKINGS/PAINTINGS

N.02.1 Description

This item shall consist of placing markings/paintings on all the curbs, tire guard/stoppers and pavement lane markers. The work shall include the furnishing of reflective traffic pavement marking paint, which ever is called for in the contract, sampling and packing, preparing the surface, and applying the paint to the surface, all in accordance with this Specification.

The paint shall be applied to the size, shape and location of the markings/paintings shown on the Plans or as required by the Engineer.

N.02.2 Material requirements

Traffic paint shall be mixed at the factory, ready for application without the necessity of using thinners and shall be of a smooth uniform quality. It shall conform to the composition of given in Table 606.1, Item 606 – Pavement Markings of DPWH Standard Specifications 2012.

N.02.3 Construction Requirements

The painting of lane markers and traffic strips to all curbs and tire guards/stoppers shall include the cleaning of the surface, the application, protection and drying of the paint coatings.

The paint shall not be applied during rain or wet weather or when the air is misty, or when in the opinion of the Engineer conditions are unfavorable for the work.

The paint shall be so applied as to produce a uniform, even coating in close contact with the surface being painted.

N.03 SIGNBOARD

Text made of computer cut engineering grade reflective sheeting on a Ga. 22 Aluminum Sheet substrate panel, Hi intensity Prismatic Grade Background bearing the name of the port, owner, location, logo of DA/PFDA/BFAR and LGU to be marked at R.C. parapet wall as indicated in the Plan.

Location of signage as indicated in the plan.

TECHNICAL SPECIFICATIONS

PART II – CIVIL WORKS

SURVEY AND LAYOUT WORK

General: Under **PART I.A** Site Development and Utilities work shall also be applied to this term with the additional provisions.

A.01 Construction Survey Requirements

The Contractor shall establish the following:

- a. Column/grid reference system of the building
- b. Boundary or primary perimeter lines of the building
- c. Entrance points of all utilities in the project area
- d. Reference mark to control the floor elevation and other finish grades.

A.02 Interior Layout Work

As the work progresses, the contractor shall provide the reference points throughout each interior area, which are necessary to facilitate detailed layout of partitions, doors, windows, equipment foundation, ceilings and other structures.

All layouts, locations and dimensions shall be rechecked and verified in the plans by the contractor before starting any work items of the project.

EXCAVATION AND BACKFILLING FOR BUILDINGS

B.01 Scope of Work

The Contractor shall furnish all labor, materials, equipment, plant and other facilities and perform all work necessary to complete the preparation of site, excavation, filling and grading in strict compliance with the applicable drawings and as specified herein.

B.02 Stake and Batter Boards

The Contractor shall stake out the buildings accurately and establish grades, after which the approval of the Owner shall be secured before any excavation work is started.

Basic batter boards and basic reference marks shall be erected at the expense of the Contractor, at such places where they will not be disturbed during construction. Materials shall be stored and work shall be conducted in such manner as to preserve all reference marks set.

The Contractor shall construct two (2) permanent benchmarks of previously known elevations near or within the site of construction for determining any settlement that may occur during the progress of construction.

Elevation reading shall be taken on at least four (4) points in the buildings and other related structures. A permanent record of the weekly reading shall be kept at construction site and monthly report thereof shall be submitted to the Owner unless some unusual reading is observed in which case report shall be made immediately.

B.03 Excavation

Excavation work shall commence after the fill has thoroughly compacted and attained the required elevation.

The Contractor shall make all necessary excavation for foundations to grade indicated on the Drawings. All trenches shall be excavated at a neat size, leveled to a line at the bottom, which is ready to receive the foundation. The Contractor shall not excavate to a depth below elevations shown on the drawings. Work that is excavated to a greater depth than required by the drawings and this specification shall be filled with lean concrete (fc' = 13.8 Mpa) at the expense of the Contractor.

No footings shall rest on fill. If the excavations for foundation reveal that footing will rest on fill, excavations shall be carried until the desired stratum is reached

for safe bearing. All excavations shall be made with proper allowance made for floor slabs and forms. Bottom of footing and foundations shall be approximately level, clean and clear of loose materials with the lower section true to size.

All excavation for drainage, sewer and water services, and other underground utilities, which are within the property line or scope of work indicated on the Plans, are included.

Sheathing shall be driven below the bottom of excavation deep enough. Where walls or footings are to be poured without forms, trench sides shall be sharp and true.

The Contractor, at all times protects the excavation and trenches from damage due to water. He shall provide pumps and equipment, build enclosures and shall construct and maintain temporary drainage and do all pumping necessary to keep the excavation free of water. Sheet piling if needed shall be provided and tightly driven, shored and braced to maintain its position until removed.

B.04 Utilities

Protect the existing active sewer, water, gas, electric, other utility services, and structures, for proper execution of work, relocate them if necessary or as directed. If encountered during construction and requiring protection or relocation, the contractor shall request in writing for decision of the Owner. Do not proceed until written instructions are obtained.

B.05 Backfilling, Grading and Compaction

After forms have been removed from footings, beams, foundations, walls, etc., and when the concrete work has attained full designed strength, backfill shall be placed free from waste and objectionable matters. After the backfill has settled, the Contractor shall fill all shallow places to bring the backfill area to grade.

The Contractor shall grade the site within the area indicated in the scope of work.

All filling materials shall be placed in layers not exceeding 150 mm in thickness, each layer being thoroughly wetted and compacted by rolling or tamping. All fills shall have 95% compaction.

The types of filling materials for buildings shall be selected earthfill and the source shall be approved by the Engineer.

CONCRETE WORKS

C.01 Scope of Work

The work shall include all labor, materials, equipment, plant and other facilities for the satisfactory performance of all work necessary to complete all concrete and reinforced concrete work shown on the Drawing and specified herein.

C.02 Concrete and Reinforced Concrete

All concrete and reinforced concrete work shall be done in accordance with the *DPWH Standard Specifications for Highways and Bridges revised 1988 and the current American Concrete Institute "BUILDING CODE REQUIREMENTS FOR THE REINFORCED CONCRETE (ACI 318 – 76)"*.

C.03 Concrete Materials

Portland Cement shall be Type I and shall conform to "Specification for Portland cement (ASTM – C – 150-76a)".

Concrete aggregates shall be well-graded particles of gravel or crushed rock conforming to the *"Specification for Concrete Aggregates (ASTM C33 – 74a)"*.

The maximum size of the aggregates shall not be larger than 1/5 of the narrowest dimension between forms nor larger than 3/4 of the minimum clear spacing between reinforcing bars nor larger than 25 mm in diameter.

Larger diameters of aggregates may be allowed in massive concreting with written permissions from the Owner.

Water used in mixing concrete shall be clean and free from injurious amount of oil, acid, alkali, salt, organic matter or other deleterious substances.

All reinforcing bars used shall be deformed and shall be free from rust, oil, defects, grease or kink.

All reinforcing steel bars shall conform to the *PHILIPPINE STANDARD GRADE DSB 275*.

C.04 Forms

The Contractor shall provide forms that will produce correctly aligned concrete. Plastering in general shall not be allowed so that extra care shall be exercised by the Contractor in choice of fitting and rigid supporting of the forms. Plywood, metal or surfaced lumber forms shall be used for all exposed concrete works.

Column forms shall check for plumpness before concrete is poured. Handholds shall be provided in column forms at lowest points of per lifts to render this space accessible for cleaning.

Forms and shoring shall not be removed until the concrete is adequately set and strong enough to withstand anticipated loading, and in no case less than seven (7) days after pouring.

All girders, beams, centering shall be crowned at least 25 mm in all direction from every eight (8) meters span. However, chambers for all cantilevers shall be as indicated in Plans or obtained from the Owner.

21. C.05 Storage of Materials

Cement shall be stored immediately upon arrival at the site in substantial, weatherproof bodegas, with a floor raised from the ground sufficiently high to be free from dampness.

Aggregates shall be stored in such a manner as to avoid the inclusion of other/foreign materials.

Reinforcing bars shall be placed in racks raised above the ground and protected from moisture and vegetation.

C.06 Samples and Testing

Testing except as otherwise specified herein shall be performed by an approved testing agency as proposed by the Contractor and approved by the Owner at no additional cost to the Owner.

Cement: Sampled either at the mill or at the site of the work and tested by an approved independent commercial or national testing laboratory at no additional cost to the Owner. Certified copies of laboratory test reports shall be furnished for each lot of cement and shall include all test data results and certificates that the sampling and testing cement shall be used until notice has been given by the Owner that the test results are satisfactory. Cement that has been stored, other than in bins at the mills, for more than four (4) months after delivery to the site shall be retest before use. Cement delivered at the site and later found under the test to be unsuitable shall not be incorporated into the permanent works.

Aggregates: Tested as prescribed in ASTM C 33.

Reinforcement: Certified copies of mill certificates of tests shall accompany deliveries of steel bar reinforcement. If requested by the Owner, additional testing of the materials shall be made at the Contractor expense.

Concrete Test: Provide for test purposes three sets of test specimens taken under the instructions of the Owner from each 50 cu. m. or fraction thereof of each class of concrete placed. At least one set of test specimens shall provided for each Class of concrete placed in each 8-hour shift. Each shall consist of two specimens, and shall be made from separate batch. *Samples shall be secured in conformity with ASTM C 172. Test specimens shall be made, cured and packed for shipment in accordance with ASTM C 31.* Cylinders will be tested by and at the expense of the Contractor in accordance with the ASTM C 39. Test specimens will be evaluated separately by the Owner for meeting strength level requirements for each cylinder with CONCRETE QUALITY of ACI 318. The standard age of test shall be 28 days, however 7 days tests may be allowed, with

the permission of the Owner provided that the relation between the 7 day and the 28 day strengths on the concrete is established by tests for the materials and proportions used. When samples fail to conform to the requirements for strength, the Owner shall have the right to order a change in the proportions of the concrete mix for the remaining portions of the work at no additional cost to the Owner.

C.07 Proportioning of Concrete Work

Trial design batches and testing to meet requirements of the classes of concrete specified shall be the responsibility of the Contractor. The design mix shall be of consistencies specified herein after in **PART II.C – CONCRETE WORKS**/Test for slump, unit weight, and air content shall be performed in the field under the presence of the Owner.

Concrete Proportioning: Samples of approved aggregate shall be obtained in accordance with the requirements of ASTM D 75. Samples of materials other than aggregate shall be representative of those proposed for the project and shall be accompanied by the manufacturer’s test reports indicating compliance with applicable specified requirements. Trial mixes shall have proportions, consistencies, and air content suitable for the work. Trial mix shall be designed for maximum permitted slump and air content. The temperature of concrete in each trial batch shall be reported. For concrete in each water-cement ratio, at least three test cylinders for each test age shall be made and cured in accordance with ASTM C 39. From these test results, a curve shall be plotted showing the relationship between water-cement.

C.08 Strength Requirement

All concrete, unless otherwise indicated, shall develop a minimum 28 - day cylinder strength of 20.70 MPa.

The Contractor shall submit mix design obtained from at least three standard cylinder samples made in accordance with Section 5.4 of the NSCB, 1991, for the strength required stating the proposed slump and the proportional weights of cement, aggregates and water. The mixes shall be approved by preliminary tests fourteen (14) days before concreting and shall show the required strength. No substitutions shall be made in the materials or mix without additional tests to show that the quality for concrete is satisfactory.

Slump: Tests shall be made in conformity with ASTM C 143, and unless otherwise specified by the Owner slump shall be within the following limits:

<i>Structural Element</i>	<i>Slump of Vibrated Concrete</i>	
	<i>Minimum</i>	<i>Maximum</i>
Concrete Wall, Column and girder, beam, 25 cm maximum thickness	50 mm	70 mm
	50 mm	70 mm

All other concrete

50 mm

100 mm

C.09 Joints

No reinforcement, corner protection angles or other fixed metal items shall be run continuous through joints containing expansion – joint filler, through crack - control joints in slabs on grade and vertical surfaces.

Pre – molded Expansion Joint Filler

Joints with Joint Sealant: At expansion joints in concrete slabs to be exposed, and at the other joints indicated to receive joint sealant, pre–molded expansion joint filler strips shall be installed at the proper level below the elevation with a slightly tapered, dressed and wood strip temporarily secured to the top thereof to form a groove, when surface dry, shall be cleaned of foreign matter, loosed particles, and concrete protrusions, there filled approximately flush with joint sealant so as to be slightly concave after drying.

Finish of Concrete at Joints: Edges of exposed concrete slabs along expansion joints shall be nearly finished with slightly rounded edging tools.

Construction Joints: Unless otherwise specified herein, all construction joints shall be subject for approval of the Owner. Concrete shall be placed continuously to form a monolithic construction. Fresh concrete may be placed against adjoining units, provided the set concrete is sufficiently hard not to be injured thereby. Joints not indicated shall be made and located in a manner not to impair strength and appearance of the structure.

Placement of concrete shall be at such rate that surfaces of concrete not carried to joint levels will not have attained initial set before additional concrete is placed thereon. Lifts shall terminate at such levels as indicated or as to conform to structural requirements as directed. If horizontal construction joints are required, a strip of 25 mm square – edge lumber, leveled to facilitate removal shall be taken to the inside the forms at the construction joint. Concrete shall be placed to a point 25 mm above the underside of the strip. The strip shall be removed (1) one hour after the concrete has been placed, any irregularities in the joint lines shall be leveled off with a wood float, and all laitance removed. Prior to placing additional concrete, horizontal constructed joints shall be prepared as specified in **BONDING**.

Crack control joints in slabs on grade are specified in **Part II.C – CONCRETE WORKS/SLABS ON GRADE**.

C.10 Placing Concrete

Concrete shall be transport from mixer to the place of final deposit in a continuous manner, as rapidly as practicable without segregation or loss of ingredient until the approved unit of work is completed. Placing will not be permitted when the sun, heat, wind or limitations of facilities furnished by the Contractor, prevent proper finishing and curing of the concrete. Concrete shall be

placed in the forms, as closed as possible in the final position, in uniform approximately horizontal layers not over 300 mm deep. Forms splashed with concrete or form coating shall be cleaned in advance of placing subsequent lifts. Concrete shall not be allowed to drop freely more than 10 m in unexposed work not more than 1.0 m in exposed work; where greater drops are required, tremie or other approved means shall be employed. The discharge of the tremies shall be controlled so that the concrete may be effectively compacted into horizontal layers no more than 300 mm thick, and spacing of the tremies shall be such that segregation does not occur. Concrete to receive other construction shall be screeded to the proper level to avoid excessive skimming or grouting. Conduits and pipes shall not be embedded in concrete unless specifically indicated or as directed by the Owner.

Time Interval Between Mixing and Placing: Concrete mixed in stationary mixers and transported by non-agitating equipment shall be placed in the forms within 45 minutes from the time ingredients are charge into the mixing drum. Concrete transported in truck mixers or truck agitator shall be delivered to the site of work discharge in the forms within 45 minutes from the time that the ingredients are discharge into the mixing drum. Concrete shall be placed in the forms within 45 minutes after discharge from the mixer at the jobsite.

Earth – foundation Placement: Leveling concrete for concrete foundations, exterior slabs and exterior foundations receiving equipment or machinery shall be placed upon undisturbed surfaces conforming to ***Part II.B – EXCAVATION AND BACKFILLING FOR BUILDINGS***. The surfaces shall be clean, free from mud and water. The concrete foundations maybe placed over the leveling concrete surfaces.

Conveying Concrete by Chute, Conveyor or Pump: Concrete may be conveyed by chute, conveyor, or pump if approved in writing. In requesting approval, the Contractor shall submit his entire plan of operation for time of discharge of concrete from the mixer to final placement in the forms, and the steps to be taken to prevent the formation of cold joints, in case the transporting of concrete by chute, conveyor or pump is disrupted. Conveyor and pump shall be capable of expeditiously placing concrete at the rate most advantageous to good workmanship. Approval will not be given for chutes or conveyors requiring changes in the concrete materials or design mix for efficient operation.

- a. ***Chutes and Conveyors:*** Chutes shall be of steel or steel line wood, rounded in cross section rigid in construction, and protected from over flow. Conveyors shall be designed and operated and chute section shall be set, to assure a uniform flow of concrete from mixer to final place of deposit without segregation of ingredients, loss of mortar, or change in slump. The discharge portion of each chute or conveyor shall be provided with a device to prevent segregation. The chute and conveyor shall be thoroughly cleaned before and after each run. Waste material and flushing water shall be discharge outside the forms. When using tilted chutes, the inclination should not be flatter than one (1) vertical and two (2) horizontal. From the outlet/mouth of the chute to the concrete surface, the maximum allowable height shall be 1.50 m.
- b. Pumps shall be operated and maintained so that a continuous stream of concrete is delivered into the forms without air pocket, segregation of change

in slump. When pumping is completed, concrete remaining in the pipeline shall be ejected, wasted without contamination of concrete already.

- c. After each operation, equipment shall be thoroughly cleaned and the flushing water shall be splashed outside the forms.
- d. **Placing Concrete Reinforcement:** Where congestion of the steel or other conditions will make placing or compaction of concrete difficult, a layer of mortar shall be first deposited in forms to a depth of approximately 25 cm. Mortar proportions shall be the same as the concrete minus the coarse aggregate.

C.11 Compaction

Immediately after placing, each layer of concrete shall be compacted by internal concrete vibrators supplemented by handspading, rodding and tamping. Tapping or other external vibration of forms will not be permitted unless specifically approved by the Owner. Vibrators shall not be used to transport concrete inside forms. Internals vibrators submerged in concrete shall maintain a speed of not less than 7,000 impulses per minute. The vibrating equipment at all times shall be adequate in number of units and power to properly consolidate all concrete.

Spare units shall be on hand as necessary to insure such adequacy. Duration of vibrating equipment shall be limited to time necessary to produce satisfactory consolidation without causing objectionable segregation. The vibrators shall not be inserted into lower courses that have begun to set.

Vibrators shall be applied at uniformity spaced points not further apart than the visible effectiveness of the machine.

C.12 Bonding

Bonding/depositing new concrete on or against concrete that has set; The surfaces of the set concrete shall be thoroughly cleaned so as to expose the coarse aggregate and be free of laitance, coatings, foreign matter and loose particles. Forms shall be retightened. The cleaned surfaces shall be moistened, but shall be without free flowing water when concrete is placed.

C.13 Slabs on Grade

Capillary water barrier or surged shall conform to **PART II.B – EXCAVATION AND BACKFILLING FOR BUILDINGS.**

Concrete shall be compacted, screened to grade, and prepared for the specified finish. Concrete shall be placed continuously so that each unit of operation will be monolithic in construction. Concrete shall be placed in alternate check board pattern terminating at crack-control joints or construction joints or may be placed in alternative paving lanes as limited by expansion, and contraction joints. Crack-control joints shall be expansion, contraction, or construction joints. Joints not shown shall be lifted at column centerlines and at intermediate intervals so that such panel is shall not be more than 55 sq.m. . Panels shall be approximately

square with dimensioning of one side not more than 7.5 m. Forms shall remain in place for at least 12 hours after complete placement.

Construction joints may be formed by the insertion of hard pressed fiberboard strips inserted in the plastic concrete or may be cut with an approved concrete sawing machine, after the concrete has set. Unless otherwise indicated or directed the joints shall be 3 mm wide and depth equal to approximately 1/4 of the slab thickness of the maximum size of the coarse aggregate whichever is greater.

C.14 Finishes of Concrete

Within 12 hours after forms are removed, surface defects shall be remedied as specified herein. Fine and loose material shall be removed. Honeycomb, aggregate pockets, voids over 13 mm in diameter, and holes left by the rods or bolts shall be cut out to solid concrete, reamed, thoroughly wetted, brush-coated with neat cement rout, and filled with mortar. Mortar shall be a stiff mix of 1 part portland cement to not more than 2 parts fine aggregates passing the no. 16 mesh sieve, and minimum amount of water. The color of the mortar shall match the adjoining concrete color. Mortar shall be thoroughly compacted in place.

Holes passing through walls shall be completely filled from the inside face by forcing mortar through to the outside face. Holes, which do not pass entirely through wall, shall be packed full.

Patchwork shall be finished to match adjoining surfaces in texture and color. Patchworks shall be damp cured for 72 hours. Ambient temperature shall not be less than 10 degrees C. Dusting of finish surfaces with dry material or adding water to concrete surfaces will not be permitted.

C.15 Concrete Finished for Slabs

Slabs Receiving Concrete Paving: After concrete is placed and consolidated, slab shall be screed or struck off and no further finish is required.

Smooth Finish: Required only when specified; screed concrete and floats to required level with no coarse aggregate visible. After surface moisture has disappeared and laitance has been removed the surface shall be finished by float and steel trowel.

Broom Finish: Required for paving, stairs and landings; the concrete shall be screed and floated to required finish level with no coarse aggregate visible. After the surface moisture has disappeared and laitance has been removed, surface shall be float finished to an even, smooth finish. The floated surfaces shall be broom with a fiber bristle brush in a direction transverse to the direction of the main traffic.

Tolerance: Smooth and broom finished surfaces shall be true to plane with no deviation in excess of 3 mm in any direction when tested with a 3.0 m. straight edge.

C.16 Finishes of Concrete other than Floor Slabs

Within 12 hours after forms are removed, surfaced defects shall be remedied as specified herein. Honeycomb, aggregate, pockets, voids over 12 mm in diameter, and holes left by the rods or bolts shall be cut out to, reamed and thoroughly wetted, brush coated with next cement grout and filed with mortar.

Mortar shall be a stiff mix of 1 part portland cement and not more than 2 parts fine aggregates passing the no. 16 mesh sieve. Minimum amount of water using white portland cement for all or part of the cement so that when dry, the color of the mortar shall be thoroughly compacted in place. Holes passing entirely through walls shall be completely filled from the inside face by forcing mortar through the wall shall be packed full. Patchwork shall be damp cured for 72 hours protruding portions of bar supports shall be ground flush with concrete surfaces that will be exposed, painted or plastered directly.

Smooth Finish: After the above operations have been completed, smooth finish shall be given to interior and exterior concrete surfaces that are to be painted or exposed to view. Smooth finished shall consist of thoroughly wetting and then brush-coating the surfaces with cement grout composed by volume of 1 part fine aggregate passing the no. 30 mesh sieve and mix with water to the consistency of thick mixes, so that the final color of grout when dry, will be approximately the same as the color of the surrounding concrete. Grout shall be cork or wood-floated to fill all pits and air bubbles; visible grout film. The grout shall be kept damp by means of fog spray during the setting period. The finish of any area shall be completed in the same day and the limits of a finished area shall be made at natural breaks in the finished surface.

Rough Slab Finish: Slabs to receive full and mortar setting beds shall be screeded with straightedges to bring the surface to the required finish plane with no aggregate visible.

Broom Finish shall be given to exterior surfaces except concrete stairs treads, entrances, and landings for buildings. The concrete shall be screeded and floated to the required finish level with no coarse aggregate visible. After the surface moisture has disappeared and laitance has been removed, surfaces shall be still troweled to an even, smooth finish. The troweled surfaces shall be broomed with a fiber bristle brush in a direction transverse to that of the main traffic.

C.17 Curing

Concrete shall be protected against moisture loss, rapid temperature change, mechanical injury from rain or flowing water, for a minimum period of 7 days.

Concrete shall be maintained in a moist condition at temperature above 10 degrees C throughout the specified curing period and until remedied work started under **Part II.C – CONCRETE WORKS/FINISHES OF CONCRETE**. Curing activities shall be started as soon as free water has disappeared from the surface of the concrete after placing and finishing. Form under surfaces shall be moist cured with forms in place for the full curing period or, if other removes forms prior

to the end of the curing period approved means. Curing shall be accomplished by any of the following methods of combination thereof, as approved.

Water: Water used in curing shall be reasonably cleaned and free of oil, salt, acid, alkali, or other substances injurious to the concrete. Drinking water may be used for curing test.

Moist Curing: Uniformed surfaces shall be covered with burlap or mats, wetted before placing and over-lap at least 150 mm. Burlap or mats shall be kept continually wet and in intimate contact with the surface. If the forms are removed before the end of the curing period, curing shall be continued on uniformed surfaces, using suitable materials.

D. CONCRETE WATERPROOFING

D.01 Scope of Work

This item shall consist of furnishing all water proofing materials, labor, tools, equipment and other facilities and undertaking the proper work required as

shown on the plan and in accordance with this specification and as directed by the Engineer.

D.02 Material Requirements

Liquid water proofing materials shall be Multi-high Quality Water Proofing Film (Castle Brand or equivalent materials) applied in liquid form and shall be approved by the Engineer.

Integral water proofing shall be in accordance with the approved manufacture's recommended amount/ratio of admixture for cement.

D.03 Construction Requirements

D.03.1 Submittals

The Contractor shall submit for approval of the Engineer the manufacture's recommended method of water proof installation/construction.

D.03.2 Surface Preparation

Concrete surface to be applied with water proofing shall be structurally sound clean and free of dirt, loose mortar particles, paints, films oil, protective coats, etc.

All defects shall be properly corrected and carefully formed to provide smooth surface that is free of marks and properly cured prior to application works.

Inside corners where vertical and horizontal structure meet shall be provide with cants measuring 50 mm. or rounded at corners a minimum of 50 mm. radius.

Concrete slabs shall be properly graded to drain rainwater. Provide a minimum pitch of 1 on 100 to satisfactorily drain rainwater freely into the drainage lines, gutters and downspout.

Drainage connections and weep holes shall be set permit the free flow of water.

Any expansion and contraction joint shall be cleaned, primed, fitted with a backing rod and caulked with sealant.

Provide reglets of about 40 mm. deep by 40 mm. wide and 250 mm. above floor along walls or parapets for the termination of the membrane.

Prepared surface shall be cured and kept wet by sprinkling with water at regular intervals for a period of at least three days and allow surface to actually set within seven (7) days.

Ensure that the prepared surface has completely set and all defects repaired.

D.03.3 Application Procedure

Prior to application to multi-high quality water proofing film, concrete surfaces should be sound and cured without the use of curing compound. Apply a coat neutralized to removed oil, dirt and other contaminants.

Apply a primer coat of Cement and Mortar Intensifier (Castle Brand, PME 901) or equivalent (coating of the manufacturer at the rate of 25 square meter per gallon over the surface area to be applied by brush or roller brush (Make mix of PME 901 and 150% of water perfectly).

The prime coat shall be allowed to dry in 40 to 60 minutes, before applying the main water proofing materials.

Apply three (3) coats of Multi-high Quality Water Proofing Film (Castle Brand, PME 202) or equivalent by using brush or roller at the rate of three (3) to four (4) square meters per gallon for three (3) coats at a film dry thickness of 1.0 mm. to 1.2 mm.

Water proofing application/procedure shall conform to manufacturer's specification.

D.03.4 Flood Testing

Flood test for duration of 24 hours shall be undertaken upon completion of water proofing installation to determine any leakage or defect on the materials and/or workmanship.

E. CEMENT AND MASONRY

E.01 Scope of Work

The work under this section shall include all labor, materials, equipment, plant and other facilities and the satisfactory performance of all work necessary to complete all cement and masonry work shown on the Drawings and as specified herein.

Unless otherwise indicated on the Drawings, or specified herein; all materials or work under this section shall be subject to provision under ***Part II.C – CONCRETE WORKS.***

E.02 Mortar

Cement mortar shall be one (1) part portland cement and three (3) parts of sand by volume.

Re-tampering is not permitted. No mortar that has stood for more than one (1) hour shall be used. Works shall not be permitted on mortar that has reached its initial set.

E.03 Concrete Hollow Blocks

Concrete hollow blocks shall have a minimum compressive strength of 350 psi. computed from the average of five (5) units based on the average gross area and a minimum of 300 psi. for individual unit. Samples shall be taken at random for every batch/delivery of at least 2,000 pieces and upon the discretion of the Engineer.

E.04 Laying of Concrete Hollow Blocks

Do not wet blocks before using. Blocks must be dry when laid.

The first row of blocks must be thoroughly anchored to concrete walls, columns or slabs. Courses shall be laid straight and uniform with regular running bond and vertical faces truly vertical and set true to line. Each block shall be adjusted to its position in the wall while the mortar is still soft and plastic enough to ensure good bond. The position of the block shall never be shifted after the mortar has stiffened. No re-alignment of a block shall be attempted after a higher or following course has been laid.

All horizontal and vertical reinforcing bars shall be anchored 20 diameters into the concrete walls, columns and slabs.

Dowel bars properly spaced are placed into walls, columns or slabs during pouring and hooked to the vertical bar, leaving bar diameter exposed to splice with the reinforcing bars of the hollow block walls during construction.

All units shall be laid with mortar composed of one (1) part portland cement and three (3) parts of sand. Unless otherwise specified or detailed on the drawings, horizontal and vertical joints shall be 10 mm thick with full mortar coverage on the face shells and on the web surrounding the cells to be filled.

Reinforcing bars shall have a lap of 40 bar diameters. All horizontal reinforcement must be tied to the vertical reinforcement at their intersection.

After each days work, uncompleted wall shall be covered with waterproof materials to keep the inside of the blocks dry in case of rain.

E.05 Plain Cement Plaster Finish

All concrete columns, beams, roof beams, exposed concrete hollow block walls and floor surfaces to be applied with plain cement finish shall be clean and evenly wet, slushed with a wash or neat cement and followed by cement mortar 5mm thick which shall be applied with a wooden float to leave the surface straight, true, smooth, plumb and even, and all corner angles and all intersections shall be straight, true and rounded slighted. The use of an approved bond fluid is suggested.

E.06 Tiles

E.06.1 Description

This item shall consist of furnishing all vitrified tiles and cementitious material, tools and equipment including labor required in undertaking the proper installation of walls and floor tiles as shown on the Plans and in accordance with this Specification.

E.06.2 Material Requirement

Glazed tiles and trims shall have an impervious face of vitrified materials fused onto the color scheme approved by the Owner.

Walls to be finished with glazed tile wainscoting or elsewhere indicated as shown on Drawings, shall be chipped off, cleaned thoroughly with a wire brush, wetted with clean water and then pointed up solid with 1:2 cement mortar before applying the tile wainscoting.

Unglazed tiles shall be granite hard dense tile of homogeneous composition. The materials used in the body, the method of manufacture and the thermal treatment determine its color and characteristics.

Vitrified unglazed floor tiles shall be applied in the areas shown in the Plan.

Floor tiles installation shall not be started in spaces requiring wall tile until the wall has been installed.

Floor and wall tiles and their accessories shall be first quality free from lamination, serrated edges, chipped-off corners and other imperfections affecting their quality, appearance and strength. Tiles shall conform to samples approved by the Owner.

Floor and wall tiles shall be of imported or locally manufacture's brand, first in quality.

Samples of all floor and wall tiles shall be submitted to the Owner for approval as to color, texture and quality.

E.06.3

Tiles for Public Comfort Rooms

Floor and wall tiles and their accessories shall be first quality 300 x 300mm free from lamination, serrated edges, chipped-off corners and other imperfections affecting their quality, appearance and strength

Floor tiles shall be vitrified unglazed tiles and wall tiles shall be glazed, cushion-edged tiles, MARIWASA brand or approved equivalent. Tiles for sink/kitchen counter shall be glazed tiles.

Sample of tiles shall be submitted to the Owner for approval as to color, textures and quality.

E.06.4 Tiles for Administration Office

Floor tiles shall be first quality laminated granite type 600 x 600mm free from lamination, serrated edges, chipped-off corners and other imperfections affecting their quality, appearance and strength.

All tiles shall conform to samples approved by the Owner.

E.07 Installation of Floor Tiles

Floor tiles shall be laid out with 1:3 mortar, at least 10mm thick, tiles and their accessories to be used shall be thoroughly soaked in water before laying.

The mortar shall be spread until the surface of the mortar setting bed is absolutely even and uniformly sloped for drainage as required.

Limit the area that can be covered with tile before the mortar has reached its initial set to what can be placed in one (1) operation. When more setting has been spread that can be thus covered, the unfinished portion shall be cut to a clean leveled edge and removed.

Cement shall uniformly hand-dusted over the surface of the mortar setting beds immediately preceding the setting of the tiles. The tiles shall be placed, firmly pressed and tamped, into the mortar until true and even with finished floor tiles. The tiles shall be laid to a straight edge at regular intervals.

The inner edged of all borders against filed bodies shall be kept straight and any cutting of tiles for irregularities in wall lines or vertical planes shall be done along the outer edges. All surfaces not intended to be level shall be sloped as detailed or directed.

Tile nosing, coves, cappings or other moulded or shaped pieces shall be thoroughly backed up with mortar. They shall be rigidly set, reinforced, or otherwise made firm and secure.

As soon as the cement mortar bed has sufficiently set, the tiles in floors or other horizontal surfaces shall be washed with clean water and joints between the tiles grouted or pointed as detailed or directed.

E.08 Installation of Wall Tiles

Wall tiles shall be laid out with 1:3 cement mortar. Tiles and their accessories shall be thoroughly soaked in water before laying. Tiles wainscoting shall be one meter and sixty cm. (1.60m) high from the floor and shall be placed continuously around the entire room including lavatory and the minor partitions, except the doors.

The concrete or masonry wall shall be roughened, cleaned and soaked well with water then followed by a skim of neat cement in such quantity as can be covered with tiles before the initial set of the cement.

Each tiles shall be buttered with the setting mortar tamped in place and brought to a plumb and true surface flush with adjacent tiles already in place. The back of each tile shall be covered with mortar to make the bed full and even.

Vertical units and joints, together with all caps, bases and moulding shall be maintained plumb, level and even. All caps, bases, and mouldings, or other trim tiles shall be backed full with mortar.

As soon as the cement mortar beds have sufficiently set, the tiles for walls or other vertical surfaces shall be washed with clean water and joints between the tiles grouted or pointed as detailed or directed.

F. CARPENTRY WORKS

F.01 Scope of Work

The scope of work shall consist of furnishing all tools, labor, equipment, and materials, unless otherwise specified to complete all carpentry and joinery works shown on the Drawings and specified herein.

F.02 General Provisions

Lumber shall be approved quality of the respective kinds required for the various parts of the work, well seasoned, thoroughly dry and free from large, loose or unsound knots, sap shakes or other imperfections impairing its strength, durability or appearance.

Framing lumber shall be of the rough dimensions unless otherwise shown on the Drawings.

All exposed woodwork shall be smoothly dressed and sandpapered.

ANY LUMBER equally good for the purpose intended may be substituted for the kinds specified, subject to the approval of the Owner. Provided, however, that in the substitution of the cheaper kind of lumber that specified, a reduction in the contract price equal to the difference in the cost of the two kinds of lumber will be made.

Note:

All painting works shall conform to the provision of **PART II.I – PAINTING**.

F.03 Fastenings

Fastenings shall be common nails, glue as specified, flat-head wood screws (F.H.W.S), round-head wood screws (R.H.W.S), bolts or lag screws where specified or called for shall be used.

Conceal fastening as much as possible, or if not possible, locate them in inconspicuous places. Where nailing is permitted through woodwork smooth-finished face, conceal nail heads.

F.04 Protection and Storage

Lumber shall be protected and kept under cover both in transit and all at the job site, and shall be carefully piled off the ground and be insured of proper drainage, ventilation, and protection from the weather. Surface of wood framework, and other wood members coming in contact with or embedded in concrete shall be painted with two (2) coats of hot applied asphalt.

The Contractor shall protect all finished wood work and millwork from injury after it has been set in place until the completion and final acceptance of work.

Temporary Supports: Make or provide wood centering or other necessary supports for openings in masonry walls accurately, strongly and well braced and secured in position until masonry has set thoroughly.

F.05 Wooden Materials

Unless otherwise shown on the drawings, the Contractor shall use the following lumber in accordance with the schedule below:

- a. *Apitong/Tanguile*(common grade) for ceiling joist, hangers and nailers.
- b. 6mm thk. Marine Plywood for ceiling board.
- c. Coco Lumber for scaffoldings, shoring and bracing only.

G. DOORS

G.01 *Scope of Work*

The work under this Section shall include all labor, materials, hardware, painting, equipment, and other facilities and the satisfactory performance of all work necessary to complete all doors shown on the Drawings and as specified herein.

22. G.02 **Make of Doors**

23.

All lumbers for doors and all woodwork of similar nature shall be kiln dried (KD) with not more than fourteen percent (14%) moisture content. All doors shall be done in accordance with full sized details which will be furnished, hereafter to the contractor. Door shall have one and three fourth ($1\frac{3}{4}$) inch finished thickness.

All doors shall be guaranteed against warping, twisting or cracking for a period of twelve (12) months from the date of final acceptance of the finished building. This obligates the Contractor to make good such defects or replace entirely any and all such defective doors.

24. G.03 **Comfort Room Doors**

All doors for public comfort room partition shall be PVC door with louver and complete with jambs, lockset and accessories. Exterior doors shall be Panel Type Wooden Door.

25. G.04 Administration Office Doors

Panel Type Door shall be kiln dried (KD) and painted with complete jambs and accessories. It shall be provided with loose pin hinges 3 1/2" x 3 1/2", door lockset "Schlage" brand.

Aluminum Screen Doors (analok type) installed on D-1 at Admin office complete with door closer and accessories.

H. WINDOWS

H.01 Scope of Work

The work under this Section shall include all labor, materials, hardware, equipment, and other facilities and the satisfactory performance of all work necessary to complete all aluminum glass windows shown on the Drawings and as specified herein.

H.02 Materials Requirements (steel frame/aluminum glass windows)

- Steel and aluminum frame and panel members shall be fabricated from extruded steel/aluminum sections true to details with clean, straight, sharply defined profiles and free from defects impairing strength of

durability. Extruded steel/aluminum sections shall conform to the specifications requirements as defined in ASTM B211.

- Screw, nuts, bolts, rivets and other miscellaneous fastening devices shall be made of non-corrosive materials such as steel, aluminum, stainless steel, etc.
- Hardware for fixing and locking devices shall be closely match to the extruded aluminum section and adaptable to the type and method of opening.
- Weather strips shall be provided with good quality
- For Aluminum Framed Glass Windows use 6mm thick glass.

H.03 Construction Requirements

- For all assembly and fabrication works and cut ends shall be true and accurately jointed, free of burrs and rough edges. Cut-out recesses, mortising, grinding operation for hardwares shall be accurately made and properly reinforced when necessary.
- Installation procedure:

Main frame shall consist of head sill and jamb stiles specifically designed and machined to interfit and be joined at corners with self-threading screw.

Sliding window shall be provided with nylon sheave. Sliding panel shall be suspended with concealed roller overhead tracks with bottom guide pitch outward and slotted to complete drainage. The sliding panels shall be provided with interior handles. The locking devices shall be spring loaded extruded latch that automatically engages special frame hips.

All joints between metal surfaces and masonry shall be properly caulked.

H.04 Protection

- All Aluminum parts and glasses shall be protected adequately to ensure against damage during transit and construction phase.

H.05 Cleaning

- The contractor shall be responsible for removal of protective materials and cleaning the aluminum surface including glazing before work is accepted by the Owner.
- Aluminum shall be thoroughly cleaned with kerosene or gasoline diluted with motor and then wipe surface using clean clothings.
- No abrasive cleaning materials shall be permitted in cleaning surface.

H.06 Comfort Room Windows

Install aluminum awning windows at comfort room. *Analok* type frame.

H.07 Administration Office Windows

Aluminum sliding windows with aluminum sliding screen and grills. *Analok* type frame for window and screen.

Aluminum *Analok* awning windows with aluminum screen and grills for the comfort room.

Aluminum *Analok* fixed window with sliding part below for the cashier.

I. PAINTING

I.01 Scope of work

The work under this Section shall include all labor, materials, equipment, plant and other facilities and the satisfactory performance of all work necessary to complete all field painting and as specified herein.

I.02 General

Color schemes for the painting of the whole building, complete both inside and outside shall be furnished by the Architect to the Contractor upon request. Color scheme samples required by these Specifications shall be submitted by the Contractor to the Owner for approval. Expenses for sample of color schemes shall be at Contractor's expense.

All exposed work shall be protected while the building is being painted. Any dirt, smears, etc., shall be removed by the Contractor to the satisfaction of the Owner.

I.03 Material

All paint materials shall meet the requirements of the standard specifications of the *Standardization Committee* on supplies and shall be in accordance with latest *Classification Class "A" of the Institute of Science, Manila, Philippines*, and shall be delivered on the work in the original containers, with labels intact and seals unbroken.

Dutch Boy paint or Boysen Paint shall be used on all surfaces to be painted and certificate of origin and quality shall be submitted to the Owner for inspection and approval before using any of the paint materials.

The use of ready mixed paint may be allowed in this project, provided, however, that such paint is in accordance with the standard Specification No. 13 of the

Philippine Government and that ready mixed paints shall be those listed under "Good Substitutes" only.

Tinting colors for latex shall be the highest grade obtainable. Tinting colors for oil paint shall be color in oil ground in pure linseed oil. Color shall be non fading. Color pigments shall be used to produce the exact shades of paint which shall conform to the approved color scheme of the building. Except as otherwise noted, color of priming coat shall be white.

All materials to be used in the work shall be stored in a place to be designated by the Owner, and such place shall be kept neat and clean at all times. Any damage on this place and its surroundings shall be rectified. All precautions to avoid danger of fire must be observed by removing oily rags, waste, etc., from the building at the end of daily work.

I.04 Inspection and Preparation of Surface

The Contractor shall inspect all surfaces to be painted and all defects shall be remedied before starting work.

No work shall be started unless the Contractor shall have made certain as to the dryness of surface. Tests shall be made, in the presence of the Owner, to verify dryness of surface to be painted.

Before painting is started, all spaces shall be broom clean and all dust, dirt, plaster, grease and other extraneous matter that would affect the finish work shall be removed.

I.05 Workmanship

All painting work shall be done in workmanlike manner by skilled house painters only.

All materials shall be evenly applied on, so as to form a film of uniform thickness, free from sags, runs, crawl, or other defects. The use of a heavy brush (nylon brushes for oil paints) is required and they shall always be clean and in good

condition. Light brushes shall not be permitted. Paint shall be thoroughly stirred so as to keep the pigment evenly in suspension while paint is being applied.

In general and unless otherwise specified, and/or instructed by the Owner or due to actual conditions on the job, not less than 3 days time shall elapse between application of succeeding coats.

Each coat of paint shall be allowed to dry thoroughly and inspected for approval before the succeeding coat is applied. No painting shall be done in damp weather. No work shall be done under conditions that are unsuitable for the production of good results. No painting shall be done while plastering is in process or is drying.

Except where otherwise noted or specified, all paints shall be applied in three (3) coats (priming, body and finish). Each coat shall be brush applied (except as otherwise noted), spread evenly and in full covering body.

Surfaces which cannot be satisfactory finished on the number of coats specified shall have such additional coats, or such preparatory coats and subsequent coats as may be required to produce satisfactory finished work.

Spray gun application shall be used where indicated in color scheme schedule.

Before any painting is started, the Contractor shall furnish the Owner the paint manufacturer's detailed painting recommendation as to surface preparations and applications plus relevant information regarding the use of the paint.

I.06 Concrete and Masonry Surfaces

Surface Preparation

For New Surfaces: Scrapes off loose cement, chalk, dust and other surface deposits. Treat the surface with Dutch Boy 61-135 Acry-Free Concentrate. Mix one (1) liter Acry-Free Concentrate with ten (10) liters of water. Apply by brush

and make sure that the alkaline surfaces are completely neutralized. In case of doubt, test the surface with red litmus paper. If it turns blue, then the second neutralization will be necessary. Let dry thoroughly. Do not rinse.

For areas affected by high alkalinity, apply one coat of Dutch Boy Concentrate Sealer. Allow to dry at least four (4) hours before applying succeeding coats.

Application

Apply Dutch Boy Flat Nalcrete as primers. Thin with water if necessary. First coat may be tinted with Dutch Boy Acrytint to the desired color of topcoat. Dry for at least 2-4 hours.

Repair minor surface imperfection with suitable putty. Dry for 24 hours, sand then spot coat with top coat color.

Apply two (2) coats Dutch Boy Gloss Nalcrete for interior/exterior. Tint with Dutch Boy Acrytint to the desired color.

I.07 Wood Surfaces

Apply two (2) coats Semi-Gloss Enamel.

Apply by brush or spray two (2) coats of any of the following:

- a. Dutch Boy Semi-Gloss Enamel for wood works.
- b. Dutch Boy Quick Dry enamel for exterior wood works.

I.08 Wood Preservative

Apply two (2) coats of wood preservatives for all wood surfaces such as jambs and ceiling joist.

I.09 Columns of Market Hall (2.0m from the floor surface)

Surface Preparation

Prepare the surface by removing dirt, oil, grease, burns, weld spatter, loose concrete, masonry and other contaminants before application is performed. New concrete must be fully cured at least 28 days before etching or neutralizing the surface.

Application

Prime with Epoxy Deep Penetrating Sealer to seal up loose aggregates to give perfect hold for subsequent coatings.

Apply two (2) coats of Epoxy Polyimide Topcoat. Maybe thin up to 25% by volume if necessary. Allow overnight drying in between coats.

I.10 Metal Surfaces

Scope of Work

The work under this section shall include labor, materials, equipment, plant and other facilities for the satisfactory performance of all work necessary to complete all field painting as specified herein.

The Contractor shall be responsible for cleaning and removal of corrosive surface on newly installed steel members. No painting shall be allowed unless the newly installed steel members are free from corrosive and surface imperfections.

All members shall meet the requirements of the Standard Specification of the Standard Committee on supplies and shall be in accordance with the latest classification "A" of the Institute of Science in Manila, Philippines and shall be delivered on the work in the original containers with the labels intact and seals unbroken.

Boysen epoxy paint or its approved equivalent shall be used on all surfaces to be painted and certificate of original quality shall be submitted to the Owner for inspection and approved before using any of the paint.

All materials to be used in the work shall be stored in a single place to be kept near and clean at all times. Any damages on its surrounding shall be rectified. All precautions to avoid danger of fire must be observed by removing oily rags, waste at the end of daily works.

All exposed works shall be protected while the steel members are being painted. Any dirt, smear, etc. shall be removed by the Contractor to the satisfaction of the Owner.

The work under this section shall include labor, materials, equipment, plant and other facilities for the satisfactory performance of all work necessary to complete all field painting as specified herein.

Inspection and Preparation of Surfaces

The Contractor shall inspect all surfaces to be painted and all defects shall be remedied before starting the work.

No work shall be started unless Contractor shall have made certain as to the dryness of surface. The test shall be made in the presence of the Owner's Engineer to verify dryness of surface to be painted.

Before painting is started, all spaces shall be broom, clean and all dust, dirt, plaster, grease and other extraneous matter which would affect the finish shall be removed.

Workmanship

26.

27. All painting shall be done in the workmanlike manner by skilled painters only.

28.

29. All materials shall be evenly applied on, as to form a firm of uniform thickness, free from sags, runs, crawl or other defects. The use of heavy brushes are required and shall be cleaned and in good condition. Paint shall be thoroughly stirred so as to keep the pigment evenly in suspension while paint is being applied.

30. In general and unless otherwise satisfied, and/ or instructed by the Owner's Engineer or due to actual conditions on the job, not less than one day time shall elapsed between application succeeding coats. Each coat of paint shall be allowed to dry thoroughly and inspected for the approval before succeeding coat is applied. No work done shall be done under the conditions that are unsuitable for the production of good results. No painting shall be done while welding is in process or is drying.

31.

32. Before any painting is started, the Contractor shall furnish the Owner the paint manufacturers detailed painting recommendations as to surface preparations and application plus relevant information regarding the use of the paint.

33.

Painting

34.

35. Prime with 2-coats of EPOXY PRIMER for Steel and allow to dry for 24 hours. Apply by brush Quick Drying Enamel (Boysen, Davis or approved equivalent). Allow overnight drying in between coats. The color to be applied is the same color of the existing paint applied in the structure or as directed by the Owner.

I.11 Protection and Cleaning

Protection

- a. Lighting fixtures shall be loosened and removed from contact with surfaces covered and protected, and reset upon completion.
- b. Remove all electric plates, surface hardware, etc., before painting, protected and replace when completed.
- c. The Contractor at his own expense shall make all undue damage to any part or parts of present structure caused by the Contractor, during the execution of the work good.

The Contractor shall, upon completion of work remove all paint, where it has been spilled, splashed, or splattered on the surface, remove all surplus materials, scaffolds, etc., so as to leave premises in perfect condition, acceptable to the Owner.

Finished surfaces shall be solid, even colors; and finished texture free from drops, runs, lumps, brush marks, discoloration and other defects. Before final inspection, any work that has become damaged or discolored shall be touched up or refinished in a satisfactory manner.

All other items or work to painted and not specified herein, but necessary to complete the work shall be painted with appropriate first quality paint and suited to the service and nature of the surface and material in accordance with these Specifications.

J. METAL WORKS

J.01 Scope of Work

This section covers the furnishing of all work, equipment, materials labor and supervision required to complete the items in full compliance with the Drawing and this Specifications.

J.02 Material Provisions

All welding shall conform to the “AWS CODE FOR ARC AND GAS WELDING IN BUILDING” and as herein specified or any other welding standards approved by the Owner’s Engineer’s.

All metal and stainless works shall be done in accordance with all related publications of American Institute of Steel Construction (AISC), American Society of Testing Materials (ASTM) and American Welding Society (AWS).

Use only welding equipment, electrodes welding wire and fluxes capable of producing satisfactory when used in a qualified welding procedure.

The Contractor shall be responsible for all errors of detailing for correct fitting of the structural members.

J.03 Storage of Materials

The materials shall be stored out of contact with the ground and in a manner and location that will minimize contamination and deterioration.

J.04 Materials

All materials shall be new stock, free from surface imperfections and shall conform to the applicable ASTM Specifications and equivalent standards.

J.05 Shop Connections

As detailed in the drawing or as approved by the Owner's Engineer.

J.06 Field Connections

Provide welded connections as shown in the drawing or as approved by the Owner's Engineer's.

K. PLUMBING WORKS / WATER DISTRIBUTION SYSTEM

K.01 General

- a. The Contractor shall provide all items, articles, materials, operations, or methods listed, mentioned, or schedule on the drawings and/or herein specified, including all labor, materials, equipment and incidentals necessary and required for their completion.
- b. All fittings, connections, pipings, hidden or embedded in concrete shall be subject to inspection by the Owner before covering.
- c. The drawings and these Specifications as complementary to each other, and any labor or materials called for by either, whether or not called for by both, if necessary for the successful operation of any of the particular type of equipment shall be furnished and installed by the Contractor without additional cost to the Owner. All dimensional locations of fixture, floor drains, risers and pipe chases shall be verified on the architectural drawings and manufacturer's catalogue.

- d. Intent – It is not intended that the drawings shall show every pipe, fitting, valve and appliance. All such items, whether specifically mentioned or not, or indicated on the drawings, shall be furnished and installed if necessary to complete the system in accordance with the best practice of the plumbing trade and to the satisfaction of the Owner.

K.02 Work Included

- a. Work included under this Section shall consist of furnishing all labor, tools, equipment, appliances and materials necessary for complete installation testing and operation of the plumbing system in accordance with these Specifications and all applicable drawings in the contract.
- Inside potable water distribution and supply pipes to fixtures and hose bibs/faucets. The Contractor shall furnish all piping materials and accessories of all water supply line located inside the building structures.
 - Sanitary sewers from the building and their connections to the point of discharge including septic vault as shown in the plans.
 - Drainage system for the entire building of the point of discharge including pipes, open canals, screening tank and catch basin.
 - Soil, waste and vent pipe system within the building
 - Plumbing fixtures, trims and accessories.
 - Furnishing of water meter, gate valves, check valves and related accessories.
 - Furnishing and installation of spherical fiber glass water tank and water pump including control for potable water line
 - Hydrostatic testing and reliability testing.

K.03 Materials

- a. All materials to be used shall conform with the standards below. Use of material shall further be governed by other requirements imposed on other sections of these Specifications.

For Water Pipes

- Blue uPVC Potable Water Pipes and Fittings shall conform with ASTM and ISO Standards with nominal pressure of 230 psi., Pipe fittings as per manufacturer's specification.

For Sewer Lines

- Orange uPVC Sanitary Pipe (for 100mm Diameter and below) uPVC Pipe shall conform with ASTM 2729. Pipes and fittings are specified with integral push on bell complete with elastomeric neoprene O-ring gasket on one end and plain leveled on the other end.
- Orange Gravity Sewer Pipe (for above 100mm Diameter)
- uPVC Pipe shall conform with the Standard Specification of ISO R-161/ISO 4435, SDR-41 Jointing method shall be solvent cement jointing/rubber ring on joint. Pipe fittings shall be as per manufacturer's specifications.

- b. Alternative Materials – Use of materials not specified in these Specifications may be allowed provided such alternative has been approved by the Owner and provided further that tests, if required, shall be done by an approved agency in accordance with generally accepted standards.

- b. Identification of Materials – each length of pipe, fittings, traps, fixtures and devices used in the plumbing system shall have cast, stamped or indelibly

marked on it, the manufacturer's trademark or name, the weight, type and classes of product when required by the standards mentioned above.

K.04 Make of Fixtures

Unless otherwise indicated, water closet (model: C54337, closed coupled, jupiter savi type) and lavatory (single hole, 480mm. x 480mm. x 225mm., jupiter savi type) including soap and tissue holders shall be HCG brand or equivalent complete with accessories.

Urinals shall be done as shown on the plan, HCG brand "U-999 Model" or equivalent. Push valve type.

Lavatory, faucet shall be knob type, LF3184 Px, Amazona Model, HCG or equivalent.

Faucets shall be chrome plated, U.S. made.

Glass mirror shall be 12mm thick and dimension as indicated in the drawings.

K.05 Soil, Water, Drain and Vent Pipes

(For Sanitary Sewer Lines)

Underground soil, waste pipes and fittings shall be uPVC Sanitary Pipe, Orange or Brown.

All main vent stacks shall be extended to full size to end above the roofline except where otherwise specifically indicated.

Vent pipes in roof spaces shall run as close as possible to underside of roof, with horizontal piping pitched down to stacks without forming traps. Vertical vent pipes maybe connected into one main vent riser above the highest vented fixtures.

Where end or circuit vent pipe from any fixtures or line of fixtures is connected to a vent line serving other fixtures, the connections shall be at least 1,200 mm above the floor on which the fixtures are located, to prevent the use of any vent line as waste pipe, unless indicated otherwise.

Horizontal waste lines receiving the discharge from two or more fixtures shall be provided with end vents, unless separate venting of fixture is noted.

Rough in for pipes and fixtures shall be carried along the building construction. Correctly located opening of proper sizes shall be provided where required in the walls and floor for the passage of pipes. All items to be embedded in concrete shall be thoroughly cleaned and free from all rust scale and paint.

K.06 Cleanout, Plugs, Test and Traps

Cleanouts shall be the same size as the pipe but cleanouts larger than 100 mm shall not be required.

Every plumbing fixtures or equipment requiring connection to the sanitary drainage system shall be equipped with a trap. Each trap shall be placed as near the fixture as possible. No fixture shall be double-trapped.

K.07 Valves and Faucets for Building

Valves shall be KITZ or equivalent and shall be provided on all supplied fixtures as specified.

All valves shall be gate valves, check valves and ball valves unless otherwise specified or noted on the drawings.

Valves up to and including 50 mm dia. shall be brass with threaded ends, rough bodies and finished trimmings.

Faucets shall be U.S. made, chrome plated.

K.08 Fixtures and Equipment Supports and Fastenings

Stub-outs for sanitary lines, and vents shall be 300 mm above the floor line, and properly capped or else installed ready to receive the fixtures. The entire comfort room shall be properly tiled and finished, complete with doors and windows.

All fixtures shall be supported and fastened in a safe and in satisfactory manner.

Bolts and nuts shall be horizontal and exposed. Bolts, nuts, cap nuts and screw shall be chromium plated and provided with chromium plated brass washer.

K.09 Drains and Floor Sinks

Floor drains and floor sinks shall be made of high-grade, strong tough and even grained metals.

K.10 Cleaning

All exposed metal surfaces shall be rid of grease, dirt or other foreign materials.

All plumbing fixtures shall be properly protected from use and drainage during the construction period. At the end of the work and prior to approval, the fixture shall be cleaned as per manufacturer's recommendations to the satisfaction of the Owner.

All pipes, valves and fittings shall be cleaned of grease and sludge, which may have accumulated. The Contractor shall repair any stoppage or discoloration or other damage to parts of the building, its finished or furnishing due to the system without additional cost to the Owner.

K.11 Defective Work

If inspection or test show any defect, such defect work or matter shall be replaced by the Contractor and inspection and tests repeated until satisfactory to the Owner.

K.12 Septic Vault/Tank

Dimensions and locations are indicated in the plan, cement plaster for all inner linings.

Construction shall conform to Sanitary and Plumbing Code of the Philippines.

All septic vault outlets shall be connected to the nearest drainage system.

The work shall conform to the applicable provision of **PART II.C – CONCRETE WORKS AND PART II.E – CEMENT AND MASONRY WORKS.**

K.13 Galvanized Pipes and Fittings

Galvanized steel pipe shall conform to the requirements of "AST M – 120", and shall be Schedule 40. Fittings for galvanized pipe shall be galvanized malleable iron.

K.14 Water Meter

Water meter must be "ARAD" or Asahi brand, or approved equivalent, screw type brass bodied with operating pressure conforming to standard specifications of MWSS or LWUA.

The Contractor shall submit certification of calibration issued by authorized government water utility agencies prior to acceptance of the required equipment.

K.15 Testing Requirements

Pressure testing of the piping system shall be performed as work progresses to detect leaks especially at the pipe joints. Testing shall be done prior to backfilling. Testing shall be made only after all the pipes are properly anchored. Test pressures and procedures as approved by the Engineer.

Pump test shall also be performed to check its performance under actual operating condition. This is done after the installation works so that the whole system including its controls shall be subjected to demonstration test to prove that they operate and function satisfactorily.

All pipes, fittings, valves, joints and couplings found to be defective or cracked during the test should be removed and replaced by the Contractor at his own expense.

TECHNICAL SPECIFICATIONS

PART - III ELECTRICAL WORKS

A. GENERAL

GENERAL REQUIREMENTS contain requirements essential to these specifications and apply whether or not individually referred to under this section.

A-01 SCOPE OF WORK

The work shall consist of the supply of labor, materials, equipment and other facilities necessary to complete the Electrical Works

All works herein shall comply with the pertinent provisions of the latest edition of the Philippine Electrical Code and is hereby made part of the Contract.

Compliance with the provisions herein shall be Contractor's responsibility to provide as part of the Contract Work and without separate payment therefore.

NOTE: *Expenses for the power connection/tapping from the existing local Electric Cooperative including electric meter deposit, billing deposit, drop wires and other accessories necessary for the energization of the project shall be provided by the Local Government Unit of Mariveles or by the Philippine Fisheries Development Authority.*

A-02 EXECUTION AND INSTALLATION WORKS

The work under this contract shall be done in accordance with the provision of the latest edition of the Philippine Electrical Code, the Rules and Regulations of the Bureau of Labor and Standards and in compliance with the requirements of the local utility company. Nothing contained in these Specifications or shown in

the drawing shall be construed as to conflict with national and local ordinance or laws governing the installation of electrical works and all such laws and ordinances are hereby made part of these specifications. The contractor is required to meet the requirement thereof.

A.03 GUARANTEE

The Contractor shall guarantee that the electrical system are free from all grounds and from all defective workmanship and will remain so for a period of one year from the date of acceptance of the work. The Contractor at his owns expense shall remedy any defects, appearing within the aforesaid period.

A.04 WORKMANSHIP

The work throughout shall be executed in the best and most thorough manner under the direction of and to the satisfaction of the PFDA who will interpret the meaning of the Drawings and Specifications and shall have power to reject any work and materials that in his judgment are not in full accordance therewith.

A.04.1 Standard of Materials

All materials shall be new and shall conform to the standards of Underwriter's Laboratories, Inc., IEEE, NEMA and Philippine Standard Agency (PSA) for every case where such a standard has been established for the particular type of materials in questions.

All materials on all systems shall comply with the specifications, and all material, which is not specified, shall be of the best of their respective kind.

A.04.2 Ground Test

The entire installation shall be free from improper grounds and from short circuits. Test shall be made in the presence of the PFDA. Each panel shall be tested with mains connected to the feeder and branches, and all switches closed all fixtures in place and permanently connected, lamps removed or omitted from the sockets and all switches closed. Each individual power feeder shall be tested with the power equipment connected for proper and intended operation. In no case shall the resistance be less than that allowed by the Regulations for Electrical Equipment of Buildings. Failure shall be corrected in a manner

satisfactory to the PFDA.

A.04.3 Performance Test

It shall be the responsibility of the Contractor to test all system of the entire electrical installation for proper operational condition. This condition shall apply to the power and lighting installation as well as low voltage and alarm control, signal and communication systems. Where sequence operation is required, the Contractor shall test for proper sequence of the entire electrical installation for satisfactory working condition as approved by the PFDA.

A.04.4 Completion Requirements

Remove waste and debris resulting from this work, as work progresses and upon completion. Service and adjust moving or mechanical parts for smooth, quiet and proper operating condition.

Touch-up abraded or damaged prime paintings or galvanizing and leave clean and ready for finishing work required.

A.04.5 Trade/Brand Names

Trade/Brand names of equipment are intended only to show the degree of standardization on which the design of the particular work is based and also to avoid ambiguous description of the equipment. The indication of the trade/brand names therefore shall in no way be considered to limit the acceptability of other products of equal or better performances, functions, reliability and durability.

A.04.5 Inspection Test

The Contractor in the presence of the owner's representative shall conduct inspection and tests. These tests shall be for the normal operation of the entire electrical system of the project. The decision made by the owner's

representative for correction on any item of work, alteration of incorrect installation, or replacement of defective materials, or any other defects as found by him shall be final and must be complied with by the Contractor within forty-eight (48) hours after receipt of the official written communication before final acceptance can be made.

A.04.5 Temporary Light and Power

The Contractor shall provide, install and maintain adequate incoming service transformer, light feeders, branch circuits, outlets, lamps and fixtures, as required for performance of the work by all trades engaged in the construction of the building structures and installation.

B. LIGHTING SYSTEM

The lighting system shall be complete in every aspect, all as indicated in the plans.

If anything has been omitted in any item of work or material usually furnished which are necessary for the completion of the lighting system work as outline hereunder, then such item must be and hereby included in this section of the work.

Each lighting outlet shall have standard deep 100 mm. Octagonal or square box for each ceiling and bracket fixture installation. Each box shall finish flush against concrete and plaster walls or ceiling, except for exposed work.

The Contractor shall provide and install all lighting fixtures of the size and type as indicated in the drawings.

All fixtures shall be wired and installed completely including all lamps and/or tubes, transformers, ballast, supports, canopies, globes, and other parts and devices necessary for the complete installation and operation.

B.01 RELAMPING

The Contractor shall furnish and install all lamps for the entire lighting fixture installations and shall replace all broken or burned out lamps up to the time that the owner takes final acceptance of the work.

B.02 LIGHTING FIXTURES/ LUMINAIRES

- Surface mounted dome type luminaire, color temp 6500K, 316mm overall dia. x 191mm height, in clear polymethylmethacrylate (acrylic) complete with E27 bell socket and Phillips 1x14watts essential cool daylight LED Lamp, similar to *LGC Electric model name acrilux reflector*
- 65 watts CFL in die-cast aluminum Floodlighting fixture, 394x222x165mm size, IP65, 100x120 beam angle, similar to *AMCO model C-80-S*
- Surface mounted downlight with center frosted glass cover and plain mirrorized reflector; 180mm overall dia. x 195mm height, complete with E27 socket and Phillips 1x18watts essential daylight CFL lamp similar to *Fumaco model FDL-SC6001*
- Recessed mounted downlight with center frosted glass cover and plain mirrorized reflector; 190mm overall dia. fitted white powder coated flange and black gear box, complete with E27 socket and Phillips 1x18watts essential daylight CFL lamp similar to *Fumaco model FDL-C0601AA-FF*
- Surface mounted moisture and vaportight luminaire, 114mm dia. x 240mm height, IP65, complete with E27 socket and Phillips 1x18watts essential cool daylight CFL in die-cast aluminum housing similar to *Fumaco Vaportight model*

C. WIRING DEVICES

C.01 SWITCHES

Wall switches shall be rated at 15-amps, 240-volts, one-way or three-way as required. The type of switch shall be tumbler or snap-on as required, *Panasonic/National or equivalent*. Where switches are installed surface mounted, they shall be installed in type FS conduit fittings and provided with surface mounting covers.

Switches shall not arc during switching operations.

Wall switches shall be mounted 1400 mm. from center of device to FFL.

C.02 RECEPTACLES

Receptacles outlets shall be flush-mounted, single or duplex rated at 20-amps, 240-volt connection, *Panasonic/National* or equivalent. Type and color of receptacle outlet plates shall be as selected by the Engineer and appropriate samples of outlet and plates shall be submitted prior to purchase of device.

Weatherproof, if any, shall be *Panasonic/National* brand. Wall receptacles shall be mounted 300mm from floor finish unless otherwise indicated in the plan.

C.03 OUTLET AND SWITCH BOXES

All outlets or whatever kind for all systems, there shall be provided suitable outlet boxes or other fittings specially designed to receive the type of devices to be mounted thereon.

All outlet boxes shall be uPVC type.

Boxes installed in damp or wet locations shall be specifically approved for the purpose and shall be so placed and constructed as to prevent moisture from

entering or accumulating within the box.

In walls or ceiling constructed of wood, concrete or other similar materials, boxes and covers shall be flush with finished surfaces. Number of wires and devices contained in the box shall be in accordance with the code. Where necessary flush square outlet boxes shall be fitted with extension rings or raised cover plates.

Boxes shall be securely and rigidly fastened to surface upon which they are mounted or embedded in concrete or masonry, and shall be supported from a structural member of building either directly or by using substantial and approved metal braces.

Standard outlet boxes shall be of the octagonal, square or rectangular shapes and only deep types no less than 54mm depth shall be used for all installations.

D. PULLBOXES AND WIRE GUTTERS

Pull boxes and wire gutters for the pulling or concealment of wires or cables shall be provided where indicated and also where required though not indicated. It shall be made of steel sheets, thickness not less than gauge 16, galvanized and painted with anti-rust primer.

Pull boxes shall be provided on all conduit runs exceeding 30 meters between outlets, and shall be sufficiently set by bolts braces and fasteners. In large pull boxes, cables shall be tied or racked in an approved manner.

E. RACEWAYS AND CONDUITS

E.01 NON-METALLIC CONDUITS

All conduits shall be unplasticized Polyvinyl Chloride (uPVC), schedule 40, and uniformed wall thickness. It shall be compression and impact resistant, non-corrosive, weatherproof as manufactured by *Moldex*, *Neltex*, *Emerald* or its approved equal. The material shall not support combustion and shall not deteriorate when exposed to sunlight, rain and other elements.

E.02 METALLIC CONDUITS

Conduit shall be Rigid Steel Conduit (RSC), zinc coated high strength steel tubing meeting Philippine Electrical Code specifications and conforming Underwriter's Laboratories, Inc. requirements, equal to *Nichi*. The material shall be hot-dipped galvanized inside and out.

For ceiling drop, conduit shall be flexible metal conduit equal to *Hokki*. The material shall be hot-dip galvanized steel and shall have extruded polyvinyl covering with integral ground.

E.03 INSTALLATION OF CONDUIT SYSTEM

Conduits shall be installed and supported in a rigid and satisfactory manner. No conduits shall be used in any system smaller than 20mm (1/2") outside diameter trade size, nor shall have more than four quarter bends in any one run between outlets and/or fittings. When necessary, pull boxes shall be provided as directed by the Engineer.

All cut ends of conduit shall be reamed to remove rough edges. Where a conduit enters a box or fitting, bushing shall be provided to protect wire from abrasion, unless design of box or fitting is such as to afford equivalent protection.

Raceways shall be installed at right angles or parallel to building lines. Conduit shall be firmly fastened within 300mm of each outlet box fitting or cabinet by means of standard clamps and intermediately spaced no more than 1.0 meter. All clamps, bolts, straps, etc. shall be galvanized and painted metal.

Support and braces may be welded to structural steel with the specific approval of the Engineer. When running over concrete surfaces, the screws shall be held in place by expansion sleeves.

F. WIRES AND CABLES

600 Volt grade wire shall be copper, hard drawn and annealed and shall be of 98% conductivity.

Wire or cable for lighting and power systems shall be plastic insulated type THHN/THWN as noted on plans or as specified. All wires 8.0 mm² and larger shall be stranded unless noted on plans.

No wire smaller than 3.5 mm² shall be used except where otherwise specified. Control leads for motors shall be types THHN/THWN, unless otherwise indicated.

All wires shall be color coded (Black, Red, Yellow, Green) and shall be as manufactured by *Phelps*dodge, *Philflex*, *Columbia* or its approved equal.

Ungrounded conductors shall have distinct insulation color from grounded and grounding wires. Grounding wires and cables shall be colored green or white or as approved by the Engineer.

F.01 CABLE CONNECTORS

The connection of conductors from sizes 8.0mm² and larger shall be made with copper, solderless, pressure type connectors. Connection shall be done without damaging the individual cable strands. Connectors shall be provided insulators or fish paperboard separators.

F.02 INSTALLATION OF WIRE AND CABLES

Conductors or cable shall not be installed in conduits, raceway until such systems has been completed, nor it be installed until the inside of conduit has been cleaned.

The Contractor shall exercise due care to prevent damage to conductors, insulation or sheathing when pulling wires and cables.

All feeder cables installed shall be continuous from origin to panel or equipment terminations without running splices in pull box except where taps and splices are approved by the Engineer using suitable connectors.

Wires and cables for power and lighting shall be in separate conduit from any wires or cables for communication and signal systems.

Where cable passes through building exterior walls and underground identification tags of non-corrosive materials shall be stamped on each end and every route.

Wires and cables inside panelboards and control boxes shall be binded by means of plastic straps in a neat and orderly manner.

G. PANELBOARDS

Panelboard shall be as specified in the approved plans.

All protective devices shall meet NEMA and Underwriter Laboratories Inc. specifications. In multiple circuit breakers, all poles shall be interrupted simultaneously during fault conditions.

All busbars and current carrying parts shall be high conductivity copper and shall have

current density not more than 1.5 amperes per sq.m. of cross sectional area and shall be heavier where required for mechanical strength. Supply with non-ferrous or galvanized bolts, nuts, washers and other required attachment devices.

Each and every panel shall be provided on the inside of the door, with directory frame protected by a transparent plastic window, containing typed card indicating the member and designation of the circuits.

All panels shall have grounding bus or lugs with pressure type terminals of sufficient quantity and size and so located inside as to permit easy termination of cables.

Panelboards shall be supplied and installed by Contractor as specified in the plan.

H. CIRCUIT BREAKERS

Circuit breakers shall consist of quick-make, quick break operating mechanism, thermal magnetic trip unit on each pole and enclosed in a molded phenolic case. The thermal magnetic trip unit shall provide time delay overload protection in case of overload and instantaneous trip for short circuit condition in any one pole.

Rating of circuit breaker shall be suitable for each service application and shall be specified as to rated voltage, current, type, frame, size and frequency as manufactured by *Schneider or Westinghouse*.

Enclosure of individual circuit breakers or knife switches shall be general purpose NEMA type 1 or rain tight NEMA type 4X or as required according to the specific duty called for.

TECHNICAL SPECIFICATIONS PART IV – GENERAL ITEM

SCOPE OF WORK

A.01 This section includes the provision of office equipment/furniture for PFDA Resident Engineers/Field Inspectors.

B. RENTAL OF OFFICE FOR PFDA ENGINEERS

B.01 The Contractor shall lease an office space to be used by the Engineer and other government representative near the site. The office shall be properly ventilated, lighted and with toilet/comfort room. The over-all size of the office shall be approximately 20 sq. meters and to be provided with one (1) clerical table, four (4) stacking chairs (monoblock), one (1) unit 18" electric stand fan, one (1) unit laptop and one (1) unit camera. The said furniture shall be included in the lease of office space shall be turn-over to the PFDA upon the completion of the project.

B.02 The field office shall be maintained by the Contractor throughout the construction period (including electric & water expenses).

B.03 The Contractor shall provide office supplies to be use in preparation of correspondence and progress reports. Likewise, he shall be responsible for the reproduction of pictures and communication expenses (cellular card at least P5,000.00/month) borne by the PFDA personnel during the project implementation.

B.04 PROJECT SIGNBOARD

The Contractor shall provide project signboard (1.20m x 2.40m) at the construction site bearing the name of the project, location, project cost, starting date and completion date, name of implementing agency, the name of the contractor and the other information that shall be required by the PFDA.

The signboard shall be made of tarpaulin in wood framing. It shall be erected with necessary wooden support and bracing. The signboard shall be erected by the contractor within two (2) weeks after the project commence.

C. PROVIDE, OPERATE & MAINTAIN ONE (1) UNIT UTILITY VEHICLE FOR PFDA CONSTRUCTION MANAGEMENT GROUP

- C.1 The Contractor shall within seven (7) days after the receipt of Notice to Proceed shall provide a utility/service vehicle on a rental basis for the Resident Engineer/Inspector use during the contract duration and shall be utilized for twelve (12) calendar days per month. The vehicle shall comply in all respect with all relevant National or Local Laws. The vehicle shall be well kept, crew cab pick-up or AUV type acceptable to the Owner, in perfect running condition and shall be provided by the Contractor with a competent qualified and experienced driver who shall be in direct order of the Owner's Resident Engineer/Inspectors.
- C.2 The Contractor shall properly maintain the vehicle in first class condition and shall have a daily minimum fuel allocation of ten (10) liters per day for at least twelve (12) days per month including regular service maintenance.
- C.3 The Contractor shall provide equivalent substitute vehicle during such period when the specified vehicle is taken out of service for maintenance, repair or any other reason.

Under Part IV – General Items

One (1) unit LAPTOP COMPUTER

SPECIFICATION

Operating System	:	Windows 10
Processor	:	Intel Core i7-6500U Processor 2.5GHz (4M Cache, up to 3.10GHz)
Memory	:	8GB DDR3 on 2 soDIMM Modules
Storage	:	1TB 5400RPM SSHD
Display	:	15.6-inch Full HD 1920 x 1080, high-brightness

		Acer ComfyView™ LEDbacklit TFT LCD aspect ratio Mercury free, environment friendly	16:9
Optical Drive	:	DVD+/-RW	
Graphics	:	NVIDIA GeForce 940M with 4 GB	
Connectivity	:	Acer InviLink™ Nplify™ 802.11 a/b/g/n/ac wireless LAN Operates at 2.4 GHz and 5 GHz 2x2 MIMO technology Bluetooth® 4.0 Gigabit Ethernet, Wake-on-LAN ready	
Dimension	:	381.6 (W) x 259 (D) x 23.9 (H) mm (15.02 x 10.2 x 0.94 inches)	
Weight	:	2.4 kg (5.29 lbs.) with 4-cell battery pack	
Power	:	3-pin 65 W AC adapter	
		37 Wh 2500 mAh 14.8 V 4-cell Li-ion battery pack	
		Up to 5 hours (based on MobileMark® 2012 test results)	
Webcam	:	HD webcam with: <ul style="list-style-type: none"> • 1280 x 720 resolution • 720p HD audio/video recording 	
I/O Ports	:	SD Card reader	
		HDMI® port with HDCP support	
		Ethernet (RJ-45) port	
		External display (VGA) port	
		Two USB 3.0 ports with one featuring power off USB charging	
		USB 2.0 port	

Other Accessories : 1 set MICROSOFT OFFICE 2013

16gb flashdisk

Targus Laptop Bag

Under Part IV – General Items

One (1) unit DIGITAL CAMERA

SPECIFICATION

Camera Edition HERO5 Black Edition

Weight

Camera: 3.1oz (89g)

Camera with housing: 5.4oz (152g)

Video + Photo 1440p

Photo Resolutions

12MP (Default)

Housing Standard Housing 131'(40m)

Remote No

Battery 1160mAh lithium-ion

Buckles Quick Release Buckles

Mounts 1 Curved Mount
1 Flat Adhesive Mount

Cables USB Cable

3-WayPivotArm

(Mounting Hardware) Yes

**TECHNICAL SPECIFICATIONS
PART V – MOBILIZATION/DEMobilIZATION OF EQUIPMENT**

B. MOBILIZATION/DEMobilIZATION

Scope of Work

- A.01 The contractor shall mobilized and demobilized all equipment necessary to complete all work items of the project.
- A.02 Mobilization and demobilization shall be treated as a separate item. It shall be computed based on the cost of transportation of all equipment of the contractor to complete the project.